OUTFALL 008 (Happy Valley Drainage)

ANNUAL 2009 REPORTING SUMMARY
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

January 1 through December 31, 2009

			2/16/2009	
ANALYTE	**UNITS**	**Benchmark Limit Daily Max/Monthly Avg**	**RESULT**	**VALIDATION QUALIFIER**
Asbestos	MFL	-/-	ND < 11	U
Ammonia as Nitrogen (N)	mg/L	10.1/-	1.1	*
Chloride	mg/L	150/-	8.0	*
Fluoride	mg/L	1.6/-	0.23	B*
Nitrate + Nitrite as Nitrogen (N)	mg/L	8.0/-	1.9	*
Nitrate as Nitrogen (N)	mg/L	8.0/-	1.9	*
Nitrite-N	mg/L	1.0/-	ND < 0.090	*
Oil & Grease	mg/L	15/-	1.8	Ja* (DNQ)
Perchlorate	ug/L	6.0/-	2.5	Ja* (DNQ)
pH (Field)	pH units	6.5-8.5/-	7.1	*
Sulfate	mg/L	300/-	10	*
Temperature	deg. F	86/-	42	*
Total Cyanide	ug/L	-/-	8.7	--
Total Dissolved Solids	mg/L	950/-	140	*
Hardness	mg/L	-/-	66	--
Hardness, dissolved	mg/L	-/-	61	--
Total Suspended Solids	mg/L	-/-	55	--
Volume Discharged	MGD	17.8/-	0.131285	*
METALS				
Aluminum	ug/L	-/-	3100	--
Aluminum, dissolved	ug/L	-/-	160	--
Antimony	ug/L	6.0/-	0.35	Ja* (DNQ)
Antimony, dissolved	ug/L	-/-	0.33	Ja* (DNQ)
Arsenic	ug/L	-/-	ND < 7.0	U
Arsenic, dissolved	ug/L	-/-	ND < 7.0	U
Beryllium	ug/L	-/-	ND < 0.90	U
Beryllium, dissolved	ug/L	-/-	ND < 0.90	U
Boron	mg/L	1.0/-	0.061	--
Boron, dissolved	mg/L	-/-	0.060	--
Cadmium	ug/L	3.1/-	ND < 0.11	*
Cadmium, dissolved	ug/L	-/-	ND < 0.11	C*
Calcium	mg/L	-/-	20	--
Calcium, Dissolved	mg/L	-/-	19	--
Chromium	ug/L	-/-	ND < 5.0	U (B)
Chromium, dissolved	ug/L	-/-	ND < 2.0	U
Copper	ug/L	14.0/-	4.1	*
Copper, dissolved	ug/L	-/-	2.0	*
Iron	mg/L	-/-	3.0	--
Iron, dissolved	mg/L	-/-	0.14	--
Lead	ug/L	5.2/-	2.6	*
Lead, dissolved	ug/L	-/-	ND < 0.30	*
Magnesium	mg/L	-/-	3.9	--
Magnesium, Dissolved	mg/L	-/-	3.2	--
Mercury	ug/L	0.13/-	0.029	J (Q)
Mercury, dissolved	ug/L	-/-	ND < 0.027	U
Nickel	ug/L	100/-	3.5	J (DNQ)
Nickel, dissolved	ug/L	-/-	ND < 2.0	U
Selenium	ug/L	-/-	ND < 0.30	*
Selenium, dissolved	ug/L	-/-	0.68	Ja* (DNQ)

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

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ANALYTE	**UNITS**	**Benchmark Limit Daily Max/Monthly Avg**	**RESULT**	**VALIDATION QUALIFIER**
Silver	ug/L	-/-	ND < 6.0	U
Silver, dissolved	ug/L	-/-	ND < 6.0	U
Thallium	ug/L	2.0/-	ND < 0.20	C*
Thallium, dissolved	ug/L	-/-	ND < 0.20	C*
Vanadium	ug/L	-/-	6.8	J (DNQ)
Vanadium, dissolved	ug/L	-/-	ND < 3.0	U
Zinc	ug/L	159/-	14	J (DNQ)
Zinc, dissolved	ug/L	-/-	ND < 20	UJ (B,*III)
ORGANICS				
Benzene	ug/L	-/-	ND < 0.28	*
Carbon Tetrachloride	ug/L	-/-	ND < 0.28	*
Chloroform	ug/L	-/-	ND < 0.33	*
1,1-Dichloroethane	ug/L	-/-	ND < 0.40	*
1,2-Dichloroethane	ug/L	-/-	ND < 0.28	*
1,1-Dichloroethene	ug/L	-/-	ND < 0.42	*
Ethylbenzene	ug/L	-/-	ND < 0.25	*
Tetrachloroethene	ug/L	-/-	ND < 0.32	*
Toluene	ug/L	-/-	ND < 0.36	*
Xylenes (Total)	ug/L	-/-	ND < 0.90	*
1,1,1-Trichloroethane	ug/L	-/-	ND < 0.30	*
1,1,2-Trichloroethane	ug/L	-/-	ND < 0.30	*
Trichloroethene	ug/L	-/-	ND < 0.26	*
Trichlorofluoromethane	ug/L	-/-	ND < 0.34	*
Trichlorotrifluoroethane (Freon 113)	ug/L	-/-	ND < 0.50	*
Vinyl chloride	ug/L	-/-	ND < 0.40	*
ADDITIONAL ANALYTES				
2,4,5-Trichlorophenol	ug/L	-/-	ND < 2.9	*
1,1,2,2-Tetrachloroethane	ug/L	-/-	ND < 0.30	*
1,2,4-Trichlorobenzene	ug/L	-/-	ND < 2.4	*
1,2-Dichlorobenzene (EPA 625)	ug/L	-/-	ND < 2.9	*
1,2-Dichlorobenzene (EPA 624)	ug/L	-/-	ND < 0.32	*
1,2-Dichloropropane	ug/L	-/-	ND < 0.35	*
1,2-Diphenylhydrazine/Azobenzene	ug/L	-/-	ND < 2.4	*
1,3-Dichlorobenzene (EPA 625)	ug/L	-/-	ND < 2.9	*
1,3-Dichlorobenzene (EPA 624)	ug/L	-/-	ND < 0.35	*
1,4-Dichlorobenzene (EPA 625)	ug/L	-/-	ND < 2.4	*
1,4-Dichlorobenzene (EPA 624)	ug/L	-/-	ND < 0.37	*
2,4,6-Trichlorophenol	ug/L	-/-	ND < 4.3	*
2,4-Dichlorophenol	ug/L	-/-	ND < 3.3	*
2,4-Dimethylphenol	ug/L	-/-	ND < 3.3	*
2,4-Dinitrophenol	ug/L	-/-	ND < 7.7	*
2,4-Dinitrotoluene	ug/L	-/-	ND < 3.3	*
2,6-Dinitrotoluene	ug/L	-/-	ND < 1.9	*
2-Chloroethylvinylether	ug/L	-/-	ND < 1.8	*
2-Chloronaphthalene	ug/L	-/-	ND < 2.9	*
2-Chlorophenol	ug/L	-/-	ND < 2.9	*
2-Methyl-4,6-dinitrophenol	ug/L	-/-	ND < 3.8	*
2-Methylnaphthalene	ug/L	-/-	ND < 1.9	*
2-Methylphenol	ug/L	-/-	ND < 2.9	*
2-Nitrophenol	ug/L	-/-	ND < 3.3	*

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ANALYTE	**UNITS**	**Benchmark Limit Daily Max/Monthly Avg**	**RESULT**	**VALIDATION QUALIFIER**
3,3'-Dichlorobenzidine	ug/L	-/-	ND < 7.2	*
4,4'-DDD	ug/L	-/-	ND < 0.0019	UJ (C)
4,4'-DDE	ug/L	-/-	ND < 0.0029	UJ (C)
4,4'-DDT	ug/L	-/-	ND < 0.0038	UJ (C)
4-Bromophenylphenylether	ug/L	-/-	ND < 2.9	*
4-Chloro-3-methylphenol	ug/L	-/-	ND < 2.4	*
4-Chloroaniline	ug/L	-/-	ND < 1.9	*
4-Chlorophenylphenylether	ug/L	-/-	ND < 2.4	*
4-Nitrophenol	ug/L	-/-	ND < 5.3	*
Acenaphthene	ug/L	-/-	ND < 2.9	*
Acenaphthylene	ug/L	-/-	ND < 2.9	*
Acrolein	ug/L	-/-	ND < 4.0	C*
Acrylonitrile	ug/L	-/-	ND < 0.70	C*
Acute Toxicity	% SURVIVAL	70-100/-	100	*
Aldrin	ug/L	-/-	ND < 0.0014	U
alpha-BHC	ug/L	-/-	ND < 0.0053	UJ (H)
Aniline	ug/L	-/-	ND < 3.3	*
Anthracene	ug/L	-/-	ND < 2.4	*
Aroclor-1016	ug/L	-/-	ND < 0.24	U
Aroclor-1221	ug/L	-/-	ND < 0.24	U
Aroclor-1232	ug/L	-/-	ND < 0.24	U
Aroclor-1242	ug/L	-/-	ND < 0.24	U
Aroclor-1248	ug/L	-/-	ND < 0.24	U
Aroclor-1254	ug/L	-/-	ND < 0.24	U
Aroclor-1260	ug/L	-/-	ND < 0.24	U
Benzidine	ug/L	-/-	ND < 9.6	*
Benzo(a)anthracene	ug/L	-/-	ND < 2.4	*
Benzo(a)pyrene	ug/L	-/-	ND < 2.9	*
Benzo(b)fluoranthene	ug/L	-/-	ND < 1.9	*
Benzo(g,h,I)perylene	ug/L	-/-	ND < 3.8	*
Benzo(k)fluoranthene	ug/L	-/-	ND < 2.4	*
Benzoic acid	ug/L	-/-	ND < 9.6	*
Benzyl alcohol	ug/L	-/-	ND < 3.3	*
beta-BHC	ug/L	-/-	0.0052	J (DNQ, C)
bis (2-Chloroethyl) ether	ug/L	-/-	ND < 2.9	*
bis (2-ethylhexyl) Phthalate	ug/L	-/-	ND < 3.8	*
bis(2-Chloroethoxy) methane	ug/L	-/-	ND < 2.9	*
bis(2-Chloroisopropyl) ether	ug/L	-/-	ND < 2.4	*
Bromodichloromethane	ug/L	-/-	ND < 0.30	*
Bromoform	ug/L	-/-	ND < 0.40	*
Bromomethane	ug/L	-/-	ND < 0.42	*
Butylbenzylphthalate	ug/L	-/-	ND < 3.8	*
Chlordane	ug/L	-/-	ND < 0.038	U
Chlorobenzene	ug/L	-/-	ND < 0.36	*
Chloroethane	ug/L	-/-	ND < 0.40	*
Chloromethane	ug/L	-/-	ND < 0.40	*
Chlorpyrifos	ug/L	-/-	ND < 0.10	U
Chronic Toxicity	TUC	1.0/-	1.0	*
Chrysene	ug/L	-/-	ND < 2.4	*
cis-1,3-Dichloropropene	ug/L	-/-	ND < 0.22	L*

