

TABLE 1: INTERCEPTOR WELL FIELD DISCHARGE RATES

Nevada Environmental Response Trust Site

Henderson, Nevada

WELL ID	July 2009 - June 2010 (gpm)	July 2010 - June 2011 (gpm)	July 2011 - June 2012 (gpm)	July 2012- June 2013 (gpm)	July - December 2013 (gpm)	Well Screened In
I-AR	1.1	0.8	1.1	1.4	1.0	Qal/UMCf
I-B	2.3	2.5	1.5	1.6	1.4	Qal/UMCf
I-C	5.3	4.1	5.9	5.1	5.0	Qal/UMCf
I-D	3.1	4.2	1.3	1.7	1.7	Qal/UMCf
I-E	1.5	1.5	1.3	2.1	2.8	Qal/UMCf
I-F	6.3	4.1	5.7	4.4	4.7	Qal/UMCf
I-G	0.2	0.3	0.1	0.5	1.0	Qal/UMCf
I-H	0.9	0.9	0.9	1.0	0.8	Qal/UMCf
I-I	5.0	5.1	5.0	4.7	4.9	Qal/UMCf
I-J	7.4	7.3	6.3	6.0	6.7	Qal/UMCf
I-K	4.2	4.0	3.9	3.3	3.9	Qal/UMCf
I-L	1.6	1.5	1.9	1.9	1.3	Qal/UMCf
I-M	2.7	2.2	2.6	4.0	2.1	Qal/UMCf
I-N	3.7	3.7	3.1	2.7	1.1	Qal/UMCf
I-O	2.8	2.8	1.7	2.7	1.4	Qal/UMCf
I-P	3.8	3.4	2.1	3.7	5.6	Qal/UMCf
I-Q	0.4	0.6	0.3	0.2	0.4	Qal/UMCf
I-R	1.3	1.2	2.5	2.9	2.8	Qal/UMCf
I-S	5.9	6.1	5.2	4.0	3.9	Qal/UMCf
I-T	0.5	0.4	0.4	0.4	0.4	Qal/UMCf
I-U	0.9	0.8	0.7	0.8	1.0	Qal/UMCf
I-V	4.3	4.0	4.8	5.4	5.6	Qal/UMCf
I-Z	7.5	7.3	6.7	8.0	7.8	Qal/UMCf
TOTAL	72.8	68.9	65.1	68.6	67.1	

Notes:

gpm = gallons per minute

Qal = Quaternary Alluvium

UMCf = Upper Muddy Creek Formation (first fine-grained unit)

TABLE 2: ATHENS ROAD WELL FIELD DISCHARGE RATES
Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID	July 2009 - June 2010 (gpm)	July 2010 - June 2011 (gpm)	July 2011 - June 2012 (gpm)	July 2012 - June 2013 (gpm)	July - December 2013 (gpm)	Well Screened In
ART-1/1A	6.3	16.5	14.1	22.0	23.5	Qal
ART-2/2A	64.0	62.2	62.4	62.2	61.5	Qal
ART-3/3A	39.2	46.8	46.8	45.8	47.8	Qal
ART-4/4A	5.6	7.9	8.5	8.3	9.5	Qal
ART-7/7A	24.9	31.2	31.2	31.1	30.8	Qal
ART-8/8A	60.3	61.7	62.7	62.2	57.8	Qal
ART-9/ART-6 ¹	45.6	46.8	46.5e ²	49.1	47.4	Qal
TOTAL	245.9	273.1	272.2	280.7	278.2	

Notes:

ART-1, 2, 3, 4, 7 and 8 have adjacent recovery wells - "Buddy Wells" - designated by the letter "A".

¹ Starting in September 2006, ART-9 replaced the pumping of ART-6/6A due to the low water levels in that well pair. The electrical and plumbing system from ART-6A was removed and is being used in ART-9.

² The flow meter for well ART-9 malfunctioned for several days in April and May 2012. For these days, an average flow rate for well ART-9 was used to calculate the annual average (from July 2011 to June 2012).

e = estimate; due to a malfunctioning flow meter, the flow rate for this well was manually adjusted to calculate an average flow rate.

gpm = gallons per minute

Qal = Quaternary Alluvium

TABLE 3: SEEP WELL FIELD DISCHARGE RATES

Nevada Environmental Response Trust Site

Henderson, Nevada

Well ID	July 2009 - June 2010 (gpm)	July 2010 - June 2011 (gpm)	July 2011 - June 2012 (gpm)	July 2012 - June 2013 (gpm)	July - December 2013 (gpm)	Well Screened In
PC-116R	183.6	132.4	124.8	124.5	123.7	Qal
PC-99R2/R3 ¹	89.8	63.9	61.6	54.4	60.0	Qal
PC-115R	70.3	82.8	91.4	95.7	86.6	Qal
PC-117	81.1	99.0	92.5	124.6	101.3	Qal
PC-118	71.0	70.7	76.3	93.3	72.0	Qal
PC-119	54.0	62.8	65.1	87.6	65.5	Qal
PC-120 ²	2.0	3.2	0.0	0.1	0.9	Qal
PC-121 ²	2.6	1.0	0.0	0.1	0.0	Qal
PC-133	6.2	5.0	3.1	4.3e	4.3	Qal
TOTAL	560.5	520.9	514.7	584.6	514.3	

Notes:

¹ Wells PC-99R2 and PC-99R3 are connected and operate as a single pumping well.

