

December 16, 2011

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VIA U.S. MAIL AND EMAIL

Re: Comments Regarding Denison Mines (USA) Corp. Radioactive Materials License Renewal  
DRC-045

Dear Mr. Lundberg:

The Ute Mountain Ute Tribe (“Tribe”) submits the following comments regarding the above-noted Radioactive Materials License Renewal (“RML Renewal”) and the Safety Evaluation Report for The Denison Mines White Mesa Mill 2007 License Renewal Application (“SER”). The Tribe notes that it is in the process of engaging the State of Utah (including the Utah Department of Environmental Quality (“DEQ”) and its Divisions) in government-to-government consultation regarding the Tribe’s concerns with Denison Mines (USA) Corp.’s (“DUSA”) operation of the White Mesa Mill (“WMM”). *See, e.g.*, Exhibit A (“Government-to-Government Correspondence, UMUT/DEQ”). The Tribe submits these comments as public comments pursuant to Utah Admin. Code R313-17-2 and R305-6-105(2)(a).

The Tribe has organized its comments into five major sections. Section I provides Division of Radiation Control (“DRC”) a quick overview of the Tribe’s background and connection with the WMM facility. Section II addresses the three broad concerns (and legal deficiencies) identified by the Tribe in the RML Renewal and associated documentation: (A) the RML Renewal fails to ensure the maximum protection of public health and safety to persons near the WMM facility; (B) the RML Renewal fails to provide adequate Utah state regulatory oversight over the WMM facility; and (C) the RML Renewal denies the public (and the Tribe) a full opportunity to comment on all aspects of the RML Renewal. Section III provides specific comments on known contamination and violation issues, including: (A) groundwater contamination; (B) air deposition/surface contamination; and (C) special contamination issues with alternative feed materials. Section IV details the deficiencies in the RML Renewal’s approach to the WMM facility’s reclamation plan and surety estimate. Section V organizes the Tribe’s specific demands into a table to facilitate DRC action and response to the Tribe’s comments.

**I. OVERVIEW OF TRIBAL BACKGROUND AND CONNECTION WITH THE WMM FACILITY**

The Ute Mountain Ute Tribe is a federally-recognized Indian tribe with lands located in southwestern Colorado, northwestern New Mexico, and southeast Utah. There are two Tribal communities on the Ute Mountain Ute Reservation: Towaoc, in southwestern Colorado, and White Mesa, which is located in Utah within three miles of the WMM facility. The lands comprising the White Mesa community are held in trust for the Tribe and for other individual Tribal member owners. The Tribe has jurisdiction (as a federally-recognized tribal government) over Tribally-owned lands, Tribal member-owned lands, and members of the Ute Mountain Ute Tribe who live in the White Mesa community. Under the Tribe’s Constitution, the Tribal Council is responsible for, among other things, the management and protection of Tribal lands and for the protection of public peace, safety, and welfare.

Ute Mountain Ute Tribal Members (“UMU Tribal Members”) have lived on and around White Mesa for centuries and intend to do so forever. The community of White Mesa depends on groundwater resources buried deep in the Navajo aquifer for its municipal (domestic) needs. UMU Tribal Members continue traditional practices, which include hunting and gathering and using the land, plants, wildlife and water in ways that are integral to their culture. It is reasonable to expect that those resources are not contaminated with hazardous materials that have blown in the wind or traveled through the groundwater from facilities regulated by DEQ.

The Tribe has serious concerns about the manner in which the WMM is currently operated and regulated. The Tribe has long expressed concern that the WMM operations (in particular, management practices that have allowed continued contamination of surface resources, groundwater resources, and surface water resources) pose serious threats to the health of the land and the natural and cultural resources within and around the Tribe’s White Mesa community and to the health and welfare of its Tribal members and their future generations. The Tribe has also expressed concern that the poor quality of DUSA’s reclamation planning and surety estimations for the WMM facility will ultimately result in a legacy of environmental contamination and blight both in the White Mesa community and in surrounding communities. The Tribe submits these comments to identify the deficiencies in the RML Renewal and SER and in DUSA’s operation of the WMM facility and to request that DRC take appropriate regulatory action to protect the health and safety of the public, UMU Tribal members, and the environment.

