

SECTION 7

RECEIVING WATER AND SEDIMENT SAMPLE LOCATION  
ARROYO SIMI (FRONTIER PARK)  
ANNUAL 2012 REPORTING SUMMARY

**ARROYO SIMI (R-2 Spillway)**

**ANNUAL 2012 REPORTING SUMMARY  
THE BOEING COMPANY  
SANTA SUSANA FIELD LABORATORY  
NPDES PERMIT CA0001309**

January 1 through December 31, 2012

ANALYTE	UNITS	Permit Limit Daily Max/Monthly Avg	3/8/2012			3/17/2012		
			SAMPLE TYPE	RESULT	VALIDATION QUALIFIER	SAMPLE TYPE	RESULT	VALIDATION QUALIFIER
Water Velocity	ft/sec	-/-	Meas	0.017	*	ANR	ANR	ANR
pH (Field)	pH Units	6.5-8.5/-	Grab	7.7	*	ANR	ANR	ANR
Temperature	F	-/-	Grab	63	*	ANR	ANR	ANR
E. Coli	MPN/100 ml	235/-	Grab	300	--	Grab	>=1600	--
Fecal Coliform	MPN/100 ml	400/-	Grab	300	*	Grab	>=1600	--
Hardness	mg/L	-/-	Grab	800	--	ANR	ANR	ANR
Total Suspended Solids	mg/L	-/-	Grab	62	--	ANR	ANR	ANR
Calcium	mg/L	-/-	Grab	210	--	ANR	ANR	ANR
Magnesium	mg/L	-/-	Grab	66	--	ANR	ANR	ANR
4,4'-DDD	ug/L	0.0014/-	Grab	ND < 0.0038	*	ANR	ANR	ANR
4,4'-DDE	ug/L	0.001/-	Grab	ND < 0.0028	*	ANR	ANR	ANR
4,4'-DDT	ug/L	0.001/-	Grab	ND < 0.0038	*	ANR	ANR	ANR
Aroclor 1016	ug/L	0.0003/-	Grab	ND < 0.24	*	ANR	ANR	ANR
Aroclor 1221	ug/L	0.0003/-	Grab	ND < 0.24	*	ANR	ANR	ANR
Aroclor 1232	ug/L	0.0003/-	Grab	ND < 0.24	*	ANR	ANR	ANR
Aroclor 1242	ug/L	0.0003/-	Grab	ND < 0.24	*	ANR	ANR	ANR
Aroclor 1248	ug/L	0.0003/-	Grab	ND < 0.24	*	ANR	ANR	ANR
Aroclor 1254	ug/L	0.0003/-	Grab	ND < 0.24	*	ANR	ANR	ANR
Aroclor 1260	ug/L	0.0003/-	Grab	ND < 0.24	*	ANR	ANR	ANR
Chlordane	ug/L	0.001/-	Grab	ND < 0.0075	*	ANR	ANR	ANR
Chlorpyrifos	ug/L	0.02/-	Grab	ND < 0.080	*	ANR	ANR	ANR
Diazinon	ug/L	0.16/-	Grab	ND < 0.040	*	ANR	ANR	ANR
Dieldrin	ug/L	0.0002/-	Grab	ND < 0.0019	*	ANR	ANR	ANR
Toxaphene	ug/L	0.0003/-	Grab	ND < 0.24	*	ANR	ANR	ANR

**ARROYO SIMI (R-2 Spillway)**

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THE BOEING COMPANY  
SANTA SUSANA FIELD LABORATORY  
NPDES PERMIT CA0001309**

January 1 through December 31, 2012

ANALYTE	UNITS	Permit Limit Daily Max/Monthly Avg	3/27/2012			4/2/2012		
			SAMPLE TYPE	RESULT	VALIDATION QUALIFIER	SAMPLE TYPE	RESULT	VALIDATION QUALIFIER
Water Velocity	ft/sec	-/-	ANR	ANR	ANR	ANR	ANR	ANR
pH (Field)	pH Units	6.5-8.5/-	ANR	ANR	ANR	ANR	ANR	ANR
Temperature	F	-/-	ANR	ANR	ANR	ANR	ANR	ANR
E. Coli	MPN/100 ml	235/-	Grab	1600	--	Grab	500	--
Fecal Coliform	MPN/100 ml	400/-	Grab	1600	--	Grab	500	--
Hardness	mg/L	-/-	ANR	ANR	ANR	ANR	ANR	ANR
Total Suspended Solids	mg/L	-/-	ANR	ANR	ANR	ANR	ANR	ANR
Calcium	mg/L	-/-	ANR	ANR	ANR	ANR	ANR	ANR
Magnesium	mg/L	-/-	ANR	ANR	ANR	ANR	ANR	ANR
4,4'-DDD	ug/L	0.0014/-	ANR	ANR	ANR	ANR	ANR	ANR
4,4'-DDE	ug/L	0.001/-	ANR	ANR	ANR	ANR	ANR	ANR
4,4'-DDT	ug/L	0.001/-	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor 1016	ug/L	0.0003/-	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor 1221	ug/L	0.0003/-	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor 1232	ug/L	0.0003/-	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor 1242	ug/L	0.0003/-	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor 1248	ug/L	0.0003/-	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor 1254	ug/L	0.0003/-	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor 1260	ug/L	0.0003/-	ANR	ANR	ANR	ANR	ANR	ANR
Chlordane	ug/L	0.001/-	ANR	ANR	ANR	ANR	ANR	ANR
Chlorpyrifos	ug/L	0.02/-	ANR	ANR	ANR	ANR	ANR	ANR
Diazinon	ug/L	0.16/-	ANR	ANR	ANR	ANR	ANR	ANR
Dieldrin	ug/L	0.0002/-	ANR	ANR	ANR	ANR	ANR	ANR
Toxaphene	ug/L	0.0003/-	ANR	ANR	ANR	ANR	ANR	ANR

**ARROYO SIMI (R-2 Spillway)**

**ANNUAL 2012 REPORTING SUMMARY  
THE BOEING COMPANY  
SANTA SUSANA FIELD LABORATORY  
NPDES PERMIT CA0001309**

January 1 through December 31, 2012

ANALYTE	UNITS	Permit Limit Daily Max/Monthly Avg	4/6/2012			4/11/2012		
			SAMPLE TYPE	RESULT	VALIDATION QUALIFIER	SAMPLE TYPE	RESULT	VALIDATION QUALIFIER
Water Velocity	ft/sec	-/-	ANR	ANR	ANR	Meas	0.016	*
pH (Field)	pH Units	6.5-8.5/-	ANR	ANR	ANR	Grab	7.6	*
Temperature	F	-/-	ANR	ANR	ANR	Grab	50	*
E. Coli	MPN/100 ml	235/-	Grab	250	--	ANR	ANR	ANR
Fecal Coliform	MPN/100 ml	400/-	Grab	250	--	ANR	ANR	ANR
Hardness	mg/L	-/-	ANR	ANR	ANR	Grab	200	--
Total Suspended Solids	mg/L	-/-	ANR	ANR	ANR	ANR	ANR	ANR
Calcium	mg/L	-/-	ANR	ANR	ANR	Grab	55	--
Magnesium	mg/L	-/-	ANR	ANR	ANR	Grab	16	--
4,4'-DDD	ug/L	0.0014/-	ANR	ANR	ANR	Grab	ND < 0.0038	*
4,4'-DDE	ug/L	0.001/-	ANR	ANR	ANR	Grab	ND < 0.0029	*
4,4'-DDT	ug/L	0.001/-	ANR	ANR	ANR	Grab	ND < 0.0038	*
Aroclor 1016	ug/L	0.0003/-	ANR	ANR	ANR	Grab	ND < 0.24	*
Aroclor 1221	ug/L	0.0003/-	ANR	ANR	ANR	Grab	ND < 0.24	*
Aroclor 1232	ug/L	0.0003/-	ANR	ANR	ANR	Grab	ND < 0.24	*
Aroclor 1242	ug/L	0.0003/-	ANR	ANR	ANR	Grab	ND < 0.24	*
Aroclor 1248	ug/L	0.0003/-	ANR	ANR	ANR	Grab	ND < 0.24	*
Aroclor 1254	ug/L	0.0003/-	ANR	ANR	ANR	Grab	ND < 0.24	*
Aroclor 1260	ug/L	0.0003/-	ANR	ANR	ANR	Grab	ND < 0.24	*
Chlordane	ug/L	0.001/-	ANR	ANR	ANR	Grab	ND < 0.0076	*
Chlorpyrifos	ug/L	0.02/-	ANR	ANR	ANR	Grab	ND < 0.080	*
Diazinon	ug/L	0.16/-	ANR	ANR	ANR	Grab	ND < 0.040	*
Dieldrin	ug/L	0.0002/-	ANR	ANR	ANR	Grab	ND < 0.0019	*
Toxaphene	ug/L	0.0003/-	ANR	ANR	ANR	Grab	ND < 0.24	*

**ARROYO SIMI (R-2 Spillway)**

**ANNUAL 2012 REPORTING SUMMARY  
THE BOEING COMPANY  
SANTA SUSANA FIELD LABORATORY  
NPDES PERMIT CA0001309**

January 1 through December 31, 2012

ANALYTE	UNITS	Permit Limit Daily Max/Monthly Avg	8/9/2012			11/17/2012		
			SAMPLE TYPE	RESULT	VALIDATION QUALIFIER	SAMPLE TYPE	RESULT	VALIDATION QUALIFIER
Water Velocity	ft/sec	-/-	Meas	0.1	*	Meas	0.1	*
pH (Field)	pH Units	6.5-8.5/-	Grab	7.4	*	Grab	7.6	*
Temperature	F	-/-	Grab	80	*	Grab	58	*
E. Coli	MPN/100 ml	235/-	ANR	ANR	ANR	ANR	ANR	ANR
Fecal Coliform	MPN/100 ml	400/-	ANR	ANR	ANR	ANR	ANR	ANR
Hardness	mg/L	-/-	Grab	650	--	Grab	90	--
Total Suspended Solids	mg/L	-/-	ANR	ANR	ANR	ANR	ANR	ANR
Calcium	mg/L	-/-	ANR	ANR	ANR	ANR	ANR	ANR
Magnesium	mg/L	-/-	ANR	ANR	ANR	ANR	ANR	ANR
4,4'-DDD	ug/L	0.0014/-	Grab	ND < 0.0038	*	Grab	ND < 0.0038	*
4,4'-DDE	ug/L	0.001/-	Grab	ND < 0.0029	*	Grab	ND < 0.0029	*
4,4'-DDT	ug/L	0.001/-	Grab	ND < 0.0038	*	Grab	ND < 0.0038	*
Aroclor 1016	ug/L	0.0003/-	Grab	ND < 0.24	*	Grab	ND < 0.24	*
Aroclor 1221	ug/L	0.0003/-	Grab	ND < 0.24	*	Grab	ND < 0.24	*
Aroclor 1232	ug/L	0.0003/-	Grab	ND < 0.24	*	Grab	ND < 0.24	*
Aroclor 1242	ug/L	0.0003/-	Grab	ND < 0.24	*	Grab	ND < 0.24	*
Aroclor 1248	ug/L	0.0003/-	Grab	ND < 0.24	*	Grab	ND < 0.24	*
Aroclor 1254	ug/L	0.0003/-	Grab	ND < 0.24	*	Grab	ND < 0.24	*
Aroclor 1260	ug/L	0.0003/-	Grab	ND < 0.24	*	Grab	ND < 0.24	*
Chlordane	ug/L	0.001/-	Grab	ND < 0.076	*	Grab	ND < 0.076	*
Chlorpyrifos	ug/L	0.02/-	Grab	ND < 0.080	U	Grab	ND < 0.077	*
Diazinon	ug/L	0.16/-	Grab	ND < 0.040	U	Grab	ND < 0.039	*
Dieldrin	ug/L	0.0002/-	Grab	ND < 0.0019	*	Grab	ND < 0.0019	*
Toxaphene	ug/L	0.0003/-	Grab	ND < 0.24	*	Grab	ND < 0.24	*

