

IV. Combined Ocean Outfall Data Data Summaries

This section presents the results of analyses of the combined or mixed effluent stream being discharged to the South Bay Ocean Outfall from the South Bay Wastewater Reclamation and International Wastewater Treatment Plant for 2009.

SB_ITP_COMB_EFF designates a composite sample taken at a point downstream of the discharges of both plants where the wastewater stream is a mixture of both effluents (the secondary or tertiary effluent from SBWRP and the primary effluent from the IWTP).

Sampling and monitoring analyses occurred quarterly in February, May, August and October.

Discharge limits do not apply to this combined flow; but quarterly monitoring is required.

SOUTH BAY WATER RECLAMATION PLANT
COMBINED OUTFALL

Annual 2009

Source: SB_ITP_COMB_EFF

Date:		03-FEB-2009	05-MAY-2009	04-AUG-2009	06-OCT-2009
Sample ID:	MDL Units				
Aluminum	47 UG/L	287	195	196	212
Antimony	2.9 UG/L	ND	ND	ND	ND
Arsenic	.4 UG/L	2.09	2.21	3.49	2.73
Barium	.039 UG/L	42.7	35.8	27.2	31.7
Beryllium	.022 UG/L	ND	ND	ND	ND
Boron	7 UG/L	385	403	440	420
Cadmium	.53 UG/L	ND	ND	ND	ND
Chromium	1.2 UG/L	3.2	4.5	5.3	3.1
Cobalt	.85 UG/L	ND	1.1	1.0	1.0
Copper	2 UG/L	28.1	36.6	28.4	24.8
Iron	37 UG/L	1310	1500	1240	1170
Lead	2 UG/L	ND	2.2	ND	ND
Manganese	.24 UG/L	128	86.2	83.4	75.0
Mercury	.09 UG/L	ND	ND	ND	ND
Molybdenum	.89 UG/L	7.7	8.3	8.1	9.0
Nickel	.53 UG/L	14.8	39.4	26.0	37.4
Selenium	.28 UG/L	1.55	11.70	1.68	1.69
Silver	.4 UG/L	ND	0.5	ND	ND
Thallium	3.9 UG/L	ND	ND	ND	ND
Vanadium	.64 UG/L	2.5	2.0	2.2	1.4
Zinc	2.5 UG/L	69.4	42.9	44.1	34.9
Calcium Hardness	.1 MG/L	233	244	224	225
Magnesium Hardness	.4 MG/L	166	182	179	177
Total Hardness	.4 MG/L	400	425	403	403
Total Alkalinity (bicarbonate)	20 MG/L	330	357	340	NA*
Calcium	.04 MG/L	94	98	90	90
Lithium	.002 MG/L	0.05	0.07	0.07	0.07
Magnesium	.1 MG/L	40	44	44	43
Potassium	.3 MG/L	22	26	26	25
Sodium	1 MG/L	278	313	321	322
Bromide	.1 MG/L	0.45	0.51	0.50	0.37
Chloride	7 MG/L	350	372	376	363
Fluoride	.05 MG/L	0.70	0.70	0.45	0.72
Nitrate	.04 MG/L	7.95	0.31	0.20	5.00
Ortho Phosphate	.2 MG/L	7.06	10.90	10.60	8.20
Sulfate	9 MG/L	360	400	379	370
Cyanides, Total	.002 MG/L	0.003	0.022	0.050	0.049
Sulfides-Total	.18 MG/L	ND	ND	ND	0.43
BOD (Biochemical Oxygen Demand)	2 MG/L	95.0	>119	83.2	NA*
Total Suspended Solids	1.4 MG/L	46.0	65.0	58.0	NA*
Volatile Suspended Solids	1.6 MG/L	36.0	49.0	45.0	NA*
Total Dissolved Solids	28 MG/L	1540	1480	1530	NA*
Settleable Solids	.1 ML/L	8.0	29.0	0.7	ND
pH	PH	7.3	7.7	7.6	7.8
Turbidity	.13 NTU	30.4	32.8	34.1	NA*
Chlorine Residual, Total	.03 MG/L	ND	ND	ND	ND
Ammonia-N	.3 MG/L	30	39	36	NA*
Total Kjeldahl Nitrogen	1.6 MG/L	39.4	46.0	44.2	44.3