**II. BROAD CONCERNS AND LEGAL DEFICIENCIES IN THE RML RENEWAL**

**A. THE RML RENEWAL FAILS TO ENSURE THE MAXIMUM PROTECTION OF PUBLIC HEALTH AND SAFETY TO PERSONS NEAR THE WMM FACILITY**

Under Utah Admin. Code R313-12-12, the Radiation Control Board has authority and responsibility to “ensure the maximum protection of the public health and safety to all persons at, or in the vicinity of, the place of use, storage, or disposal.” Utah Admin Code R313-22-33(d) requires the Executive Secretary of the DRC to determine that: “the issuance of the license will not be inimical to the health and safety of the public” before approving a license or a license renewal. The DRC’s SER demonstrates that DRC staff and the Executive Secretary are aware of at least two significant threats to public health and safety at the WMM: (1) inadequate disposal and fugitive dust control of alternative feed material, *see* SER at 9-12 and Sections III(C)(1)-(2), *infra*; and (2)

groundwater contamination (chloroform and nitrate plumes) indicating liner failure in Tailings Cells 1, 2, and 3, *see* SER at 31-35 and Section III(A), *infra*. In addition, the Tribe has identified for DRC a significant problem with off-site migration of uranium and vanadium that has contaminated adjacent surface resources, *see* Section III(B), *infra*, and an additional groundwater contamination issue in southern monitoring wells, *see* Section III(A)(1)(a), *infra*.

The conditions contained in the current RML Renewal are inadequate to ensure that DUSA's operation of the WMM over the next five years will not be inimical to the health and safety of the public, and in particular, of the UMU Tribal Members living within three miles of the WMM. First, the RML Renewal does not contain sufficient terms and conditions to ensure that DUSA corrects the immediate and known threats to public health and safety as it enjoys the protection of its license renewal. For example, and as explained in detail below, the RML Renewal temporarily prohibits the receipt of alternative feed materials from new sites until DUSA demonstrates adequate disposal capacity and operation, but does not place any timeline for DUSA to demonstrate such capacity, does not allow DRC to revoke the RML Renewal for failure to meet such a timeline, and most importantly, does not prohibit DUSA from receiving alternative feed material from existing sites or placing existing alternative feed material in leaking disposal cells. *See* Section III(C)(1), *infra*. Similarly, the RML Renewal fails to set any firm deadlines for DUSA to address the known groundwater contamination (and leaking tailing cell liners) and does not allow DRC to revoke the RML Renewal for failure to meet such a timeline. *See* Section III(A), *infra*. The RML Renewal does not even address the known surface contamination issues associated with off-site migration of Radioactive Material, *see* Section III(B), *infra*, or associated with Monitoring Well 22, *see* Section III(A)(1)(a), *infra*.

The RML Renewal also contains insufficient terms and conditions to ensure the long-term health and safety of UMU Tribal Members and the public. The RML Renewal requires DUSA to revise its interim increase in its surety, but the RML Renewal does not contain any timelines for DUSA to finalize its surety estimate revision or to provide the additional surety, and the Renewal does not allow DRC to revoke the RML Renewal for failing to meet such a timeline. *See* Section IV(B), *infra*. The RML Renewal also fails to include a final reclamation plan for the facility. The Tribe has significant concerns with Reclamation Plan 5.0, *see* section IV(A), *infra*, and is concerned that the RML Renewal fails to set any firm deadlines for having an approved reclamation plan in place and that DRC has no ability to revoke the RML Renewal for failure to meet such deadlines. Therefore, the Tribe now asserts as a general statement that the current conditions in the RML Renewal fail to ensure that the issuance of the license will not be inimical to the health and safety of UMU Tribal Members.

## **B. THE RML RENEWAL FAILS TO PROVIDE ADEQUATE UTAH STATE REGULATORY OVERSIGHT OVER THE WHITE MESA MILL FACILITY**

Under the "Agreement Between the United States Nuclear Regulatory Commission and the State of Utah for Discontinuance of Certain Commission Regulatory Authority and Responsibility Within the State Pursuant to Section 274 of the Atomic Energy Act of 1954, As Amended" ("NRC/Utah Primacy Agreement"), the Nuclear Regulatory Commission recognized that the State of Utah "has a program for the control of radiation hazards adequate to protect the public health and safety" with respect to both "source material" and "by-product material" (as defined by the Atomic Energy Act of 1954, and hereinafter "Radioactive Material"). The State has delegated its authority and responsibility for the regulation of Radioactive Material to the DRC. *See, e.g.*, U.C. § 19-3-

104(4). The Radiation Control Board has exercised its authority to regulate the use of Radioactive Material “to ensure the maximum protection of the public health and safety to all persons at, or in the vicinity of, the place of use, storage, or disposal.” Utah Admin. Code R313-12-2. Thus, under both the Utah Code and under the DRC’s own rules, the DRC maintains primary responsibility for regulating Radioactive Material to protect public health and safety.