**Arroyo Simi (R-2 Spillway)**

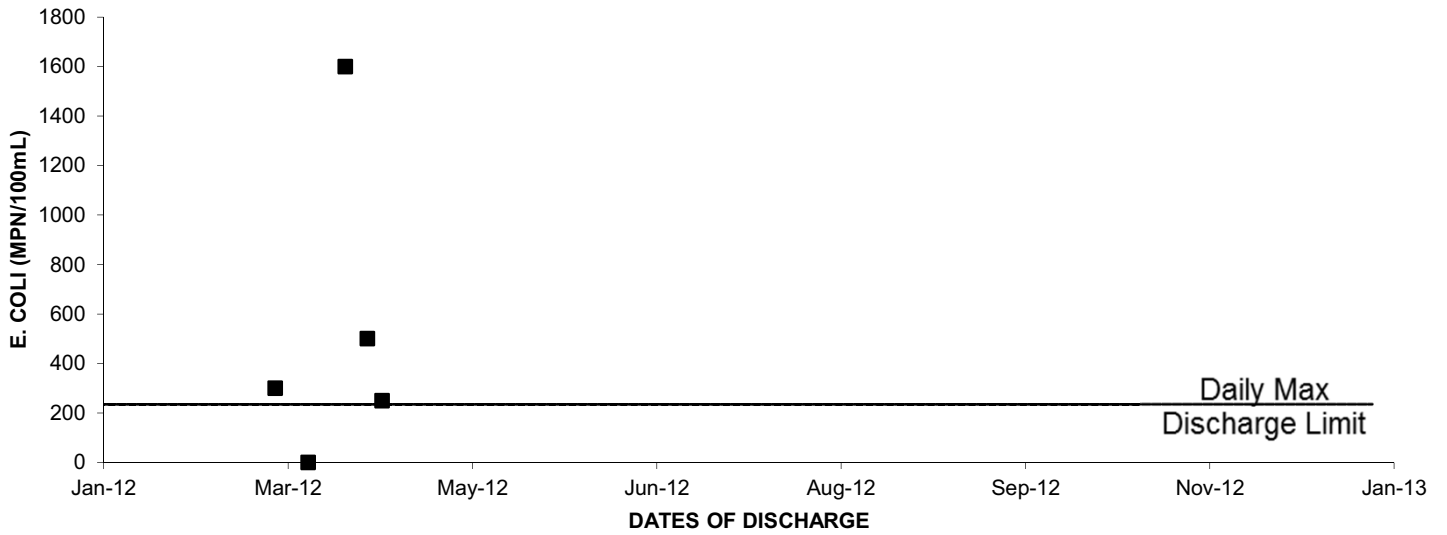
**ANNUAL 2012 REPORTING SUMMARY  
THE BOEING COMPANY  
SANTA SUSANA FIELD LABORATORY  
NPDES PERMIT CA0001309**

**Sample Type Grab  
Sample Date November 17, 2012**

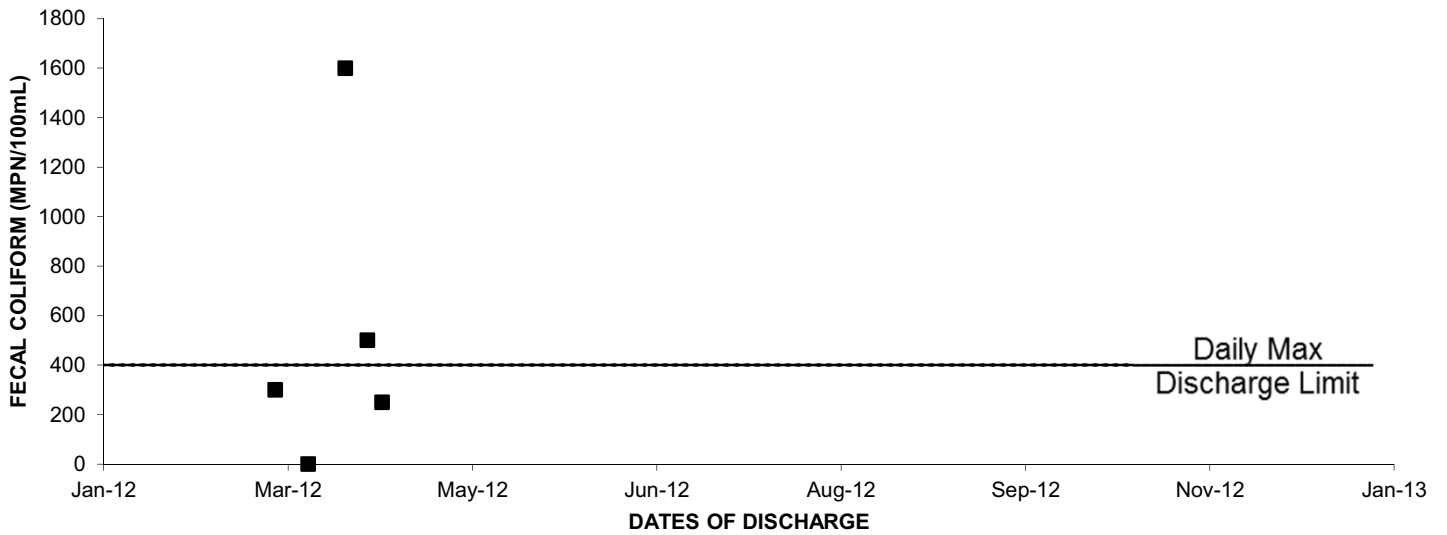
<b>ANALYTE</b>	<b>LAB LOD (ug/L)</b>	<b>LAB RL (ug/L)</b>	<b>LAB RESULT (ug/L)</b>	<b>VALIDATION QUALIFIER</b>	<b>1998 WHO TEF</b>	<b>BEF Great Lakes Water Quality Initiative</b>	<b>TCDD Equivalent (w/out DNQ Values) (ug/L)</b>
1,2,3,4,6,7,8-HpCDD	2.30E-06	5.00E-05	ND	U (B)	0.01	0.05	ND
1,2,3,4,6,7,8-HpCDF	2.00E-06	5.00E-05	ND	U (B)	0.01	0.01	ND
1,2,3,4,7,8,9-HpCDF	3.20E-06	5.00E-05	ND	U	0.01	0.4	ND
1,2,3,4,7,8-HxCDD	2.30E-06	5.00E-05	ND	U	0.1	0.3	ND
1,2,3,4,7,8-HxCDF	1.50E-06	5.00E-05	ND	U (B)	0.1	0.08	ND
1,2,3,6,7,8-HxCDD	1.90E-06	5.00E-05	ND	U	0.1	0.1	ND
1,2,3,6,7,8-HxCDF	1.30E-06	5.00E-05	ND	U (B)	0.1	0.2	ND
1,2,3,7,8,9-HxCDD	1.80E-06	5.00E-05	ND	U	0.1	0.1	ND
1,2,3,7,8,9-HxCDF	1.90E-06	5.00E-05	ND	U	0.1	0.6	ND
1,2,3,7,8-PeCDD	3.70E-06	5.00E-05	ND	U	1	0.9	ND
1,2,3,7,8-PeCDF	5.10E-06	5.00E-05	ND	U	0.05	0.2	ND
2,3,4,6,7,8-HxCDF	1.40E-06	5.00E-05	ND	U	0.1	0.7	ND
2,3,4,7,8-PeCDF	5.80E-06	5.00E-05	ND	U	0.5	1.6	ND
2,3,7,8-TCDD	2.70E-06	1.00E-05	ND	U	1	1	ND
2,3,7,8-TCDF	4.40E-06	1.00E-05	ND	U	0.1	0.8	ND
OCDD	5.10E-06	1.00E-04	ND	U (B)	0.0001	0.01	ND
OCDF	4.70E-06	1.00E-04	ND	U (B)	0.0001	0.02	ND
<b>TCDD TEQ w/out DNQ Values</b>							<b>ND</b>

See attached notes for abbreviations, definitions, and other explanations for the data presented in this table.