*= Not analyzed, insufficient sample volume to complete all analyses

ND= Not Detected

NA= Not Analyzed

NS= Not Sampled

Chromium results are for Total Chromium

SOUTH BAY WATER RECLAMATION PLANT
COMBINED OUTFALL (SB_ITP_COMB_EFF)

Temperature

ANNUAL 2009

SB_ITP_COMB_EFF	Temperature
GRAB	(C)
=====	=====
03-FEB-2009	20.9
05-MAY-2009	22.8
04-AUG-2009	27.5
06-OCT-2009	23.9
=====	=====
Average:	23.8
Maximum:	27.5
Minimum:	20.9

NA= Not Analyzed
NS= Not Sampled

SOUTH BAY WATER RECLAMATION PLANT
 COMBINED EFFLUENT (SB_ITP_COMB_EFF)

Ammonia-Nitrogen and Total Cyanides

Annual 2009

	Ammonia-N .3 MG/L COMB EFF	Cyanides, Total .002 MG/L COMB EFF
=====	=====	=====
FEBRUARY -2009	30.1	0.0031
MAY -2009	38.6	0.0216
AUGUST -2009	35.8	0.0501
OCTOBER -2009	NA*	0.0494
=====	=====	=====
Average:	34.8	0.0311

ND= not detected

NR= not required

NA*= Not Analyzed, insufficient sample volume to complete all analyses

SOUTH BAY WATER RECLAMATION PLANT
 COMBINED OUTFALL (SB_ITP_COMB_EFF)

Radioactivity

Annual 2009

Source	Month	Gross Alpha Radiation
SB_ITP_COMB_EFF	FEBRUARY -2009	2.7 ± 2.1
SB_ITP_COMB_EFF	MAY -2009	5.9 ± 3.5
SB_ITP_COMB_EFF	AUGUST -2009	2.4 ± 3.1
SB_ITP_COMB_EFF	OCTOBER -2009	0.2 ± 2.6
AVERAGE		2.8 ± 2.8

Source	Month	Gross Beta Radiation
SB_ITP_COMB_EFF	FEBRUARY -2009	26.6 ± 5.5
SB_ITP_COMB_EFF	MAY -2009	22.5 ± 5.2
SB_ITP_COMB_EFF	AUGUST -2009	25.9 ± 6.6
SB_ITP_COMB_EFF	OCTOBER -2009	23.7 ± 5.4
AVERAGE		24.7 ± 5.7

Units in picocuries/liter (pCi/L)

SOUTH BAY WATER RECLAMATION PLANT
COMBINED OUTFALL

Chlorinated Pesticide Analysis

Annual 2009

Analyte	MDL	Units	SB_ITP_COMB	SB_ITP_COMB	SB_ITP_COMB	SB_ITP_COMB	EFF
			03-FEB-2009	05-MAY-2009	04-AUG-2009	06-OCT-2009	
			P458516	P468792	P481329	P490593	
Aldrin	7	NG/L	ND	ND	ND	ND	ND
BHC, Alpha isomer	7	NG/L	ND	ND	ND	ND	ND
BHC, Beta isomer	3	NG/L	ND	ND	ND	ND	ND
BHC, Delta isomer	3	NG/L	ND	ND	ND	ND	ND
BHC, Gamma isomer	5	NG/L	ND	ND	ND	ND	6
Alpha (cis) Chlordane	3	NG/L	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	4	NG/L	ND	ND	ND	ND	ND
Alpha Chlordene		NG/L	NA	NA	NA	NA	NA
Gamma Chlordene		NG/L	NA	NA	NA	NA	NA
Cis Nonachlor	3	NG/L	ND	ND	ND	ND	ND
Dieldrin	3	NG/L	ND	ND	ND	ND	ND
Endosulfan Sulfate	6	NG/L	ND	ND	ND	ND	ND
Alpha Endosulfan	4	NG/L	ND	ND	ND	ND	ND
Beta Endosulfan	2	NG/L	ND	ND	ND	ND	ND
Endrin	2	NG/L	ND	ND	ND	ND	ND
Endrin aldehyde	9	NG/L	ND	ND	ND	ND	ND
Heptachlor	8	NG/L	ND	ND	ND	ND	ND
Heptachlor epoxide	4	NG/L	ND	ND	ND	ND	ND
Methoxychlor	10	NG/L	ND	ND	ND	ND	ND
Mirex	10	NG/L	ND	ND	ND	ND	ND
o,p-DDD	4	NG/L	ND	ND	ND	ND	ND
o,p-DDE	5	NG/L	ND	ND	ND	ND	ND
o,p-DDT	3	NG/L	ND	ND	ND	ND	ND
Oxychlordane	6	NG/L	ND	ND	ND	ND	ND
PCB 1016	4000	NG/L	ND	ND	ND	ND	ND
PCB 1221	4000	NG/L	ND	ND	ND	ND	ND
PCB 1232	360	NG/L	ND	ND	ND	ND	ND
PCB 1242	4000	NG/L	ND	ND	ND	ND	ND
PCB 1248	2000	NG/L	ND	ND	ND	ND	ND
PCB 1254	2000	NG/L	ND	ND	ND	ND	ND
PCB 1260	2000	NG/L	ND	ND	ND	ND	ND
PCB 1262	930	NG/L	ND	ND	ND	ND	ND
p,p-DDD	3	NG/L	ND	ND	ND	ND	ND
p,p-DDE	4	NG/L	ND	ND	ND	ND	ND
p,p-DDT	8	NG/L	ND	ND	ND	ND	ND
Toxaphene	330	NG/L	ND	ND	ND	ND	ND
Trans Nonachlor	5	NG/L	ND	ND	ND	ND	ND
Aldrin + Dieldrin	7	NG/L	0	0	0	0	0
Hexachlorocyclohexanes	7	NG/L	0	0	0	0	6
DDT and derivatives	8	NG/L	0	0	0	0	0
Chlordane + related cmpds.	6	NG/L	0	0	0	0	0
Polychlorinated biphenyls	4000	NG/L	0	0	0	0	0
Endosulfans	6	NG/L	0	0	0	0	0
Heptachlors	8	NG/L	0	0	0	0	0
Chlorinated Hydrocarbons	4000	NG/L	0	0	0	0	6