The RML Renewal and the SER indicate that the DRC has failed to provide adequate regulatory oversight over the WMM facility. The Tribe has three general concerns about oversight of the facility. First, the Tribe is concerned that confusion over DRC responsibilities for regulatory oversight for the WMM has led to regulatory gaps for the facility. Here, the Tribe notes, for example, that DRC staff relies on DUSA’s Division of Air Quality (“DAQ”) Air Approval Order to address concerns about wind dispersal of alternative feed material, *see* SER at 9, but that the DAQ has not set forth any binding fugitive dust management procedures in the cited air approval order or mandated that DUSA take any additional measures to control airborne dispersal of Radioactive Material. *See* Exhibit B, “Request for Agency Action” (“RAA”); *see also* Section III(B), *infra* (addressing air dispersal/surface contamination issues). The DRC must ensure that no such regulatory gaps exist as it evaluates and issues the RML Renewal for the facility.

The Tribe’s second concern with Utah state regulatory oversight is that the DRC (along with DAQ) has repeatedly allowed DUSA long timelines and extensions of those long timelines to address problems at the WMM facility. The Tribe is, for example, very concerned that, when faced with clear evidence of groundwater contamination, DRC allowed DUSA more than three years to put forth an alternate “theory” of the source of the nitrate plume and that DRC has not yet mandated specific work or timelines for DUSA to stop contaminating the groundwater or to implement a functional leak detection system. *See* Section III(A), *infra*. The Tribe asserts that the DRC has a responsibility in the RML Renewal process to mandate that DUSA implement cleanup actions and adhere to timelines to avoid catastrophic water and resource contamination resulting from known sources of contamination.

The Tribe’s third concern with DRC’s oversight is that DRC has failed to impose requirements upon DUSA that could compensate for the lack of DEQ resources to provide adequate staff time to regulate the WMM facility. The SER indicates, for example, that the DRC lacks resources “to complete the work needed to resolve the compliance status of the Reclamation Plan, Revision 4.0, and ICTM Report.” SER at 28. DRC (along with DAQ) also appears to lack the resources to locate staff near the WMM facility, which means that DEQ fails to maintain a regular physical and inspection presence at the facility. The Tribe believes that the DRC could compensate for the lack of staff resources by: (1) setting forth clear license conditions requiring additional quality control measures, standard operating procedures, and more specific monitoring requirements; and (2) providing clear instructions and hard deadlines for DUSA to accomplish monitoring, licensing, and cleanup and remediation work. However, DRC’s “ad-hoc” or flexible approach to monitoring and cleanup efforts, *see, e.g.*, SER at p. 32, implemented by an overburdened regulatory staff, has allowed DUSA to operate the WMM facility in a way that threatens the long-term health and well being of the public, UMU Tribal Members, and the environment.

**C. THE RML RENEWAL DENIES THE PUBLIC (AND THE TRIBE) A FULL OPPORTUNITY TO COMMENT ON ALL ASPECTS OF THE RML RENEWAL**

The RML Renewal denies the public and the Tribe a full opportunity to comment on important aspects of DUSA's license. There are two general public comment deficiencies with the RML Renewal. First, the RML Renewal fails to give opportunity for additional public comment on the unresolved environmental contamination and reclamation issues identified in the SER. Here, the SER guarantees opportunity for additional public comment before authorizing the receipt of alternative feed materials from new sites, SER at p. 11, but the SER and the RML Renewal provide no such public review and comment capacity on the final license conditions addressing groundwater cleanup and remediation issues, the revised surety amount, or the reclamation plan. Without such guaranteed public comment periods, the DRC will effectively deny the public the opportunity to participate in important licensing conditions involving public health and safety.

