0003

#3229

WATER QUALITY MEMORANDUM

Utah Coal Regulatory Program

June 1, 2009

TO: Internal File

THRU: James D. Smith, Permit Supervisor 06/08/09

FROM: April A. Abate, Environmental Scientist II 6/1/2009

RE: 2009 First Quarter Water Monitoring, Nevada Electric Investment Corporation, Wellington Preparation Plant, C/007/0012, Task ID #3229

The Wellington Preparation Plant is currently in temporary cessation. No mining or coal processing activities currently take place there, nor is the site in active reclamation. 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 to be collected in the year preceding permit renewal. The upcoming renewal submittal is due 08/10/09 and the next renewal is due 12/10/09. Five-year sampling of all baseline parameters was performed this quarter in accordance with the MRP prior to renewal.

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

There is no spring or in-mine monitoring at this site.

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 first quarter 2009, baseline sampling of all surface water parameters in accordance with Table 7.24-5 were required. Most baseline parameters were collected; however some were missed. The missed parameters are: total aluminum, total arsenic, and total zinc.

SW-3, SW-4, and all the ponds were dry during the first quarter 2009.

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. In addition, samples from GW-4 and GW-6 are to also be analyzed for BTEXN and propylene glycol. BTEXN and propylene glycol were not detected in GW-4 or GW-6 during this quarter.

Wells GW-3, GW-13 and GW-17 were gauged but not sampled. It is presumed that similar to the fourth quarter 2008, there appears to be insufficient water to collect samples for analyses at these wells. Based on a review of historical data, monitoring well GW-3 has not been productive since 2003, well GW-13 has only produced sporadically over the past several years, and GW-17 has not been producing samples since 2007.

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 first quarter 2009.

3. Were all required parameters reported for each site?

Streams and Ponds YES ☐ NO ☒

Dissolved lead was not sampled during this round of sampling. Dissolved lead has not been detected in either stream sample since the 1980s, so it is not of a major concern.

Wells YES ☒ NO ☐

Static water level was measured but inflow was not sufficient to allow purging and sampling at GW-3, GW-13, and GW-17 during the first quarter 2009.

UPDES YES ☒ NO ☐

4. Were any irregularities found in the data?

Streams and Ponds YES ☐ NO ☒

In SW-1, the Price River sample collected above the Prep Plant, total dissolved solids (TDS) was detected at a concentration of 1,366 parts per million (ppm). The standard for TDS for that stream reach is 1,200 ppm. The previous quarter TDS result was 2,761 ppm. Additionally, oil and grease was detected at a concentration of 6 ppm in this sample during this most recent sampling. Previous data has indicated that the last time oil and grease was detected from this sample location was in 2002. The action limit for oil and grease under the Wellington UPDES permit is 10 mg/L.

Wells YES ☒ NO ☐

Sodium, bicarbonate, and total iron were shown to be outside of at least two standard deviations in monitoring well sample MW-9B. Sodium and bicarbonate appear to be at typical concentrations seen in previous rounds of data. Total iron however, seems to have spiked significantly in this sample. Monitoring well GW-15A showed total iron and dissolved sodium at levels outside of two standard deviations. Similar to MW-9B, the sodium levels appear to be the norm, but total iron was also significantly higher in this quarter's sampling than previous quarters. Chart 1 shows the total iron concentrations during the March 2009 sampling event for all monitoring wells.

Baseline parameters are collected on a 5-year basis. The baseline data collected from the monitoring wells indicate that most of the parameters were not detected or only detected in trace amounts. Dissolved aluminum was the parameter showing the most frequent detections as shown on Chart 2. Dissolved aluminum is a secondary inorganic contaminant regulated by EPA drinking water standards. The maximum contaminant level for this parameter established by the EPA is between 0.05-0.2 mg/l. GW-9B, GW-15A, GW-15B, and GW-16 all exceeded the standards. However, the highest concentration was detected in GW-9B at a concentration of 3.51. The last time dissolved aluminum was sampled was in 2004 where it was not detected in monitoring well MW-9B.