ND=not detected

NA=not analyzed

Standards for alpha and gamma chlordene are no longer available in the U.S. for the analysis of these compounds.

SOUTH BAY WATER RECLAMATION PLANT
COMBINED EFFLUENT

Acid Extractables

Annual 2009

Source: SB_ITP_COMB_EFF

Analyte	MDL	Units	FEB	MAY	AUG	OCT	Avg
2-chlorophenol	1.32	UG/L	ND	ND	ND	ND	ND
2,4-dichlorophenol	1.01	UG/L	ND	ND	ND	ND	ND
4-chloro-3-methylphenol	1.67	UG/L	ND	ND	ND	ND	ND
2,4,6-trichlorophenol	1.65	UG/L	ND	ND	ND	ND	ND
Pentachlorophenol	1.12	UG/L	ND	ND	ND	ND	ND
Phenol	1.76	UG/L	13.5	24.2	18.0	9.8	16.4
2-nitrophenol	1.55	UG/L	ND	ND	ND	ND	ND
2,4-dimethylphenol	2.01	UG/L	ND	ND	ND	ND	ND
2,4-dinitrophenol	2.16	UG/L	ND	ND	ND	ND	ND
4-nitrophenol	1.14	UG/L	ND	ND	ND	ND	ND
2-methyl-4,6-dinitrophenol	1.52	UG/L	ND	ND	ND	ND	ND
Total Chlorinated Phenols	1.67	UG/L	0.0	0.0	0.0	0.0	0.0
Total Non-Chlorinated Phenols	2.16	UG/L	13.5	24.2	18.0	9.8	16.4
Total Phenols	2.16	UG/L	13.5	24.2	18.0	9.8	16.4
2-methylphenol	2.15	UG/L	ND	ND	ND	ND	ND
3-methylphenol(4-MP is unresolved)		UG/L	ND	ND	ND	ND	ND
4-methylphenol(3-MP is unresolved)	2.11	UG/L	7.1	3.4	3.7	3.3	4.4
2,4,5-trichlorophenol	1.66	UG/L	ND	ND	ND	ND	ND

ND=not detected

SOUTH BAY WATER RECLAMATION PLANT
Priority Pollutants Base/Neutrals
COMBINED EFFLUENT