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ANALYTE	**UNITS**	**Benchmark Limit Daily Max/Monthly Avg**	**RESULT**	**VALIDATION QUALIFIER**
delta-BHC	ug/L	-/-	ND < 0.0033	UJ (C)
Diazinon	ug/L	-/-	ND < 0.24	U
Dibenzo(a,h)anthracene	ug/L	-/-	ND < 2.9	*
Dibenzofuran	ug/L	-/-	ND < 3.8	*
Dibromochloromethane	ug/L	-/-	ND < 0.40	*
Dieldrin	ug/L	-/-	ND < 0.0019	U
Diethylphthalate	ug/L	-/-	ND < 3.3	*
Dimethylphthalate	ug/L	-/-	ND < 2.4	*
Di-n-butylphthalate	ug/L	-/-	ND < 2.9	*
Di-n-octylphthalate	ug/L	-/-	ND < 3.3	*
Endosulfan I	ug/L	-/-	ND < 0.0019	UJ (C)
Endosulfan II	ug/L	-/-	ND < 0.0029	UJ (C)
Endosulfan sulfate	ug/L	-/-	ND < 0.0029	UJ (C)
Endrin	ug/L	-/-	ND < 0.0019	UJ (C)
Endrin aldehyde	ug/L	-/-	0.0027	J (DNQ, C)
Endrin ketone	ug/L	-/-	ND < 0.0029	UJ (C)
Fluoranthene	ug/L	-/-	ND < 2.9	*
Fluorene	ug/L	-/-	ND < 2.9	*
Heptachlor	ug/L	-/-	ND < 0.0029	UJ (C)
Heptachlor epoxide	ug/L	-/-	ND < 0.0024	UJ (C)
Hexachlorobenzene	ug/L	-/-	ND < 2.9	*
Hexachlorobutadiene	ug/L	-/-	ND < 3.8	*
Hexachlorocyclopentadiene	ug/L	-/-	ND < 4.8	*
Hexachloroethane	ug/L	-/-	ND < 3.3	*
Indeno(1,2,3-cd)pyrene	ug/L	-/-	ND < 3.3	*
Isophorone	ug/L	-/-	ND < 2.9	*
Lindane (gamma-BHC)	ug/L	-/-	ND < 0.0029	UJ (C)
Methoxychlor	ug/L	-/-	ND < 0.0033	U
Methylene Chloride	ug/L	-/-	ND < 0.95	*
m-Nitroaniline	ug/L	-/-	ND < 2.9	*
Naphthalene	ug/L	-/-	ND < 2.9	*
Nitrobenzene	ug/L	-/-	ND < 2.9	*
n-Nitrosodimethylamine	ug/L	-/-	ND < 2.4	*
n-Nitroso-di-n-propylamine	ug/L	-/-	ND < 3.3	*
n-Nitrosodiphenylamine	ug/L	-/-	ND < 1.9	*
o-Nitroaniline	ug/L	-/-	ND < 1.9	*
p-Cresol	ug/L	-/-	ND < 2.9	*
Pentachlorophenol	ug/L	-/-	ND < 3.3	*
Phenanthrene	ug/L	-/-	ND < 3.3	*
Phenol	ug/L	-/-	ND < 1.9	*
p-Nitroaniline	ug/L	-/-	ND < 3.8	*
Pyrene	ug/L	-/-	ND < 3.8	*
Toxaphene	ug/L	-/-	ND < 0.24	U
trans-1,2-Dichloroethene	ug/L	-/-	ND < 0.30	*
trans-1,3-Dichloropropene	ug/L	-/-	ND < 0.32	*

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Sample Date February 16, 2009

ANALYTE	LAB LOD (ug/L)	LAB RL (ug/L)	LAB RESULT (ug/L)	VALIDATION QUALIFIER		1998 WHO TEF	TCDD Equivalent (w/out DNQ Values) (ug/L)
1,2,3,4,6,7,8-HpCDD	0.00E+00	2.50E-05	1.78E-05	J (DNQ)		0.01	**ND**
1,2,3,4,6,7,8-HpCDF	0.00E+00	5.73E-06	ND	UJ (*III)		0.01	**ND**
1,2,3,4,7,8,9-HpCDF	2.16E-06	2.50E-05	ND	U		0.01	**ND**
1,2,3,4,7,8-HxCDD	1.73E-06	2.50E-05	ND	U		0.1	**ND**
1,2,3,4,7,8-HxCDF	9.59E-07	2.50E-05	ND	U		0.1	**ND**
1,2,3,6,7,8-HxCDD	1.75E-06	2.50E-05	ND	U		0.1	**ND**
1,2,3,6,7,8-HxCDF	9.75E-07	2.50E-05	ND	U		0.1	**ND**
1,2,3,7,8,9-HxCDD	1.68E-06	2.50E-05	ND	U		0.1	**ND**
1,2,3,7,8,9-HxCDF	1.59E-06	2.50E-05	ND	U		0.1	**ND**
1,2,3,7,8-PeCDD	1.14E-06	2.50E-05	ND	U		1	**ND**
1,2,3,7,8-PeCDF	8.81E-07	2.50E-05	ND	U		0.05	**ND**
2,3,4,6,7,8-HxCDF	1.11E-06	2.50E-05	ND	U		0.1	**ND**
2,3,4,7,8-PeCDF	9.20E-07	2.50E-05	ND	U		0.5	**ND**
2,3,7,8-TCDD	5.63E-07	5.00E-06	ND	U		1	**ND**
2,3,7,8-TCDF	6.27E-07	5.00E-06	ND	U		0.1	**ND**
OCDD	0.00E+00	5.00E-05	1.51E-04	--		0.0001	**1.51E-08**
OCDF	0.00E+00	5.00E-05	1.44E-05	J (DNQ)		0.0001	**ND**

TCDD TEQ w/out DNQ Values	**1.51E-08**

TCDD TEQ BENCHMARK LIMIT = 2.80E-08

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

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January 1 through December 31, 2009

			2/16/2009		
ANALYTE	**UNITS**	**Benchmark Limit Daily Max/Monthly Avg**	**RESULT**	**MDA**	**VALIDATION QUALIFIER**
RADIOACTIVITY					
Gross Alpha	pCi/L	15/-	1.9 ± 1.3	1.9	UJ (H,C)
Gross Beta	pCi/L	50/-	4.7 ± 1.1	1.4	J (H)
Strontium-90	pCi/L	8.0/-	0.34 ± 0.46	0.76	U
Total Combined Radium-226 & Radium 228	pCi/L	5.0/-	0.19 ± 0.34	0.73	U
Tritium	pCi/L	20000/-	300 ± 200	310	U
Uranium, Total	pCi/L	20/-	0.549 ± 0.062	0.21	J (H, DNQ)
Potassium-40	pCi/L	-/-	-50 ± 380	240	UJ (H)
Cesium 137	pCi/L	200/-	3.2 ± 8.8	16	UJ (H)

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January 1 through December 31, 2009

			2/16/2009	
ANALYTE	**UNITS**	**Benchmark Limit Daily Max/Monthly Avg**	**Result**	**CONCENTRATION RESULT VALIDATION QUALIFIER**
Ammonia as Nitrogen (N)	LBS/DAY	1,500/-	1.20	*
Chloride	LBS/DAY	22,268/-	8.76	*
Fluoride	LBS/DAY	238/-	0.25	B*
Nitrate + Nitrite as Nitrogen (N)	LBS/DAY	1,188/-	2.08	*
Nitrate as Nitrogen (N)	LBS/DAY	1,190/-	2.08	*
Nitrite-N	LBS/DAY	148/-	ND	*
Oil & Grease	LBS/DAY	2227/-	1.97	Ja* (DNQ)
Perchlorate	LBS/DAY	0.89/-	0.003	Ja* (DNQ)
Sulfate	LBS/DAY	44,536/-	10.95	*
Total Dissolved Solids	LBS/DAY	141,029/-	153.29	*
Antimony	LBS/DAY	0.89/-	0.0004	Ja* (DNQ)
Boron	LBS/DAY	148/-	0.07	--
Cadmium	LBS/DAY	0.46/-	ND	*
Copper	LBS/DAY	2.08/-	0.004	*
Lead	LBS/DAY	0.77/-	0.003	*
Mercury	LBS/DAY	0.02/-	0.00003	J (Q)
Nickel	LBS/DAY	14.9/-	0.004	J (DNQ)
Thallium	LBS/DAY	0.3/-	ND	C*
Zinc	LBS/DAY	23.6/-	0.02	J (DNQ)
TCDD TEQ_NoDNQ	LBS/DAY	4.20E-09/-	1.60E-11	--

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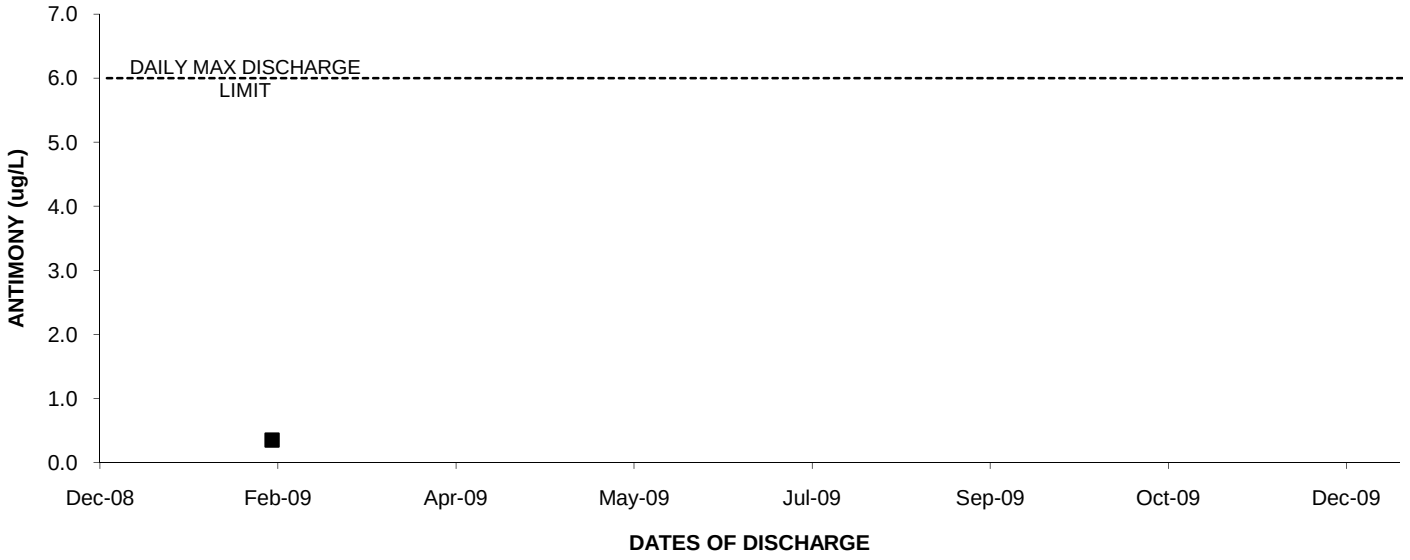
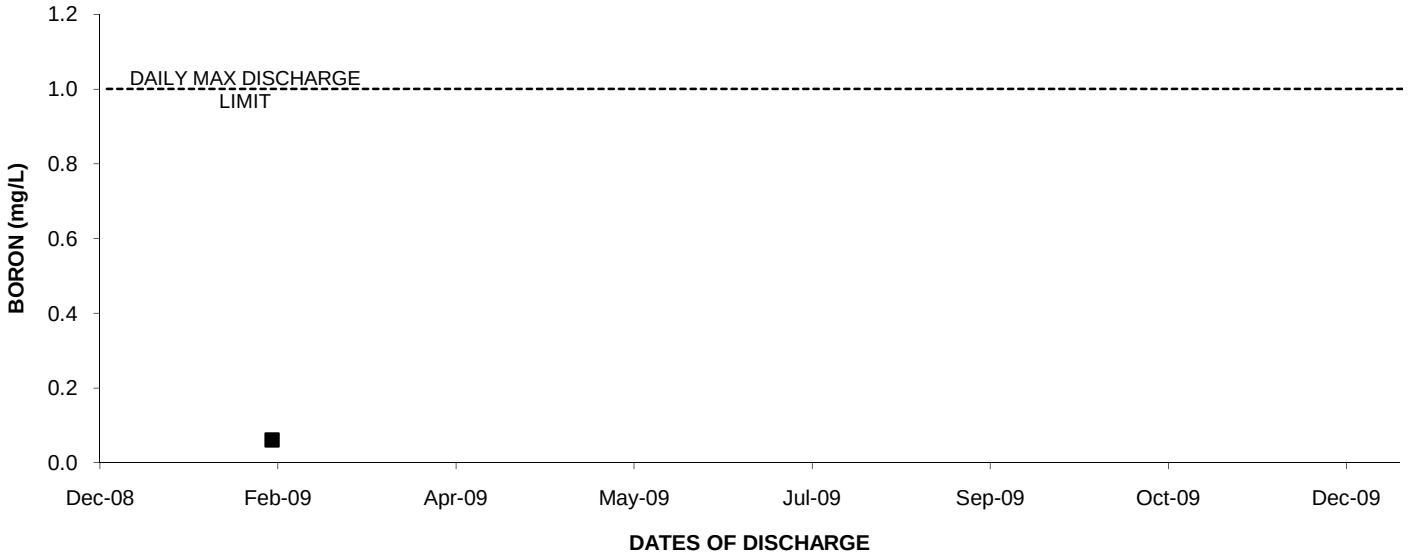
2009: OUTFALL 008 ANTIMONY