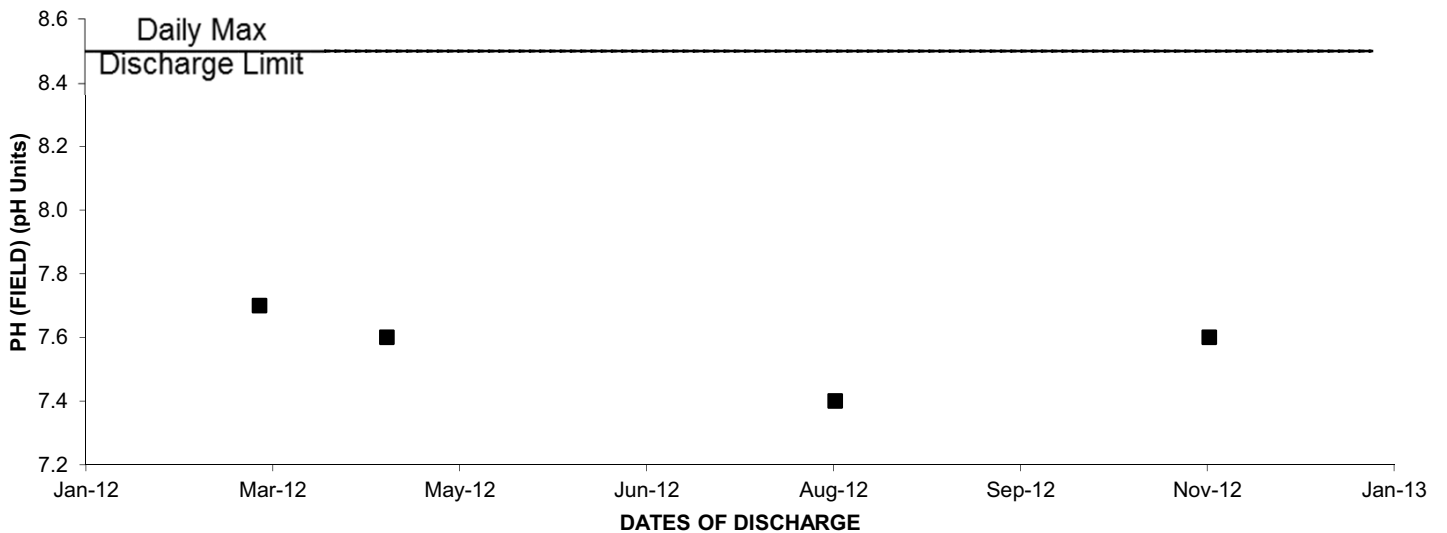
2012: ARROYO SIMI E. COLI



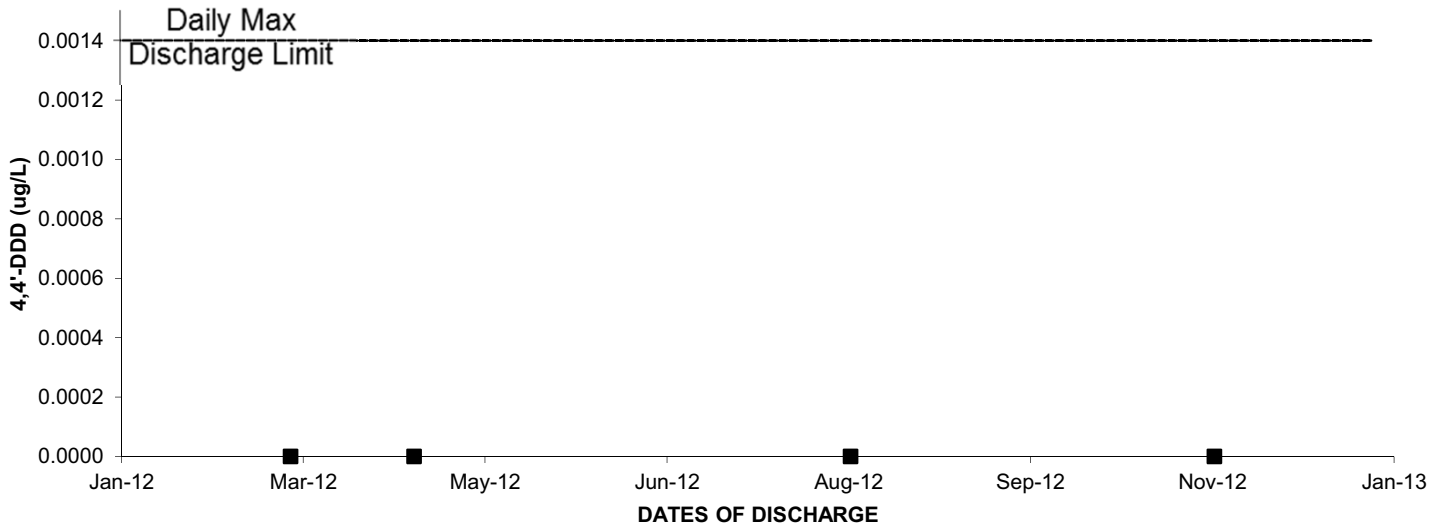
2012: ARROYO SIMI FECAL COLIFORM



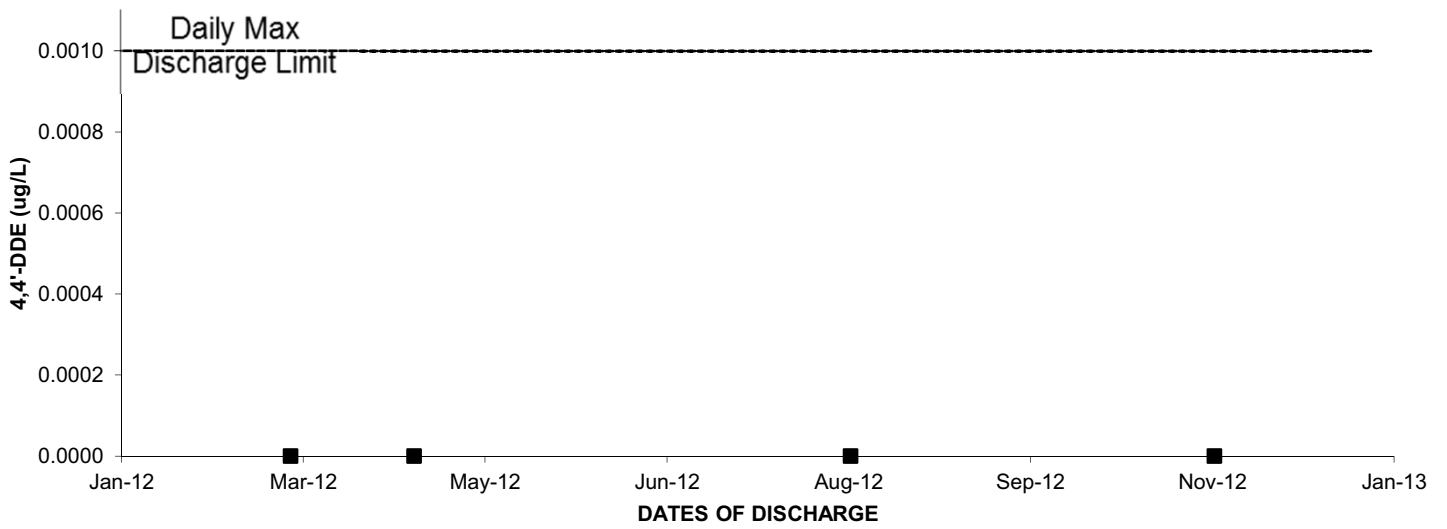
2012: ARROYO SIMI PH (FIELD)



