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**BEFORE THE BOARD OF OIL, GAS AND MINING  
DEPARTMENT OF NATURAL RESOURCES  
STATE OF UTAH**

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<b>Living Rivers,</b>	:	
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	:	<b>Docket No.</b> _____
Petitioner,	:	<b>Cause No. M/047/0090</b>
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<b>Division of Oil, Gas and Mining,</b>	:	
	:	
Respondent.	:	

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**REQUEST FOR AGENCY ACTION  
AND REQUEST FOR A HEARING BY  
PETITIONER LIVING RIVERS**

Living Rivers (Living Rivers) files this Request for Agency Action to appeal the decision of the Division of Oil, Gas and Mining (Division) approving the application of Earth Energy Resources (Earth Energy) to conduct tar sands mining and reclamation operations at the PR Springs mine. This Request for Agency Action also requests a declaratory order clarifying the Division’s jurisdiction over air quality and water quality issues arising out of mining operations. Living Rivers respectfully requests a hearing on the reasons for the decision and on the requested declaratory order.

As explained more fully below, the Division failed to follow applicable state law, including its own regulations, in approving Earth Energy's inaccurate and incomplete permit application. Accordingly, Living Rivers urges the Board to vacate the Division's approval of the Earth Energy permit application and enter an order denying it as inaccurate, incomplete, or both. Alternatively, Living Rivers requests that the Board vacate the approval decision and remand the matter to the Division to allow Earth Energy to correct identified permit deficiencies, if it can.

### **I. LEGAL AUTHORITY, JURISDICTION AND STANDING**

This Board has legal authority and jurisdiction to review approval of the Earth Energy permit application pursuant to Utah Code Ann. § 40-10-14(3), Utah Admin. Code r. 641-100 *et seq.*, and r. 647-5-106.17. Living Rivers is an interested party in this action.

Living Rivers is a nonprofit organization of approximately 300 members and supporters dedicated to restoring river ecosystems by mobilizing public support and involvement for river restoration; to educating and enlisting humanity to protect and restore the quality of the natural river ecosystems; and to using all lawful means to carry out these objectives. The main focus of Living Rivers is restoration of the Colorado River. Living Rivers is a member of the New York-based Waterkeeper Alliance. Living Rivers members use and enjoy public lands in and throughout Utah, including the Tavaputs Plateau area. Living Rivers members use these lands for a variety of purposes, including: recreation, solitude, scientific study, and aesthetic appreciation. Living Rivers members visit and recreate (e.g., study, hunt, camp, bird, sightsee, and enjoy solitude) throughout the lands that are the subject of this request for agency action, including the Tavaputs Plateau and surrounding public lands. Living Rivers members have a substantial interest in resources affected by this matter, including wildlife, plant communities, night skies, air quality, water quality, and cultural historic sites. Living Rivers members also

have a substantial interest in ensuring that the Division complies with the terms and requirements of state law and its own regulations.

Living Rivers brings this action on its own behalf as well as on behalf of its members – aggrieved parties who have participated in a hearing before the Division. Utah Admin. Code r. 647-5-106.17. Living Rivers members use the biological, recreational, cultural/historic, aesthetic, water, air, and other environmental resources located within and adjacent to the Tavaputs Plateau area to stargaze, hike, hunt, camp, and sightsee. They view the wildlife, plant communities and archeological sites there and enjoy the unique solitude of these undeveloped lands. Living Rivers members have enjoyed and hope to continue to enjoy the resources of the Tavaputs Plateau area. The Division’s unlawful decision to approve the proposed tar sands mining and reclamation operations in these largely untrammelled areas will have a direct adverse effect on these resources and on the interests of Living Rivers members. Each of the affected members of Living Rivers relies upon Living Rivers, as an organization, to bring actions such as this one to protect the member’s potentially affected interests.

## **II. SUMMARY OF THE ARGUMENT**

The Division acted arbitrarily, capriciously, and contrary to law in failing to withhold approval of Earth Energy’s inaccurate and incomplete Notice of Intention (NOI) because the NOI fails to adequately address issues relating to stormwater runoff, potential groundwater contamination, and reclamation. The Division failed to provide support for their view that Petitioner’s concerns were adequately assessed in the NOI. During the informal hearing, the Division indicated that the stormwater and groundwater concerns were more appropriately addressed by the Utah Division of Water Quality (DWQ). Petitioner, in an effort to exhaust administrative remedies, raises issues relating to the stormwater and groundwater as discussed in

the NOI before this Board. Recognizing these issues may also be heard before the DWQ, Living Rivers seeks a declaratory order to clarify the proper forum to voice these concerns and the extent to which the Division must oversee the adequacy of DWQ's determinations. Lastly, the Division's approval of the reclamation efforts outlined in the NOI fail to conform with the Division's own regulations; consequently, the approval of Earth Energy's permit is arbitrary capricious and contrary to law.

