

TABLE E-1A: INTERCEPTOR WELL CONSTRUCTION DETAILS

Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID	Muddy Creek Elevation (ft amsl)	Depth to Qal/UMCf Contact (feet)	Total Borehole Depth (ft bgs)	Well Total Depth (ft bgs)	Depth to Top of Screen (feet bgs)	Depth to Bottom of Screen (feet bgs)	Screen Interval (feet)	Installation Date	Casing Material	Casing Diameter (inches)	Filter Interval (feet)	Screen Size	Water-Bearing Zone	Lithology
I-B	1723.0	27.0	46.0	43.0	17.8	42.5	24.7	10/1/1986	PVC	6	14.3-46	0.02	Shallow	Qal/xMCf/UMCf
I-C	1724.5	27.5	44.5	43.0	13.2	42.5	29.3	12/1/1986	PVC	6	10.4-44.5	0.02	Shallow	UMCf
I-D	1721.0	29.0	47.0	45.0	16.0	44.5	28.5	10/1/1986	PVC	6	10.7-47	0.02	Shallow	Qal/xMCf/UMCf
I-E	1723.0	27.0	49.0	44.0	21.5	43.5	22	12/1/1986	PVC	6	10.2-49	0.02	Shallow	UMCf
I-F	1717.7	30.0	50.0	43.8	11.8	43.3	31.5	9/1/1986	PVC	6	11-50	0.02	Shallow	Qal/xMCf/UMCf
I-G	1721.2	28.0	43.5	39.3	9.5	38.8	29.3	12/1/1986	PVC	6	7-43.5	0.02	Shallow	Qal/xMCf/UMCf
I-H	1721.8	28.5	47.0	43.6	13.6	43.1	29.5	9/1/1986	PVC	6	11.6-47	0.02	Shallow	UMCf
I-I	1715.8	26.5	45.0	41.0	11.3	40.5	29.2	12/1/1986	PVC	6	8.5-45	0.02	Shallow	Qal/xMCf/UMCf
I-J	1718.6	28.0	45.0	41.0	11.2	40.5	29.3	12/1/1986	PVC	6	8.7-45	0.02	Shallow	Qal/xMCf/UMCf
I-K	1719.3	24.5	43.0	35.8	7.0	35.2	28.2	12/1/1986	PVC	6	6-43	0.02	Shallow	UMCf
I-L	1720.3	28.0	45.0	40.0	9.0	39.0	30	10/1/1993	PVC	6	7-45	0.02	Shallow	Qal/xMCf/UMCf
I-M	1719.2	30.0	45.0	40.0	9.0	39.0	30	10/1/1993	PVC	6	7-40	0.02	Shallow	Qal/xMCf/UMCf
I-N	1713.8	34.0	45.0	38.0	7.0	37.0	30	10/1/1993	PVC	6	5-38	0.02	Shallow	Qal/xMCf/UMCf
I-O	1719.0	30.0	40.0	40.0	9.0	39.0	30	10/1/1993	PVC	6	7-40	0.02	Shallow	Qal/xMCf/UMCf
I-P	1716.2	33.0	45.0	44.5	14.0	44.0	30	3/1/1998	PVC	6	12-45	0.02	Shallow	Qal/xMCf/UMCf
I-Q	1721.4	28.0	40.0	40.0	9.6	39.6	30	3/1/1998	PVC	6	7-40	0.02	Shallow	Qal/xMCf/UMCf
I-R	1721.6	27.5	45.0	43.0	9.8	39.8	30	2/1/1999	PVC	6	7.8-43	0.02	Shallow	Qal/xMCf/UMCf
I-S	1721.1	26.5	45.2	45.2	12.0	42.0	30	2/1/1999	PVC	6	9.5-45.2	0.02	Shallow	Qal/xMCf/UMCf
I-T	1718.0	31.0	60.0	45.2	12.0	42.0	30	2/1/1999	PVC	6	10-45.2	0.02	Shallow	Qal/xMCf/UMCf
I-U	1721.0	28.5	45.0	45.0	12.0	42.0	30	2/1/1999	PVC	6	9.5-45	0.02	Shallow	Qal/xMCf/UMCf
I-V	1717.0	32.5	55.0	45.0	12.0	42.0	30	2/1/1999	PVC	6	9.5-45	0.02	Shallow	Qal/xMCf/UMCf
I-W	1727.1	33.0	51.0	50.5	20.0	50.0	30	9/1/2000	PVC	6	14-51	0.02	Shallow	Qal/xMCf/UMCf
I-X	1713.2	33.0	51.0	50.5	20.0	50.0	30	9/1/2000	PVC	6	14-51	0.02	Shallow	Qal/xMCf/UMCf
I-Y	1720.9	28.0	50.5	50.5	20.0	50.0	30	9/1/2000	PVC	6	14-50.5	0.02	Shallow	Qal/xMCf/UMCf
I-Z	1718.8	25.0	40.0	35.0	15.0	35.0	20	6/1/2003	PVC	6	10-35	0.02	Shallow	Qal/xMCf/UMCf
I-AA	1721.1	30.0	47.0	46.0	23.7	43.7	20	12/4/2007	PVC	6	18-47	0.02	Shallow	UMCf
I-AB	1723.4	30.5	51.0	51.0	25.0	45.0	20	8/14/2009	PVC	6	20-51	0.02	Shallow	Qal/UMCf
I-AC	1717.1	33.0	50.0	50.0	24.5	44.5	20	6/15/2010	PVC	6	20-50	0.02	Shallow	Qal/UMCf
I-AD	1721.9	31.0	50.0	50.0	24.5	44.5	20	6/16/2010	PVC	6	20-50	0.02	Shallow	Qal/UMCf
I-A-R	1731.0	27.0	45.0	45.0	25.0	45.0	20	4/1/2000	Galv Steel	18	20-45	0.02	Shallow	UMCf