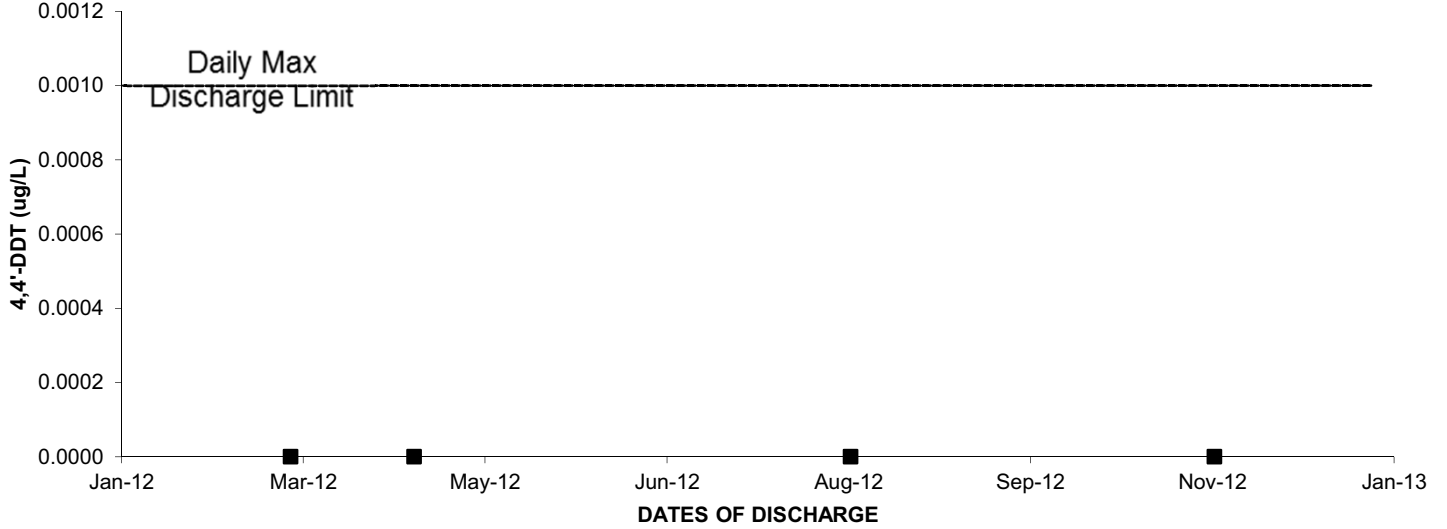
2012: ARROYO SIMI 4,4'-DDD



2012: ARROYO SIMI 4,4'-DDE

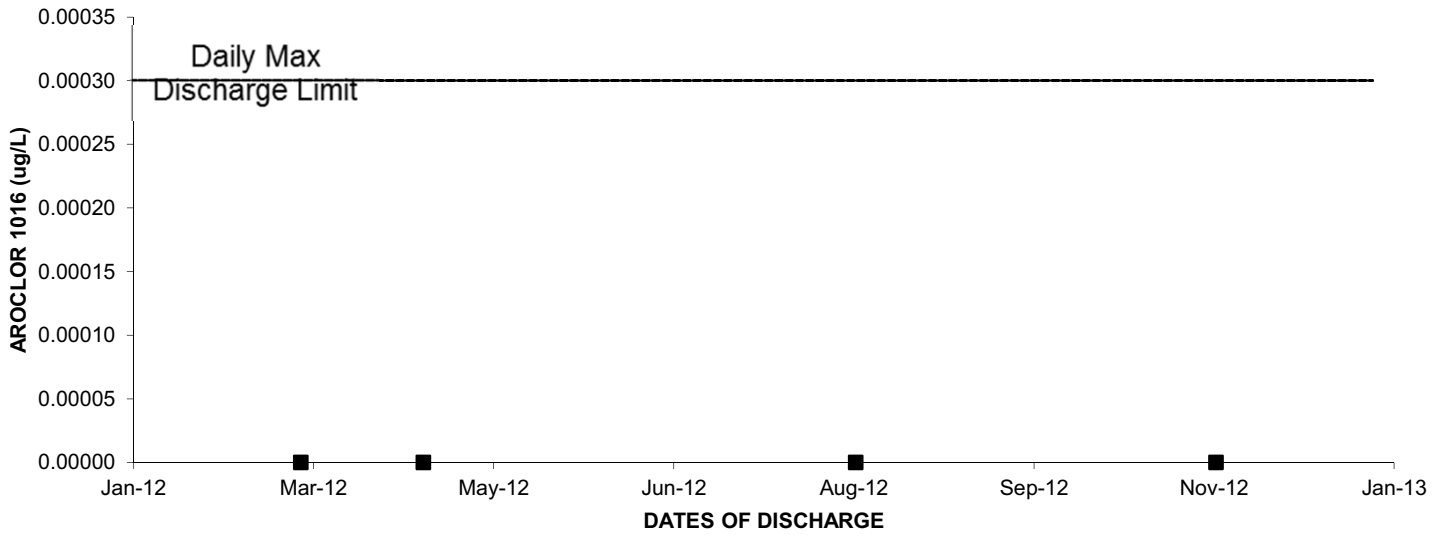


2012: ARROYO SIMI 4,4'-DDT

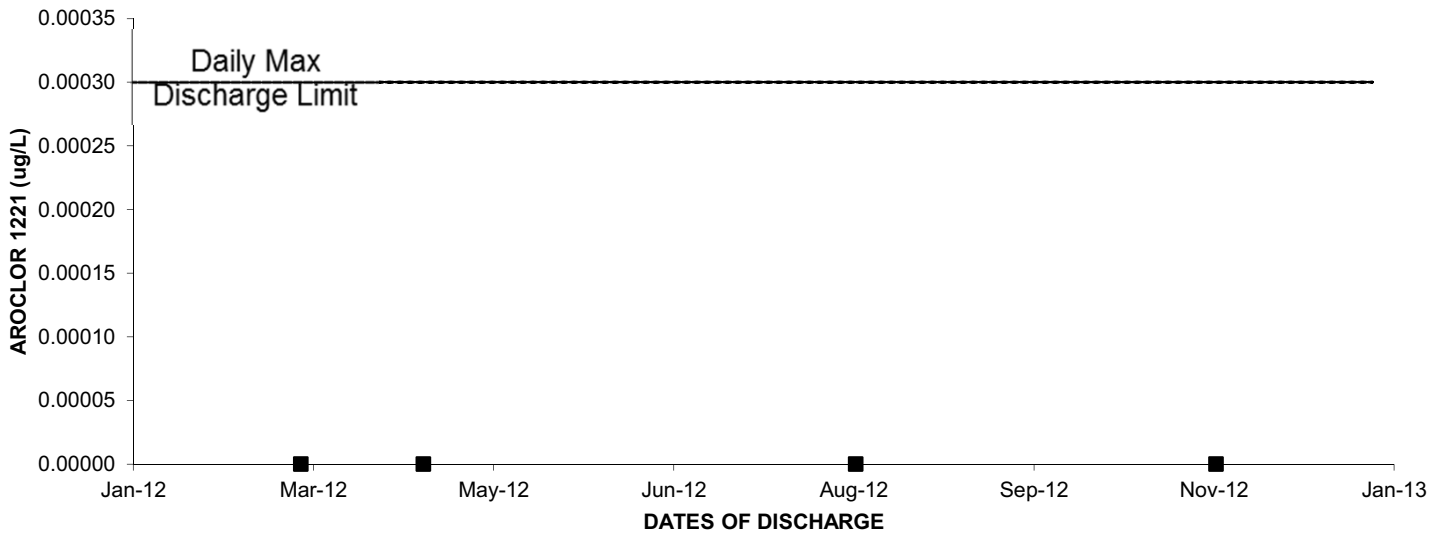




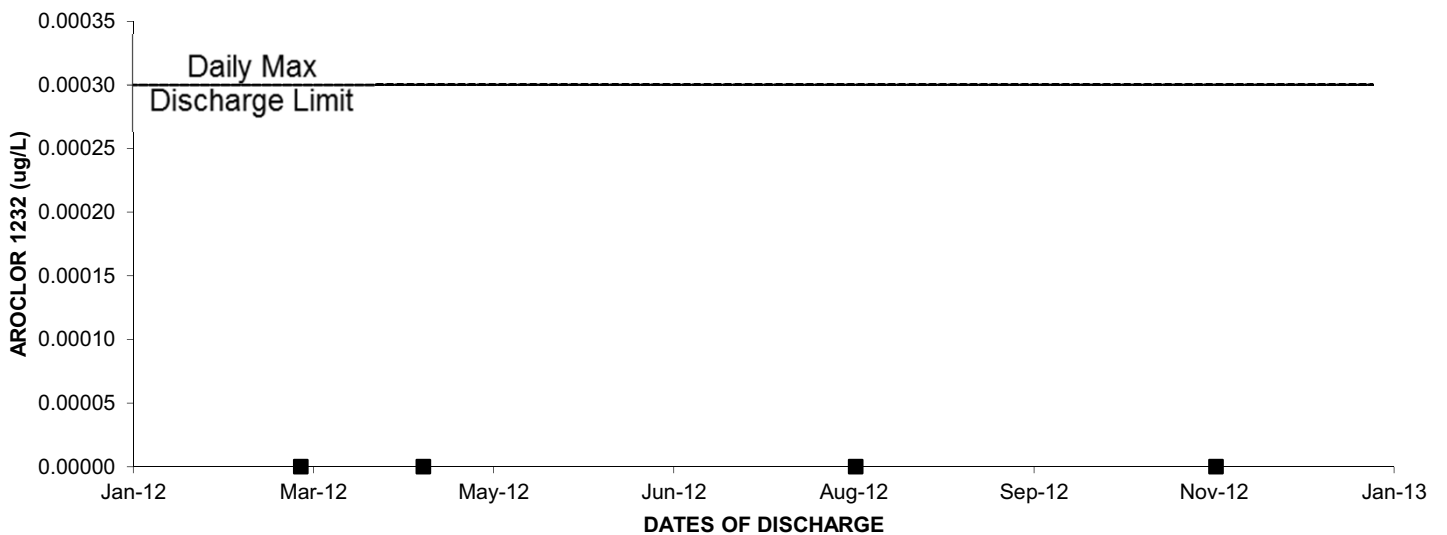
2012: ARROYO SIMI AROCLOR 1016



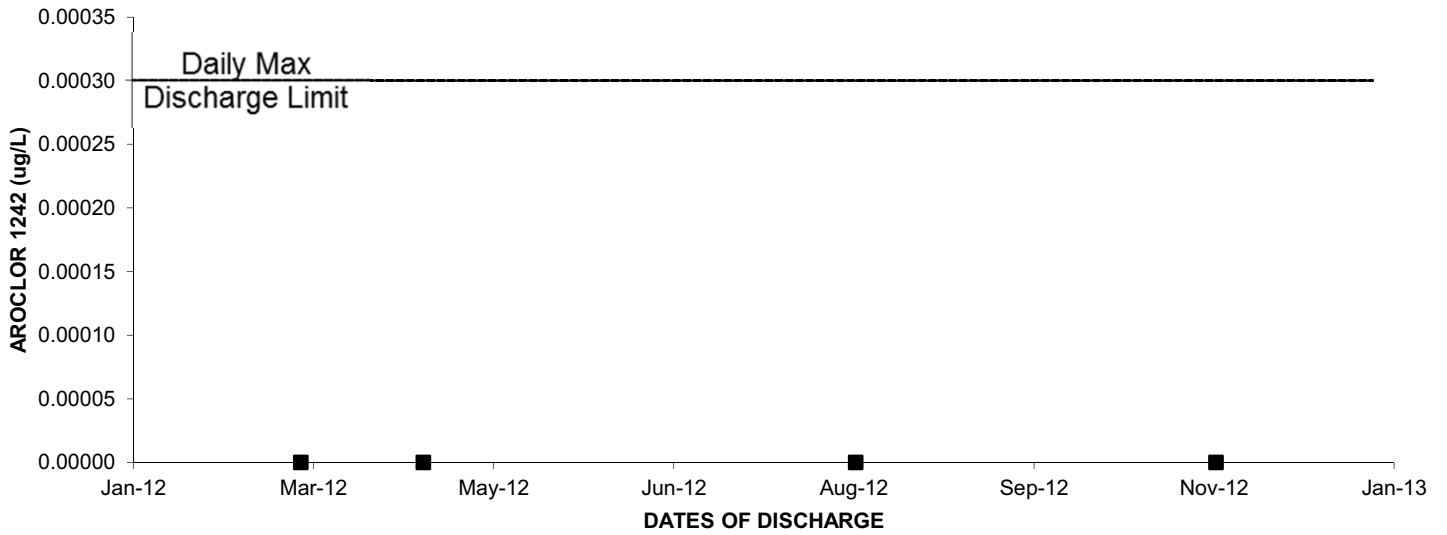
2012: ARROYO SIMI AROCLOR 1221



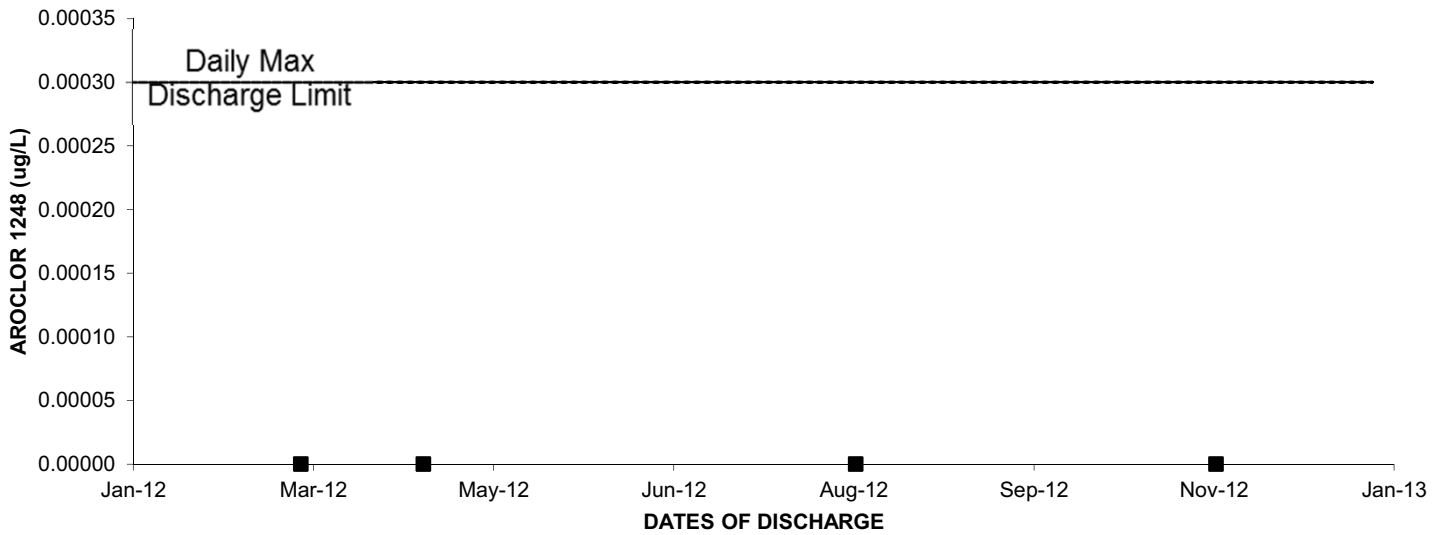
2012: ARROYO SIMI AROCLOR 1232



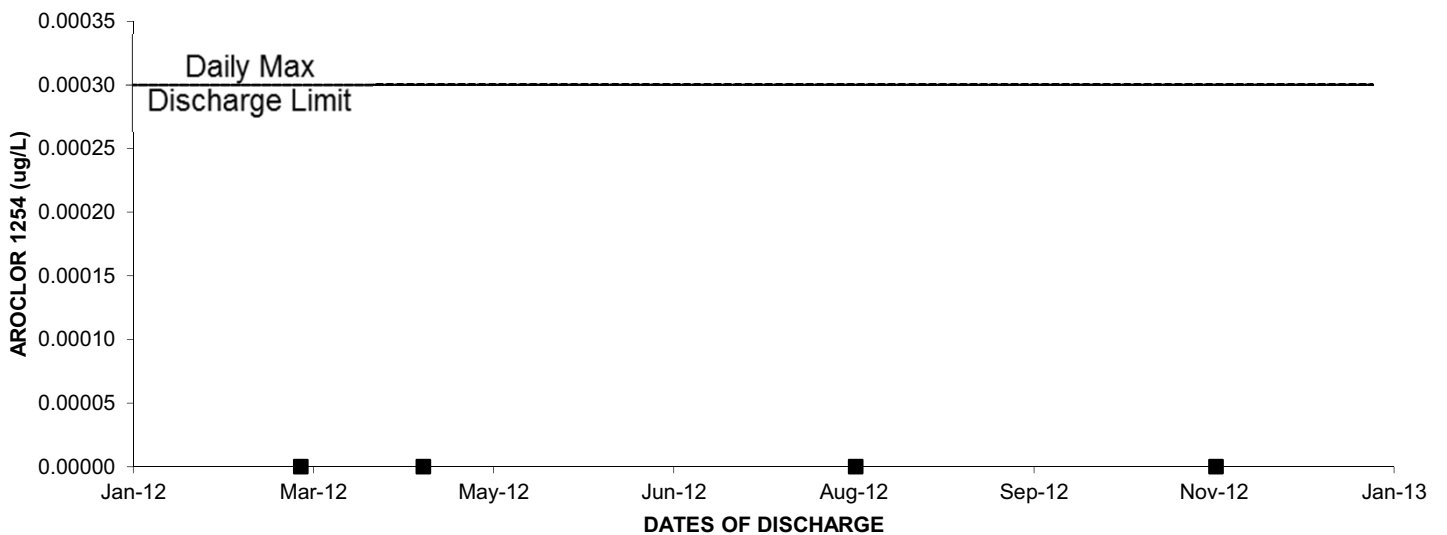
2012: ARROYO SIMI AROCLOR 1242



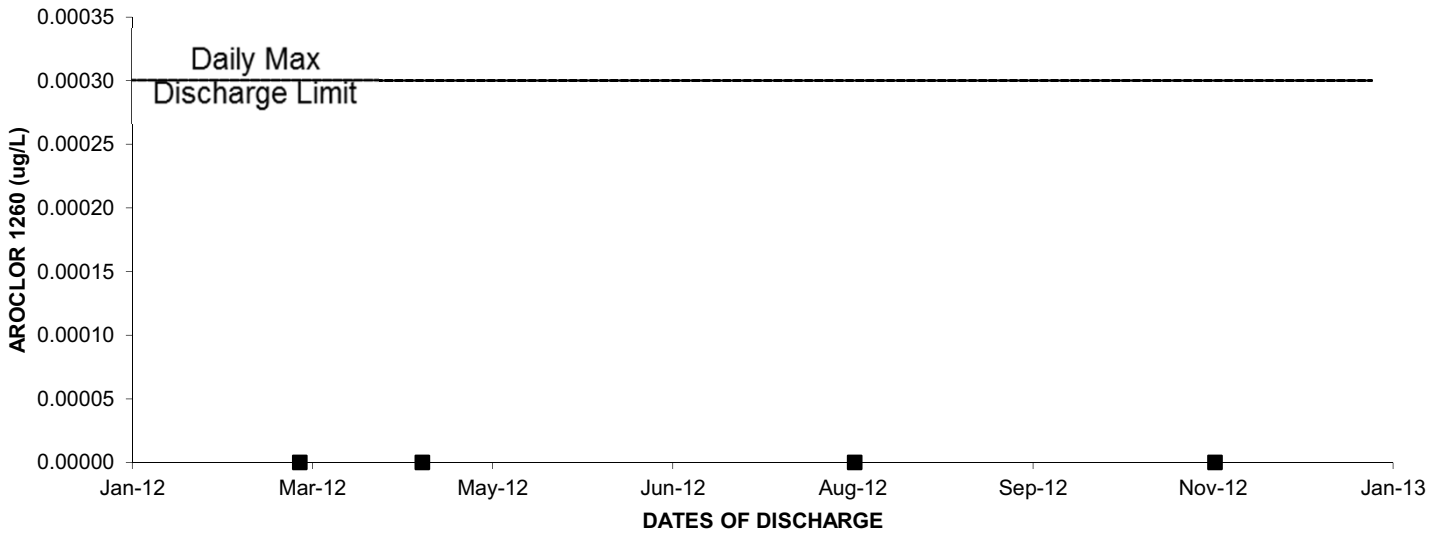
2012: ARROYO SIMI AROCLOR 1248



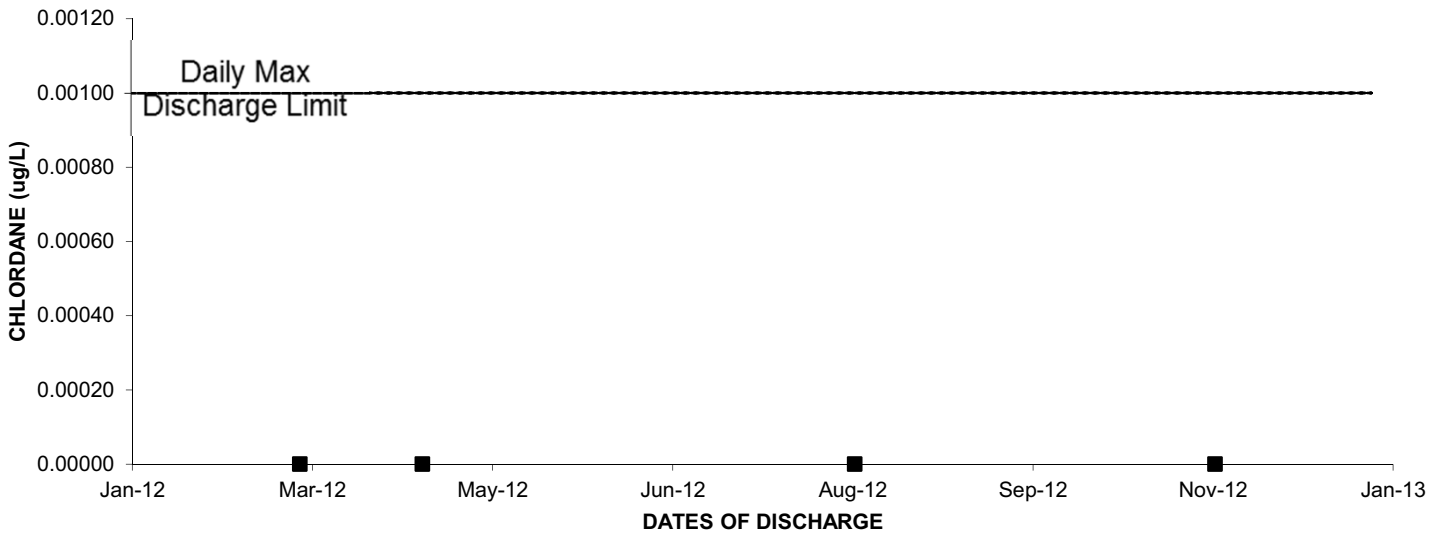
2012: ARROYO SIMI AROCLOR 1254



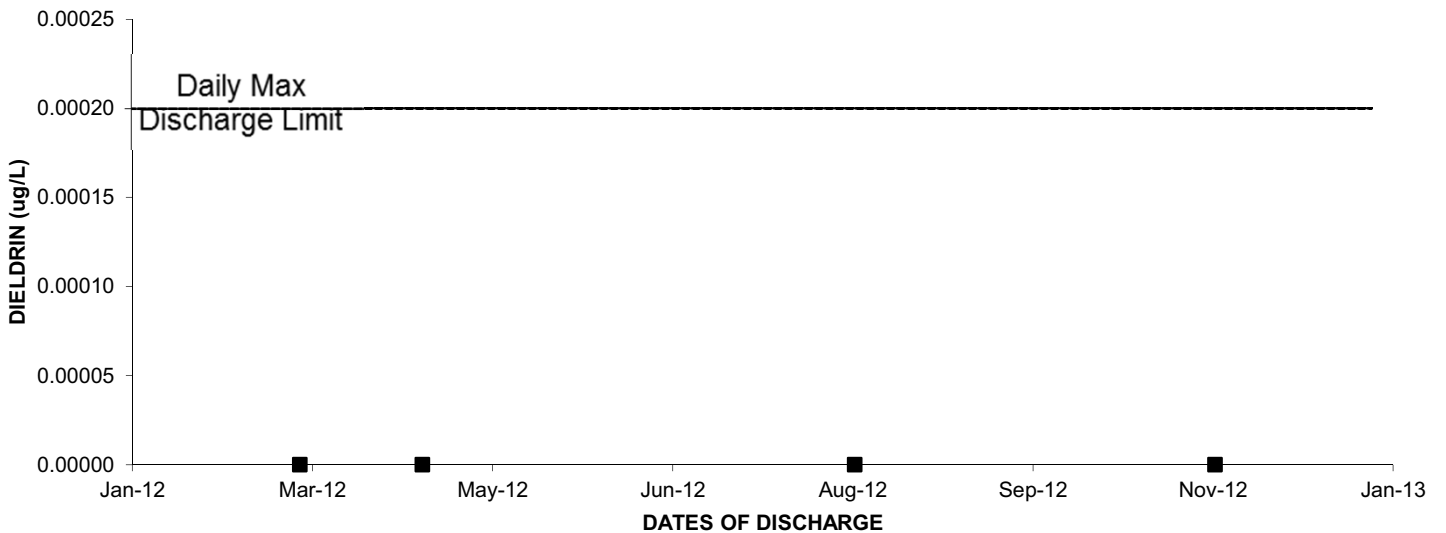
2012: ARROYO SIMI AROCLOR 1260



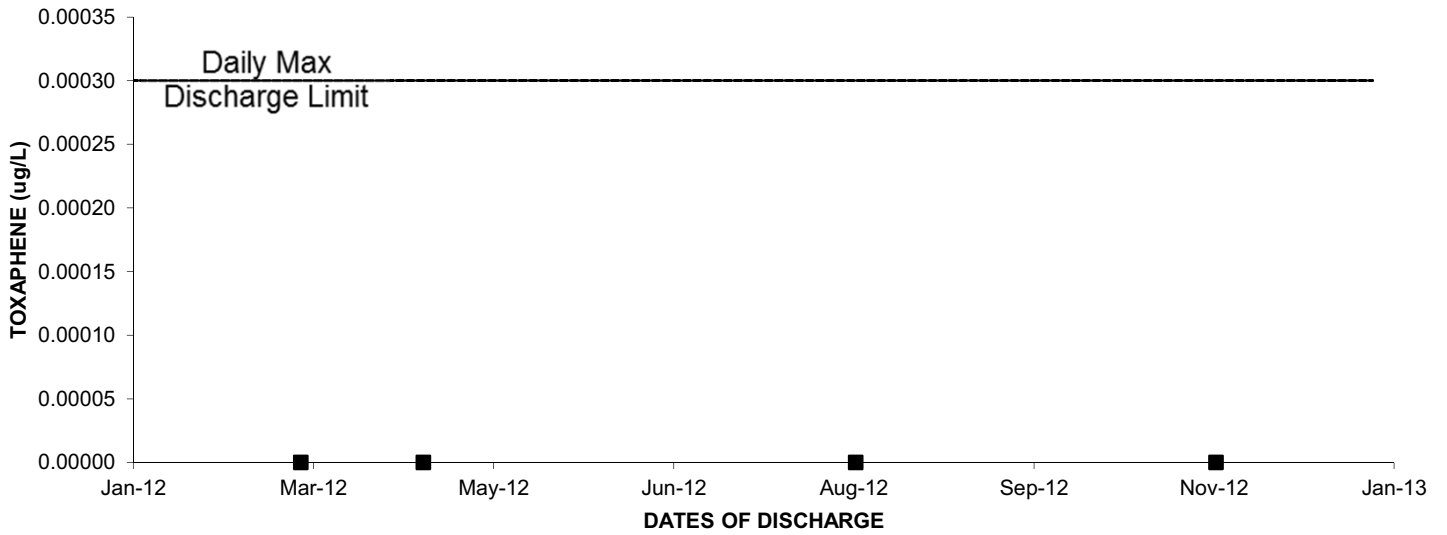
2012: ARROYO SIMI CHLORDANE



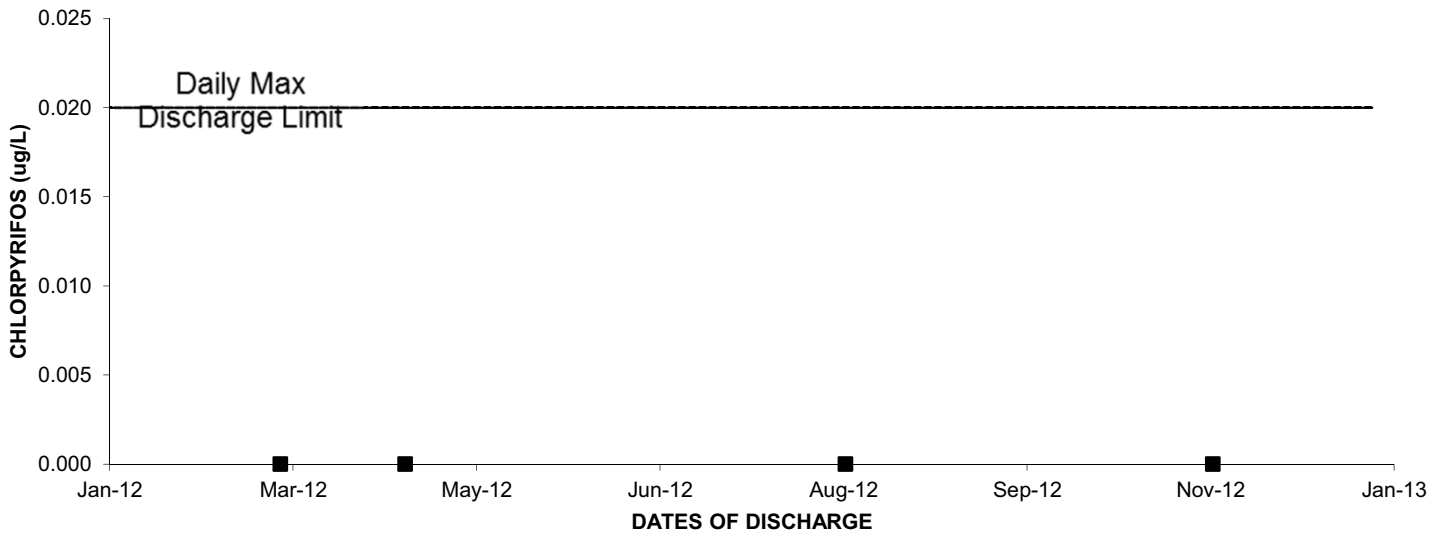
2012: ARROYO SIMI DIELDRIN



