

Work Orders: 8C02116

Project: Irwindale SW Outfall Mon.

Attn: Edmond G. Suher

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

Report Date: 4/16/2018

Received Date: 3/2/2018

Turnaround Time: Normal

Phones: (818) 841-9004

Fax: (818) 841-8013

P.O. #:

Billing Code:

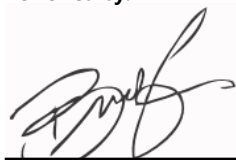
DoD-ELAP #L2457 • EPA-UCMR #CA00211 • Guam-EPA #17-008R • ISO 17025 #L2457.01 • LACSD #10143 • NJ-DEP #CA015

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 3/02/18 with the Chain-of-Custody document. The samples were received in good condition, at 13.1 °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:

04/16/2018 15:32

Project Manager: Edmond G. Suher

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
SAWPW-074A	ES/TM	8C02116-01	Water	03/02/18 15:00	
SGR-077	ES/TM	8C02116-02	Water	03/02/18 15:30	
BDW-027A	ES/TM	8C02116-03	Water	03/02/18 16:30	
Trip Blank	ES/TM	8C02116-04	Water	03/02/18 00:00	

Not Certified Analyses Summary

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



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Reported:

04/16/2018 15:32

Project Manager: Edmond G. Suher

Sample Results

Sample: SAWPW-074A

Sampled: 03/02/18 15:00 by ES/TM

8C02116-01 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
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Anions by IC, EPA Method 300.0

Method: EPA 300.0	Batch ID: W8C0120	Instr: LC12	Prepared: 03/02/18 15:33	Analyst: jan	
Chloride, Total	2.1	0.50	mg/l	1	03/03/18 22:09
NO2+NO3 as N	0.63	0.11	mg/l	1	03/03/18 22:09
Sulfate as SO4	2.3	0.50	mg/l	1	03/03/18 22:09

Chlorinated Acids Herbicides by GC/ECD

Method: EPA 515.3	Batch ID: W8C0259	Instr: GC08	Prepared: 03/06/18 08:38			Analyst: rmr
2,4,5-T		ND	0.20	ug/l	1	03/13/18 09:41
2,4,5-TP (Silvex)		ND	0.20	ug/l	1	03/13/18 09:41
2,4-D		ND	0.40	ug/l	1	03/13/18 09:41
2,4-DB		ND	2.0	ug/l	1	03/13/18 09:41
3,5-Dichlorobenzoic acid		ND	1.0	ug/l	1	03/13/18 09:41
Acifluorfen		ND	0.40	ug/l	1	03/13/18 09:41
Bentazon		ND	2.0	ug/l	1	03/13/18 09:41
Dalapon		ND	0.40	ug/l	1	03/13/18 09:41
DCPA		ND	0.10	ug/l	1	03/13/18 09:41
Dicamba		ND	0.60	ug/l	1	03/13/18 09:41
Dichloroprop		ND	0.30	ug/l	1	03/13/18 09:41
Dinoseb		ND	0.40	ug/l	1	03/13/18 09:41
Pentachlorophenol	0.65		0.20	ug/l	1	03/13/18 09:41
Picloram		ND	0.60	ug/l	1	03/13/18 09:41
Surrogate(s)						
2,4-DCAA	105%	Conc: 10.5	70-130			03/13/18 09:41

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

Method: EPA 160.4	Batch ID: W8C0107	Instr: FURN01	Prepared: 03/05/18 12:00	Analyst: mic			
Volatile Suspended Solids		15	5.0	mg/l	1	03/05/18 12:30	
Method: EPA 180.1	Batch ID: W8C0132	Instr: TURB01	Prepared: 03/02/18 17:39	Analyst: mnq			
Turbidity		29	0.10	NTU	1	03/02/18 18:59	
Method: EPA 335.4	Batch ID: W8C0848	Instr: AA01	Prepared: 03/14/18 20:55	Analyst: AJK			
Cyanide, Total		ND	2.5	ug/l	1	03/16/18 14:11	
Method: EPA 350.1	Batch ID: W8C0625	Instr: AA06	Prepared: 03/12/18 14:01	Analyst: mnq			
Ammonia as N		0.54	0.10	mg/l	1	03/14/18 18:29	
Method: EPA 351.2	Batch ID: W8C0798	Instr: AA06	Prepared: 03/14/18 12:13	Analyst: mnq			
TKN		2.3	0.40	mg/l	4	03/16/18 14:24	
Method: EPA 365.1	Batch ID: W8C0216	Instr: AA01	Prepared: 03/05/18 13:53	Analyst: nat			
Phosphorus as P, Total		0.42	0.040	mg/l	2	03/08/18 16:14	M-02
Method: EPA 365.3	Batch ID: W8C0335	Instr: UVVIS04	Prepared: 03/06/18 16:41	Analyst: stg			
Phosphorus, Dissolved		0.29	0.010	mg/l	1	03/12/18 14:18	

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Project Number: Irwindale SW Outfall Mon.

Project Manager: Edmond G. Suher

Certificate of Analysis

FINAL REPORT

Reported:
04/16/2018 15:32

Sample Results

(Continued)

Sample: SAWPW-074A
8C02116-01 (Water)

Sampled: 03/02/18 15:00 by ES/TM
(Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)						
Method: EPA 410.4 Chemical Oxygen Demand	Batch ID: W8C0480 Instr: Inst 89	Prepared: 03/08/18 10:51 5.0	mg/l	1	Analyst: mnq 03/13/18 09:29	
Method: EPA 420.4 Phenolics	Batch ID: W8C1005 Instr: AA03 0.021	Prepared: 03/18/18 08:29 0.010	mg/l	1	Analyst: YMT 03/20/18 15:33	
Method: SM 2320B Alkalinity as CaCO3	Batch ID: W8C0200 Instr: AA02 27	Prepared: 03/05/18 12:05 2.0	mg/l	1	Analyst: stg 03/05/18 15:47	
Method: SM 2510B Specific Conductance (EC)	Batch ID: W8C0392 Instr: AA02 72	Prepared: 03/07/18 12:57 2.0	umhos/cm	1	Analyst: stg 03/07/18 16:04	
Method: SM 2540C Total Dissolved Solids	Batch ID: W8C0427 Instr: Inst 64	Prepared: 03/07/18 17:00 10	mg/l	1	Analyst: ymt 03/08/18 17:49	
Method: SM 2540D Total Suspended Solids	Batch ID: W8C0106 Instr: OVEN11 40	Prepared: 03/05/18 12:00 5	mg/l	1	Analyst: mic 03/05/18 12:30	
Method: SM 4500O-G Dissolved Oxygen	Batch ID: W8C0117 Instr: Inst 9.52	Prepared: 03/02/18 14:25 1.00	mg/l	1	Analyst: mic 03/02/18 18:50	*
Method: SM 5210B Biochemical Oxygen Demand	Batch ID: W8C0154 Instr: Inst 9.9	Prepared: 03/04/18 14:06 2.0	mg/l	1	Analyst: mic 03/09/18 12:10	
Method: SM 5310B Total Organic Carbon (TOC)	Batch ID: W8C0370 Instr: TOC02 13	Prepared: 03/07/18 09:23 0.10	mg/l	1	Analyst: jlp 03/07/18 10:32	
Method: SM 5540C MBAS	Batch ID: W8C0156 Instr: UVVIS03 0.38	Prepared: 03/04/18 11:42 0.050	mg/l	1	Analyst: ymt 03/04/18 13:51	
Hexavalent Chromium by IC						
Method: EPA 218.6 Chromium 6+	Batch ID: W8C0541 Instr: LC13 0.36	Prepared: 03/09/18 10:45 0.10	ug/l	5	Analyst: dil 03/09/18 16:25	
Chromium 6+, Dissolved	0.37	0.10	ug/l	5	03/09/18 16:37	
Hydrocarbons by GC/FID						
Method: EPA 8015D Diesel Range Organics	Batch ID: W8C0424 Instr: GC04 1.7	Prepared: 03/07/18 16:53 0.20	mg/l	2	Analyst: cam 03/14/18 11:11	M-04
Oil Range Organics	3.3	1.0	mg/l	2	03/14/18 11:11	M-04
Surrogate(s) n-Tetracosane	99% Conc: 0.248	64-155			03/14/18 11:11	M-04
Mercury - Low Level by CVAFS						
Method: EPA 1631E Mercury, Dissolved	Batch ID: W8C0375 Instr: Inst 6.1	Prepared: 03/02/18 18:39 0.50	ng/l	1	Analyst: aln 03/08/18 11:37	
Mercury, Total	14	2.5	ng/l	5	03/08/18 11:37	
Metals by EPA 200 Series Methods						
Method: EPA 200.7 Calcium Hardness as CaCO3	Batch ID: [CALC] Instr: [CALC] 19.3	Prepared: 03/13/18 17:52 0.250	mg/l	1	Analyst: JCK 03/19/18 18:24	

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04/16/2018 15:32

Project Manager: Edmond G. Suher

Sample Results

(Continued)

Sample: SAWPW-074A

Sampled: 03/02/18 15:00 by ES/TM

8C02116-01 (Water)

(Continued)

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

Method: EPA 200.7 Batch ID: W8C0755 Instr: ICP03 Prepared: 03/13/18 17:52 Analyst: JCK
Calcium, Total 7.74 0.100 mg/l 1 03/19/18 18:24

Method: EPA 200.8 Batch ID: W8C0756 Instr: ICPMS04 Prepared: 03/13/18 17:56 Analyst: rrl

Aluminum, Dissolved	24	5.0	ug/l	1	03/20/18 14:34
Aluminum, Total	1800	5.0	ug/l	1	03/20/18 14:38
Antimony, Dissolved	1.3	0.50	ug/l	1	03/20/18 14:34
Antimony, Total	2.1	0.50	ug/l	1	03/20/18 14:38
Arsenic, Dissolved	1.4	0.40	ug/l	1	03/20/18 14:34
Arsenic, Total	2.2	0.40	ug/l	1	03/20/18 14:38
Cadmium, Dissolved	ND	0.10	ug/l	1	03/20/18 14:34
Cadmium, Total	0.28	0.10	ug/l	1	03/20/18 14:38
Chromium, Dissolved	0.70	0.20	ug/l	1	03/20/18 14:34
Chromium, Total	5.2	0.20	ug/l	1	03/20/18 14:38
Copper, Dissolved	21	0.50	ug/l	1	03/20/18 14:34
Copper, Total	44	0.50	ug/l	1	03/20/18 14:38
Iron, Dissolved	36	20	ug/l	1	03/20/18 14:34
Iron, Total	2900	20	ug/l	1	03/20/18 14:38
Lead, Dissolved	0.35	0.20	ug/l	1	03/20/18 14:34
Lead, Total	14	0.20	ug/l	1	03/20/18 14:38
Nickel, Dissolved	2.2	0.80	ug/l	1	03/20/18 14:34
Nickel, Total	7.9	0.80	ug/l	1	03/20/18 14:38
Zinc, Dissolved	70	5.0	ug/l	1	03/20/18 14:34
Zinc, Total	180	5.0	ug/l	1	03/20/18 14:38

Microbiological Parameters by Standard Methods

Method: Enterolert Batch ID: W8D0383 Instr: Inst Prepared: 03/02/18 19:00 Analyst: kvm
Enterococcus 10000 10 MPN/100ml 10 03/03/18 21:15

Method: SM 9221B Batch ID: W8D0464 Instr: Inst Prepared: 03/02/18 19:00 Analyst: kvm
Total Coliform >=16000 18 MPN/100ml 10 03/31/18 15:06

Method: SM 9221E Batch ID: W8D0464 Instr: Inst Prepared: 03/02/18 19:00 Analyst: kvm
Fecal Coliform 790 18 MPN/100ml 10 03/30/18 16:11

Method: SM 9221F Batch ID: W8D0464 Instr: Inst Prepared: 03/02/18 19:00 Analyst: kvm
E. coli 790 18 MPN/100ml 10 03/30/18 16:11

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

Method: EPA 625.1 Batch ID: W8C0255 Instr: GCMS15 Prepared: 03/06/18 08:27 Analyst: EFC

Acenaphthene	ND	25	ng/l	1	03/07/18 22:58	M-02
Acenaphthylene	ND	25	ng/l	1	03/07/18 22:58	M-02
Anthracene	ND	25	ng/l	1	03/07/18 22:58	M-02