Notes:

Qal = Alluvium

xMC = Transition Zone between Alluvium and Muddy Creek Formation

UMCf = Upper Muddy Creek Formation

TABLE E-1B: ATHENS ROAD WELL CONSTRUCTION DETAILS

Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID	Muddy Creek Elevation (ft amsl)	Depth to Qal/UMCf Contact (feet)	Total Borehole Depth (ft bgs)	Well Total Depth (ft bgs)	Depth to Top of Screen (feet bgs)	Depth to Bottom of Screen (feet bgs)	Screen Interval (feet)	Installation Date	Casing Material	Casing Diameter (inches)	Filter Interval (feet)	Screen Size	Water-Bearing Zone	Lithology
ART-1	1562.6	53.0	58.0	56.0	14.0	54.0	40	10/1/2001	PVC/SS	6	11-58	0.04	Shallow	Qal
ART-1A	1561.8	54.0	58.0	56.0	19.0	54.0	35	3/1/2003	PVC/SS	8	16-57	0.04	Shallow	Qal
ART-2	1562.4	55.0	57.0	56.0	19.0	54.0	35	10/1/2001	PVC/SS	6	16-57	0.04	Shallow	Qal
ART-2A	1561.3	57.0	58.0	58.0	21.0	56.0	35	3/1/2003	PVC/SS	8	9-58	0.04	Shallow	Qal
ART-3	NR	NR	48.5	47.0	15.0	45.0	30	10/1/2001	PVC/SS	6	13-48.5	0.04	Shallow	Qal
ART-3A	1566.1	53.0	58.0	55.0	18.0	53.0	35	3/1/2003	PVC/SS	8	9-58	0.04	Shallow	Qal
ART-4	1573.9	44.4	48.4	46.4	19.4	44.4	25	10/1/2001	PVC/SS	6	14.4-48.4	0.02	Shallow	Qal
ART-4A	1574.9	43.4	47.4	45.4	18.4	43.4	25	2/1/2003	PVC/SS	8	7.4-45.4	0.04	Shallow	Qal
ART-5	1589.2	28.6	31.6	30.6	18.6	28.6	10	10/1/2001	PVC/SS	6	15.6-30.6	0.04	Shallow	Qal
ART-6	1582.3	37.9	41.9	39.9	17.9	37.9	20	10/1/2001	PVC/SS	6	13.5-39.9	0.04	Shallow	Qal
ART-6A	1582.3	37.7	41.7	39.7	22.7	37.7	15	3/1/2003	PVC/SS	8	10.7-39.7	0.04	Shallow	Qal
ART-7	NR	NR	41.7	41.0	19.0	39.0	20	10/1/2001	PVC/SS	6	13.5-41	0.04	Shallow	Qal
ART-7A	NR	NR	42.7	41.7	19.7	39.7	20	3/1/2003	PVC/SS	8	9.7-41.7	0.04	Shallow	Qal
ART-7B	1573.1	45.0	50.0	50.0	29.5	44.5	15	6/28/2010	PVC/SS	8	25-50	0.04	Shallow	Qal
ART-8	1567.5	51.0	54.0	50.5	18.0	48.0	30	1/1/2002	PVC/SS	6	15-54	0.02	Shallow	Qal
ART-8A	1566.5	52.0	58.0	54.0	22.0	52.0	30	3/1/2003	PVC/SS	8	9-58	0.04	Shallow	Qal
ART-9	1576.2	42.5	47.5	45.5	23.0	43.0	20	5/1/2006	PVC/SS	8	15-45.5	0.04	Shallow	Qal
PC-148	1592.8	25.0	50.0	50.0	24.5	44.5	20	6/19/2010	PVC	6	20-50	0.01	Shallow	UMCf
PC-149	1586.9	32.0	50.0	50.0	24.5	44.5	20	6/23/2010	PVC	6	20-50	0.01	Shallow	Qal/UMCf
PC-150	1579.4	39.0	45.0	45.0	19.5	39.5	20	6/30/2010	PVC	6	15-45	0.02	Shallow	Qal

