The following text includes contains the Interrogatories pertaining to the Tailings Management Plan for the Shootaring Canyon Uranium Processing Facility – Amended 2005 (hereafter abbreviated TMP). Also included in this submittal is a revision to the TMP. Accompanying each of the Interrogatories is a Response that contains explanation, clarification, and in some cases, references to sections within the revision that address the subject of the Interrogatories.

INTERROGATORY R313-24-1(3)-02/01: SUMMARY OF REGULATORY REQUIRMENTS

PRELIMINARY FINDING:

Refer to R313-24-1(3: The requirements of Rule R313-24 are in addition to, and not substitution for, the other applicable requirements of Title R313. In particular, the provisions of Rules R313-12, R313-15, R313-18, R313-19, R313-21, R313-22, and R313-70 apply to applicants and licensees subject to Rule R313-24.

INTERROGATORY STATEMENT:

Please provide the following revisions and clarifications in Section 2.0 of the Tailings Management Plan:

1. *Reference should be made to the sections in the plan (or other documents) that addresses the specific requirements presented in this section.*
2. *Section 2.1.1 has a reference to 10 CFR 40 Appendix A, Criteria 1, which also needs to address siting as it relates to isolation and minimizing disturbance and dispersion. This includes remoteness from populated areas, hydrologic and other natural conditions that contribute to immobilization and isolation of contamination from groundwater sources, potential for minimizing erosion, disturbance, and dispersion by natural forces.*

Response: ***The discussion of siting in Section 2.1.1 has been expanded. Because the site already exists and the major impoundment structures are in place, additional evaluation of siting criteria beyond the analyses performed prior to mill and tailings dam construction is unnecessary. The closest town, Ticaboo, was originally developed in support of the mill construction and operation, and there have been no other significant changes in the nearby land use beyond a minor expansion of Ticaboo. Figure 1-1 presents a map showing the location of the site and the town of Ticaboo.***

3. *10 CFR 40 Appendix A Criterion 3 should be addressed. This should include a summary of the evaluation of alternative sites and disposal methods. The "prime option" for disposal of tailings is below grade. However, this should be justified given the site physical conditions (hydrology, geologic, groundwater, etc.).*

Response: ***A brief discussion of tailings disposal criteria has been added to Section 2.1.1. As mentioned in the preceding response to item 2, the fact that the facility already exists and the bulk of the TMP is related to technological improvements in tailings containment within an existing facility renders many of the siting and disposal methodology questions moot.***

4. *Section 2.1.2.1 that addresses 10 CFR 40 Appendix A Criterion 4; erosion protection…; should also address the tailings pile cover (vegetative and/or rock).*

Response: ***A brief discussion of the erosion protection rock mulch has been added to Section 2.1.2.1.***

5. *Section 2.1.2.2 – Groundwater protection*

a. The groundwater protections standards to reference are the State of Utah standards as included in R317-6 (not Appendix A, 40 CFR 192, etc.)

Response: ***Section 2.1.2.2 has been revised.***

b. Remove reference to 40 CFR 264. The requirement for a double liner leachate collection and detection system is per R317-6 (6.4.A.3) of the Utah regulations that require the use of Best Available Technology (BAT) to minimize the discharge of any pollutant.

Response: ***Section 2.1.2.2 has been revised and references to 40 CFR 264 eliminated.***

c. Include that the liner must be constructed of materials that have the appropriate chemical and physical properties to prevent failure per Criterion 5(a)(2)(a).

Response: ***Section 2.1.2.2 and numerous subsections in Section 5 have been revised to address chemical and physical properties. Details of the physical properties are included in Appendix C.***

d. Include that the liner must be placed on a competent foundation or base per Criterion 5(a)(2)(b).

Response: ***Section 2.1.2.2 has been revised.***

e. Include that the liner must be installed to cover all surrounding earth likely to come in contact with wastes or leachate. (per Criterion 5(a)(2)(c)).

Response: ***The perimeter of the liner system is shown in several of the figures in Section 5. As described throughout the TMP, the liner will be continuous between the EPPC and Cell 1 and will eventually extend between Cell 1 and Cell 2. On the perimeter of the individual cells, the liner extends to or beyond the point where it is at the same elevation as the crest of the impounding structure. Therefore this criterion is met by the default restriction of limiting tailings discharge to within the lined cells. There is a secondary containment provision for pipelines conveying tailings material to the tailings to prevent spillage in the event of a pipeline break.***

*f. Include that the dikes must be designed, constructed and maintained with sufficient structural integrity to prevent massive failure per Criterion 5(a)(5**).***

Response: ***Section 2.1.2.2 has been revised.***

g. Need to address specific requirements of R313-6. These are, (and will be) covered by the Groundwater Quality Discharge Permit. However, should be summarized here, as well as how compliance is met.

Response: ***Section 2.1.2.2 has been revised, but the discussion of the requirements of R317-6 is limited primarily to the Groundwater Quality Discharge Permit. The association of relevant requirements in the Groundwater Quality Discharge Permit through reference in the TMP is considered appropriate because revisions, amendments or updates to the Permit then become effective in the TMP without the need for revision of the TMP.***

h. *Remove reference to Appendix A Criterion 5E, per R313-24-4, it is replaced by R313-6 and the BAT requirement in R313-6.*

Response: ***Section 2.1.2.2 has been revised and the references to Criterion 5E removed.***

6. *Section 2.1.2.3 – Closure; Reference to NRC STP and guidance is useful. However, reference to 40 CFR 264 should be removed (again, this is covered under R313-6 BAT requirements). Also, 10 CFR 40 Appendix A criterion 6 though 10 should be presented and how they apply and are being met.*

Response: ***Section 2.1.4 has been added to Section 2.***

BASIS FOR INTERROGATORY:

Section 2 of the Tailings Management Plan appears to be a summary of the regulatory requirements and how the proposed tailings management will meet these regulations. This could be a useful summary. However, to make section 2 complete, there needs to be numerous clarifications and revisions. The revisions and/or clarifications identified are presented in the Interrogatory Statement above.

REFERENCES:

Plateau Resources, Ltd., "Tailings Management Plan for Shootaring Canyon Uranium Processing Facility" Amended December, 2005.

INTERROGATORY R313-24-4-05/01: DAILY INSPECTIONS OF WASTE TAILINGS

PRELIMINARY FINDING:

Refer to R313-24-4, 10 CFR 40.26(c)(2): The documentation of daily inspections of tailing or waste retention systems and the immediate notification of the Executive Secretary, of any failure in a tailing or waste retention system that results in a release of tailings or waste into unrestricted areas, or of any unusual conditions (conditions not contemplated in the design of the retention system) that if not corrected could lead to a failure of the system and result in a release of tailings or waste into unrestricted areas; and any additional requirements the Executive Secretary my by order deem necessary. The licensee shall retain this documentation of each daily inspection as a record for three years after each inspection is documented.

Refer to R313-24-4, 10 CFR 40 Appendix A(8)(a): Daily inspections of tailings or waste retention systems must be conducted by a qualified engineer or scientist and documented. The licensee shall retain the documentation for each daily inspection as a record for three years after the documentation is made. The Executive Secretary, must be immediately notified of any failure in a tailings or waste retention system that results in a release of tailings or waste into unrestricted areas, or of any unusual conditions (conditions not contemplated in the design of the retention system) that is not corrected could indicate the potential or lead to failure of the system and result in a release of tailings or waste into unrestricted areas.

Refer to R317-6-6.3 (O): Unless otherwise determined by the Executive Secretary, applicant for a groundwater discharge permit ...shall include the following information: O. Methods and procedures for inspections of the facility operations and for detecting failure of the system.

INTERROGATORY STATEMENT:

Section 5.3 of the Tailings Management Plan identifies SOP HP-21 for main tailings dam inspection program. Appendix I of the Tailings Reclamation and Decommissioning Plan identifies SOP HP-21 as "Function Check of Equipment for Radiation Surveys".

Please explain this discrepancy and provide an SOP or Section in the report that details documentation of daily inspections of the tailings and waste retention system. Also included in this information should be a commitment to notify the Executive Secretary of any failure of the systems that would result in a release of tailings or waste unto unrestricted areas or of any unusual conditions that if not corrected could lead to a failure of the system. Provide a commitment to preserve documentation for a three-year period after each inspection.

The inspections to be performed on the tailings site include but are not limited to

- *Decant systems*
- *Effluent from under drain pipes*
- *Pond water elevation*
- *Slurry transport system inspection*
- *Retention dam inspection*
- *Diversion and storm water channel inspection*

- *Embankment Settlement*
- *Embankment Slope Conditions*
- *Seepage*
- *Slope Protection*
- *Emergency discharge Facility*
- *Safety and Performance Instrumentation*
- *Operation and Maintenance Features*
- *Postconstruction Changes*
- *Inspections following significant earthquakes, tornadoes, floods, intense rainfalls, or other unusual events.*
- *Groundwater Monitoring systems*
- *Tailings piles*

Documentation should include the completed inspection reports, engineering data compilation, general project data, as-built drawings and photographs, hydrologic and hydraulic data, test results, applicable correspondence, the name of the inspector and responsible supervisor. This documentation should be included in the annual BAT Report for the facility.

Inspections and evaluations should be planned and conducted under the direction of an experienced professional who is thoroughly familiar with the investigation, design, construction, and operations of the Facility with reports prepared to present the results of each technical evaluation and the inspection data accumulated since the last report.

Response: ***The SOP for the Tailings Dam and Facilities Inspection Program is being revised as described in Section 5.4. The discrepancy in SOP number reflects the withdrawal of the previous Dam inspection SOP and the subsequent reassignment of the number. The revised SOP will be assigned a new number.***

BASIS FOR INTERROGATORY:

The Division requires written documentation of daily inspections and immediate notification of potential breaches to waste retention systems.

REFERENCES:

Plateau Resources, Ltd., "Tailings Reclamation and Decommissioning Plan for Shootaring Canyon Uranium Project", Dated December, 2005.

Plateau Resources, Ltd., "Tailings Management Plan for Shootaring Canyon Uranium Processing Facility" Amended December, 2005.

Plateau Resources, Ltd., "Shootaring Canyon Uranium Processing Facility Environmental Report, Source Material License No. UT0900480", Dated January 2006.

NRC. Regulatory Guide 3.11, "Design, Construction, and Inspection of Embankment Retention Systems for Uranium Mills." Washington DC. NRC December 1977.

NRC. Regulatory Guide 3.11.1, "Operational Inspection and Surveillance of Embankment Retention Systems for Uranium Mills." Washington DC. NRC October 1980.