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Reported:

04/16/2018 15:32

Project Manager: Edmond G. Suher

Sample Results

(Continued)

Sample: SAWPW-074A

Sampled: 03/02/18 15:00 by ES/TM

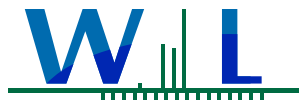
8C02116-01 (Water)

(Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
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Semivolatile Organics - Low Level by Tandem GC/MS/MS (Continued)

Method: EPA 625.1	Batch ID: W8C0255	Instr: GCMS15	Prepared: 03/06/18 08:27	Analyst: EFC		
Benzo (a) anthracene	ND	25	ng/l	1	03/07/18 22:58	M-02
Benzo (a) pyrene	ND	25	ng/l	1	03/07/18 22:58	M-02
Benzo (b) fluoranthene	ND	25	ng/l	1	03/07/18 22:58	M-02
Benzo (g,h,i) perylene	ND	25	ng/l	1	03/07/18 22:58	M-02
Benzo (k) fluoranthene	ND	25	ng/l	1	03/07/18 22:58	M-02
Chrysene	ND	25	ng/l	1	03/07/18 22:58	M-02
Dibenzo (a,h) anthracene	ND	25	ng/l	1	03/07/18 22:58	M-02
Fluoranthene	ND	25	ng/l	1	03/07/18 22:58	M-02
Fluorene	ND	25	ng/l	1	03/07/18 22:58	M-02
Indeno (1,2,3-cd) pyrene	ND	25	ng/l	1	03/07/18 22:58	M-02
Naphthalene	ND	25	ng/l	1	03/07/18 22:58	M-02
Phenanthrene	ND	25	ng/l	1	03/07/18 22:58	M-02
Pyrene	ND	25	ng/l	1	03/07/18 22:58	M-02
Surrogate(s)						
1,3-Dimethyl-2-nitrobenzene	73% Conc: 367	50-150			03/07/18 22:58	M-02
Perylene-d12	72% Conc: 362	50-150			03/07/18 22:58	M-02



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Reported:

04/16/2018 15:32

Project Manager: Edmond G. Suher

Sample Results

(Continued)

Sample: SGR-077

Sampled: 03/02/18 15:30 by ES/TM

8C02116-02 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
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Anions by IC, EPA Method 300.0

Method: EPA 300.0	Batch ID: W8C0120	Instr: LC12	Prepared: 03/02/18 15:33	Analyst: jan	
Chloride, Total	1.5	0.50	mg/l	1	03/03/18 22:27
NO2+NO3 as N	0.36	0.11	mg/l	1	03/03/18 22:27
Sulfate as SO4	1.4	0.50	mg/l	1	03/03/18 22:27

Chlorinated Acids Herbicides by GC/ECD

Method: EPA 515.3	Batch ID: W8C0259	Instr: GC08	Prepared: 03/06/18 08:38	Analyst: rmr	
2,4,5-T		ND	0.20 ug/l	1	03/13/18 10:17
2,4,5-TP (Silvex)		ND	0.20 ug/l	1	03/13/18 10:17
2,4-D		ND	0.40 ug/l	1	03/13/18 10:17
2,4-DB		ND	2.0 ug/l	1	03/13/18 10:17
3,5-Dichlorobenzoic acid		ND	1.0 ug/l	1	03/13/18 10:17
Acifluorfen		ND	0.40 ug/l	1	03/13/18 10:17
Bentazon		ND	2.0 ug/l	1	03/13/18 10:17
Dalapon		ND	0.40 ug/l	1	03/13/18 10:17
DCPA		ND	0.10 ug/l	1	03/13/18 10:17
Dicamba		ND	0.60 ug/l	1	03/13/18 10:17
Dichloroprop		ND	0.30 ug/l	1	03/13/18 10:17
Dinoseb		ND	0.40 ug/l	1	03/13/18 10:17
Pentachlorophenol	0.20		0.20 ug/l	1	03/13/18 10:17
Picloram		ND	0.60 ug/l	1	03/13/18 10:17
Surrogate(s)					
2,4-DCAA	112%	Conc: 11.2	70-130		03/13/18 10:17

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

Method: EPA 160.4	Batch ID: W8C0107	Instr: FURN01	Prepared: 03/05/18 12:00	Analyst: mic	
Volatile Suspended Solids		12	5.0 mg/l	1	03/05/18 12:30
Method: EPA 180.1	Batch ID: W8C0132	Instr: TURB01	Prepared: 03/02/18 17:39	Analyst: mnq	
Turbidity		54	0.40 NTU	4	03/02/18 18:59
Method: EPA 335.4	Batch ID: W8C0848	Instr: AA01	Prepared: 03/14/18 20:55	Analyst: AJK	
Cyanide, Total		ND	2.5 ug/l	1	03/16/18 14:12
Method: EPA 350.1	Batch ID: W8C0625	Instr: AA06	Prepared: 03/12/18 14:01	Analyst: mnq	
Ammonia as N		0.51	0.10 mg/l	1	03/14/18 18:29
Method: EPA 351.2	Batch ID: W8C0798	Instr: AA06	Prepared: 03/14/18 12:13	Analyst: mnq	
TKN		1.1	0.40 mg/l	4	03/16/18 14:24
Method: EPA 365.1	Batch ID: W8C0651	Instr: AA01	Prepared: 03/12/18 17:22	Analyst: AJK	
Phosphorus as P, Total		0.24	0.020 mg/l	1	03/16/18 11:45
Method: EPA 365.3	Batch ID: W8C0335	Instr: UVVIS04	Prepared: 03/06/18 16:41	Analyst: stg	
Phosphorus, Dissolved		0.098	0.010 mg/l	1	03/12/18 14:18

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Certificate of Analysis

FINAL REPORT

Reported:
04/16/2018 15:32

Sample Results

(Continued)

Sample: SGR-077

Sampled: 03/02/18 15:30 by ES/TM

8C02116-02 (Water)

(Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)						
Method: EPA 410.4 Chemical Oxygen Demand	Batch ID: W8C0480 Instr: Inst 59	Prepared: 03/08/18 10:51 5.0	mg/l	1	Analyst: mnq 03/13/18 09:29	
Method: EPA 420.4 Phenolics	Batch ID: W8C1005 Instr: AA03 0.11	Prepared: 03/18/18 08:29 0.010	mg/l	1	Analyst: ymt 03/20/18 15:29	
Method: SM 2320B Alkalinity as CaCO3	Batch ID: W8C0200 Instr: AA02 20	Prepared: 03/05/18 12:05 2.0	mg/l	1	Analyst: stg 03/05/18 15:47	
Method: SM 2510B Specific Conductance (EC)	Batch ID: W8C0392 Instr: AA02 44	Prepared: 03/07/18 12:57 2.0	umhos/cm	1	Analyst: stg 03/07/18 16:04	
Method: SM 2540C Total Dissolved Solids	Batch ID: W8C0427 Instr: Inst 47	Prepared: 03/07/18 17:00 10	mg/l	1	Analyst: ymt 03/08/18 17:49	
Method: SM 2540D Total Suspended Solids	Batch ID: W8C0106 Instr: OVEN11 42	Prepared: 03/05/18 12:00 5	mg/l	1	Analyst: mic 03/05/18 12:30	
Method: SM 4500O-G Dissolved Oxygen	Batch ID: W8C0117 Instr: Inst 9.25	Prepared: 03/02/18 14:25 1.00	mg/l	1	Analyst: mic 03/02/18 18:50	*
Method: SM 5210B Biochemical Oxygen Demand	Batch ID: W8C0154 Instr: Inst 7.3	Prepared: 03/04/18 14:06 2.0	mg/l	1	Analyst: mic 03/09/18 12:10	
Method: SM 5310B Total Organic Carbon (TOC)	Batch ID: W8C0370 Instr: TOC02 8.4	Prepared: 03/07/18 09:23 0.10	mg/l	1	Analyst: jlp 03/07/18 10:32	
Method: SM 5540C MBAS	Batch ID: W8C0156 Instr: UVVIS03 0.22	Prepared: 03/04/18 11:42 0.050	mg/l	1	Analyst: ymt 03/04/18 13:51	
Hexavalent Chromium by IC						
Method: EPA 218.6 Chromium 6+	Batch ID: W8C0541 Instr: LC13 0.30	Prepared: 03/09/18 10:45 0.10	ug/l	5	Analyst: dil 03/09/18 16:49	
Chromium 6+, Dissolved	0.25	0.10	ug/l	5	03/09/18 17:01	
Hydrocarbons by GC/FID						
Method: EPA 8015D Diesel Range Organics	Batch ID: W8C0424 Instr: GC04 1.6	Prepared: 03/07/18 16:53 0.20	mg/l	2	Analyst: cam 03/14/18 11:45	M-04
Oil Range Organics	2.0	1.0	mg/l	2	03/14/18 11:45	M-04
Surrogate(s) n-Tetracosane	108% Conc: 0.270	64-155			03/14/18 11:45	M-04
Mercury - Low Level by CVAFS						
Method: EPA 1631E Mercury, Dissolved	Batch ID: W8C0375 Instr: Inst 4.7	Prepared: 03/02/18 18:39 0.50	ng/l	1	Analyst: aln 03/08/18 11:37	
Mercury, Total	13	2.5	ng/l	5	03/08/18 11:37	
Metals by EPA 200 Series Methods						
Method: EPA 200.7 Calcium Hardness as CaCO3	Batch ID: [CALC] Instr: [CALC] 13.9	Prepared: 03/13/18 17:52 0.250	mg/l	1	Analyst: JCK 03/19/18 18:27	

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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:

04/16/2018 15:32

Project Manager: Edmond G. Suher

Sample Results

(Continued)

Sample: SGR-077

Sampled: 03/02/18 15:30 by ES/TM

8C02116-02 (Water)

(Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)						
Method: EPA 200.7	Batch ID: W8C0755	Instr: ICP03	Prepared: 03/13/18 17:52	Analyst: JCK		
Calcium, Total	5.57	0.100	mg/l	1	03/19/18 18:27	
Method: EPA 200.8	Batch ID: W8C0756	Instr: ICPMS04	Prepared: 03/13/18 17:56	Analyst: rrl		
Aluminum, Dissolved	46	5.0	ug/l	1	03/20/18 14:42	
Aluminum, Total	1700	5.0	ug/l	1	03/20/18 14:47	
Antimony, Dissolved	13	0.50	ug/l	1	03/20/18 14:42	
Antimony, Total	16	0.50	ug/l	1	03/20/18 14:47	
Arsenic, Dissolved	0.58	0.40	ug/l	1	03/20/18 14:42	
Arsenic, Total	1.2	0.40	ug/l	1	03/20/18 14:47	
Cadmium, Dissolved	ND	0.10	ug/l	1	03/20/18 14:42	
Cadmium, Total	0.11	0.10	ug/l	1	03/20/18 14:47	
Chromium, Dissolved	0.37	0.20	ug/l	1	03/20/18 14:42	
Chromium, Total	4.2	0.20	ug/l	1	03/20/18 14:47	
Copper, Dissolved	7.5	0.50	ug/l	1	03/20/18 14:42	
Copper, Total	18	0.50	ug/l	1	03/20/18 14:47	
Iron, Dissolved	52	20	ug/l	1	03/20/18 14:42	
Iron, Total	2500	20	ug/l	1	03/20/18 14:47	
Lead, Dissolved	ND	0.20	ug/l	1	03/20/18 14:42	
Lead, Total	4.6	0.20	ug/l	1	03/20/18 14:47	
Nickel, Dissolved	1.4	0.80	ug/l	1	03/20/18 14:42	
Nickel, Total	4.1	0.80	ug/l	1	03/20/18 14:47	
Zinc, Dissolved	76	5.0	ug/l	1	03/20/18 14:42	
Zinc, Total	140	5.0	ug/l	1	03/20/18 14:47	
Microbiological Parameters by Standard Methods						
Method: Enterolert	Batch ID: W8D0383	Instr: Inst	Prepared: 03/02/18 19:00	Analyst: kvm		
Enterococcus	480	10	MPN/100ml	10	03/03/18 21:15	
Method: SM 9221B	Batch ID: W8D0464	Instr: Inst	Prepared: 03/02/18 19:00	Analyst: kvm		
Total Coliform	24000	18	MPN/100ml	10	03/31/18 15:06	
Method: SM 9221E	Batch ID: W8D0464	Instr: Inst	Prepared: 03/02/18 19:00	Analyst: kvm		
Fecal Coliform	7900	18	MPN/100ml	10	03/30/18 16:11	
Method: SM 9221F	Batch ID: W8D0464	Instr: Inst	Prepared: 03/02/18 19:00	Analyst: kvm		
E. coli	7900	18	MPN/100ml	10	03/30/18 16:11	
Semivolatile Organics - Low Level by Tandem GC/MS/MS						
Method: EPA 625.1	Batch ID: W8C0255	Instr: GCMS15	Prepared: 03/06/18 08:27	Analyst: EFC		
Acenaphthene	ND	25	ng/l	1	03/07/18 23:28	M-02
Acenaphthylene	ND	25	ng/l	1	03/07/18 23:28	M-02
Anthracene	ND	25	ng/l	1	03/07/18 23:28	M-02