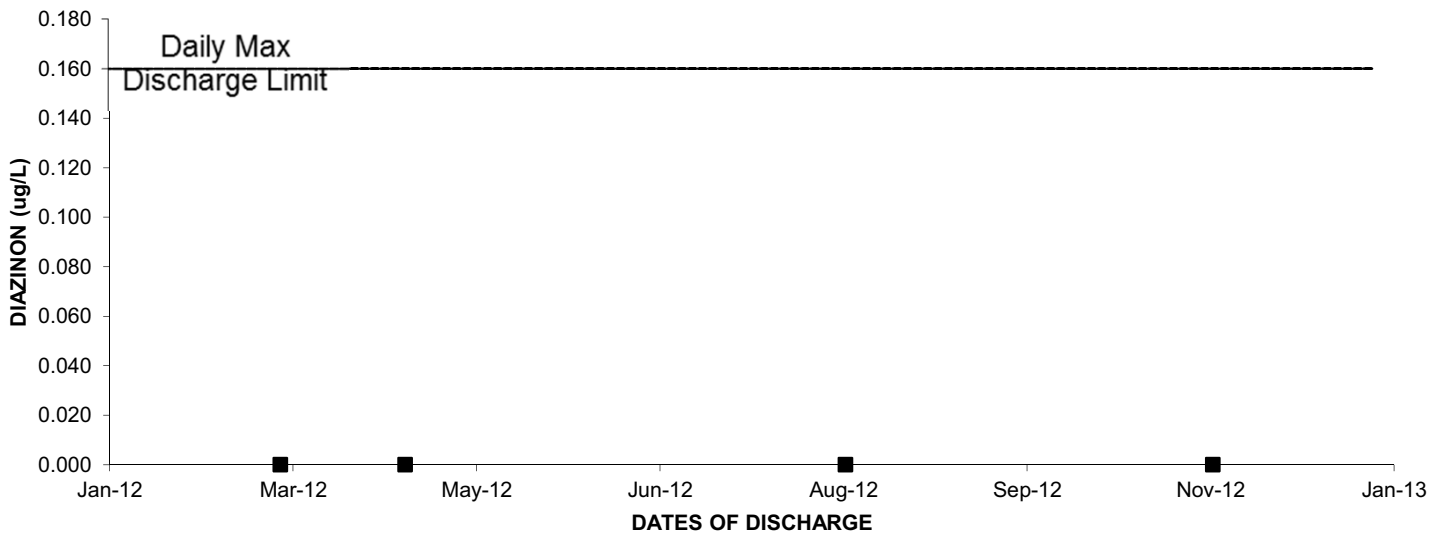
2012: ARROYO SIMI TOXAPHENE



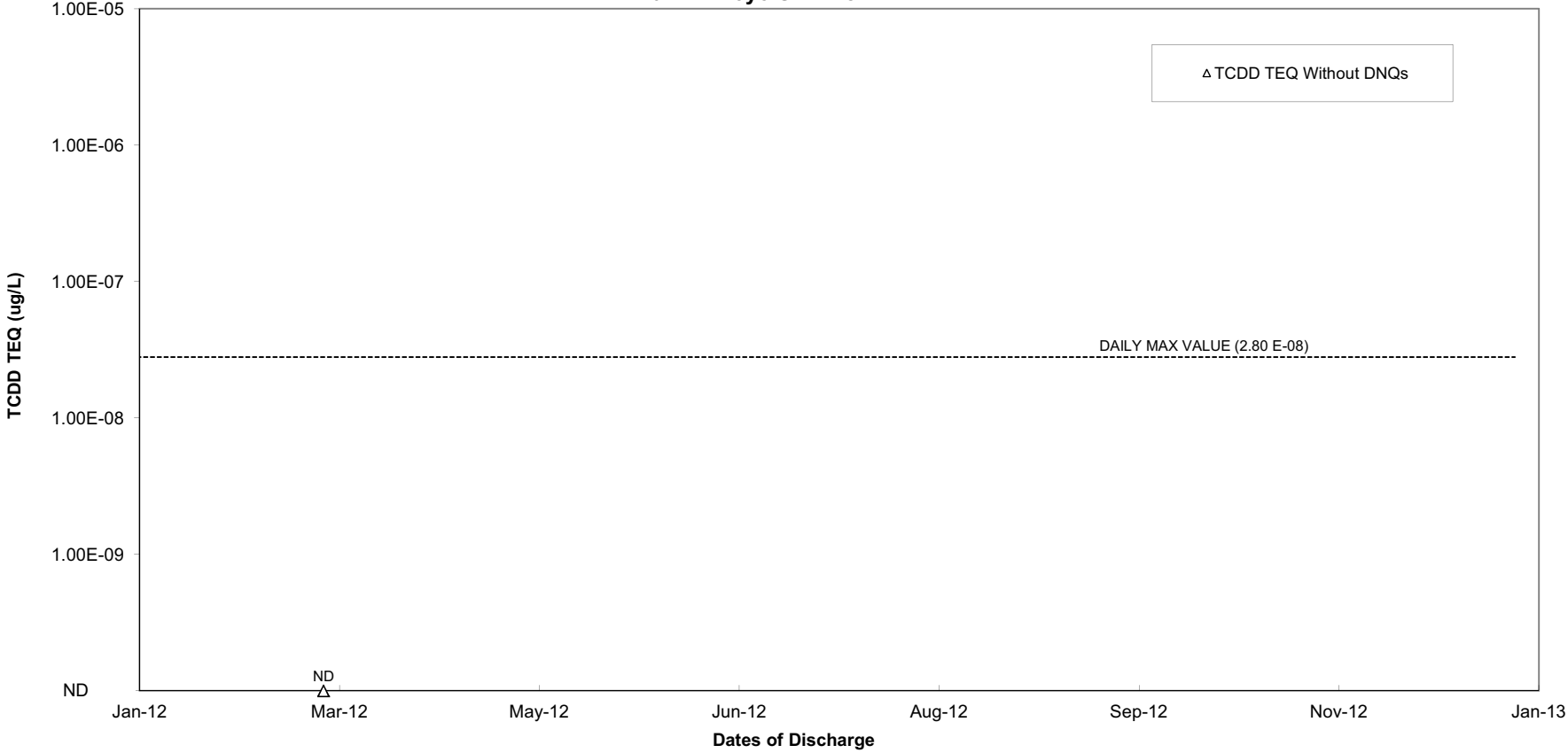
2012: ARROYO SIMI CHLORPYRIFOS



2012: ARROYO SIMI DIAZINON



2012: Arroyo Simi TCDD



△ TCDD TEQ Without DNQs

DAILY MAX VALUE (2.80 E-08)

TCDD TEQ (ug/L)

Dates of Discharge

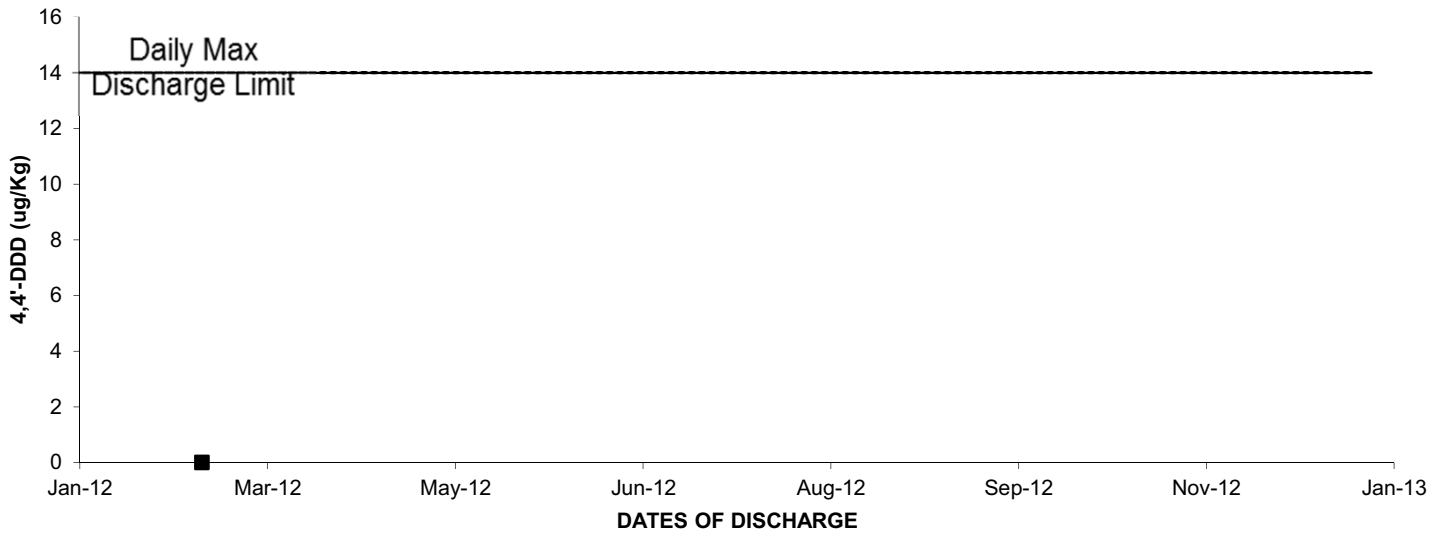
**ARROYO SIMI SEDIMENT (Frontier Park Receiving Water)**

**ANNUAL 2012 REPORTING SUMMARY  
THE BOEING COMPANY  
SANTA SUSANA FIELD LABORATORY  
NPDES PERMIT CA0001309**

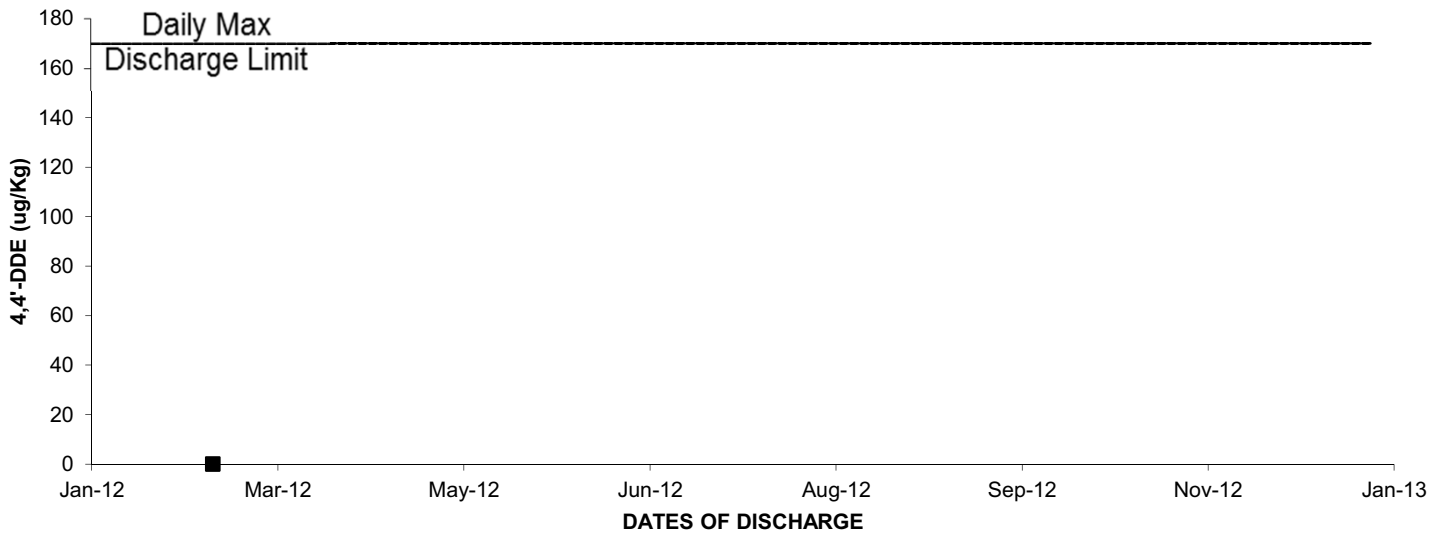
**January 1 through December 31, 2012**

ANALYTE	UNITS	Permit Limit Daily Max/Monthly Avg	2/23/2012		
			SAMPLE TYPE	RESULT	VALIDATION QUALIFIER
Water Velocity	ft/sec	-/-	Meas	0.03	*
Ammonia as Nitrogen (N)	mg/Kg	-/-	Grab	2.92	J (DNQ)
Dissolved Oxygen	mg/L	-/-	Grab	13.11	*
pH (Field)	pH Units	-/-	Grab	7.5	*
Temperature	F	-/-	Grab	64	*
