

Work Orders: 8A09096

Project: MS4 - Storm Water Monitoring 2017-2018

Attn: Edmond G. Suher

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

Report Date: 2/20/2018

Received Date: 1/9/2018

Turnaround Time: Normal

Phones: (818) 841-9004

Fax: (818) 841-8013

P.O. #:

Billing Code:

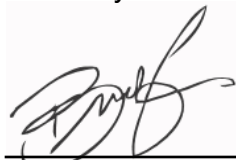
DoD-ELAP #L2457 • ELAP-CA #1132 • EPA-UCMR #CA00211 • Guam-EPA #17-008R • ISO 17025 #L2457.01 • LACSD #10143 •
NJ-DEP #CA015

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 1/09/18 with the Chain-of-Custody document. The samples were received in good condition, at 12.8 °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





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02/20/2018 08:34

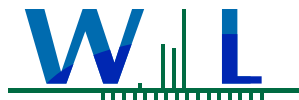
Project Manager: Edmond G. Suher

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
Outfall #6 (LL)	ES/TM	8A09096-01	Water	01/09/18 07:30	
Outfall #7 (SG)	ES/TM	8A09096-02	Water	01/09/18 08:40	
Outfall #5 (RH)	ES/TM	8A09096-03	Water	01/09/18 09:30	

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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Sample Results

Sample: Outfall #6 (LL)

Sampled: 01/09/18 7:30 by ES/TM

8A09096-01 (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: W8A0476 Instr: LC04 Prepared: 01/10/18 08:05 Analyst: jan
NO2+NO3 as N 1.7 0.11 mg/l 1 01/10/18 11:08

Method: EPA 300.0 Batch ID: W8A0586 Instr: LC12 Prepared: 01/11/18 08:05 Analyst: jan
Chloride, Total 4.0 0.50 mg/l 1 01/11/18 22:00
Sulfate as SO4 5.0 0.50 mg/l 1 01/11/18 22:00

Chlorinated Acids Herbicides by GC/ECD

Method: EPA 515.3 Batch ID: W8A0632 Instr: GC08 Prepared: 01/11/18 13:06 Analyst: rmr
2,4,5-T ND 0.20 ug/l 1 01/12/18 20:31
2,4,5-TP (Silvex) ND 0.20 ug/l 1 01/12/18 20:31
2,4-D ND 0.40 ug/l 1 01/12/18 20:31
2,4-DB ND 2.0 ug/l 1 01/12/18 20:31
3,5-Dichlorobenzoic acid ND 1.0 ug/l 1 01/12/18 20:31
Acifluorfen ND 0.40 ug/l 1 01/12/18 20:31
Bentazon ND 2.0 ug/l 1 01/12/18 20:31
Dalapon ND 0.40 ug/l 1 01/12/18 20:31
DCPA ND 0.10 ug/l 1 01/12/18 20:31
Dicamba ND 0.60 ug/l 1 01/12/18 20:31
Dichloroprop ND 0.30 ug/l 1 01/12/18 20:31
Dinoseb ND 0.40 ug/l 1 01/12/18 20:31
Pentachlorophenol 0.75 0.20 ug/l 1 01/12/18 20:31
Picloram ND 0.60 ug/l 1 01/12/18 20:31

Surrogate(s)

2,4-DCAA 93% Conc: 9.34 70-130 01/12/18 20:31

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

Method: EPA 160.4 Batch ID: W8A0690 Instr: FURN02 Prepared: 01/12/18 08:10 Analyst: ajk
Volatile Suspended Solids 17 5.0 mg/l 1 01/12/18 13:05

Method: EPA 180.1 Batch ID: W8A0474 Instr: TURB01 Prepared: 01/10/18 07:43 Analyst: sap
Turbidity 12 0.10 NTU 1 01/10/18 09:15

Method: EPA 335.4 Batch ID: W8A1064 Instr: AA01 Prepared: 01/17/18 16:23 Analyst: nat
Cyanide, Total ND 5.0 ug/l 1 01/18/18 16:46

Method: EPA 350.1 Batch ID: W8A0864 Instr: AA06 Prepared: 01/15/18 12:44 Analyst: mnq
Ammonia as N 0.53 0.10 mg/l 1 01/19/18 16:44

Method: EPA 351.2 Batch ID: W8A1383 Instr: AA06 Prepared: 01/23/18 16:07 Analyst: ymt
TKN 1.8 0.10 mg/l 1 01/28/18 14:57

Method: EPA 365.1 Batch ID: W8A0679 Instr: AA01 Prepared: 01/11/18 20:49 Analyst: nat
Phosphorus as P, Total 0.44 0.040 mg/l 2 01/16/18 11:35 M-06

Method: EPA 365.3 Batch ID: W8A0932 Instr: UVVIS04 Prepared: 01/16/18 11:32 Analyst: stg

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Sample Results

(Continued)

Sample: Outfall #6 (LL) Sampled: 01/09/18 7:30 by ES/TM
8A09096-01 (Water) (Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)						
Method: EPA 365.3 Phosphorus, Dissolved	Batch ID: W8A0932 Instr: UVVIS04 0.44	Prepared: 01/16/18 11:32 0.010	mg/l	1	Analyst: stg 01/22/18 12:47	
Method: EPA 410.4 Chemical Oxygen Demand	Batch ID: W8A1268 Instr: Inst 48	Prepared: 01/22/18 10:54 5.0	mg/l	1	Analyst: mnq 01/22/18 17:39	
Method: EPA 420.4 Phenolics	Batch ID: W8A1101 Instr: AA03 0.016	Prepared: 01/18/18 08:48 0.010	mg/l	1	Analyst: ajk 01/19/18 12:41	
Method: SM 2320B Alkalinity as CaCO3	Batch ID: W8A0786 Instr: AA02 25	Prepared: 01/12/18 19:42 2.0	mg/l	1	Analyst: stg 01/15/18 13:41	
Method: SM 2510B Specific Conductance (EC)	Batch ID: W8A0759 Instr: AA02 100	Prepared: 01/12/18 15:27 2.0	umhos/cm	1	Analyst: stg 01/12/18 16:53	
Method: SM 2540C Total Dissolved Solids	Batch ID: W8A0808 Instr: OVEN01 64	Prepared: 01/14/18 09:02 10	mg/l	1	Analyst: ymt 01/15/18 11:42	
Method: SM 2540D Total Suspended Solids	Batch ID: W8A0689 Instr: OVEN11 36	Prepared: 01/12/18 08:12 5	mg/l	1	Analyst: ajk 01/12/18 13:05	
Method: SM 4500O-G Dissolved Oxygen	Batch ID: W8A0432 Instr: Inst 9.04	Prepared: 01/09/18 15:27 1.00	mg/l	1	Analyst: mic 01/09/18 15:31	*
Method: SM 5210B Biochemical Oxygen Demand	Batch ID: W8A0521 Instr: Inst 13	Prepared: 01/10/18 12:14 2.0	mg/l	1	Analyst: mic 01/15/18 19:03	
Method: SM 5310B Total Organic Carbon (TOC)	Batch ID: W8A0598 Instr: TOC02 13	Prepared: 01/11/18 09:26 0.10	mg/l	1	Analyst: jlp 01/11/18 10:27	
Method: SM 5540C MBAS	Batch ID: W8A0436 Instr: UVVIS03 0.26	Prepared: 01/09/18 15:30 0.050	mg/l	1	Analyst: ajk 01/09/18 16:27	
Hexavalent Chromium by IC						
Method: EPA 218.6 Chromium 6+	Batch ID: W8A0657 Instr: LC13 0.39	Prepared: 01/11/18 17:32 0.10	ug/l	5	Analyst: blg 01/11/18 23:22	
Method: EPA 218.6 Chromium 6+, Dissolved	Batch ID: W8A1076 Instr: LC13 0.25	Prepared: 01/17/18 18:04 0.020	ug/l	1	Analyst: blg 01/17/18 19:31	
Hydrocarbons by GC/FID						
Method: EPA 8015D Diesel Range Organics	Batch ID: W8A0490 Instr: GC04 0.70	Prepared: 01/10/18 09:18 0.10	mg/l	1	Analyst: cam 01/18/18 05:18	
Oil Range Organics	1.7	0.50	mg/l	1	01/18/18 05:18	
Surrogate(s) n-Tetracosane	72% Conc: 0.181	64-155			01/18/18 05:18	
Metals by EPA 200 Series Methods						
Method: EPA 200.7 Calcium Hardness as CaCO3	Batch ID: [CALC] Instr: [CALC] 26.4	Prepared: 01/15/18 16:01 0.250	mg/l	1	Analyst: JCK 01/16/18 19:33	
Method: EPA 200.7	Batch ID: W8A0886 Instr: ICP03	Prepared: 01/15/18 16:01			Analyst: JCK	

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Sample Results

(Continued)

Sample: Outfall #6 (LL) Sampled: 01/09/18 7:30 by ES/TM
8A09096-01 (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: W8A0886	Instr: ICP03	Prepared: 01/15/18 16:01		Analyst: JCK
Calcium, Total	10.6	0.100	mg/l	1	01/16/18 19:33
Method: EPA 200.8	Batch ID: W8A0888	Instr: ICPMS02	Prepared: 01/15/18 16:04		Analyst: MTT
Aluminum, Dissolved	19	5.0	ug/l	1	01/24/18 20:12
Aluminum, Total	830	5.0	ug/l	1	01/24/18 20:20
Antimony, Dissolved	0.95	0.50	ug/l	1	01/24/18 20:12
Antimony, Total	2.0	0.50	ug/l	1	01/24/18 20:20
Arsenic, Dissolved	0.58	0.40	ug/l	1	01/24/18 20:12
Arsenic, Total	1.0	0.40	ug/l	1	01/24/18 20:20
Cadmium, Dissolved	0.10	0.10	ug/l	1	01/24/18 20:12
Cadmium, Total	0.25	0.10	ug/l	1	01/24/18 20:20
Chromium, Dissolved	0.44	0.20	ug/l	1	01/24/18 20:12
Chromium, Total	2.5	0.20	ug/l	1	01/24/18 20:20
Copper, Dissolved	16	0.50	ug/l	1	01/24/18 20:12
Copper, Total	29	0.50	ug/l	1	01/24/18 20:20
Iron, Dissolved	33	20	ug/l	1	01/24/18 20:12
Iron, Total	1200	20	ug/l	1	01/25/18 14:27
Lead, Dissolved	ND	0.20	ug/l	1	01/24/18 20:12
Lead, Total	8.3	0.20	ug/l	1	01/24/18 20:20
Nickel, Dissolved	3.0	0.80	ug/l	1	01/24/18 20:12
Nickel, Total	4.8	0.80	ug/l	1	01/24/18 20:20
Zinc, Dissolved	140	5.0	ug/l	1	01/24/18 20:12
Zinc, Total	230	5.0	ug/l	1	01/24/18 20:20

Microbiological Parameters by Standard Methods

Method: Enterolert	Batch ID: W8A1615	Instr: Inst	Prepared: 01/09/18 15:33		Analyst: slh	
Enterococcus		200000	100	MPN/100ml	100	01/10/18 16:42
Method: SM 9221B	Batch ID: W8A1616	Instr: Inst	Prepared: 01/09/18 15:30		Analyst: slh	
Total Coliform		900000	20	MPN/100ml	10	01/18/18 10:36
Method: SM 9221E	Batch ID: W8A1616	Instr: Inst	Prepared: 01/09/18 15:30		Analyst: slh	
Fecal Coliform		220000	20	MPN/100ml	10	01/17/18 13:19
Method: SM 9221F	Batch ID: W8A1616	Instr: Inst	Prepared: 01/09/18 15:30		Analyst: slh	
E. coli		220000	20	MPN/100ml	10	01/17/18 13:19

