March 19, 2013

Randy Vranes
P4 Production, LLC
P.O. Box 816
Soda Springs, Idaho 83276

RE: Second Modified Point of Compliance Determination for the
Blackfoot Bridge Mine

Dear Mr. Vranes:

I have enclosed the Second Modified Point of Compliance (POC) Determination for the
Blackfoot Bridge Mine. These modifications are necessary due to conditions
encountered during well installation and infrastructure construction.

Please call me at (208) 373-0502 or Margie English at (208) 373-0306, should you have
any questions regarding this letter.

Sincerely,

Barry N. Burnell
Water Quality Division Administrator

BNB:ME:dls

cc: Jeff Cundick, USBLM-Pocatello
    Bruce Olenick, DEQ-Pocatello
    Ed Hagan, DEQ-Boise
    Doug Conde, DEQ-Boise
    Doug Tanner, DEQ-Pocatello
    Margie English, DEQ-Boise
Idaho Department of Environmental Quality
Second Modified Point of Compliance Determination

March 20, 2013

Project Name: Proposed Blackfoot Bridge Mine, Caribou County, Idaho

Applicant: P4 Production, L.L.C.

Background: P4 Production, L.L.C. ("P4") submitted a revised Request for Setting Points of Compliance application to the Idaho Department of Environmental Quality ("DEQ") on July 12, 2010. Supplemental information to be incorporated into the application was received from P4 on August 6, 2010. DEQ reviewed the application in accordance with the Ground Water Quality Rule (IDAPA 58.01.11, hereafter referred to as the Rule) and determined it to be complete in accordance with IDAPA 58.01.11.401.02.a on August 12, 2010, in a letter to Mr. David Farnsworth (the applicant). DEQ also reviewed and considered other material and information related to the proposed activity, including but not limited to the following:

- Draft Environmental Impact Statement (EIS), Blackfoot Bridge Mine, Caribou County, Idaho (July 2009)
- Blackfoot Bridge Mine Environmental Monitoring Plan (September 2010)
- Water Management Plan Proposed Blackfoot Bridge Mine, Caribou County, Idaho (November 2010)

Subsequently, DEQ contacted and sought recommendations regarding proposed points of compliance (POCs) from other state and federal agencies that have regulatory authority over mining activities in accordance with IDAPA 58.01.11.401.05. These agencies included the U.S. Environmental Protection Agency, U.S. Bureau of Land Management (BLM), Idaho Department of Water Resources, and Idaho Department of Lands. Interagency meetings to discuss the Blackfoot Bridge Project and proposed POCs were held on September 28, 2010, and October 19, 2010.

On June 14, 2011, DEQ issued a Point of Compliance ("POC") Determination with respect to the proposed Blackfoot Bridge Mine pursuant to the Rule (IDAPA 58.01.11.401). On July 19, 2011, P4 filed a Petition for a Contested Case with the Idaho Board of Environmental Quality challenging the June 14, 2011, determination.

On November 4, 2011, DEQ and P4 entered into a Settlement Agreement resolving all issues raised in P4's contested case. On December 22, 2011, DEQ issued a Modified POC Determination that reflected the Settlement Agreement. The Modified POC Determination (a) set an alternative approach to establishing background ground water quality; (b) set new requirements for the timing of well installation, data collection and submittal, and other matters that were agreed to in the Settlement Agreement; (c) changed the discharge of the drainage system associated with the Water Management Ponds from a POC to an indicator well; and (d) changed the description of several of the POC wells.
Since the December 22, 2011 Modified POC Determination, POC and other wells have been drilled. Data collected from these wells has compelled DEQ to again modify the POC determination.

**Purpose of Second Modified POC Determination:** DEQ is issuing this second Modified POC Determination to (a) reflect P4’s decision to not install or use as a POC well MW-20W (that would have been located on the north bank of the Blackfoot River) and to use other POC wells for the area and contaminants at issue; (b) set the location and sampling of POC wells and Indicator wells associated with the Water Management Ponds based on new information acquired since the December 22, 2011 Modified POC Determination; (c) set sampling frequencies for all wells; and (d) accurately describe the location and identification of all wells.