Conductivity (Field)	umhos/cm	-/-	Grab	2070	*
Total Organic Carbon	mg/Kg	-/-	Grab	ND < 1700	*
Percent Moisture	%	-/-	Grab	21	*
4,4'-DDD	ug/Kg	14/-	Grab	ND < 3.0	*
4,4'-DDE	ug/Kg	170/-	Grab	ND < 3.0	*
4,4'-DDT	ug/Kg	25/-	Grab	ND < 3.0	*
Aroclor-1016	ug/Kg	25700/-	Grab	ND < 24	*
Aroclor-1221	ug/Kg	25700/-	Grab	ND < 24	*
Aroclor-1232	ug/Kg	25700/-	Grab	ND < 24	*
Aroclor-1242	ug/Kg	25700/-	Grab	ND < 24	*
Aroclor-1248	ug/Kg	25700/-	Grab	ND < 24	*
Aroclor-1254	ug/Kg	25700/-	Grab	ND < 24	*
Aroclor-1260	ug/Kg	25700/-	Grab	ND < 24	*
Chlordane	ug/Kg	3.3/-	Grab	ND < 20	*
Dieldrin	ug/Kg	1.1/-	Grab	ND < 3.0	*
Toxaphene	ug/Kg	230/-	Grab	ND < 99	*
Sediment toxicity	%	-/-	Grab	100	*
Bivalve Embryo toxicity	%	-/-	Grab	100	*
<b>PARTICLE SIZE DISTRIBUTION</b>					
Gravel	%	-/-	Grab	0	*
Coarse Sand	%	-/-	Grab	0	*
Medium Sand	%	-/-	Grab	13.40	*
Fine Sand	%	-/-	Grab	32.67	*
Silt/Clay	%	-/-	Grab	53.93	*

