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 2011.

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
ANNUAL SEWAGE: COMBINED OUTFALL (SB_ITP_COMB_EFF)

Annual 2012

Source: SB_ITP_COMB_EFF

Date:			07-FEB-2012	01-MAY-2012	07-AUG-2012	19-AUG-2012	02-OCT-2012
Sample ID:	MDL	Units				P631092	
Aluminum	47	UG/L	181	ND	140		117
Antimony	2.9	UG/L	ND	ND	ND		ND
Arsenic	.4	UG/L	1.3	ND	1.2		1.4
Barium	.039	UG/L	46.9	24.2	9.04		18.4
Beryllium	.022	UG/L	0.047	ND	ND		0.04
Boron	7	UG/L	597	346	426		457
Cadmium	.53	UG/L	ND	ND	ND		ND
Chromium	1.2	UG/L	4.5	1.6	1.3		2.6
Cobalt	.85	UG/L	ND	ND	1.1		1.1
Copper	2	UG/L	20	7	5		7
Iron	37	UG/L	813	273	169		143
Lead	2	UG/L	ND	ND	ND		4
Manganese	.24	UG/L	126	54.5	94.3		52.5
Mercury	.005	UG/L	0.01	0.008	0.005		ND
Molybdenum	.89	UG/L	12.4	7.0	7.1		7.1
Nickel	.53	UG/L	24.1	13.1	14.5		12.8
Selenium	.28	UG/L	1.28	0.68	1.21		1.05
Silver	.4	UG/L	ND	ND	ND		ND
Thallium, Total Recoverable	3.9	UG/L	ND	ND	ND		ND
Vanadium	.64	UG/L	2.5	2.0	1.6		1.3
Zinc	2.5	UG/L	55.7	26.1	29.9		121
Calcium Hardness	.1	MG/L	241	197	203		208
Magnesium Hardness	.4	MG/L	173	135	157		159
Total Hardness	.4	MG/L	414	332	360		367
Total Alkalinity (bicarbonate)	20	MG/L	189	158		143	267
Calcium	.04	MG/L	97	79	81		83
Lithium	.002	MG/L	0.06	0.05	0.08		0.08
Magnesium	.1	MG/L	42	33	38		39
Potassium	.3	MG/L	24	20	24		23
Sodium	1	MG/L	278	222	280		283
Bromide	.1	MG/L	0.5	0.4	0.3		0.4
Chloride	7	MG/L	333	312	362		357
Fluoride	.05	MG/L	0.82	0.6	0.55		0.6
Nitrate	.04	MG/L	42.5	63.1	15.7		20.8
Ortho Phosphate	.2	MG/L	12.6	10.0	8.7		9.4
Sulfate	9	MG/L	317	287	336		332
Cyanides,Total	.002	MG/L	0.004	0.004	0.005		0.002
Sulfides-Total	.4	MG/L	ND	ND	ND		ND
BOD (Biochemical Oxygen Demand)	2	MG/L	47.6	13.6	11		8
Total Suspended Solids	1.4	MG/L	34.0	11.8	4.1		3.9
Volatile Suspended Solids	1.6	MG/L	30	9.6	3.3		3.0
Total Dissolved Solids	28	MG/L	1330	1360	1530		1640
Settleable Solids	.1	ML/L	0.1	ND	ND		ND
pH(Grab)		PH	7.24	7.31	7.63		7.62
Turbidity	.13	NTU	8.7	3.7	29.1		1.7
Chlorine Residual, Total(Grab)	.03	MG/L	ND	0.04	0.06		0.07
Ammonia-N	.3	MG/L	1.9	0.3		1.0	2.2
Total Kjeldahl Nitrogen	1.6	MG/L	6.6	ND	8.9		ND

ND= Not Detected
Chromium results are for Total Chromium.