INTERROGATORY R313-24-4-07/01: NOTIFICATION REQUIREMENTS

PRELIMINARY FINDING:

Refer to R313-24-4, R313-19-50: Licensees shall notify the Executive Secretary as soon as possible but not later than four hours after the discovery of an event that prevents immediate protective actions necessary to avoid exposures to radiation or radioactive materials that could exceed regulatory limits or releases of licensed material that could exceed regulatory limits. Events may include fires, explosions, toxic gas releases, etc.

(2) The following events involving licensed material require notification of the Executive Secretary by the licensee within 24 hours:

(a) an unplanned contamination event that:

(i) requires access to the contamination area, by workers or the public, to be restricted for more than 24 hours by imposing additional radiological controls or by prohibiting entry into the area;

(ii) involves a quantity of material greater than five times the lowest annual limit on intake specified in Appendix B of 10 CFR 20.1001 through 20.2402 (2000), which is incorporated by reference, for the material; and

(iii) has access to the area restricted for a reason other than to allow radionuclides with a half-life of less than 24 hours to decay prior to decontamination; or

(b) an event in which equipment is disabled or fails to function as designed when:

(i) the equipment is required by rule or license condition to prevent releases exceeding regulatory limits, to prevent exposures to radiation and radioactive materials exceeding regulatory limits, or to mitigate the consequences of an accident;

(ii) the equipment is required by rule or license condition to be available and operable; and

(iii) no redundant equipment is available and operable to perform the required safety function; or

(c) an event that requires unplanned medical treatment at a medical facility of an individual with spreadable radioactive contamination on the individual's clothing or body; or

(d) an unplanned fire or explosion damaging licensed material or a device, container, or equipment containing licensed material when:

(i) the quantity of material involved is greater than five times the lowest annual limit on intake specified in Appendix B of 10 CFR 20.1001 through 20.2402 (2000), which is incorporated by reference, for the material; and

(ii) the damage affects the integrity of the licensed material or its container.

(3) Preparation and submission of reports. Reports made by licensees in response to the requirements of Section R313-19-50 must be made as follows:

(a) licensees shall make reports required by Subsections R313-19-50(1) and (2) by telephone to the Executive Secretary. To the extent that the information is available at the time of

notification, the information provided in these reports must include:
(i) the caller's name and call back telephone number;

(ii) a description of the event, including date and time;

(iii) the exact location of the event;

(iv) the radionuclides, quantities, and chemical and physical form of the licensed material involved; and

(v) available personnel radiation exposure data.

(b) Written report. A licensee who makes a report required by Subsections R313-19-50(1) or (2) shall submit a written follow-up report within 30 days of the initial report. Written reports prepared pursuant to other rules may be submitted to fulfill this requirement if the reports contain all of the necessary information and the appropriate distribution is made. These written reports shall be sent to the Executive Secretary. The report shall include the following:

(i) A description of the event, including the probable cause and the manufacturer and model number, if applicable, of equipment that failed or malfunctioned;

(ii) the exact location of the event;

(iii) the radionuclides, quantities, and chemical and physical form of the licensed material involved;

(iv) date and time of the event;

(v) corrective actions taken or planned and results of evaluations or assessments; and

(vi) the extent of exposure of individuals to radiation or radioactive materials without identification of individuals by name.

INTERROGATORY STATEMENT:

Please describe how Plateau will comply with the regulation requirements cited above. Please provide all documentation generated to date in compliance with these requirements.

Response: ***A SOP for the Notification Procedures is being developed and will be submitted. No notifications have been provided to the State of Utah in compliance with these requirements. The mill has not operated in over 20 years. Activities to date have been limited to monitoring and maintenance.***

BASIS FOR INTERROGATORY:

The Division requires a written commitment that notification to the Executive Secretary will be given in a timely manner followed by written notification when any of the above cited exposures or accidents occur. It is important that the inspection and maintenance plan is developed so as to include the identification of the items listed above and the respective reporting requirements.

REFERENCES:

Plateau Resources, Ltd., "Tailings Reclamation and Decommissioning Plan for Shootaring Canyon Uranium Project", Dated December, 2005.

Plateau Resources, Ltd., "Tailings Management Plan for Shootaring Canyon Uranium Processing Facility" Amended December, 2005.

Plateau Resources, Ltd., "Shootaring Canyon Uranium Processing Facility Environmental Report, Source Material License No. UT0900480", Dated January 2006.

NRC. Regulatory Guide 3.11, "Design, Construction, and Inspection of Embankment Retention Systems for Uranium Mills." Washington DC. NRC December 1977.

NRC. Regulatory Guide 3.11.1, "Operational Inspection and Surveillance of Embankment Retention Systems for Uranium Mills." Washington DC. NRC October 1980.

INTERROGATORY R313-24-1-14/01: MILLING OPERATIONS

PRELIMINARY FINDING:

Refer to 313-24-4; 10 CFR 40.31(h); An application for a license to receive, possess, and use source material for uranium or thorium milling or byproduct material, as defined in this part, at sites formerly associated with such milling shall contain proposed written specifications relating to milling operations and the disposition of the byproduct material to achieve the requirements and objectives set forth in appendix A of this part. Each application must clearly demonstrate how the requirements and objectives set forth in appendix A of this part have been addressed. Failure to clearly demonstrate how the requirements and objectives in appendix A have been addressed shall be grounds for refusing to accept an application.

INTERROGATORY STATEMENT:

In order to understand the handling and processing of the waste tailings and related solution please provide a complete material/production flow diagram that includes production rates and the properties of the product generated, liquids generated, waste generated, reagents used, losses, etc., starting at the ore pile and ending up in the tailings pile, and evaporation pond. Please provide the details of the tailings dewatering and tailing placement process. This includes:

1. *Design criteria for the dewatering process and tailings placement into the cell.*

Response: ***The process of extracting a portion of the liquid from the tailings slurry will hereafter be termed as fluid extraction rather than dewatering to avoid confusion with the more common definition of dewatering through leachate collection systems or dewatering wells. The present target for the fluid extraction process includes a reduction of the water content in the placed tailings from approximately 51% in the slurry to around 35% or less by weight. With the typical finely milled and low strength tailings, this material would have a consistency of a paste to semi-solid with considerable slumping at the discharge and some tendency to flow and spread. As cited in the revised Tailings Management Plan (TMP) the anticipated approach includes a paste processing plant. The aggressiveness of the fluid extraction process can vary from a passive pre-placement decantation process to an elaborate paste processing plant with sequential press operation and multiple admixtures. Conceptual designs have been developed for plausible options for the fluid extraction process and equipment, but complete designs and specifications will not be done until some economic analysis and further materials testing has been completed. Appendix G of the TMP contains the report of the conceptual designs. Because the tailings cells are designed to accommodate tailings slurry, it is not necessary that the fluid extraction process be in place for the milling operations to proceed. The tailings can be placed as a slurry with concurrent pilot testing of various fluid extraction processes prior to selection of the final process equipment.***

2. *Proposed location and layout of the dewatering equipment and transfer piping.*

Response: ***Because the selection and complete design of the fluid extraction equipment could conceivably be delayed until after the mill has been put in operation, development of a complete layout is not possible at this time. The plausible locations for the fluid extraction process equipment include: adjacent to the CCD tanks and circuit, in the designated area between Cell 1 and the EPPC, and within the tailings cell. A tailings slurry line will necessarily extend from the mill to the active tailings cell, and for cases where the fluid extraction equipment is adjacent to or in the tailings cell, this slurry line could be the feed line for the fluid extraction process.***

3. *Detailed equipment and operational specifications and drawings of the dewatering and related tailings process equipment. This includes (but is not limited to) transfer piping to and from the equipment, the dewatering equipment, dewatered tailing placement equipment and methods, and secondary containment measures for tailings transfer and processing operations.*

Response: ***See previous response. The fluid extraction equipment will be located within a containment pad if located in the mill area, and within the lined containment of the tailings cell(s) if located in or adjacent to the tailings cells.***

4. *Quality control and assurance measures to be used to ensure tailings dewatering and placement meet design criteria and specifications.*

Response: ***Because the tailings cells can accommodate a tailings slurry and have a leachate collection system capable of rapidly removing all free liquid from the cell(s), there is no significant restriction on the liquid content in the discharged tailings. Additional details of the leachate collection system function and capacity are included in Section 5 of the TMP. The proposed fluid extraction offers many benefits such as quicker consolidation of the tailings, thicker placement layers, reduced segregation and a reduction of the rate of collection from the leachate collection system. Even a very modest reduction in tailings water content with a passive fluid extraction process can provide significant benefits without imposing restrictions on the tailings placement.***

5. *Rate and make up of the slurry transferred to the dewatering area.*

Response: ***As stated in a previous response, the anticipated solids content in the slurry is 49% by weight, although minor adjustments will likely be required with differing ore properties. The fluid in the slurry will consist of the highly acidic process solution.***

6. *Rate and feed method into the press for dewatering.*

Response: ***See responses to 1, 2 and 3.***

7. *Feed staging and contingency plans when the dewatering system is out of service. It is stated that if the dewatering press cannot accept the slurry it will be placed into the cell. How will this impact the material in the cell (water content, stability, etc.)? Will it be removed again and dewatered?*

Response: ***As stated in a previous response, the tailings can be placed directly in the cell as a slurry. With the leachate collection system in place and functioning, the free liquid from the slurry will be quickly captured and discharged to the EPPC ponds for evaporation or return to the mill operations. There is no expected adverse affect on the tailings stability. There is a disadvantage in the placement of the tailings as a slurry in that the potential for above-grade placement is limited and the tailings are more likely to segregate.***

8. *Storm water management details for the water collected in the cell and dewatering area.*

Response: ***The intent is to limit capture of runoff into the tailings cell area as much as possible. The local contributing drainage area to the EPPC and tailings Cell 1 is small, but the construction of the planned north drainage diversion during operations would further reduce the drainage area. Section 5.1.6 of the TMP contains discussions of the measures taken to limit runoff delivery to the tailings cells.***

Please provide the anticipated engineering properties of the tailings such as classification (gradation), moisture content, density, unconfined compressive strength, shear strength, permeability, cohesion, and angle of internal friction. These properties are important in evaluating stability and long-term performance of the tailings cell.

