APPENDIX A

August 11, 2008

FILE COPY

Caleb Hiner, Project Lead
Bureau of Land Management
Pinedale Field Office
P.O. Box 768
Pinedale, Wyoming 82941

RE: Wyoming Department of Environmental Quality (DEQ) July 31, 2008 Letter to the Bureau of Land Management (BLM) on the June 2008 Pinedale Anticline Final Supplemental EIS Comments

Dear Caleb,

In the referenced letter, the DEQ states at the bottom of page 1: "Shown below is a summary of what funding requirements are necessary from the DEQ perspective. These amounts have been discussed with the project proponents and they have agreed that this amount will be in addition to any other mitigation funds that were previously committed to."

This statement is correct on behalf of Ultra Resources, Inc. (Ultra), Shell Exploration & Production Company (Shell), and Questar Market Resources (Questar).

RECEIVED
AUG 11 2008
PINEDALE RESOURCE
AREA OFFICE

THIS SPACE INTENTIONALLY LEFT BLANK

Respectfully submitted,

W. R. Picquet	John A. Bickley	J. P. Matheny
Vice President - Operations	Development Manager	Vice President
Ultra Resources, Inc.	Shell Rocky Mountain Production	Questar Market Resources

RECEIVED
AUG 11 2008
PINEDALE RESOURCE
AREA OFFICE

Department of Environmental Quality

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.

Dave Freudenthal, Governor

John Corra, Directo

July 31, 2008

Mr. Chuck Otto
Field Office Manager
Bureau of Land Management
1625 W. Pine Street
Pinedale, WY 82941

RE: June 2008 Pinedale Anticline Final Supplemental EIS Comments

Dear

This letter is intended to discuss the final version of the SEIS and our comments regarding groundwater. The three main issues we have been concerned about are: the need for aquifer characterization in order to establish a framework for the design of an effective groundwater monitoring program; the need to develop and implement a revised groundwater monitoring program, including the installation of new monitoring wells where necessary, and; the need to develop and implement mitigation measures as necessary to prevent the introduction of contaminants into aquifers. One over-riding matter is that the project proponents have committed to providing funding for such activities, and this should be noted in either the Final SEIS or the record of Decision.

Aquifer Characterization

There is confusion within the SEIS regarding a few issues relating to aquifer characterization:

1. The concern is that since there is no hard deadline for completing aquifer characterization work, there is no hard deadline for beginning the development of the *Groundwater/Aquifer Pollution Prevention, Mitigation and Monitoring Plan.*

2. Section 4.13.5 (*Groundwater Resources Additional Mitigation Opportunities*; Page 4-110) of the SEIS states: *"Within 3 months of the ROD, the Operators, the WDEQ-WQD, and the BLM would develop a plan and funding strategy to characterize groundwater resources in the PAPA."* It must also be noted that the necessary funding from the project proponents will be made available at that time.

Shown below is a summary of what funding requirements are necessary from the DEQ perspective. These amounts have been discussed with the project proponents and they have agreed that this amount will be in addition to any other mitigation funds that were previously committed to.

Phase I (Year 1) Data Acquisition & Monitoring Network Design $250K

- Well location and construction details
- Geologic/hydro geologic characterization and mapping
  - Significant aquifers and characteristics (quality, potential yield, direction of flow, etc.)
  - Lateral continuity (geologic cross-sections)
- Monitoring Network Design
  - Identify monitoring locations and depths
  - Evaluate existing wells for appropriate monitoring design criteria
  - Develop monitoring protocols (sampling requirements, etc.)
  - Final design of monitoring well network; develop GIS coverage and MW database

Phase II (Year 2) Monitoring Network Installation and Initial Sampling $500K

- Field verify locations for new wells needed in some locations/depths
- Install additional monitoring wells where needed
- Develop water quality/quantity data management system

Phase III (Year 3 – Year 10) Groundwater Monitoring and Reporting $750K ($100K/Year)

- Sample collection and laboratory analysis
- Data compilation and analysis
- Develop annual report and executive summary.