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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:

04/16/2018 15:32

Project Manager: Edmond G. Suher

Sample Results

(Continued)

Sample: SGR-077

Sampled: 03/02/18 15:30 by ES/TM

8C02116-02 (Water)

(Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Semivolatile Organics - Low Level by Tandem GC/MS/MS (Continued)						
Method: EPA 625.1	Batch ID: W8C0255	Instr: GCMS15	Prepared: 03/06/18 08:27	Analyst: EFC		
Benzo (a) anthracene	ND	25	ng/l	1	03/07/18 23:28	M-02
Benzo (a) pyrene	ND	25	ng/l	1	03/07/18 23:28	M-02
Benzo (b) fluoranthene	ND	25	ng/l	1	03/07/18 23:28	M-02
Benzo (g,h,i) perylene	ND	25	ng/l	1	03/07/18 23:28	M-02
Benzo (k) fluoranthene	ND	25	ng/l	1	03/07/18 23:28	M-02
Chrysene	ND	25	ng/l	1	03/07/18 23:28	M-02
Dibenzo (a,h) anthracene	ND	25	ng/l	1	03/07/18 23:28	M-02
Fluoranthene	ND	25	ng/l	1	03/07/18 23:28	M-02
Fluorene	ND	25	ng/l	1	03/07/18 23:28	M-02
Indeno (1,2,3-cd) pyrene	ND	25	ng/l	1	03/07/18 23:28	M-02
Naphthalene	ND	25	ng/l	1	03/07/18 23:28	M-02
Phenanthrene	ND	25	ng/l	1	03/07/18 23:28	M-02
Pyrene	ND	25	ng/l	1	03/07/18 23:28	M-02
<i>Surrogate(s)</i>						
1,3-Dimethyl-2-nitrobenzene	70% Conc: 349	50-150			03/07/18 23:28	M-02
Perylene-d12	73% Conc: 365	50-150			03/07/18 23:28	M-02



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:

04/16/2018 15:32

Project Manager: Edmond G. Suher

Sample Results

(Continued)

Sample: BDW-027A

Sampled: 03/02/18 16:30 by ES/TM

8C02116-03 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
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Anions by IC, EPA Method 300.0

Method: EPA 300.0	Batch ID: W8C0120	Instr: LC12	Prepared: 03/02/18 16:33	Analyst: jan	
Chloride, Total	1.6	0.50	mg/l	1	03/03/18 22:45
NO2+NO3 as N	0.50	0.11	mg/l	1	03/03/18 22:45
Sulfate as SO4	1.9	0.50	mg/l	1	03/03/18 22:45

Chlorinated Acids Herbicides by GC/ECD

Method: EPA 515.3	Batch ID: W8C0259	Instr: GC08	Prepared: 03/06/18 08:38			Analyst: rmr
2,4,5-T		ND	0.20	ug/l	1	03/13/18 12:42
2,4,5-TP (Silvex)		ND	0.20	ug/l	1	03/13/18 12:42
2,4-D		ND	0.40	ug/l	1	03/13/18 12:42
2,4-DB		ND	2.0	ug/l	1	03/13/18 12:42
3,5-Dichlorobenzoic acid		ND	1.0	ug/l	1	03/13/18 12:42
Acifluorfen		ND	0.40	ug/l	1	03/13/18 12:42
Bentazon		ND	2.0	ug/l	1	03/13/18 12:42
Dalapon		ND	0.40	ug/l	1	03/13/18 12:42
DCPA		ND	0.10	ug/l	1	03/13/18 12:42
Dicamba		ND	0.60	ug/l	1	03/13/18 12:42
Dichloroprop		ND	0.30	ug/l	1	03/13/18 12:42
Dinoseb		ND	0.40	ug/l	1	03/13/18 12:42
Pentachlorophenol		ND	0.20	ug/l	1	03/13/18 12:42
Picloram		ND	0.60	ug/l	1	03/13/18 12:42
Surrogate(s)						
2,4-DCAA	117%	Conc: 11.7	70-130			03/13/18 12:42

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

Method: EPA 160.4	Batch ID: W8C0107	Instr: FURN01	Prepared: 03/05/18 12:00	Analyst: mic	
Volatile Suspended Solids		5.0	5.0 mg/l	1	03/05/18 12:30
Method: EPA 180.1	Batch ID: W8C0132	Instr: TURB01	Prepared: 03/02/18 17:39	Analyst: mnq	
Turbidity		17	0.10 NTU	1	03/02/18 18:59
Method: EPA 335.4	Batch ID: W8C0848	Instr: AA01	Prepared: 03/14/18 20:55	Analyst: AJK	
Cyanide, Total		ND	2.5 ug/l	1	03/16/18 14:09
Method: EPA 350.1	Batch ID: W8C0625	Instr: AA06	Prepared: 03/12/18 14:01	Analyst: mnq	
Ammonia as N		0.67	0.10 mg/l	1	03/14/18 18:29
Method: EPA 351.2	Batch ID: W8C0798	Instr: AA06	Prepared: 03/14/18 12:13	Analyst: mnq	
TKN		1.3	0.40 mg/l	4	03/16/18 14:24
Method: EPA 365.1	Batch ID: W8C0651	Instr: AA01	Prepared: 03/12/18 17:22	Analyst: AJK	
Phosphorus as P, Total		0.17	0.020 mg/l	1	03/16/18 11:46
Method: EPA 365.3	Batch ID: W8C0335	Instr: UVVIS04	Prepared: 03/06/18 16:41	Analyst: stg	
Phosphorus, Dissolved		0.087	0.010 mg/l	1	03/12/18 14:18

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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:

04/16/2018 15:32

Project Manager: Edmond G. Suher

Sample Results

(Continued)

Sample: BDW-027A

Sampled: 03/02/18 16:30 by ES/TM

8C02116-03 (Water)

(Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)						
Method: EPA 410.4 Chemical Oxygen Demand	Batch ID: W8C0480 Instr: Inst 54	Prepared: 03/08/18 10:51 5.0	mg/l	1	Analyst: mnq 03/13/18 09:29	
Method: EPA 420.4 Phenolics	Batch ID: W8C1005 Instr: AA03 0.043	Prepared: 03/18/18 08:29 0.010	mg/l	1	Analyst: YMT 03/20/18 15:34	
Method: SM 2320B Alkalinity as CaCO3	Batch ID: W8C0200 Instr: AA02 22	Prepared: 03/05/18 12:05 2.0	mg/l	1	Analyst: stg 03/05/18 15:47	
Method: SM 2510B Specific Conductance (EC)	Batch ID: W8C0392 Instr: AA02 49	Prepared: 03/07/18 12:57 2.0	umhos/cm	1	Analyst: stg 03/07/18 16:04	
Method: SM 2540C Total Dissolved Solids	Batch ID: W8C0427 Instr: Inst 51	Prepared: 03/07/18 17:00 10	mg/l	1	Analyst: ymt 03/08/18 17:49	
Method: SM 2540D Total Suspended Solids	Batch ID: W8C0106 Instr: OVEN11 16	Prepared: 03/05/18 12:00 5	mg/l	1	Analyst: mic 03/05/18 12:30	
Method: SM 4500O-G Dissolved Oxygen	Batch ID: W8C0117 Instr: Inst 9.59	Prepared: 03/02/18 14:25 1.00	mg/l	1	Analyst: mic 03/02/18 18:50	*
Method: SM 5210B Biochemical Oxygen Demand	Batch ID: W8C0154 Instr: Inst 5.7	Prepared: 03/04/18 14:06 2.0	mg/l	1	Analyst: mic 03/09/18 12:10	
Method: SM 5310B Total Organic Carbon (TOC)	Batch ID: W8C0461 Instr: TOC02 12	Prepared: 03/08/18 09:09 0.10	mg/l	1	Analyst: jlp 03/08/18 10:22	
Method: SM 5540C MBAS	Batch ID: W8C0156 Instr: UVVIS03 0.37	Prepared: 03/04/18 11:42 0.050	mg/l	1	Analyst: ymt 03/04/18 13:51	
Hexavalent Chromium by IC						
Method: EPA 218.6 Chromium 6+	Batch ID: W8C0541 Instr: LC13 0.29	Prepared: 03/09/18 10:45 0.10	ug/l	5	Analyst: dil 03/09/18 17:12	
Chromium 6+, Dissolved	0.27	0.10	ug/l	5	03/09/18 17:24	
Hydrocarbons by GC/FID						
Method: EPA 8015D Diesel Range Organics	Batch ID: W8C0424 Instr: GC04 1.3	Prepared: 03/07/18 16:53 0.10	mg/l	1	Analyst: cam 03/14/18 12:20	
Oil Range Organics	1.4	0.50	mg/l	1	03/14/18 12:20	
Surrogate(s) n-Tetracosane	115% Conc: 0.288	64-155			03/14/18 12:20	
Mercury - Low Level by CVAFS						
Method: EPA 1631E Mercury, Dissolved	Batch ID: W8C0375 Instr: Inst 7.3	Prepared: 03/02/18 18:39 0.50	ng/l	1	Analyst: aln 03/08/18 11:37	
Mercury, Total	12	2.5	ng/l	5	03/08/18 11:37	
Metals by EPA 200 Series Methods						
Method: EPA 200.7 Calcium Hardness as CaCO3	Batch ID: [CALC] Instr: [CALC] 15	Prepared: 03/13/18 17:52 0.250	mg/l	1	Analyst: JCK 03/19/18 18:29	

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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:

04/16/2018 15:32

Project Manager: Edmond G. Suher

Sample Results

(Continued)

Sample: BDW-027A

Sampled: 03/02/18 16:30 by ES/TM

8C02116-03 (Water)

(Continued)

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

Method: EPA 200.7	Batch ID: W8C0755	Instr: ICP03	Prepared: 03/13/18 17:52		Analyst: JCK
Calcium, Total	6.03	0.100	mg/l	1	03/19/18 18:29

Method: EPA 200.8	Batch ID: W8C0756	Instr: ICPMS04	Prepared: 03/13/18 17:56			Analyst: rrl
Aluminum, Dissolved	28	5.0	ug/l	1	03/20/18 14:51	
Aluminum, Total	840	5.0	ug/l	1	03/20/18 14:55	
Antimony, Dissolved	1.2	0.50	ug/l	1	03/20/18 14:51	
Antimony, Total	2.2	0.50	ug/l	1	03/20/18 14:55	
Arsenic, Dissolved	0.60	0.40	ug/l	1	03/20/18 14:51	
Arsenic, Total	1.1	0.40	ug/l	1	03/20/18 14:55	
Cadmium, Dissolved	ND	0.10	ug/l	1	03/20/18 14:51	
Cadmium, Total	ND	0.10	ug/l	1	03/20/18 14:55	
Chromium, Dissolved	0.31	0.20	ug/l	1	03/20/18 14:51	
Chromium, Total	2.5	0.20	ug/l	1	03/20/18 14:55	
Copper, Dissolved	8.4	0.50	ug/l	1	03/20/18 14:51	
Copper, Total	18	0.50	ug/l	1	03/20/18 14:55	
Iron, Dissolved	25	20	ug/l	1	03/20/18 14:51	
Iron, Total	1300	20	ug/l	1	03/20/18 14:55	
Lead, Dissolved	ND	0.20	ug/l	1	03/20/18 14:51	
Lead, Total	4.9	0.20	ug/l	1	03/20/18 14:55	
Nickel, Dissolved	1.1	0.80	ug/l	1	03/20/18 14:51	
Nickel, Total	8.4	0.80	ug/l	1	03/20/18 14:55	
Zinc, Dissolved	90	5.0	ug/l	1	03/20/18 14:51	
Zinc, Total	170	5.0	ug/l	1	03/20/18 14:55	