Response: ***At this point, the engineering properties of the tailings are highly speculative. However, the tailings will likely be a very low strength material that exhibits strength properties similar to a noncohesive silt or sand. The expected maximum particle size through the milling process is equivalent to a medium sand, and the clay and silt fraction may range up to 30% by weight. The angle of internal friction will be relatively flat, and if the material is placed in a manner that prevents segregation, a typical permeability will likely be in the range of 1E-04 to 1E-06 cm/sec. For non-segregated material, a well-drained long-term moisture content of 12% to 18% by weight is a reasonable expectation, although the presence of a significant clay fraction could increase the moisture content dramatically. If a paste technology is used, the long-term moisture content of the tailings could also increase. The density of the tailings will depend largely on the clay and sand fractions, but a dry density of 75 to 90 psf is plausible.***

BASIS FOR INTERROGATORY:

It would be helpful to see a material flow diagram that includes the production rates and the properties of the product generated, liquids generated, tailings generated, reagents used, losses, etc., starting at the ore pile and ending up in the tailings pile, and evaporation pond. Figure 3.1-1 in the Environmental Report is very useful. However, the same type of diagram with material balance information (e.g., % solids, pH, flow rate, etc.) is needed.

What are the anticipated engineering properties of the tailings such as classification (gradation), moisture content, density, unconfined compressive strength, shear strength, permeability, cohesion, and angle of internal friction? These properties are important in evaluating stability and long-term performance of the tailings cell. Also, the Tailings Management Plan states that the dewatering system may be bypassed if it cannot accept the slurry. This could have a negative impact on the dewatered tailings already in the cell. A contingency plan needs to be developed for the case when the dewatering equipment cannot accept the slurry that does not impact the integrity of the tailings in the cell.

Details on the dewatering process were not provided.

REFERENCES:

Plateau Resources, Ltd., "Shootaring Canyon Uranium Processing Facility Environmental Report, Source Material License No. UT0900480", Dated January 2006.

Plateau Resources, Ltd., "Tailings Management Plan for Shootaring Canyon Uranium Processing Facility" Amended December, 2005.

INTERROGATORY R313-24-4-15/01: RADIATION SURVEY

PRELIMINARY FINDING:

Refer to R313-24-1(3), R313-24-4, R313-15-501, R313-15-406, and 10 CFR 40 Appendix A, Criterion 5A(1); DRC rules require that a radiation survey be performed to demonstrate that the requirements of R313-15 are met, including the magnitude and extent of radiation levels and concentrations or quantities of radioactive material (see R313-15-501). DRC rules also require the licensee to describe "… how facility design and procedures for operation will minimize, to the extent practicable, contamination of the facility and the environment,…" (see R313-15-406). R313-24-4 and 10 CFR 40 Appendix A, Criterion 5A(1) require that for uranium tailings impoundments where wastes have migrated into the liner during the active life of the facility, that closure of said impoundment must include "…removal or decontamination of all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate."

Also refer to R317-6-6.4(A). The licensee must provide information that allows the Executive Secretary to determine:…"3. the applicant is using best available technology to minimize the discharge of any pollutant;…".

INTERROGATORY STATEMENT:

Please provide an evaluation that demonstrates that the existing soil subgrade for both Cell 1 and Cell 2 have radiation and contamination levels that are acceptable. One possible scenario to minimize contamination and meet Best Available Technology (BAT) requirements is to base the design of the liner system for the cells on a clean and stable subgrade. Another scenario is to demonstrate that the levels of any soil contamination left under the new liner design will have no adverse impact on local groundwater quality or the environment. In either case, it is Plateau's burden to demonstrate and justify that any soil concentration level proposed as a cleanup standard has both technical and regulatory justification. Consequently, it is imperative that this evaluation be submitted to the DRC and is approved prior to issuance of a Construction Permit. Also, if the implementation of the plan results in modifications to the proposed subgrade and liner system, the respective modifications will need to be submitted to the DRC for review and concurrence prior to liner construction.

Response: ***As stated throughout the TMP, the EPPC is the planned repository for the existing tailings and other contaminated soil. Section 5.2.2 of the TMP describes contaminated material transfer. All areas where the contaminated materials are collected will be surveyed for compliance with radiological cleanup criteria described in Section 8 and other relevant sections of "Tailings Reclamation and Decommissioning Plan for Shootaring Canyon Uranium Project – 2005, Revised: December 2006".***

BASIS FOR INTERROGATORY:

It is our understanding that a radiation survey is to be performed for the downstream area near the dam where a spill had once occurred, and in the area of the proposed cell where tailings are now stored. The plan and the respective results associated with this survey needs to be provided to the DRC for review.

REFERENCES:

Plateau Resources, Ltd., "Shootaring Canyon Uranium Processing Facility Environmental Report, Source Material License No. UT0900480", Dated January 2006.

Plateau Resources, Ltd., "Tailings Management Plan for Shootaring Canyon Uranium Processing Facility" Amended December, 2005.

INTERROGATORY R313-24-4-16/01: SEISMIC HAZARD CHARACTERIZATION

PRELIMINARY FINDING:

Refer to Criterion 1 of 40 CFR Part 40, Appendix A, Criterion 1"… In the selection of disposal sites, primary emphasis must be given to isolation of tailings or wastes, a matter having long-term impacts, as opposed to consideration only of short-term convenience or benefits, such as minimization of transportation or land acquisition costs. While isolation of tailings will be a function of both site and engineering design, overriding consideration must be given to siting features given the long-term nature of the tailings hazards";

Refer to Criterion 4of 40 CFR Part 40, Appendix A, Criterion 4 (e)…The impoundment may not be located near a capable fault that could cause a maximum credible earthquake larger than that which the impoundment could reasonably be expected to withstand."

Refer to Criterion 1 of 40 CFR Part 40, Appendix A, Criterion 6(1): …[Uranium mill tailings disposal shall be] "in accordance with a design that provides reasonable assurance of control of radiological hazards to be effective for 1,000 years, to the extent reasonably achievable, but in any case for at least 200 years…" ;

INTERROGATORY STATEMENT:

Please provide additional information to support the determination of an appropriate and consistent maximum predicted horizontal ground acceleration (MHGA) for the site. Please include sufficient information regarding historical seismicity and deterministic or probabilistic methodologies used to derive the estimated MHGA value, and to demonstrate that the proposed MHGA value reflects the most current information available regarding predicted seismic hazard levels in eastern/southeastern Utah and the area including the site. Seismic stability analyses should be based on this MHGA value.

BASIS FOR INTERROGATORY:

Additional information needs to be provided to justify that selection of the specified MHGA value of 0.19 g is appropriate for the site and that the stated value reflects the best information currently available for southeastern Utah/the project site. The only information provided in "Exhibit C – Seismic Hazard Analysis" to support determination of the 0.19 g value is page 91 from a referenced report ("June 26, 1994 Seismic Hazard Analysis of Title II Reclamation Plans", Lawrence Livermore National Laboratory). Some of the information on that page is illegible (e.g., the exponent in the cited Hazard Level values); also, information items referenced on that page, including hazard curves, a methodology section, and Fault 2, Fault 3 locations are not provided for review. The 0.19 g value was used for a seismic stability analysis for the Shootaring Canyon Dam performed in 1997 (January 9, 1997 letter report by Inberg-Miller Engineers).

Newmark Analyses conducted in 1999 for the Shootaring Canyon Dam and Cross Valley Berm used a peak ground acceleration of 0.33 g based on a magnitude 6.5 earthquake (January 29 and June 14, 1999 letter reports by Inberg-Miller Engineers).

Response: ***Sections 3.1 and 3.2 of the TMP have been revised and a section 3.3 has been added to summarize the sequence of analyses. The stability evaluation included a seismic stability analysis using the site specific horizontal seismic coefficient of 0.19 g as determined by the Lawrence Livermore National Laboratory study. At the request of the State Engineer, a Newmark Deformation Analysis using the specified peak ground acceleration of 0.33g based on a magnitude 6.5 earthquake. The differing acceleration coefficients reflect the differing purposes of the two analyses. The State Engineers office has thoroughly reviewed the stability analyses for the existing structures and has confirmed in writing that the evaluation is acceptable. The Lawrence Livermore National Laboratory document was previously supplied to the NRC and presumably transferred to the DRC. If possible, an additional copy will be located and provided to the DRC.***

REFERENCES:

Plateau Resources, Ltd., "Tailings Management Plan for Shootaring Canyon Uranium Processing Facility" Amended December, 2005.

INTERROGATORY R313-24-4-19/01: DOUBLE LINER SYSTEM CQAP PLAN AND SPECIFICATIONS

PRELIMINARY FINDING:

Refer to R313-24-4, 10 CFR 40 Appendix A(5)(a)(1): Surface impoundments must have a liner that is designed, constructed, and installed to prevent any migration of wastes out of the impoundment to the adjacent subsurface soil, ground water, or surface water at any time during the active life (including the closure period) of the impoundment. The liner may be constructed of materials that may allow wastes to migrate into the liner (but not into the adjacent subsurface soil, ground water, or surface water) during the active life of the facility, provided that impoundment closure includes removal or decontamination of all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate. For impoundments that will be closed with the liner material left in place, the liner must be constructed of materials that can prevent wastes from migrating into the liner during the active life of the facility.

Refer to R317-3-1(1.7). 1.7. Construction Supervision. The applicant must demonstrate that adequate and competent inspection will be provided during construction. It is the responsibility of the applicant to provide frequent and comprehensive inspection of the project.

Refer to R317-3-10(4)(E). E. Construction Quality Control and Assurance. A construction quality control and assurance plan showing frequency and type of testing for materials used in construction shall be submitted with the design for review and approval. Results of such testing, gradation, compaction, field permeability, etc., shall be submitted to the executive secretary.