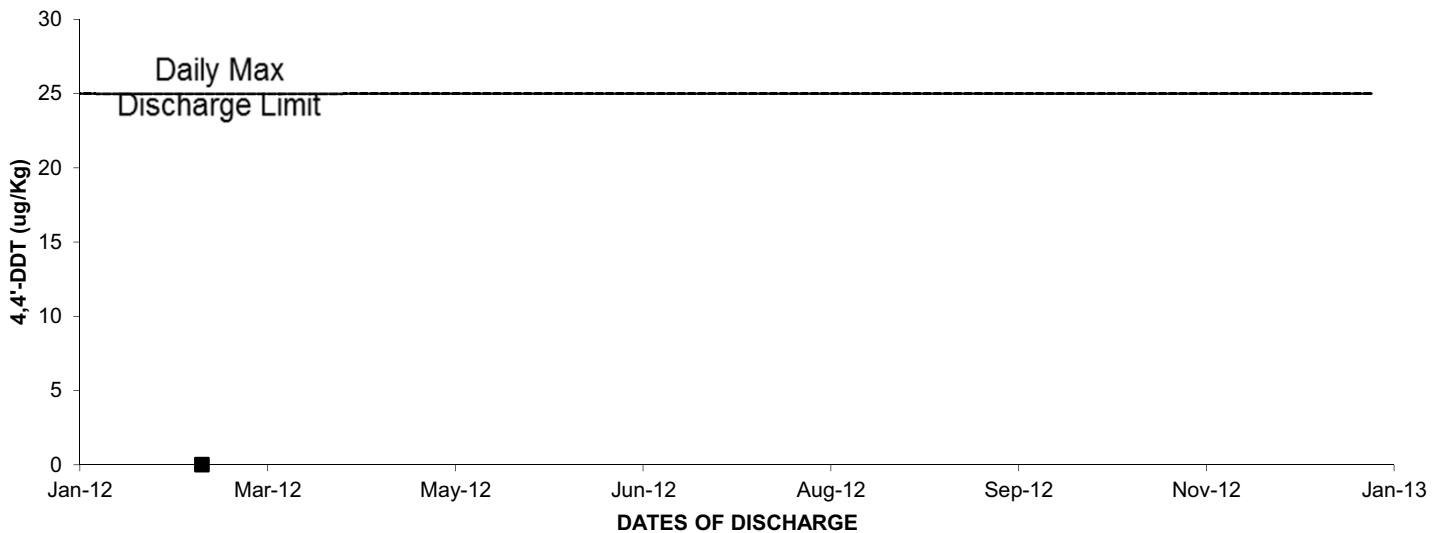
2012: ARROYO SIMI SEDIMENT 4,4'-DDD



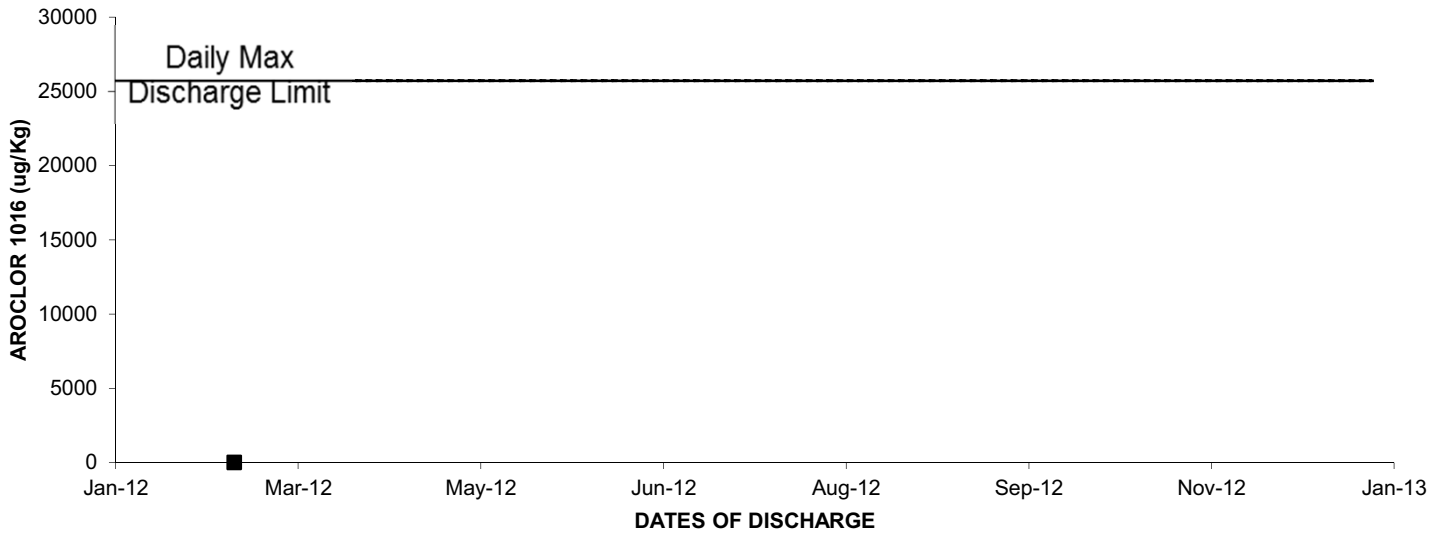
2012: ARROYO SIMI SEDIMENT 4,4'-DDE



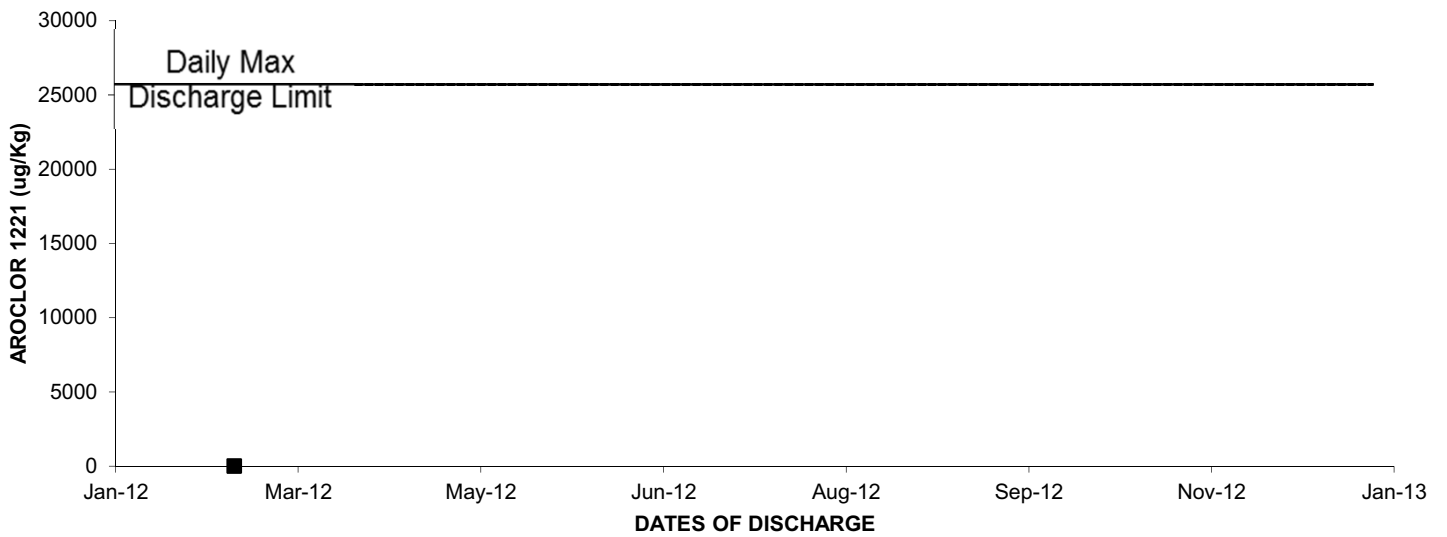
2012: ARROYO SIMI SEDIMENT 4,4'-DDT



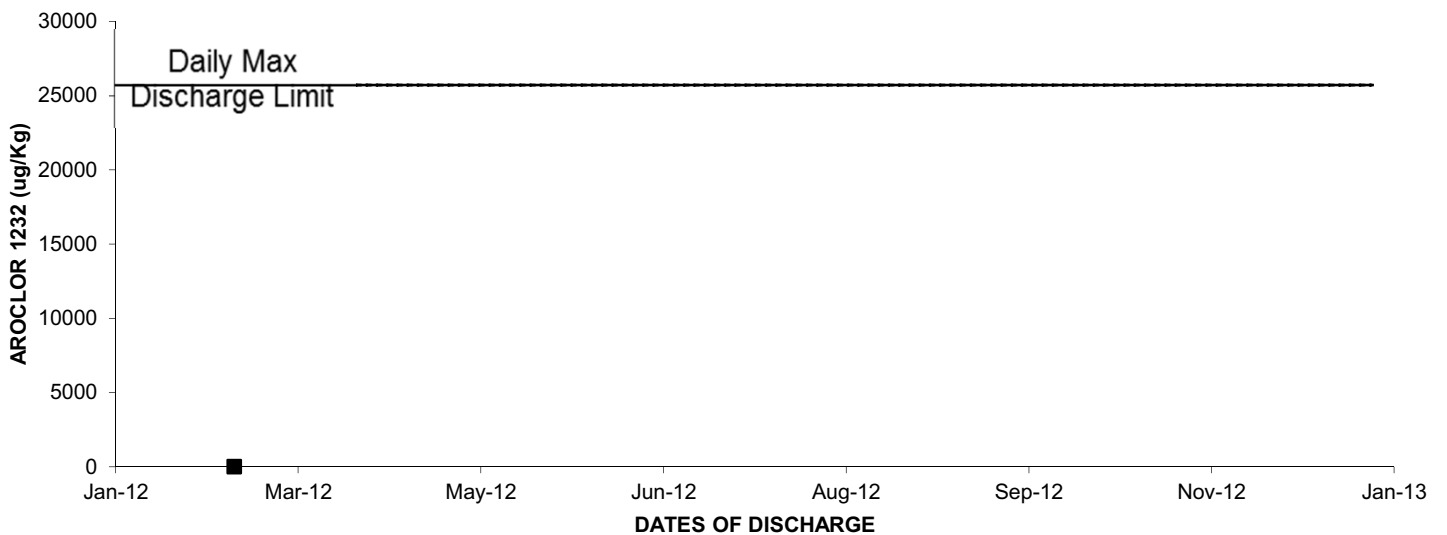
2012: ARROYO SIMI SEDIMENT AROCLOR 1016



2012: ARROYO SIMI SEDIMENT AROCLOR 1221

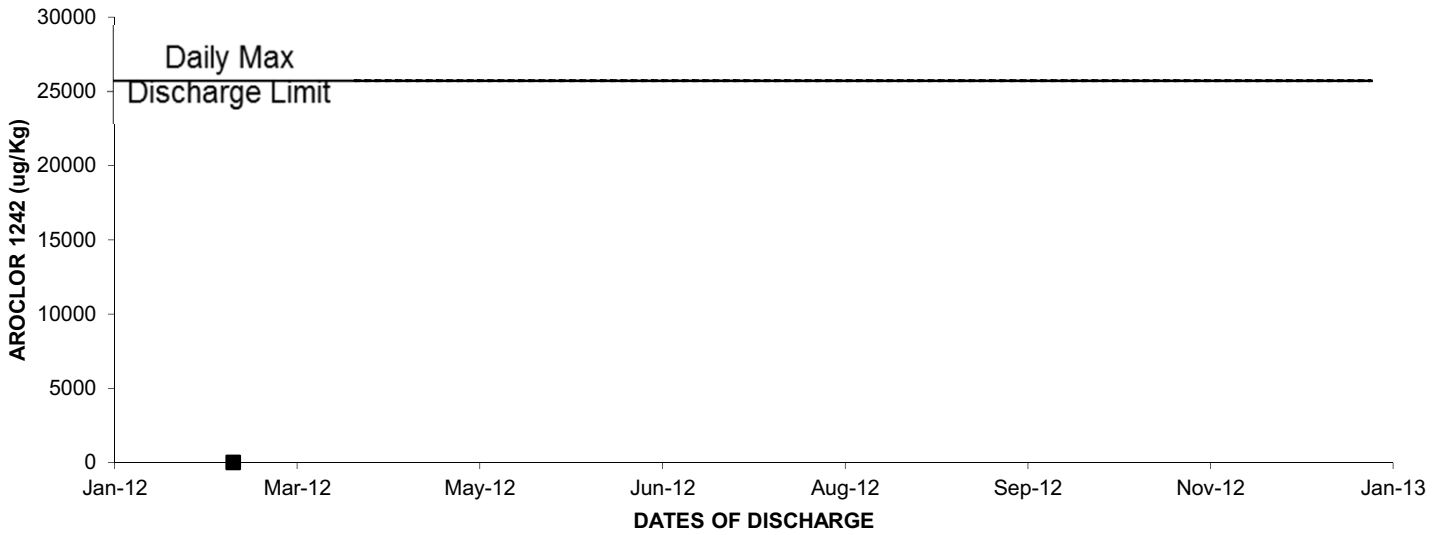


2012: ARROYO SIMI SEDIMENT AROCLOR 1232