Notes:

Qal = Alluvium

xMCf = Transition Zone between Alluvium and Muddy Creek Formation

UMCf = Upper Muddy Creek Formation

TABLE E-2: CURRENT AND PROPOSED MASS REMOVAL AT THE INTERCEPTOR WELL FIELD

Nevada Environmental Response Trust Site

Henderson, Nevada

Well	Perchlorate Concentration (mg/L)	Total Chromium Concentration (mg/L)	Current Extraction Rate (gpm)	Current Perchlorate Mass Removal (pounds/day)	Current Total Chromium Mass Removal (pounds/day)	Maximum Sustainable Flow (gpm)	Proposed Extraction Rate (gpm)	Expected Perchlorate Mass Removal (pounds/day)	Expected Total Chromium Mass Removal (pounds/day)
Existing Wells									
I-A-R	2200	1.4	1.1	29.1	0.02	1.0	1.0	26.4	0.02
I-B	480	1.0	1.5	8.7	0.02	1.5	1.5	8.7	0.02
I-C	860	3.1	5.9	61.0	0.22	6.0	6.0	62.0	0.22
I-D	730	7.4	1.3	11.4	0.12	2.0	1.5	13.2	0.13
I-E	710	10.0	1.3	11.1	0.16	1.5	1.5	12.8	0.18
I-F	1200	19.0	5.7	82.2	1.30	5.7	5.7	82.2	1.30
I-G	1600	27.0	0.1	1.9	0.03	0.5	0.5	9.6	0.16
I-H	1600	26.0	0.9	17.3	0.28	1.2	1.2	23.1	0.37
I-I	720	13.0	5.0	43.3	0.78	5.0	4.4	38.1	0.69
I-J	250	2.9	6.3	18.9	0.22	8.0	2.5	7.5	0.09
I-K	120	1.3	3.9	5.6	0.06	4.0	2.0	2.9	0.03
I-L	1600	0.7	1.9	36.5	0.02	2.5	2.5	48.1	0.02
I-M	770	0.9	2.6	24.1	0.03	2.6	2.6	24.1	0.03
I-N	970	11.0	3.1	36.1	0.41	3.5	3.5	40.8	0.46
I-O	1600	22.0	1.7	32.7	0.45	2.5	2.5	48.1	0.66
I-P	1600	13.0	2.1	40.4	0.33	3.0	2.5	48.1	0.39
I-Q	1500	29.0	0.3	5.4	0.10	2.5	2.5	45.1	0.87
I-R	1600	0.4	2.5	48.1	0.01	2.5	2.3	43.3	0.01
I-S	870	1.4	5.2	54.4	0.09	5.0	5.0	52.3	0.08
I-T	1600	29.0	0.4	7.7	0.14	0.4	0.4	7.7	0.14
I-U	1600	27.0	0.7	13.5	0.23	0.8	0.8	15.4	0.26
I-V	1400	17.0	4.8	80.8	0.98	4.8	4.0	67.3	0.82
I-Z	310	8.1	6.7	25.0	0.65	8	5.5	20.5	0.54