² Wells PC-120 and PC-121 have not been continuously pumped since October 2005 due to their low perchlorate removal efficiencies and because they are located at the end of the well line in the shallowest portion of the subsurface alluvial channel.

gpm = gallons per minute

Qal = Quaternary Alluvium

e = estimate; due to a malfunctioning flow meter, the flow rate for this well was manually adjusted to calculate an average flow rate.

TABLE 4: MONTHLY WELL FIELD EXTRACTION RATES, JULY - DECEMBER 2013Nevada Environmental Response Trust Site
Henderson, Nevada

Well	July 2013 ² (gpm)	August 2013 ² (gpm)	September 2013 (gpm)	October 2013 (gpm)	November 2013 ³ (gpm)	December 2013 (gpm)
Interceptor Well Field (IWF)						
I-A-R	0.9	0.8	0.6	0.4	1.6	1.6
I-B	1.4	1.5	1.7	1.7	0.8	1.6
I-C	4.4	3.4	5.3	5.6	5.4	5.9
I-D	1.8	1.7	1.6	1.6	1.4	1.9
I-E	2.6	2.7	2.8	2.8	2.7	2.8
I-F	4.7	4.7	4.7	4.7	4.5	4.7
I-G	0.9	0.8	0.9	1.1	1.1	0.9
I-H	1.0	1.0	0.8	0.6	0.6	0.6
I-I	4.8	4.9	4.9	4.9	4.8	4.9
I-J	6.5	6.5	6.6	6.8	6.7	6.9
I-K	3.9	3.8	4.0	4.0	3.9	4.0
I-L	1.4	1.4	1.3	1.4	1.3	1.2
I-M	2.2	2.2	2.2	2.1	2.0	2.1
I-N	1.2	1.1	1.1	1.2	1.0	1.0
I-O	2.9	2.8	1.1	0.4	0.5	0.6
I-P	5.1	4.8	5.5	6.2	6.0	6.1
I-Q	0.2	0.2	0.2	0.1	0.8	1.1
I-R	2.5	2.6	2.7	2.2	2.8	3.7
I-S	3.8	3.9	3.9	3.9	3.8	4.3
I-T	0.3	0.5	0.4	0.3	0.2	0.5
I-U	0.6	1.0	1.0	1.1	1.1	1.1
I-V	5.6	5.6	5.6	5.6	5.5	5.7
I-Z	7.6	7.7	7.9	8.0	7.8	7.9
Total for IWF:	66.2	65.6	66.7	66.7	66.2	71.3
Athens Road Well Field (AWF)						
ART-1/1A	23.5	23.5	23.4	23.6	23.2	23.4
ART-2/2A	60.8	61.9	62.4	61.7	59.7	62.3
ART-3/3A	45.9	47.6	48.0	48.6	47.5	49.2
ART-4/4A	7.8	8.3	9.2	9.9e	10.3e	11.6e
ART-7/7A	30.5	31.0	53.0	30.9	29.9	45.3
ART-8/8A	60.8	56.6	31.2	60.8	59.7	31.1
ART-9/ART-6	45.5	48.2	46.8	48.3	43.9	62.3
Total for AWF:	274.8	277.1	274.0	283.8	274.2	285.3
Seep Well Field (SWF)						
PC-116R	123.2	124.7	124.9	124.4	120.7	124.6
PC-99R2/R3	55.9	57.2	62.4	62.1	60.3	62.1
PC-115R	96.0	89.9	96.2	94.8	76.9 ⁴	65.9 ⁴
PC-117	123.3	113.6	93.7	93.3	90.6	93.5
PC-118	92.7	84.3	65.0	61.3	63.6	64.9
PC-119	74.7	70.8	62.5	62.2	60.3	62.3
PC-120 ¹	0.0	0.0	0.0	5.0	0.0	0.0
PC-121 ¹	0.0	0.0	0.0	0.0	0.0	0.0
PC-133	4.4	4.7	4.2	4.3	4.2	4.2
Total for SWF:	570.2	545.1	508.9	507.4	476.6	477.6

Notes:

gpm = gallons per minute

e = estimate; due to malfunctioning flow meter or other issues, the flow rate for this well was manually adjusted to calculate an average flow rate based on field observations.