Microbiological Parameters by Standard Methods

Method: Enterolert	Batch ID: W8D0383	Instr: Inst	Prepared: 03/02/18 19:00	Analyst: kvm
Enterococcus		820	10 MPN/100ml	10 03/03/18 21:15
Method: SM 9221B	Batch ID: W8D0464	Instr: Inst	Prepared: 03/02/18 19:00	Analyst: kvm
Total Coliform		24000	18 MPN/100ml	10 03/31/18 15:06
Method: SM 9221E	Batch ID: W8D0464	Instr: Inst	Prepared: 03/02/18 19:00	Analyst: kvm
Fecal Coliform		1100	18 MPN/100ml	10 03/30/18 16:11
Method: SM 9221F	Batch ID: W8D0464	Instr: Inst	Prepared: 03/02/18 19:00	Analyst: kvm
E. coli		680	18 MPN/100ml	10 03/30/18 16:11

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

Method: EPA 625.1	Batch ID: W8C0255	Instr: GCMS15	Prepared: 03/06/18 08:27			Analyst: EFC
Acenaphthene	ND	25	ng/l	1	03/07/18 23:59	M-02
Acenaphthylene	ND	25	ng/l	1	03/07/18 23:59	M-02
Anthracene	ND	25	ng/l	1	03/07/18 23:59	M-02

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

Project Number: Irwindale SW Outfall Mon.

Project Manager: Edmond G. Suher

Reported:
04/16/2018 15:32

Sample Results

(Continued)

Sample: BDW-027A
8C02116-03 (Water)

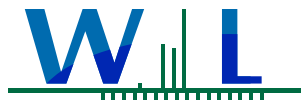
Sampled: 03/02/18 16:30 by ES/TM
(Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Semivolatile Organics - Low Level by Tandem GC/MS/MS (Continued)						
Method: EPA 625.1	Batch ID: W8C0255	Instr: GCMS15	Prepared: 03/06/18 08:27	Analyst: EFC		
Benzo (a) anthracene	ND	25	ng/l	1	03/07/18 23:59	M-02
Benzo (a) pyrene	ND	25	ng/l	1	03/07/18 23:59	M-02
Benzo (b) fluoranthene	ND	25	ng/l	1	03/07/18 23:59	M-02
Benzo (g,h,i) perylene	ND	25	ng/l	1	03/07/18 23:59	M-02
Benzo (k) fluoranthene	ND	25	ng/l	1	03/07/18 23:59	M-02
Chrysene	ND	25	ng/l	1	03/07/18 23:59	M-02
Dibenzo (a,h) anthracene	ND	25	ng/l	1	03/07/18 23:59	M-02
Fluoranthene	ND	25	ng/l	1	03/07/18 23:59	M-02
Fluorene	ND	25	ng/l	1	03/07/18 23:59	M-02
Indeno (1,2,3-cd) pyrene	ND	25	ng/l	1	03/07/18 23:59	M-02
Naphthalene	ND	25	ng/l	1	03/07/18 23:59	M-02
Phenanthrene	ND	25	ng/l	1	03/07/18 23:59	M-02
Pyrene	ND	25	ng/l	1	03/07/18 23:59	M-02
<i>Surrogate(s)</i>						
1,3-Dimethyl-2-nitrobenzene	81% Conc: 403	50-150			03/07/18 23:59	M-02
Perylene-d12	74% Conc: 372	50-150			03/07/18 23:59	M-02

Sample: Trip Blank
8C02116-04 (Water)

Sampled: 03/02/18 0:00 by ES/TM

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Mercury - Low Level by CVAFS						
Method: EPA 1631E	Batch ID: W8C0375	Instr: Inst	Prepared: 03/02/18 18:39	Analyst: aln		
Mercury, Dissolved	ND	0.50	ng/l	1	03/08/18 11:37	
Mercury, Total	ND	0.50	ng/l	1	03/08/18 11:37	



WECK LABORATORIES, INC.

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Certificate of Analysis

FINAL REPORT

Project Number: Irwindale SW Outfall Mon.

Reported:

04/16/2018 15:32

Project Manager: Edmond G. Suher

Quality Control Results

Anions by IC, EPA Method 300.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W8C0120 - EPA 300.0										
Blank (W8C0120-BLK1)				Prepared: 03/02/18 Analyzed: 03/03/18						
Chloride, Total	ND	0.50	mg/l							
NO2+NO3 as N	ND	0.11	mg/l							B-07
Sulfate as SO4	ND	0.50	mg/l							
LCS (W8C0120-BS1)				Prepared: 03/02/18 Analyzed: 03/03/18						
Chloride, Total	9.86	0.50	mg/l	10.0		99	90-110			
NO2+NO3 as N	3.95	0.11	mg/l	4.04		98	90-110			
Sulfate as SO4	9.88	0.50	mg/l	10.0		98	90-110			
Matrix Spike (W8C0120-MS1)				Source: 8C02076-03 Prepared: 03/02/18 Analyzed: 03/03/18						
Chloride, Total	149	5.0	mg/l	100	48.8	100	76-118			
NO2+NO3 as N	51.2	1.1	mg/l	40.4	10.8	100	84-115			
Sulfate as SO4	190	5.0	mg/l	100	84.6	104	78-111			
Matrix Spike (W8C0120-MS2)				Source: 8C02079-01 Prepared: 03/02/18 Analyzed: 03/03/18						
Chloride, Total	107	5.0	mg/l	100	5.00	102	76-118			
NO2+NO3 as N	42.4	1.1	mg/l	40.4	1.12	102	84-115			
Sulfate as SO4	107	5.0	mg/l	100	3.20	103	78-111			
Matrix Spike Dup (W8C0120-MSD1)				Source: 8C02076-03 Prepared: 03/02/18 Analyzed: 03/03/18						
Chloride, Total	149	5.0	mg/l	100	48.8	100	76-118	0.3	20	
NO2+NO3 as N	51.7	1.1	mg/l	40.4	10.8	101	84-115	0.9	20	
Sulfate as SO4	191	5.0	mg/l	100	84.6	106	78-111	0.6	20	
Matrix Spike Dup (W8C0120-MSD2)				Source: 8C02079-01 Prepared: 03/02/18 Analyzed: 03/03/18						
Chloride, Total	108	5.0	mg/l	100	5.00	103	76-118	0.3	20	
NO2+NO3 as N	42.3	1.1	mg/l	40.4	1.12	102	84-115	0.2	20	
Sulfate as SO4	107	5.0	mg/l	100	3.20	104	78-111	0.3	20	



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Project Manager: Edmond G. Suher

Quality Control Results

(Continued)

Chlorinated Acids Herbicides by GC/ECD

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W8C0259 - EPA 515.3										
Blank (W8C0259-BLK1)				Prepared: 03/06/18 Analyzed: 03/13/18						
2,4,5-T	ND	0.20	ug/l							
2,4,5-TP (Silvex)	ND	0.20	ug/l							
2,4-D	ND	0.40	ug/l							
2,4-DB	ND	2.0	ug/l							
3,5-Dichlorobenzoic acid	ND	1.0	ug/l							
Acifluorfen	ND	0.40	ug/l							
Bentazon	ND	2.0	ug/l							
Dalapon	ND	0.40	ug/l							
DCPA	ND	0.10	ug/l							
Dicamba	ND	0.60	ug/l							
Dichloroprop	ND	0.30	ug/l							
Dinoseb	ND	0.40	ug/l							
Pentachlorophenol	ND	0.20	ug/l							
Picloram	ND	0.60	ug/l							
<i>Surrogate(s)</i>										
2,4-DCAA		11.3	ug/l	10.0		113	70-130			
LCS (W8C0259-BS1)				Prepared: 03/06/18 Analyzed: 03/13/18						
2,4,5-T	4.42	0.20	ug/l	4.00		111	70-130			
2,4,5-TP (Silvex)	4.31	0.20	ug/l	4.00		108	70-130			
2,4-D	9.00	0.40	ug/l	8.00		113	70-130			
2,4-DB	17.1	2.0	ug/l	16.0		107	70-130			
3,5-Dichlorobenzoic acid	8.67	1.0	ug/l	8.00		108	70-130			
Acifluorfen	4.47	0.40	ug/l	4.00		112	70-130			
Bentazon	16.5	2.0	ug/l	16.0		103	70-130			
Dalapon	8.99	0.40	ug/l	8.00		112	70-130			
DCPA	4.36	0.10	ug/l	4.00		109	70-130			
Dicamba	8.74	0.60	ug/l	8.00		109	70-130			
Dichloroprop	8.69	0.30	ug/l	8.00		109	70-130			
Dinoseb	4.59	0.40	ug/l	4.00		115	70-130			
Pentachlorophenol	4.18	0.20	ug/l	4.00		105	70-130			
Picloram	4.56	0.60	ug/l	4.00		114	70-130			
<i>Surrogate(s)</i>										
2,4-DCAA		11.7	ug/l	10.0		117	70-130			
Matrix Spike (W8C0259-MS1)				Source: 8C02008-01 Prepared: 03/06/18 Analyzed: 03/13/18						
2,4,5-T	4.56	0.20	ug/l	4.00	ND	114	70-130			
2,4,5-TP (Silvex)	4.66	0.20	ug/l	4.00	ND	117	70-130			
2,4-D	9.08	0.40	ug/l	8.00	ND	114	70-130			



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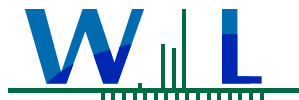
Project Manager: Edmond G. Suher

Quality Control Results

(Continued)

Chlorinated Acids Herbicides by GC/ECD (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W8C0259 - EPA 515.3 (Continued)										
Matrix Spike (W8C0259-MS1)			Source: 8C02008-01		Prepared: 03/06/18 Analyzed: 03/13/18					
2,4-DB	17.7	2.0	ug/l	16.0	ND	110	70-130			
3,5-Dichlorobenzoic acid	8.53	1.0	ug/l	8.00	ND	107	70-130			
Acifluorfen	4.60	0.40	ug/l	4.00	ND	115	70-130			
Bentazon	17.1	2.0	ug/l	16.0	ND	107	70-130			
Dalapon	8.55	0.40	ug/l	8.00	ND	107	70-130			
DCPA	4.46	0.10	ug/l	4.00	ND	111	70-130			
Dicamba	8.83	0.60	ug/l	8.00	ND	110	70-130			
Dichloroprop	8.80	0.30	ug/l	8.00	ND	110	70-130			
Dinoseb	4.61	0.40	ug/l	4.00	ND	115	70-130			
Pentachlorophenol	4.22	0.20	ug/l	4.00	ND	106	70-130			
Picloram	4.50	0.60	ug/l	4.00	ND	112	70-130			
<i>Surrogate(s)</i>										
2,4-DCAA		11.3	ug/l	10.0		113	70-130			
Matrix Spike (W8C0259-MS2)			Source: 8C02079-01		Prepared: 03/06/18 Analyzed: 03/13/18					
2,4,5-T	3.49	0.20	ug/l	4.00	ND	87	70-130			
2,4,5-TP (Silvex)	4.48	0.20	ug/l	4.00	ND	112	70-130			
2,4-D	9.61	0.40	ug/l	8.00	ND	120	70-130			
2,4-DB	19.0	2.0	ug/l	16.0	ND	119	70-130			
3,5-Dichlorobenzoic acid	8.44	1.0	ug/l	8.00	ND	105	70-130			
Acifluorfen	4.20	0.40	ug/l	4.00	ND	105	70-130			
Bentazon	19.0	2.0	ug/l	16.0	ND	119	70-130			
Dalapon	9.10	0.40	ug/l	8.00	ND	114	70-130			
DCPA	3.82	0.10	ug/l	4.00	ND	96	70-130			
Dicamba	8.52	0.60	ug/l	8.00	ND	107	70-130			
Dichloroprop	9.73	0.30	ug/l	8.00	ND	122	70-130			
Dinoseb	4.46	0.40	ug/l	4.00	ND	112	70-130			
Pentachlorophenol	3.94	0.20	ug/l	4.00	0.262	92	70-130			
Picloram	3.75	0.60	ug/l	4.00	ND	94	70-130			
<i>Surrogate(s)</i>										
2,4-DCAA		11.8	ug/l	10.0		118	70-130			
Matrix Spike Dup (W8C0259-MSD1)			Source: 8C02008-01		Prepared: 03/06/18 Analyzed: 03/13/18					
2,4,5-T	4.50	0.20	ug/l	4.00	ND	112	70-130	1	30	
2,4,5-TP (Silvex)	4.70	0.20	ug/l	4.00	ND	117	70-130	0.8	30	
2,4-D	9.01	0.40	ug/l	8.00	ND	113	70-130	0.8	30	
2,4-DB	17.4	2.0	ug/l	16.0	ND	109	70-130	1	30	
3,5-Dichlorobenzoic acid	8.53	1.0	ug/l	8.00	ND	107	70-130	0	30	
Acifluorfen	4.48	0.40	ug/l	4.00	ND	112	70-130	3	30	