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

Method: EPA 625.1	Batch ID: W8A0599	Instr: GCMS15	Prepared: 01/11/18 09:34			Analyst: EFC	
Acenaphthene		ND	50	ng/l	1	01/23/18 20:09	M-02
Acenaphthylene		ND	50	ng/l	1	01/23/18 20:09	M-02
Anthracene		ND	50	ng/l	1	01/23/18 20:09	M-02

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Sample Results

(Continued)

Sample: Outfall #6 (LL)

Sampled: 01/09/18 7:30 by ES/TM

8A09096-01 (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: W8A0599	Instr: GCMS15	Prepared: 01/11/18 09:34	Analyst: EFC		
Benzo (a) anthracene	ND	50	ng/l	1	01/23/18 20:09	M-02
Benzo (a) pyrene	ND	50	ng/l	1	02/16/18 01:07	M-02
Benzo (b) fluoranthene	ND	50	ng/l	1	02/16/18 01:07	M-02
Benzo (g,h,i) perylene	ND	50	ng/l	1	02/16/18 01:07	M-02
Benzo (k) fluoranthene	ND	50	ng/l	1	02/16/18 01:07	M-02
Chrysene	ND	50	ng/l	1	01/23/18 20:09	M-02
Dibenzo (a,h) anthracene	ND	50	ng/l	1	02/16/18 01:07	M-02
Fluoranthene	ND	50	ng/l	1	01/23/18 20:09	M-02
Fluorene	ND	50	ng/l	1	01/23/18 20:09	M-02
Indeno (1,2,3-cd) pyrene	ND	50	ng/l	1	02/16/18 01:07	M-02
Naphthalene	63	50	ng/l	1	01/23/18 20:09	B, M-02
Phenanthrene	59	50	ng/l	1	01/23/18 20:09	M-02
Pyrene	ND	50	ng/l	1	01/23/18 20:09	M-02
Surrogate(s)						
1,3-Dimethyl-2-nitrobenzene	92% Conc: 925	50-150			01/23/18 20:09	M-02
Perylene-d12	89% Conc: 887	50-150			01/23/18 20:09	M-02



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Sample Results

(Continued)

Sample: Outfall #7 (SG) Sampled: 01/09/18 8:40 by ES/TM
8A09096-02 (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: W8A0476	Instr: LC04	Prepared: 01/10/18 08:05		Analyst: jan
NO2+NO3 as N		0.67	0.11	mg/l	1 01/10/18 11:29
Method: EPA 300.0	Batch ID: W8A0586	Instr: LC12	Prepared: 01/11/18 08:05		Analyst: jan
Chloride, Total		2.4	0.50	mg/l	1 01/11/18 22:00
Sulfate as SO4		3.0	0.50	mg/l	1 01/11/18 22:00

Chlorinated Acids Herbicides by GC/ECD

Method: EPA 515.3	Batch ID: W8A0632	Instr: GC08	Prepared: 01/11/18 13:06			Analyst: rmr
2,4,5-T		ND	0.20	ug/l	1	01/12/18 21:07
2,4,5-TP (Silvex)		ND	0.20	ug/l	1	01/12/18 21:07
2,4-D		ND	0.40	ug/l	1	01/12/18 21:07
2,4-DB		ND	2.0	ug/l	1	01/12/18 21:07
3,5-Dichlorobenzoic acid		ND	1.0	ug/l	1	01/12/18 21:07
Acifluorfen		ND	0.40	ug/l	1	01/12/18 21:07
Bentazon		ND	2.0	ug/l	1	01/12/18 21:07
Dalapon		ND	0.40	ug/l	1	01/12/18 21:07
DCPA		ND	0.10	ug/l	1	01/12/18 21:07
Dicamba		ND	0.60	ug/l	1	01/12/18 21:07
Dichloroprop		ND	0.30	ug/l	1	01/12/18 21:07
Dinoseb		ND	0.40	ug/l	1	01/12/18 21:07
Pentachlorophenol		0.27	0.20	ug/l	1	01/12/18 21:07
Picloram		ND	0.60	ug/l	1	01/12/18 21:07
Surrogate(s)						
2,4-DCAA	94%	Conc: 9.38	70-130			01/12/18 21:07

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

Method: EPA 160.4	Batch ID: W8A0690	Instr: FURN02	Prepared: 01/12/18 08:10		Analyst: ajk	
Volatile Suspended Solids		37	5.0	mg/l	1	01/12/18 13:05
Method: EPA 180.1	Batch ID: W8A0474	Instr: TURB01	Prepared: 01/10/18 07:43		Analyst: sap	
Turbidity		25	0.10	NTU	1	01/10/18 09:15
Method: EPA 335.4	Batch ID: W8A1064	Instr: AA01	Prepared: 01/17/18 16:23		Analyst: nat	
Cyanide, Total		ND	5.0	ug/l	1	01/18/18 16:51
Method: EPA 350.1	Batch ID: W8A0864	Instr: AA06	Prepared: 01/15/18 12:44		Analyst: mnq	
Ammonia as N		0.67	0.10	mg/l	1	01/19/18 16:44
Method: EPA 351.2	Batch ID: W8A1383	Instr: AA06	Prepared: 01/23/18 16:07		Analyst: ymt	
TKN		2.8	0.10	mg/l	1	01/28/18 14:57
Method: EPA 365.1	Batch ID: W8A0679	Instr: AA01	Prepared: 01/11/18 20:49		Analyst: nat	
Phosphorus as P, Total		0.55	0.040	mg/l	2	01/16/18 11:36
Method: EPA 365.3	Batch ID: W8A0932	Instr: UVVIS04	Prepared: 01/16/18 11:32		Analyst: stq	

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Sample Results

(Continued)

Sample: Outfall #7 (SG) Sampled: 01/09/18 8:40 by ES/TM
8A09096-02 (Water) (Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)						
Method: EPA 365.3 Phosphorus, Dissolved	Batch ID: W8A0932 Instr: UVVIS04 0.30	Prepared: 01/16/18 11:32 0.010	mg/l	1	Analyst: stg 01/22/18 12:47	
Method: EPA 410.4 Chemical Oxygen Demand	Batch ID: W8A1268 Instr: Inst 81	Prepared: 01/22/18 10:54 5.0	mg/l	1	Analyst: mnq 01/22/18 17:39	
Method: EPA 420.4 Phenolics	Batch ID: W8A1101 Instr: AA03 0.049	Prepared: 01/18/18 08:48 0.010	mg/l	1	Analyst: ajk 01/19/18 12:41	
Method: SM 2320B Alkalinity as CaCO3	Batch ID: W8A0786 Instr: AA02 25	Prepared: 01/12/18 19:42 2.0	mg/l	1	Analyst: stg 01/15/18 13:41	
Method: SM 2510B Specific Conductance (EC)	Batch ID: W8A0759 Instr: AA02 70	Prepared: 01/12/18 15:27 2.0	umhos/cm	1	Analyst: stg 01/12/18 16:53	
Method: SM 2540C Total Dissolved Solids	Batch ID: W8A0808 Instr: OVEN01 50	Prepared: 01/14/18 09:02 10	mg/l	1	Analyst: ymt 01/15/18 11:42	
Method: SM 2540D Total Suspended Solids	Batch ID: W8A0689 Instr: OVEN11 100	Prepared: 01/12/18 08:12 5	mg/l	1	Analyst: ajk 01/12/18 13:05	
Method: SM 4500O-G Dissolved Oxygen	Batch ID: W8A0432 Instr: Inst 8.74	Prepared: 01/09/18 15:27 1.00	mg/l	1	Analyst: mic 01/09/18 15:31	*
Method: SM 5210B Biochemical Oxygen Demand	Batch ID: W8A0521 Instr: Inst 16	Prepared: 01/10/18 12:14 2.0	mg/l	1	Analyst: mic 01/15/18 19:03	
Method: SM 5310B Total Organic Carbon (TOC)	Batch ID: W8A0598 Instr: TOC02 16	Prepared: 01/11/18 09:26 0.10	mg/l	1	Analyst: jlp 01/11/18 10:27	
Method: SM 5540C MBAS	Batch ID: W8A0436 Instr: UVVIS03 0.32	Prepared: 01/09/18 15:30 0.050	mg/l	1	Analyst: ajk 01/09/18 16:27	
Hexavalent Chromium by IC						
Method: EPA 218.6 Chromium 6+	Batch ID: W8A0657 Instr: LC13 0.79	Prepared: 01/11/18 17:32 0.10	ug/l	5	Analyst: blg 01/11/18 23:34	
Method: EPA 218.6 Chromium 6+, Dissolved	Batch ID: W8A1076 Instr: LC13 0.70	Prepared: 01/17/18 18:04 0.020	ug/l	1	Analyst: blg 01/17/18 19:43	
Hydrocarbons by GC/FID						
Method: EPA 8015D Diesel Range Organics	Batch ID: W8A0490 Instr: GC04 0.78	Prepared: 01/10/18 09:18 0.10	mg/l	1	Analyst: cam 01/18/18 05:53	
Oil Range Organics	2.2	0.50	mg/l	1	01/18/18 05:53	
Surrogate(s) n-Tetracosane	66% Conc: 0.165	64-155			01/18/18 05:53	
Metals by EPA 200 Series Methods						
Method: EPA 200.7 Calcium Hardness as CaCO3	Batch ID: [CALC] Instr: [CALC] 20.9	Prepared: 01/15/18 16:01 0.250	mg/l	1	Analyst: JCK 01/16/18 19:35	
Method: EPA 200.7	Batch ID: W8A0886 Instr: ICP03	Prepared: 01/15/18 16:01			Analyst: JCK	

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2740 W. Magnolia Blvd., Ste.102
Burbank, CA 91505

Project Number: MS4 - Storm Water Monitoring 2017-2018

Reported:
02/20/2018 08:34

Project Manager: Edmond G. Suher

Sample Results

(Continued)

Sample: Outfall #7 (SG) Sampled: 01/09/18 8:40 by ES/TM
8A09096-02 (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: W8A0886	Instr: ICP03	Prepared: 01/15/18 16:01		Analyst: JCK	
Calcium, Total		8.39	0.100	mg/l	1	01/16/18 19:35
Method: EPA 200.8	Batch ID: W8A0888	Instr: ICPMS02	Prepared: 01/15/18 16:04		Analyst: MTT	
Aluminum, Dissolved		34	5.0	ug/l	1	01/24/18 20:27
Aluminum, Total		2300	5.0	ug/l	1	01/24/18 20:35
Antimony, Dissolved		1.6	0.50	ug/l	1	01/24/18 20:27
Antimony, Total		4.7	0.50	ug/l	1	01/24/18 20:35
Arsenic, Dissolved		0.82	0.40	ug/l	1	01/24/18 20:27
Arsenic, Total		1.7	0.40	ug/l	1	01/24/18 20:35
Cadmium, Dissolved		ND	0.10	ug/l	1	01/24/18 20:27
Cadmium, Total		0.28	0.10	ug/l	1	01/24/18 20:35
Chromium, Dissolved		0.91	0.20	ug/l	1	01/24/18 20:27
Chromium, Total		5.3	0.20	ug/l	1	01/24/18 20:35
Copper, Dissolved		12	0.50	ug/l	1	01/24/18 20:27
Copper, Total		37	0.50	ug/l	1	01/24/18 20:35
Iron, Dissolved		61	20	ug/l	1	01/24/18 20:27
Iron, Total		3100	20	ug/l	1	01/24/18 20:35
Lead, Dissolved		0.44	0.20	ug/l	1	01/24/18 20:27
Lead, Total		15	0.20	ug/l	1	01/24/18 20:35
Nickel, Dissolved		2.4	0.80	ug/l	1	01/24/18 20:27
Nickel, Total		6.0	0.80	ug/l	1	01/24/18 20:35
Zinc, Dissolved		59	5.0	ug/l	1	01/24/18 20:27
Zinc, Total		210	5.0	ug/l	1	01/24/18 20:35