¹ Wells PC-120 and PC-121 have not been continuously pumped since October 2005 due to their low perchlorate removal efficiencies and because they are located at the end of the well line in the shallowest portion of the subsurface alluvial channel.

TABLE 4: MONTHLY WELL FIELD EXTRACTION RATES, JULY - DECEMBER 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

² Flow rates at the SWF and AWF were estimated by site personnel during portions of July and August 2013 after a communications line was damaged during an electrical storm.

³ A scheduled plant shutdown for approximately two days in November 2013 reduced average flow rates at the IWF, AWF, and SWF by approximately 3.5% during this month.

⁴ PC-115R began cycling on and off in November 2013. The issue was resolved by increasing the flow between Lift Station 1 and Lift Station 2.

TABLE 5: CHROMIUM TREATMENT DATA FOR GWTP, JULY - DECEMBER 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Month	Average Flow to GWTP (gpm)	Average Flow to GWTP (MM Gals)	Average Total Cr Inflow ¹ (mg/L)	Average Total Cr Outflow ² (mg/L)	Average Cr VI Outflow ² (mg/L)	Average Total Cr Removed (lbs/day)	Total Cr Removed (lbs/month)
July 2013	66.2	2.96	10.2	0.176	0.0002	8.10	251
August 2013	65.6	2.93	10.6	0.128	0.0001	8.33	258
September 2013	66.7	2.88	9.7	0.125	0.0002	7.81	234
October 2013	66.7	2.98	8.6	0.234	0.0004	6.90	214
November 2013	66.2	2.86	10.2	0.563	0.0002	8.14	244
December 2013	71.3	3.18	9.6	0.553	0.0001	8.24	255

Estimated Chromium Removed by GTWP: 1,460
Estimated Chromium Removed by FBRs: 40
Estimated Total Chromium Removed: 1,500

Notes:

Estimated removal rates are rounded to the nearest 10 pounds.

¹ Hexavalent chromium is used as a surrogate for total chromium in inflow calculations.

² Treated Outflow is directed to Bioplant Equalization Area and Carbon Treatment before being fed to the Fluidized Bed Reactors (FBRs).

Cr = chromium

Cr VI = hexavalent chromium

FBR = fluidized bed reactor

GWTP = groundwater treatment plant

gpm = gallons per minute

lbs = pounds

mg/L = milligrams per liter

MM gals = million gallons

TABLE 6: WEEKLY CHROMIUM IN FBR INFLUENT AND EFFLUENT, JULY - DECEMBER 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Sample Date	Influent/ Effluent	Total Chromium EPA 200.7 (mg/L)	Total Chromium SQL (mg/L)	Hexavalent Chromium EPA 218.6 (mg/L)	Hexavalent Chromium SQL (mg/L)