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE: COMBINED OUTFALL (SB_ITP_COMB_EFF)
Temperature

Annual 2012

Analyte:	Temperature
	GRAB
Units:	(°C)
07-FEB-2012	20.0
01-MAY-2012	23.5
07-AUG-2012	27.8
02-OCT-2012	28.6
Average:	25.0
Maximum:	28.6
Minimum:	20.0

ND= not detected

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE: COMBINED EFFLUENT (SB_ITP_COMB_EFF)

Ammonia-Nitrogen and Total Cyanides

Annual 2012

Analyte:	Ammonia-N	Cyanides,Total
MDL/ Units:	.3 MG/L	.002 MG/L
FEBRUARY -2012	1.9	0.004
MAY -2012	0.3	0.004
AUGUST -2012	1.0	0.005
OCTOBER -2012	2.2	0.002
Average:	1.4	0.004

ND= not detected

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE: COMBINED OUTFALL (SB_ITP_COMB_EFF)

Radioactivity

Annual 2012

Source	Month	Gross Alpha Radiation
SB_ITP_COMB_EFF	FEBRUARY -2012	-2.2 ± 5.0
SB_ITP_COMB_EFF	MAY -2012	6.8 ± 6.2
SB_ITP_COMB_EFF	AUGUST -2012	3.7 ± 4.6
SB_ITP_COMB_EFF	OCTOBER -2012	2.7 ± 5.3
AVERAGE		2.8 ± 5.3

Source	Month	Gross Beta Radiation
SB_ITP_COMB_EFF	FEBRUARY -2012	20.1 ± 7.0
SB_ITP_COMB_EFF	MAY -2012	25.2 ± 8.0
SB_ITP_COMB_EFF	AUGUST -2012	27.5 ± 6.8
SB_ITP_COMB_EFF	OCTOBER -2012	24.1 ± 4.7
AVERAGE		24.2 ± 6.6

Units in picocuries/liter (pCi/L)

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE: COMBINED OUTFALL (SB_ITP_COMB_EFF)

Chlorinated Pesticide Analysis

Annual 2012

Source:			COMB_EFF	COMB_EFF	COMB_EFF	COMB_EFF	COMB_EFF
Date:			07-FEB-2012	01-MAY-2012	07-AUG-2012	02-OCT-2012	
Analyte	MDL	Units					Avg
Aldrin	7	NG/L	ND	ND	ND	ND	ND
Dieldrin	8	NG/L	ND	ND	ND	ND	ND
BHC, Alpha isomer	7	NG/L	ND	ND	ND	ND	ND
BHC, Beta isomer	6	NG/L	ND	ND	ND	ND	ND
BHC, Gamma isomer	5	NG/L	ND	ND	ND	ND	ND
BHC, Delta isomer	4	NG/L	ND	ND	ND	ND	ND
p,p-DDD	4	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
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
Heptachlor	8	NG/L	ND	ND	ND	ND	ND
Heptachlor epoxide	4	NG/L	ND	ND	ND	ND	ND
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
Oxychlordane	6	NG/L	ND	ND	ND	ND	ND
Trans Nonachlor	5	NG/L	ND	ND	ND	ND	ND
Cis Nonachlor	5	NG/L	ND	ND	ND	ND	ND
Alpha Endosulfan	4	NG/L	ND	ND	ND	ND	ND
Beta Endosulfan	5	NG/L	ND	ND	ND	ND	ND
Endosulfan Sulfate	6	NG/L	ND	ND	ND	ND	ND
Endrin	8	NG/L	ND	ND	ND	ND	ND
Endrin aldehyde	9	NG/L	ND	ND	ND	ND	ND
Mirex	10	NG/L	ND	ND	ND	ND	ND
Methoxychlor	10	NG/L	ND	ND	ND	ND	ND
Toxaphene	330	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
Aldrin + Dieldrin	8	NG/L	0	0	0	0	0
Hexachlorocyclohexanes	7	NG/L	0	0	0	0	0
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	0

ND=not detected
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
ANNUAL SEWAGE: COMBINED OUTFALL (SB_ITP_COMB_EFF)

Acid Extractables

Annual 2012

Source: SB_ITP_COMB_EFF

Date:			FEB	MAY	AUG	OCT	
Analyte	MDL	Units					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	ND	ND	ND	ND	ND
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	0.0	0.0	0.0	0.0	0.0
Total Phenols	2.16	UG/L	0.0	0.0	0.0	0.0	0.0
Additional analytes determined							
2-Methylphenol	2.15	UG/L	ND	ND	ND	ND	ND
3-Methylphenol(4-MP is unresolved)		UG/L	NA	NA	NA	NA	NA
4-Methylphenol(3-MP is unresolved)	2.11	UG/L	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	1.66	UG/L	ND	ND	ND	ND	ND