Annual 2009

Analyte	MDL	Units	FEB	MAY	AUG	OCT	Avg
Acenaphthene	1.8	UG/L	ND	ND	ND	ND	ND
Acenaphthylene	1.77	UG/L	ND	ND	ND	ND	ND
Anthracene	1.29	UG/L	ND	ND	ND	ND	ND
Benzidine	1.52	UG/L	ND	ND	ND	ND	ND
Benzo[A]anthracene	1.1	UG/L	ND	ND	ND	ND	ND
3,4-benzo(B)fluoranthene	1.35	UG/L	ND	ND	ND	ND	ND
Benzo[K]fluoranthene	1.49	UG/L	ND	ND	ND	ND	ND
Benzo[A]pyrene	1.25	UG/L	ND	ND	ND	ND	ND
Benzo[G,H,I]perylene	1.09	UG/L	ND	ND	ND	ND	ND
4-bromophenyl phenyl ether	1.4	UG/L	ND	ND	ND	ND	ND
bis(2-chloroethoxy)methane	1.01	UG/L	ND	ND	1.7	ND	0.4
bis(2-chloroethyl) ether	1.38	UG/L	ND	ND	ND	ND	ND
Bis-(2-chloroisopropyl) ether	1.16	UG/L	ND	ND	ND	ND	ND
4-chlorophenyl phenyl ether	1.57	UG/L	ND	ND	ND	ND	ND
2-chloronaphthalene	1.87	UG/L	ND	ND	ND	ND	ND
Chrysene	1.16	UG/L	ND	ND	ND	ND	ND
Dibenzo(A,H)anthracene	1.01	UG/L	ND	ND	ND	ND	ND
Butyl benzyl phthalate	2.84	UG/L	ND	ND	ND	ND	ND
Di-n-butyl phthalate	3.96	UG/L	ND	ND	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	8.96	UG/L	ND	ND	ND	ND	ND
Diethyl phthalate	3.05	UG/L	17.2	18.0	16.9	15.7	17.0
Dimethyl phthalate	1.44	UG/L	ND	ND	ND	ND	ND
Di-n-octyl phthalate	1	UG/L	ND	ND	ND	ND	ND
3,3-dichlorobenzidine	2.44	UG/L	ND	ND	ND	ND	ND
2,4-dinitrotoluene	1.36	UG/L	ND	ND	ND	ND	ND
2,6-dinitrotoluene	1.53	UG/L	ND	ND	ND	ND	ND
1,2-diphenylhydrazine	1.37	UG/L	ND	ND	ND	ND	ND
Fluoranthene	1.33	UG/L	ND	ND	ND	ND	ND
Fluorene	1.61	UG/L	ND	ND	ND	ND	ND
Hexachlorobenzene	1.48	UG/L	ND	ND	ND	ND	ND
Hexachlorobutadiene	1.64	UG/L	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	1.25	UG/L	ND	ND	ND	ND	ND
Hexachloroethane	1.32	UG/L	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	1.14	UG/L	ND	ND	ND	ND	ND
Isophorone	1.53	UG/L	ND	ND	ND	ND	ND
Naphthalene	1.65	UG/L	ND	ND	ND	ND	ND
Nitrobenzene	1.6	UG/L	ND	ND	ND	ND	ND
N-nitrosodimethylamine	1.27	UG/L	ND	ND	ND	ND	ND
N-nitrosodi-n-propylamine	1.16	UG/L	ND	ND	ND	ND	ND
N-nitrosodiphenylamine	3.48	UG/L	ND	ND	ND	ND	ND
Phenanthrene	1.34	UG/L	ND	ND	ND	ND	ND
Pyrene	1.43	UG/L	ND	ND	ND	ND	ND
1,2,4-trichlorobenzene	1.52	UG/L	ND	ND	ND	ND	ND
Polynuc. Aromatic Hydrocarbons	1.77	UG/L	0.0	0.0	0.0	0.0	0.0
Base/Neutral Compounds	8.96	UG/L	17.2	18.0	18.6	15.7	17.4

Additional analytes determined

Benzo[e]pyrene	1.44	UG/L	ND	ND	ND	ND	ND
Biphenyl	2.29	UG/L	ND	ND	ND	ND	ND
2,6-dimethylnaphthalene	2.16	UG/L	ND	ND	ND	ND	ND
1-methylnaphthalene	2.18	UG/L	ND	ND	ND	ND	ND
1-methylphenanthrene	1.46	UG/L	ND	ND	ND	ND	ND
2-methylnaphthalene	2.14	UG/L	ND	ND	ND	ND	ND
2,3,5-trimethylnaphthalene	2.18	UG/L	ND	ND	ND	ND	ND
Perylene	1.41	UG/L	ND	ND	ND	ND	ND