7/5/2013	INFLUENT	0.15	0.002	0.047	0.00025
7/5/2013	EFFLUENT	0.0077	0.002	<0.00025	0.00025
7/11/2013	INFLUENT	0.014	0.002	0.008	0.00025
7/11/2013	EFFLUENT	0.012	0.002	<0.00025	0.00025
7/15/2013	INFLUENT	0.025 B	0.002	0.022	0.00025
7/15/2013	EFFLUENT	0.0095 B	0.002	<0.00025	0.00025
7/22/2013	INFLUENT	0.045	0.002	0.039	0.00025
7/22/2013	EFFLUENT	0.0083	0.002	0.00056 J	0.00025
7/30/2013	INFLUENT	0.074	0.002	0.076	0.00025
7/30/2013	EFFLUENT	0.045	0.002	<0.00025	0.00025
8/5/2013	INFLUENT	0.0035 J	0.002	0.00068 J	0.00025
8/5/2013	EFFLUENT	0.007	0.002	<0.0025	0.0025
8/12/2013	INFLUENT	0.064	0.004	0.063	0.00025
8/12/2013	EFFLUENT	0.011	0.002	<0.0025	0.0025
8/19/2013	INFLUENT	0.013	0.002	0.0074	0.00025
8/19/2013	EFFLUENT	0.014	0.002	--	--
8/21/2013	EFFLUENT	--	--	<0.00025	0.00025
8/26/2013	INFLUENT	0.061	0.002	0.01	0.00025
8/26/2013	EFFLUENT	0.013	0.002	<0.00025	0.00025
9/3/2013	INFLUENT	0.012	0.002	0.0082	0.00025
9/3/2013	EFFLUENT	0.016	0.002	<0.00025	0.00025
9/9/2013	INFLUENT	0.0096	0.002	0.0048	0.00025
9/9/2013	EFFLUENT	0.013	0.002	<0.00025	0.00025
9/19/2013	INFLUENT	0.012	0.002	0.0088	0.00025
9/19/2013	EFFLUENT	0.0054	0.002	<0.00025	0.00025
9/24/2013	INFLUENT	0.0092	0.002	0.0061	0.00025
9/24/2013	EFFLUENT	0.0065	0.002	<0.00025	0.00025
9/30/2013	INFLUENT	0.0089	0.002	0.0056	0.00025
9/30/2013	EFFLUENT	0.01	0.002	<0.00025	0.00025
10/7/2013	INFLUENT	0.011	0.002	0.0085	0.00025
10/7/2013	EFFLUENT	0.0038 J	0.002	<0.00025	0.00025
10/14/2013	INFLUENT	0.014	0.002	0.0046	0.00025
10/14/2013	EFFLUENT	0.0062	0.002	<0.00025	0.00025
10/21/2013	INFLUENT	0.016	0.002	0.0086	0.00025
10/21/2013	EFFLUENT	0.0064	0.002	<0.00025	0.00025
10/28/2013	INFLUENT	0.012	0.002	0.0081	0.00025
10/28/2013	EFFLUENT	0.0058	0.002	<0.00025	0.00025
11/4/2013	INFLUENT	0.005	0.002	0.0007 J	0.00025
11/4/2013	EFFLUENT	0.0043 J	0.002	<0.00025	0.00025
11/11/2013	INFLUENT	0.010 J	0.01	0.0069	0.00025
11/11/2013	EFFLUENT	0.010 J	0.01	<0.00025	0.00025
11/18/2013	INFLUENT	0.0022 J	0.002	0.00087 J	0.00025
11/18/2013	EFFLUENT	<0.0020	0.002	<0.00025	0.00025
11/25/2013	INFLUENT	0.02	0.002	0.019	0.00025
11/25/2013	EFFLUENT	0.011	0.002	<0.00025	0.00025
12/2/2013	INFLUENT	<0.0020	0.002	0.00092 J	0.00025
12/2/2013	EFFLUENT	0.0031 J	0.002	<0.00025	0.00025