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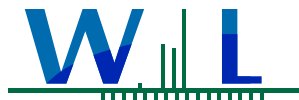
Project Manager: Edmond G. Suher

Quality Control Results

(Continued)

Chlorinated Acids Herbicides by GC/ECD (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W8C0259 - EPA 515.3 (Continued)										
Matrix Spike Dup (W8C0259-MSD1)			Source: 8C02008-01		Prepared: 03/06/18 Analyzed: 03/13/18					
Bentazon	18.3	2.0	ug/l	16.0	ND	114	70-130	7	30	
Dalapon	8.67	0.40	ug/l	8.00	ND	108	70-130	1	30	
DCPA	4.44	0.10	ug/l	4.00	ND	111	70-130	0.5	30	
Dicamba	8.87	0.60	ug/l	8.00	ND	111	70-130	0.5	30	
Dichloroprop	8.64	0.30	ug/l	8.00	ND	108	70-130	2	30	
Dinoseb	4.54	0.40	ug/l	4.00	ND	114	70-130	1	30	
Pentachlorophenol	4.19	0.20	ug/l	4.00	ND	105	70-130	0.8	30	
Picloram	4.42	0.60	ug/l	4.00	ND	110	70-130	2	30	
<i>Surrogate(s)</i>										
2,4-DCAA		11.2	ug/l	10.0		112	70-130			
Matrix Spike Dup (W8C0259-MSD2)			Source: 8C02079-01		Prepared: 03/06/18 Analyzed: 03/13/18					
2,4,5-T	3.50	0.20	ug/l	4.00	ND	88	70-130	0.3	30	
2,4,5-TP (Silvex)	4.13	0.20	ug/l	4.00	ND	103	70-130	8	30	
2,4-D	9.09	0.40	ug/l	8.00	ND	114	70-130	6	30	
2,4-DB	17.2	2.0	ug/l	16.0	ND	107	70-130	10	30	
3,5-Dichlorobenzoic acid	8.14	1.0	ug/l	8.00	ND	102	70-130	4	30	
Acifluorfen	4.08	0.40	ug/l	4.00	ND	102	70-130	3	30	
Bentazon	18.3	2.0	ug/l	16.0	ND	115	70-130	4	30	
Dalapon	9.05	0.40	ug/l	8.00	ND	113	70-130	0.6	30	
DCPA	3.68	0.10	ug/l	4.00	ND	92	70-130	4	30	
Dicamba	8.32	0.60	ug/l	8.00	ND	104	70-130	2	30	
Dichloroprop	8.34	0.30	ug/l	8.00	ND	104	70-130	15	30	
Dinoseb	4.07	0.40	ug/l	4.00	ND	102	70-130	9	30	
Pentachlorophenol	3.69	0.20	ug/l	4.00	0.262	86	70-130	7	30	
Picloram	3.60	0.60	ug/l	4.00	ND	90	70-130	4	30	
<i>Surrogate(s)</i>										
2,4-DCAA		10.7	ug/l	10.0		107	70-130			



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Quality Control Results

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

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W8C0106 - SM 2540D										
Blank (W8C0106-BLK1)				Prepared: 03/02/18 Analyzed: 03/05/18						
Total Suspended Solids	ND	5	mg/l							
LCS (W8C0106-BS1)				Prepared: 03/02/18 Analyzed: 03/05/18						
Total Suspended Solids	50.0	5	mg/l	54.4		92	90-110			
Duplicate (W8C0106-DUP1)				Source: 8B27112-02 Prepared: 03/02/18 Analyzed: 03/05/18						
Total Suspended Solids	927	5	mg/l		963			4	20	
Duplicate (W8C0106-DUP2)				Source: 8C02037-01 Prepared: 03/02/18 Analyzed: 03/05/18						
Total Suspended Solids	2.00	5	mg/l		3.00			40	20	R-03
Batch: W8C0107 - EPA 160.4										
Blank (W8C0107-BLK1)				Prepared: 03/02/18 Analyzed: 03/05/18						
Volatile Suspended Solids	ND	5.0	mg/l							
LCS (W8C0107-BS1)				Prepared: 03/02/18 Analyzed: 03/05/18						
Volatile Suspended Solids	37	5.0	mg/l	38.6		96	90-110			
Duplicate (W8C0107-DUP1)				Source: 8B27112-02 Prepared: 03/02/18 Analyzed: 03/05/18						
Volatile Suspended Solids	180	5.0	mg/l		170			3	15	
Duplicate (W8C0107-DUP2)				Source: 8C02037-01 Prepared: 03/02/18 Analyzed: 03/05/18						
Volatile Suspended Solids	ND	5.0	mg/l		ND				15	
Batch: W8C0132 - EPA 180.1										
Blank (W8C0132-BLK1)				Prepared & Analyzed: 03/02/18						
Turbidity	ND	0.10	NTU							
LCS (W8C0132-BS1)				Prepared & Analyzed: 03/02/18						
Turbidity	6.84	0.10	NTU	6.99		98	90-110			
Duplicate (W8C0132-DUP1)				Source: 8C02033-02 Prepared & Analyzed: 03/02/18						
Turbidity	1.45	0.10	NTU		1.43			1	10	
Batch: W8C0154 - SM 5210B										
Blank (W8C0154-BLK1)				Prepared: 03/04/18 Analyzed: 03/09/18						
Biochemical Oxygen Demand	ND	2.0	mg/l							
Blank (W8C0154-BLK2)				Prepared: 03/04/18 Analyzed: 03/09/18						
Biochemical Oxygen Demand	ND	2.0	mg/l							
LCS (W8C0154-BS1)				Prepared: 03/04/18 Analyzed: 03/09/18						
Biochemical Oxygen Demand	173	2.0	mg/l	198		87	85-115			
Duplicate (W8C0154-DUP1)				Source: 8C03025-03 Prepared: 03/04/18 Analyzed: 03/09/18						
Biochemical Oxygen Demand	ND	2.0	mg/l		ND				20	
Batch: W8C0156 - SM 5540C										
Blank (W8C0156-BLK1)				Prepared & Analyzed: 03/04/18						
MBAS	ND	0.050	mg/l							
LCS (W8C0156-BS1)				Prepared & Analyzed: 03/04/18						

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Quality Control Results

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

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W8C0156 - SM 5540C (Continued)										
LCS (W8C0156-BS1)				Prepared & Analyzed: 03/04/18						
MBAS	0.199	0.050	mg/l	0.200		100	82-115			
LCS (W8C0156-BS2)				Prepared & Analyzed: 03/04/18						
MBAS	0.216	0.050	mg/l	0.200		108	82-115			
Matrix Spike (W8C0156-MS1)				Prepared & Analyzed: 03/04/18						
MBAS	0.194	0.050	mg/l	0.200	ND	97	74-123			
Matrix Spike Dup (W8C0156-MSD1)				Prepared & Analyzed: 03/04/18						
MBAS	0.216	0.050	mg/l	0.200	ND	108	74-123	11	20	
Batch: W8C0200 - SM 2320B										
Blank (W8C0200-BLK1)				Prepared & Analyzed: 03/05/18						
Alkalinity as CaCO3	ND	2.0	mg/l							
LCS (W8C0200-BS1)				Prepared & Analyzed: 03/05/18						
Alkalinity as CaCO3	243	2.0	mg/l	250		97	94-108			
Duplicate (W8C0200-DUP1)				Prepared & Analyzed: 03/05/18						
Alkalinity as CaCO3	24.8	2.0	mg/l		24.0			3	15	
Batch: W8C0216 - EPA 365.1										
Blank (W8C0216-BLK1)				Prepared: 03/05/18 Analyzed: 03/08/18						
Phosphorus as P, Total	ND	0.010	mg/l							
LCS (W8C0216-BS1)				Prepared: 03/05/18 Analyzed: 03/08/18						
Phosphorus as P, Total	0.0476	0.010	mg/l	0.0500		95	90-110			
Matrix Spike (W8C0216-MS1)				Prepared: 03/05/18 Analyzed: 03/08/18						
Phosphorus as P, Total	0.274	0.020	mg/l	0.0500	0.222	104	90-110			
Matrix Spike (W8C0216-MS2)				Prepared: 03/05/18 Analyzed: 03/08/18						
Phosphorus as P, Total	0.308	0.020	mg/l	0.0500	0.252	112	90-110			MS-02
Matrix Spike Dup (W8C0216-MSD1)				Prepared: 03/05/18 Analyzed: 03/08/18						
Phosphorus as P, Total	0.344	0.020	mg/l	0.100	0.222	122	90-110	23	20	MS-02
Matrix Spike Dup (W8C0216-MSD2)				Prepared: 03/05/18 Analyzed: 03/08/18						
Phosphorus as P, Total	0.304	0.020	mg/l	0.0500	0.252	104	90-110	1	20	
Batch: W8C0335 - EPA 365.3										
Blank (W8C0335-BLK1)				Prepared: 03/06/18 Analyzed: 03/12/18						
Phosphorus, Dissolved	ND	0.010	mg/l							
LCS (W8C0335-BS1)				Prepared: 03/06/18 Analyzed: 03/12/18						
Phosphorus, Dissolved	0.201	0.010	mg/l	0.200		100	90-110			
Matrix Spike (W8C0335-MS1)				Prepared: 03/06/18 Analyzed: 03/12/18						
Phosphorus, Dissolved	0.396	0.010	mg/l	0.200	0.189	104	90-110			
Matrix Spike Dup (W8C0335-MSD1)				Prepared: 03/06/18 Analyzed: 03/12/18						
Phosphorus, Dissolved	0.392	0.010	mg/l	0.200	0.189	102	90-110	1	20	