ND=not detected
NA=not analyzed

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE: COMBINED OUTFALL (SB_ITP_COMB_EFF)

Priority Pollutants Base/Neutrals

Annual 2012

Source:			EFF	EFF	EFF	EFF	EFF
Date:			FEB	MAY	AUG	OCT	
Analyte	MDL	Units					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	ND	ND	ND
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	ND	ND	ND	ND	ND
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	0.0	0.0	0.0	0.0	0.0
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
ANNUAL SEWAGE: COMBINED OUTFALL (SB_ITP_COMB_EFF)

Tributyl Tin Analysis

Annual 2012

Source: SB_ITP_COMB_EFF

DATE:			FEB	MAY	AUG	OCT	
Analyte	MDL	Units					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
ANNUAL SEWAGE: COMBINED OUTFALL (SB_ITP_COMB_EFF)

Priority Pollutants Purgeables

Annual 2012

Source: SB_ITP_COMB_EFF

Date:			FEB	MAY	AUG	OCT	
Analyte	MDL	Units					Avg
Dichlorodifluoromethane	.66	UG/L	ND	ND	ND	ND	ND
Chloromethane	.5	UG/L	ND	ND	ND	ND	ND
Vinyl chloride	.4	UG/L	ND	ND	ND	ND	ND
Bromomethane	.7	UG/L	ND	ND	ND	ND	ND
Chloroethane	.9	UG/L	ND	ND	ND	ND	ND
Trichlorofluoromethane	.3	UG/L	ND	ND	ND	ND	ND
Acrolein	1.3	UG/L	ND	ND	ND	ND	ND
1,1-Dichloroethane	.4	UG/L	ND	ND	ND	ND	ND
Methylene chloride	.3	UG/L	ND	ND	1.7	ND	0.4
trans-1,2-dichloroethene	.6	UG/L	ND	ND	ND	ND	ND
1,1-Dichloroethene	.4	UG/L	ND	ND	ND	ND	ND
Acrylonitrile	.7	UG/L	ND	ND	ND	ND	ND
Chloroform	.2	UG/L	3.1	1.9	0.9	0.8	1.7
1,1,1-Trichloroethane	.4	UG/L	ND	ND	ND	ND	ND
Carbon tetrachloride	.4	UG/L	ND	ND	ND	ND	ND
Benzene	.4	UG/L	ND	ND	ND	ND	ND
1,2-Dichloroethane	.5	UG/L	ND	ND	ND	ND	ND
Trichloroethene	.7	UG/L	ND	ND	ND	ND	ND
1,2-Dichloropropane	.3	UG/L	ND	ND	ND	ND	ND
Bromodichloromethane	.5	UG/L	0.8	0.7	ND	ND	0.4
2-Chloroethylvinyl ether	1.1	UG/L	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	.3	UG/L	ND	ND	ND	ND	ND
Toluene	.4	UG/L	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	.5	UG/L	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	.5	UG/L	ND	ND	ND	ND	ND
Tetrachloroethene	1.1	UG/L	ND	ND	ND	ND	ND
Dibromochloromethane	.6	UG/L	ND	0.6	ND	ND	0.2
Chlorobenzene	.4	UG/L	ND	ND	ND	ND	ND
Ethylbenzene	.3	UG/L	ND	ND	ND	ND	ND
Bromoform	.5	UG/L	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	.5	UG/L	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	.5	UG/L	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	.4	UG/L	1.6	1.9	1.5	1.3	1.6
1,2-Dichlorobenzene	.4	UG/L	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	1.52	UG/L	ND	ND	ND	ND	ND
Halomethane Purgeable Cmpnds	.7	UG/L	0.0	0.0	0.0	0.0	0.0
Dichlorobenzenes	.5	UG/L	0.0	0.0	0.0	0.0	0.0
Total Chloromethanes	.5	UG/L	3.1	1.9	2.6	0.8	2.1
Purgeable Compounds	1.3	UG/L	5.5	5.1	4.1	2.1	4.2
Methyl Iodide	.6	UG/L	ND	ND	ND	ND	ND
Carbon disulfide	.6	UG/L	ND	ND	ND	ND	ND
Acetone	4.5	UG/L	ND	ND	ND	ND	ND
Allyl chloride	.6	UG/L	ND	ND	ND	ND	ND
Methyl tert-butyl ether	.4	UG/L	ND	ND	ND	ND	ND
Chloroprene	.4	UG/L	ND	ND	ND	ND	ND
1,2-Dibromoethane	.3	UG/L	ND	ND	ND	ND	ND
2-Butanone	6.3	UG/L	ND	ND	ND	ND	ND
Methyl methacrylate	.8	UG/L	ND	ND	ND	ND	ND
2-Nitropropane	12	UG/L	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	1.3	UG/L	ND	ND	ND	ND	ND
meta,para xylenes	.6	UG/L	ND	ND	ND	ND	ND
ortho-xylene	.4	UG/L	ND	ND	ND	ND	ND
Isopropylbenzene	.3	UG/L	ND	ND	ND	ND	ND
Styrene	.3	UG/L	ND	ND	ND	ND	ND
Benzyl chloride	1.1	UG/L	ND	ND	ND	ND	ND