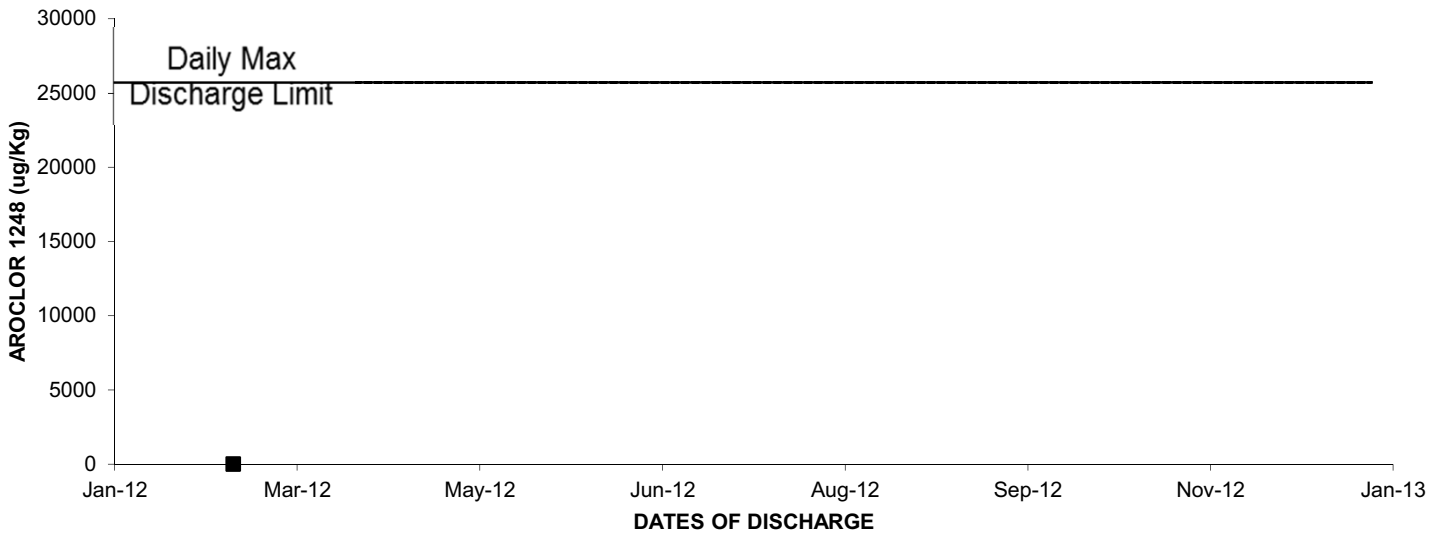




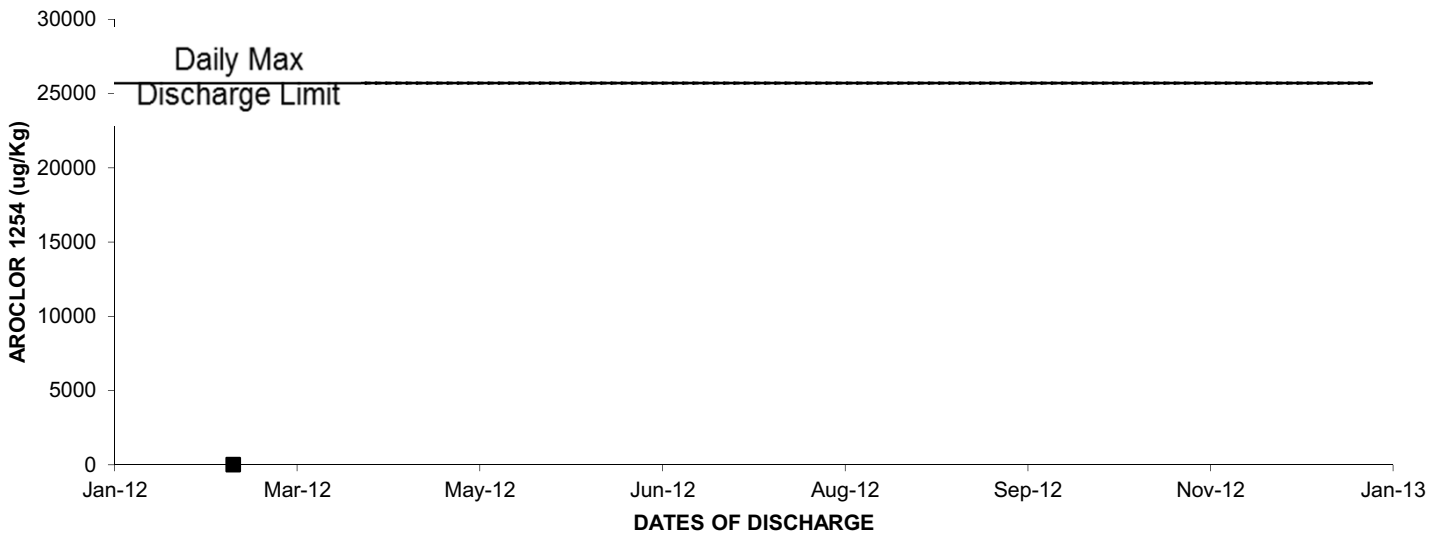
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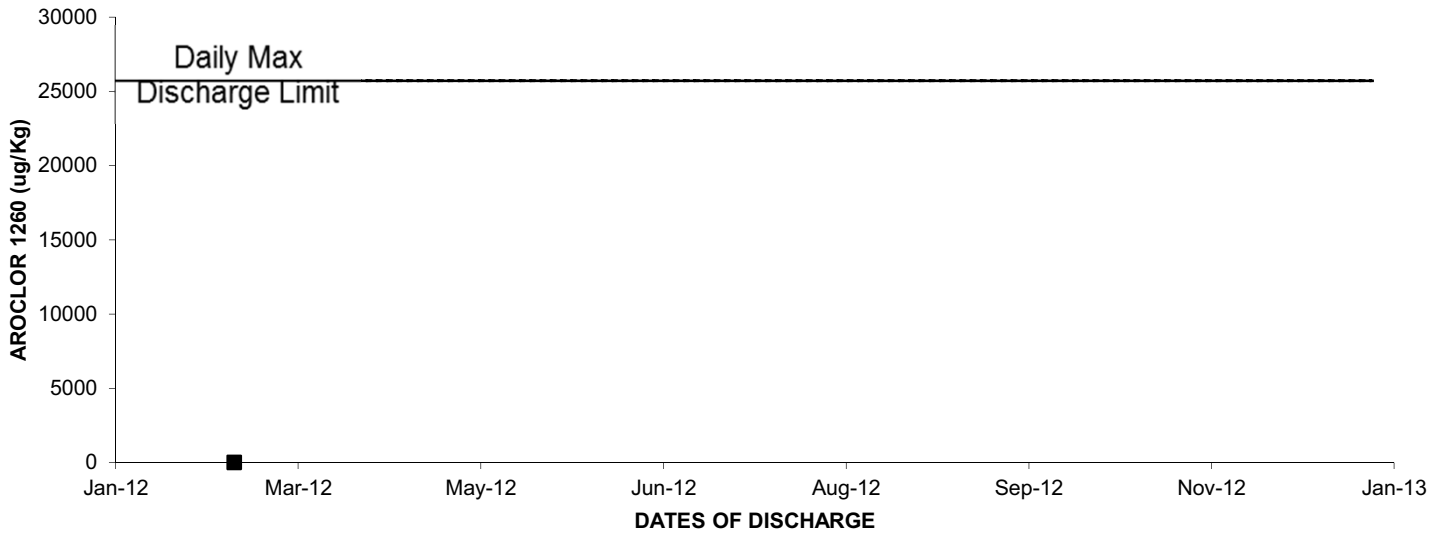
2012: ARROYO SIMI SEDIMENT AROCLOR 1248



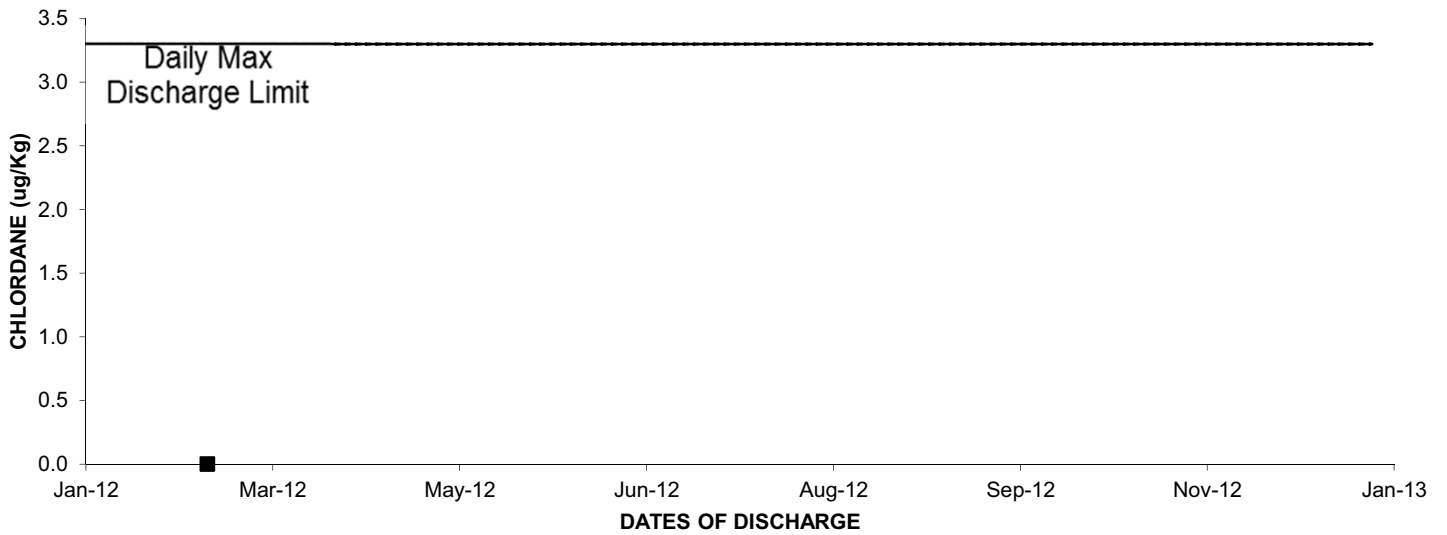
2012: ARROYO SIMI SEDIMENT AROCLOR 1254



2012: ARROYO SIMI SEDIMENT AROCLOR 1260



2012: ARROYO SIMI SEDIMENT CHLORDANE



2012: ARROYO SIMI SEDIMENT TOXAPHENE