Groundwater Monitoring Program

1. The design of a new monitoring plan, following the BLM's Regional Framework for Water Resources Monitoring Related to Energy Exploration and Development guideline document, is discussed in Chapter 3 (Section 3.15.1.5, Page 3-91) and Chapter 4 (Section 4.13.3.1 Page 4-107; Section 4.13.5 Page 4-110). *"The Framework process will have three principal tasks, namely compilation of existing information, more detailed characterization of groundwater, and modification of the monitoring plan (delivered as a Sampling and Analysis Plan)."* It should be made clear as to whether or not this is a separate effort.

2. The SEIS states (Section 4.13.5; Page 4-110) that *"A cooperative effort will be initiated which includes technical specialists from BLM and State Regulatory agencies to complete a science based Groundwater/Aquifer Pollution Prevention, Mitigation and Monitoring Plan within 6 months of completion of the groundwater characterization."* This is inconsistent with the statement on Page 4-107 that *"A cooperative effort by the BLM management and participating regulatory agencies will begin the Framework process immediately upon issuance of a ROD, and complete this revised monitoring plan within 6 months"*. Some clarification is necessary, either in the SEIS or in the Record of decision as to the timing of these activities, who will participate and the specific aspects of the cooperative effort.

3. It's unclear who will fund development and implementation of the revised monitoring plan. A major concern is the lack of clarity regarding funding for developing this new plan and the implementation of the monitoring. The only mention of funding the water monitoring plan is on the bottom of page 4-108 stating: *"The Operators will be consulted for additional operational perspective in devising a feasible monitoring plan and funding its implementation."* The SEIS is not clear or specific on how groundwater and surface water monitoring will be funded or implemented. It should be noted that completion of the

Framework process is only one step in overall development and implementation of a revised groundwater monitoring program. Subsequent yet equally, if not more, important steps include re-designing the monitoring network and re-writing the Sampling and Analysis Plan (SAP). Sources of funding must be identified so that the actual work contemplated in the SEIS is completed. The source of funding these efforts needs to be mentioned, at least to the extent of specifying what funding has been committed to by the operators.

Mitigation Measures and Best Management Practices

1. Clarify that development of the Groundwater/Aquifer Pollution Prevention, Mitigation and Monitoring Plan will include an assessment of existing potential sources of groundwater contamination and an evaluation of the effectiveness of existing mitigation measures, given the current impacts to groundwater within the PAPA.

2. It should be spelled out in either the SEIS or the ROD that operators be required to implement the following practices regarding the construction and operation of water supply wells:

    a. Back flow prevention devices should be installed on all water supply wells used to obtain water for oil and gas operations;
    b. New wells must be constructed in accordance with sanitary drilling practices and guidelines provided by the state, including the use of uncontaminated drill pipe and casing;
    c. New and existing wells must be tested to ensure that co-mingling of waters of different quality/classes is not occurring;
    d. New water supply wells must be tested upon construction to establish baseline conditions and to ensure the wells are not contaminated;
    e. Prior to construction of new water wells, geophysical logs will be run in the borehole to gather data for well completion and to identify near surface water bearing zones;
    f. New water wells should be completed in deeper aquifers (Lower Wasatch or Fox Hills formations) instead of using water from relatively shallow (<1000 foot) Class 1 aquifers;
    g. Water wells must be locked to prevent unauthorized use or access.

If you have any questions concerning these comments, please call Kevin Frederick at 307-777-5985.