Microbiological Parameters by Standard Methods

Method: Enterolert	Batch ID: W8A1615	Instr: Inst	Prepared: 01/09/18 15:33		Analyst: slh	
Enterococcus		52000	100	MPN/100ml	100	01/10/18 16:42
Method: SM 9221B	Batch ID: W8A1616	Instr: Inst	Prepared: 01/09/18 15:45		Analyst: slh	
Total Coliform		110000	20	MPN/100ml	10	01/21/18 14:36
Method: SM 9221E	Batch ID: W8A1616	Instr: Inst	Prepared: 01/09/18 15:45		Analyst: slh	
Fecal Coliform		22000	20	MPN/100ml	10	01/20/18 15:18
Method: SM 9221F	Batch ID: W8A1616	Instr: Inst	Prepared: 01/09/18 15:45		Analyst: slh	
E. coli		13000	20	MPN/100ml	10	01/20/18 15:18

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

Method: EPA 625.1	Batch ID: W8A0599	Instr: GCMS15	Prepared: 01/11/18 09:34			Analyst: EFC
Acenaphthene	ND	50	ng/l	1	01/23/18 20:40	M-02
Acenaphthylene	ND	50	ng/l	1	01/23/18 20:40	M-02
Anthracene	ND	50	ng/l	1	01/23/18 20:40	M-02



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Project Number: MS4 - Storm Water Monitoring 2017-2018

Reported:

02/20/2018 08:34

Project Manager: Edmond G. Suher

Sample Results

(Continued)

Sample: Outfall #7 (SG)

Sampled: 01/09/18 8:40 by ES/TM

8A09096-02 (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: W8A0599	Instr: GCMS15	Prepared: 01/11/18 09:34	Analyst: EFC		
Benzo (a) anthracene	ND	50	ng/l	1	01/23/18 20:40	M-02
Benzo (a) pyrene	ND	50	ng/l	1	02/16/18 01:38	M-02
Benzo (b) fluoranthene	ND	50	ng/l	1	02/16/18 01:38	M-02
Benzo (g,h,i) perylene	ND	50	ng/l	1	02/16/18 01:38	M-02
Benzo (k) fluoranthene	ND	50	ng/l	1	02/16/18 01:38	M-02
Chrysene	ND	50	ng/l	1	01/23/18 20:40	M-02
Dibenzo (a,h) anthracene	ND	50	ng/l	1	02/16/18 01:38	M-02
Fluoranthene	ND	50	ng/l	1	01/23/18 20:40	M-02
Fluorene	ND	50	ng/l	1	01/23/18 20:40	M-02
Indeno (1,2,3-cd) pyrene	ND	50	ng/l	1	02/16/18 01:38	M-02
Naphthalene	110	50	ng/l	1	01/23/18 20:40	B, M-02
Phenanthrene	ND	50	ng/l	1	01/23/18 20:40	M-02
Pyrene	ND	50	ng/l	1	01/23/18 20:40	M-02
<i>Surrogate(s)</i>						
1,3-Dimethyl-2-nitrobenzene	83% Conc: 827	50-150			01/23/18 20:40	M-02
Perylene-d12	71% Conc: 705	50-150			01/23/18 20:40	M-02



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Reported:
02/20/2018 08:34

Sample Results

(Continued)

Sample: Outfall #5 (RH) Sampled: 01/09/18 9:30 by ES/TM
8A09096-03 (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: W8A0476	Instr: LC04	Prepared: 01/10/18 08:05		Analyst: jan
NO2+NO3 as N		0.72	0.11	mg/l	1 01/10/18 11:49
Method: EPA 300.0	Batch ID: W8A0586	Instr: LC12	Prepared: 01/11/18 08:05		Analyst: jan
Chloride, Total		2.7	0.50	mg/l	1 01/11/18 22:00
Sulfate as SO4		3.8	0.50	mg/l	1 01/11/18 22:00

Chlorinated Acids Herbicides by GC/ECD

Method: EPA 515.3	Batch ID: W8A0632	Instr: GC08	Prepared: 01/11/18 13:06			Analyst: rmr
2,4,5-T		ND	0.20	ug/l	1	01/12/18 21:43
2,4,5-TP (Silvex)		ND	0.20	ug/l	1	01/12/18 21:43
2,4-D		ND	0.40	ug/l	1	01/12/18 21:43
2,4-DB		ND	2.0	ug/l	1	01/12/18 21:43
3,5-Dichlorobenzoic acid		ND	1.0	ug/l	1	01/12/18 21:43
Acifluorfen		ND	0.40	ug/l	1	01/12/18 21:43
Bentazon		ND	2.0	ug/l	1	01/12/18 21:43
Dalapon		ND	0.40	ug/l	1	01/12/18 21:43
DCPA		ND	0.10	ug/l	1	01/12/18 21:43
Dicamba		ND	0.60	ug/l	1	01/12/18 21:43
Dichloroprop		ND	0.30	ug/l	1	01/12/18 21:43
Dinoseb		ND	0.40	ug/l	1	01/12/18 21:43
Pentachlorophenol		0.49	0.20	ug/l	1	01/12/18 21:43
Picloram		ND	0.60	ug/l	1	01/12/18 21:43
Surrogate(s)						
2,4-DCAA		105% Conc: 10.5	70-130			01/12/18 21:43

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

Method: EPA 160.4	Batch ID: W8A0690	Instr: FURN02	Prepared: 01/12/18 08:10	Analyst: ajk	
Volatile Suspended Solids		22	5.0 mg/l	1	01/12/18 13:05
Method: EPA 180.1	Batch ID: W8A0474	Instr: TURB01	Prepared: 01/10/18 07:43	Analyst: sap	
Turbidity		34	0.10 NTU	1	01/10/18 09:15
Method: EPA 335.4	Batch ID: W8A1064	Instr: AA01	Prepared: 01/17/18 16:23	Analyst: nat	
Cyanide, Total		ND	5.0 ug/l	1	01/18/18 16:52
Method: EPA 350.1	Batch ID: W8A0864	Instr: AA06	Prepared: 01/15/18 12:44	Analyst: mnq	
Ammonia as N		0.60	0.10 mg/l	1	01/19/18 16:44
Method: EPA 351.2	Batch ID: W8A1383	Instr: AA06	Prepared: 01/23/18 16:07	Analyst: ymt	
TKN		2.7	0.10 mg/l	1	01/28/18 14:57
Method: EPA 365.1	Batch ID: W8A0679	Instr: AA01	Prepared: 01/11/18 20:49	Analyst: nat	
Phosphorus as P, Total		0.39	0.020 mg/l	1	01/16/18 11:32
Method: EPA 365.3	Batch ID: W8A0932	Instr: UVVIS04	Prepared: 01/16/18 11:32	Analyst: stg	M-06

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Project Manager: Edmond G. Suher

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Reported:

02/20/2018 08:34

Sample Results

(Continued)

Sample: Outfall #5 (RH) Sampled: 01/09/18 9:30 by ES/TM
8A09096-03 (Water) (Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)						
Method: EPA 365.3 Phosphorus, Dissolved	Batch ID: W8A0932 Instr: UVVIS04 0.17	Prepared: 01/16/18 11:32 0.010	mg/l	1	Analyst: stg 01/22/18 12:47	
Method: EPA 410.4 Chemical Oxygen Demand	Batch ID: W8A1268 Instr: Inst 140	Prepared: 01/22/18 10:54 5.0	mg/l	1	Analyst: mnq 01/22/18 17:39	
Method: EPA 420.4 Phenolics	Batch ID: W8A1101 Instr: AA03 0.017	Prepared: 01/18/18 08:48 0.010	mg/l	1	Analyst: ajk 01/19/18 12:41	
Method: SM 2320B Alkalinity as CaCO3	Batch ID: W8A0786 Instr: AA02 24	Prepared: 01/12/18 19:42 2.0	mg/l	1	Analyst: stg 01/15/18 13:41	
Method: SM 2510B Specific Conductance (EC)	Batch ID: W8A0759 Instr: AA02 72	Prepared: 01/12/18 15:27 2.0	umhos/cm	1	Analyst: stg 01/12/18 16:53	
Method: SM 2540C Total Dissolved Solids	Batch ID: W8A0808 Instr: OVEN01 56	Prepared: 01/14/18 09:02 10	mg/l	1	Analyst: ymt 01/15/18 11:42	
Method: SM 2540D Total Suspended Solids	Batch ID: W8A0689 Instr: OVEN11 55	Prepared: 01/12/18 08:12 5	mg/l	1	Analyst: ajk 01/12/18 13:05	
Method: SM 4500O-G Dissolved Oxygen	Batch ID: W8A0432 Instr: Inst 9.02	Prepared: 01/09/18 15:27 1.00	mg/l	1	Analyst: mic 01/09/18 15:31	*
Method: SM 5210B Biochemical Oxygen Demand	Batch ID: W8A0537 Instr: Inst 17	Prepared: 01/10/18 15:28 2.0	mg/l	1	Analyst: mic 01/15/18 21:30	
Method: SM 5310B Total Organic Carbon (TOC)	Batch ID: W8A0598 Instr: TOC02 19	Prepared: 01/11/18 09:26 0.10	mg/l	1	Analyst: jlp 01/11/18 10:27	
Method: SM 5540C MBAS	Batch ID: W8A0436 Instr: UVVIS03 0.23	Prepared: 01/09/18 15:30 0.050	mg/l	1	Analyst: ajk 01/09/18 16:27	
Hexavalent Chromium by IC						
Method: EPA 218.6 Chromium 6+	Batch ID: W8A0657 Instr: LC13 1.1	Prepared: 01/11/18 17:32 0.10	ug/l	5	Analyst: blg 01/11/18 23:46	
Method: EPA 218.6 Chromium 6+, Dissolved	Batch ID: W8A1076 Instr: LC13 1.0	Prepared: 01/17/18 18:04 0.020	ug/l	1	Analyst: blg 01/17/18 19:55	
Hydrocarbons by GC/FID						
Method: EPA 8015D Diesel Range Organics	Batch ID: W8A0490 Instr: GC04 0.81	Prepared: 01/10/18 09:18 0.10	mg/l	1	Analyst: cam 01/18/18 06:27	
Oil Range Organics	2.3	0.50	mg/l	1	01/18/18 06:27	
Surrogate(s) n-Tetracosane	67% Conc: 0.167	64-155			01/18/18 06:27	
Metals by EPA 200 Series Methods						
Method: EPA 200.7 Calcium Hardness as CaCO3	Batch ID: [CALC] Instr: [CALC] 20.5	Prepared: 01/15/18 16:01 0.250	mg/l	1	Analyst: JCK 01/16/18 19:38	
Method: EPA 200.7	Batch ID: W8A0886 Instr: ICP03	Prepared: 01/15/18 16:01			Analyst: JCK	

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Project Manager: Edmond G. Suher

Sample Results

(Continued)