ND=not detected

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE: COMBINED OUTFALL (SB_ITP_COMB_EFF)

Organophosphorus Pesticides

Annual 2012

Date:			01-MAY-2012	02-OCT-2012
Analyte	MDL	Units	P614097	P634427
Demeton O	.15	UG/L	ND	ND
Demeton S	.08	UG/L	ND	ND
Diazinon	.03	UG/L	0.04	0.07
Guthion	.15	UG/L	ND	ND
Malathion	.03	UG/L	ND	ND
Parathion	.03	UG/L	ND	ND
Dichlorvos	.05	UG/L	ND	ND
Disulfoton	.02	UG/L	ND	ND
Dimethoate	.04	UG/L	ND	ND
Stirophos	.03	UG/L	ND	ND
Coumaphos	.15	UG/L	ND	ND
Chlorpyrifos	.03	UG/L	ND	ND
Thiophosphorus Pesticides	.15	UG/L	0.0	0.0
Demeton -O, -S	.15	UG/L	0.0	0.0
Total Organophosphorus Pesticides	.15	UG/L	0.04	0.07

ND=not detected

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE: COMBINED OUTFALL (SB_ITP_COMB_EFF)

Dioxin and Furan Analysis

Annual 2012

Source:				COMB EFF	COMB EFF	COMB EFF	COMB EFF
Date:				FEB	MAY	AUG	OCT
Analyte:	MDL	Units	Equiv	P602870	P614097	P627003	P634427
2,3,7,8-tetra CDD	.26	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	.317	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	.482	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	.484	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	.46	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	.497	PG/L	0.010	DNQ3.4	ND	ND	ND
octa CDD	1.41	PG/L	0.001	DNQ17.8	DNQ6.86	ND	ND
2,3,7,8-tetra CDF	.257	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	.335	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	.34	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	.284	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	.281	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	.348	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	.294	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	.324	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	.49	PG/L	0.010	ND	ND	ND	ND
octa CDF	.805	PG/L	0.001	ND	ND	ND	ND

Source:				COMB EFF	COMB EFF	COMB EFF	COMB EFF
				TCCD	TCCD	TCCD	TCCD
Date:				FEB	MAY	AUG	OCT
Analyte:	MDL	Units	Equiv	P602870	P614097	P627003	P634427
2,3,7,8-tetra CDD	.26	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	.317	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	.482	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	.484	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	.46	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	.497	PG/L	0.010	DNQ0.034	ND	ND	ND
octa CDD	1.41	PG/L	0.001	DNQ0.018	DNQ0.007	ND	ND
2,3,7,8-tetra CDF	.257	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	.335	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	.34	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	.284	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	.281	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	.348	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	.294	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	.324	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	.49	PG/L	0.010	ND	ND	ND	ND
octa CDF	.805	PG/L	0.001	ND	ND	ND	ND

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