INTERROGATORY STATEMENT:

Please revise the CQAP:

- *So it includes sufficient detail to indicate who is responsible (between the Construction Manager, CQA Officer, and others) for, or when acceptance of the liner system construction work identified will occur. This shall include the lines of authority and communication and protocols for identifying and rectifying deficiencies. Limited information is included in Section 5.0 however, a clear and concise description of the lines of authority and communication as well as the protocols for identifying and rectifying deficiencies is needed.*

Response: ***Section 5.2 of Appendix C states that the Site Manager, Design Engineer and or the Quality Control Officer (QC Officer) has the authority to reject and or accept work. There is a separate Quality Assurance Officer (QA Officer) as described in Section 4.3. Section 4.2.2 of Appendix C describes the duties of the QC Officer and the QC Officer will be primarily responsible for the identification of changes, nonconformances and the need for corrective action. The QC Officer reports to the Design Engineer and the Site Manager, and will develop Compliance Report for each phase of construction (see Section 4.1.2 of the Appendix C). The QA Officer's responsibilities are presented in Section 4.3.2 and include oversight of quality control procedures.***

- *So it clearly identifies responsibility assignments or procedures for when there is non-conformance, how they are addressed and corrected, and the timely implementation and documentation of the corrective measure.*

Response: ***Section 5.3.2 of Appendix C indicates that the QC Officer has the primary responsibility for identification and resolution of nonconformances. This does not preclude consultation with the QA Officer, Design Engineer, or Site Manager in order to resolve the nonconformance.***

- *So it clearly states that the CQA Officer and the engineer of record (licensed in the State of Utah) are independent parties who will certify the CQA report by both direct field observations, testing, and document review.*

Response: ***As discussed in preceding responses, separate personnel perform the duties of the QC Officer, QA Officer, Design Engineer, and Site Manager. The compliance report requires approval by both the Design Engineer and Site Manager. A summary of the required reporting and approval is presented in Table 1 of Appendix C. The compliance report requires approval by both the Design Engineer and Site Manager. The methods that the Design Engineer and Site Manager use to evaluate the reports will be left to the personnel in these positions as they will be directly involved with the on-site construction.***

- *To include testing to demonstrate that the clay used for the bottom liner meets the $1x10^{-7}$ cm/s field hydraulic conductivity requirement.*

Response: ***The proposed methods for testing include laboratory testing of remolded samples (density of 95% of standard Proctor) with a falling head permeameter. Field permeameters were considered, but the difficulties in performing a representative test on low permeability in-situ compacted clays are numerous. The preliminary testing indicates that the available clay has a very small hydraulic conductivity of approximately 1E-08 cm/sec, and this adds further difficulty in that the duration of a field test to produce quantifiable results will be very long. In fact, the preliminary laboratory permeability tests were discontinued after several days without having passed sufficient effluent through the sample to quantify the permeability. The potential for disturbance of the compacted clay sample site while driving an infiltrometer or permeameter is also great, and the biasing of the test results by this disturbance makes the approach questionable.***

BASIS FOR INTERROGATORY:

The applicant proposes to use a double liner with leak detection in order to prevent migration of wastes out of the impoundment (section 4 & 5, TMP). The liners will be constructed of 60 mil High-Density Polyethylene (HDPE) with material properties as shown in Appendix C (TMP). The applicant indicates that the double liner with the leak detection system design is the Best Available Technology (BAT) and comparable to similar facilities in the industry. The application of HDPE flexible membrane liner appears to be in concurrence with the current regulations and BAT. The applicant also proposes to install storm water controls and a final cover that are to address long term stability of the site both during and after closure. However, there is insufficient information provided in the Construction Control Quality Assurance Plan (CCQAP) and only limited detailed plans and specification are provided for the construction of

Cell 1 and 2. The deficiencies in the CCQAP are addressed in this interrogatory, while the deficiencies in the plans and specifications are addressed in a separate interrogatory.

The review of the CCQA revealed a few items that were not clear. The Appendix (C, TMP) does not contain sufficient detail to indicate acceptance of non-conforming work and procedures/documentation for retesting control. Also, no technical specifications were located within the application.

Response: ***Regarding the presence of technical specifications, there are numerous specifications listed throughout Appendix C. As examples: (1)the bullet listing in Section 7.4 of Appendix C includes soil classification, gradation, Atterberg Limits requirements, compaction specifications etc. for the clay; (2)the bullet listing in Section 7.5 of Appendix contains material and physical properties specifications for the HDPE liners included material properties in Table 3. The level of technical specification is appropriate for a Tailings Management Plan.***

Section 7.4.1 does include the requirement that for every 10,000 cubic yards of clay placed, clay liner composite samples of the placed clay shall be collected and tested for hydraulic conductivity. However, the method used for this testing is not provided. Also, Appendix F includes test data on the proposed material to be used for the clay liner. However, no test method or laboratory results on the hydraulic conductivity is provided, only a statement in a transmittal letter that test results indicated hydraulic conductivity on the order of $1x10^{-8}$ cm/s or less.

Response: ***As mentioned in a previous response, the permeability testing was discontinued after several days because there was not sufficient effluent from the sample column to quantify the permeability. This indicates a very small hydraulic conductivity.***

The requirement for the hydraulic conductivity of the clay liner is an in place field hydraulic conductivity of $1x10^{-7}$ cm/s or less. Plateau needs to provide a demonstration that the clay used for the bottom liner meets this requirement. Laboratory hydraulic conductivity testing is typically found to be less than demonstrated for the same compacted clay in the field.

REFERENCES:

Plateau Resources, Ltd., "Tailings Reclamation and Decommissioning Plan for Shootaring Canyon Uranium Project", Dated December, 2005.

INTERROGATORY R313-24-4-20/01: LINER STRENGTH & COMPATIBILITY

PRELIMINARY FINDING:

Refer to R313-24-4, 10 CFR 40 Appendix A(5)(a)(2)(a): The liner must be constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation;

Refer to R317-6-1 (1.3): "Best Available Technology (BAT)" means the application of design, equipment, work practice, operation standard or combination thereof at a facility to effect the maximum reduction of a pollutant achievable by available processes and methods taking into account energy, public health, environmental and economic impacts and other costs;

Refer to R317-6-6 (6.4): ["ISSUANCE OF DISCHARGE PERMIT - The Executive Secretary, may issue a ground water discharge permit for a new facility if the Executive Secretary determines, after reviewing the information provided under R317-6-6.3, that: ...(A.3) the applicant is best available technology to minimize the discharge of any pollutant…";

INTERROGATORY STATEMENT:

To meet the regulatory requirements referenced for the cell liner system the following evaluations or calculations need to be provided: Liner system material (HDPE, clay, geonet, fabric, granular material, piping, extraction and monitoring equipment, etc.) to be compatible with leachate so as not to compromise the integrity if the system. Please provide site-specific information, test data, and/or studies on the anticipated chemical and physical characteristics of the leachate and the ability of all of the liner system materials and equipment to resist long-term damage/degradation due to exposure to leachate and residual process liquids.

Please provide an evaluation that demonstrates that the proposed lining system will remain stable during cell operations; this includes:

1. *Anchor trench calculations that provide the basis for the anchor trench design.*

Response: ***Section 5.1.4.8 and Appendix K describe the anchor trench design.***

2. *An evaluation of the impact of stress imposed by equipment, tailings and liquid during placement on the liner system side slopes that could result in movement and degradation of the liner system.*

Response: ***The use of equipment on top of the liner is restricted to specialized low-ground pressure equipment. Section 5.2 and subsections contain descriptions of the construction sequencing and the planned access corridors for equipment. There is also a restriction requiring a minimum of 27 inches of cover over the primary liner for unrestricted traffic. Both the EPPC and Cell 1 have mildly sloping corridors to allow access. Section 5.2.5 describes the construction sequence for Cell 2, which includes a pre-construction access ramp and a sloped interior ramp to allow cell completion and post-construction access. With the exception of the upstream face of the cross valley berm and other small areas, the liner system in Cell 1 will be at relatively mild slopes and will be***

covered with the drainage layer. There is a commitment to advance tailings from the base of the cell and to advance the tailings to cover the exposed liner on the 3H:1V slopes as early as possible in the cell operation. With the Reduced Moisture Tailings Placement (RMTP) it will be possible to "buttress" the tailings at the base of the 3H:1V slopes and advance the tailings at a slope milder than 3H:1V. It is not anticipated that there will be any significant ponding of liquids against the exposed 3H:1V liner.

3. *Information to demonstrate the stability of the lining system interfaces, particularly the HDPE liner interfaces, on the cell side slopes during lining system installation and cell operation. Include information assessing the stability of the lining system in the event of a possible failure of anchoring of the lining system at the anchor trench as a result of cell loading during operations (such as from equipment), during unusually severe wind uplift conditions that might occur prior to or during the operational period, etc.*

Response: ***Section 5.4.9 includes an evaluation of the liner interface stability, and Appendix K includes anchorage calculations. The cells will be filled from the base with the anticipated RMTP process which will compress the liners against the side slopes resulting in increased liner stability.***

4. *An evaluation of the impacts of wind uplift forces, ballasting for wind uplift, UV degradation, wetting/drying cycles, freeze-thaw cycles, and temperature fluctuations on the liner system while exposed to these forces.*

Response: ***Section 5.1.4.8 presents a discussion of liner system anchorage and potential wind uplift. The materials specifications in Table 3 of Appendix 3 includes a minimum carbon black content and required retention of 50% under High Pressure OIT testing (ASTM D 5885) and conformance with these specifications should provide acceptable UV resistance. Freeze-thaw cycles are not expected to degrade the liner, and with no sustained ponding expected with the RMTP process, the potential for damage by ice is minimal. The expected thermal expansion/contraction of HDPE is on the order of 1.2E-06/ºC. There is a commitment to advance the tailings in a manner which covers the exposed liner as quickly as possible.***

5. *A calculation demonstrating that the synthetic liner will not be punctured by the proposed drainage filter materials (e.g., by Entrada sands on the cell floors and side slopes and by sand and gravel filter layer materials on cell side slopes) - i.e. provide information demonstrating whether or not any cushion geotextiles are needed atop the upper synthetic liner at locations where the liner contacts these drainage filter media.*

Response: ***Two gradations for Entrada sand are presented in Figure B-3 of Appendix B of TMP. The maximum particle size for a typical Entrada sand will pass a #4 US Standard sieve with more than 99.5% usually passing a #16 US Standard sieve, and there is virtually no potential for puncture of the primary liner by processed and debris-free Entrada sand. One of the primary purposes of the Entrada sand as presented throughout the TMP is to protect the HDPE liner. The Entrada sand is specified exclusively as the material in contact with the liner in areas where the drainage layers are present or where access roads are constructed. The sand and gravel filter layer is used only as the intermediate layer in the drainage system. The revised leachate collection piping installation is shown in Figure 5-8 and illustrates that the washed gravel envelope is enclosed in a nonwoven geotextile.***

An additional layer of geotextile is then placed below the gravel envelope to further cushion the liner. In the sumps, the HDPE liners are doubled to prevent puncture and penetration.