Sample: Outfall #5 (RH) Sampled: 01/09/18 9:30 by ES/TM
8A09096-03 (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:** W8A0886 **Instr:** ICP03 **Prepared:** 01/15/18 16:01 **Analyst:** JCK
Calcium, Total 8.22 0.100 mg/l 1 01/16/18 19:38

Method: EPA 200.8 **Batch ID:** W8A0888 **Instr:** ICPMS02 **Prepared:** 01/15/18 16:04 **Analyst:** MTT

Aluminum, Dissolved	45	5.0	ug/l	1	01/24/18 20:42
Aluminum, Total	1800	5.0	ug/l	1	01/24/18 20:49
Antimony, Dissolved	1.6	0.50	ug/l	1	01/24/18 20:42
Antimony, Total	4.4	0.50	ug/l	1	01/24/18 20:49
Arsenic, Dissolved	0.68	0.40	ug/l	1	01/24/18 20:42
Arsenic, Total	1.4	0.40	ug/l	1	01/24/18 20:49
Cadmium, Dissolved	0.10	0.10	ug/l	1	01/24/18 20:42
Cadmium, Total	0.26	0.10	ug/l	1	01/24/18 20:49
Chromium, Dissolved	1.2	0.20	ug/l	1	01/24/18 20:42
Chromium, Total	4.6	0.20	ug/l	1	01/24/18 20:49
Copper, Dissolved	19	0.50	ug/l	1	01/24/18 20:42
Copper, Total	46	0.50	ug/l	1	01/24/18 20:49
Iron, Dissolved	46	20	ug/l	1	01/24/18 20:42
Iron, Total	2200	20	ug/l	1	01/24/18 20:49
Lead, Dissolved	1.6	0.20	ug/l	1	01/24/18 20:42
Lead, Total	18	0.20	ug/l	1	01/24/18 20:49
Nickel, Dissolved	2.4	0.80	ug/l	1	01/24/18 20:42
Nickel, Total	5.2	0.80	ug/l	1	01/24/18 20:49
Zinc, Dissolved	110	5.0	ug/l	1	01/24/18 20:42
Zinc, Total	220	5.0	ug/l	1	01/24/18 20:49

Microbiological Parameters by Standard Methods

Method: Enterolert **Batch ID:** W8A1615 **Instr:** Inst **Prepared:** 01/09/18 15:33 **Analyst:** slh
Enterococcus 24000 10 MPN/100ml 10 01/10/18 16:42

Method: SM 9221B **Batch ID:** W8A1616 **Instr:** Inst **Prepared:** 01/09/18 15:45 **Analyst:** slh
Total Coliform 900000 20 MPN/100ml 10 01/21/18 14:36

Method: SM 9221E **Batch ID:** W8A1616 **Instr:** Inst **Prepared:** 01/09/18 15:45 **Analyst:** slh
Fecal Coliform 70000 20 MPN/100ml 10 01/20/18 15:18

Method: SM 9221F **Batch ID:** W8A1616 **Instr:** Inst **Prepared:** 01/09/18 15:45 **Analyst:** slh
E. coli 50000 20 MPN/100ml 10 01/20/18 15:18

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

Method: EPA 625.1 **Batch ID:** W8A0599 **Instr:** GCMS15 **Prepared:** 01/11/18 09:34 **Analyst:** EFC

Acenaphthene	ND	50	ng/l	1	01/23/18 21:11	M-02
Acenaphthylene	ND	50	ng/l	1	01/23/18 21:11	M-02
Anthracene	ND	50	ng/l	1	01/23/18 21:11	M-02

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Reported:

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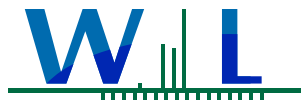
Project Manager: Edmond G. Suher

Sample Results

(Continued)

Sample: Outfall #5 (RH) Sampled: 01/09/18 9:30 by ES/TM
8A09096-03 (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: W8A0599	Instr: GCMS15	Prepared: 01/11/18 09:34	Analyst: EFC		
Benzo (a) anthracene	ND	50	ng/l	1	01/23/18 21:11	M-02
Benzo (a) pyrene	ND	50	ng/l	1	02/16/18 02:08	M-02
Benzo (b) fluoranthene	ND	50	ng/l	1	02/16/18 02:08	M-02
Benzo (g,h,i) perylene	ND	50	ng/l	1	02/16/18 02:08	M-02
Benzo (k) fluoranthene	ND	50	ng/l	1	02/16/18 02:08	M-02
Chrysene	ND	50	ng/l	1	01/23/18 21:11	M-02
Dibenzo (a,h) anthracene	ND	50	ng/l	1	02/16/18 02:08	M-02
Fluoranthene	ND	50	ng/l	1	01/23/18 21:11	M-02
Fluorene	ND	50	ng/l	1	01/23/18 21:11	M-02
Indeno (1,2,3-cd) pyrene	ND	50	ng/l	1	02/16/18 02:08	M-02
Naphthalene	64	50	ng/l	1	01/23/18 21:11	B, M-02
Phenanthrene	ND	50	ng/l	1	01/23/18 21:11	M-02
Pyrene	ND	50	ng/l	1	01/23/18 21:11	M-02
<i>Surrogate(s)</i>						
1,3-Dimethyl-2-nitrobenzene	96% Conc: 961	50-150			01/23/18 21:11	M-02
Perylene-d12	65% Conc: 646	50-150			01/23/18 21:11	M-02



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02/20/2018 08:34

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: W8A0476 - EPA 300.0										
Blank (W8A0476-BLK1)				Prepared & Analyzed: 01/10/18						
NO2+NO3 as N	ND	0.11	mg/l							
LCS (W8A0476-BS1)				Prepared & Analyzed: 01/10/18						
NO2+NO3 as N	3.89	0.11	mg/l	4.00		97	90-110			
Matrix Spike (W8A0476-MS1)				Prepared & Analyzed: 01/10/18						
NO2+NO3 as N	8.74	0.23	mg/l	8.00	4.13	58	84-115			MS-05
Matrix Spike (W8A0476-MS2)				Prepared & Analyzed: 01/10/18						
NO2+NO3 as N	4.33	0.11	mg/l	4.00	0.153	105	84-115			
Matrix Spike Dup (W8A0476-MSD1)				Prepared & Analyzed: 01/10/18						
NO2+NO3 as N	8.87	0.23	mg/l	8.00	4.13	59	84-115	1	20	MS-05
Matrix Spike Dup (W8A0476-MSD2)				Prepared & Analyzed: 01/10/18						
NO2+NO3 as N	4.25	0.11	mg/l	4.00	0.153	102	84-115	2	20	
Batch: W8A0586 - EPA 300.0										
Blank (W8A0586-BLK1)				Prepared & Analyzed: 01/11/18						
Chloride, Total	ND	0.50	mg/l							
Sulfate as SO4	ND	0.50	mg/l							
LCS (W8A0586-BS1)				Prepared & Analyzed: 01/11/18						
Chloride, Total	10.2	0.50	mg/l	10.0		102	90-110			
Sulfate as SO4	10.3	0.50	mg/l	10.1		102	90-110			
Matrix Spike (W8A0586-MS1)				Prepared & Analyzed: 01/11/18						
Chloride, Total	155	5.0	mg/l	100	54.8	100	76-118			
Sulfate as SO4	171	5.0	mg/l	101	66.6	103	78-111			
Matrix Spike (W8A0586-MS2)				Prepared & Analyzed: 01/11/18						
Chloride, Total	153	5.0	mg/l	100	51.0	102	76-118			
Sulfate as SO4	154	5.0	mg/l	101	47.6	105	78-111			
Matrix Spike Dup (W8A0586-MSD1)				Prepared & Analyzed: 01/11/18						
Chloride, Total	155	5.0	mg/l	100	54.8	100	76-118	0.06	20	
Sulfate as SO4	171	5.0	mg/l	101	66.6	103	78-111	0.1	20	
Matrix Spike Dup (W8A0586-MSD2)				Prepared & Analyzed: 01/11/18						
Chloride, Total	153	5.0	mg/l	100	51.0	102	76-118	0	20	
Sulfate as SO4	154	5.0	mg/l	101	47.6	105	78-111	0.03	20	



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Quality Control Results

(Continued)

Chlorinated Acids Herbicides by GC/ECD

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W8A0632 - EPA 515.3										
Blank (W8A0632-BLK1)				Prepared: 01/11/18 Analyzed: 01/12/18						
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		10.2	ug/l	10.0		102	70-130			
LCS (W8A0632-BS1)				Prepared: 01/11/18 Analyzed: 01/12/18						
2,4,5-T	4.28	0.20	ug/l	4.00		107	70-130			
2,4,5-TP (Silvex)	4.29	0.20	ug/l	4.00		107	70-130			
2,4-D	8.70	0.40	ug/l	8.00		109	70-130			
2,4-DB	16.7	2.0	ug/l	16.0		105	70-130			
3,5-Dichlorobenzoic acid	8.40	1.0	ug/l	8.00		105	70-130			
Acifluorfen	4.17	0.40	ug/l	4.00		104	70-130			
Bentazon	17.5	2.0	ug/l	16.0		110	70-130			
Dalapon	8.85	0.40	ug/l	8.00		111	70-130			
DCPA	4.27	0.10	ug/l	4.00		107	70-130			
Dicamba	8.32	0.60	ug/l	8.00		104	70-130			
Dichloroprop	8.82	0.30	ug/l	8.00		110	70-130			
Dinoseb	4.15	0.40	ug/l	4.00		104	70-130			
Pentachlorophenol	4.27	0.20	ug/l	4.00		107	70-130			
Picloram	4.20	0.60	ug/l	4.00		105	70-130			
<i>Surrogate(s)</i>										
2,4-DCAA		10.7	ug/l	10.0		107	70-130			
Matrix Spike (W8A0632-MS1)				Source: 8A05010-01 Prepared: 01/11/18 Analyzed: 01/12/18						
2,4,5-T	3.99	0.20	ug/l	4.00	ND	100	70-130			
2,4,5-TP (Silvex)	3.99	0.20	ug/l	4.00	ND	100	70-130			
2,4-D	8.61	0.40	ug/l	8.00	ND	108	70-130			



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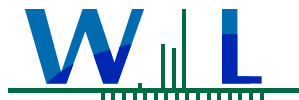
Project Manager: Edmond G. Suher