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 ☐

Baseline parameters for total aluminum, total arsenic, and total zinc should be collected during the next quarter round of sampling for surface water samples.

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

- Wells GW-3, GW-13 and GW-17 have not been producing enough water to collect adequate samples. A performance evaluation of these wells is recommended to identify any issues associated with these wells, such as a drop in water levels or silted in pumps. Assuming the pumps are set in the wells, routine maintenance to the pumps may be needed or the pumps may need to be set lower.

- Surface water sample SW-1, which is collected from the Price River above the Prep Plant area had a detection of oil and grease at a concentration of 6 ppm. Even though this result is within the UPDES permit limitation (the standard is used as guidance only), the operator should determine if there is a source for this oil and grease and whether or not it is originating on or off-site.

- Total iron levels appear to be elevated in several of the groundwater monitoring wells. Total iron concentrations for most of the wells were in line with previous results for each respective well. However, spikes in total iron were shown in monitoring well MW-9B and MW-15A this quarter. Second quarter 2009 sampling results should be evaluated for these wells to determine whether or not these results are anomalous. If elevated total iron concentrations persist, this issue should be reported to the Department of Water Quality.

- Dissolved aluminum was also detected in several of the groundwater monitoring wells. This parameter is one of the baseline parameters that are only sampled every five years.

- Dissolved aluminum is a secondary inorganic contaminant regulated by EPA drinking water standards. The maximum contaminant level for this parameter established by the EPA is between 0.05-0.2 mg/l. Four wells exceeded the dissolved aluminum EPA standards with MW-9B showing a significantly higher concentration compared to the other wells. Similar to the previous comment regarding dissolved iron, the division recommends a resampling of the dissolved aluminum parameter for the second quarter. This would help to establish a more complete data set and also to determine whether or not the groundwater conditions

in MW-9B were anomalous during the first quarter.

8. Follow-up from last quarter, if necessary.

None

Chart 1.