**Merger of POC Determinations:** For the convenience of DEQ, P4, and other interested parties, this second Modified POC Determination reflects the original June 14, 2011, POC Determination as it has been modified by the December 22, 2011 Modification and this second Modification. DEQ’s intent is that there will now be only this one document that sets out all the critical components of DEQ’s POC determination regarding the Blackfoot Bridge Mine. (The second Modified POC Determination does, however, reference P4’s Request for a POC and certain figures and maps that are contained in other documents, and therefore, reference to other documents will still be necessary to some degree.) To the extent there is a conflict between this document and the prior DEQ POC Determinations, this document shall control.

**Ground Water Potentially Affected:** Ground water is present in multiple aquifers below and adjacent to the proposed mine; ground water of concern primarily occurs in the alluvium/colluvium, Dinwoody Formation, Rex Chert Member of the Phosphoria Formation, and the Wells Formation.

**Project Location:** This project is located in the following sections of Township 7 South, Range 42 East: SE ½ of the NE ¼ and the SE ¼ of Section 22; W ½ of Section 23; W ½ of the SE ¼, W ½ of the NE ¼, and W ½ of Section 26; N ½ of the NE ¼, SE ¼ of the NE ¼, and the NE ¼ of the NW ¼ of Section 27; and W ½ of the SE ¼, W ½ of the NE ¼, E ½ of the SW ¼, and the NW ¼ of Section 35.

**Authorities:** Pursuant to the provisions of subsection 401.01 of the Rule, DEQ has authority to set a point of compliance or points of compliance at the request of a mine operator. The POC shall be set as close as possible to the boundary of the mining area, taking into consideration the relevant factors set forth in Subsection 401.03.a through 401.03.h of the Rule, but in no event shall the POC(s) be within the boundary of the mining area.

**Points of Compliance**

The POCs are located within the Blackfoot River watershed and are identified in Table 1 and Appendix A. Currently, there are 16 POC wells, as defined by this POC determination, at the Blackfoot Bridge Mine. In addition, there are 10 other existing wells that are required to be monitored under this POC determination for purposes of assessing ground water conditions. Any POC or required monitoring wells that are destroyed during mine construction or operation activities shall be reinstalled as soon as practicable, as close to the original well locations as
feasible. DEQ shall be notified if any well identified in this POC determination is damaged or destroyed, and also when any of the wells identified herein are repaired and/or replaced.

**North Pit and Mid-Pit**

The proposed POCs in the P4 application for a POC determination were determined to be inadequate north of the North Pit between MW-17W and MW-14W (see Appendix A, Figure A1, for proposed monitoring well locations from the POC application). Figure A2 (Appendix A) identifies this additional area of concern between the north end of the mine and the Blackfoot River. The base map for Figure A2 shows the maximum plume extent modeled for the "Proposed Action" as described in the Draft EIS and Final EIS. This figure was selected to represent the area of additional concern because mining of the North Pit will occur over several years and mine reclamation and final cover placement under Alternative 1A (the selected alternative) cannot occur instantaneously after the cessation of mining or overburden placement in this area of the mine.

Figure A2 presents the modeled iso-contours for selenium concentrations in the ground water of the Wells Formation and shows that the predicted pathway for the ground water to move toward the Blackfoot River lies between the existing monitoring wells MW-17W to the east and MW-14W to the west. Therefore, three additional monitoring wells (POCs) were drilled (MW-22B, MW-23W, and MW-24W) in the basalt and Wells Formation at locations distributed between the existing wells MW-17W and MW-14W to coincide with the modeled selenium plume geometry (Appendix A, Figure A3). Although the Mine Modification of May 2012 eliminated the Northwest Overburden Pile, the monitoring wells identified earlier in this paragraph were located and drilled based on this prediction.

The model predicts the highest selenium concentrations in the Wells Formation nearest the mining area boundary will occur in the area now monitored by POC wells MW-22B, MW-23W, and MW-24W. The probability that preferential ground water pathways (narrow width and/or at discreet depths) exist between the sources of selenium and the Blackfoot River is high. These three monitoring wells are the warning system to protect the Blackfoot River should the modeling predictions prove to be nonconservative.