TABLE 6: WEEKLY CHROMIUM IN FBR INFLUENT AND EFFLUENT, JULY - DECEMBER 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Sample Date	Influent/ Effluent	Total Chromium EPA 200.7 (mg/L)	Total Chromium SQL (mg/L)	Hexavalent Chromium EPA 218.6 (mg/L)	Hexavalent Chromium SQL (mg/L)
12/9/2013	INFLUENT	0.084	0.002	0.074	0.00025
12/9/2013	EFFLUENT	0.014	0.002	<0.00025	0.00025
12/16/2013	INFLUENT	0.096	0.002	0.077	0.00025
12/16/2013	EFFLUENT	0.014	0.002	<0.00025	0.00025
12/23/2013	INFLUENT	0.028	0.002	0.028	0.00025
12/23/2013	EFFLUENT	0.01	0.002	<0.00025	0.00025
12/30/2013	INFLUENT	0.0033 J	0.002	0.0015	0.00025
12/30/2013	EFFLUENT	0.0075	0.002	<0.00025	0.00025

Notes:

-- = No Sample

B = Compound was found in the blank and sample.

FBR = Fluidized Bed Reactor

J = Estimated Concentration

NA = Not analyzed

mg/L = milligrams per liter

SQL = Sample Quantitation Limit

TABLE 7: PERCHLORATE REMOVED FROM THE ENVIRONMENT

Nevada Environmental Response Trust Site

Henderson, Nevada

Date	Seep Wells and Seep (lbs/day)	Athens Road Well Field (lbs/day)	Interceptor Well Field (lbs/day)	Total (lbs/day)	Total Tons Removed (per month)
OCT 2002 ¹	495	331	1,402	2,228	34.5
NOV 2002	422	1,001	1,146	2,569	38.5
DEC 2002	208	1,164	1,292	2,664	41.3
JAN 2003	408	1,077	1,467	2,952	45.7
FEB 2003	482	785	1,060	2,327	32.6
MAR 2003 ²	576	806	1,067	2,449	38.0
APR 2003	664	708	1,033	2,405	36.1
MAY 2003	640	728	1,148	2,517	39.0
JUN 2003	628	909	1,098	2,634	39.5
JUL 2003	550	764	1,034	2,348	36.4
AUG 2003	431e	742	999	2,172e	33.7e
SEP 2003	415	769	937	2,121	31.8
OCT 2003	370	767	1,003	2,140	33.2
NOV 2003	337	714	949	2,000	30.0
DEC 2003	318	734	932	1,984	30.8
JAN 2004	306	690	938	1,934	30.0
FEB 2004	322	652	881	1,856	26.9
MAR 2004	221	742	917	1,879	29.1
APR 2004	151	735	854	1,740	26.1
MAY 2004	122	741	890	1,753	27.2
JUN 2004	157	753	978	1,888	28.3
JUL 2004	195	758	985	1,938	30.0
AUG 2004	201	803	941	1,945	30.2
SEP 2004	169	835	970	1,973	29.6
OCT 2004	262	799	1,038	2,099	32.5
NOV 2004	168	814	1,016	1,997	30.0
DEC 2004	122	811	917	1,850	28.7
JAN 2005	142	776	993	1,910	29.6
FEB 2005	139e	762e	942	1,843e	25.8e
MAR 2005	158	781	964	1,902	29.5
APR 2005	145	787	971	1,904	28.6
MAY 2005	152	756	966	1,875	29.1
JUN 2005 ³	151	792	970	1,913	28.7
JUL 2005	154	769	1,060	1,983	30.7
AUG 2005	135	800	1,092	2,028	31.4
SEP 2005	85	806	1,122	2,013	30.2
OCT 2005	99	797	1,060	1,957	30.3
NOV 2005	111	773	1,072	1,956	29.3
DEC 2005	121	726	1,123	1,971	30.5
JAN 2006	141	750	984	1,875	29.1
FEB 2006	120	778	978	1,876	26.3
MAR 2006	107	736	967	1,810	28.1
APR 2006	129	755	1,011	1,895	28.4

TABLE 7: PERCHLORATE REMOVED FROM THE ENVIRONMENT

Nevada Environmental Response Trust Site

Henderson, Nevada

Date	Seep Wells and Seep (lbs/day)	Athens Road Well Field (lbs/day)	Interceptor Well Field (lbs/day)	Total (lbs/day)	Total Tons Removed (per month)
MAY 2006	131	713	945	1,789	27.7
JUN 2006	135	753	874	1,762	26.4
JUL 2006	123	647	920	1,690	26.2
AUG 2006	141	652	918	1,710	26.5
SEP 2006 ⁴	142	762	1,045	1,949	29.2
OCT 2006	134	778	1,018	1,930	29.9
NOV 2006	101	714	867	1,682	25.2
DEC 2006	121	745	870	1,736	26.9
JAN 2007	100	786	948	1,833	28.4
FEB 2007	89	736	871	1,695	23.7
MAR 2007	88	689	915	1,693	26.2
APR 2007	89	689	896	1,675	25.1
MAY 2007	102	699	890	1,690	26.2
JUN 2007	91	642	832	1,565	23.5
JUL 2007	67	659	912	1,638	25.4
AUG 2007	55	632	840	1,527	23.7
SEP 2007	53	631	842	1,526	22.9
OCT 2007	53	686	841	1,580	24.5
NOV 2007	55	682	762	1,500	22.5
DEC 2007	59	664	742	1,465	22.7
JAN 2008	58	633	873	1,565	24.3
FEB 2008	63	656	861	1,580	22.9
MAR 2008	60	666	865	1,591	24.7
APR 2008	54	656	851	1,561	23.4
MAY 2008	46	627	721	1,394	21.6
JUN 2008	44	637	732	1,413	21.2
JUL 2008	54	673	817	1,544	23.9
AUG 2008	59	691	945	1,695	26.3
SEP 2008	56	639	798	1,493	22.4
OCT 2008	51	626	801	1,477	22.9
NOV 2008	48	643	807	1,497	22.5
DEC 2008	58	678	809	1,544	23.9
JAN 2009	44	659	864	1,567	24.3
FEB 2009	32	622	796	1,450	20.3
MAR 2009	36	723	865	1,624	25.2
APR 2009	32	685	833	1,550	23.2
MAY 2009	35	655	835	1,525	23.6
JUN 2009	36	611	866	1,512	22.7
JUL 2009	40	571e	833	1,444e	22.4e
AUG 2009	43	652	859	1,554	24.1
SEP 2009	48	671	938	1,657	24.9
OCT 2009	44	625	847	1,516	23.5
NOV 2009	47	613	894	1,554	23.3