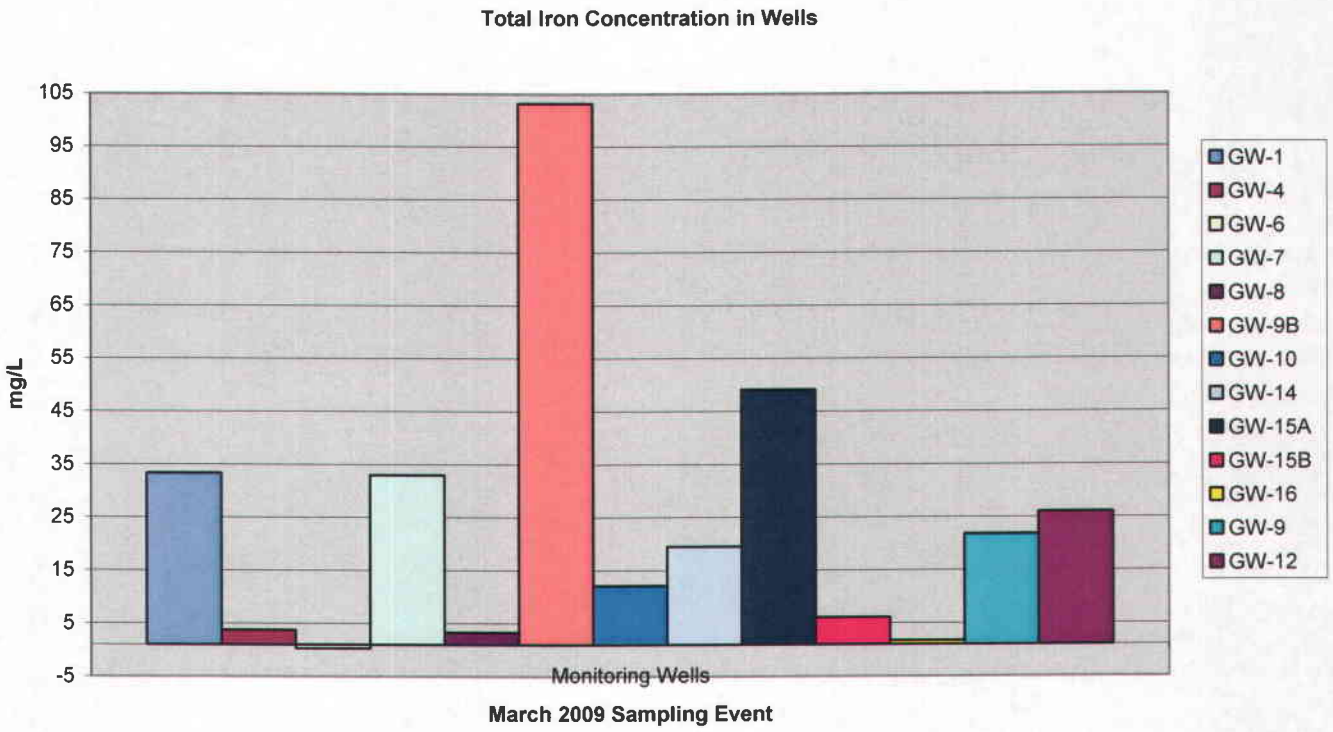
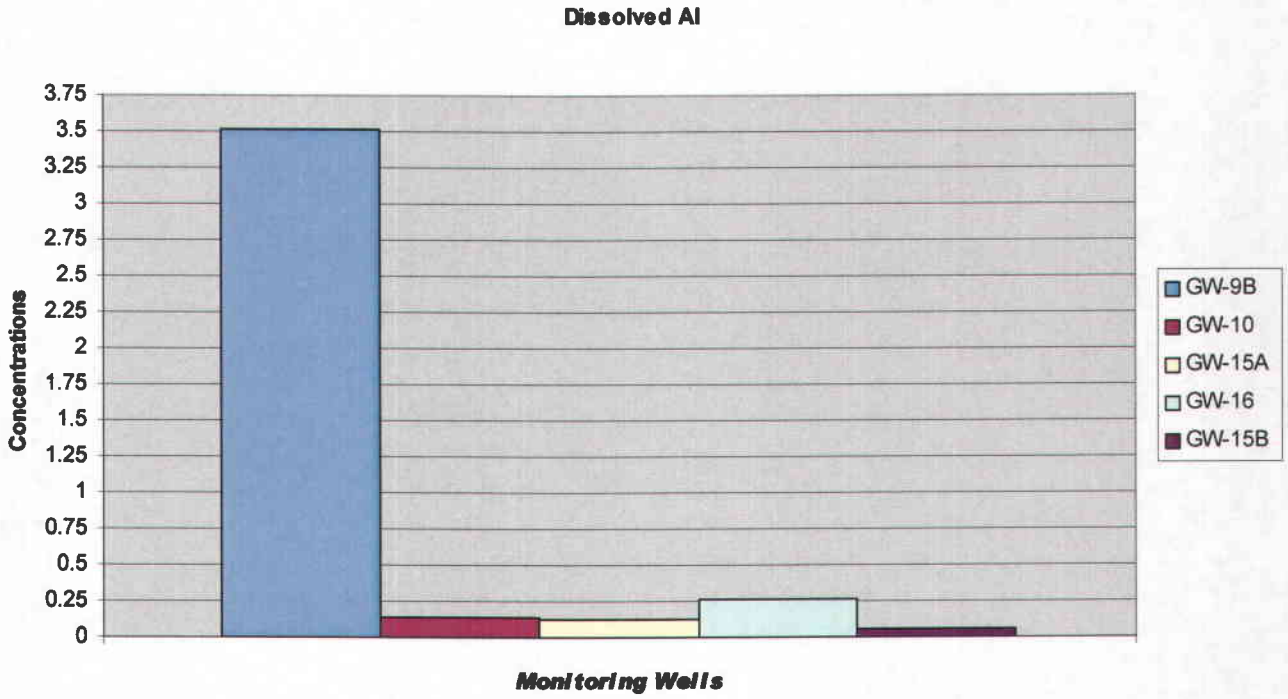


Chart 2.

Chart 2.



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