Although monitoring well MW-20 was proposed as a POC in P4's July 10, 2010, Request for Setting Points of Compliance application—and was included in the original June 14, 2011, POC determination and the December 22, 2011, POC Modification—P4 recently informed DEQ that they are no longer seeking permission to install this well on private property on the north bank of the Blackfoot River as depicted on Figure A3 in Appendix A. The location for proposed well MW-20 had been chosen based on predicted manganese exceedances in the Wells Formation north of the Blackfoot River. Since the proposed MW-20 location is not available, the existing monitoring wells located on the north edge of the mine property (MW-17W, MW-14W, MW-22B, MW-23W, and MW-24W) shall be the POC locations for manganese. Reference to well MW-20 has been removed from Table 1.

POC locations MW-13A, MW-14W, and MW-17W monitor ground water in the alluvium and the Wells Formation to the northwest and north of the North Pit. POC wells MW-18Da and MW-18Db monitor ground water in the Dinwoody Formation east-northeast of the North Pit.
South Pit

POC wells MW-2R and MW-3A monitor ground water in the Rex Chert Member of the Phosphoria Formation and the alluvium northeast of the South Pit.

Wells MW-39W and MW-40W are a dual well completion, installed in November 2011, which monitor deep and shallow intervals of the Wells Formation, respectively, between the northern boundary of the Conda/Woodall Mountain Mine and the southern boundary of the South Pit. These wells were installed as a joint effort between P4 and the J.R. Simplot Co. pursuant to requirements of both the June 14, 2011, POC Determination (for P4) and the Conda/Woodall Mountain Mine Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Remedial Investigation (for the J.R. Simplot Co.). Although these wells are not POCs, they comprise a necessary monitoring point to fulfill the requirements identified in subsection 401.04.a.i of the Rule, specifically determining upgradient ground water quality that may be impacted by past releases from the Conda/Woodall Mountain Mine.

Water Management Ponds

Eight monitoring wells were drilled (Appendix A, Figure A3) by P4 since issuance of the June 10, 2011, POC Determination. Six of the new wells are POCs, including wells MW-25T, MW-26T, MW-27T, and MW-28T on the north side of the Water Management Ponds and wells MW-19T and MW-31T on the west side of the ponds. Monitoring wells MW-29T and MW-30T were installed south of the ponds but are not POCs as explained below. Other monitoring wells and piezometers near the Water Management Ponds and depicted in Figure A3 were considered but cannot serve as POCs for the Water Management Ponds because they would not provide representative samples of the shallowest ground water flowpaths due to their depths and completion intervals.

Monitoring wells (MW-29T and MW-30T) were installed south of the Water Management Ponds to determine whether there is a component of southward flow in the shallow ground water (Appendix A, Figure A4). Although a strong southward flow component was not anticipated based on information from the existing well network, the effects of the pond construction on the shallow aquifer are difficult to predict. DEQ reviewed the ground water elevation data provided by P4 for January and May of 2012 from the new shallow wells around the Water Management Ponds presented in a Well Installation & Initial Monitoring Report (July 2012). On the basis of the ground water elevation data from the new wells, DEQ concluded there was no component of southward flow in the uppermost aquifer beneath the Water Management Ponds in 2012, which was a low water year. If on the basis of ground water elevation data collected in the future, DEQ determines that ground water flow directions in the shallow aquifer change to include a southerly flow component, then DEQ will incorporate the new wells south of the Water Management Ponds as additional POCs in accordance with the Rule (IDAPA 58.01.11.08). Ground water elevations shall be measured at least twice a year, spring and fall, to verify ground water flow directions in the shallow aquifer.

The ground water drain system under the Water Management Ponds will capture leakage from the ponds if the water table is high enough for water to flow from the drainage pipe system installed as part of the construction of the ponds. Under these conditions, the leakage will not move downward to the completion intervals of the older, deeper monitoring wells or piezometers within the mine area. Therefore, when ground water elevations are high, water will flow in the
ground water drainage system under the Water Management Ponds to the perimeter of the ponds along the north and northwest sides of the pond system. Discharge from this drain system was identified as an indicator well in the December 22, 2011, Modification to the POC Determination but construction issues negated the effectiveness of the system for monitoring.