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: W8A0632 - EPA 515.3 (Continued)										
Matrix Spike (W8A0632-MS1)			Source: 8A05010-01		Prepared: 01/11/18 Analyzed: 01/12/18					
2,4-DB	16.5	2.0	ug/l	16.0	ND	103	70-130			
3,5-Dichlorobenzoic acid	8.89	1.0	ug/l	8.00	ND	111	70-130			
Acifluorfen	4.02	0.40	ug/l	4.00	ND	100	70-130			
Bentazon	16.6	2.0	ug/l	16.0	ND	104	70-130			
Dalapon	7.48	0.40	ug/l	8.00	ND	94	70-130			
DCPA	4.12	0.10	ug/l	4.00	ND	103	70-130			
Dicamba	8.35	0.60	ug/l	8.00	ND	104	70-130			
Dichloroprop	9.53	0.30	ug/l	8.00	ND	119	70-130			
Dinoseb	3.97	0.40	ug/l	4.00	ND	99	70-130			
Pentachlorophenol	4.00	0.20	ug/l	4.00	ND	100	70-130			
Picloram	4.50	0.60	ug/l	4.00	ND	113	70-130			
<i>Surrogate(s)</i>										
2,4-DCAA		11.5	ug/l	10.0		115	70-130			
Matrix Spike (W8A0632-MS2)			Source: 8A10055-01		Prepared: 01/11/18 Analyzed: 01/12/18					
2,4,5-T	4.11	0.20	ug/l	4.00	ND	103	70-130			
2,4,5-TP (Silvex)	4.24	0.20	ug/l	4.00	ND	106	70-130			
2,4-D	8.67	0.40	ug/l	8.00	ND	108	70-130			
2,4-DB	16.8	2.0	ug/l	16.0	ND	105	70-130			
3,5-Dichlorobenzoic acid	8.91	1.0	ug/l	8.00	ND	111	70-130			
Acifluorfen	4.22	0.40	ug/l	4.00	ND	105	70-130			
Bentazon	18.2	2.0	ug/l	16.0	ND	114	70-130			
Dalapon	7.83	0.40	ug/l	8.00	ND	98	70-130			
DCPA	4.32	0.10	ug/l	4.00	ND	108	70-130			
Dicamba	8.64	0.60	ug/l	8.00	ND	108	70-130			
Dichloroprop	8.88	0.30	ug/l	8.00	ND	111	70-130			
Dinoseb	4.11	0.40	ug/l	4.00	ND	103	70-130			
Pentachlorophenol	4.15	0.20	ug/l	4.00	ND	104	70-130			
Picloram	4.49	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 Dup (W8A0632-MSD1)			Source: 8A05010-01		Prepared: 01/11/18 Analyzed: 01/12/18					
2,4,5-T	4.13	0.20	ug/l	4.00	ND	103	70-130	3	30	
2,4,5-TP (Silvex)	4.11	0.20	ug/l	4.00	ND	103	70-130	3	30	
2,4-D	8.63	0.40	ug/l	8.00	ND	108	70-130	0.2	30	
2,4-DB	17.8	2.0	ug/l	16.0	ND	111	70-130	7	30	
3,5-Dichlorobenzoic acid	8.69	1.0	ug/l	8.00	ND	109	70-130	2	30	
Acifluorfen	4.22	0.40	ug/l	4.00	ND	106	70-130	5	30	



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Quality Control Results

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Chlorinated Acids Herbicides by GC/ECD (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W8A0632 - EPA 515.3 (Continued)										
Matrix Spike Dup (W8A0632-MSD1)			Source: 8A05010-01		Prepared: 01/11/18 Analyzed: 01/12/18					
Bentazon	17.3	2.0	ug/l	16.0	ND	108	70-130	4	30	
Dalapon	9.05	0.40	ug/l	8.00	ND	113	70-130	19	30	
DCPA	4.33	0.10	ug/l	4.00	ND	108	70-130	5	30	
Dicamba	8.54	0.60	ug/l	8.00	ND	107	70-130	2	30	
Dichloroprop	9.44	0.30	ug/l	8.00	ND	118	70-130	0.9	30	
Dinoseb	4.05	0.40	ug/l	4.00	ND	101	70-130	2	30	
Pentachlorophenol	4.17	0.20	ug/l	4.00	ND	104	70-130	4	30	
Picloram	4.21	0.60	ug/l	4.00	ND	105	70-130	7	30	
<i>Surrogate(s)</i>										
2,4-DCAA		10.7	ug/l	10.0		107	70-130			
Matrix Spike Dup (W8A0632-MSD2)			Source: 8A10055-01		Prepared: 01/11/18 Analyzed: 01/12/18					
2,4,5-T	4.29	0.20	ug/l	4.00	ND	107	70-130	4	30	
2,4,5-TP (Silvex)	4.33	0.20	ug/l	4.00	ND	108	70-130	2	30	
2,4-D	8.99	0.40	ug/l	8.00	ND	112	70-130	4	30	
2,4-DB	17.4	2.0	ug/l	16.0	ND	108	70-130	3	30	
3,5-Dichlorobenzoic acid	8.80	1.0	ug/l	8.00	ND	110	70-130	1	30	
Acifluorfen	4.41	0.40	ug/l	4.00	ND	110	70-130	5	30	
Bentazon	18.0	2.0	ug/l	16.0	ND	113	70-130	1	30	
Dalapon	8.57	0.40	ug/l	8.00	ND	107	70-130	9	30	
DCPA	4.49	0.10	ug/l	4.00	ND	112	70-130	4	30	
Dicamba	8.84	0.60	ug/l	8.00	ND	111	70-130	2	30	
Dichloroprop	8.97	0.30	ug/l	8.00	ND	112	70-130	1	30	
Dinoseb	4.20	0.40	ug/l	4.00	ND	105	70-130	2	30	
Pentachlorophenol	4.34	0.20	ug/l	4.00	ND	108	70-130	4	30	
Picloram	4.66	0.60	ug/l	4.00	ND	117	70-130	4	30	
<i>Surrogate(s)</i>										
2,4-DCAA		10.9	ug/l	10.0		109	70-130			



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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: W8A0436 - SM 5540C										
Blank (W8A0436-BLK1)				Prepared & Analyzed: 01/09/18						
MBAS	ND	0.050	mg/l							
LCS (W8A0436-BS1)				Prepared & Analyzed: 01/09/18						
MBAS	0.201	0.050	mg/l	0.200		101	82-115			
Matrix Spike (W8A0436-MS1)				Prepared & Analyzed: 01/09/18						
MBAS	0.261	0.050	mg/l	0.200	0.0287	116	74-123			
Matrix Spike Dup (W8A0436-MSD1)				Prepared & Analyzed: 01/09/18						
MBAS	0.255	0.050	mg/l	0.200	0.0287	113	74-123	2	20	
Batch: W8A0474 - EPA 180.1										
Blank (W8A0474-BLK1)				Prepared & Analyzed: 01/10/18						
Turbidity	ND	0.10	NTU							
LCS (W8A0474-BS1)				Prepared & Analyzed: 01/10/18						
Turbidity	6.94	0.10	NTU	6.99		99	90-110			
Duplicate (W8A0474-DUP1)				Prepared & Analyzed: 01/10/18						
Turbidity	ND	0.10	NTU		ND				10	
Batch: W8A0521 - SM 5210B										
LCS (W8A0521-BS1)				Prepared: 01/10/18 Analyzed: 01/15/18						
Biochemical Oxygen Demand	199	2.0	mg/l	198		101	85-115			
Duplicate (W8A0521-DUP1)				Prepared: 01/10/18 Analyzed: 01/15/18						
Biochemical Oxygen Demand	7.31	2.0	mg/l		7.16			2	20	
Batch: W8A0537 - SM 5210B										
LCS (W8A0537-BS1)				Prepared: 01/10/18 Analyzed: 01/15/18						
Biochemical Oxygen Demand	192	2.0	mg/l	198		97	85-115			
Duplicate (W8A0537-DUP1)				Prepared: 01/10/18 Analyzed: 01/15/18						
Biochemical Oxygen Demand	2.58	2.0	mg/l		2.52			2	20	
Batch: W8A0598 - SM 5310B										
Blank (W8A0598-BLK1)				Prepared & Analyzed: 01/11/18						
Total Organic Carbon (TOC)	ND	0.10	mg/l							
LCS (W8A0598-BS1)				Prepared & Analyzed: 01/11/18						
Total Organic Carbon (TOC)	0.942	0.10	mg/l	1.00		94	85-115			
LCS Dup (W8A0598-BSD1)				Prepared & Analyzed: 01/11/18						
Total Organic Carbon (TOC)	0.968	0.10	mg/l	1.00		97	85-115	3	20	
Batch: W8A0679 - EPA 365.1										
Blank (W8A0679-BLK1)				Prepared: 01/11/18 Analyzed: 01/16/18						
Phosphorus as P, Total	ND	0.010	mg/l							
LCS (W8A0679-BS1)				Prepared: 01/11/18 Analyzed: 01/16/18						
Phosphorus as P, Total	0.0529	0.010	mg/l	0.0500		106	90-110			

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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: W8A0679 - EPA 365.1 (Continued)										
Matrix Spike (W8A0679-MS1)	Source: 8A09143-01		Prepared: 01/11/18		Analyzed: 01/16/18					
Phosphorus as P, Total	0.104	0.010	mg/l	0.0500	0.0555	97	90-110			
Matrix Spike (W8A0679-MS2)	Source: 8A09180-03		Prepared: 01/11/18		Analyzed: 01/16/18					
Phosphorus as P, Total	0.202	0.020	mg/l	0.0500	0.152	100	90-110			
Matrix Spike Dup (W8A0679-MSD1)	Source: 8A09143-01		Prepared: 01/11/18		Analyzed: 01/16/18					
Phosphorus as P, Total	0.104	0.010	mg/l	0.0500	0.0555	97	90-110	0	20	
Matrix Spike Dup (W8A0679-MSD2)	Source: 8A09180-03		Prepared: 01/11/18		Analyzed: 01/16/18					
Phosphorus as P, Total	0.202	0.020	mg/l	0.0500	0.152	100	90-110	0	20	
Batch: W8A0689 - SM 2540D										
Blank (W8A0689-BLK1)				Prepared & Analyzed: 01/12/18						
Total Suspended Solids	ND	5	mg/l							
LCS (W8A0689-BS1)				Prepared & Analyzed: 01/12/18						
Total Suspended Solids	69.0	5	mg/l	63.2	109	90-110				
Duplicate (W8A0689-DUP1)	Source: 8A09096-01		Prepared & Analyzed: 01/12/18							
Total Suspended Solids	39.0	5	mg/l	36.0				8	20	
Duplicate (W8A0689-DUP2)	Source: 8A09096-02		Prepared & Analyzed: 01/12/18							
Total Suspended Solids	114	5	mg/l	105				8	20	
Batch: W8A0690 - EPA 160.4										
Blank (W8A0690-BLK1)				Prepared & Analyzed: 01/12/18						
Volatile Suspended Solids	ND	5.0	mg/l							
LCS (W8A0690-BS1)				Prepared & Analyzed: 01/12/18						
Volatile Suspended Solids	49	5.0	mg/l	44.9	109	90-110				
Duplicate (W8A0690-DUP1)	Source: 8A09096-01		Prepared & Analyzed: 01/12/18							
Volatile Suspended Solids	18	5.0	mg/l	17				6	15	
Duplicate (W8A0690-DUP2)	Source: 8A09096-02		Prepared & Analyzed: 01/12/18							
Volatile Suspended Solids	37	5.0	mg/l	37				0	15	
Batch: W8A0759 - SM 2510B										
Blank (W8A0759-BLK1)				Prepared & Analyzed: 01/12/18						
Specific Conductance (EC)	ND	2.0	umhos/cm							
LCS (W8A0759-BS1)				Prepared & Analyzed: 01/12/18						
Specific Conductance (EC)	201	2.0	umhos/cm	200	100	95-105				
Duplicate (W8A0759-DUP1)	Source: 8A05010-01		Prepared & Analyzed: 01/12/18							
Specific Conductance (EC)	728	2.0	umhos/cm	728				0	5	
Batch: W8A0786 - SM 2320B										
Blank (W8A0786-BLK1)				Prepared: 01/12/18		Analyzed: 01/15/18				
Alkalinity as CaCO3	ND	2.0	mg/l							
LCS (W8A0786-BS1)				Prepared: 01/12/18		Analyzed: 01/15/18				