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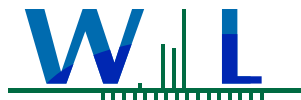
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Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W8C0370 - SM 5310B										
Blank (W8C0370-BLK1)				Prepared & Analyzed: 03/07/18						
Total Organic Carbon (TOC)	ND	0.10	mg/l							
LCS (W8C0370-BS1)				Prepared & Analyzed: 03/07/18						
Total Organic Carbon (TOC)	1.05	0.10	mg/l	1.00		105	85-115			
Matrix Spike (W8C0370-MS1)				Prepared & Analyzed: 03/07/18						
Total Organic Carbon (TOC)	22.7	0.10	mg/l	5.00	18.6	82	76-115			
Matrix Spike Dup (W8C0370-MSD1)				Prepared & Analyzed: 03/07/18						
Total Organic Carbon (TOC)	23.4	0.10	mg/l	5.00	18.6	97	76-115	3	20	
Batch: W8C0392 - SM 2510B										
Blank (W8C0392-BLK1)				Prepared & Analyzed: 03/07/18						
Specific Conductance (EC)	ND	2.0	umhos/cm							
LCS (W8C0392-BS1)				Prepared & Analyzed: 03/07/18						
Specific Conductance (EC)	192	2.0	umhos/cm	200		96	95-105			
Duplicate (W8C0392-DUP1)				Prepared & Analyzed: 03/07/18						
Specific Conductance (EC)	152	2.0	umhos/cm		152			0.1	5	
Batch: W8C0427 - SM 2540C										
Blank (W8C0427-BLK1)				Prepared: 03/07/18 Analyzed: 03/08/18						
Total Dissolved Solids	ND	10	mg/l							
LCS (W8C0427-BS1)				Prepared: 03/07/18 Analyzed: 03/08/18						
Total Dissolved Solids	833	10	mg/l	824		101	96-102			
Duplicate (W8C0427-DUP1)				Prepared: 03/07/18 Analyzed: 03/08/18						
Total Dissolved Solids	2040	10	mg/l		2090			2	10	
Duplicate (W8C0427-DUP2)				Prepared: 03/07/18 Analyzed: 03/08/18						
Total Dissolved Solids	1580	10	mg/l		1570			0.3	10	
Batch: W8C0461 - SM 5310B										
Blank (W8C0461-BLK1)				Prepared & Analyzed: 03/08/18						
Total Organic Carbon (TOC)	ND	0.10	mg/l							
LCS (W8C0461-BS1)				Prepared & Analyzed: 03/08/18						
Total Organic Carbon (TOC)	1.01	0.10	mg/l	1.00		101	85-115			
Matrix Spike (W8C0461-MS1)				Prepared & Analyzed: 03/08/18						
Total Organic Carbon (TOC)	5.34	0.10	mg/l	5.00	0.122	104	76-115			
Matrix Spike Dup (W8C0461-MSD1)				Prepared & Analyzed: 03/08/18						
Total Organic Carbon (TOC)	5.26	0.10	mg/l	5.00	0.122	103	76-115	1	20	
Batch: W8C0480 - EPA 410.4										
Blank (W8C0480-BLK1)				Prepared: 03/08/18 Analyzed: 03/13/18						
Chemical Oxygen Demand	ND	5.0	mg/l							
LCS (W8C0480-BS1)				Prepared: 03/08/18 Analyzed: 03/13/18						

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Quality Control Results

(Continued)

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

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W8C0480 - EPA 410.4 (Continued)										
LCS (W8C0480-BS1)				Prepared: 03/08/18 Analyzed: 03/13/18						
Chemical Oxygen Demand	92.6	5.0	mg/l	100		93	90-110			
Duplicate (W8C0480-DUP1)				Source: 8C02036-01 Prepared: 03/08/18 Analyzed: 03/13/18						
Chemical Oxygen Demand	5980	50	mg/l		6100			2	15	
Matrix Spike (W8C0480-MS1)				Source: 8C02053-02 Prepared: 03/08/18 Analyzed: 03/13/18						
Chemical Oxygen Demand	212	20	mg/l	200	17.6	97	90-110			
Matrix Spike (W8C0480-MS2)				Source: 8C05033-01 Prepared: 03/08/18 Analyzed: 03/13/18						
Chemical Oxygen Demand	279	20	mg/l	200	47.9	116	90-110			MS-01
Matrix Spike Dup (W8C0480-MSD1)				Source: 8C02053-02 Prepared: 03/08/18 Analyzed: 03/13/18						
Chemical Oxygen Demand	221	20	mg/l	200	17.6	102	90-110	4	15	
Matrix Spike Dup (W8C0480-MSD2)				Source: 8C05033-01 Prepared: 03/08/18 Analyzed: 03/13/18						
Chemical Oxygen Demand	257	20	mg/l	200	47.9	104	90-110	8	15	
Batch: W8C0625 - EPA 350.1										
Blank (W8C0625-BLK1)				Prepared: 03/12/18 Analyzed: 03/14/18						
Ammonia as N	ND	0.10	mg/l							
Blank (W8C0625-BLK2)				Prepared: 03/12/18 Analyzed: 03/14/18						
Ammonia as N	ND	0.10	mg/l							
LCS (W8C0625-BS1)				Prepared: 03/12/18 Analyzed: 03/14/18						
Ammonia as N	0.235	0.10	mg/l	0.250		94	90-110			
LCS (W8C0625-BS2)				Prepared: 03/12/18 Analyzed: 03/14/18						
Ammonia as N	0.232	0.10	mg/l	0.250		93	90-110			
LCS Dup (W8C0625-BSD1)				Prepared: 03/12/18 Analyzed: 03/14/18						
Ammonia as N	0.240	0.10	mg/l	0.250		96	90-110	2	15	
Matrix Spike (W8C0625-MS1)				Source: 8C02149-01 Prepared: 03/12/18 Analyzed: 03/14/18						
Ammonia as N	2.75	0.50	mg/l	1.25	1.50	100	90-110			
Matrix Spike (W8C0625-MS2)				Source: 8C02150-01 Prepared: 03/12/18 Analyzed: 03/14/18						
Ammonia as N	0.615	0.10	mg/l	0.250	0.379	94	90-110			
Matrix Spike Dup (W8C0625-MSD1)				Source: 8C02149-01 Prepared: 03/12/18 Analyzed: 03/14/18						
Ammonia as N	2.69	0.50	mg/l	1.25	1.50	95	90-110	2	15	
Matrix Spike Dup (W8C0625-MSD2)				Source: 8C02150-01 Prepared: 03/12/18 Analyzed: 03/14/18						
Ammonia as N	0.606	0.10	mg/l	0.250	0.379	91	90-110	2	15	
Batch: W8C0651 - EPA 365.1										
Blank (W8C0651-BLK1)				Prepared: 03/12/18 Analyzed: 03/16/18						
Phosphorus as P, Total	ND	0.010	mg/l							
LCS (W8C0651-BS1)				Prepared: 03/12/18 Analyzed: 03/16/18						
Phosphorus as P, Total	0.0500	0.010	mg/l	0.0500		100	90-110			
Matrix Spike (W8C0651-MS1)				Source: 8C03001-09 Prepared: 03/12/18 Analyzed: 03/16/18						

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Project Manager: Edmond G. Suher

Quality Control Results

(Continued)

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

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W8C0651 - EPA 365.1 (Continued)										
Matrix Spike (W8C0651-MS1)	Source: 8C03001-09			Prepared: 03/12/18		Analyzed: 03/16/18				
Phosphorus as P, Total	0.576	0.040	mg/l	0.100	0.504	72	90-110			MS-02
Matrix Spike (W8C0651-MS2)	Source: 8C03024-02			Prepared: 03/12/18		Analyzed: 03/16/18				
Phosphorus as P, Total	0.885	0.050	mg/l	0.250	0.645	96	90-110			
Matrix Spike Dup (W8C0651-MSD1)	Source: 8C03001-09			Prepared: 03/12/18		Analyzed: 03/16/18				
Phosphorus as P, Total	0.596	0.040	mg/l	0.100	0.504	92	90-110	3	20	
Matrix Spike Dup (W8C0651-MSD2)	Source: 8C03024-02			Prepared: 03/12/18		Analyzed: 03/16/18				
Phosphorus as P, Total	0.895	0.050	mg/l	0.250	0.645	100	90-110	1	20	
Batch: W8C0798 - EPA 351.2										
Blank (W8C0798-BLK1)				Prepared: 03/14/18		Analyzed: 03/16/18				
TKN	ND	0.10	mg/l							
Blank (W8C0798-BLK2)				Prepared: 03/14/18		Analyzed: 03/16/18				
TKN	ND	0.10	mg/l							
LCS (W8C0798-BS1)				Prepared: 03/14/18		Analyzed: 03/16/18				
TKN	1.08	0.10	mg/l	1.00		108	90-110			
LCS (W8C0798-BS2)				Prepared: 03/14/18		Analyzed: 03/16/18				
TKN	1.08	0.10	mg/l	1.00		108	90-110			
Matrix Spike (W8C0798-MS1)	Source: 8C03024-02			Prepared: 03/14/18		Analyzed: 03/16/18				
TKN	7.90	0.40	mg/l	4.00	3.42	112	90-110			
Matrix Spike (W8C0798-MS2)	Source: 8C12143-03			Prepared: 03/14/18		Analyzed: 03/16/18				
TKN	1.30	0.10	mg/l	1.00	0.190	111	90-110			MS-01
Matrix Spike Dup (W8C0798-MSD1)	Source: 8C03024-02			Prepared: 03/14/18		Analyzed: 03/16/18				
TKN	7.45	0.40	mg/l	4.00	3.42	101	90-110	6	10	
Matrix Spike Dup (W8C0798-MSD2)	Source: 8C12143-03			Prepared: 03/14/18		Analyzed: 03/16/18				
TKN	1.18	0.10	mg/l	1.00	0.190	99	90-110	9	10	
Batch: W8C0848 - EPA 335.4										
Blank (W8C0848-BLK1)				Prepared: 03/14/18		Analyzed: 03/16/18				
Cyanide, Total	ND	2.5	ug/l							
LCS (W8C0848-BS1)				Prepared: 03/14/18		Analyzed: 03/16/18				
Cyanide, Total	47.4	2.5	ug/l	50.0		95	90-110			
Matrix Spike (W8C0848-MS1)	Source: 8C02116-03			Prepared: 03/14/18		Analyzed: 03/16/18				
Cyanide, Total	84.0	2.5	ug/l	100	ND	84	90-110			MS-01
Matrix Spike Dup (W8C0848-MSD1)	Source: 8C02116-03			Prepared: 03/14/18		Analyzed: 03/16/18				
Cyanide, Total	95.5	2.5	ug/l	100	ND	96	90-110	13	20	
Batch: W8C1005 - EPA 420.4										
Blank (W8C1005-BLK1)				Prepared: 03/18/18		Analyzed: 03/20/18				
Phenolics	ND	0.010	mg/l							

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Quality Control Results

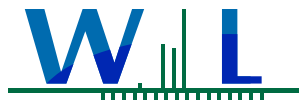
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Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W8C1005 - EPA 420.4 (Continued)										
LCS (W8C1005-BS1)				Prepared: 03/18/18 Analyzed: 03/20/18						
Phenolics	0.103	0.010	mg/l	0.100		103	90-110			
Matrix Spike (W8C1005-MS1)				Source: 8C02116-02 Prepared: 03/18/18 Analyzed: 03/20/18						
Phenolics	0.263	0.010	mg/l	0.250	0.107	62	90-110			MS-01
Matrix Spike (W8C1005-MS2)				Source: 8C02116-02 Prepared: 03/18/18 Analyzed: 03/20/18						
Phenolics	0.514	0.020	mg/l	0.500	0.107	81	90-110			MS-03
Matrix Spike Dup (W8C1005-MSD1)				Source: 8C02116-02 Prepared: 03/18/18 Analyzed: 03/20/18						
Phenolics	0.261	0.010	mg/l	0.250	0.107	62	90-110	0.8	20	MS-01
Matrix Spike Dup (W8C1005-MSD2)				Source: 8C02116-02 Prepared: 03/18/18 Analyzed: 03/20/18						
Phenolics	0.514	0.020	mg/l	0.500	0.107	81	90-110	0.007	20	MS-03

Hexavalent Chromium by IC

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W8C0541 - EPA 218.6										
Blank (W8C0541-BLK1)				Prepared & Analyzed: 03/09/18						
Chromium 6+	ND	0.020	ug/l							
Chromium 6+, Dissolved	ND	0.020	ug/l							
LCS (W8C0541-BS1)				Prepared & Analyzed: 03/09/18						
Chromium 6+	5.26	0.020	ug/l	5.00		105	90-110			
Chromium 6+, Dissolved	5.26	0.020	ug/l	5.00		105	90-110			
Matrix Spike (W8C0541-MS1)				Source: 8C02116-01 Prepared & Analyzed: 03/09/18						
Chromium 6+	26.6	0.10	ug/l	25.0	0.365	105	88-112			
Chromium 6+, Dissolved	26.6	0.10	ug/l	25.0	0.368	105	88-112			
Matrix Spike (W8C0541-MS2)				Source: 8C02116-02 Prepared & Analyzed: 03/09/18						
Chromium 6+	26.8	0.10	ug/l	25.0	0.297	106	88-112			
Chromium 6+, Dissolved	26.8	0.10	ug/l	25.0	0.250	106	88-112			
Matrix Spike Dup (W8C0541-MSD1)				Source: 8C02116-01 Prepared & Analyzed: 03/09/18						
Chromium 6+	26.5	0.10	ug/l	25.0	0.365	105	88-112	0.4	10	
Chromium 6+, Dissolved	26.5	0.10	ug/l	25.0	0.368	105	88-112	0.4	10	
Matrix Spike Dup (W8C0541-MSD2)				Source: 8C02116-02 Prepared & Analyzed: 03/09/18						
Chromium 6+	26.7	0.10	ug/l	25.0	0.297	106	88-112	0.3	10	
Chromium 6+, Dissolved	26.7	0.10	ug/l	25.0	0.250	106	88-112	0.3	10	



