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# WATER QUALITY MEMORANDUM

Utah Coal Regulatory Program

January 9, 2012

TO: Internal File

THRU: Steve Christensen, Permit Supervisor *src*

FROM: April A. Abate, Environmental Scientist III *AAA 1-9-2012*

RE: 2011 Second Quarter Water Monitoring, Nevada Electric Investment Corporation, Wellington Preparation Plant, C/007/0012, Task ID #3848

The Wellington Preparation Plant is currently in temporary cessation. No mining or coal processing activities currently take place there. Water-monitoring requirements are in Sections 7.23 and 7.31.2 through 7.31.22, and Tables 7.24-2 and 7.24-5 of the MRP.

**1. On what date does the MRP require a five-year re-sampling of baseline water data.**

Baseline parameters are collected in the year preceding permit renewal. The next scheduled permit renewal for the Wellington Preparation Plant is November 30, 2014.

**2. Were data submitted for all of the MRP required sites?**

**Streams and Ponds** YES  NO

The Permittee is required to analyze samples from streams at SW-1, SW-2A, SW-3, and SW-4 and from ponds at SW-5, SW-6, SW-7, and SW-8 for the parameters in Table 7.24-5, and to measure flow only at SW-2. In addition, samples from SW-4 and SW-5 are to also be analyzed for benzene, toluene, ethylbenzene, xylene, and naphthalene (BTEXN) and propylene glycol. Monitoring is done quarterly.

During the second quarter 2011, samples were collected from SW-1 and SW-2A. Flow only was measured from SW-2. None of the other monitoring locations reported flow. None of the pond samples reported any water during this monitoring period.

**Wells** YES  NO

The Permittee is required to analyze samples quarterly from GW-1, GW-3, GW-4, GW-6, GW-7, GW-8, GW-9, GW-9B, GW-10, GW-12, GW-13, GW-14, GW-15A, GW-15B, GW-16, and GW-17 for the parameters in Table 7.24-2, and to measure depth only at GW-2.

Wells GW-3, GW-12, GW-13 and GW-17 were not sampled. GW-3 was reported as dry. GW-12 was inundated with irrigation water and could not be accurately sampled. GW-13 and GW-17 were gauged for water level but reported as not having enough water in it to monitor. GW-3, GW-13 and GW-17 have consistently been reported as dry or not producing enough water to collect samples and are not meeting the objectives of the groundwater sampling program.

**UPDES** YES  NO

Six UPDES permitted outfalls at the Wellington Preparation Plant are monitored monthly: #UTG040010-003, 004, 005, 006, 007, and 008. None of the UPDES sites reported flow during the second quarter 2011.

**3. Were all required parameters reported for each site?**

**Streams and Ponds** YES  NO

**Wells** YES  NO

**UPDES** YES  NO

Not applicable

**4. Were any irregularities found in the data?**

**Streams and Ponds** YES  NO

**Wells** YES  NO

The following table summarizes the parameters that were outside of at least two standard deviations for this quarter:

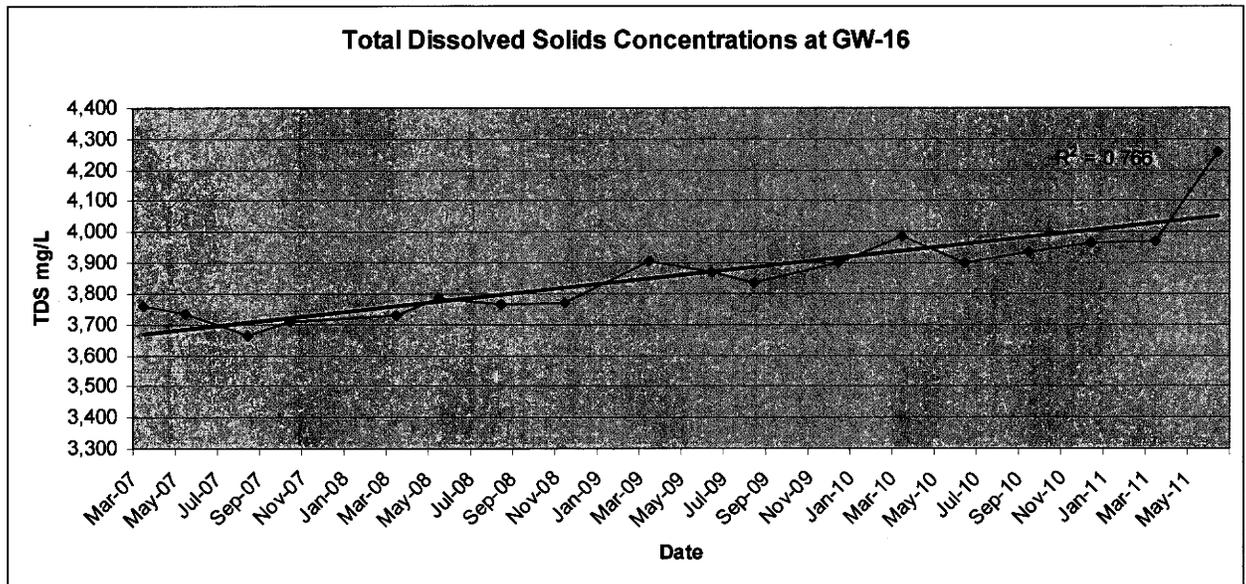
Well	Parameter	Concentration mg/L	Std Deviation	Mean mg/L
GW-6	D-Mg	289.04	2.28	259.24
GW-9B	D-Mg	495.1	2.31	678.61
GW-9	Bcrb CaCO3	650	2.08	686.11
GW-14	T-Se	80 ug/L	2.04	29.58 ug/L
GW-15A	D-Mg	290.52	2.59	190.16
GW-15A	D-Na	674.73	2.23	389.95

GW-15A	T-Alk	639	2.70	515.71
GW-15A	Bcrb CaCO3	639	2.17	513.17
GW-15B	T-Alk	523	2.30	479.82
GW-15B	Bcrb CaCO3	523	2.34	474.17
GW-16	TDS	4,258	2.79	3,812.28

Parameters that were flagged as being outside two standard deviations were mainly the typical parameters associated with hard water and salt. In general, these were the groundwater samples that have historically shown indicators of poor groundwater quality. The groundwater quality in the area is considered poor given the abundant sedimentary rock and the high concentrations of total dissolved solids (TDS) found along this reach of the Price River. Groundwater monitoring wells GW-15A and GW-15B were intended to be representative of alluvial groundwater from upgradient areas of the permit boundary.

GW-14: Total selenium was detected this month at a concentration of 80 ug/L as compared to previously being non-detected. The state standard for total selenium in groundwater is 50 ug/L, which was exceeded this month. It should be noted that concentrations of dissolved selenium have not been detected from this well since 2006.

GW-16: represents groundwater at the Clear Water Dike. TDS was reported at a higher than average concentration this quarter of 4,248 mg/L. There is no state standard for TDS in groundwater.



**UPDES**

YES  NO

Not Applicable. No discharges were reported from any of the UPDES monitoring locations.

**5. Did the Permittee make a timely submittal of all data, including initially missing data, and satisfactorily explain irregular data?** YES  NO

**6. Does the Mine Permittee need to submit more information to fulfill this quarter's monitoring requirements?** YES  NO

The Permittee has committed to making some modifications to wells that do not meet the objectives of the Probable Hydrologic Consequences (PHC) section of the Wellington water monitoring program.

**7. Follow-up from last quarter, if necessary.**

The Wellington Prep Plant permit transfer for the will not be going through. NEICO is to remain the permit holder for the time being.

**8. Based on your review, what further actions, if any, do you recommend?**

The detection of total selenium at GW-14 above groundwater quality standards appears to be an anomaly based on some subsequent data that was recently provided to the Division. Nevertheless, this location should continue to be monitored.