Lateral monitoring wells were constructed in November 2012 as indicator wells (Appendix A, Figure A4) to observe any changes in ground water quality in this seasonal, shallow flow system. Two lateral monitoring wells (WMP-IW5 and WMP-IW6) were installed along the northwestern flank of Water Management Pond 1. Two lateral monitoring wells (WMP-IW3 and WMP-IW4) were installed along the northern flank of Water Management Pond 1. Two lateral monitoring wells (WMP-IW1 and WMP-IW2) were installed along the northern flank of Water Management Pond 2. These lateral monitoring wells are required indicator wells under this determination and will be sampled when adequate water is present for sampling. Because the specific objective is to capture ground water flow in the shallowest flow paths, these wells will often be dry or have too little water to sample except in the spring and early summer months when the ground water table is high.

**Sampling Frequency Required**

P4 shall use reasonable efforts to collect 12 independent background ground water quality samples, collected on a monthly basis, from all POC wells, including the new wells, prior to (a) for the wells associated with the Water Management Ponds, placing water that has infiltrated through the seleniferous overburden in the East Overburden Pile and been collected by the Seep Management System (“Seepage Water”) in the Water Management Ponds; and (b) for all other wells, P4 beginning the routine, ongoing stripping of seleniferous overburden from the mine pits solely in preparation for ore extraction, as that activity is described in Section 5.3 of the June 2011 Revised Blackfoot Bridge Mine and Reclamation Plan. The events described in (a) and (b) shall hereinafter be referred to as “Described Events”. In the event P4 is unable to collect 12 independent samples from one or more wells prior to the Described Events, DEQ shall establish background levels for the applicable constituents for all POC wells using the sample results P4 is able to collect.

P4 shall submit a data summary report of all validated ground water quality data collected from existing and new monitoring wells within the Blackfoot Bridge Mine project area no later than 60 days after P4 collects the 12 background samples or 60 days after the start of stripping seleniferous overburden at the North Pit in preparation for ore extraction as described above, whichever first occurs. The report shall identify proposed background concentrations for those constituents identified as water analysis parameters in this Determination using the DEQ Statistical Guidance for Determining Background Ground Water Quality and Degradation (http://www.deq.idaho.gov/media/471696-guidance_statistical_degradation.pdf). DEQ shall review the report and make a determination of background concentrations using the DEQ statistical guidance document. Prior to submitting the data summary report, P4 shall provide to DEQ, on a quarterly basis, validated sample results collected during the preceding quarter.

During the time period when P4 is collecting background samples as described above, P4 may place stormwater in the Water Management Ponds. During any month that P4 pumps stormwater to the Water Management Ponds prior to obtaining 12 background samples, P4 shall obtain and analyze a sample of water being pumped to the Water Management Ponds for the following
constituents: total dissolved solids, sulfate, aluminum, antimony, cadmium, chromium, iron, manganese, nickel, selenium, and zinc. P4 shall submit the sample results to DEQ as soon as validated results are available, not to exceed 120 days following sampling.

For POC wells that already have the required 12 sample background data set, pre-mining (i.e., prior to the Described Event) sampling will occur quarterly for the wells nearest the Blackfoot River (i.e., MW-13A, MW-14W, MW-17W) and semi-annually for other wells (i.e., MW-2R, MW-3A, MW-18Da and MW-18Db).

Once Described Event “b” occurs in the North Pit, the sampling frequency for wells MW-13A, MW-14W, and MW-17W shall increase to monthly, and the sampling frequency for wells MW-18Da and MW-18Db shall increase to quarterly. In addition, the three new POC wells along the north mine boundary (i.e., wells MW-22B, MW-23, and MW-24) shall be sampled monthly once Described Event “b” occurs in the North Pit. When Described Event “b” occurs in the South Pit, the sampling frequency for wells MW-2R and MW-3A shall increase to quarterly.

Sampling at MW-14W, MW-17W, MW-22B, MW-23W, and MW-24W may be increased to weekly if DEQ determines that ground water concentration trends are not consistent with modeling completed for the EIS. The weekly sampling of the noted wells would only be required if the elevation of ground water in that well is higher than the elevation of the surface water in the Blackfoot River nearest the monitoring well. This sampling is needed because of the short ground water travel time from the northern boundary of mining activities to the Blackfoot River. Frequent sampling will enable P4, DEQ, and BLM to closely monitor the hydraulic gradient between the North Pit and the river and to sample the required POCs when ground water flow is toward the river. Observation of ground water gradients and trends in the hydrochemistry, primarily selenium, will enable P4, DEQ, and BLM to react in a timely fashion if the trends indicate the possibility that ground water could impact the river at concentrations greater than those predicted by the modeling.