ND=not detected

SOUTH BAY WATER RECLAMATION PLANT
COMBINED EFFLUENT

Tributyl Tin Analysis

Annual 2009

Source: SB_ITP_COMB_EFF

Analyte	MDL	Units	FEB	MAY	AUG	OCT	Avg
Dibutyltin	7	UG/L	ND	ND	ND	ND	ND
Monobutyltin	16	UG/L	ND	ND	ND	ND	ND
Tributyltin	2	UG/L	ND	ND	ND	ND	ND

ND=not detected

SOUTH BAY WATER RECLAMATION PLANT
COMBINED OUTFALL
Priority Pollutants Purgeable Compounds

ANNUAL 2009

Source: SB_ITP_COMB_EFF

Analyte	MDL	Units	03-FEB-2009	05-MAY-2009	04-AUG-2009	06-OCT-2009
			P458519	P468795	P481332	P490596
Dichlorodifluoromethane	.66	UG/L	ND	ND	ND	ND
Chloromethane	.5	UG/L	ND	ND	ND	ND
Vinyl chloride	.4	UG/L	ND	ND	ND	ND
Bromomethane	.7	UG/L	ND	ND	ND	ND
Chloroethane	.9	UG/L	ND	ND	ND	ND
Trichlorofluoromethane	.3	UG/L	ND	ND	ND	ND
Acrolein	1.3	UG/L	ND	ND	ND	ND
1,1-dichloroethane	.4	UG/L	ND	ND	ND	ND
Methylene chloride	.3	UG/L	1.37*	1.5	2.2	2.38*
trans-1,2-dichloroethene	.6	UG/L	ND	ND	ND	ND
1,1-dichloroethene	.4	UG/L	ND	ND	ND	ND
Acrylonitrile	.7	UG/L	ND	ND	ND	ND
Chloroform	.2	UG/L	4.1	3.0	3.0	4.0
1,1,1-trichloroethane	.4	UG/L	ND	ND	ND	ND
Carbon tetrachloride	.4	UG/L	ND	ND	ND	ND
Benzene	.4	UG/L	ND	ND	ND	ND
1,2-dichloroethane	.5	UG/L	ND	ND	ND	ND
Trichloroethene	.7	UG/L	ND	ND	ND	ND
1,2-dichloropropane	.3	UG/L	ND	ND	ND	ND
Bromodichloromethane	.5	UG/L	1.3	ND	ND	ND
2-chloroethylvinyl ether	1.1	UG/L	ND	ND	ND	ND
cis-1,3-dichloropropene	.3	UG/L	ND	ND	ND	ND
Toluene	.4	UG/L	7.1	9.6	149	173
trans-1,3-dichloropropene	.5	UG/L	ND	ND	ND	ND
1,1,2-trichloroethane	.5	UG/L	ND	ND	ND	ND
Tetrachloroethene	1.1	UG/L	ND	ND	ND	ND
Dibromochloromethane	.6	UG/L	1.7	ND	ND	ND
Chlorobenzene	.4	UG/L	ND	ND	ND	ND
Ethylbenzene	.3	UG/L	0.4	0.7	0.3	2.3
Bromoform	.5	UG/L	0.8	ND	ND	ND
1,1,2,2-tetrachloroethane	.5	UG/L	ND	ND	ND	ND
1,3-dichlorobenzene	.5	UG/L	ND	ND	ND	ND
1,4-dichlorobenzene	.4	UG/L	3.1	3.1	3.7	3.4
1,2-dichlorobenzene	.4	UG/L	ND	ND	ND	ND
Halomethane Purgeable Cmpnds	.7	UG/L	0.8	0.0	0.0	0.0
Total Dichlorobenzenes	.5	UG/L	0.0	0.0	0.0	0.0
Total Chloromethanes	.5	UG/L	4.1	4.5	5.2	4.0
Purgeable Compounds	1.3	UG/L	18.5	17.9	158.2	182.7
Methyl Iodide	.6	UG/L	ND	ND	ND	ND
Carbon disulfide	.6	UG/L	1.4	1.1	2.0	2.0
Acetone	4.5	UG/L	253	389	388	2050
Allyl chloride	.6	UG/L	ND	ND	ND	ND
Methyl tert-butyl ether	.4	UG/L	ND	0.4	ND	ND
Chloroprene	.4	UG/L	ND	ND	ND	ND
1,2-dibromoethane	.3	UG/L	ND	ND	ND	ND
2-butanone	6.3	UG/L	ND	7.4	10.2	64.7
Methyl methacrylate	.8	UG/L	ND	ND	ND	ND
2-nitropropane	12	UG/L	ND	ND	ND	ND
4-methyl-2-pentanone	1.3	UG/L	3.8	3.5	3.7	70.4
meta,para xylenes	.6	UG/L	1.7	2.8	1.3	11.8
ortho-xylene	.4	UG/L	1.0	1.7	0.8	7.7
Isopropylbenzene	.3	UG/L	ND	ND	ND	ND
Styrene	.3	UG/L	ND	ND	ND	ND
Benzyl chloride	1.1	UG/L	ND	ND	ND	ND
1,2,4-trichlorobenzene	.7	UG/L	ND	ND	ND	ND