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Quality Control Results

(Continued)

Hydrocarbons by GC/FID

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W8C0424 - EPA 8015D										
Blank (W8C0424-BLK1)				Prepared: 03/07/18 Analyzed: 03/14/18						
Diesel Range Organics	ND	0.10	mg/l							
Oil Range Organics	ND	0.50	mg/l							
<i>Surrogate(s)</i>										
<i>n-Tetracosane</i>		0.289	mg/l	0.250		116	64-155			
LCS (W8C0424-BS1)				Prepared: 03/07/18 Analyzed: 03/14/18						
Diesel Range Organics	0.622	0.10	mg/l	0.500		124	56-136			
<i>Surrogate(s)</i>										
<i>n-Tetracosane</i>		0.301	mg/l	0.250		120	64-155			
LCS Dup (W8C0424-BSD1)				Prepared: 03/07/18 Analyzed: 03/14/18						
Diesel Range Organics	0.582	0.10	mg/l	0.500		116	56-136	7	25	
<i>Surrogate(s)</i>										
<i>n-Tetracosane</i>		0.300	mg/l	0.250		120	64-155			

Mercury - Low Level by CVAFS

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W8C0375 - EPA 1631E										
Blank (W8C0375-BLK1)				Prepared: 03/07/18 Analyzed: 03/08/18						
Mercury, Dissolved	ND	0.50	ng/l							
Mercury, Total	ND	0.50	ng/l							
LCS (W8C0375-BS1)				Prepared: 03/07/18 Analyzed: 03/08/18						
Mercury, Total	4.60	0.50	ng/l	5.00		92	85-115			
LCS Dup (W8C0375-BSD1)				Prepared: 03/07/18 Analyzed: 03/08/18						
Mercury, Total	4.70	0.50	ng/l	5.00		94	85-115	2	20	
Matrix Spike (W8C0375-MS1)				Source: 8C06008-01 Prepared: 03/07/18 Analyzed: 03/08/18						
Mercury, Total	4.89	0.50	ng/l	5.00	0.423	89	75-125			
Matrix Spike (W8C0375-MS2)				Source: 8C06009-01 Prepared: 03/07/18 Analyzed: 03/08/18						
Mercury, Total	5.21	0.50	ng/l	5.00	0.802	88	75-125			
Matrix Spike Dup (W8C0375-MSD1)				Source: 8C06008-01 Prepared: 03/07/18 Analyzed: 03/08/18						
Mercury, Total	4.83	0.50	ng/l	5.00	0.423	88	75-125	1	20	
Matrix Spike Dup (W8C0375-MSD2)				Source: 8C06009-01 Prepared: 03/07/18 Analyzed: 03/08/18						
Mercury, Total	5.10	0.50	ng/l	5.00	0.802	86	75-125	2	20	



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Quality Control Results

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Metals by EPA 200 Series Methods

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W8C0755 - EPA 200.7										
Blank (W8C0755-BLK1)				Prepared: 03/13/18 Analyzed: 03/19/18						
Calcium, Total	ND	0.100	mg/l							
LCS (W8C0755-BS1)				Prepared: 03/13/18 Analyzed: 03/19/18						
Calcium, Total	47.1	0.100	mg/l	50.2		94	85-115			
Matrix Spike (W8C0755-MS1)				Source: 8C02113-04 Prepared: 03/13/18 Analyzed: 03/19/18						
Calcium, Total	62.3	0.100	mg/l	50.2	16.5	91	70-130			
Matrix Spike Dup (W8C0755-MSD1)				Source: 8C02113-04 Prepared: 03/13/18 Analyzed: 03/19/18						
Calcium, Total	62.6	0.100	mg/l	50.2	16.5	92	70-130	0.5	30	
Batch: W8C0756 - EPA 200.8										
Blank (W8C0756-BLK1)				Prepared: 03/13/18 Analyzed: 03/20/18						
Aluminum, Dissolved	ND	5.0	ug/l							
Aluminum, Total	ND	5.0	ug/l							
Antimony, Dissolved	ND	0.50	ug/l							
Antimony, Total	ND	0.50	ug/l							
Arsenic, Dissolved	ND	0.40	ug/l							
Arsenic, Total	ND	0.40	ug/l							
Cadmium, Dissolved	ND	0.10	ug/l							
Cadmium, Total	ND	0.10	ug/l							
Chromium, Dissolved	ND	0.20	ug/l							
Chromium, Total	ND	0.20	ug/l							
Copper, Dissolved	ND	0.50	ug/l							
Copper, Total	ND	0.50	ug/l							
Iron, Dissolved	ND	20	ug/l							
Iron, Total	ND	20	ug/l							
Lead, Dissolved	ND	0.20	ug/l							
Lead, Total	ND	0.20	ug/l							
Nickel, Dissolved	ND	0.80	ug/l							
Nickel, Total	ND	0.80	ug/l							
Zinc, Dissolved	ND	5.0	ug/l							
Zinc, Total	ND	5.0	ug/l							
LCS (W8C0756-BS1)				Prepared: 03/13/18 Analyzed: 03/20/18						
Aluminum, Dissolved	47.3	5.0	ug/l	50.0		95	85-115			
Aluminum, Total	47.3	5.0	ug/l	50.0		95	85-115			
Antimony, Dissolved	49.8	0.50	ug/l	50.0		100	85-115			
Antimony, Total	49.8	0.50	ug/l	50.0		100	85-115			
Arsenic, Dissolved	49.3	0.40	ug/l	50.0		99	85-115			
Arsenic, Total	49.3	0.40	ug/l	50.0		99	85-115			
Cadmium, Dissolved	49.3	0.10	ug/l	50.0		99	85-115			

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Quality Control Results

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Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W8C0756 - EPA 200.8 (Continued)										
LCS (W8C0756-BS1)				Prepared: 03/13/18 Analyzed: 03/20/18						
Cadmium, Total	49.3	0.10	ug/l	50.0		99	85-115			
Chromium, Dissolved	48.5	0.20	ug/l	50.0		97	85-115			
Chromium, Total	48.5	0.20	ug/l	50.0		97	85-115			
Copper, Dissolved	49.6	0.50	ug/l	50.0		99	85-115			
Copper, Total	49.6	0.50	ug/l	50.0		99	85-115			
Iron, Dissolved	1090	20	ug/l	1050		104	85-115			
Iron, Total	1090	20	ug/l	1050		104	85-115			
Lead, Dissolved	49.1	0.20	ug/l	50.0		98	85-115			
Lead, Total	49.1	0.20	ug/l	50.0		98	85-115			
Nickel, Dissolved	49.0	0.80	ug/l	50.0		98	85-115			
Nickel, Total	49.0	0.80	ug/l	50.0		98	85-115			
Zinc, Dissolved	51.1	5.0	ug/l	50.0		102	85-115			
Zinc, Total	51.1	5.0	ug/l	50.0		102	85-115			
Matrix Spike (W8C0756-MS1)				Source: 8C02113-05 Prepared: 03/13/18 Analyzed: 03/20/18						
Aluminum, Total	1560	5.0	ug/l	50.0	1430	255	70-130			MS-02
Antimony, Total	49.6	0.50	ug/l	50.0	2.97	93	70-130			
Arsenic, Total	49.8	0.40	ug/l	50.0	1.82	96	70-130			
Cadmium, Total	48.7	0.10	ug/l	50.0	0.166	97	70-130			
Chromium, Total	52.0	0.20	ug/l	50.0	2.71	99	70-130			
Copper, Total	79.6	0.50	ug/l	50.0	31.4	96	70-130			
Iron, Total	2700	20	ug/l	1050	1540	110	70-130			
Lead, Total	62.4	0.20	ug/l	50.0	12.3	100	70-130			
Nickel, Total	54.6	0.80	ug/l	50.0	6.31	97	70-130			
Zinc, Total	162	5.0	ug/l	50.0	114	96	70-130			
Matrix Spike (W8C0756-MS2)				Source: 8C02113-06 Prepared: 03/13/18 Analyzed: 03/20/18						
Aluminum, Total	1190	5.0	ug/l	50.0	1130	119	70-130			
Antimony, Total	51.8	0.50	ug/l	50.0	5.18	93	70-130			
Arsenic, Total	51.8	0.40	ug/l	50.0	3.53	97	70-130			
Cadmium, Total	49.9	0.10	ug/l	50.0	0.221	99	70-130			
Chromium, Total	53.1	0.20	ug/l	50.0	3.90	98	70-130			
Copper, Total	104	0.50	ug/l	50.0	56.1	96	70-130			
Iron, Total	2730	20	ug/l	1050	1660	102	70-130			
Lead, Total	63.7	0.20	ug/l	50.0	12.4	103	70-130			
Nickel, Total	66.5	0.80	ug/l	50.0	18.2	97	70-130			
Zinc, Total	238	5.0	ug/l	50.0	193	91	70-130			
Matrix Spike Dup (W8C0756-MSD1)				Source: 8C02113-05 Prepared: 03/13/18 Analyzed: 03/20/18						
Aluminum, Total	1690	5.0	ug/l	50.0	1430	510	70-130	8	30	MS-02

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Quality Control Results

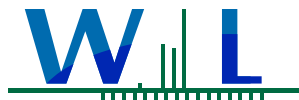
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Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W8C0756 - EPA 200.8 (Continued)										
Matrix Spike Dup (W8C0756-MSD1)			Source: 8C02113-05		Prepared: 03/13/18 Analyzed: 03/20/18					
Antimony, Total	51.4	0.50	ug/l	50.0	2.97	97	70-130	4	30	
Arsenic, Total	51.0	0.40	ug/l	50.0	1.82	98	70-130	2	30	
Cadmium, Total	50.3	0.10	ug/l	50.0	0.166	100	70-130	3	30	
Chromium, Total	53.2	0.20	ug/l	50.0	2.71	101	70-130	2	30	
Copper, Total	82.3	0.50	ug/l	50.0	31.4	102	70-130	3	30	
Iron, Total	2780	20	ug/l	1050	1540	118	70-130	3	30	
Lead, Total	65.0	0.20	ug/l	50.0	12.3	105	70-130	4	30	
Nickel, Total	56.4	0.80	ug/l	50.0	6.31	100	70-130	3	30	
Zinc, Total	166	5.0	ug/l	50.0	114	105	70-130	3	30	
Matrix Spike Dup (W8C0756-MSD2)			Source: 8C02113-06		Prepared: 03/13/18 Analyzed: 03/20/18					
Aluminum, Total	1240	5.0	ug/l	50.0	1130	215	70-130	4	30	MS-02
Antimony, Total	52.3	0.50	ug/l	50.0	5.18	94	70-130	1	30	
Arsenic, Total	52.4	0.40	ug/l	50.0	3.53	98	70-130	1	30	
Cadmium, Total	49.5	0.10	ug/l	50.0	0.221	99	70-130	0.8	30	
Chromium, Total	54.0	0.20	ug/l	50.0	3.90	100	70-130	2	30	
Copper, Total	106	0.50	ug/l	50.0	56.1	100	70-130	2	30	
Iron, Total	2810	20	ug/l	1050	1660	109	70-130	3	30	
Lead, Total	64.3	0.20	ug/l	50.0	12.4	104	70-130	0.9	30	
Nickel, Total	68.0	0.80	ug/l	50.0	18.2	100	70-130	2	30	
Zinc, Total	242	5.0	ug/l	50.0	193	99	70-130	2	30	

Microbiological Parameters by Standard Methods

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W8D0383 - Enterolert										
Blank (W8D0383-BLK1)			Prepared: 03/02/18 Analyzed: 03/03/18							
Enterococcus	ND	1.0	MPN/100ml							
Blank (W8D0383-BLK4)			Prepared: 03/26/18 Analyzed: 03/27/18							
Enterococcus	ND	1.0	MPN/100ml							
Batch: W8D0464 - SM 9221F										
Blank (W8D0464-BLK1)			Prepared: 03/02/18 Analyzed: 03/30/18							
E. coli	ND	1.8	MPN/100ml							
Fecal Coliform	ND	1.8	MPN/100ml							
Total Coliform	ND	1.8	MPN/100ml							



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Certificate of Analysis

FINAL REPORT

Project Number: Irwindale SW Outfall Mon.