2009: OUTFALL 008 BORON



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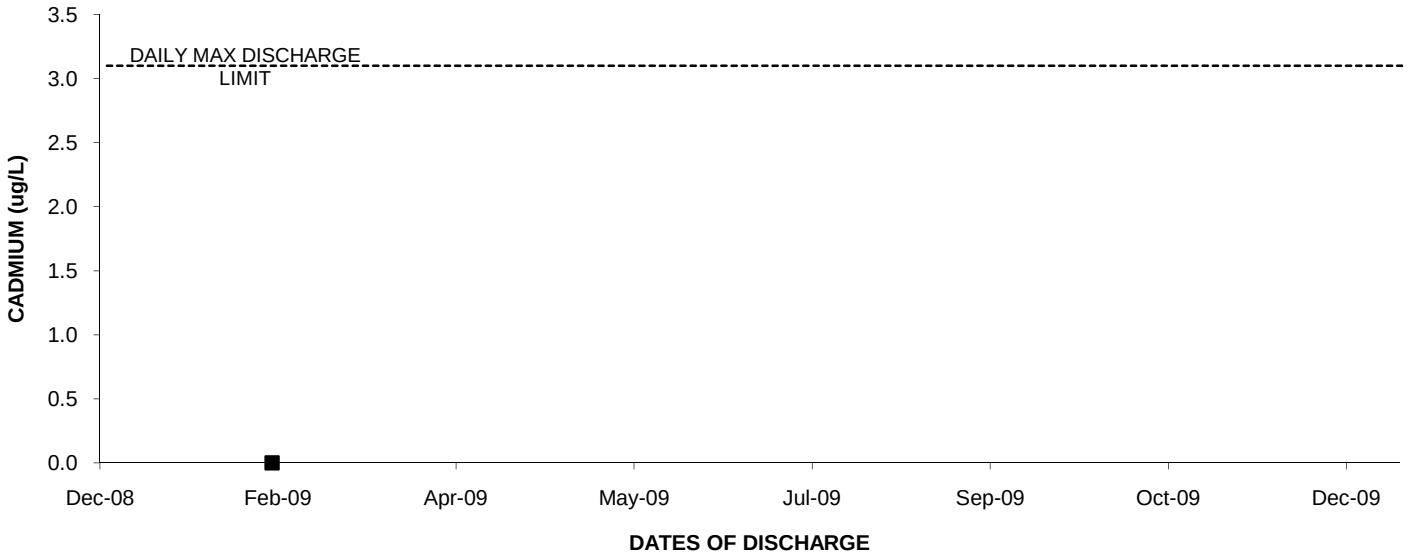

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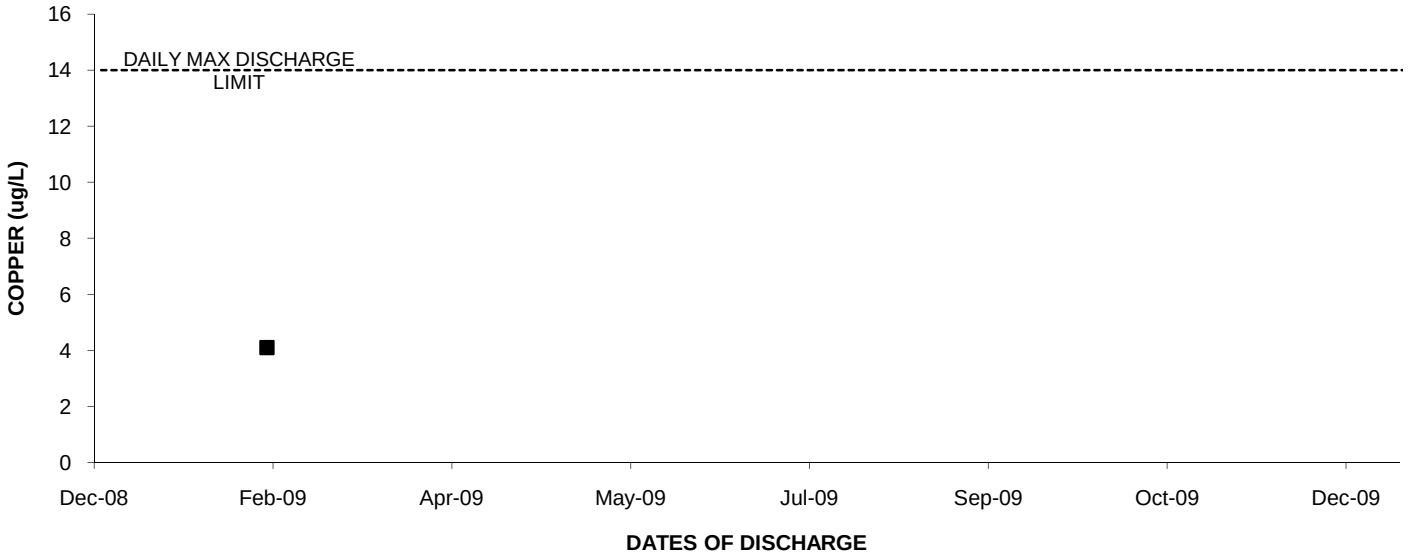

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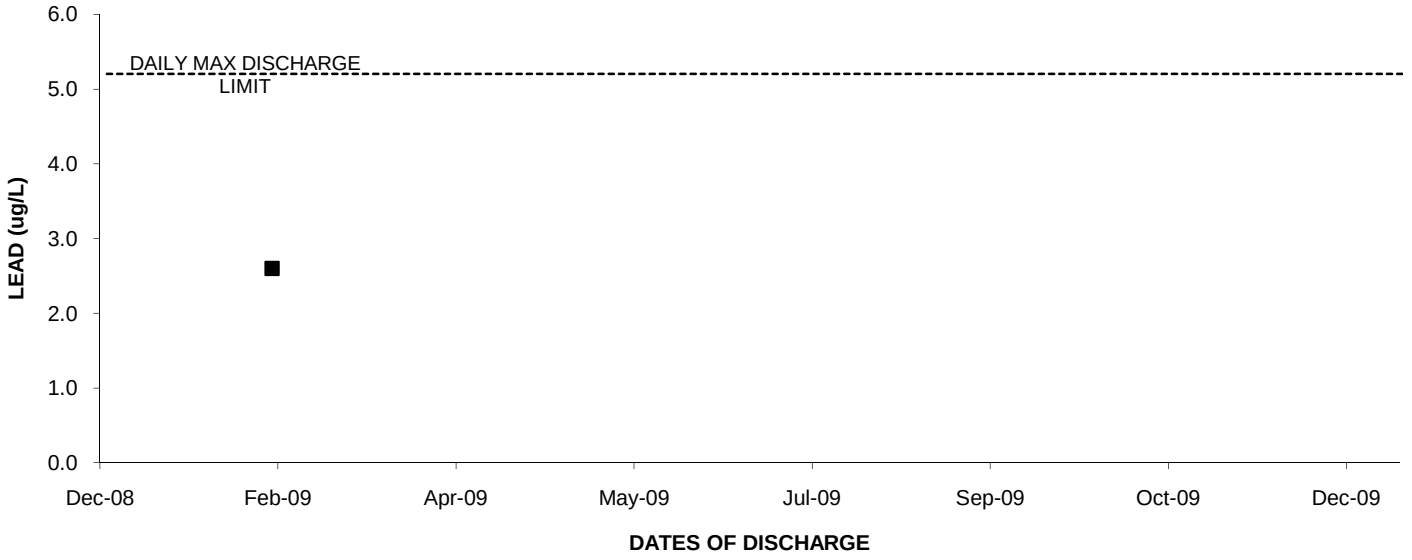
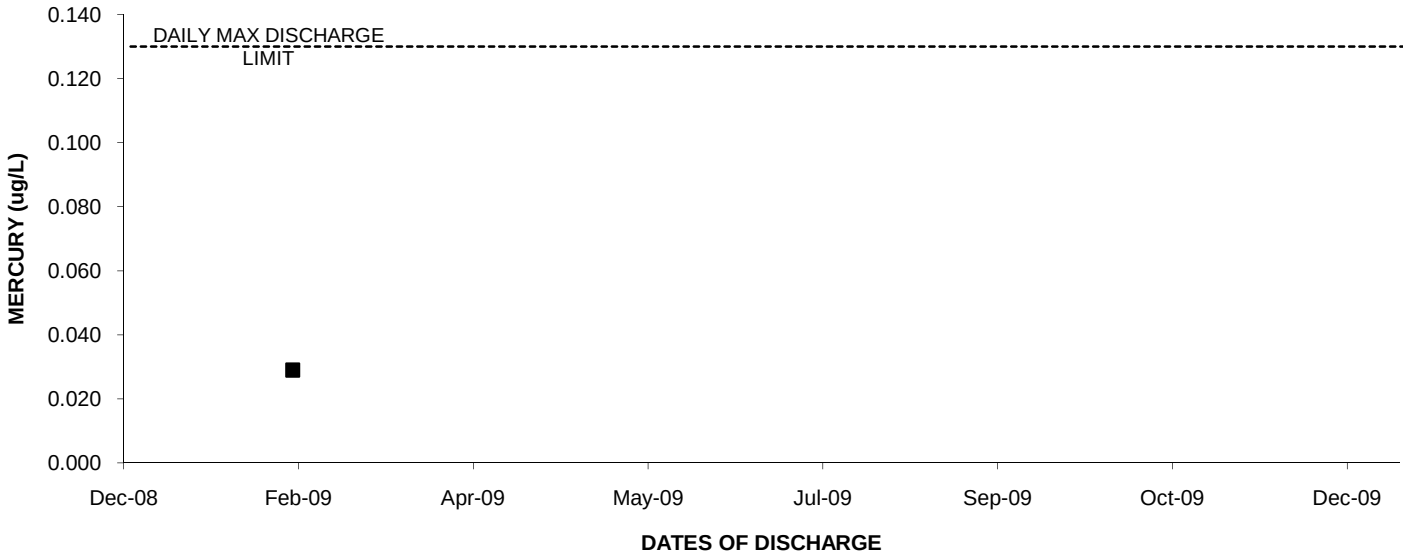
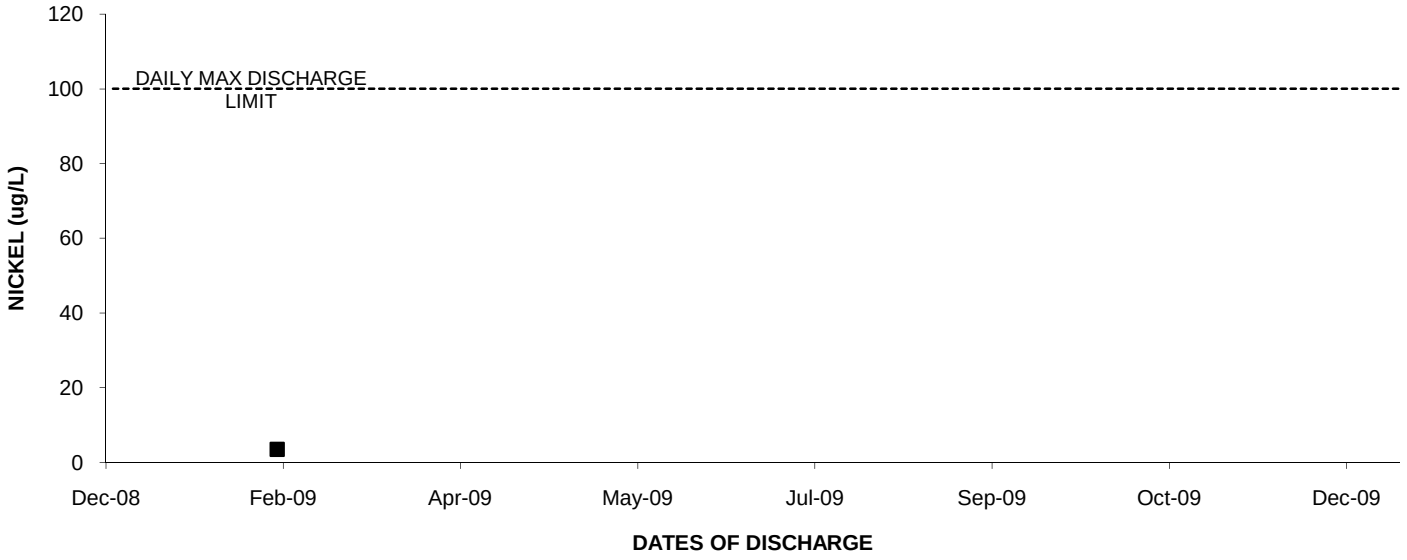