TABLE 7: PERCHLORATE REMOVED FROM THE ENVIRONMENT

Nevada Environmental Response Trust Site

Henderson, Nevada

Date	Seep Wells and Seep (lbs/day)	Athens Road Well Field (lbs/day)	Interceptor Well Field (lbs/day)	Total (lbs/day)	Total Tons Removed (per month)
DEC 2009	49	635	891	1,575	24.4
JAN 2010	55	661	912	1,629e	25.2e
FEB 2010	53	675	853	1,581e	22.1e
MAR 2010	49	629	949	1,626e	25.2e
APR 2010	50	630	926	1,607	24.1
MAY 2010	53	758	983	1,794	27.8
JUN 2010	53	733	942	1,728	25.9
JUL 2010	46	652	838	1,535	23.8
AUG 2010	44	658	846	1,548	24.0
SEP 2010	42	728	833	1,602	24.0
OCT 2010	50	634	794	1,478	22.9
NOV 2010	50	635	761	1,446	21.7
DEC 2010	42	636	690	1,368	21.2
JAN 2011	32	598	735	1,364	21.1
FEB 2011	40	588	709	1,336	18.7
MAR 2011	43	634	733	1,410	21.8
APR 2011	48	616	791	1,455	21.8
MAY 2011	57	632	734	1,423	22.1
JUN 2011	46	639	754	1,438	21.6
JULY 2011	41	646	756	1,443	22.4
AUG 2011	39	630	768	1,438	22.3
SEP 2011	41	619	751	1,410	21.2
OCT 2011	41	585	691	1,317	20.4
NOV 2011	41	570	696	1,307	19.6
DEC 2011	38	567	659	1,263	19.6
JAN 2012	41	606	694	1,341	20.8
FEB 2012	44	669	726	1,439	20.9
MAR 2012	46	623	720	1,389	21.5
APR 2012	44e	607e	686	1,337e	20.0e
MAY 2012	47e	665e	687	1,399e	21.7e
JUN 2012	48e	641	541	1,229e	18.4e
JULY 2012	52e	635	661	1,348e	20.9e
AUG 2012	48e	601	655	1,304e	20.2e
SEP 2012	61e	626	1,042	1,728e	25.9e
OCT 2012	65e	621	1,294	1,980e	30.7e
NOV 2012	63e	609	1,145	1,817e	27.2e
DEC 2012	58e	619	1,301	1,978e	30.7e
JAN 2013	58	642	1,292	1,992	30.9
FEB 2013	52	615	1,194	1,862	26.1
MAR 2013	51	610	1,070	1,732	26.8
APR 2013	63	629	1,141	1,833	27.5
MAY 2013	62	639	1,086	1,787	27.7
JUN 2013	47	544	886	1,477	22.2

TABLE 7: PERCHLORATE REMOVED FROM THE ENVIRONMENT

Nevada Environmental Response Trust Site

Henderson, Nevada

Date	Seep Wells and Seep (lbs/day)	Athens Road Well Field (lbs/day)	Interceptor Well Field (lbs/day)	Total (lbs/day)	Total Tons Removed (per month)
JULY 2013	53	523	942	1,518	23.5
AUG 2013	59	569	929	1,557	24.1
SEP 2013	44	576	956	1,576	23.6
OCT 2013	55	593	937	1,586	24.6
NOV 2013	54	514	782	1,350	20.3
DEC 2013	46	451	799	1,295	20.1

Notes:¹ Athens Rd recovery wells began full time operation on 10/22/02.² Five new Seep Area recovery wells began operation on 3/24/03.³ One new Seep Area recovery well began operation on 6/21/05.⁴ One new Athens Rd recovery well began full time operation on 9/8/06.

lbs/day = pounds per day

e = estimate; due to malfunctioning flow meter or other issues, the flow rate for this well was manually adjusted to calculate an average flow rate based on field observations.

In some cases, the monthly perchlorate mass removal numbers in this table differ slightly from those presented in previous reports due to minor corrections made in the historical calculations. These adjustments did not substantively affect the mass removal numbers.