The RML Renewal also fails to provide the Tribe an opportunity to review and comment on the DRC's analysis of DUSA's environmental report. Under Utah Admin. Code R313-24-3(3), DRC is required to provide written analysis of the environmental report and to provide an opportunity for public notice and comment. The DRC has not provided any stand-alone analysis of the environmental report, but has provided some environmental analysis in the SER. The Tribe is concerned that DUSA's 2007 Environmental Report, which is now over four years old, failed to present the full extent of groundwater contamination, *see* Utah Admin. Code R313-24-3(1)(b), failed to assess impacts to public health, *see* Utah Admin. Code R313-24-3(1)(a), and failed to address reclamation at the site, *see* Utah Admin. Code R313-24(3)(1)(d). In particular, the Tribe is concerned that DRC and DAQ have failed to assess and address the evidence of off-site migration of uranium and vanadium (and the known contamination of surface resources). *See* Section III(B), *infra*. Accordingly, the Tribe now asserts that DRC has failed to provide the opportunity for comment as required under R-313-24-3(3).

**III. TRIBAL CONCERNS ON SPECIFIC ISSUES OF KNOWN ENVIRONMENTAL CONTAMINATION AND VIOLATION OF STATE AND FEDERAL LAW**

Section II, *supra* explains the overarching legal deficiencies with the RML Renewal. Section III of the Tribe's comments provides specific comments and demands on specific issues of known environmental contamination and violations of state and federal law. To facilitate DRC review regarding these specific contamination issues, the Tribe will present each issue with an identification of the problem and a list of demands for DRC.

**A. GROUNDWATER CONTAMINATION**

1. The DRC Must Immediately Require DUSA to Remediate and Prevent Groundwater Contamination at the WMM Facility

a. Issue Identification

On pages 31-32 of the SER, DRC staff explains the 1999 chloroform investigation and the current nitrate investigation at the WMM facility. The SER provides information on the Ground Water Corrective Action Order that has been in place since 1999 for chloroform contamination in the shallow aquifer in well MW-4. The SER also explains that, in 2008, DRC staff identified a

nitrate/chloride plume at a number of wells on the WMM facility. Since 2008, DRC and DUSA have engaged in an investigation of DUSA's "theory" that the nitrate and chloride contamination arose from natural sources. Now, in 2011, DRC and DUSA have agreed to formulate a corrective action plan to address the nitrate plume.

The SER does not address an additional groundwater contamination problem in one of DUSA's monitoring wells. In 2010, DUSA identified excessive levels of chloride, fluoride, uranium, cobalt, cadmium, molybdenum, nickel and manganese, as well as excessive hydronium ion (low pH), in Monitoring Well 22. Exhibit C (describing the "Background Groundwater Quality Report for Wells M-20 and MW-22 for Denison Mines (USA) Corp.'s White Mesa Mill Site, San Juan County, Utah"). This contamination problem greatly concerns the Tribe, as Monitoring Well 22 is located south of the facility (between the Tailings Cells and the White Mesa community) and as DUSA's report indicates the presence of tailings leachate in MW-22. Exhibit C. DRC accepted DUSA's erroneous conclusion that there is no possibility of WMM-caused pollution of the wells because of the distance from the facility. *See* Exhibit C (explaining how DUSA's groundwater travel time of 0.33-0.43 feet per year is not scientifically supportable due to indications of modern water in the well). DRC has not required DUSA to address the groundwater contamination in MW-22, which is likely linked to leaks from Tailing Cells 1, 2 and 3. Exhibit C.

The Tribe is concerned at the amount of time it has taken DRC to seek corrective action from DUSA on known instances of groundwater contamination. For the nitrate plume identified in the SER, the Tribe is troubled that it has taken DRC more than three years to begin the process of seeking a corrective action plan from DUSA. For more than a decade, DRC has documented its concerns about groundwater contamination resulting from potential seepage from the tailings impoundments at the WMM. *See* Exhibit D, "February 11, 1999 Letter to David C. Frydenlund" (hereinafter "Frydenlund Letter"). DUSA has also repeatedly documented to DRC that nitrate, nitrite, and chloride found in groundwater at the WMM facility are all "smoking gun" or "primary" indicators of tailing cell leakage. *See* Frydenlund Letter at p. 3 (expressing DRC's concern that DUSA was not using "smoking gun" leakage parameters such as "ammonia, nitrate, nitrite, molybdenum and sulfate" during the groundwater monitoring (emphasis supplied)); *see also* Exhibit E, "Chloride Citations" (providing numerous citations submitted to DRC by DUSA that chloride, nitrate, and nitrite are primary indicators of tailing cell leakage). DRC has expressed concern about the design of the leak detection systems in Cells 1, 2, and 3, stating that "only the largest catastrophic leaks will be detected by the current leak detection systems for these cells," and that non-catastrophic leaks will likely be detected only after traveling vertically and reaching the groundwater monitoring wells. Frydenlund Letter; *see also* Exhibit F, "June 27, 2000 Memo to Dane Finerfrock" (hereinafter "Finerfrock Memo") at p. 1 (noting that it is unlikely that any leak detection system exists under Cell 1 and stating that the system under Cells 2 and 3 is "grossly inadequate").

