

September 5, 2013

Michael Anderson, P.E.
Nevada State Engineer
Nevada Department of Conservation and Natural Resources
Division of Water Resources
901 South Stewart Street, Suite 2002
Carson City, Nevada 89701-5249

**Re: Amended GW-11 Volume Calculations
Nevada Environmental Response Trust Site; Henderson, NV
Dam Permit #J-665**

Dear Mr. Anderson,

The Nevada Environmental Response Trust (NERT or the Trust) maintains Permit #J-665, which covers the earthen embankment associated with the 11-acre synthetically double-lined aquifer retention basin (GW-11 or the GW-11 pond). Attachment A, Item 6 of the Dam Permit #J-665 states that "Water may be impounded to a maximum elevation of 1747 feet above mean sea level (msl) for an approved capacity of 114 acre-feet." The 1747 feet above msl corresponds to 3 feet of freeboard in GW-11.

ENVIRON International Corporation (ENVIRON), on behalf of the Trust, submitted a request on July 31, 2013, for temporary freeboard reduction from 1747 feet above msl to 1748 feet above msl in the GW-11 pond during implementation of an emergency fluidized bed reactor (FBR) refurbishment plan at the site. In a letter from you dated August 21, 2013, the Nevada Division of Water Resources (NDWR) authorized the Trust to temporarily impound extracted groundwater in GW-11 under Dam Permit #J-665 to a maximum elevation of 1748 feet above msl, which corresponds to 2 feet of freeboard. The authorization is contingent upon two conditions, one of which includes the following:

- *An amended stage/area/capacity table and/or curve will be prepared as soon as practical and provided to the Division.*


ENVIRON recently reviewed the volume calculations for GW-11 to verify its capacity and found that an elevation of 1747 feet above msl does not correspond to a capacity of 114 acre-feet, as stated in the Dam Permit. ENVIRON's revised volume calculations indicate that an elevation of 1747 feet above msl actually corresponds to a capacity of approximately 192 acre-feet. Attached to this letter is a stage/area/capacity table and curve, which reflect the revised GW-11 volumes based on ENVIRON's recent calculations. ENVIRON, on behalf of the Trust, hereby requests a minor modification to Attachment A, Item 6 of the Dam Permit to reflect the revised GW-11 volume calculations.

Should you have any questions concerning this correspondence, please contact Allan DeLorme at (510) 420-2565 or adelorme@environcorp.com or Kimberly Kuwabara at (510) 420-2525 or kkuwabara@environcorp.com.

Sincerely,



Allan J. DeLorme, PE
Principal



Kimberly Kuwabara, MS
Senior Manager
Nevada CEM 2353, exp. 3/20/2015

cc. Cliff Lawson, Bureau of Water Pollution Control, NDEP
David Haile, Bureau of Water Pollution Control, NDEP
Greg Lovato, Bureau of Corrective Actions, NDEP
James Dotchin, Bureau of Corrective Actions, NDEP
Weiquan Dong, Bureau of Corrective Actions, NDEP
Nevada Environmental Response Trust
Tanya O'Neill, Foley and Lardner LLP
Todd Webster, Envirogen Technologies
Bill Schwartz, Envirogen Technologies