TABLE 8: WEEKLY PERCHLORATE IN FBR INFLUENT AND EFFLUENT, JULY - DECEMBER 2013

**Nevada Environmental Response Trust Site
Henderson, Nevada**

Sample Date	Influent/Effluent Weekly Composite	Perchlorate EPA 314 (mg/L)	Perchlorate SQL (mg/L)
7/6/2013	INFLUENT-COMP	100	9.5
7/6/2013	EFFLUENT-COMP	0.074	0.0048
7/13/2013	INFLUENT-COMP	120	9.5
7/13/2013	EFFLUENT-COMP	0.00094 H	0.0005
7/20/2013	INFLUENT-COMP	120	9.5
7/20/2013	EFFLUENT-COMP	0.0011	0.0005
7/27/2013	INFLUENT-COMP	110	9.5
7/27/2013	EFFLUENT-COMP	0.0011	0.0005
8/3/2013	INFLUENT-COMP	130	9.5
8/3/2013	EFFLUENT-COMP	0.015	0.0048
8/10/2013	INFLUENT-COMP	110	9.5
8/10/2013	EFFLUENT-COMP	<0.0048	0.0048
8/17/2013	INFLUENT-COMP	130	9.5
8/17/2013	EFFLUENT-COMP	<0.0048	0.0048
8/24/2013	INFLUENT-COMP	120	9.5
8/24/2013	EFFLUENT-COMP	<0.0048	0.0048
8/31/2013	INFLUENT-COMP	130	9.5
8/31/2013	EFFLUENT-COMP	<0.0048	0.0048
9/7/2013	INFLUENT-COMP	110	9.5
9/7/2013	EFFLUENT-COMP	<0.0048	0.0048
9/14/2013	INFLUENT-COMP	120	9.5
9/14/2013	EFFLUENT-COMP	<0.0048	0.0048
9/21/2013	INFLUENT-COMP	120	9.5
9/21/2013	EFFLUENT-COMP	<0.0048	0.0048
9/28/2013	INFLUENT-COMP	130	9.5
9/28/2013	EFFLUENT-COMP	<0.0048	0.0048
10/5/2013	INFLUENT-COMP	140	4.0
10/5/2013	EFFLUENT-COMP	<0.0041	0.0041
10/12/2013	INFLUENT-COMP	110	0.0025
10/12/2013	EFFLUENT-COMP	0.0064*	See note*
10/19/2013	INFLUENT-COMP	110	5.0
10/19/2013	EFFLUENT-COMP	<0.0025	0.0025
10/26/2013	INFLUENT-COMP	100	5.0
10/26/2013	EFFLUENT-COMP	<0.0025	0.0025
11/2/2013	INFLUENT-COMP	120	5.0
11/2/2013	EFFLUENT-COMP	<0.0025	0.0025
11/9/2013	INFLUENT-COMP	120	5.0
11/9/2013	EFFLUENT-COMP	<0.0025	0.0025
11/16/2013	INFLUENT-COMP	110	5.0
11/16/2013	EFFLUENT-COMP	<0.0025	0.0025
11/23/2013	INFLUENT-COMP	100	5.0
11/23/2013	EFFLUENT-COMP	<0.0025	0.0025
11/30/2013	INFLUENT-COMP	110	5.0
11/30/2013	EFFLUENT-COMP	<0.0025	0.0025

TABLE 8: WEEKLY PERCHLORATE IN FBR INFLUENT AND EFFLUENT, JULY - DECEMBER 2013

**Nevada Environmental Response Trust Site
Henderson, Nevada**

Sample Date	Influent/Effluent Weekly Composite	Perchlorate EPA 314 (mg/L)	Perchlorate SQL (mg/L)
12/7/2013	INFLUENT-COMP	99	5.0
12/7/2013	EFFLUENT-COMP	<0.0025	0.0025
12/14/2013	INFLUENT-COMP	110	5.0
12/14/2013	EFFLUENT-COMP	<0.0025	0.0025
12/21/2013	INFLUENT-COMP	100	5.0
12/21/2013	EFFLUENT-COMP	<0.0025	0.0025
12/28/2013	INFLUENT-COMP	93	5.0
12/28/2013	EFFLUENT-COMP	<0.0025	0.0025

Notes:

The influent and effluent composite results above are the same as those used in the Discharge Monitoring Reports (DMRs) associated with the Site's National Pollution Discharge Elimination System (NPDES) Permit NV0023060.

FBR = Fluidized Bed Reactor

J = Estimated Concentration

H = Sample prepped or analyzed beyond specified holding time

mg/L = milligrams per liter

SQL = Sample Quantitation Limit

* Perchlorate analysis of the original effluent composite sample was subcontracted to Calscience Environmental Laboratories, Inc. (CalScience) due to instrument issues at TestAmerica Laboratories (TestAmerica); the result was 19 micrograms per liter (µg/L). Subsequently, Envirogen requested reanalysis from Eurofins Eaton Analytical (Eurofins), Advanced Technology Laboratories (ATL), and TestAmerica. In all three reanalyses, the result was below the sample quantitation limit (SQL; Eurofins: <1.0 µg/L, ATL: <10 µg/L, TestAmerica: <2.5 µg/L). The result shown here is an average of the 19 µg/L result, and half the detection limits for the three reanalyses.

TABLE 9: PERCHLORATE MASS ESTIMATES

Nevada Environmental Response Trust Site

Henderson, Nevada

	On-site		Off-site to AWF		AWF to Wash		Entire Area
	Alluvium	UMCf	Alluvium	UMCf	Alluvium	UMCf	
Kriging							
2002	18	3,680	680	1,604	95	0	6,078
2006	12	2,321	538	1,223	11	0	4,105
2012	9	1,724	384	817	14	0	2,947
Spline							
2002	16	4,393	952	2,120	115	0	7,598
2006	12	2,476	667	1,457	17	0	4,629
2012	11	1,955	460	933	15	0	3,374
Contour							
2002	24	4,305	954	1,972	179	0	7,433
2006	12	2,404	576	1,225	18	0	4,236
2012	18	2,530	500	1,043	18	0	4,109

Notes:

Mass values are presented in tons.