6. *Information regarding the proposed upper geomembrane liner (e.g. standard all-black 60-mil HDPE vs. black/white HDPE geomembrane; textured vs. smooth) and additional information supporting the technical suitability of the proposed geomembrane for the site conditions (e.g. HDPE geomembane vs. other type of geomembranes that may be more tolerant to long-term UV radiation and higher temperature effects).*

Response: ***Both HDPE liners are specified as smooth standard black 60-mil HDPE. The areas of the liners that will be exposed for an extended period of time include the 3H:1V slopes. With the RMTP process, these areas can be covered in within a reasonable period of time and no significant degradation of the liner is expected. The HDPE material was selected because it is the industry standard for this type of application and has suitable physical properties, chemical resistance, and durability.***

BASIS FOR INTERROGATORY:

The Applicant's submission does not include sufficient information to allow a complete review of adequacy of the lining system design for meeting the requirements of 10 CFR 40, Appendix A, Criterion 5 A(2) which addresses cell liner requirements, or for meeting the criteria identified in R317-6-1, 1.3 for BAT, for double liner systems. 10 CFR 40 Appendix A, p. 651, Criterion 5 A(2) states that" the liner must be--constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation". The liner system description and schematics provided in the stated reports describe some aspects of the lining system design but supporting information, evaluations, and calculations providing a basis for the design are lacking. No specifications are provided regarding the properties of the upper geomembrane liner (other than what is provided in the CQAP). The extent to which the liner materials could be subject to dimpling/puncture by the proposed drainage filter materials has not been quantified. Sand bags are specified to hold down the geomembrane liner during installation; however, no specifications are provided regarding the size or spacing of such sand bags required. No calculations are provided to evaluate the potential for wind uplift of the geomembrane liner. No specifications are provided regarding the depth and width of anchor trenches required for anchorage of the liner system or for the thickness of additional anchorage soil material, if any, required on the anchor trench berm to support the liner system stability. No calculations are provided to evaluate the potential deleterious effects of different particle sizes in potential anchor trench backfill materials on the geomembrane liner buried in the anchor trenches. The evaluations or calculations listed above should be included to fulfill these information gaps.

REFERENCES:

Plateau Resources, Ltd., "Tailings Reclamation and Decommissioning Plan for Shootaring Canyon Uranium Project", Dated December, 2005.

Plateau Resources, Ltd., "Tailings Management Plan for Shootaring Canyon Uranium Processing Facility" Amended December, 2005.

Valero, S.N., and Austin, D.N., 1999. "Simplified Design Charts for Geomembrane Cushions", in Geosynthetics '99, Boston, Mass. Available at: http://www.sedimentremediation.com/TechRef/Dredge/GPD-SM-116.pdf

Giroud, J.P., Gleason, M.H., and Zornberg, J.G., 1999. Design of Geomembrane Anchorage Against Wind Action", in Geosynthetics International, Vol. 6, No. 6, 1999, pp. 481-507.

Hsuan, Y.G., Lord, A.E., and Koerner, R.M., 1991. "Effects of Outdoor Exposure on a High Density Polyethylene Geomembrane", in Geosynthetics ' 91, Atlanta, GA, pp. 287-302.

Koerner, R.M. , Hsuan, Y.G., and Koerner, G.R., 2005. "Geomembrane Lifetime Prediction: Unexposed and Exposed Conditions", Geosynthetic Institute White Paper #6, June 7, 2005.

INTERROGATORY R313-24-4-21/01: LINER SETTLEMENT

PRELIMINARY FINDING:

Refer to R313-24-4, 10 CFR 40 Appendix A(5)(a)(2)(b): The liner must be placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift.

INTERROGATORY STATEMENT:

Please indicate the extent of settlement, differential settlement, and distortion in the cover that are allowed, on the bottom and side slopes under the liner system at the time of final closure. Demonstrate that allowable settlement, differential settlement, and distortion resulting from the anticipated loads during operation will not damage the final liner system A justification of the respective design criteria used needs to be included.

Response: ***The subgrade for the liner system will be the bedrock Entrada sandstone that is present throughout the area. The fine uniform Entrada sand compacts easily to a high density and the specified compaction for fill within Appendix C is 95% of standard Proctor density. Appendix I of the TMP presents Proctor testing results for the Entrada sand. Much of the base of the EPPC and Cell 2 will be excavated within the Entrada and the minimum depth to water below the pond base is approximately 50 feet. Under these conditions, the expected compressibility of the Entrada sand is expected to be negligible. The compaction standard for the clay liner is also 95% of standard Proctor density. With a dense bedrock and bedrock-derived subgrade, and a 12 inch thickness of compacted clay, the potential for significant differential sediment is very limited, and the total magnitude of subgrade settlement is expected to be insignificant.***

BASIS FOR INTERROGATORY:

The liner system will be placed on one-foot minimum of compacted clay (section 4 & 5, TMP). A quality control plan/ procedure for construction of the clay liner is presented in Appendix C (TMP). However, the license applicant has not provided calculations of settlement on the bottom or side slopes of the liner due to anticipated loads during operations and after closure. The applicant did not provide these details for review.

REFERENCES:

Plateau Resources, Ltd., "Tailings Management Plan for Shootaring Canyon Uranium Processing Facility" Amended December, 2005.

INTERROGATORY R313-24-4-22/01: LEACHATE COLLECTION AND DETECTION SYSTEM DESIGN

PRELIMINARY FINDINGS:

Refer to R313-24-4(2)(J)(ii): Clarifications or Exceptions. "Utah Administrative Code, Rule R317-6, Ground Water Quality Protection" for ground water standards in "Environmental Protection Agency in 40 CFR part 192, subparts D and E" as found in the Introduction, paragraph 4; or "Environmental Protection Agency in 40 CFR part 192, subparts D and E (48 FR 45926; October 7, 1983)" as found in Criterion 5;

Refer to R317-6-1 (1.3): "Best Available Technology (BAT)" means the application of design, equipment, work practice, operation standard or combination thereof at a facility to effect the maximum reduction of a pollutant achievable by available processes and methods taking into account energy, public health, environmental and economic impacts and other costs.

Refer to R317-6-6 (6.4): ["ISSUANCE OF DISCHARGE PERMIT - The Executive Secretary, may issue a ground water discharge permit for a new facility if the Executive Secretary determines, after reviewing the information provided under R317-6-6.3, that: ...(A.3) the applicant is best available technology to minimize the discharge of any pollutant…".

Refer to Refer to 10 CFR Part 40 Appendix A, Criterion 5 (A)(4): …" a surface impoundment must be designed, constructed, maintained, and operated to prevent overtopping resulting from normal or abnormal operations, overfilling, wind and wave actions, rainfall, or run-on; from malfunctions of level controllers, alarms, and other equipment; and from human error…"

INTERROGATORY STATEMENT:

Please provide additional information to demonstrate that:

1. *The proposed "drainage sock" surrounding the perforated leachate collection drain pipe will not clog or become bio-fouled with residues, fine particles, inorganic precipitates, etc... following construction, that such clogging will not interfere with effective leachate flow into the leachate collection system, and that the sock would not interfere with future flushing of the leachate collection system lines, if required.*

Response: ***Section 5.1.4.2 and Figure 5-8 present the revised drainage collection pipe and gravel envelope. The geotextile wrap surrounding the gravel envelope functions as the filter for the piping system with a dramatically expanded surface area. No flushing of the piping should be necessary. The filter sock will only be used for sections of the pipe that extend up the side slopes without drainage layers.***

2. *The diameter of the pipe perforations is appropriately sized to prevent invasion of particles from the granular backfill materials overlying and surrounding the perforated drain pipe to ensure that the perforated drain pipe will not become clogged with sediments and such clogging will not interfere with effective leachate flow through the leachate collection and detection systems.*

Response: ***The standard perforation dimensions (0.035 to 0.050 inch wide by 0.5 to 0.75 inch long) for corrugated pipe are suitable for the washed gravel envelope which is wrapped in the geotextile.***

3. *The design of the geotextile filter and granular drainage medium surrounding the leachate collection and detection system drainpipe has included an adequate factor of safety against long-term clogging.*

Response: ***The sizing of the Entrada sand and sand and gravel drainage layers will prevent intrusion of the tailings fines into the drainage layers or piping systems. There is a significant factor of safety for the leachate collection system capacity (see Section 5.1.4.1 and table 5-1 of the TMP).***

4. *Clean outs should be included to enable effective pipe cleaning as needed.*

Response: ***The conservative piping density and system capacity of the leachate collection system is adequate to function without maintenance. The sizing of the drainage layers and the large surface area of the geotextile wrap of the gravel envelope (see Figure 5-8) should eliminate the need for maintenance.***

5. *The leachate collection and detection system drainpipes are sufficiently strong to withstand damage due to pipe loading (pipe wall buckling and crushing and pipe deflection calculations) under anticipated loads from the overlying tailings and cover.*

Response: ***Section 5.1.4.2 and Appendix J of the TMP present the buried pipe loading analysis.***

BASIS FOR INTERROGATORY:

BAT requires that leachate collection and detection systems be designed to resist clogging during the active life and post-closure period. Published reports and case studies indicate that filter socks surrounding leachate collection system drain pipes are susceptible to clogging and therefore this design does not meet criteria identified in R317-6-1, 1.3 for Best Available Technology for leachate collection drain pipes. If perforations in leachate drainpipes are improperly sized, this can lead to clogging and interfere with flow of leachate into/through leachate collection and detection system drainpipes. If leachate collection and/or detection drain pipes become crushed or experience excessive deflection due to construction, operational, or closure construction loading forces, their performance could be compromised. Most landfill designers recommend periodic flushing (e.g., jetting; back-flushing) of leachate collection pipes to clear pipe perforation or pipes to maintain efficient leachate flow rates. Most designers typically recommend use of either 6 or 8-inch-diameter LCRS drain pipes with appropriate SDRs (Standard Dimensional Ratios) and Moduli of Elasticity in order to withstand loading-induced damage (ring deflection, wall crushing, wall buckling) and use of gravel backfill around perforated (vs. slotted) pipes to permit effective back flushing. Clean out are also included to facilitate effective cleaning.

REFERENCES:

Plateau Resources, Ltd., "Tailings Reclamation and Decommissioning Plan for Shootaring Canyon Uranium Project", Dated December, 2005.

Plateau Resources, Ltd., "Tailings Management Plan for Shootaring Canyon Uranium Processing Facility" Amended December, 2005.

Koerner, G.R, Koerner, R.M., and Martin, J.P. 1993. "Field Performance of Leachate Collection Systems and Design Implications". Solid Waste Association of North America: 31st Annual International Solid Waste Exposition, pp. 365-380.

Reinhart, D.R. et al. 1998. Assessment of Leachate Collection System Clogging at Florida Municipal Landfills. Report # 98-5. Florida Center for Solid and Hazardous Waste Management, Gainesville, FL. October 30, 1998.