2009: OUTFALL 008 MERCURY



2009: OUTFALL 008 NICKEL



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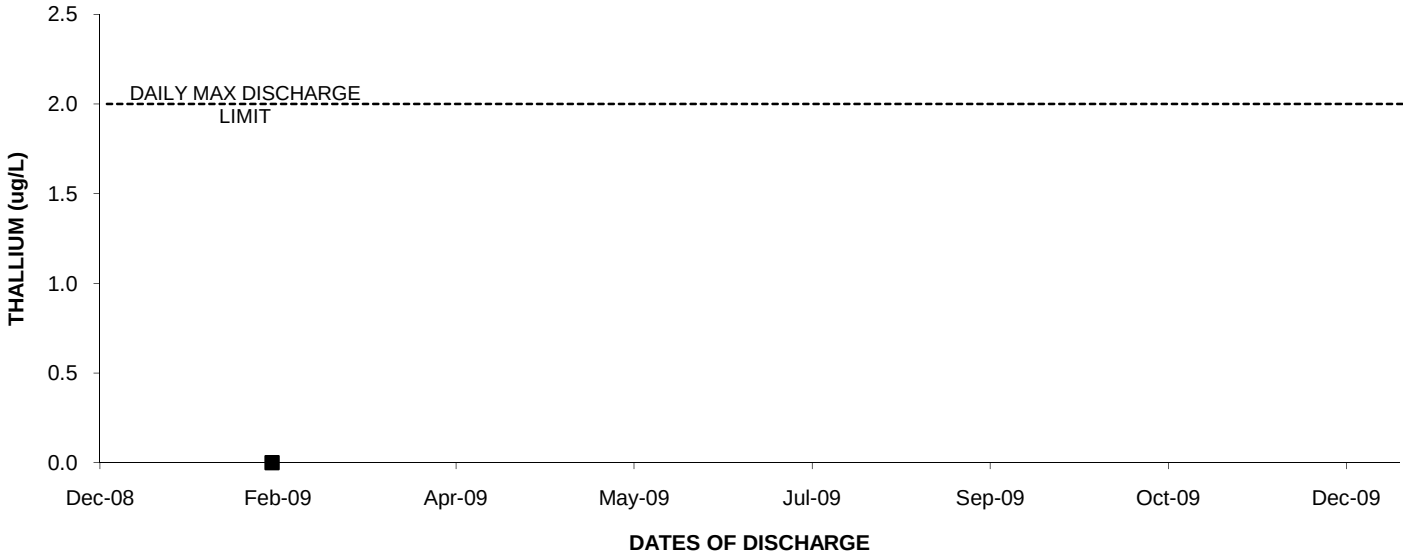
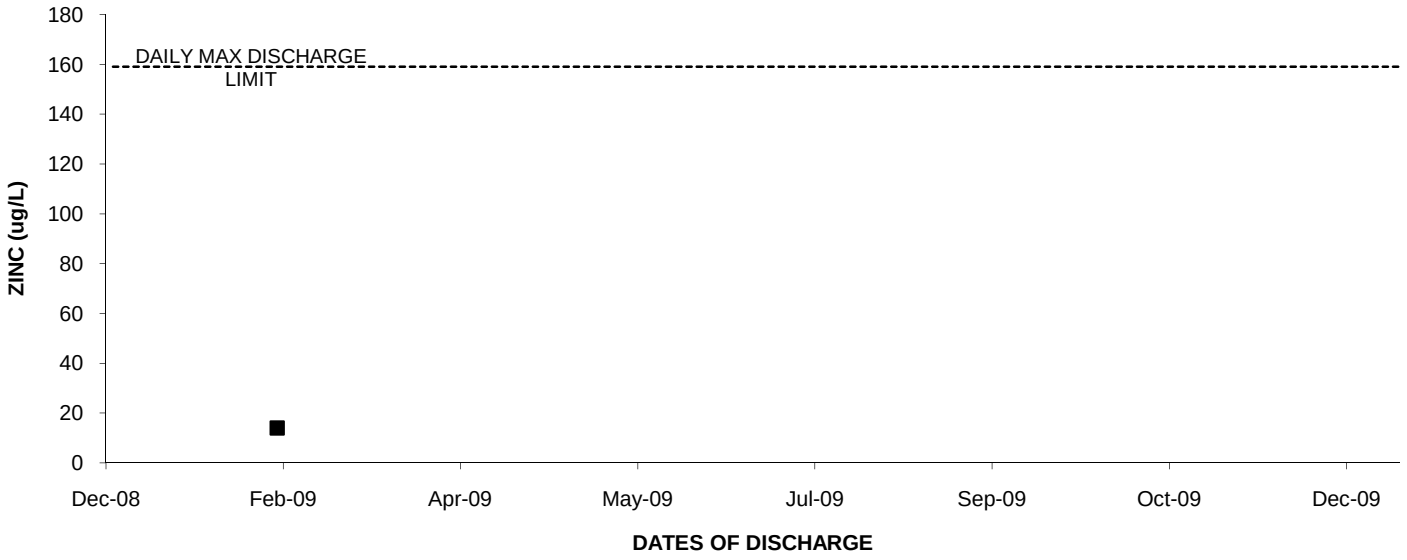
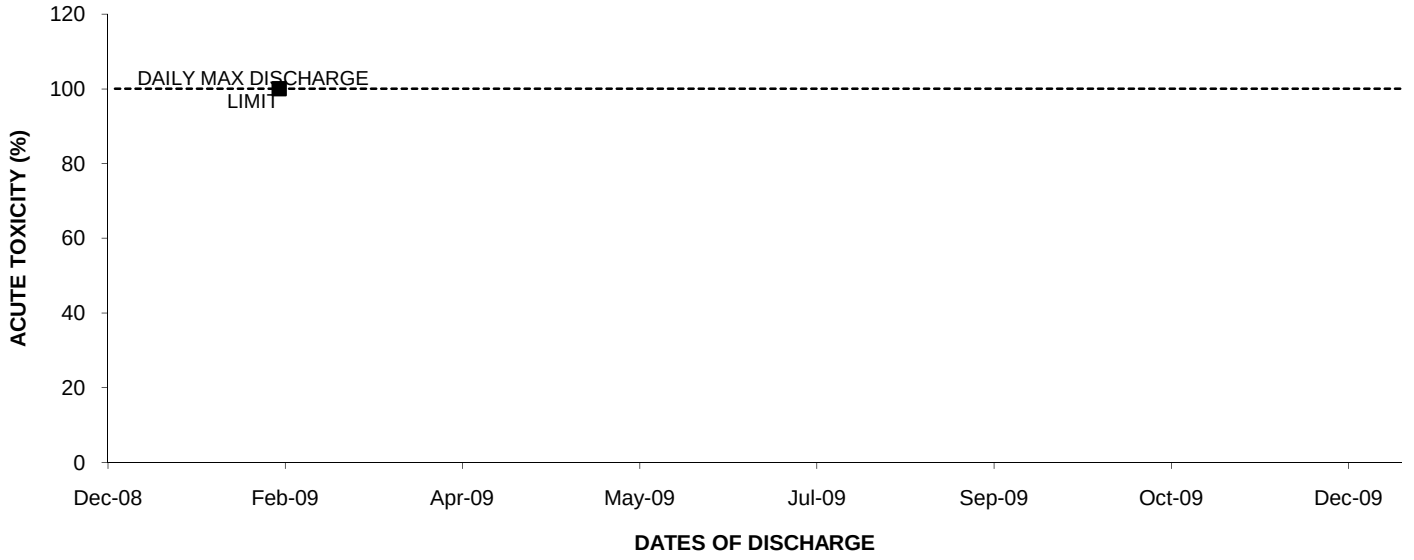