The sampling schedule for the POC monitoring wells MW-25T, MW-26T, MW-27T, and MW-28T shall be monthly once Described Event “a” occurs. The remaining POC monitoring wells, MW-19T and MW-31T, and the required monitoring wells MW-29T and MW-30T do not require sampling unless DEQ determines that ground water flow directions change toward the west or south and then the sampling frequency at one or more of those wells (as determined by DEQ) shall be monthly. Ground water elevations in the monitoring wells shall be reported to DEQ monthly from April through July for a minimum of the first two years of operation of the ponds.

The required sampling schedule for the upgradient monitoring wells, MW-39W and MW-40W, will be determined following review of the baseline data set.

Monitoring of all wells will continue as long as necessary to ensure there is no injury to current or projected future beneficial uses of ground water and no violation of water quality standards applicable to any interconnected surface waters. DEQ and BLM will review the monitoring locations, sampling schedule, and parameter list annually and determine if changes in the monitoring plan and/or POCs are needed. In addition, P4 may submit a written request for a reduced sampling frequency or other change in the monitoring requirements. It is P4’s obligation to present the data and an analysis of the data to DEQ supporting any request for change in the
POCs or monitoring requirements. Modifications to the POCs and/or monitoring requirements described herein will be in accordance with the Rule (IDAPA 58.01.11.08).

**Water Analysis Parameter List**

All new wells must be sampled for common ions on a quarterly basis until all background water quality samples have been collected as specified in the *Sample Frequency Required* section. The following laboratory-based common ion analyses are required: sulfate, chloride, calcium, magnesium, potassium, carbonate, bicarbonate, fluoride, and sodium. After the minimum data set has been collected, P4 may submit the data and analysis of the data to DEQ requesting a reduction in the sampling frequency of the new wells for the common ions. With the exception of sulfate, future sampling for common ions is anticipated to be needed only in select cases where the general chemistry of the ground water is suspect because of anomalies in the data for the POC parameters.

P4 must collect the following field parameters from all wells when sampling: depth to water, pH, electrical conductivity, oxidation reduction potential, dissolved oxygen, and temperature. The following laboratory analyses are required from all wells: total dissolved solids, sulfate, aluminum, antimony, cadmium, chromium, iron, manganese, nickel, selenium, and zinc. The metal analyses shall include both total and dissolved fractions. Required well monitoring locations and frequencies are included in Table 1.
<table>
<thead>
<tr>
<th>Well ID (POC wells unless otherwise noted)</th>
<th>Formation</th>
<th>Location</th>
<th>Sampling Frequency Once Baseline Sampling is Complete</th>
</tr>
</thead>
</table>
| MW-13A                                   | Alluvium  | Northwest of NW Overburden Pile | Quarterly, then monthly  
| MW-14W                                   | Wells Formation | Northwest of NW Overburden Pile | Quarterly, then monthly or weekly  
| MW-17W                                   | Wells Formation | N of North Pit | Quarterly, then monthly or weekly  
| MW-22B, -23W, and -24W                   | Basalt & Wells Formation | North of North Pit | Monthly, or weekly  
| MW-18Da                                  | Dinwoody (shallow) | Northeast of North Pit | 2 times/year, then quarterly  
| MW-18Db                                  | Dinwoody (deep) | Northeast of North Pit | 2 times/year, then quarterly  
| MW-19T                                   | Travertine | West of Water Management Ponds | Monthly if flow directions become westerly  
| MW-31T                                   | Travertine | West of Water Management Ponds | Monthly if flow directions become westerly  
| MW-29T & 30T                             | Travertine | South of Water Management Ponds | Monthly if southerly flow direction develops  
| Indicator Wells = WMP-IW1, -IW2, -IW3, -IW4, -IW5, & -IW6 (lateral wells)   | Alluvium/drain rock | North & Northwestern Flanks of Water Management Ponds | Weekly samples when adequate water is present in lateral monitoring wells  
| MW-39W (deep) and MW-40W (shallow); upgrade; background only | Wells Formation | Between Conda Mine and South Pit (upgradient reference point for South Pit) | To be determined following completion of baseline sampling  
| MW-2R                                    | Rex Chert | Between South & Mid Pits | 2 times/year then quarterly  
| MW-3A                                    | Alluvium  | Between South & Mid Pits | 2 times/year then quarterly  