### **III. PROCEDURAL HISTORY**

On September 28, 2007, Earth Energy submitted its initial Notice of Intention (NOI) to Commence Large Mining Operations for the PR Spring Mine, M/047/0090. The Division determined that this application was incomplete, and after several revision and responses to the Division's review of the NOI, the company submitted a final, revised NOI on May 7, 2009. On May 20, 2009, the Division issued tentative approval of the NOI and submitted this approval for public comment.

On March 23, 2010, Ms. Dana Dean issued public notice, identifying the Division's tentative decision to approve Earth Energy's mining permit. In response to this notice, Living Rivers timely filed comments to Earth Energy's NOI on April 26, 2010. Living Rivers raised comments on how the proposed mining operations would impair Willow Creek, potentially contaminate groundwater supplies, result in increased greenhouse gas emissions, and diminish air quality. Living Rivers also commented on the inadequacy of the proposed stormwater prevention plan, and the insufficiency of proposed reclamation requirements.

#### IV. STATEMENT OF FACTS

Earth Energy holds State Institutional Trust Lands Administration (SITLA) tar sands leases on 5,930 acres of Utah's Uinta Basin, near PR Spring. Earth Energy PR Spring Mine NOI [hereinafter NOI] at 1.<sup>1</sup> Within this lease area, Earth Energy has identified a 2,255 acre Study Area for the PR Spring Mine, and the initial mine development under this NOI covers 213 acres in the southeastern portion of the area. *Id.* The details provided by Earth Energy in its NOI focus exclusively on a 62-acre initial mine pit (North Pit). NOI at 13. The company anticipates that it will mine approximately 7.9 million cubic yards of material from the North Pit. NOI at 14. Earth Energy will use its proprietary Ophus process to extract the bitumen from the excavated tar sands; the biodegradability of process chemical used in the Ophus process is undetermined. NOI at 17. Due to processing of this material, mining from the North Pit will result in 9.7 million cubic yards of waste. *Id.* The NOI states that after the North Pit is mined, Earth Energy would extend mining to the southwest, to a contiguous area known as the West Pit. *Id.* The NOI indicates that the West Pit covers 32 acres, meaning that the proposed expansion is fifty percent of the size of the North Pit.<sup>2</sup>

Earth Energy contends that details of its West Pit are conceptual in nature, and that once testing has been completed, the pit design will be completed and submitted to the Division. *Id.* Because it maintains that the design of the West Pit is "conceptual," Earth Energy has only included approximate figures in its bonding, which will be revised once the plan is finalized. NOI at 14-15. The life of the mine is expected to be between 6 and 13 years for both the North and the West pits. NOI at 15.

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<sup>1</sup> The approved NOI is found at <https://fs.ogm.utah.gov/FILES/MINERALS/PERMITS/047/M0470090/2009/NOI/09192009apv/0001.pdf> and is hereby incorporated in its entirety by reference.

<sup>2</sup> Area maps provided by Earth Energy in the NOI show the West Pit to be 31 acres in size.

## **V. ARGUMENTS AND BASES OF REQUEST FOR REVIEW**

Without waiving any other arguments it may raise before the Board after a complete review of the certified administrative record, Living Rivers principally argues that the Division wrongfully approved Earth Energy's incomplete, inaccurate, and otherwise unlawful permit application in direct violation of Utah Admin. Code r. 645-4-103 to -110. Specifically, the permitting documents included in the NOI fail to sufficiently address potential impacts to (1) downstream uses and (2) groundwater, and (3) the proposed reclamation plan is not in accordance with the Division's rules.

### **A. Potential Surface Water Quantity Impacts**

First, the NOI and accompanying permitting documents fail to include the amount of water and sediment from runoff generated from the overburden/interburden storage areas. Utah Admin. Code R647-4-109.1 requires an assessment of the potential impacts to surface water systems. The permitting documents acknowledge the possibility that storm water and snowmelt runoff may leave the site from these areas. Stormwater Prevention Plan (SPP) at 16. However, this assertion is not accompanied by any quantitative analysis to determine the possible negative effects caused by such runoff. Without this analysis, Earth Energy cannot state what the potential impacts are, in violation of R647-4-109.1, or what the appropriate measures are that it will have to undertake to avoid or minimize environmental damage as required by Utah Admin. Rule R647-4-107.2 and 111.2.