Rowe, R.K. 2005. Long Term Performance of Containment Barrier Systems, Geotechnique, 55, No. 9, pp. 631-678.

R313-24. Uranium Mills and Source Material Mill Tailings Disposal Facility Requirements.

R317-6. Ground Water Quality Protection.

10 CFR Part 40. Domestic Licensing of Source Materials.

Title 40, Chapter 1, Part 264, Subpart K, Sec 264.221

INTERROGATORY R313-24-4-23/01: DIKE INTEGRITY

PRELIMINARY FINDING:

Refer to R313-24-4, 10 CFR 40 Appendix A(5)(a)(5): When dikes are used to form the surface impoundment, the dikes must be designed, constructed, and maintained with sufficient structural integrity to prevent massive failure of the dikes. In ensuring structural integrity, it must not be presumed that the liner system will function without leakage during the active life of the impoundment.

INTERROGATORY STATEMENT:

The elevations that were used in the slope stability analysis for the Cross Valley Berm appear to have changed compared to elevations on drawings in the TMP (section 5, Figure 5-3) and TRDP (section 9 and Figures). Please indicate if these elevations will change and if the slope stability analysis is still valid. Submit revised slope stability analysis if necessary. Also confirm if this berm is to be reshaped during Cell 1 construction. If the berm is to be reshaped, revise the slope stability analysis to reflect proposed elevations, geometry and soil conditions. Also confirm that that all critical slopes have been evaluated or are represented by the evaluation of the most critical slope. This evaluation is to include and/or consider the dikes between Cell 1 and Cell 2 and between Cell 1 and the Evaporation and Process Pond Cell (EPPC) and the conditions where the liner has failed and the cell contains it's maximum amount of liquid (e.g., worst case scenario).

Response: ***The evaluation of stability of the cross valley berm was performed for the reconfigured cross valley berm as detailed in Section A.3 of Appendix A. This included the slope reduction to 2H:1V and a berm crest height of 4455 feet above MSL as shown in the figure titled Berm Modifications in Section A.3. Hence the recommended modifications to the berm were incorporated in the stability analysis and correspond with the configuration depicted in Figure 5-3. There is a commitment in the TMP to modify the reconfigured cross valley berm in accordance with the recommendations in Section A.3 of Appendix A. The modifications to the cross valley berm will not occur until the EPPC is constructed and the contaminated material transfer is complete. The further slope reduction to 3H:1V for liner installation is a simple buttressing of the upstream and downstream toe and face, and the buttress material will be consistent with reconfiguration materials described in Section A.3 of Appendix A. This buttressing will further improve the stability of the cross valley berm and should in no way adversely affect stability. Hence, no additional analysis is needed. The configuration and placement conditions for the minor berm separating the EPPC from Cell 1 are described in Section 3.4.***

BASIS FOR INTERROGATORY:

Seismic and slope stability analyses were conducted by the applicant for the Shootaring Canyon Dam and the Cross Valley Berm (section 3 & Appendix A, TMP). The reference documents within the application do not address piping, however this may not be wholly applicable since the cells have double layers (liners) technology. The documents do contain a slope stability analysis for the Cross Valley Berm.

Correct slope information, from current elevation data, should be utilized in the slope stability analysis. It appears that information and evaluations performed to support previous submittals were included in the current TMP and TRDP and they may contain inconsistencies that were never updated to reflect proposed cell construction. For example, the slope stability evaluation of the Cross Valley Berm included recommendations for improving the stability of the slope. Were these recommendations implemented? Also, it states in section 3.0 of the Tailings Management Plan that the Cross Valley Berm is to be reshaped to a 3H:1V configuration. This reshaped slope needs to be evaluated for stability.

Alternately, provide conclusive statements as to the applicability of the existing slope stability analysis. Special conditions may exist between Cell 1 and Cell 2 and between Cell 1 and the EPPC in terms of dike and liner system integrity. This information is needed to demonstrate the long-term stability of the final cover.

REFERENCES:

Plateau Resources, Ltd., "Tailings Reclamation and Decommissioning Plan for Shootaring Canyon Uranium Project", Dated December, 2005.

Plateau Resources, Ltd., "Tailings Management Plan for Shootaring Canyon Uranium Processing Facility" Amended December, 2005.

INTERROGATORY R313-24-4-24/01: BEST AVAILABLE TECHNOLOGY

PRELIMINARY FINDING:

Refer to R313-24-4, R317-6-1 (1.3): "Best Available Technology (BAT)" means the application of design, equipment, work practice, operation standard or combination thereof at a facility to effect the maximum reduction of a pollutant achievable by available processes and methods taking into account energy, public health, environmental and economic impacts and other costs.

Refer to R317-6-6 (6.4): ["ISSUANCE OF DISCHARGE PERMIT - The Executive Secretary, may issue a ground water discharge permit for a new facility if the Executive Secretary determines, after reviewing the information provided under R317-6-6.3, that: ...(A.3) the applicant is best available technology to minimize the discharge of any pollutant…".

INTERROGATORY STATEMENT:

Please provide:

1. *A Leachate Monitoring, Operations, Maintenance, and Reporting Plan that includes an estimation of anticipated flow rates and maximum capacity in both the leachate collection and detection systems.*

Response: ***The operation and capacity of the leachate collection system is described in Sections 5.1.4.1 through 5.1.4.6. The leachate collected will be delivered to the process or evaporation ponds in the EPPC and possibly recycled to the mill. Since the leachate collection is an active part of the milling circuit fluid cycle, the metering and conveyance of this fluid will be an internal operational program.***

2. *The Action Leakage Rates for the EPPC, Cell 1, and Cell 2 systems. They should be included as part of the Leachate Monitoring, Operations, Maintenance, and Reporting Plan.*

Response: ***The operation and capacity of the leakage detection system is described in Section 5.1.4.7. The commitment is for weekly monitoring of volume discharged from the leakage detection sumps, along with operational fluid level detection equipment and alarms.***

3. Leachate collection and detection pipe strength calculations that provide a basis for their design.

Response: ***The structural design of the piping is described in Section 5.1.4.2, Section 5.1.4.5 and Appendix J.***

4. Complete Cell liner system plans and installation specifications. These are addressed for the cover system, but are not included for the liner system. Provide drawings (plans) and specifications in sufficient detail so they can be used in construction. They are to be certified by a qualified Professional Engineer licensed in the State of Utah. The drawings shall include, but not be limited to, cell liner, leachate collection, leak detection, dewatering operations, tailings transfer and management, and stormwater control layouts, cross sections, details, and profiles. They shall include proposed elevations and horizontal coordinates at all key locations. The specifications shall cover (but not limited

to) all proposed components and materials, their respective material and equipment and installation requirements.

Response: ***The production of construction level drawings and plans will begin after approval of the Tailings Management Plan. The level of drawing detail and materials specification included in the TMP is considered appropriate to evaluate the major design concepts and configurations for the tailings impoundments. There are also factors that make it impractical to develop detail drawings and specifications for certain aspects of the design at this time. As an example, the design objective of transfer of all existing contaminated materials to the EPPC precludes development of precise grading plans for Cell 1 until the contaminated material is removed and the radiological survey completed.***

5. *Since the means for ensuring the integrity of the liner system through time is through maintenance and inspection, Plateau should provide a Liner Maintenance and Inspection Plan at this time.*

Response: ***The Liner Inspection and Maintenance SOP will be developed in conjunction with the revision of the SOP for Tailings Dam and Facilities Inspection Program.***

BASIS FOR INTERROGATORY:

For waste cell liner systems as proposed for Cell 1 and 2, the State of Utah considers BAT to be a double liner with leachate collection/detection systems. For the EPPC, Cell 1, and Cell 2, this means:

- *Leachate collection layer and removal system above a primary liner consisting of appropriately designed collection pipes, granular filter bed, and sump type extraction system. The leachate collection system shall have the ability to remove liquid from the cell in practical and timely manner while maintaining a minimal head on the primary liner with a maximum allowable head of three (3) feet.*
- *Primary HDPE Liner that is at least sixty (60)-mil thick.*
- *A rapid reporting leak detection layer and removal system between the primary and secondary liner consisting of appropriately designed collection pipes, geonet and/or granular filter bed, and sump type extraction system. The leachate detection system shall operate so as to maintain a minimal head on the secondary liner with a maximum allowable head of one (1) foot under anticipated impacts from siltation and clogging, rib layover and creep of synthetic components of the system, overburden pressures, etc.*
- *A composite secondary liner that consists of a HDPE liner that is at least sixty (60)-mil thick over at least twelve (12) inches of compacted clay with a maximum field permeability of 1×10^{-7} centimeters per second.*
- *Bedding layer and/or appropriately prepared clean subgrade.*
- *Maximum side slopes of 3-horizontal to 1-vertical*
- *Leachate Monitoring, Operations, Maintenance and Reporting Plan (that addressees both the leachate collection and detection system)*

- *Ground Water Monitoring system (per the facility Ground Water Quality Discharge Permit)*
- *Ground Water Monitoring Plan (per the facility Ground Water Quality Discharge Permit)*
- *Liner Maintenance and Inspection Plan*

Per BAT for leachate collection and detection systems the Leachate Monitoring, Operations, Maintenance, and Reporting Plan needs to include an estimation of anticipated flow rates that include the flow rate under 3-feet of head on the primary liner for the leachate collection layer and the maximum capacity (flow rates) in both of these layers to demonstrate compliance with the above listed respective requirements.

The Action Leakage Rate, which is defined as the maximum design flow rate that the leak detection system can rapidly remove without the fluid head on the liner exceeding one (1) foot, needs to be determined. The action leakage rate must include an adequate safety margin to allow for uncertainties in the design (e.g., slope, hydraulic conductivity, thickness of drainage material), construction, operation, and location of the system, waste and leachate characteristics, likelihood and amounts of other sources of liquids, considerations for rapid reporting when it is exceeded, and proposed response actions (e.g., the action leakage rate must consider decreases in the flow capacity of the system over time resulting from siltation and clogging, rib layover and creep of synthetic components of the system, overburden pressures, etc.). The development of the action leakage rate includes a reasonable and defendable estimation of an allowable leakage rate through the primary liner into the leak detection system. Note that the allowable leakage rate needs to consider that the maximum allowable head on the primary liner is 3-feet. Guidance can be found in 40 CFR 264.302, the EPA document Action Leakage Rates For Leak Detection Systems; January 1992, and in Geosynthetics International, Special Issue on Liquid Migration Control Using Geosynthetic Liner Systems, 1997, Vol. 4 (that includes an article on page 215 by GeoSyntec Consultants on this topic).