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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: W8A0786 - SM 2320B (Continued)										
LCS (W8A0786-BS1)				Prepared: 01/12/18 Analyzed: 01/15/18						
Alkalinity as CaCO3	244	2.0	mg/l	250		98	94-108			
Duplicate (W8A0786-DUP1)				Source: 8A05010-01 Prepared: 01/12/18 Analyzed: 01/15/18						
Alkalinity as CaCO3	186	2.0	mg/l		184			0.8	15	
Batch: W8A0808 - SM 2540C										
Blank (W8A0808-BLK1)				Prepared: 01/14/18 Analyzed: 01/15/18						
Total Dissolved Solids	ND	10	mg/l							
LCS (W8A0808-BS1)				Prepared: 01/14/18 Analyzed: 01/15/18						
Total Dissolved Solids	823	10	mg/l	824		100	96-102			
Duplicate (W8A0808-DUP1)				Source: 7L26003-01 Prepared: 01/14/18 Analyzed: 01/15/18						
Total Dissolved Solids	1760	10	mg/l		1660			6	10	
Duplicate (W8A0808-DUP2)				Source: 8A11019-01 Prepared: 01/14/18 Analyzed: 01/15/18						
Total Dissolved Solids	198	10	mg/l		198			0	10	
Batch: W8A0864 - EPA 350.1										
Blank (W8A0864-BLK1)				Prepared: 01/15/18 Analyzed: 01/19/18						
Ammonia as N	ND	0.10	mg/l							
Blank (W8A0864-BLK2)				Prepared: 01/15/18 Analyzed: 01/19/18						
Ammonia as N	ND	0.10	mg/l							
LCS (W8A0864-BS1)				Prepared: 01/15/18 Analyzed: 01/19/18						
Ammonia as N	0.258	0.10	mg/l	0.250		103	90-110			
LCS (W8A0864-BS2)				Prepared: 01/15/18 Analyzed: 01/19/18						
Ammonia as N	0.255	0.10	mg/l	0.250		102	90-110			
Matrix Spike (W8A0864-MS1)				Source: 8A10167-01 Prepared: 01/15/18 Analyzed: 01/19/18						
Ammonia as N	0.771	0.10	mg/l	0.250	0.512	104	90-110			
Matrix Spike (W8A0864-MS2)				Source: 8A11114-01 Prepared: 01/15/18 Analyzed: 01/19/18						
Ammonia as N	0.445	0.10	mg/l	0.250	0.182	105	90-110			
Matrix Spike Dup (W8A0864-MSD1)				Source: 8A10167-01 Prepared: 01/15/18 Analyzed: 01/19/18						
Ammonia as N	0.770	0.10	mg/l	0.250	0.512	103	90-110	0.1	15	
Matrix Spike Dup (W8A0864-MSD2)				Source: 8A11114-01 Prepared: 01/15/18 Analyzed: 01/19/18						
Ammonia as N	0.445	0.10	mg/l	0.250	0.182	105	90-110	0.07	15	
Batch: W8A0932 - EPA 365.3										
Blank (W8A0932-BLK1)				Prepared: 01/16/18 Analyzed: 01/22/18						
Phosphorus, Dissolved	ND	0.010	mg/l							
LCS (W8A0932-BS1)				Prepared: 01/16/18 Analyzed: 01/22/18						
Phosphorus, Dissolved	0.200	0.010	mg/l	0.200		100	90-110			
Matrix Spike (W8A0932-MS1)				Source: 8A09096-01 Prepared: 01/16/18 Analyzed: 01/22/18						
Phosphorus, Dissolved	0.630	0.010	mg/l	0.200	0.439	95	90-110			

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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	RPD Limit	Qualifier
Batch: W8A0932 - EPA 365.3 (Continued)										
Matrix Spike Dup (W8A0932-MSD1)	Source: 8A09096-01			Prepared: 01/16/18 Analyzed: 01/22/18						
Phosphorus, Dissolved	0.625	0.010	mg/l	0.200	0.439	93	90-110	0.8	20	
Batch: W8A1064 - EPA 335.4										
Blank (W8A1064-BLK1)				Prepared: 01/17/18 Analyzed: 01/18/18						
Cyanide, Total	ND	5.0	ug/l							
LCS (W8A1064-BS1)				Prepared: 01/17/18 Analyzed: 01/18/18						
Cyanide, Total	110	5.0	ug/l	100		110	90-110			
Matrix Spike (W8A1064-MS1)	Source: 8A09096-01			Prepared: 01/17/18 Analyzed: 01/18/18						
Cyanide, Total	210	5.0	ug/l	200	ND	105	90-110			
Matrix Spike Dup (W8A1064-MSD1)	Source: 8A09096-01			Prepared: 01/17/18 Analyzed: 01/18/18						
Cyanide, Total	201	5.0	ug/l	200	ND	100	90-110	4	20	
Batch: W8A1101 - EPA 420.4										
Blank (W8A1101-BLK1)				Prepared: 01/18/18 Analyzed: 01/19/18						
Phenolics	ND	0.010	mg/l							
LCS (W8A1101-BS1)				Prepared: 01/18/18 Analyzed: 01/19/18						
Phenolics	0.102	0.010	mg/l	0.100		102	90-110			
Matrix Spike (W8A1101-MS1)	Source: 8A10127-03			Prepared: 01/18/18 Analyzed: 01/19/18						
Phenolics	0.278	0.010	mg/l	0.250	ND	111	90-110			MS-01
Matrix Spike Dup (W8A1101-MSD1)	Source: 8A10127-03			Prepared: 01/18/18 Analyzed: 01/19/18						
Phenolics	0.273	0.010	mg/l	0.250	ND	109	90-110	2	20	
Batch: W8A1268 - EPA 410.4										
Blank (W8A1268-BLK1)				Prepared & Analyzed: 01/22/18						
Chemical Oxygen Demand	ND	5.0	mg/l							
LCS (W8A1268-BS1)				Prepared & Analyzed: 01/22/18						
Chemical Oxygen Demand	103	5.0	mg/l	100		103	90-110			
Duplicate (W8A1268-DUP1)	Source: 8A12033-01			Prepared & Analyzed: 01/22/18						
Chemical Oxygen Demand	2510	50	mg/l		2510			0	15	
Matrix Spike (W8A1268-MS1)	Source: 8A12034-01			Prepared & Analyzed: 01/22/18						
Chemical Oxygen Demand	212	20	mg/l	200	14.0	99	90-110			
Matrix Spike Dup (W8A1268-MSD1)	Source: 8A12034-01			Prepared & Analyzed: 01/22/18						
Chemical Oxygen Demand	224	20	mg/l	200	14.0	105	90-110	5	15	
Batch: W8A1383 - EPA 351.2										
Blank (W8A1383-BLK1)				Prepared: 01/23/18 Analyzed: 01/28/18						
TKN	ND	0.10	mg/l							
Blank (W8A1383-BLK2)				Prepared: 01/23/18 Analyzed: 01/28/18						
TKN	ND	0.10	mg/l							
LCS (W8A1383-BS1)				Prepared: 01/23/18 Analyzed: 01/28/18						

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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: W8A1383 - EPA 351.2 (Continued)										
LCS (W8A1383-BS1)				Prepared: 01/23/18 Analyzed: 01/28/18						
TKN	0.961	0.10	mg/l	1.00		96	90-110			
LCS (W8A1383-BS2)				Prepared: 01/23/18 Analyzed: 01/28/18						
TKN	0.961	0.10	mg/l	1.00		96	90-110			
Matrix Spike (W8A1383-MS1)				Source: 8A12067-09 Prepared: 01/23/18 Analyzed: 01/28/18						
TKN	1.19	0.10	mg/l	1.00	0.209	99	90-110			
Matrix Spike (W8A1383-MS2)				Source: 8A12067-10 Prepared: 01/23/18 Analyzed: 01/28/18						
TKN	1.20	0.10	mg/l	1.00	0.168	103	90-110			
Matrix Spike Dup (W8A1383-MSD1)				Source: 8A12067-09 Prepared: 01/23/18 Analyzed: 01/28/18						
TKN	1.19	0.10	mg/l	1.00	0.209	98	90-110	0.5	10	
Matrix Spike Dup (W8A1383-MSD2)				Source: 8A12067-10 Prepared: 01/23/18 Analyzed: 01/28/18						
TKN	1.21	0.10	mg/l	1.00	0.168	105	90-110	1	10	

Hexavalent Chromium by IC

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W8A0657 - EPA 218.6										
Blank (W8A0657-BLK1)				Prepared & Analyzed: 01/11/18						
Chromium 6+	ND	0.020	ug/l							
LCS (W8A0657-BS1)				Prepared & Analyzed: 01/11/18						
Chromium 6+	4.82	0.020	ug/l	5.00		96	90-110			
Matrix Spike (W8A0657-MS1)				Source: 8A08102-01RE1 Prepared & Analyzed: 01/11/18						
Chromium 6+	119	1.0	ug/l	250	ND	47	88-112			MS-05
Matrix Spike Dup (W8A0657-MSD1)				Source: 8A08102-01RE1 Prepared & Analyzed: 01/11/18						
Chromium 6+	64.4	1.0	ug/l	250	ND	26	88-112	59	10	MS-05
Batch: W8A1076 - EPA 218.6										
Blank (W8A1076-BLK1)				Prepared & Analyzed: 01/17/18						
Chromium 6+, Dissolved	ND	0.020	ug/l							
LCS (W8A1076-BS1)				Prepared & Analyzed: 01/17/18						
Chromium 6+, Dissolved	4.99	0.020	ug/l	5.00		100	90-110			
Matrix Spike (W8A1076-MS1)				Source: 8A09096-01 Prepared & Analyzed: 01/17/18						
Chromium 6+, Dissolved	5.08	0.020	ug/l	5.00	0.248	97	88-112			
Matrix Spike Dup (W8A1076-MSD1)				Source: 8A09096-01 Prepared & Analyzed: 01/17/18						
Chromium 6+, Dissolved	5.30	0.020	ug/l	5.00	0.248	101	88-112	4	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: W8A0490 - EPA 8015D										
Blank (W8A0490-BLK1)										
				Prepared: 01/10/18 Analyzed: 01/18/18						
Diesel Range Organics	ND	0.10	mg/l							
Oil Range Organics	ND	0.50	mg/l							
<i>Surrogate(s)</i>										
<i>n-Tetracosane</i>		0.233	mg/l	0.250		93	64-155			
LCS (W8A0490-BS1)										
				Prepared: 01/10/18 Analyzed: 01/18/18						
Diesel Range Organics	0.494	0.10	mg/l	0.500		99	56-136			
<i>Surrogate(s)</i>										
<i>n-Tetracosane</i>		0.233	mg/l	0.250		93	64-155			
LCS Dup (W8A0490-BSD1)										
				Prepared: 01/10/18 Analyzed: 01/18/18						
Diesel Range Organics	0.477	0.10	mg/l	0.500		95	56-136	4	25	
<i>Surrogate(s)</i>										
<i>n-Tetracosane</i>		0.221	mg/l	0.250		88	64-155			