The NOI outlines mitigation measures to minimize the volume of runoff and the sediments that may reach the waters of the State, SPP at 16; NOI at 32, but these measures are not supported by any analysis regarding what is the actual amount of sediment that is expected to reach waters of the State. Consequently, these mitigation efforts are insufficient, because,

without any supporting analysis, Earth Energy cannot state what the potential impacts are, as required by R647-4-109.1, or that the degree of erosion control is appropriate for the site-specific and regional conditions of topography, soil, drainage, water quality or other characteristics, as required under R647-4-107.3 and R647-4-111.3.

## **B. Potential Surface Water Quality Impacts**

The NOI is incomplete because it does not contain an analysis of the water quality from runoff generated from the overburden/interburden storage areas. Without this analysis, Earth Energy cannot state what the potential impacts are, as required under R647-4-109.1, or that appropriate measures are being taken to avoid or minimize environmental damage, as required under Rule 647-4-107.2.

Earth Energy proposes to place sand and clay fine tailings within the overburden/interburden storage areas. SPP at 16. Leachate from these tailings could potentially migrate through the overburden/interburden storage areas and be transported off site as surface water. Earth Energy investigated the chemical characteristics and leaching potential of the processed tar sands from samples obtained from Asphalt Ridge because “[t]he Asphalt Ridge samples are assumed to be a valid stand-in for PR Spring operation because of their similarity geologically and analytically.” Groundwater Discharge Permit-By-Rule Demonstration (GDPRD) at 8.<sup>3</sup> The results of this analysis show that the processed sand and processed fines will have total dissolved solids (TDS) concentrations of 300 and 6,100 mg/kg as opposed to the unprocessed tar sand with concentrations of 24 mg/kg. Earth Energy states that these results are “... from a non-standard analytical method; therefore these results are not considered relevant for estimation of the TDS of leachate from the process residuals. The expected TDS of the leachate that might develop from the processed oil sands is not known ...” GDPRD at 11.

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<sup>3</sup> The GDPRD was prepared on February 22, 2008 and submitted to DWQ, and is hereby incorporated by reference.

Earth Energy provides no explanation for their laboratory testing and results. If the analytical methods were non-standard, then EER should conduct additional analysis using standard methods in order to determine the TDS of the leachate. As presented, the laboratory data indicate TDS of the leachate will be in excess of 100 times the concentration of the unprocessed tar sands.

The overburden/interburden storage areas are located in a tributary of Main Canyon, which is a tributary of Willow Creek. Willow Creek is listed as a Category 5A (needing TMDLS) impaired stream on Utah's 303(d) list under provisions of the Clean Water Act. The listed pollutant is total dissolved solids (DWQ, 2006). The permit documents contain no water quality data for nearby streams, GDPRD at 4, and there is no analysis of the impacts to the Willow Creek drainage from the discharge of high TDS water from the PR Spring operation. Without these analyses, Earth Energy cannot state what the potential impacts to the surface water systems are, as required under R647-4-109.1. Furthermore, Earth Energy proposes no monitoring of surface water discharges.

Finally, the permitting documents do not contain information that deleterious material from the Ophus Process, *see* Section E below for further discussion, will be kept in an isolated condition in order to ensure that adverse environmental effects are eliminated or controlled, as required under R647-4-107.4 and R647-4-111.4.

### **C. Potential Groundwater Quantity Impacts**

The NOI is not complete because it does not contain an analysis of the potential impacts to ground water systems, as required under R647-4-109.1. The NOI reports that “[t]here are several small springs or seeps that issue in the headwater reaches of Main Canyon and support perennial flow for some distance along its main stem.” NOI at 35. Four seeps are in the drainage immediately west of the PR Spring operation. NOI at Figure 7. These seeps are approximately one



half mile from the pit at elevations between approximately 7,400 and 7,800 feet. The aquifers from which these seeps issue has not been identified and the potential impacts of the pit dewatering on these, or any other seeps or springs in the area has not been analyzed.

Earth Energy has investigated the ground water conditions only to a depth of 150 feet, the depth of the proposed pit. GDPRD at 2. They report a general depth to a ground water piezometric surface of 1,500 feet based on a 1975 hydrologic reconnaissance report, but the actual presence or absence of any aquifers that could be impacted by the operation below a depth of 150 feet has not been confirmed by any data collected in the area of the PR Spring operation.

Earth Energy recognizes the presence of "... localized, shallow groundwater, likely representing isolated perched aquifers..." NOI at 30. However, EER has not provided information on the depth to ground water in these aquifers, as required by R647-4-106.8. Without this information, Earth Energy can not state what the potential impacts to the ground water systems are, as required under R647-4-109.