REFERENCES:

EPA 1992. "Action Leakage Rates for Leak Detection Systems: Supplemental Background Document for the Final Double Liners and Leak Detection Systems Rule for Hazardous Waste Landfills, Waste Piles, and Surface Impoundments," Office of Solid Waste, EPA-530-R92-004, January 1992.

Giroud, J.P., B.A. Gross, R. Bonaparte and J.A. McKelvey, "Leachate Flow In Leakage Collection Layers Due To Defects In Geomembrane Liners", Geosynthetics International, Special Issue on Liquid Migration Control Using Geosynthetic Liner Systems, 1997, Vol. 4. Available at http://www.geosyntheticssociety.org/GI_SourceFiles/V4I34/GI-V4-N3&4-Paper1.pdf

Plateau Resources, Ltd., "Tailings Reclamation and Decommissioning Plan for Shootaring Canyon Uranium Project", Dated December, 2005.

Plateau Resources, Ltd., "Tailings Management Plan for Shootaring Canyon Uranium Processing Facility" Amended December, 2005.

Plateau Resources, Ltd., "Shootaring Canyon Uranium Processing Facility Environmental Report, Source Material License No. UT0900480", Dated January 2006.

INTERROGATORY R313-24-4-25/01: COVER SYSTEM DESIGN AND CELL INFILTRATION

PRELEMINARY FINDINGS:

Refer to R313-24-4(ii) "Utah Administrative Code, Rule R317-6, Ground Water Quality Protection" for ground water standards in "Environmental Protection Agency in 40 CFR part 192, subparts D and E" as found in the Introduction, paragraph 4; or "Environmental Protection Agency in 40 CFR part 192, subparts D and E (48 FR 45926; October 7, 1983)" as found in Criterion 5;

Refer to R317-6-6.3 (G) Information which shows that the discharge can be controlled and will not migrate into or adversely affect the quality of any other waters of the state, including the applicable surface water quality standards, that the discharge is compatible with the receiving ground water, and that the discharge will comply with the applicable class TDS limits, ground water quality standards, class protection levels or an alternate concentration limit proposed by the facility.

Refer to R317-6-1 (1.3): "Best Available Technology" means the application of design, equipment, work practice, operation standard or combination thereof at a facility to effect the maximum reduction of a pollutant achievable by available processes and methods taking into account energy, public health, environmental and economic impacts and other costs.

Per 10 CFR 40 Appendix A (6)(1); In disposing of waste byproduct material, licensees shall place an earthen cover (or approved alternative) over tailings or wastes at the end of milling operations and shall close the waste disposal area in accordance with a design which provides reasonable assurance of control of radiological hazards to (i) be effective for 1,000 years, to the extent reasonably achievable, and, in any case, for at least 200 years,…

INTERROGATORY STATEMENT:

Please provide additional analyses and justification to support the proposed design of the final cover system design for this facility. For example, the proposed final cover design does not incorporate a geomembrane liner. In terms of long-term stability of the closed impoundment, justify the lack of the geomembrane liner in the cover system as a deviation from design guidance or revise the design to incorporate a geomembrane. Published regulatory guidance pertaining to the design of cover systems for landfills or waste impoundment facilities that specify that such facilities, if constructed with synthetic liners and leachate collection and leak detection systems, have a final cover system that is no more permeable or less permeable than the liner system.

BASIS FOR INTERROGATORY:

Final cover systems for facilities of this type, which have a double synthetic liner and leachate collection and leak detection system and has a minimum design life of 200 to 1,000 years, are typically designed with a cover design consisting of multi-layers of protection and typically include a geomembrane liner (e.g., EPA 2004, Chapter 2, Section 2.8 and Figure 2-19; EPA 2006, Figure 4). The concern exists for long-term "bathtubbing" of leachate within the closed impoundment cell due to long-term percolation rates through a potentially partially degraded cover system. If such bathtubbing were to occur, this condition could compromise the long-term

stability of the closed impoundment and could necessitate active maintenance measures which would be contrary to the concept of minimal maintenance. If a geomembrane liner is not considered for inclusion in the final cover system, a detailed demonstration needs to be provided as to why it is not needed.

Response: ***Note: this response was also included in the response to interrogatories for the Tailings Reclamation and Decommissioning Plan (TRDP) submitted in December 2006. The cover system has been revised to include a 40 mil textured HDPE geomembrane. Sections 5.4.8 and 5.4.9 of the TRDP present a discussion of the potential infiltration and the impacts of accumulation of infiltrate.***

REFERENCES:

EPA 2006. Joint NRC-EPA Guidance on a Conceptual Design Approach for Commercial Mixed Low-Level Radioactive and Hazardous Waste Disposal Facilities, Issued in 1987. Website last updated March 8, 2006; accessed on May 9, 2006:

http://www.epa.gov/radiation/mixed-waste/mw_pg26.htm.

Epa 2004. "draft technical guidance for rcra/cercla final covers", usepa - usace superfund partnership program policy, guidance, and activities, chapter 2. Http://hq.environmental.usace.army.mil/epasuperfund/geotech/

Plateau Resources, Ltd., "Tailings Reclamation and Decommissioning Plan for Shootaring Canyon Uranium Project", Dated December, 2005.

Plateau Resources, Ltd., "Tailings Management Plan for Shootaring Canyon Uranium Processing Facility" Amended December, 2005.

Plateau Resources, Ltd., "Shootaring Canyon Uranium Processing Facility Environmental Report, Source Material License No. UT0900480", Dated January 2006.

INTERROGATORY R317-6-6.3F-28/01: INFORMATION ON EFFLUENT DISCHARGE RATES

PRELIMINARY FINDING:

Refer to R317-6-6.3F: Unless otherwise determined by the Executive Secretary, the application for a permit to discharge wastes or pollutants to ground water shall include the following complete information:

F. The type, source, and chemical, physical, radiological, and toxic characteristics of the effluent or leachate to be discharged; the average and maximum daily amount of effluent or leachate discharged (gpd), the discharge rate (gpm), and the expected concentrations of any pollutant (mg/l) in each discharge or combination of discharges. If more than one discharge point is used, information for each point must be given separately.

INTERROGATORY STATEMENT:

Please provide the maximum daily leachate (gpd) and discharge rate (gpm) in each discharge or combination of discharges. This information should include any discharge that may result from leakage through the tailings cells liner systems, the ore pad liner, and the Evaporation and Process Pond Cell. Please provide the appropriate calculations for each discharge or include a statement of basis for not providing the information. Also, please state the expected concentrations of pollutants in each discharge and the basis for the determination.

Response: ***With the BAT liner system and operating leakage detection system, the discharge(s) from the tailings impoundments (EPPC, Cell 1 and Cell 2) is expected to be immeasurably small. There is currently a compacted clay liner beneath the ore pad, and with modifications described in the TMP, potential runoff from the ore pad area will be captured within a HDPE lined pond. With the limited precipitation and high evaporation rates, the recharge to the ore stored on the pad will be dramatically limited, and this in turn limits the potential for measurable discharge through the clay liner beneath the ore. Any attempt to quantify the extremely small rate of discharge through the seven-part liner or the ore pad clay liner is so speculative as to be unusable. The quality of the water that will be discharged to the lined tailings cells can be described in general terms based on experience with other uranium milling operations, but concentrations of constituents cannot be precisely specified. The fluid discharged to the tailings will be acidic with an anticipated pH of 1 to 2 standard units. The Total Dissolved Solids (TDS) concentration may range up to 30,000 mg/l, and major ion concentrations (e.g. chloride and sulfate) may range up to several thousand mg/l. Activities of radium-226, radium-226 and thorium-230 will likely be elevated to levels that may range up to hundreds of pCi/l. Concentrations of some trace metals are likely to be elevated but it is difficult to predict the presence and mobilization of trace metals. Regardless of the anticipated water quality of the fluid discharged to the lined cells, the expected rate of discharge through the dual HDPE liners and compacted clay liner is so small that no measurable impacts are expected.***

BASIS FOR INTERROGATORY:

Plateau Resources must provide the above requested information on all discharges of pollutants that impact or have the potential to impact ground water. This information must include all discharges or potential discharges associated with effluent discharge, storage, and liner systems.

REFERENCES:

Plateau Resources, Ltd., "Tailings Management Plan for Shootaring Canyon Uranium Processing Facility" Amended December, 2005.

INTERROGATORY PR R317-6-6.3G-29/01: SURFACE WATER CONTROLS

PRELIMINARY FINDING:

Refer to R317-6-6.3G.: Unless otherwise determined by the Executive Secretary, the application for a permit to discharge wastes or pollutants to ground water shall include the following complete information:

G. Information which shows that the discharge can be controlled and will not migrate into or adversely affect the quality of any other waters of the state, including the applicable surface water quality standards, that the discharge is compatible with the receiving ground water, and that the discharge will comply with the applicable class TDS limits, ground water quality standards, class protection levels or an alternate concentration limit proposed by the facility.

INTERROGATORY STATEMENT:

Please provide information on how surface water run-on and run-off controls will be applied to control the migration of contaminants from the site and associated operations. Section 8.3 of the Tailings Management Plan (Hydro-Engineering, 2005) states that "Excess solution or run-off water captured within the tailings disposal cells will be transferred to the Storage/Evaporation Pond if possible." How will this water be controlled? How and when will the water be "…distributed over the tailings cell surface…"?

Response: ***The storm water drainage and management system is described in Section 5.1.6, and Sections 5.1.6.1 through 5.1.6.6. Active and passive measures are undertaken to exclude external runoff from the tailings cells, but all runoff from the mill and tailings area is ultimately contained within the drainage basin bounded by the Shootaring dam. There will be no surface discharge of water that has come in contact with the mill, ore pad or tailings area. For severe events, the runoff will discharge to Cell 1 or Cell 2. If a significant depth of ponded water is captured within the tailings cells and remains for a period of more than 48 hours, a centrifugal pump and piping system will be used to distribute the water over available surfaces on the tailings to promote evaporation of the excess water. Possible distribution methods include sprinklers or a length of perforated pipe.***

BASIS FOR INTERROGATORY:

Plateau Resources must provide the above requested information on all discharges of pollutants that impact or have the potential to impact surface water, ground water, and associated water quality standards.

REFERENCES:

Plateau Resources, Ltd., "Tailings Management Plan for Shootaring Canyon Uranium Processing Facility" Amended December, 2005.