AWF = Athens Road Well Field

UMCf = Upper Muddy Creek Formation

TABLE 10: CHROMIUM MASS ESTIMATES

Nevada Environmental Response Trust Site

Henderson, Nevada

	On-site		Off-site to AWF		AWF to Wash		Entire Area
	Alluvium	UMCf	Alluvium	UMCf	Alluvium	UMCf	
Kriging							
2006	0.06	31.74	1.79	4.61	0.12	0.00	38.32
2012	0.04	20.15	1.20	3.01	0.04	0.00	24.44
Spline							
2006	0.07	34.17	2.06	5.24	0.13	0.00	41.67
2012	0.05	22.09	1.31	3.18	0.05	0.00	26.69
Contour							
2006	0.05	37.04	1.59	3.78	0.57	0.00	43.04
2012	0.05	21.30	1.45	3.60	0.10	0.00	26.50

Notes:

Mass values are presented in tons.

AWF = Athens Road Well Field

UMCf = Upper Muddy Creek Formation

TABLE 11: GWETS PERFORMANCE METRICS SUMMARY

Nevada Environmental Response Trust Site

Henderson, Nevada

Performance Metric	Method of Evaluation	Location	Value
<i>Mass Removal and Remaining Plume Mass (Section 5.4.1)</i>			
Perchlorate Mass Remaining in Groundwater (tons)	Interpolation of concentrations using kriging (2012 estimate shown)	On-site	1,733
		Off-site to AWF	1,201
		AWF to the Wash	14
		Total	2,947
Perchlorate Mass Removal Rate ¹ (tons/year)	Calculated from extraction rates and concentrations in extraction wells	IWF	164
		AWF	99
		SWF	10
		Total	273
Chromium Mass Remaining in Groundwater (tons)	Interpolation of concentrations using kriging (2012 estimate shown)	On-site	20.2
		Off-site to AWF	4.2
		AWF to the Wash	0.04
		Total	24.44
Chromium Mass Removal Rate ² (tons/year)	Calculated from extraction rates and concentrations in extraction wells	IWF ³	1.5
		AFW/SWF ⁴	0.06
		Total	1.56
<i>Capture Zone Evaluation and Estimated Mass Flux (Section 5.4.2)</i>			
Well Field Capture Zones	Estimated capture zones from particle tracking compared to target capture zone. See Figures 29a and 29b.	Study Area	Target area captured except for small area near SWF
Capture Efficiency at Well Fields (percent)	Calculated from groundwater modeling, measured concentrations, and extraction rates	IWF ⁵	97%
		AWF ⁵	95%
		SWF	93%

TABLE 11: GWETS PERFORMANCE METRICS SUMMARY

**Nevada Environmental Response Trust Site
Henderson, Nevada**

Performance Metric	Method of Evaluation	Location	Value
Perchlorate Mass Loading to Las Vegas Wash (Section 5.4.3)			
Perchlorate Mass Loading in Las Vegas Wash (lbs/day)	Based on quarterly average sampling results and flow rates. Average over 2008-2013 shown.	Northshore Rd	91
		Pabco Rd	22
		LV Wasteway	2
Contribution to Northshore Road Mass Loading by Reach (percent)	Apportionment of mass loading at Northshore Road to stream reaches. Average over 2008-2013 shown.	Pabco Rd to Northshore Rd	76%
		Wasteway to Pabco Rd	22%
		Upstream of Wasteway	2%
Surface Water-Groundwater Interaction Near the SWF (Section 5.4.4)			
Las Vegas Wash Flow Captured at SWF	Comparison of surface water level at Pabco Road gauge to nearby groundwater levels	SWF	Flow direction is from Las Vegas Wash to SWF
COH Birding Pond Flow Captured at SWF	Low TDS plume used as tracer	SWF	Flow direction is from Birding Ponds to SWF
Environmental Footprint (Section 5.4.5)			
Energy Use (GW-hr/yr)	Summarized from utility bills (2012 estimate shown)	Entire system	6.0

Notes:

- ¹ Average mass removal rate at each well field between July and December 2013. Monthly removal rates are shown on Table 7.
- ² Average mass removal rate at the GWTP and FBR between July and December 2013. Monthly removal rates at the GTWP are shown on Table 5.
- ³ The average mass removal rate is calculated using influent and effluent hexavalent chromium concentration data at the GWTP and average monthly flow to the GWTP. Flows to the GWTP
- ⁴ The average mass removal rate is calculated using influent and effluent total chromium concentration data at the FBRs and average monthly FBR flow data.
- ⁵ Capture efficiency may be overestimated at the IWF and AWF. Elevated perchlorate concentrations in wells downgradient of the IWF and AWF indicate potential gaps in capture.

IWF = Interceptor Well Field
 AWF = Athens Road Well Field
 SWF = Seep Well Field
 lbs/day = pounds per day
 GW-hr/yr = gigawatt hours per year