* Wells MW-13A, MW-14W, MW-17W shall be sampled quarterly until P4 begins Described Event "b" (i.e., routine, ongoing stripping of seleniferous overburden from the mine pits solely in preparation for ore extraction, as that activity is described in Section 5.3 of the June 2011 Revised Blackfoot Bridge Mine and Reclamation Plan). After the occurrence of Described Event "b," sampling in the wells will be monthly.  
* Weekly sampling required if concentration trends are inconsistent with EIS modeling and ground water flow is toward the river.  
* Wells MW-18Da, MW-18Db, MW-2R, and MW-3A shall be sampled semi-annually (2 times/year) until P4 begins Described Event "b" (i.e., routine, ongoing stripping of seleniferous overburden from the mine pits solely in preparation for ore extraction, as that activity is described in Section 5.3 of the June 2011 Revised Blackfoot Bridge Mine and Reclamation Plan). After the occurrence of Described Event "b," sampling in the wells will be quarterly.  
* These are not compliance point wells, but are required monitoring wells under this POC determination.

**Reporting Results of Monitoring**

In addition to the report regarding background water quality outlined above, P4 shall prepare and submit annual reports to DEQ and BLM at an agreed upon time that includes all data collected to date for each monitoring location and will consist primarily of ground water and surface water (Blackfoot River near the North Pit) elevations and qualified ground water quality data as previously specified. The ground water quality data shall be evaluated using statistical procedures described in *Statistical Guidance for Determining Background Ground Water*.
Quality and Degradation (May 2009, Version 2008-1), which can be found at the following link: http://www.deq.idaho.gov/media/471696-guidance_statistical_degradation.pdf. Alternate statistical procedures to those described in the guidance can be proposed to DEQ.

P4 shall submit to DEQ and BLM on a quarterly basis all data collected during the previous quarter. The quarterly submittals can include preliminary ground water quality data. The ground water quality and water elevation data shall be submitted in tabular form as well as graphical form as concentrations or elevations versus time. An analysis of the data is not needed to support the quarterly reports but explanations should be provided that describe variances from normal sampling procedures, changes in mine operations that P4 believes may be affecting the data, or resultant changes in mine operations that P4 initiated to mitigate potential adverse impacts to water quality.

The annual report and quarterly submittals shall be submitted to DEQ and BLM as hard copies and electronically, such as on a CD. The data shall be submitted in electronic format such as an Excel spreadsheet accompanying the report and quarterly submittals. The required contents, format, and submittal schedules for the annual and quarterly reports will be described in the final Environmental Monitoring Plan.

Right to Appeal Final Determination
The final second Modified POC Determination may be appealed by submitting a petition to initiate a contested case, pursuant to Idaho Code § 39-107(5) and the Rules of Administrative Procedure Before the Board of Environmental Quality, IDAPA 58.01.23, within 35 days of the date of the final determination.

Questions regarding the actions taken in this determination should be directed to Margie English, Pocatello Regional Office, at (208) 373-0306 or e-mail at margaretha.english@deq.idaho.gov.

Barry N. Burnell
Water Quality Division Administrator
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Figure A1. Proposed monitoring well locations (Figure 19 from the POC application).
Figure A2. Modeled maximum extent of selenium plume for proposed action prior to Mine Modification of May 2012 (Figure 42 from the FINAL Groundwater Modeling Report Blackfoot Bridge Project, July 2010).
Figure A3. New well locations and potentiometric surface map (Figure 2 from the Draft Points of Compliance Well Installation & Initial Monitoring Report, July 2012).
Figure A4. Shallow potentiometric map and proposed monitoring well locations (Figure 1 from a letter from Chris Leatherman to Doug Tanner, November 5, 2012).