#### **D. Potential Ground Water Quality Impacts**

The permitting documents are not complete because they do not contain any analysis of potential impacts on the water quality of ground water systems. Earth Energy proposes to place blended sand and clay fine tailings within the backfilled pit. NOI at 19. Although the pit is designed to be internally drained with respect to surface water, over time the pit has the potential to collect ground water and leachate from these tailings will potentially migrate off site as ground water (see Section B above for the discussion of TDS concentrations of the leachate from the tailings and Section E below on the Ophus Process).

Earth Energy has not collected and analyzed baseline ground water quality in the project area. GDPRD at 4. Without these analyses, Earth Energy cannot state what the potential

impacts to the ground water systems are, as required under R647-4-109.1. Furthermore, Earth Energy proposes no monitoring of ground water in the project area that could detect impacts to ground water quality.

### **E. Ophus Process**

Earth Energy has a patented chemical method for extraction of hydrocarbons from oil sands known as the Ophus Process. NOI at 1. According to Earth Energy, this method relies upon a proprietary cleaning emulsion which produces chemically inert “damp-dry” sand tailings. GDPRD at 5. Earth Energy has not made available for public review chemical properties of this cleaning emulsion or results of analysis to support its claim that it is chemically inert. In fact, Earth Energy reports that “... the cleaning emulsion’s biodegradability had not been determined...” GDPRD at 5.

Earth Energy does not provide sufficient information that adverse environmental effects of deleterious materials from the Ophus Process are eliminated or controlled, as required by Rule 647-4-107.4 and Rule 647-4-111.4. Without making information on the Ophus Process available to the public, it is not possible to evaluate whether DOGM’s approval of the NOI is in compliance with the Rules for Large Mining Operations (R647-4). UDOGM rules do not permit the agency to withhold this information from the public. Utah Admin. Code R647-4-115 (noting that information in the NOI related to the location, size, and nature of the mineral deposit, marked confidential by the operation, will be protected as confidential by the Board and Division). Therefore, the is required to release this information to the public to permit it evaluate DOGM’s approval of the NOI

## **F. The Reclamation Plan Outlined in the NOI is insufficient**

Lastly, the reclamation plan outlined in the NOI is insufficient and Division approval of Earth Energy's permit should be vacated, until missing information has been included and made available for public review. The reclamation plan fails to analyze the potential negative effects caused by the processed tar sands that will be mixed in with the overburden/interburden. The Division is unable to adequately assess the possible impacts, because Earth Energy's is unwilling to release information detailing the chemical makeup of the process chemical used in the Ophus process and the biodegradability of this chemical is undetermined. NOI at 17; *see also* Section E above.


The Reclamation Plan states its objective "to allow postmining land uses of wildlife habitat and open space to resume" by ensuring the affected area is "environmentally safe and stable condition for the wildlife." The Reclamation Plan does not contain sufficient information to allow the Division to meet this objective. Given that there will be only visual inspections of the site, the Division cannot be sure that the remaining process chemical contained in the processed tar sands will not contaminate the groundwater or runoff the site as surface water that will further impair Willow Creek or the seep and springs noted in Section C & D above. NOI at 53. The Division is clearly responsible for ensuring the reclamation plan meets statutory and regulatory requirements. Utah Code Ann. § 40-8-12; Utah Admin. Code R647-4-100. The Division's reliance on DWQ to ensure the storm water permit conditions are met is insufficient, to meet DOGM's responsibility to ensure that the Reclamation Plan meets its stated objectives. The Board should vacate Earth Energy's permit approval until DOGM adequately analyzes the possible effects to groundwater and downstream uses. Until DOGM conducts such an analysis,

any proposed reclamation plan will be insufficient and in violation of the Division's statutory and regulatory responsibilities to ensure reclamation of the site.

## **VI. CONCLUSIONS AND PRAYER FOR RELIEF**

For the foregoing reasons, Living Rivers respectfully requests that this Board determine that the Division failed to follow its own regulations in approving Earth Energy's permit application for the PR Springs mine and accordingly vacate the Division's approval of Earth Energy's permit application and enter an order denying it as inaccurate, incomplete, or both. Alternatively, Living Rivers requests that the Board vacate the approval decision and remand the matter to the Division to allow Earth Energy to correct identified deficiencies, if it can. Living Rivers further requests that this Board provide such other and further relief as may be appropriate.

Respectfully submitted this 27th day of September, 2010.



ROB DUBUC  
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## CERTIFICATE OF SERVICE

I hereby certify that on this 27th day of September 2010, I served a true and correct copy of Request for Agency Action and Request for a Hearing by Petitioner Living Rivers by email and via first-class mail to Julie Ann Carter, Secretary to the Board of Oil, Gas and Mining,

Julie Ann Carter  
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and to each of the following persons via first-class mail, postage pre-paid:

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