* The method blank for this analyte was above the MDL, value is shown for review only.
ND= not detected

SOUTH BAY WATER RECLAMATION PLANT
 COMBINED OUTFALL (SB_ITP_COMB_EFF)

Organophosphorus Pesticides

Annual 2009

Analyte:	MDL Units	05-MAY-2009	06-OCT-2009
		P468792	P490593
Demeton O	.15 UG/L	ND	ND
Demeton S	.08 UG/L	ND	ND
Diazinon	.03 UG/L	ND	ND
Guthion	.15 UG/L	ND	ND
Malathion	.03 UG/L	ND	0.2
Parathion	.03 UG/L	ND	ND
Dichlorvos	.05 UG/L	0.4	0.3
Dibrom	.2 UG/L	ND	ND
Ethoprop	.04 UG/L	ND	ND
Phorate	.04 UG/L	ND	ND
Sulfotepp	.04 UG/L	ND	ND
Disulfoton	.02 UG/L	ND	ND
Dimethoate	.04 UG/L	ND	ND
Ronnel	.03 UG/L	ND	ND
Trichloronate	.04 UG/L	ND	ND
Merphos	.09 UG/L	ND	ND
Dichlofenthion	.03 UG/L	ND	ND
Tokuthion	.06 UG/L	ND	ND
Stiropfos	.03 UG/L	ND	ND
Bolstar	.07 UG/L	ND	ND
Fensulfothion	.07 UG/L	ND	ND
EPN	.09 UG/L	ND	ND
Coumaphos	.15 UG/L	ND	ND
Mevinphos, e isomer	.05 UG/L	ND	ND
Mevinphos, z isomer	.3 UG/L	ND	ND
Chlorpyrifos	.03 UG/L	ND	ND
Thiophosphorus Pesticides	.15 UG/L	0.0	0.2
Demeton -O, -S	.15 UG/L	0.0	0.0
Total Organophosphorus Pesticides	.3 UG/L	0.4	0.5

ND=not detected

SOUTH BAY WATER RECLAMATION PLANT
COMBINED OUTFALL

Dioxin and Furan Analysis

Annual 2009

Analyte:	MDL	Units	Equiv	COMB EFF	COMB EFF	COMB EFF	COMB EFF
				FEB	MAY	AUG	OCT
				P458516	P468792	P481329	P490593
2,3,7,8-tetra CDD	125	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	123	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	113	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	98	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	111	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	137	PG/L	0.010	ND	ND	ND	ND
octa CDD	247	PG/L	0.001	ND	ND	ND	ND
2,3,7,8-tetra CDF	115	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	140	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	118	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	147	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	107	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	152	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	148	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	90	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	166	PG/L	0.010	ND	ND	ND	ND
octa CDF	222	PG/L	0.001	ND	ND	ND	ND

Analyte:	MDL	Units	Equiv	COMB EFF	COMB EFF	COMB EFF	COMB EFF
				TCCD	TCCD	TCCD	TCCD
				FEB	MAY	AUG	OCT
				P458516	P468792	P481329	P490593
2,3,7,8-tetra CDD	125	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	123	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	113	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	98	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	111	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	137	PG/L	0.010	ND	ND	ND	ND
octa CDD	247	PG/L	0.001	ND	ND	ND	ND
2,3,7,8-tetra CDF	115	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	140	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	118	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	147	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	107	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	152	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	148	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	90	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	166	PG/L	0.010	ND	ND	ND	ND
octa CDF	222	PG/L	0.001	ND	ND	ND	ND

Above are permit required CDD/CDF isomers.
ND= not detected