The Frydenlund Letter, the Finerfrock Memo, and the documents cited in Exhibit E demonstrate that DRC understands that, given the design of the leak detection system ("LDS") in Tailings Cells 1, 2, and 3, evidence of chloride, nitrate, and nitrite in the groundwater monitoring system is a "smoking gun" or "primary" indicator that the cell liners in Tailings Cells 1, 2, and 3 are leaking (and that these cells likely were leaking for years before the nitrate plume was identified). However, instead of immediately taking action to prepare a corrective action plan to identify the source of the nitrate plume and implement groundwater pumping and other remediation measures, DRC has allowed DUSA more than three years to put forth its "theory" of natural source

contamination. DRC also appears to be allowing DUSA unlimited time to identify the source of the contamination present in MW-22. The Tribe asserts that DRC should not allow DUSA long periods of time to identify the sources of contamination and that DRC should, in these types of situations, order immediate remediation work.<sup>1</sup>

The Tribe is also concerned that DRC will not, through the current corrective action plan process, force DUSA to address the likely source of the nitrate groundwater contamination (which is leaking liners in Tailings Cells 1, 2, and 3). The most recent corrective action plan, submitted by DUSA to DRC on November 29, 2011, fails to consider the Tailings Cells as a source of the nitrate and chloride contamination, and therefore fails to consider any action associated with the cells or the cell liners. *See* Exhibit G (providing EPD Review of CAP).

The Tribe asserts here that the nitrate, nitrite, and chloride contamination provides strong evidence that the liners in Tailings Cells 1, 2, and 3 have passed their useful life. The thin, 30-mil polyvinyl chloride (“PVC”) liners on Tailings Cells 1, 2, and 3 were not best available technology when they were installed in the late 1970s. *See* Exhibit H, Letter Re: Review of Containment and Closure Issues Denison USA/White Mesa Uranium Mill, Relicensing Application, Revision 5.0, Sept 2011, § 2.1 (Dec. 1, 2011) (hereinafter “RRD Letter”). The Tribe’s experts have found that, particularly in this industry, this type of thin PVC liner cannot last 30 years in an acidic environment. RRD Letter §§ 2.2, 2.3; *see also* Finerfrock Memo at p. 15-18. The Tribe’s experts are also concerned (as DRC was in 1999 and as DRC has indicated in the SER) that the liners in Tailings Cells 1, 2, and 3 have been further compromised by the placement of incompatible alternative feed material in the cells. RRD Letter § 2.3; Section III(C)(1), *infra*. This means that, given the evidence of chloride, nitrate, and nitrite contamination, it is likely that the liners of Tailings Cells 1, 2, and 3 are currently leaking and that there is a risk of catastrophic liner failure in each of these cells.

The Tribe asserts here that, given the significant risk of liner failure in Tailings Cells 1, 2, and 3, and given that each of these cells have passed their useful life, the appropriate course of action would be for DRC to require DUSA to immediately take these three cells out of service. *See* RRD Letter § 2.5. However, due to concerns with the reclamation plan at the facility, the Tribe makes the following recommendations.

i. DRC Should Require DUSA to Close, De-Water, and Place Final Caps on Cells 2 and 3

The Tribe recommends placing Cells 2 and 3 in final closure. RRD Letter § 2.5. DRC staff has indicated to the Tribe that Cell 2 is full and that Cell 3 is nearly full (but is still receiving in situ leachate waste (“ISL Waste”). Once DUSA closes, de-waters, and places final caps on these cells, there will be significantly less risk of liner leakage and resulting groundwater contamination.