TABLE E-2: CURRENT AND PROPOSED MASS REMOVAL AT THE INTERCEPTOR WELL FIELD

Nevada Environmental Response Trust Site

Henderson, Nevada

Well	Perchlorate Concentration (mg/L)	Total Chromium Concentration (mg/L)	Current Extraction Rate (gpm)	Current Perchlorate Mass Removal (pounds/day)	Current Total Chromium Mass Removal (pounds/day)	Maximum Sustainable Flow (gpm)	Proposed Extraction Rate (gpm)	Expected Perchlorate Mass Removal (pounds/day)	Expected Total Chromium Mass Removal (pounds/day)
New Wells									
I-AA	100	0.1	NO*	0	0	--	1.0	1.2	0.00
I-AB	250	0.2	NO*	0	0	--	1.0	3.0	0.00
I-AC	50	0.9	NO*	0	0	--	1.0	0.6	0.01
I-AD	70	0.9	NO*	0	0	--	1.0	0.8	0.01
I-W	1200	20.0	NO*	0	0	--	2.5	36.1	0.60
I-X	1100	13.0	NO*	0	0	--	2.5	33.0	0.39
I-Y	600	0.5	NO*	0	0	--	4.1	29.6	0.02
Total Pumping at IWF (gpm)			65.0				75.0		
Total Mass Removal at IWF (pounds/day)				695.0	6.64			851.3	8.54

Notes:

Current analytical results and extraction rates are from Second Quarter 2012.

Total chromium and perchlorate concentrations for the new wells are based on interpolation of concentration data presented on Plate 6 and Plate 7, respectively, in the main report.

The perchlorate mass removal rate for the IWF in Table 6 of the main report is differ slightly because it is based on combined flow rates and a perchlorate concentration from all IWF wells inflowing to the GWETS on a weekly frequency.

-- = no data available

gpm = gallons per minute

NO* = not operational

mg/L = milligrams per liter

TABLE E-3: CURRENT AND PROPOSED MASS REMOVAL AT THE ATHENS ROAD WELL FIELD

Nevada Environmental Response Trust Site

Henderson, Nevada

Well	Perchlorate Concentration (mg/L)	Total Chromium Concentration (mg/L)	Current Extraction Rate (gpm)	Current Perchlorate Mass Removal (pounds/day)	Current Total Chromium Mass Removal (pounds/day)	Maximum Sustainable Flow (gpm)	Proposed Extraction Rates (gpm)	Expected Perchlorate Mass Removal (pounds/day)	Expected Total Chromium Mass Removal (pounds/day)
Existing Wells									
ART-1	4.8	0.00096	14.1	0.8	0.00	33.0	1.0	0.1	0.00
ART-2	64	0.026	62.4	48.0	0.02	71.0	61.0	46.9	0.02
ART-3	300	0.37	46.1	166.3	0.21	54.0	52.5	189.3	0.23
ART-4	410	0.57	8.5	42.0	0.06	10.0	8.5	41.9	0.06
ART-5 ¹	--	--	NO	0.0	0.00	0.0	0.0	0.0	0.0
ART-6 ²	300	1.2	NO	0.0	0.00	0.0	0.0	0.0	0.00
ART-7	160	0.74	31.2	60.0	0.28	32.0	0.0	0.0	0.00
ART-8	220	0.2	62.7	165.8	0.15	85.0	85.0	224.7	0.20
ART-9	330	1.2	46.5	184.4	0.67	47.0	46.0	182.4	0.66
New Wells									
ART-7B	270	1.2	NO*	0.0	0.00	--	31.0	100.6	0.45
PC-148	32	0.027	NO*	0.0	0.00	--	0.0	0.0	0.00
PC-149	22	0.0061	NO*	0.0	0.00	--	0.0	0.0	0.00
PC-150	250	0.25	NO*	0.0	0.00	--	5.0	15.0	0.02
Total Pumping at AWF (gpm)			271.6			332.0	290.0		
Total Mass Removal at AWF (pounds/day)				667.3	1.38			800.9	1.64

Notes:

Current analytical results and extraction rates are from Second Quarter 2012.

¹ ART-5 has been dry since February 2006

² Pumping from ART-6 was replaced by ART-9 in September 2006.

-- = no data available

NO = not operational

NO* = proposed pumping well

gpm = gallons per minute

mg/L = milligrams per liter

NA = not applicable