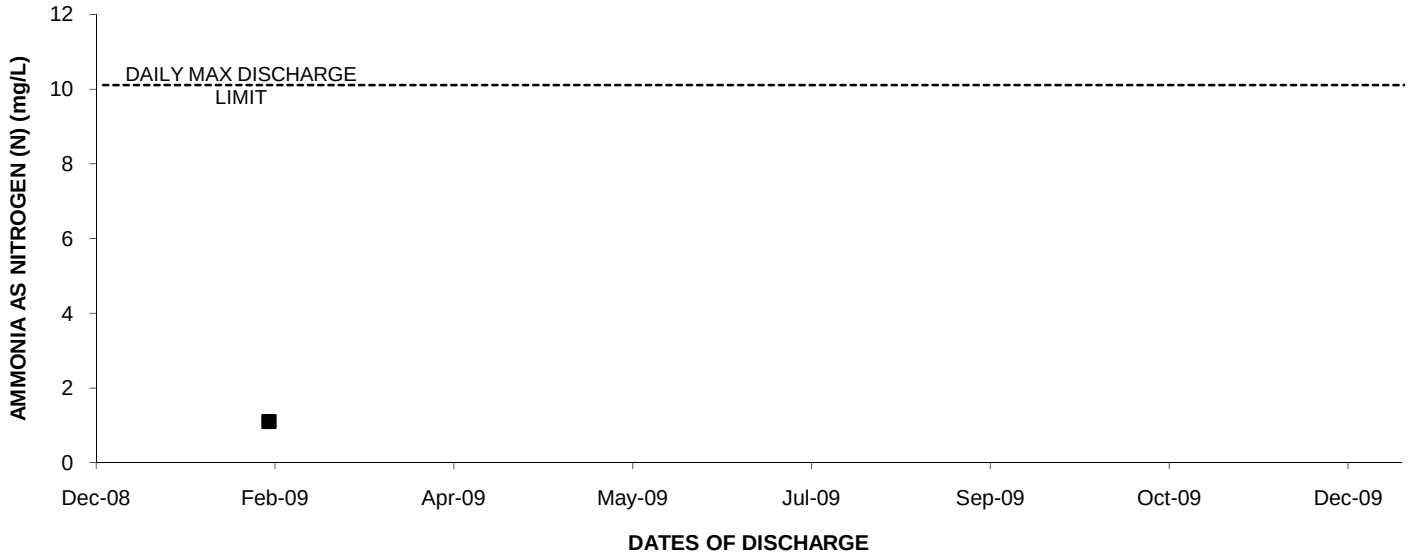
2009: OUTFALL 008 ZINC



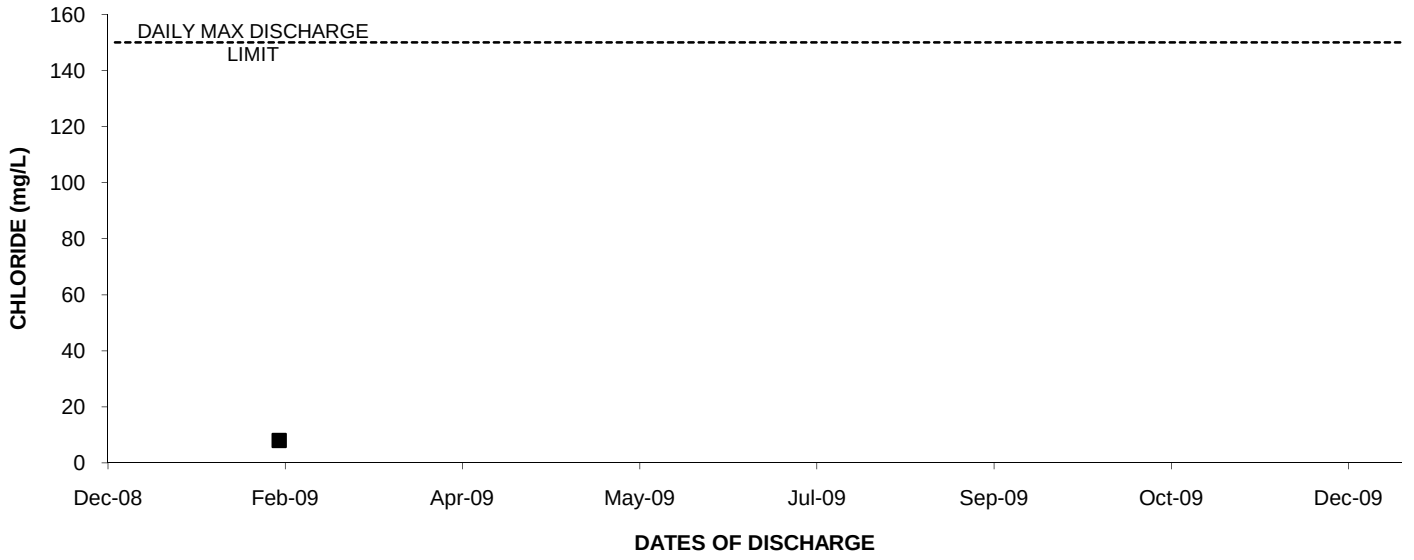
2009: OUTFALL 008 ACUTE TOXICITY



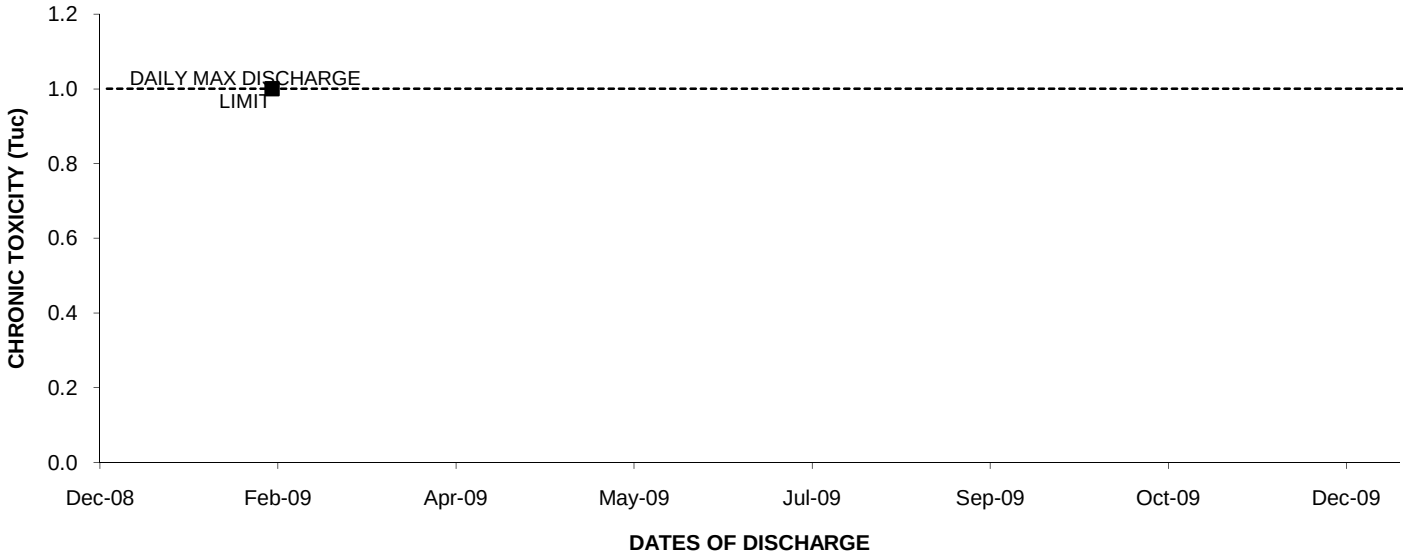
2009: OUTFALL 008 AMMONIA AS NITROGEN (N)



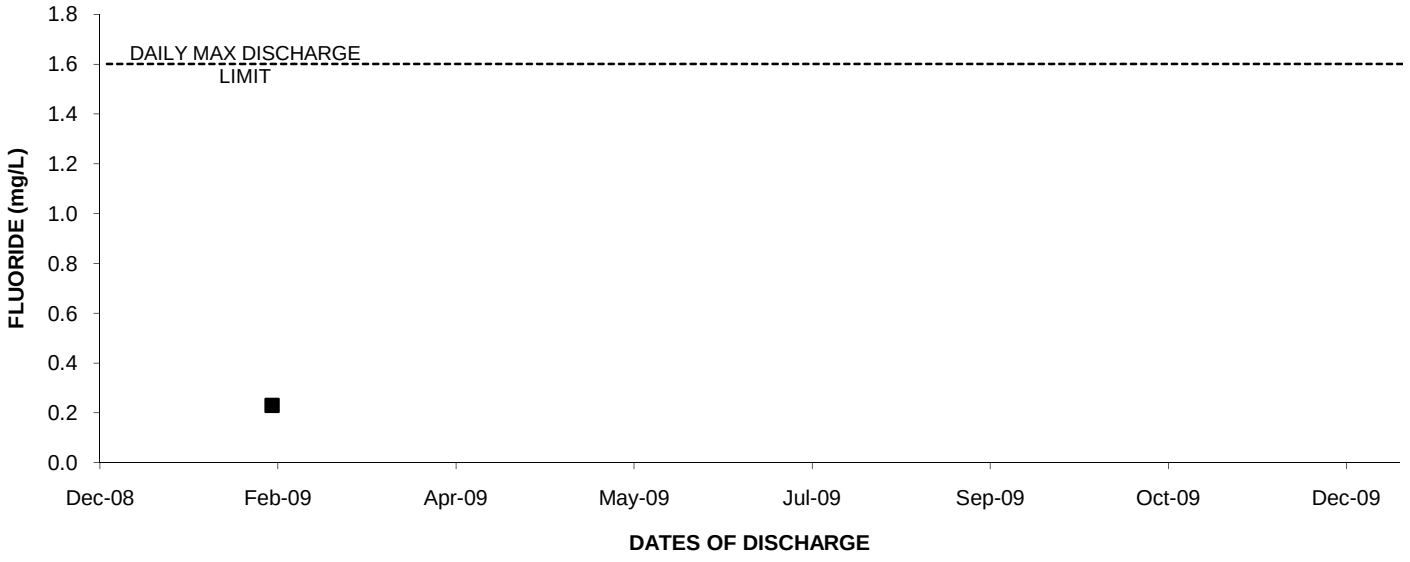
2009: OUTFALL 008 CHLORIDE



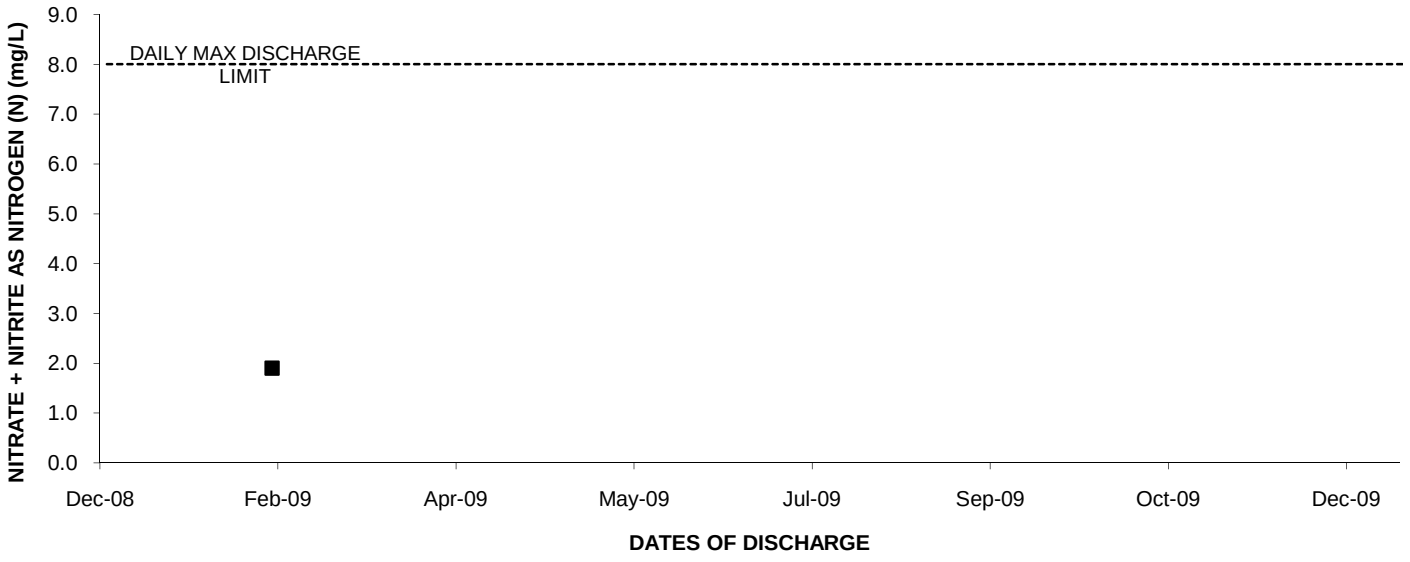
2009: OUTFALL 008 CHRONIC TOXICITY



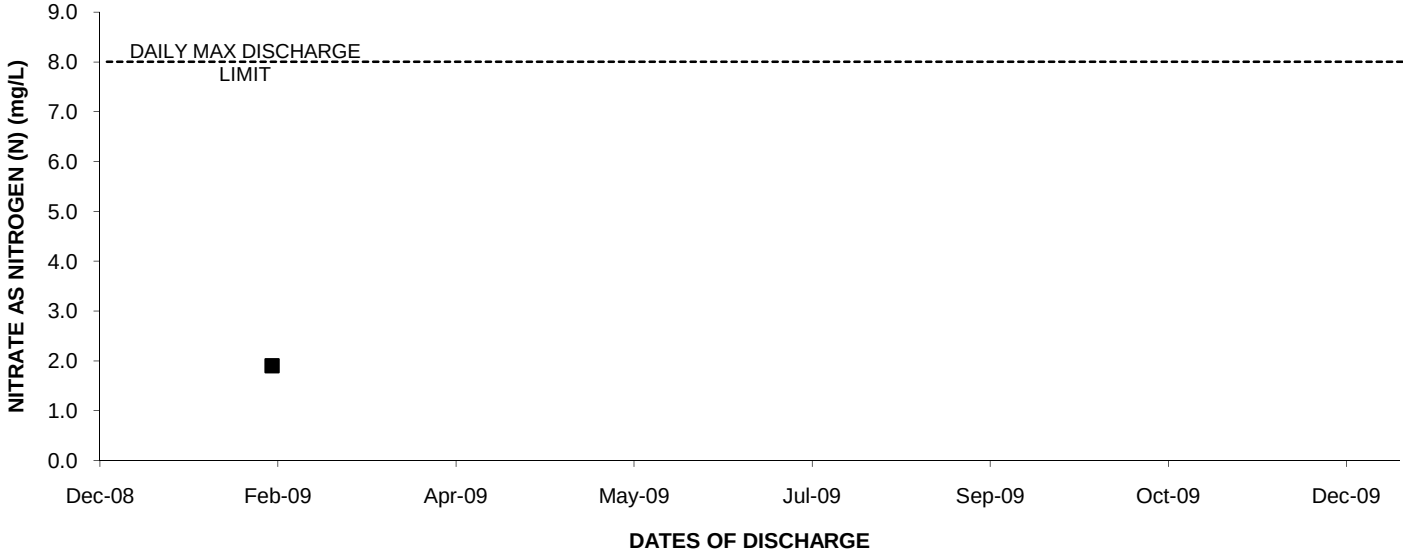
2009: OUTFALL 008 FLUORIDE



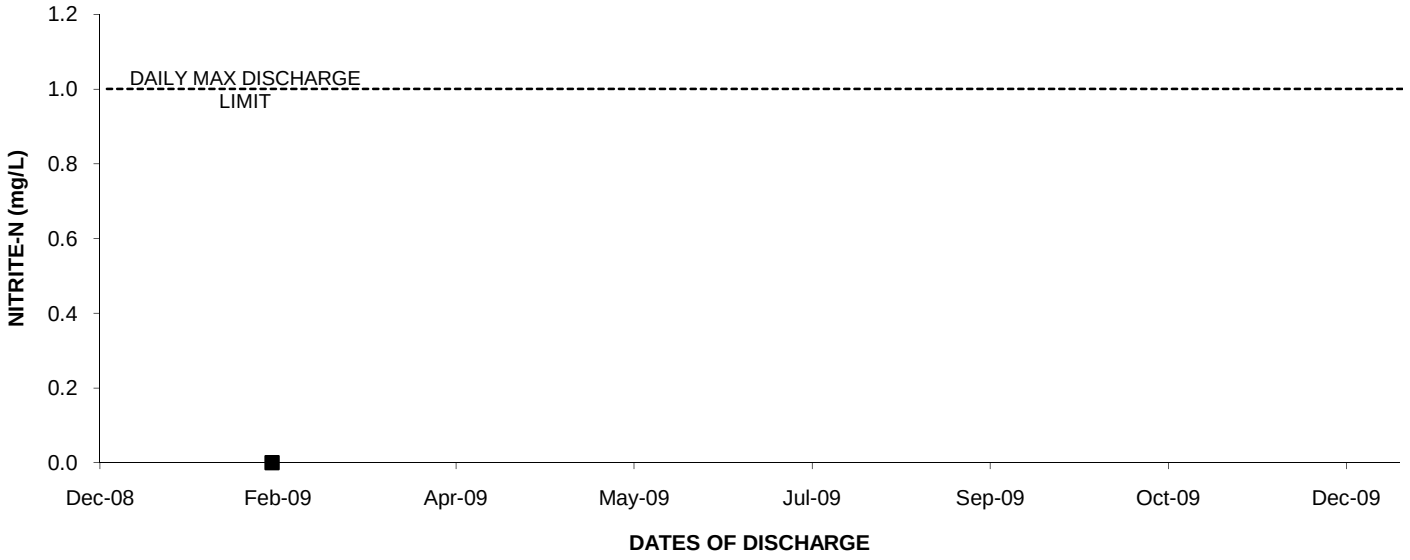
2009: OUTFALL 008 NITRATE + NITRITE AS NITROGEN (N)