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<sup>1</sup> Here, the Tribe recognizes that identifying DUSA as the source of groundwater contamination has been significantly complicated by the effects of groundwater mounding around DUSA’s wildlife ponds. Public Participation Summary Modification to Groundwater Quality Discharge Permit UGW370004, p. 12-13 (January 20, 2010). However, DUSA’s groundwater discharge permit has already addressed this issue and requires corrective action for groundwater contamination in excess of the criteria enforced in the permit by Utah Admin. Code R317-6-6.15. Permit UGW370004 I.C.1, p.2. Thus, there is no excuse for DRC to allow DUSA three years to concede responsibility for groundwater contamination.

The Tribe's first concern with DUSA's management of Cells 2 and 3 is that any temporary caps designed to meet NESHAP (radon emissions) standards will be insufficient, during the working life of the WMM facility, to protect against additional infiltration into and leakage from the cell liners. RRD Letter § 2.5. Given that DUSA has not specified a closing date for the facility, and given that DUSA, DRC, and the Department of Energy have indicated that the facility may be in operation until at least 2025, *see* Exhibit I (stating that the Department of Energy is not scheduled to receive the WMM facility until 2035—which likely includes a 10-year period of monitoring for DUSA after final reclamation), leaving Tailings Cells 2 and 3 without sufficient caps until final reclamation will pose a significant and long-term risk of catastrophic groundwater contamination. Because of the risk of leakage from Tailings Cells 2 and 3, DRC should not allow DUSA to defer final capping of the cells until final reclamation, and DRC should instead require DUSA to practice concurrent closure and to place adequate final caps on Tailings Cells 2 and 3 as it takes those cells out of service. *See* Finerfrock Memo at pp. 1-2 (indicating DRC recommendation for phased or concurrent closure). The Tribe also asserts that DRC should prohibit DUSA from disposing of any other waste (and in particular, liquid ISL Waste<sup>2</sup>) in Cells 2 and 3. Even incidental disposal of wastes into those cells will add to the total contaminate load available to seep through the liners in those cells, and the Tribe asserts that those cells should immediately be closed, de-watered, and permanently capped. RRD Letter §2.5.

The Tribe notes that concurrent closure practices can reduce current environmental footprint and contamination risks, which should reduce the liability transferred to the agency at abandonment and which should reduce some aspects of DUSA's surety estimate, *see* Section IV(B), *infra*. RRD Letter § 2.5. The Tribe also notes that DRC may need to give DUSA direction regarding concurrent closure of Cells 2 and 3 before the Reclamation Plan is finalized. Here, DRC should instruct DUSA to modify the cap design to allow phased closure of Tailings Cells 2 and 3. *See also* Section IV(A), *infra* (containing comments on the inadequacy of the tailings cell cover design).

ii. DRC Should Require DUSA to Close, Clean, and Re-Line Cell 1 (Or Close Cell 1 and Change Stormwater Management off the Mill Yard)

Because of the threat of serious groundwater contamination from leaking PVC liners, the Tribe's expert has recommended closure of Cell 1. RRD Letter § 2.5. However, the Tribe is concerned that necessary revisions to Reclamation Plan 5.0 and the Storm Water Best Management Practices Plan ("Stormwater Plan") may require a liquids disposal cell in the current Cell 1 location to catch stormwater runoff from the Mill Yard and prevent the discharge and dispersion of Radioactive Material, alternative feed material, and other chemicals in the washes and creeks west of Cell 1. *See* Section IV(A)(1), *infra*. Accordingly, the Tribe has identified two options to address the threat of groundwater contamination from Cell 1. First, DUSA could close, de-water, clean, and re-line Cell 1. Here, the Tribe asserts that DRC should require DUSA to dispose of waste and the current Cell 1 liner in a disposal cell designed to the standards used for Cells 4A and 4B. *See* Section IV(A)(1), *infra* (explaining why DRC cannot approve the proposed "area for contaminated

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<sup>2</sup> RML Renewal License Condition 10.5(C) states that Cell 3 is the only cell approved for the receipt of the ISL Waste. The Tribe's understanding from DRC staff is that DRC currently only allows disposal of the ISL Waste in Cell 3 because DUSA has not yet received approval from DRC to place this material in Cells 4A and 4B because of concerns about damaging the liners in the new cells. The Tribe comments here that, although it appreciates DRC's intent to keep the liners in Cells 4A and 4B intact, DRC is creating a risk of significant environmental contamination by placing the liquid ISL Waste in Cell 3, which is at significant risk for catastrophic liner failure and which has an insufficient leak detection system in place.

materials”). The Tribe also insists that DRC require DUSA to install a new liner system into Cell 1 that meets BAT/BACT in 2011 (which will, at a minimum, include a compacted clay base and two 60-mil HDPE liners). The Tribe also asserts that DRC should require DUSA to install a functional leak detection system in the re-lined Cell 1.