Sincerely,

John Corra
Director

cc: Don Simpson, BLM, 5353 Yellowstone Rd., Cheyenne, WY 82009

APPENDIX B

Regional Framework Matrix

	Regional Framework Step Description	Means by which Regional Framework Step is Addressed
1	Specify monitoring goals and objectives	• Monitoring goals and objectives were analyzed by original Environmental Impact Statement (USDI BLM, 2000) • Goals and objectives were re-evaluated by the Draft Supplemental EIS (USDI BLM 2006), Revised Supplemental EIS (USDI BLM 2007), and Final Supplemental EIS (USDI BLM 2008)
2	Characterize anthropogenic stressors that may affect receptors and parameters of interest	• Stressors and receptors were identified by the EIS process. • Step 2, Section 4.2 of the 2008 ROD requires identification of potential contaminant sources. • All potential sources were comprehensively evaluated by the BDE and summarized in the "Rainbow Matrix". • Task 3 of the Interim Plan will evaluate this matrix and develop for recommendation to the BDE, appropriate mitigation response. The Vulnerability Assessment in coordination with this Matrix evaluation will further refine where to focus mitigation efforts.
3	Develop regional questions and conceptual models to describe the process and pathways anthropogenic stressors affect receptors	• Step 2, Section 4.2 of the 2008 ROD requires additional characterization efforts, the results of which will be used to update the conceptual model developed by Geomatrix (2008). • Processes, pathways, and potential affects were identified by the EIS process. The existing monitoring program was initially designed to monitor these affects. • A hydrogeologic conceptual model for the PAPA and data gaps were presented in the Final Hydrogeologic Conceptual Model Report (Geomatrix 2008). • Information from aquifer characterization, data gap analyses, and vulnerability assessment activities identified by Task 1 of the Interim Plan will be used to update Conceptual Model.

Regional Framework Matrix

	Regional Framework Step Description	Means by which Regional Framework Step is Addressed
4	Suggest indicators to measure the effects of anthropogenic stressors and define existing information availability and needs	• Step 2, Section 4.2 of the 2008 ROD requires additional characterization, identification of potential contaminant sources, monitoring program augmentation, and mitigation. • The current monitoring program was initially designed to collect data on indicator parameters from the 2000 PAPA ROD. • Additional refinement is specified in Tasks 1, 2, and 3 of the Interim Plan (e.g. groundwater/aquifer characterization, vulnerability assessment, source evaluation, and development of Best Management Practices).
5	Estimate the sensitivity of the indicators to detect change, and to guide final indicator choice and monitoring design	• Step 2, Section 4.2 of the 2008 ROD requires additional aquifer characterization and monitoring program augmentation, as necessary. • Task 1 of the Interim Plan is an aquifer vulnerability assessment that will identify sensitive areas based on land use/surface activities. Results of this assessment will be directly used to select indicators and design the monitoring program. • Task 3 of the Interim Plan is identification of mitigation measures. Mitigation identification will be based upon the evaluation of potential sources and the current practices used within the field to prevent impacts.
6	Describe a process by which management can identify thresholds of change requiring a management response	• This step is a result of the previously described Steps 1-5. By completion of the Interim Plan and resulting vulnerability assessment, characterization of the groundwater system and a thorough evaluation of existing practices as they relate to groundwater contamination, the Final GAPPMM Plan will be able to address this step through development of a redefined monitoring program aimed at detecting changes in baseline quality/quantity and/or BMP failure at level which requires a management response.

Regional Framework Matrix

Step	Regional Framework Step Description	Means by which Regional Framework Step is Addressed
7	Identify clear connections between the overall monitoring program and the management decision process	• Step 3 specified in Section 4.2 of the 2008 ROD requires updating the Interim Plan within 6 months of completing characterization to redesign the existing monitoring program to more accurately address potential sources of contamination or changes to the baseline groundwater environment.. • 2008 ROD emphasizes performance-based outcomes and adaptive management strategy and also provides for the creation of the Pinedale Anticline Project Office specific to monitoring and mitigation. • 2008 ROD carries forward the PAWG WRTG so that may continue to review monitoring data and formulate recommendations for additional measures to the BLM. • Appropriate response actions will be identified in the Final Groundwater/Aquifer Pollution Prevention, Monitoring and Mitigation Plan

Note - Regional Framework - Regional Framework for Water-Resources Monitoring Related to Energy Exploration and Development (USGS 2007)