

# WATER QUALITY MEMORANDUM

Utah Coal Regulatory Program

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September 30<sup>th</sup>, 2015

TO: Internal File

THRU: Daron Haddock, Coal Program Manager

FROM: Steve Christensen, Environmental Scientist



RE: 2015 1<sup>st</sup> Quarter Water Monitoring (WQ15-1), Price River Terminal, LLC.,  
Wellington Preparation Plant, C/007/0012, Task ID #4847

The Wellington Preparation Plant is currently in temporary cessation of coal mining or reclamation operations. However; trans-loading of oil is currently being conducted at the site by Price River Terminal, LLC (the Permittee). 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. Historically, baseline sampling has occurred during the 1<sup>st</sup> quarter of the permit renewal year. However; the Division and the Permittee have discussed that data obtained during late 2<sup>nd</sup> quarter or 3<sup>rd</sup> quarter would be more representative of baseline conditions. As a result, the Permittee collected baseline data in 3<sup>rd</sup> quarter of 2014. The next baseline collection event would be in the 3<sup>rd</sup> quarter of 2019.

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

### Streams and Ponds

YES  NO

The surface water monitoring plan requires sampling of nine surface water sites (SW-1, SW-2, SW-2A, SW-3, SW-4, SW-5, SW-6, SW-7 and SW-8). The required water quality parameters are provided in Table 7.24.5 with the exception of SW-2. Flow is the only data collected at monitoring site SW-2. Surface water monitoring sites are no longer monitored for BTEX-N. The reduction in monitoring at these sites was the result of inactivity at the site (Task ID #4253). Four of the sites are retention ponds (SW-5, SW-6, SW-7 and SW-8).

Water quality data was obtained from three sites: SW-1, SW-2 and SW-2A. The remaining monitoring locations reported no flow.

### Wells

YES  NO

The Permittee is required to analyze samples quarterly from 16 well sites. GW-12 is no longer required for monitoring (since 1<sup>st</sup> quarter 2012. Mid-term). GW-1, GW-3, GW-4, GW-6, GW-7, GW-8, GW-9, GW-9B, GW-10, 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.

Monitoring well GW-12 is no longer an actively monitored site. It was dropped during the most recent mid-term review (Task ID #4253). It was last sampled during the 4<sup>th</sup> quarter of 2012.

Data was submitted for all of the required monitoring well sites. Monitoring well GW-3, did not have enough water to collect a sample (i.e. they were reported dry).

**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 discharge points reported a discharge this quarter.

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

**Streams and Ponds**

YES  NO

**Wells**

YES  NO

**UPDES**

YES  NO

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

**Streams and Ponds**

YES  NO

Surface water monitoring site SW-1 had reported an elevated chloride (Cl) concentration outside of two standard deviations from the mean in the 1<sup>st</sup> quarter of 2014 and slightly elevated nitrate levels the 3<sup>rd</sup> quarter of 2014. No irregularities were reported for SW-1 during the 4<sup>th</sup> quarter of 2014. However; elevated concentrations for D-Mg, Cl, T-hardness and total cations were reported this quarter.

Surface water monitoring site SW-2A had produced several parameters slightly outside of two standard deviations from the mean during the 1<sup>st</sup> quarter of 2014: dissolved calcium (D-Ca) 265.9 ppm, dissolved magnesium (D-Mg) 164.12 ppm, Cl 113 ppm, sulfate (SO4) 1,725 ppm, total hardness (T-Hardns) 1,340 ppm, total dissolved solids (TDS) 3,096 ppm and total anions (T-Anis) of 45.81 milliequivalents per liter (meq/l). All of the concentrations for the aforementioned parameters were back to within two standard deviations from the mean in the 2<sup>nd</sup>

quarter of 2014. An elevated specific conductance concentration was reported during the 3<sup>rd</sup> quarter of 2014. No irregularities were reported for SW-2A the 4<sup>th</sup> quarter of 2014. However; slightly elevated concentrations were reported this quarter for Cl, D-Mg and field conductivity.

**Wells**

YES  NO

Monitoring well GW-1 reported slightly elevated concentrations for D-K, Cl and TDS the 4<sup>th</sup> quarter of 2015. The Cl concentration was again slightly elevated along with D-K and TDS.

Monitoring well GW-10 reported a slightly elevated concentration for total selenium the 4<sup>th</sup> quarter of 2014. The reported concentration of 60 ug/l was 3 standard deviations from the mean of 21.47 ug/l. The selenium concentration reported this quarter was within historic ranges. However; a reduced bicarbonate concentration was reported.

Monitoring well GW-13 reported a slight reduction in D-K and an increase in concentration for D-Na during the 4<sup>th</sup> quarter of 2014. Those concentrations returned to historical ranges this quarter. A reduction in the total anions value was reported.

Monitoring well GW-14 reported elevated concentrations outside of two standard deviations from the mean for D-K, T-Alk, CaCO<sub>3</sub> and T-Se the 4<sup>th</sup> quarter of 2014. The concentrations returned to historic ranges this quarter.

Monitoring well GW-15A reported elevated concentrations for numerous parameters: field conductivity, D-Mg, D-Na, Cl, T-Alk, T-hardness, TDS, total cations and total anions.

Monitoring GW-16 reported slightly reduced concentrations for D-Mg, D-Na, SO<sub>4</sub> and total-hardness. An increase in concentration was reported for bicarbonate.

Monitoring well GW-3 has not had a measurable water level since June of 2009.

Monitoring well GW-4 had previously reported a decrease in dissolved calcium (D-Ca), dissolved magnesium (D-Mg) and Total Anions (T-Anis) in the 1<sup>st</sup> quarter of 2014. A reduction in bicarbonate (CaCO<sub>3</sub>) was during the 2<sup>nd</sup> quarter of 2014. A reduced concentration for dissolved calcium was reported for the last two quarters (3<sup>rd</sup> and 4<sup>th</sup> quarter of 2014). Concentrations for all required parameters returned to historical ranges this quarter.

Significantly lower concentrations were reported for D-Ca, D-Mg, D-K, D-Na for monitoring well GW-8.

A slightly elevated concentration of CaCO<sub>3</sub> was reported for monitoring well GW-6 the 4<sup>th</sup> quarter of 2014. All reported concentrations were within historical ranges this quarter.

A concentration of 50 ug/L was reported for total selenium during the 4<sup>th</sup> quarter of 2014 for

monitoring well GW-7. The selenium concentration returned to historical ranges this quarter.

A reduction in D-Na and CaCO<sub>3</sub> was reported for monitoring well GW-9 during the 4<sup>th</sup> quarter of 2014. A reduced concentration for bicarbonate was reported again this quarter.

Monitoring well GW-9B reported a reduction in concentration for D-Mg, dissolved sodium (D-Na) and total cations (T-Cats) during the 3<sup>rd</sup> quarter of 2014. A continued reduction in D-Na was produced during the 4<sup>th</sup> quarter of 2014 and again this quarter.

**UPDES**

YES  NO

**5. Does the Mine Permittee need to submit more information to fulfill this quarter's monitoring requirements?**

YES  NO

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

NA

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

NA