An alternative option to address the threat of contamination from Cell 1 would be to close and de-water the cell and move any remaining contents and the Cell 1 liner into a disposal cell with a liner designed to the standards used in Cells 4A and 4B. *See* Section IV(A)(1), *infra*, (explaining why DRC cannot approve the proposed “area for contaminated materials”). Here, DRC must also require DUSA to modify the stormwater management at the facility to prevent the planned discharge of Radioactive Material from the Mill Site to the west of the Cell 1 location. *See* Section IV(A)(1), *infra*.

b. List of Tribal Demands (Known Groundwater Contamination)

- ❖ The Tribe supports DRC’s movement from evaluation to the corrective action plan that will address the nitrate contamination.
- ❖ The Tribe supports DRC’s new language in License Condition 9.5 requiring DUSA to include remediation for groundwater contamination in its surety estimate. *See* further discussion in Section IV(B), *infra*, regarding DUSA’s surety estimate.
- ❖ The Tribe supports deadlines put forth in the License and in the SER to require DUSA to submit a corrective action plan by November 30, 2011 and to have the surety estimate include groundwater remediation by March 4, 2012. Given the history of relaxed timelines for DUSA to address this issue, DRC must put deadlines on DUSA to complete the remediation work. Here, the Tribe suggests that DRC either: (1) amend the RML Renewal in December 2011 to place the deadlines in the renewal document; or (2) amend the RML Renewal to place a hard deadline for DUSA to implement the work outlined in the CAP.
- ❖ The Tribe does not support the deadline put forth in the Amended Stipulated Consent Agreement requiring completion of groundwater remediation at the time of transfer to federal authority. *See* Exhibit J, “Amended Stipulated Consent Agreement” at p. 8, September 30, 2011. The Tribe does not support the amount of time DRC has allowed DUSA between the identification of groundwater pollution and the corrective action plan. Amended Stipulated Consent Agreement at pp. 1-4. DRC must add a provision to the RML Renewal that allows DRC to revoke the RML License if DUSA fails to perform prompt remediation of the nitrate plume and other obligations under the CAP.
- ❖ The Tribe does not support DUSA’s lack of attention to the MW-22 contamination. DRC must revisit the status of MW-20 and MW-22 and conduct a source identification assessment of these wells, as described in Permit UGW370004 Part IE.2, page 5.
- ❖ DRC must designate MW-20 and MW-22 as Point of Compliance Wells and immediately require DUSA to implement the concurrent closure and other groundwater protection measures necessary to protect human health and the environment.

- ❖ DRC must provide an additional opportunity to review and comment on the nitrate plume corrective action plan and to suggest and comment on any amendments to the RML Renewal addressing the CAP. Here, the Tribe puts forth its preliminary comments on the corrective action plan.

DRC must:

- Require DUSA to immediately implement groundwater pumping to prevent further contamination.
  - Require DUSA to permanently close Tailings Cell 2.
  - Require DUSA to cease putting any additional material into Tailings Cell 3 (including ISL Waste) and to permanently close Tailings Cell 3.
  - Require that DUSA place adequate permanent cap systems on Tailings Cells 2 and 3. *See Section IV(A)(2), infra* (detailing demands for improvement to the tailings cell cover design).
  - Require DUSA to cease putting any additional material (liquid or otherwise) into Tailings Cell 1. Here, the Tribe recommends that DRC require DUSA to re-line Tailings Cell 1 with a liner that meets BAT/BACT for 2011 so that the WMM has a functional liquids disposal cell for the life of the facility and to provide an adequate stormwater catchment basin during reclamation of the facility. *See Section IV(A)(1), infra* (describing problems with liquid disposal and stormwater runoff in Reclamation Plan 5.0). In the alternative, DRC could require DUSA to close and de-water Cell 1, place the remaining contents of Cell 1 in a disposal cell, and re-route stormwater from the Mill Yard.
2. The DRC Must Require DUSA To Install a Leak Detection System that Allows DUSA to Detect and Clean Up Future Leaks Before the Leaks Cause Groundwater Contamination
- a. Issue Identification