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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	RPD Limit	Qualifier
Batch: W8A0886 - EPA 200.7										
Blank (W8A0886-BLK1)				Prepared: 01/15/18 Analyzed: 01/16/18						
Calcium, Total	ND	0.100	mg/l							
LCS (W8A0886-B51)				Prepared: 01/15/18 Analyzed: 01/16/18						
Calcium, Total	52.3	0.100	mg/l	50.2		104	85-115			
Matrix Spike (W8A0886-MS1)				Source: 8A09096-01 Prepared: 01/15/18 Analyzed: 01/16/18						
Calcium, Total	60.5	0.100	mg/l	50.2	10.6	99	70-130			
Matrix Spike (W8A0886-MS2)				Source: 8A09096-02 Prepared: 01/15/18 Analyzed: 01/16/18						
Calcium, Total	59.5	0.100	mg/l	50.2	8.39	102	70-130			
Matrix Spike Dup (W8A0886-MSD1)				Source: 8A09096-01 Prepared: 01/15/18 Analyzed: 01/16/18						
Calcium, Total	60.2	0.100	mg/l	50.2	10.6	99	70-130	0.5	30	
Matrix Spike Dup (W8A0886-MSD2)				Source: 8A09096-02 Prepared: 01/15/18 Analyzed: 01/16/18						
Calcium, Total	58.3	0.100	mg/l	50.2	8.39	100	70-130	2	30	
Batch: W8A0888 - EPA 200.8										
Blank (W8A0888-BLK1)				Prepared: 01/15/18 Analyzed: 01/24/18						
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							
Blank (W8A0888-BLK2)				Prepared: 01/15/18 Analyzed: 01/24/18						
Aluminum, Dissolved	ND	5.0	ug/l							
Aluminum, Total	ND	5.0	ug/l							
Antimony, Dissolved	ND	0.50	ug/l							

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Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W8A0888 - EPA 200.8 (Continued)										
Blank (W8A0888-BLK2)				Prepared: 01/15/18 Analyzed: 01/24/18						
Arsenic, Dissolved	ND	0.40	ug/l							
Cadmium, Dissolved	ND	0.10	ug/l							
Chromium, Dissolved	ND	0.20	ug/l							
Copper, Dissolved	ND	0.50	ug/l							
Iron, Dissolved	ND	20	ug/l							
Iron, Total	ND	20	ug/l							
Lead, Dissolved	ND	0.20	ug/l							
Nickel, Dissolved	ND	0.80	ug/l							
Zinc, Dissolved	ND	5.0	ug/l							
LCS (W8A0888-BS1)				Prepared: 01/15/18 Analyzed: 01/24/18						
Aluminum, Dissolved	50.7	5.0	ug/l	50.0		101	85-115			
Aluminum, Total	50.7	5.0	ug/l	50.0		101	85-115			
Antimony, Dissolved	50.6	0.50	ug/l	50.0		101	85-115			
Antimony, Total	50.6	0.50	ug/l	50.0		101	85-115			
Arsenic, Dissolved	51.1	0.40	ug/l	50.0		102	85-115			
Arsenic, Total	51.1	0.40	ug/l	50.0		102	85-115			
Cadmium, Dissolved	49.3	0.10	ug/l	50.0		99	85-115			
Cadmium, Total	49.3	0.10	ug/l	50.0		99	85-115			
Chromium, Dissolved	49.4	0.20	ug/l	50.0		99	85-115			
Chromium, Total	49.4	0.20	ug/l	50.0		99	85-115			
Copper, Dissolved	51.5	0.50	ug/l	50.0		103	85-115			
Copper, Total	51.5	0.50	ug/l	50.0		103	85-115			
Iron, Dissolved	1070	20	ug/l	1050		102	85-115			
Iron, Total	1070	20	ug/l	1050		102	85-115			
Lead, Dissolved	48.1	0.20	ug/l	50.0		96	85-115			
Lead, Total	48.1	0.20	ug/l	50.0		96	85-115			
Nickel, Dissolved	50.1	0.80	ug/l	50.0		100	85-115			
Nickel, Total	50.1	0.80	ug/l	50.0		100	85-115			
Zinc, Dissolved	52.9	5.0	ug/l	50.0		106	85-115			
Zinc, Total	52.9	5.0	ug/l	50.0		106	85-115			
LCS (W8A0888-BS2)				Prepared: 01/15/18 Analyzed: 01/25/18						
Aluminum, Total	48.3	5.0	ug/l	50.0		97	85-115			
Iron, Total	1080	20	ug/l	1050		103	85-115			
Matrix Spike (W8A0888-MS1)				Source: 8A09143-06 Prepared: 01/15/18 Analyzed: 01/24/18						
Aluminum, Total	366	5.0	ug/l	50.0	276	180	70-130			MS-02
Antimony, Total	49.7	0.50	ug/l	50.0	0.940	98	70-130			
Arsenic, Total	54.9	0.40	ug/l	50.0	2.14	106	70-130			



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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: W8A0888 - EPA 200.8 (Continued)										
Matrix Spike (W8A0888-MS1) Source: 8A09143-06 Prepared: 01/15/18 Analyzed: 01/24/18										
Cadmium, Total	44.5	0.10	ug/l	50.0	0.310	88	70-130			
Chromium, Total	51.4	0.20	ug/l	50.0	1.10	101	70-130			
Copper, Total	53.7	0.50	ug/l	50.0	7.83	92	70-130			
Iron, Total	2590	20	ug/l	1050	1490	105	70-130			
Lead, Total	46.3	0.20	ug/l	50.0	1.02	91	70-130			
Nickel, Total	49.9	0.80	ug/l	50.0	4.06	92	70-130			
Zinc, Total	86.9	5.0	ug/l	50.0	39.4	95	70-130			
Matrix Spike (W8A0888-MS2) Source: 8A09143-01 Prepared: 01/15/18 Analyzed: 01/24/18										
Aluminum, Total	193	5.0	ug/l	50.0	124	139	70-130			MS-02
Antimony, Total	49.2	0.50	ug/l	50.0	0.400	98	70-130			
Arsenic, Total	55.1	0.40	ug/l	50.0	2.10	106	70-130			
Cadmium, Total	44.2	0.10	ug/l	50.0	0.150	88	70-130			
Chromium, Total	48.9	0.20	ug/l	50.0	0.220	97	70-130			
Copper, Total	45.4	0.50	ug/l	50.0	0.860	89	70-130			
Iron, Total	1380	20	ug/l	1050	330	100	70-130			
Lead, Total	45.7	0.20	ug/l	50.0	0.240	91	70-130			
Nickel, Total	50.6	0.80	ug/l	50.0	5.71	90	70-130			
Zinc, Total	47.2	5.0	ug/l	50.0	2.75	89	70-130			
Matrix Spike (W8A0888-MS3) Source: 8A09143-06 Prepared: 01/15/18 Analyzed: 01/25/18										
Aluminum, Total	329	5.0	ug/l	50.0	276	104	70-130			
Iron, Total	2580	20	ug/l	1050	1490	104	70-130			
Matrix Spike (W8A0888-MS4) Source: 8A09143-01 Prepared: 01/15/18 Analyzed: 01/25/18										
Aluminum, Total	166	5.0	ug/l	50.0	124	86	70-130			
Iron, Total	1390	20	ug/l	1050	330	101	70-130			
Matrix Spike Dup (W8A0888-MSD1) Source: 8A09143-06 Prepared: 01/15/18 Analyzed: 01/24/18										
Aluminum, Total	399	5.0	ug/l	50.0	276	245	70-130	8	30	MS-02
Antimony, Total	50.3	0.50	ug/l	50.0	0.940	99	70-130	1	30	
Arsenic, Total	54.9	0.40	ug/l	50.0	2.14	106	70-130	0	30	
Cadmium, Total	44.9	0.10	ug/l	50.0	0.310	89	70-130	1	30	
Chromium, Total	51.7	0.20	ug/l	50.0	1.10	101	70-130	0.6	30	
Copper, Total	53.7	0.50	ug/l	50.0	7.83	92	70-130	0.02	30	
Iron, Total	2650	20	ug/l	1050	1490	110	70-130	2	30	
Lead, Total	46.9	0.20	ug/l	50.0	1.02	92	70-130	1	30	
Nickel, Total	50.4	0.80	ug/l	50.0	4.06	93	70-130	0.8	30	
Zinc, Total	87.3	5.0	ug/l	50.0	39.4	96	70-130	0.5	30	
Matrix Spike Dup (W8A0888-MSD2) Source: 8A09143-01 Prepared: 01/15/18 Analyzed: 01/24/18										
Aluminum, Total	191	5.0	ug/l	50.0	124	134	70-130	1	30	MS-02

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Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W8A0888 - EPA 200.8 (Continued)										
Matrix Spike Dup (W8A0888-MSD2)			Source: 8A09143-01		Prepared: 01/15/18 Analyzed: 01/24/18					
Antimony, Total	49.9	0.50	ug/l	50.0	0.400	99	70-130	1	30	
Arsenic, Total	56.3	0.40	ug/l	50.0	2.10	108	70-130	2	30	
Cadmium, Total	44.4	0.10	ug/l	50.0	0.150	89	70-130	0.5	30	
Chromium, Total	49.0	0.20	ug/l	50.0	0.220	98	70-130	0.1	30	
Copper, Total	45.7	0.50	ug/l	50.0	0.860	90	70-130	0.7	30	
Iron, Total	1370	20	ug/l	1050	330	99	70-130	0.3	30	
Lead, Total	46.5	0.20	ug/l	50.0	0.240	92	70-130	2	30	
Nickel, Total	50.9	0.80	ug/l	50.0	5.71	90	70-130	0.5	30	
Zinc, Total	47.4	5.0	ug/l	50.0	2.75	89	70-130	0.4	30	
Matrix Spike Dup (W8A0888-MSD3)			Source: 8A09143-06		Prepared: 01/15/18 Analyzed: 01/25/18					
Aluminum, Total	349	5.0	ug/l	50.0	276	145	70-130	6	30	MS-02
Iron, Total	2670	20	ug/l	1050	1490	112	70-130	3	30	
Matrix Spike Dup (W8A0888-MSD4)			Source: 8A09143-01		Prepared: 01/15/18 Analyzed: 01/25/18					
Aluminum, Total	165	5.0	ug/l	50.0	124	83	70-130	0.9	30	
Iron, Total	1400	20	ug/l	1050	330	102	70-130	0.9	30	

Microbiological Parameters by Standard Methods

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W8A1615 - Enterolert										
Blank (W8A1615-BLK1)			Prepared: 01/09/18 Analyzed: 01/10/18							
Enterococcus	ND	1.0	MPN/100ml							
Batch: W8A1616 - SM 9221E										
Blank (W8A1616-BLK5)			Prepared: 01/09/18 Analyzed: 01/20/18							
Fecal Coliform	ND	2.0	MPN/100ml							
Total Coliform	ND	2.0	MPN/100ml							
Blank (W8A1616-BLK8)			Prepared: 01/09/18 Analyzed: 01/17/18							
E. coli	ND	2.0	MPN/100ml							
Fecal Coliform	ND	2.0	MPN/100ml							
Total Coliform	ND	2.0	MPN/100ml							
Blank (W8A1616-BLK9)			Prepared: 01/09/18 Analyzed: 01/20/18							
E. coli	ND	2.0	MPN/100ml							
Fecal Coliform	ND	2.0	MPN/100ml							
Total Coliform	ND	2.0	MPN/100ml							



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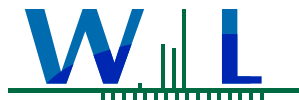
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Semivolatile Organics - Low Level by Tandem GC/MS/MS

