



**WESTERN RESOURCE**  
**ADVOCATES**

August 7, 2012

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Mr. Novak:

Thank you for this opportunity to submit a reply to Crown Asphalt Ridge, LLC's (CAR) written response dated July 27, 2012 (Response) to Living Rivers comments dated July 18, 2012 (Comments) protesting the Utah Division of Water Quality's (DWQ) proposal to approve a Ground Water Discharge Permit Permit-By-Rule determination (PBR or Permit-By-Rule) for CAR's large-scale tar sands mining operation. As Living River stated in its Comments, it disagrees with the DWQ's determination that CAR qualifies for PBR status and requests that DWQ rescind its PBR decision, require CAR to submit a complete Ground Water Discharge Permit Application (GWDP) and issue a ground water discharge permit for this operation.

**Introduction**

In CAR's Response, the company failed to address or respond to many, if not all, of Living Rivers' concerns regarding DWQ's proposal to issue a PBR for CAR's operation. Simply stated, CAR's Response failed to offer support for the company's assertion that "[n]o potential ground water contaminants will be introduced during processing or be present in the sand." Response at 1. Since CAR's main premise is unsupported by the record, DWQ should withdraw its decision to issue a PBR for CAR's tar sands mining operation pending further review.

**1. CAR Incorrectly Misstates Living Rivers' Burden of Proof**

CAR incorrectly attempts to place the burden of proof on Living Rivers to show that CAR's operation will "discharge [] pollutants into the waters of Utah", "exceed the existing Class III TDS limits for ground water", or "render waters of Utah harmful, detrimental or injurious to public health, safety or welfare, or to domestic, commercial, industrial, agricultural, recreational or other legitimate beneficial uses, or to livestock, wild animals, birds, fish or other aquatic life." Response at 2. CAR claims that Living Rivers failed to provide evidence in support of the group's claims, however Living Rivers cannot be held to the impossible standard of providing evidence that it cannot possibly obtain. As CAR notes, the mine is located on private property and Living Rivers' access is restricted to the lands surrounding the mine site. Living Rivers has challenged this permit on its face based on the deficiencies noted in its

Comments as well as on the expert testimony attached to those Comments, and the organization has met its burden of proof in this matter.

## **2. DWQ's PBR Determination Fails to Account for the Second Half of CAR's Two-Step Process**

DWQ's determination appears to provide a blanket authority for the company to move forward with its mine under the PBR while only accounting for a portion of the first step in CAR's proposed process, while completely ignoring the implications of the 2nd step. In its Response, CAR notes that the company "anticipates the utilization of a 'two-step' process," but that they are "currently only using the first step which does not introduce any liquid in the process other than water." Response at 2. The company notes, "[u]tilization of the 2nd 'step' is still under investigation but may be introduced in the future." *Id.* n.1. According to CAR, "[i]f used [the second step] may require a solvent to remove fines and clay particles from the bitumen froth." *Id.* The "fines and clays" will be returned to the mine for reclamation or landfill if "approval from DWQ and the Utah Division of Oil, Gas and Mining" is given. *Id.*

From the information provided in the Statement of Basis, it appears that the CAR PBR determination encompasses all future mine operations, including disposition of the waste streams from both the first and second steps. As Living Rivers noted in its Comments, this is clearly inappropriate and denies the public the ability to meaningfully comment on any future agency decisions regarding this mine.

DWQ is aware of CAR's proposed two-step extraction process, noting that "[t]he second step was intended to separate the clay particles from the bitumen using a solvent extraction process," but that pilot tests for this second step were "never conducted." Statement of Basis at 1. However, there is nothing in the record that addresses specifics related to the waste stream from the second step of the extraction process. CAR's application, for example, does not contain any information regarding what type of solvent may be used in the second step; what chemicals are found in this solvent; whether these chemical pose a risk to the environment, including water resources; how the solvent will be applied to the tar sands; and, importantly, CAR offers no explanation of how the second step of the extraction process works. *See* Utah Admin. Code R317-6-6.3(F) (requiring CAR to submit information on "[t]he type, source, and chemical, physical, radiological, and toxic characteristics of the effluent or leachate to be discharged.").

Even more troubling is the company's acknowledgement that its two-step extraction process will likely "require a solvent to remove fines and clay particles from the bitumen froth." Notably, CAR's premise for its argument that the mining waste will pose no more than a *de minimis* threat to water resources is based on the assumption that "[n]o potential ground water contaminates will be introduced during processing." *See* Response at 1. The use of a chemical extraction for the second step flies in the face of that assertion.

Therefore, DWQ acted arbitrarily and capriciously when it found that CAR's large-scale tar sands mining operation would not have more than a *de minimis* impact on water resources, especially since it based its determination on the notion that CAR's extraction process uses only hot water and no organic solvents – an assumption that is only true with regards to step one of the proposed two-step process, if it is true at all.