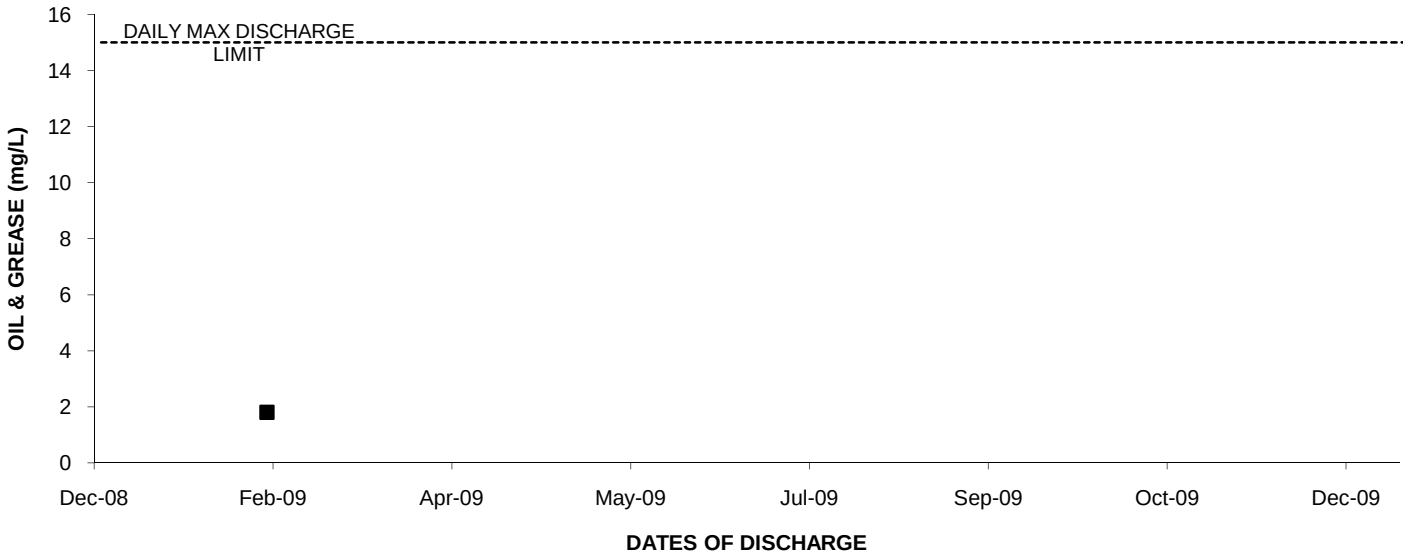
2009: OUTFALL 008 NITRATE AS NITROGEN (N)



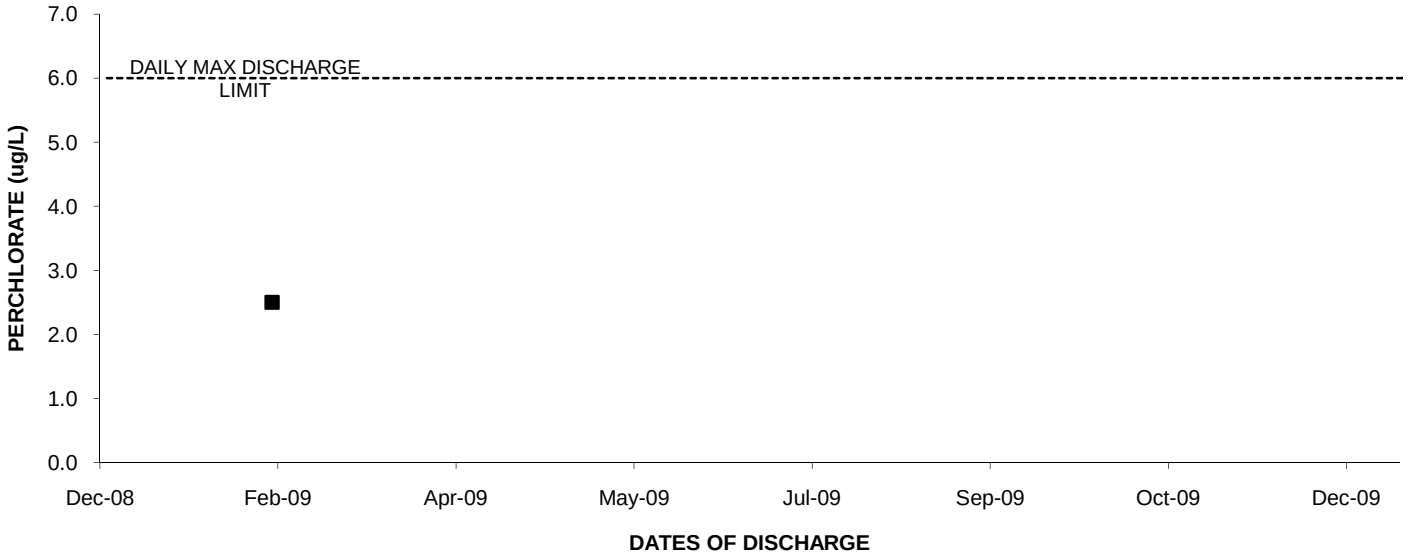
2009: OUTFALL 008 NITRITE-N



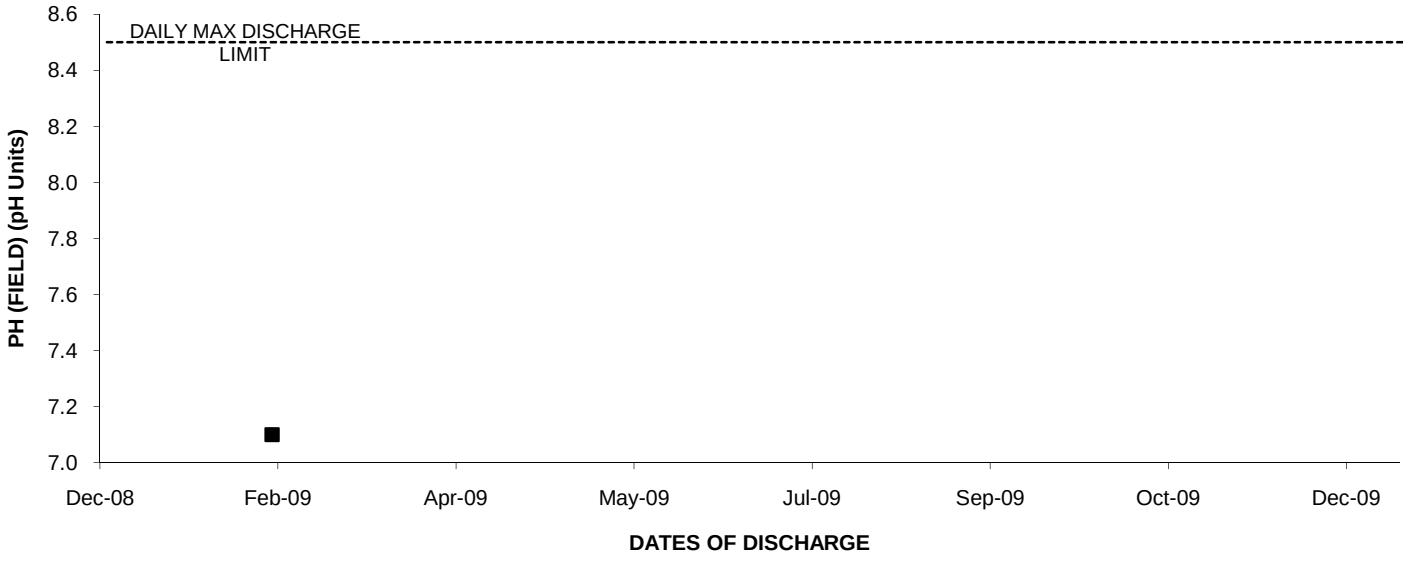
2009: OUTFALL 008 OIL & GREASE



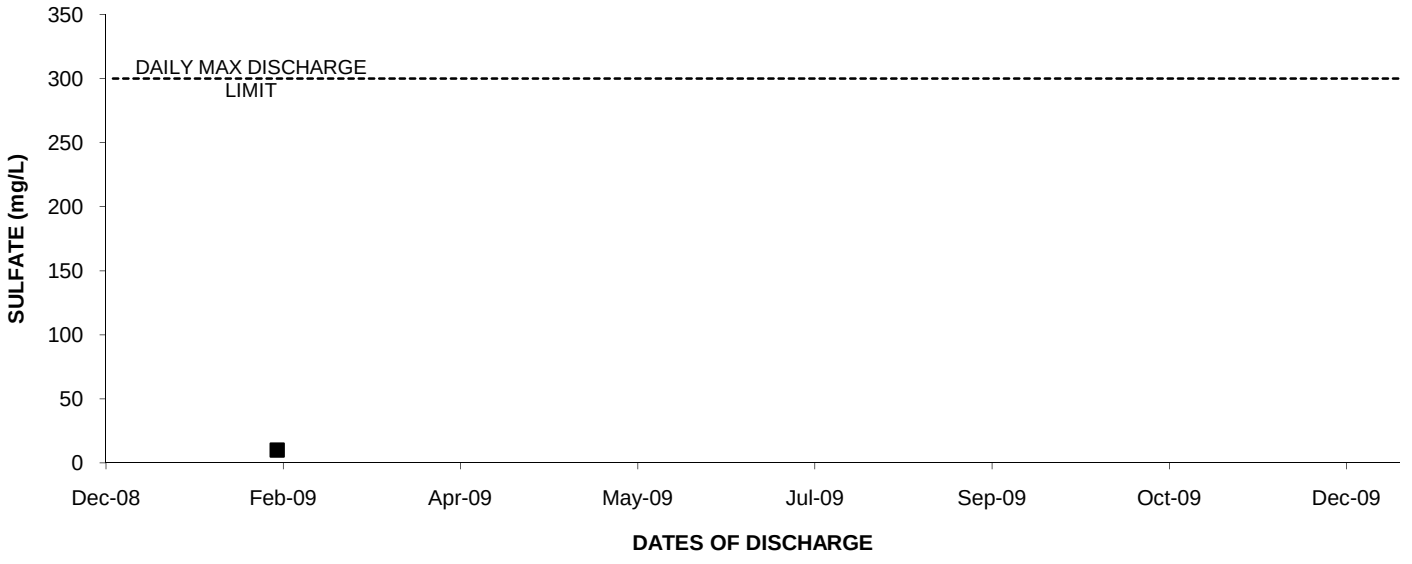
2009: OUTFALL 008 PERCHLORATE



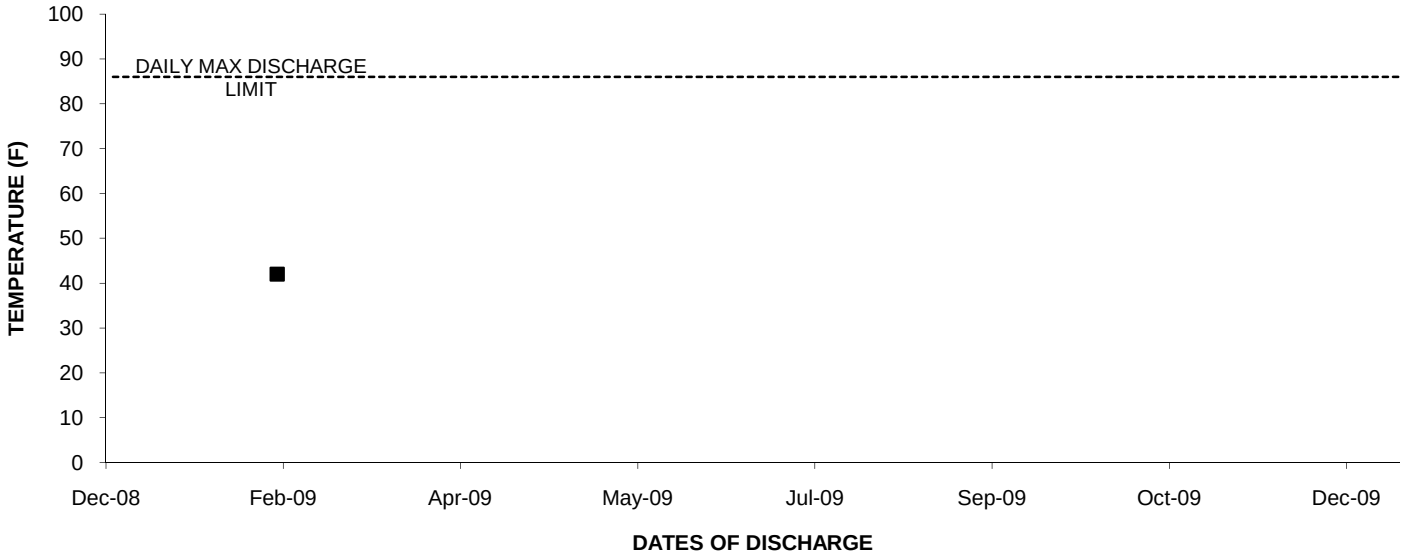
2009: OUTFALL 008 PH (FIELD)