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W8A0599 - EPA 625.1										
Blank (W8A0599-BLK1)				Prepared: 01/11/18 Analyzed: 01/23/18						
1-Methylphenanthrene	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							
Chrysene	ND	5.0	ng/l							
Fluoranthene	ND	5.0	ng/l							
Fluorene	ND	5.0	ng/l							
Naphthalene	5.16	5.0	ng/l							B
Phenanthrene	ND	5.0	ng/l							
Pyrene	ND	5.0	ng/l							
<i>Surrogate(s)</i>										
1,3-Dimethyl-2-nitrobenzene		83.8	ng/l	100		84	50-150			
Perylene-d12		92.2	ng/l	100		92	50-150			
Blank (W8A0599-BLK2)										
				Prepared: 01/11/18 Analyzed: 02/15/18						
Benzo (a) pyrene	ND	5.0	ng/l							QC-2
Benzo (b) fluoranthene	ND	5.0	ng/l							QC-2
Benzo (e) pyrene	ND	5.0	ng/l							QC-2
Benzo (g,h,i) perylene	ND	5.0	ng/l							QC-2
Benzo (k) fluoranthene	ND	5.0	ng/l							QC-2
Dibenzo (a,h) anthracene	ND	5.0	ng/l							QC-2
Indeno (1,2,3-cd) pyrene	ND	5.0	ng/l							QC-2
Perylene	ND	5.0	ng/l							QC-2
<i>Surrogate(s)</i>										
1,3-Dimethyl-2-nitrobenzene		115	ng/l	100		115	50-150			QC-2
Perylene-d12		118	ng/l	100		118	50-150			QC-2
LCS (W8A0599-BS1)										
				Prepared: 01/11/18 Analyzed: 01/23/18						
Acenaphthene	34.6	5.0	ng/l	50.0		69	50-150			
Acenaphthylene	36.1	5.0	ng/l	50.0		72	50-150			
Anthracene	37.6	5.0	ng/l	50.0		75	50-150			
Benzo (a) anthracene	35.1	5.0	ng/l	50.0		70	50-150			
Chrysene	30.3	5.0	ng/l	50.0		61	50-150			
Fluoranthene	40.3	5.0	ng/l	50.0		81	50-150			
Fluorene	39.8	5.0	ng/l	50.0		80	50-150			
Naphthalene	37.8	5.0	ng/l	50.0		76	50-150			
Phenanthrene	38.4	5.0	ng/l	50.0		77	50-150			
Pyrene	40.0	5.0	ng/l	50.0		80	50-150			
<i>Surrogate(s)</i>										

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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: MS4 - Storm Water Monitoring 2017-2018

Reported:

02/20/2018 08:34

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: W8A0599 - EPA 625.1 (Continued)										
LCS (W8A0599-BS1)				Prepared: 01/11/18 Analyzed: 01/23/18						
Surrogate(s)										
1,3-Dimethyl-2-nitrobenzene		84.7	ng/l	100		85	50-150			
Perylene-d12		88.4	ng/l	100		88	50-150			
LCS (W8A0599-BS2)				Prepared: 01/11/18 Analyzed: 02/15/18						
Benzo (a) pyrene	47.3	5.0	ng/l	50.0		95	50-150			QC-2
Benzo (b) fluoranthene	46.8	5.0	ng/l	50.0		94	50-150			QC-2
Benzo (g,h,i) perylene	36.6	5.0	ng/l	50.0		73	50-150			QC-2
Benzo (k) fluoranthene	47.4	5.0	ng/l	50.0		95	50-150			QC-2
Dibenzo (a,h) anthracene	37.1	5.0	ng/l	50.0		74	50-150			QC-2
Indeno (1,2,3-cd) pyrene	38.0	5.0	ng/l	50.0		76	50-150			QC-2
Surrogate(s)										
1,3-Dimethyl-2-nitrobenzene		119	ng/l	100		119	50-150			QC-2
Perylene-d12		114	ng/l	100		114	50-150			QC-2
LCS Dup (W8A0599-BSD1)				Prepared: 01/11/18 Analyzed: 01/23/18						
Acenaphthene	29.5	5.0	ng/l	50.0		59	50-150	16	30	
Acenaphthylene	32.2	5.0	ng/l	50.0		64	50-150	12	30	
Anthracene	34.5	5.0	ng/l	50.0		69	50-150	8	30	
Benzo (a) anthracene	33.3	5.0	ng/l	50.0		67	50-150	5	30	
Chrysene	27.6	5.0	ng/l	50.0		55	50-150	9	30	
Fluoranthene	35.9	5.0	ng/l	50.0		72	50-150	11	30	
Fluorene	34.4	5.0	ng/l	50.0		69	50-150	15	30	
Naphthalene	35.5	5.0	ng/l	50.0		71	50-150	6	30	
Phenanthrene	36.5	5.0	ng/l	50.0		73	50-150	5	30	
Pyrene	35.1	5.0	ng/l	50.0		70	50-150	13	30	
Surrogate(s)										
1,3-Dimethyl-2-nitrobenzene		84.5	ng/l	100		85	50-150			
Perylene-d12		102	ng/l	100		102	50-150			
LCS Dup (W8A0599-BSD2)				Prepared: 01/11/18 Analyzed: 02/15/18						
Benzo (a) pyrene	48.7	5.0	ng/l	50.0		97	50-150	3	30	QC-2
Benzo (b) fluoranthene	48.6	5.0	ng/l	50.0		97	50-150	4	30	QC-2
Benzo (g,h,i) perylene	41.9	5.0	ng/l	50.0		84	50-150	14	30	QC-2
Benzo (k) fluoranthene	48.8	5.0	ng/l	50.0		98	50-150	3	30	QC-2
Dibenzo (a,h) anthracene	41.6	5.0	ng/l	50.0		83	50-150	11	30	QC-2
Indeno (1,2,3-cd) pyrene	43.3	5.0	ng/l	50.0		87	50-150	13	30	QC-2
Surrogate(s)										
1,3-Dimethyl-2-nitrobenzene		112	ng/l	100		112	50-150			QC-2
Perylene-d12		114	ng/l	100		114	50-150			QC-2
Matrix Spike (W8A0599-MS1)		Source: 8A09146-01		Prepared: 01/11/18 Analyzed: 01/23/18						

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WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

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

Project Number: MS4 - Storm Water Monitoring 2017-2018

Reported:

02/20/2018 08:34

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
Batch: W8A0599 - EPA 625.1 (Continued)										
Matrix Spike (W8A0599-MS1)			Source: 8A09146-01		Prepared: 01/11/18 Analyzed: 01/23/18					
Acenaphthene	342	50	ng/l	500	7.80	67	50-150			M-02
Acenaphthylene	381	50	ng/l	500	6.23	75	50-150			M-02
Anthracene	383	50	ng/l	500	ND	77	50-150			M-02
Benzo (a) anthracene	400	50	ng/l	500	ND	80	50-150			M-02
Chrysene	320	50	ng/l	500	ND	64	50-150			M-02
Fluoranthene	427	50	ng/l	500	21.1	81	50-150			M-02
Fluorene	397	50	ng/l	500	14.4	77	50-150			M-02
Naphthalene	399	50	ng/l	500	53.0	69	50-150			M-02
Phenanthrene	364	50	ng/l	500	51.5	63	50-150			M-02
Pyrene	365	50	ng/l	500	ND	73	50-150			M-02
<i>Surrogate(s)</i>										
1,3-Dimethyl-2-nitrobenzene		918	ng/l	1000		92	50-150			M-02
Perylene-d12		684	ng/l	1000		68	50-150			M-02
Matrix Spike (W8A0599-MS2)			Source: 8A09146-01		Prepared: 01/11/18 Analyzed: 02/15/18					
Benzo (a) pyrene	60.3	5.0	ng/l	50.0	12.4	96	50-150			M-02, QC-2
Benzo (b) fluoranthene	56.2	5.0	ng/l	50.0	11.4	90	50-150			M-02, QC-2
Benzo (g,h,i) perylene	54.8	5.0	ng/l	50.0	23.3	63	50-150			M-02, QC-2
Benzo (k) fluoranthene	57.2	5.0	ng/l	50.0	8.53	97	50-150			M-02, QC-2
Dibenzo (a,h) anthracene	53.1	5.0	ng/l	50.0	19.5	67	50-150			M-02, QC-2
Indeno (1,2,3-cd) pyrene	57.6	5.0	ng/l	50.0	28.2	59	50-150			M-02, QC-2
<i>Surrogate(s)</i>										
1,3-Dimethyl-2-nitrobenzene		120	ng/l	100		120	50-150			M-02, QC-2
Perylene-d12		84.0	ng/l	100		84	50-150			M-02, QC-2
Matrix Spike Dup (W8A0599-MSD1)			Source: 8A09146-01		Prepared: 01/11/18 Analyzed: 01/23/18					
Acenaphthene	379	50	ng/l	500	7.80	74	50-150	10	30	M-02
Acenaphthylene	425	50	ng/l	500	6.23	84	50-150	11	30	M-02
Anthracene	458	50	ng/l	500	ND	92	50-150	18	30	M-02
Benzo (a) anthracene	444	50	ng/l	500	ND	89	50-150	10	30	M-02
Chrysene	336	50	ng/l	500	ND	67	50-150	5	30	M-02
Fluoranthene	467	50	ng/l	500	21.1	89	50-150	9	30	M-02
Fluorene	454	50	ng/l	500	14.4	88	50-150	13	30	M-02
Naphthalene	437	50	ng/l	500	53.0	77	50-150	9	30	M-02
Phenanthrene	440	50	ng/l	500	51.5	78	50-150	19	30	M-02
Pyrene	382	50	ng/l	500	ND	76	50-150	5	30	M-02
<i>Surrogate(s)</i>										
1,3-Dimethyl-2-nitrobenzene		884	ng/l	1000		88	50-150			M-02
Perylene-d12		556	ng/l	1000		56	50-150			M-02
Matrix Spike Dup (W8A0599-MSD2)			Source: 8A09146-01		Prepared: 01/11/18 Analyzed: 02/16/18					

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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: MS4 - Storm Water Monitoring 2017-2018

Reported:

02/20/2018 08:34

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: W8A0599 - EPA 625.1 (Continued)										
Matrix Spike Dup (W8A0599-MSD2)			Source: 8A09146-01		Prepared: 01/11/18 Analyzed: 02/16/18					
Benzo (a) pyrene	66.7	5.0	ng/l	50.0	12.4	109	50-150	10	30	M-02, QC-2
Benzo (b) fluoranthene	63.6	5.0	ng/l	50.0	11.4	104	50-150	12	30	M-02, QC-2
Benzo (g,h,i) perylene	58.9	5.0	ng/l	50.0	23.3	71	50-150	7	30	M-02, QC-2
Benzo (k) fluoranthene	65.5	5.0	ng/l	50.0	8.53	114	50-150	14	30	M-02, QC-2
Dibenzo (a,h) anthracene	58.7	5.0	ng/l	50.0	19.5	78	50-150	10	30	M-02, QC-2
Indeno (1,2,3-cd) pyrene	59.0	5.0	ng/l	50.0	28.2	62	50-150	2	30	M-02, QC-2
<i>Surrogate(s)</i>										
1,3-Dimethyl-2-nitrobenzene		119	ng/l	100		119	50-150			M-02, QC-2
Perylene-d12		75.0	ng/l	100		75	50-150			M-02, QC-2

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

Project Number: MS4 - Storm Water Monitoring 2017-2018

Project Manager: Edmond G. Suher

Reported:
02/20/2018 08:34



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	Blank contamination. The analyte was found in the associated blank as well as in the sample.
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-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-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.
QC-2	This QC sample was reanalyzed to complement samples that require re-analysis on different date. See analysis date.
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

W.L. **Weck Laboratories, Inc.**
Analytical Laboratory Services • Since 1964
14859 East Clark Avenue • Industry, CA 91745
Tel 626-336-2139 • Fax 626-336-2634 • www.wecklabs.com

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WECK LABORATORIES, INC.

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

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

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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.