INTERROGATORY R313-24-4-30/01: GEOLOGIC, HYDROLOGIC, AND AGRICULTURAL DESCRIPTION

PRELIMINARY FINDINGS:

Refer to R313-24-4(2)(J)(ii): "Utah Administrative Code, Rule R317-6, Ground Water Quality Protection" for ground water standards in "Environmental Protection Agency in 40 CFR part 192, subparts D and E" as found in the Introduction, paragraph 4; or "Environmental Protection Agency in 40 CFR part 192, subparts D and E (48 FR 45926; October 7, 1983)" as found in Criterion 5;

Refer to R317-6-6.3: ["APPLICATION REQUIREMENTS FOR A GROUND WATER DISCHARGE PERMIT - Unless otherwise determined by the Executive Secretary, the application for a permit to discharge wastes or pollutants to ground water shall include the following complete information..: D. A plat map showing all water wells, including the status and use of each well, Drinking Water source protection zones, topography, springs, water bodies, drainages, and man-made structures within a one-mile radius of the discharge. The plat map must also show the location and depth of existing or proposed wells to be used for monitoring ground water quality. Identify any applicable Drinking Water source protection ordinances and their impacts on the proposed permit;.

Refer to R317-6-6.3: ["APPLICATION REQUIREMENTS FOR A GROUND WATER DISCHARGE PERMIT - Unless otherwise determined by the Executive Secretary, the application for a permit to discharge wastes or pollutants to ground water shall include the following complete information… E. Geologic, hydrologic, and agricultural description of the geographic area within a one-mile radius of the point of discharge, including soil types, aquifers, ground water flow direction, ground water quality, aquifer material, and well logs."

INTERROGATORY STATEMENT:

Please provide, in a readily accessible format, the hydrologic information specified under the stated requirements. Please also provide a current plat map showing all existing water wells, including the status and use of each well, Drinking Water source protection zones, topography, springs, water bodies, drainages, and man-made structures within a one-mile radius of the discharge (or other information demonstrating that such features do not exist).

Response: ***The existing wells within a one mile radius of the site are all associated with monitoring and water supply for the mill and tailings operations. Figure 7-1 of the TRDP presents the location of wells in and around the site including proposed monitoring wells. Figure 7-1 of the TMP presents the location of the monitoring wells associated with the tailings system including proposed monitoring wells. Figure 1-1 of the TMP presents the site location and surrounding area. The closest well outside of those that are associated with the site operation is the water supply well for Ticaboo and is located approximately two miles south of the site. There are three seeps or springs located within a one-mile radius of the site as shown on Figure 1-1 of the TMP. These seeps are included in the ground-water sampling program for the site.***

BASIS FOR INTERROGATORY:

A plat map showing all existing water wells, including the status and use of each well, Drinking Water source protection zones, topography, springs, water bodies, drainages, and man-made structures within a one-mile radius of the discharge (or other information demonstrating that such features do not exist) required in accordance to R317-6-6.3D is not provided. The hydrologic description of the geographic area within a one-mile radius of the point of discharge as stated in R317-6-6.3E is not provided/not readily available. Please present the requested information in a manner that is easily accessible in the document.

REFERENCES:

Plateau Resources, Ltd., "Tailings Reclamation and Decommissioning Plan for Shootaring Canyon Uranium Project", Dated December, 2005.

Plateau Resources, Ltd., "Tailings Management Plan for Shootaring Canyon Uranium Processing Facility" Amended December, 2005.

Plateau Resources, Ltd., "Shootaring Canyon Uranium Processing Facility Environmental Report, Source Material License No. UT0900480", Dated January 2006.

INTERROGATORY R313-24-4-32/01: GROUND WATER MONITORING QUALITY ASSURANCE PLAN

PRELIMINARY FINDINGS:

Refer to R313-24-4(2)(J)(ii): Clarifications or Exceptions. "Utah Administrative Code, Rule R317-6, Ground Water Quality Protection" for ground water standards in "Environmental Protection Agency in 40 CFR part 192, subparts D and E" as found in the Introduction, paragraph 4; or "Environmental Protection Agency in 40 CFR part 192, subparts D and E (48 FR 45926; October 7, 1983)" as found in Criterion 5.

Refer to R317-6-6.3.I: ["APPLICATION REQUIREMENTS FOR A GROUND WATER DISCHARGE PERMIT - Unless otherwise determined by the Executive Secretary, the application for a permit to discharge wastes or pollutants to ground water shall include the following complete information: (I) A proposed sampling and analysis monitoring plan which conforms to EPA Guidance for Quality Assurance Project Plans, EPA QA (EPA/600/R-98/018, February 1998) and includes …quality assurance and control provisions for monitoring data."

INTERROGATORY STATEMENT:

Please provide the information requested below. This information can be provided as part of an updated Groundwater Monitoring Quality Assurance Plan

Response: ***The updated Groundwater Monitoring Quality Assurance Plan has been submitted and approved.***

(1) The new monitoring wells proposed in the Hydro-Engineering, L.L.C. Ground-Water Hydrology of the Shootaring Tailings Site, 2005 document need to be included in the Groundwater Monitoring Quality Assurance Plan.

(2) Information requested in the February 15, 2006 letter from the State of Utah Department of Environmental Quality need to be addressed.

(3) Please provide the following additional information:

- *In reference to Section 2.3 of the Groundwater Monitoring Quality Assurance Plan, Accuracy, please describe the methods that will be used to assess false positive or high biased field sample results (e.g., use of field blanks, trip blanks, etc…).*
- *In reference to Section 2.3, please provide more detailed information regarding methods and criteria that will be used to assess data comparability. Please consider: (i) similar detection capabilities for instrumentation used; (ii) similar QA procedures used for evaluating all data sets; (iii) use of a similar number of observations at each sampling point, etc…*

BASIS FOR INTERROGATORY:

(1) The information received for review is outdated and new or updated information needs to be included in the Groundwater Monitoring Quality Assurance Plan. Please update the Groundwater Monitoring Quality Assurance Plan, Utah Ground Water Quality Discharge Permit UGW170003 with the new monitoring wells proposed in the 2005 Ground-Water Hydrology of the Shootaring Tailings Site document.

(2) The Request for Additional Information in Groundwater Monitoring Quality Assurance Plan (QAP) from the State of Utah Department of Environmental Quality dated February 15, 2006, needs to be addressed and resolved. Also, additional information should be provided for Section 2.3, Accuracy and Comparability to ensure that all applicable and appropriate accuracy and comparability criteria are included.

REFERENCES:

Groundwater Quality Discharge Permit No. UGW17003, Part I. B., I.C., I.E., and I.H.

INTERROGATORY R313-24-4-35/01: SITE ENVIRONMENTAL MONITORING PROGRAM

PRELIMINARY FINDING:

10 CFR 40 Appendix A(7): Throughout the construction and operating phases of the mill, an operational monitoring program must be conducted to measure or evaluate compliance with applicable standards and regulations; to evaluate performance of control systems and procedures; to evaluate environmental impacts of operation; and to detect potential long-term effects.

INTERROGATORY STATEMENT:

Please provide the specific sampling and analysis procedures to be used in the Radiological Environmental Monitoring Program under operational conditions. Also include a drawing that shows the locations for sample collection (as appropriate).

BASIS FOR INTERROGATORY:

Section 7 of the Tailings Management Plan includes a description of the environmental monitoring to be performed for the site, and Appendix D includes tables that summarize the type of monitoring, media, general location, and frequency. However, details on the sampling and analysis methods, and a site drawing showing the monitoring locations is not included.

Response: ***Figure 3.7.1 of the "Operation of Shootaring Canyon Uranium Mill – Amendment Request for License Number UT 0900480" presents the environmental monitoring locations for the site except for monitoring wells. The ground-water monitoring program is described in Sections 7.1 through 7.1.5 of the TMP, and the locations of the wells are shown in Figure 7-1 of the TMP. The environmental sampling and analysis methods are presented in various SOP's and the Ground-Water Quality Assurance Plan.***

REFERENCES:

Plateau Resources, Ltd., "Tailings Management Plan for Shootaring Canyon Uranium Processing Facility" Amended December, 2005.

INTERROGATORY R313-24-4-36/01: OPERATIONAL DUST CONTROL

PRELIMINARY FINDING:

Refer to R313-24-4, 10 CFR 40 Appendix A(8): To control dusting from tailings, that portion not covered by standing liquids must be wetted or chemically stabilized to prevent or minimize blowing and dusting to the maximum extent reasonably achievable. This requirement may be relaxed if tailings are effectively sheltered from wind, such as may be the case where they are disposed of below grade and the tailings surface is not exposed to wind. Consideration must be given in planning tailings disposal programs to methods which would allow phased covering and reclamation of tailings impoundments because this will help in controlling particulate and radon emissions during operation. To control dusting from diffuse sources, such as tailings and ore pads where automatic controls do not apply, operators shall develop written operating procedures specifying the methods of control which will be utilized.

INTERROGATORY STATEMENT:

Section 3.2.4, Countercurrent Decantation Thickening Effluents, discusses dust suppression over the surface areas of the tailings. Please provide more detail on dust suppression methods to be used on the tailings. Provide specifications on the reagent to be used, its application on interim covering a portion of a cell when not working in the area, and discuss the impact it will have the engineering properties of the tailings (long and short term). Also, provide ALARA evaluations performed for dust suppression to assure that airborne effluent releases are reduced to levels as low as reasonably achievable.

Response: ***The application of dust suppression agents is discussed in Sections 4.1.1 and 6.2 of the TMP. The RMTP methodology requires further evaluation and refinement, and the production of dust from the paste or moist tailings is not yet quantified. It will be necessary to conduct testing of the fluid extraction process, reduced moisture tailings properties, and available dust suppression agents prior to operation of the mill. Representative ore will have to be available prior to this testing. Because the tailings are assumed to be placed as a low strength non-cohesive material, it is unlikely that dust suppression agents will have an adverse affect on engineering properties. It is more likely that typical polymer-based dust suppression agents will result in some additional cohesion in the tailings.***

BASIS FOR INTERROGATORY:

The Division requires a consideration of airborne effluent releases to assure they are ALARA.

REFERENCES:

Plateau Resources, Ltd., "Shootaring Canyon Uranium Processing Facility Environmental Report, Source Material License No. UT0900480", Dated January 2006.

Regulatory Guide 3.56, "General Guidance for Designing, Testing, Operating, and Maintaining Emission Control Devices at Uranium Mills," Task CE 309-4, USNRC, May, 1986.