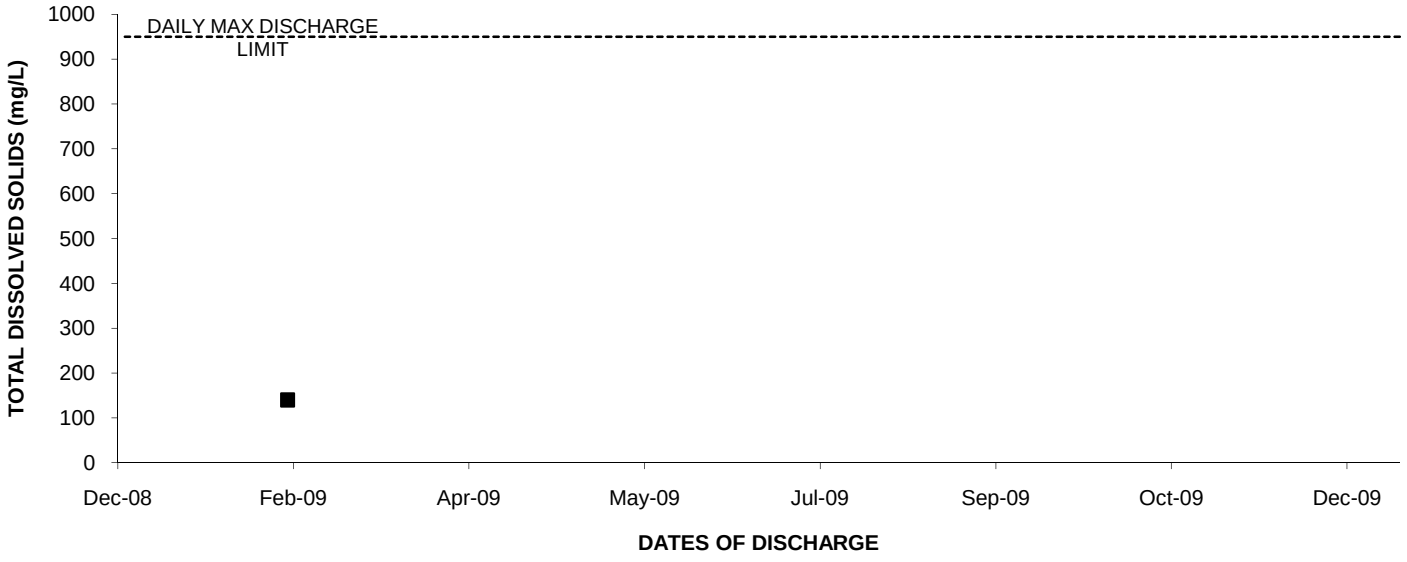
2009: OUTFALL 008 SULFATE



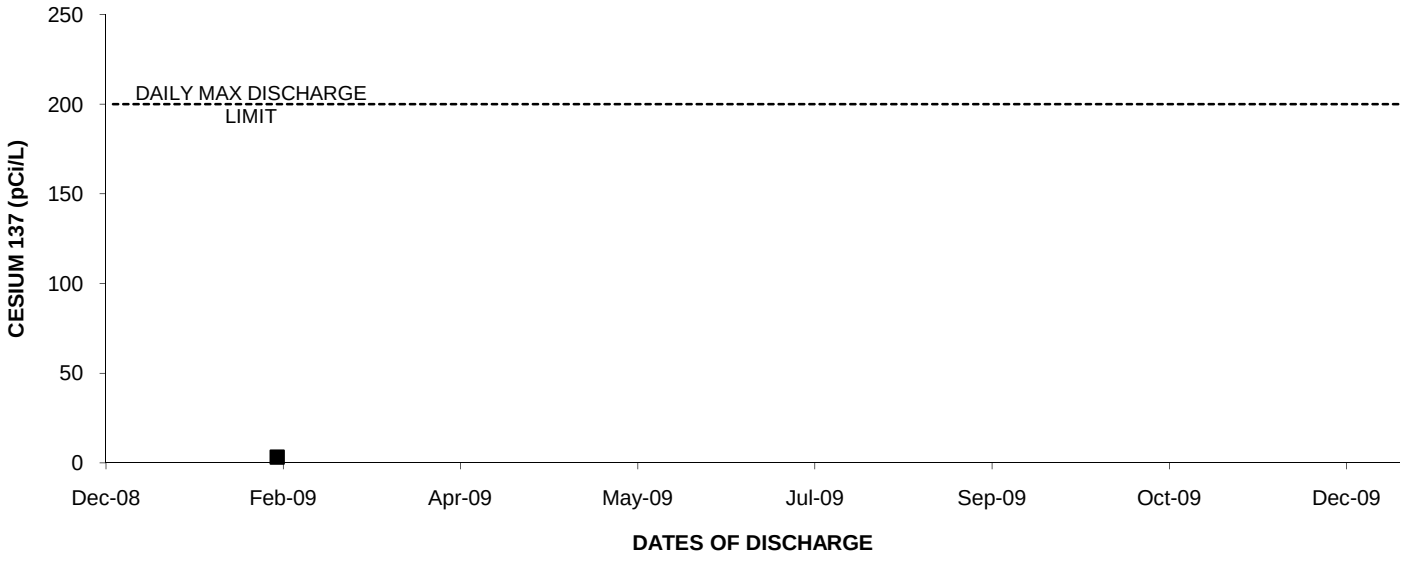
2009: OUTFALL 008 TEMPERATURE



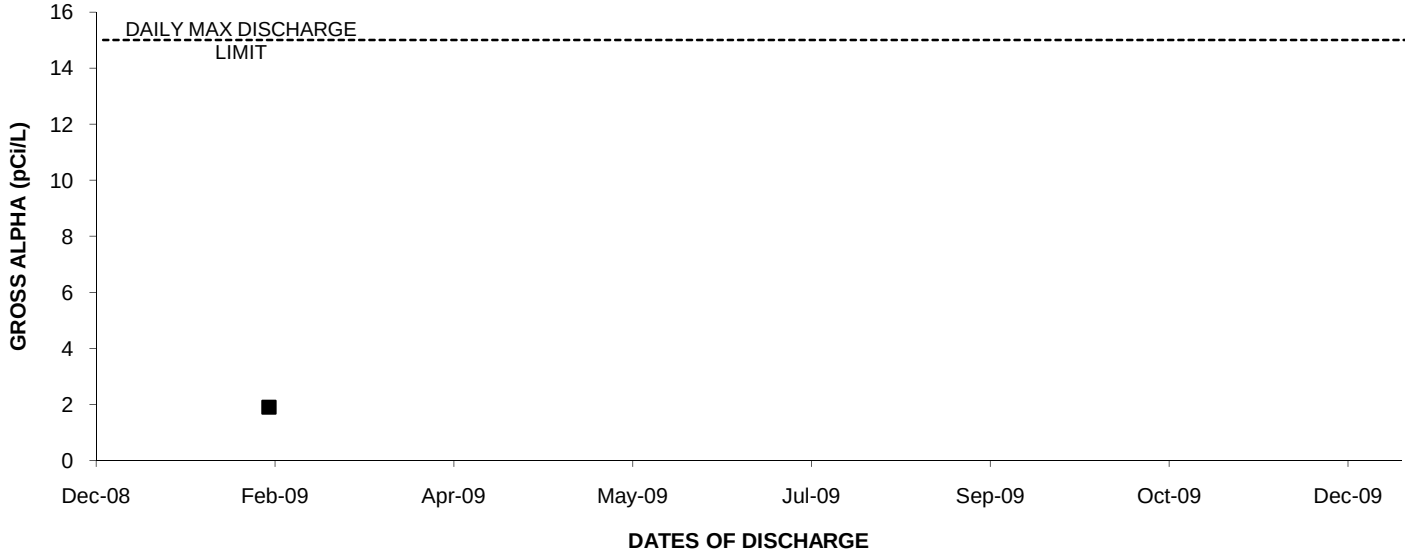
2009: OUTFALL 008 TOTAL DISSOLVED SOLIDS