Reported:

04/16/2018 15:32

Project Manager: Edmond G. Suher

Quality Control Results

(Continued)

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

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
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Batch: W8C0255 - EPA 625.1

Blank (W8C0255-BLK1)

Prepared: 03/06/18 Analyzed: 03/07/18

1-Methylnaphthalene	ND	5.0	ng/l
1-Methylphenanthrene	ND	5.0	ng/l
2,6-Dimethylnaphthalene	ND	5.0	ng/l
2-Methylnaphthalene	ND	5.0	ng/l
Acenaphthene	ND	5.0	ng/l
Acenaphthylene	ND	5.0	ng/l
Anthracene	ND	5.0	ng/l
Benzo (a) anthracene	ND	5.0	ng/l
Benzo (a) pyrene	ND	5.0	ng/l
Benzo (b) fluoranthene	ND	5.0	ng/l
Benzo (e) pyrene	ND	5.0	ng/l
Benzo (g,h,i) perylene	ND	5.0	ng/l
Benzo (k) fluoranthene	ND	5.0	ng/l
Biphenyl	ND	5.0	ng/l
Chrysene	ND	5.0	ng/l
Dibenzo (a,h) anthracene	ND	5.0	ng/l
Fluoranthene	ND	5.0	ng/l
Fluorene	ND	5.0	ng/l
Indeno (1,2,3-cd) pyrene	ND	5.0	ng/l
Naphthalene	ND	5.0	ng/l
Perylene	ND	5.0	ng/l
Phenanthrene	ND	5.0	ng/l
Pyrene	ND	5.0	ng/l

Surrogate(s)

1,3-Dimethyl-2-nitrobenzene	72.4	ng/l	100	72	50-150
Perylene-d12	68.5	ng/l	100	69	50-150

LCS (W8C0255-BS1)

Prepared: 03/06/18 Analyzed: 03/07/18

Acenaphthene	28.6	5.0	ng/l	50.0	57	50-150
Acenaphthylene	29.8	5.0	ng/l	50.0	60	50-150
Anthracene	27.1	5.0	ng/l	50.0	54	50-150
Benzo (a) anthracene	31.5	5.0	ng/l	50.0	63	50-150
Benzo (a) pyrene	34.2	5.0	ng/l	50.0	68	50-150
Benzo (b) fluoranthene	33.5	5.0	ng/l	50.0	67	50-150
Benzo (g,h,i) perylene	32.6	5.0	ng/l	50.0	65	50-150
Benzo (k) fluoranthene	33.1	5.0	ng/l	50.0	66	50-150
Chrysene	30.5	5.0	ng/l	50.0	61	50-150
Dibenzo (a,h) anthracene	31.4	5.0	ng/l	50.0	63	50-150



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04/16/2018 15:32

Project Manager: Edmond G. Suher

Quality Control Results

(Continued)

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

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W8C0255 - EPA 625.1 (Continued)										
LCS (W8C0255-BS1)				Prepared: 03/06/18 Analyzed: 03/07/18						
Fluoranthene	28.3	5.0	ng/l	50.0		57	50-150			
Fluorene	27.4	5.0	ng/l	50.0		55	50-150			
Indeno (1,2,3-cd) pyrene	34.4	5.0	ng/l	50.0		69	50-150			
Naphthalene	28.5	5.0	ng/l	50.0		57	50-150			
Phenanthrene	29.1	5.0	ng/l	50.0		58	50-150			
Pyrene	27.5	5.0	ng/l	50.0		55	50-150			
<i>Surrogate(s)</i>										
1,3-Dimethyl-2-nitrobenzene		75.6	ng/l	100		76	50-150			
Perylene-d12		69.3	ng/l	100		69	50-150			
LCS Dup (W8C0255-BSD1)				Prepared: 03/06/18 Analyzed: 03/07/18						
Acenaphthene	37.1	5.0	ng/l	50.0		74	50-150	26	30	
Acenaphthylene	36.4	5.0	ng/l	50.0		73	50-150	20	30	
Anthracene	36.3	5.0	ng/l	50.0		73	50-150	29	30	
Benzo (a) anthracene	38.6	5.0	ng/l	50.0		77	50-150	20	30	
Benzo (a) pyrene	40.5	5.0	ng/l	50.0		81	50-150	17	30	
Benzo (b) fluoranthene	39.3	5.0	ng/l	50.0		79	50-150	16	30	
Benzo (g,h,i) perylene	37.7	5.0	ng/l	50.0		75	50-150	15	30	
Benzo (k) fluoranthene	38.4	5.0	ng/l	50.0		77	50-150	15	30	
Chrysene	38.1	5.0	ng/l	50.0		76	50-150	22	30	
Dibenzo (a,h) anthracene	36.5	5.0	ng/l	50.0		73	50-150	15	30	
Fluoranthene	37.5	5.0	ng/l	50.0		75	50-150	28	30	
Fluorene	36.3	5.0	ng/l	50.0		73	50-150	28	30	
Indeno (1,2,3-cd) pyrene	40.7	5.0	ng/l	50.0		81	50-150	17	30	
Naphthalene	36.4	5.0	ng/l	50.0		73	50-150	24	30	
Phenanthrene	37.1	5.0	ng/l	50.0		74	50-150	24	30	
Pyrene	36.8	5.0	ng/l	50.0		74	50-150	29	30	
<i>Surrogate(s)</i>										
1,3-Dimethyl-2-nitrobenzene		81.4	ng/l	100		81	50-150			
Perylene-d12		77.3	ng/l	100		77	50-150			
Matrix Spike (W8C0255-MS1)				Source: 8C03022-01 Prepared: 03/06/18 Analyzed: 03/07/18						
Acenaphthene	31.9	5.0	ng/l	50.0	ND	64	50-150			
Acenaphthylene	31.3	5.0	ng/l	50.0	ND	63	50-150			
Anthracene	31.6	5.0	ng/l	50.0	ND	63	50-150			
Benzo (a) anthracene	27.1	5.0	ng/l	50.0	ND	54	50-150			
Benzo (a) pyrene	19.5	5.0	ng/l	50.0	ND	39	50-150			MS-05
Benzo (b) fluoranthene	21.8	5.0	ng/l	50.0	ND	44	50-150			MS-05
Benzo (g,h,i) perylene	13.6	5.0	ng/l	50.0	ND	27	50-150			MS-05
Benzo (k) fluoranthene	19.3	5.0	ng/l	50.0	ND	39	50-150			MS-05

8C02116

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FINAL REPORT

Project Number: Irwindale SW Outfall Mon.

Reported:

04/16/2018 15:32

Project Manager: Edmond G. Suher

Quality Control Results

(Continued)

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

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
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Batch: W8C0255 - EPA 625.1 (Continued)

Matrix Spike (W8C0255-MS1)

Source: 8C03022-01

Prepared: 03/06/18 Analyzed: 03/07/18

Chrysene	23.5	5.0	ng/l	50.0	ND	47	50-150			MS-05
Dibenzo (a,h) anthracene	13.5	5.0	ng/l	50.0	ND	27	50-150			MS-05
Fluoranthene	30.1	5.0	ng/l	50.0	ND	60	50-150			
Fluorene	31.7	5.0	ng/l	50.0	ND	63	50-150			
Indeno (1,2,3-cd) pyrene	15.5	5.0	ng/l	50.0	ND	31	50-150			MS-05
Naphthalene	29.2	5.0	ng/l	50.0	ND	58	50-150			
Phenanthrene	31.8	5.0	ng/l	50.0	2.24	59	50-150			
Pyrene	29.7	5.0	ng/l	50.0	ND	59	50-150			

Surrogate(s)

1,3-Dimethyl-2-nitrobenzene	67.9	ng/l	100	68	50-150	
Perylene-d12	68.0	ng/l	100	68	50-150	

Matrix Spike Dup (W8C0255-MSD1)

Source: 8C03022-01

Prepared: 03/06/18 Analyzed: 03/07/18

Acenaphthene	35.7	5.0	ng/l	50.0	ND	71	50-150	11	30	
Acenaphthylene	36.4	5.0	ng/l	50.0	ND	73	50-150	15	30	
Anthracene	35.1	5.0	ng/l	50.0	ND	70	50-150	11	30	
Benzo (a) anthracene	31.9	5.0	ng/l	50.0	ND	64	50-150	16	30	
Benzo (a) pyrene	21.4	5.0	ng/l	50.0	ND	43	50-150	10	30	MS-05
Benzo (b) fluoranthene	24.9	5.0	ng/l	50.0	ND	50	50-150	13	30	
Benzo (g,h,i) perylene	14.5	5.0	ng/l	50.0	ND	29	50-150	6	30	MS-05
Benzo (k) fluoranthene	22.2	5.0	ng/l	50.0	ND	44	50-150	14	30	MS-05
Chrysene	28.3	5.0	ng/l	50.0	ND	57	50-150	18	30	
Dibenzo (a,h) anthracene	13.8	5.0	ng/l	50.0	ND	28	50-150	2	30	MS-05
Fluoranthene	34.7	5.0	ng/l	50.0	ND	69	50-150	14	30	
Fluorene	35.1	5.0	ng/l	50.0	ND	70	50-150	10	30	
Indeno (1,2,3-cd) pyrene	17.4	5.0	ng/l	50.0	ND	35	50-150	12	30	MS-05
Naphthalene	34.0	5.0	ng/l	50.0	ND	68	50-150	15	30	
Phenanthrene	35.9	5.0	ng/l	50.0	2.24	67	50-150	12	30	
Pyrene	34.9	5.0	ng/l	50.0	ND	70	50-150	16	30	

Surrogate(s)

1,3-Dimethyl-2-nitrobenzene	77.3	ng/l	100	77	50-150	
Perylene-d12	70.6	ng/l	100	71	50-150	



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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.
B-07	This analyte was found in the method blank at levels above the MDL but below the reporting limit.
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.
R-03	The RPD is not applicable for result below the reporting limit (either ND or J value).
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.

CHAIN OF CUSTODY RECORD

[illegible]

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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) 841-9004
Fax: (818) 841-8013

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

IRWINDALE

Project: MS4 - Storm Water Monitoring 2017-2018

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

Bid Project: AEI-CASC Consulting - MS4 - Storm Water Monitoring 2017-2018

Weck Laboratories, Inc. 14859 East Clark Avenue, City of Industry, CA 91745. Phone: (626) 336-2139

www.wecklabs.com



Code	Method	Qty	TAT * (workdays)
Phosphorus, Total as P - EPA 365.1	EPA 365.1	1	15
Specific Conductance (EC) - SM 2510B	SM 2510B	1	15
Sulfate - EPA 300.0	EPA 300.0	1	15
Total Coliforms by Enumeration SM9221B 3 dil.	SM 9221B	1	15
Total Dissolved Solids - SM 2540C	SM 2540C	1	15
Total Kjeldahl Nitrogen by EPA 351.2	EPA 351.2	1	15
Total Organic Carbon - SM 5310C	SM 5310C	1	15
Total Suspended Solids - SM2540D	SM 2540D	1	15
Turbidity - EPA 180.1	EPA 180.1	1	15
Volatile Suspended Solids - 160.4	EPA 160.4	1	15
Zinc - EPA 200.8	EPA 200.8	1	15
Zinc, dissolved - EPA 200.8	EPA 200.8	1	15
Additional Items (if requested or applicable, will be charged at listed rates)			
Afterhours - Holiday 10p before-8a after /hr/empl		1	
Afterhours - Rain Event - Standby flat fee		1	
Afterhours - Weekday 10p-8a /hour/employee		1	
Afterhours - Weekday 6p-10p /hour/employee		1	
Afterhours - Weekend 10p Fri-8a Mon /hr/empl		1	
Extra per micro dilution		1	
Filtration Fee		1	

200.7 Hardness consists of:

Calcium - EPA 200.7

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 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.