### **3. It is Improper for DWQ to Preclude Living Rivers from Meaningfully Commenting on Future Agency Decisions Regarding the CAR Mine**

DWQ's approach – to first issue a PBR, and then look to see whether CAR's process complies with Utah law, was arbitrary and capricious, and precludes the opportunity for any meaningful future public comment and/or challenge on future test results or analysis related to that process. DWQ is fully aware that that once the PBR is in place there will not be another opportunity for the public to submit comments on, or challenge, any future DWQ decision that falls under this PBR determination because the PBR remains in place for the life of the project. Statements by the company regarding possible future decisions by DWQ to require the company to obtain a Ground Water Discharge Permit are unavailing because there is no basis in the record to support DWQ's current determination that CAR's operation will not pose more than a *de minimis* threat to ground water resources. Response at 4. Living Rivers is being harmed by being precluded from the opportunity to comment on, and if necessary challenge, subsequent DWQ decisions regarding CAR's mine, and it is unlawful for the agency to prevent Living Rivers from doing so.

### **4. CAR Supplied Inadequate, Faulty, And Irrelevant Testing Information**

CAR supplied inadequate, faulty, and irrelevant testing information as part of its GWDDPA. In order to qualify for a PBR determination, an applicant must first show that their large-scale mining operations will not “discharge or would probably result in a discharge of pollutants that may move directly or indirectly into ground water.” Utah Admin. Code R317-6-6.2(A)(1). To prove that no such threat to ground water will result or is likely to result, Utah law requires that the *applicant* supply “complete information” for nineteen different categories. *See* Utah Admin. Code R317-6-6.3. In this case, CAR has failed to submit most, if not all, of this information, and specifically, the testing information they did supply was inadequate, faulty, and/or irrelevant.

As Living Rivers noted in its Comments, the test results provided by CAR were done by a different company, using a dissimilar extraction process, and were “compromised” to an unknown extent.<sup>1</sup> CAR's GWDDPA Attachments at 12 [hereinafter Attachments]; *see also* Response at 3 (noting that the two processes – Earth Energy's and CAR's – are dissimilar since “a different solvent was used.”). In addition, DWQ has recognized that CAR's two-step bitumen extraction process is new, and unproven. *See* Statement of Basis at 1. CAR has conceded that this new process “has not been tried.” Attachments at 10. These statements lend additional support for the need for accurate and relevant information.

If there are tests, analyses, and data that are relevant to the proposed extraction process, CAR should submit them to DWQ for analysis. Since they have not, and since the tests that were provided are not relevant to the CAR mine, the PBR determination should be withdrawn until proper information has been provided, and the public, including Living Rivers, has been given an opportunity to review, comment on, and if necessary challenge the accuracy and reliability of such information.

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<sup>1</sup> Living Rivers is aware that the tailings used by Earth Energy Resources for the testing originated from CAR's tar sands mine site.

## **5. Contaminated Ground Water Will Likely Flow Towards the City of Vernal and the Numerous Water Wells in Ashley Valley**

The information in the record contradicts CAR's assertion that the geological formations and structures underlying their property "dip downward in a southwest direction, away from the City of Vernal, and in the opposite direction of all existing water wells within a mile radius of the project." Response at 5 (emphasis in original omitted). For example, information provided in the CAR's GWDPA "indicates that the water at, and immediately below the mine site flows from west to east, towards Ashley Valley." Expert Report of Elliott Lips at 4 [hereinafter Lips Report]. Based on Mr. Lips' testimony, it is likely that the water wells in Ashley Valley, which are relied on as a source of water for domestic, irrigation, and stock uses, will likely be contaminated from CAR's operation.

CAR's GWDPA does not contain information on the geologic occurrence of the ground water, in or near, the proposed area of CAR's tar sands mine; does not contain information on ground water flow directions; does not contain information on geological or well logs; does not contain data on the aquifer or aquifer materials that the shallow ground water is occurring in; does not contain supporting data upon which CAR can base their assumptions regarding the aquifer or aquifer materials; does not contain information regarding the results of any testing (pump tests, slug tests, or laboratory percolation tests) necessary to determine the properties of the aquifer materials; and fails to include many other relevant and required tests, analyses, and data necessary to support CAR's contentions. *See* Lips Report at 2-4 (listing relevant and required tests and analyses that were not included in CAR's GWDPA).

Based on the paucity of information provided by the company, DWQ has no basis to reasonably conclude that the geological formations and structures underlying CAR's property dip downward in a southwest direction, away from the City of Vernal (and Ashley Valley), and the fifteen water wells located within a one mile radius of the project. The agency should therefore withdraw its PBR determination and require that CAR provide whatever tests and analyses are necessary to support a determination regarding which direction the ground water beneath the mine flows.

### **Conclusion**

Living Rivers therefore requests that DWQ withdraw the PBR determination for CAR's tar sands mine, require CAR to submit a *complete* GWDPA, and issue an adequate ground water discharge permit for this operation. As Living Rivers stated in its Comments, prior to DWQ making a final determination in this matter, Living Rivers requests a meeting to more fully explain the reasons for its position on this matter.



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