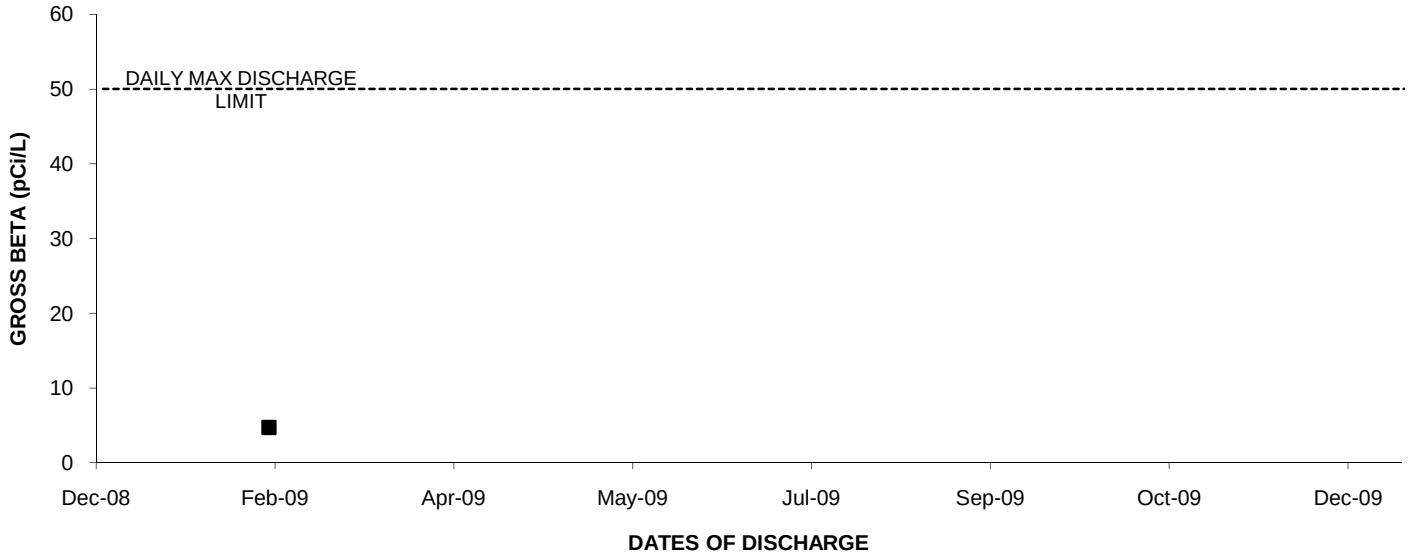
2009: OUTFALL 008 CESIUM 137



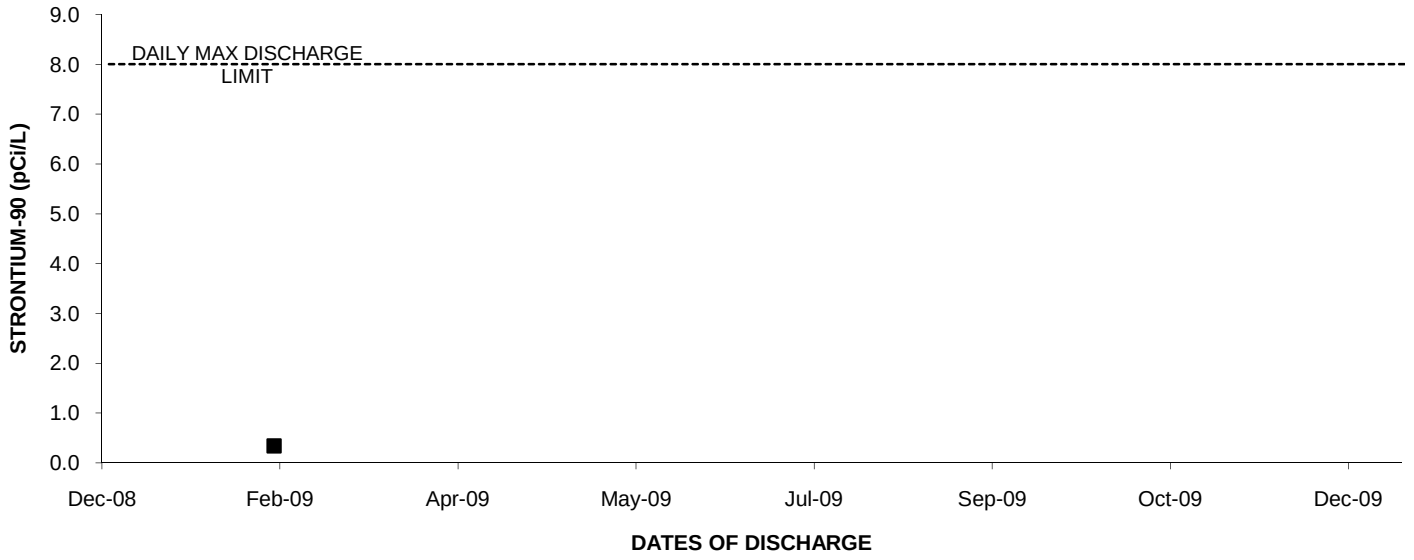
2009: OUTFALL 008 GROSS ALPHA



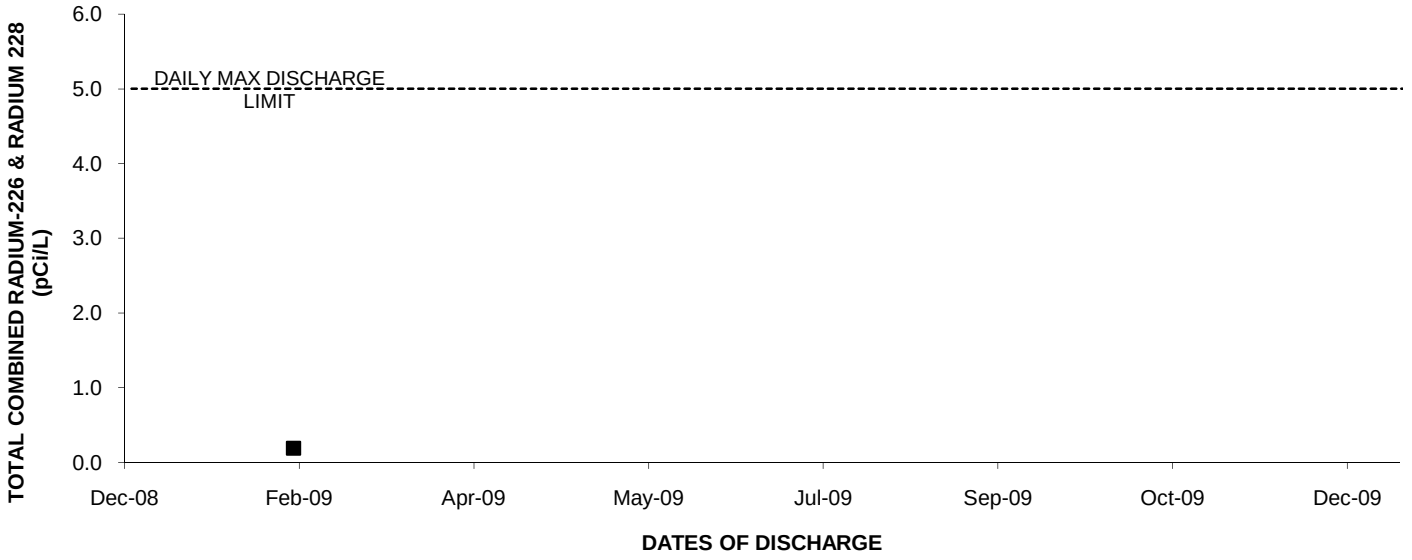
2009: OUTFALL 008 GROSS BETA



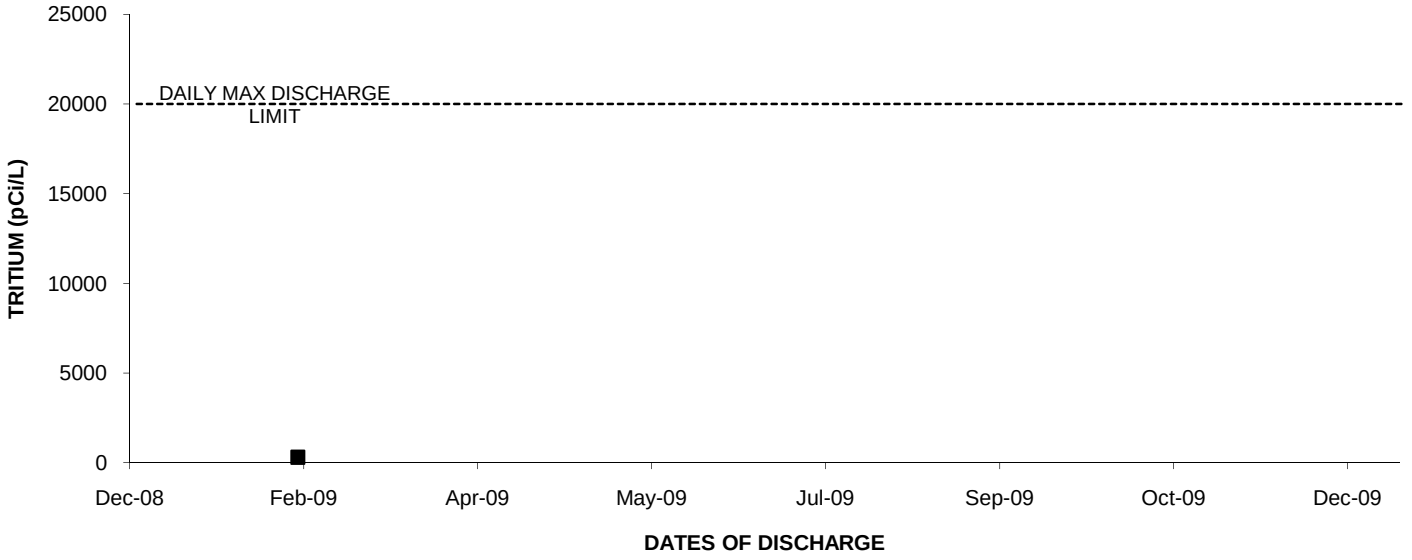
2009: OUTFALL 008 STRONTIUM-90



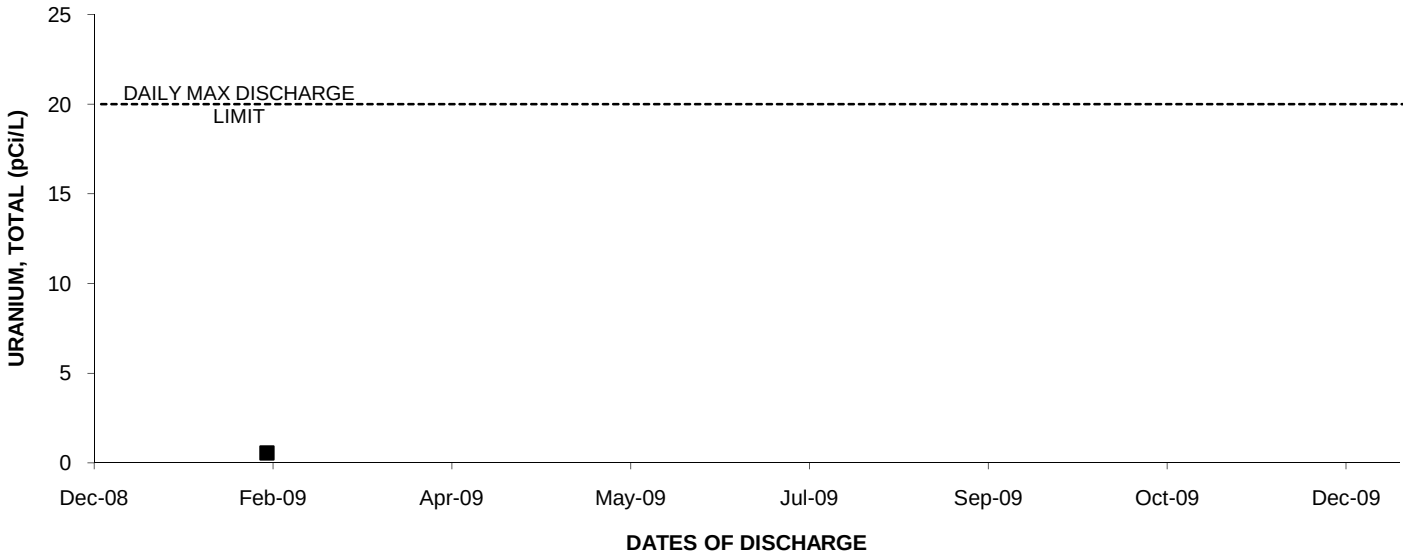
2009: OUTFALL 008 TOTAL COMBINED RADIUM-226 & RADIUM 228

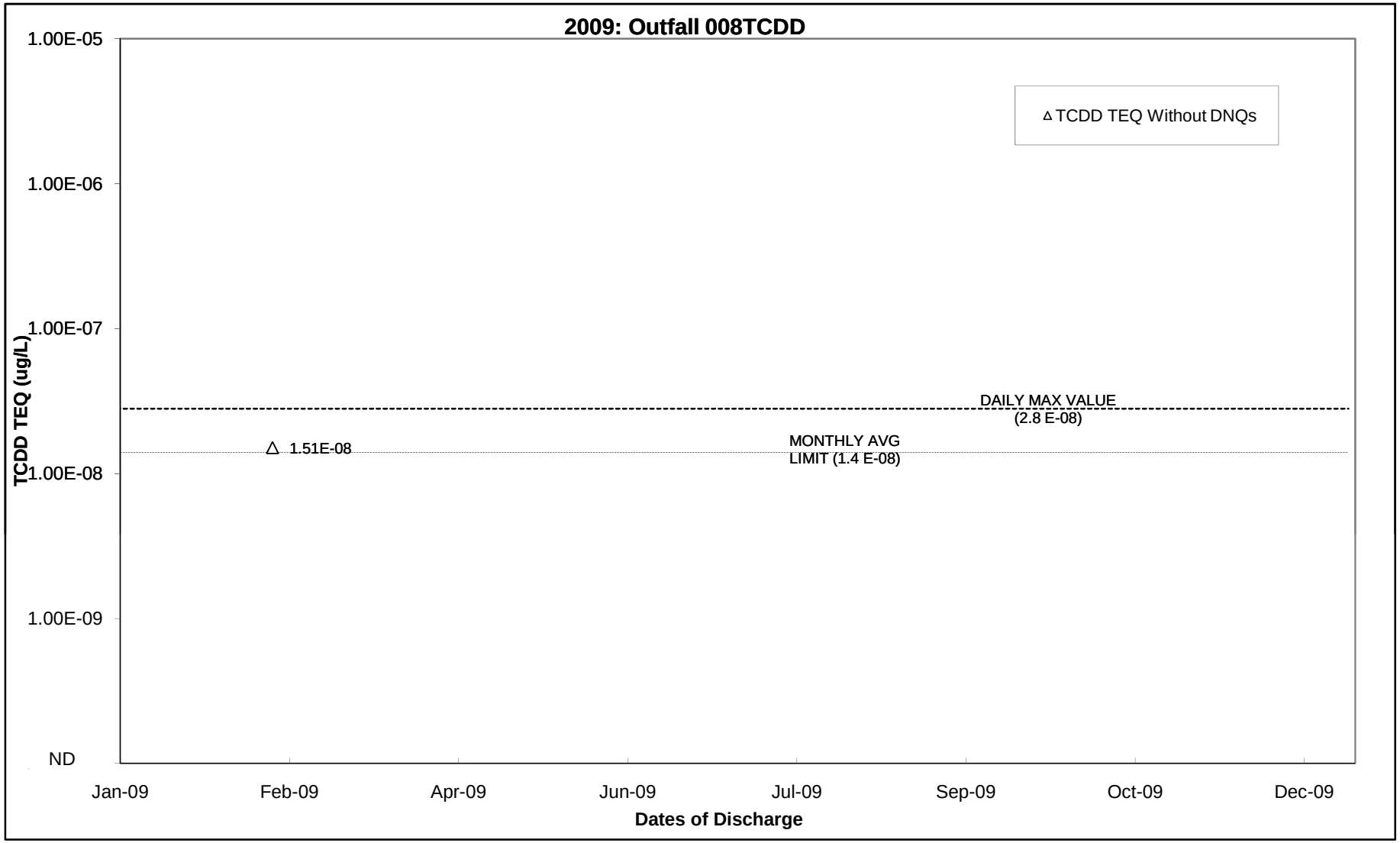


2009: OUTFALL 008 TRITIUM



2009: OUTFALL 008 URANIUM, TOTAL




2009: Outfall 008TCDD
1.00E-05
1.00E-06
1.00E-07
1.00E-08
1.00E-09
ND
TCDD TEQ (ug/L)
TCDD TEQ Without DNQs
DAILY MAX VALUE
(2.8 E-08)
1.51E-08
MONTHLY AVG
LIMIT (1.4 E-08)
Jan-09
Feb-09
Apr-09
Jun-09
Jul-09
Sep-09
Oct-09
Dec-09
Dates of Discharge