Attachment: *GW-11 Pond Stage/Area/Capacity Table and Curve*

GW-11 Pond Capacity from Civil 3D - Half-Foot Intervals

Water Depth	Field Meas. ^[1]	Freeboard (to 1747 feet)	Elevation	Stage Area ^[2]	Stage Volume Elevation		Stage Volume ^[3]		GW-11 Pond Capacity	
					From	To	cu. feet	Gallons	cu. feet	Mgal
20.0	1.71	-3.0	1750.0	644,253	1749.9	1750.0	64,395	481,675	10,233,567	76.5
19.9	2.02	-2.9	1749.9	643,350	1749.5	1749.9	256,068	1,915,389	10,169,172	76.1
19.5	3.29	-2.5	1749.5	639,522	1749.0	1749.5	318,519	2,382,522	9,913,104	74.2
19.0	4.87	-2.0	1749.0	634,334	1748.5	1749.0	315,792	2,362,124	9,594,585	71.8
18.5	6.45	-1.5	1748.5	628,826	1748.0	1748.5	313,038	2,341,524	9,278,793	69.4
18.0	8.03	-1.0	1748.0	623,358	1747.5	1748.0	310,311	2,321,126	8,965,755	67.1
17.5	9.61	-0.5	1747.5	617,889	1747.0	1747.5	307,584	2,300,728	8,655,444	64.7
17.0	11.19	0.0	1747.0	612,442	1746.5	1747.0	304,857	2,280,330	8,347,860	62.4
16.5	12.78	0.5	1746.5	607,036	1746.0	1746.5	302,157	2,260,134	8,043,003	60.2
16.0	14.36	1.0	1746.0	601,638	1745.5	1746.0	299,484	2,240,140	7,740,846	57.9
15.5	15.94	1.5	1745.5	596,253	1745.0	1745.5	296,784	2,219,944	7,441,362	55.7
15.0	17.52	2.0	1745.0	590,867	1744.5	1745.0	294,084	2,199,748	7,144,578	53.4
14.5	19.10	2.5	1744.5	585,433	1744.0	1744.5	291,357	2,179,350	6,850,494	51.2
14.0	20.68	3.0	1744.0	580,003	1743.5	1744.0	288,630	2,158,952	6,559,137	49.1
13.5	22.26	3.5	1743.5	574,510	1743.0	1743.5	285,876	2,138,352	6,270,507	46.9
13.0	23.84	4.0	1743.0	569,021	1742.5	1743.0	283,122	2,117,753	5,984,631	44.8
12.5	25.42	4.5	1742.5	563,442	1742.0	1742.5	280,341	2,096,951	5,701,509	42.6
12.0	27.01	5.0	1742.0	557,889	1741.5	1742.0	277,452	2,075,341	5,421,168	40.6
11.5	28.59	5.5	1741.5	552,005	1741.0	1741.5	274,563	2,053,731	5,143,716	38.5
11.0	30.17	6.0	1741.0	546,275	1740.5	1741.0	272,025	2,034,747	4,869,153	36.4
10.5	31.75	6.5	1740.5	541,811	1740.0	1740.5	269,784	2,017,984	4,597,128	34.4
10.0	33.33	7.0	1740.0	537,363	1739.5	1740.0	267,570	2,001,424	4,327,344	32.4
9.5	34.91	7.5	1739.5	532,929	1739.0	1739.5	265,356	1,984,863	4,059,774	30.4
9.0	36.49	8.0	1739.0	528,511	1738.5	1739.0	263,142	1,968,302	3,794,418	28.4
8.5	38.07	8.5	1738.5	524,107	1738.0	1738.5	260,955	1,951,943	3,531,276	26.4
8.0	39.65	9.0	1738.0	519,719	1737.5	1738.0	258,768	1,935,585	3,270,321	24.5
7.5	41.24	9.5	1737.5	515,347	1737.0	1737.5	256,581	1,919,226	3,011,553	22.5
7.0	42.82	10.0	1737.0	510,991	1736.5	1737.0	254,421	1,903,069	2,754,972	20.6
6.5	44.40	10.5	1736.5	506,652	1736.0	1736.5	252,234	1,886,710	2,500,551	18.7
6.0	45.98	11.0	1736.0	502,329	1735.5	1736.0	250,074	1,870,554	2,248,317	16.8
5.5	47.56	11.5	1735.5	498,023	1735.0	1735.5	247,941	1,854,599	1,998,243	14.9
5.0	49.14	12.0	1735.0	493,733	1734.5	1735.0	245,808	1,838,644	1,750,302	13.1
4.5	50.72	12.5	1734.5	489,459	1734.0	1734.5	243,675	1,822,689	1,504,494	11.3
4.0	52.30	13.0	1734.0	485,202	1733.5	1734.0	241,542	1,806,734	1,260,819	9.4
3.5	53.89	13.5	1733.5	480,964	1733.0	1733.5	239,436	1,790,981	1,019,277	7.6

GW-11 Pond Capacity from Civil 3D - Half-Foot Intervals

Water Depth	Field Meas. ^[1]	Freeboard (to 1747 feet)	Elevation	Stage Area ^[2]	Stage Volume Elevation		Stage Volume ^[3]		GW-11 Pond Capacity	
					From	To	cu. feet	Gallons	cu. feet	Mgal
feet	feet	feet	feet amsl	sq. feet.						
3.0	55.47	14.0	1733.0	476,742	1732.5	1733.0	237,330	1,775,228	779,841	5.8
2.5	57.05	14.5	1732.5	472,539	1732.0	1732.5	227,475	1,701,513	542,511	4.1
2.0	58.63	15.0	1732.0	421,920	1731.5	1732.0	177,903	1,330,714	315,036	2.4
1.5	60.21	15.5	1731.5	275,276	1731.0	1731.5	96,336	720,593	137,133	1.0
1.0	61.79	16.0	1731.0	121,717	1730.5	1731.0	35,613	266,385	40,797	0.3
0.5	63.37	16.5	1730.5	30,813	1730.0	1730.5	5,184	38,776	5,184	0.0
0.0	64.95	17.0	1730.0	--	--	--	0	0	0	0

Notes:

Based on AutoCAD Civil 3D model of GW-11 pond.

{1} The Field Measurement is the measurement made from the top of the pond down along the 3:1 side slope to the water surface. This measurement is the primary input to the volume calculations. The measuring point is on the north side of the pond at the coordinates [26720824.99; 826795.16] and an elevation of 1750.54 feet amsl (NAD83 Nevada State Plane, East Zone, US Foot).

[2] The Stage Area is the area of water estimated by the Civil 3D model when pond is filled to the elevation specified in the "Elevation" column. The Stage Areas are separate outputs of the Civil 3D model and are not used to calculate the Stage Volumes.

[3] The Stage Volume is the volume for each of the 0.5-foot intervals specified in the "Stage Volume Elevation" column. Cumulatively adding the Stage Volumes equals the pond capacity reported in the "GW-11 Pond Capacity" column.