Pages 33-35 of the SER describe recent problems with the leak detection system (“LDS”) for Tailings Cells 1, 2, and 3, and the RML Renewal contains new License Condition 11.3 to improve the LDS monitoring, operation, and maintenance. The SER and the RML Renewal do not, however, address DRC’s fundamental problems with the LDS for Tailings Cells 1, 2, and 3: that there is no secondary low-permeability barrier below the primary low-permeability liner to accumulate leakage to the leak collection pipe and that the long horizontal distance to reach the collection pipe poses a risk of vertical seepage losses. *See Frydenlund Letter*. These two problems with the LDS pose a serious risk that non-catastrophic leaks will not be detected until groundwater contamination has occurred and that there is no secondary liner to keep catastrophic or non-catastrophic leaks from resulting in groundwater contamination.

b. List of Tribal Demands (LDS)

- ❖ *See* list of demands in Section III(A)(1), *supra*. Closure of Tailings Cells 2 and 3 with adequate permanent caps will reduce the likelihood of catastrophic groundwater contamination caused by leaking liners and a flawed LDS. The same is true of Cell 1; however, if DUSA re-lines Cell 1, DUSA must design a new LDS that has a collection system that does not allow for vertical migration of leaks.

3. The DRC Must Require DUSA to Identify and Promptly Minimize Contamination Pathways to Tribal Resources

a. Issue Identification

Page 6 of the SER describes the new land use survey report requirement added to the RML Renewal as License Condition 12.3. The SER states that “[t]his report will also identify any potential routes of exposure of contaminants and dose to the general public.” SER at pp. 6-7. This indicates that DRC has imposed the land survey requirement so DUSA and DRC can identify contamination pathways between WMM facilities and resources used by the public and by UMU Tribal Members.

The Tribe commends DRC for adding the land use survey condition to the RML Renewal, but asserts that the language provided in License Condition 12.3 of the RML is not sufficient to require DUSA to assess or correct potential routes of exposure between WMM facilities and UMU Tribal groundwater resources. To begin, the language of License Condition 12.3 only requires DUSA to conduct an annual survey of off-site land use; it does not require DUSA to conduct an on-site survey of contamination pathways. Here, the Tribe notes that DEQ Divisions have already identified at least two important on-site pathways of contamination to UMU Tribal groundwater resources. First, more than a decade ago, DRC identified that vertical pathways to the groundwater aquifers potentially exist in the bedrock beneath the tailings cells. Finerfrock Memo at p. 2. The Tribe has also collected proof that groundwater to the east of the mill site at Entrance Seep and to the West of the WMM at Cottonwood Spring is less than fifty years old. USGS Report, Table 10 (explanation and citation for USGS Report noted below in Section III(B)(1)(a)). This evidence, along with the considerable spatial extent of existing groundwater contamination at the site, advances the Tribe’s concern that contamination in the shallow groundwater may travel into Tribal groundwater resources much more quickly than anticipated by DUSA.

Second, DUSA has at least one well (the “Deep Supply Well”) that reaches into the Navajo aquifer, which supplies drinking water for UMU Tribal Members living in White Mesa. *See* Exhibit K (describing the UMU Tribal drinking water infrastructure at White Mesa). DRC has also identified at least seven wells inside the Cell 3 footprint and at least one well inside the Cell 4 footprint that could form vertical conduits for groundwater pollution from these cells. Finerfrock Memo at pp. 11-12. The Tribe is concerned that DRC has not required DUSA to fully evaluate or promptly remove these known potential vertical pathways for contamination into the Tribe’s drinking water supply.

b. List of Tribal Demands (Groundwater Contamination Vectors)

- ❖ The Tribe supports DRC's addition of the land use survey.
- ❖ DRC must amend License Condition 12.3 to require DUSA to identify, assess, and promptly minimize potential routes of exposure on its facility to land uses on adjacent lands.
- ❖ DRC must add the Deep Supply Well and other wells under Cells 3 and 4 as potential routes for exposure of contaminants and dose to the general public and to UMU Tribal Members.
- ❖ DRC must put a firm and short deadline (no longer than 60 days from the January 2012 assessment deadline in the GWDP) on DUSA to correct any deficiencies on the well casing for the Deep Supply Well.

**B. AIR DEPOSITION/SURFACE CONTAMINATION AND VIOLATION OF FEDERAL LAWS**

1. The DRC Must Require Immediate Cleanup of Known Air Deposition/Surface Contamination and Take Action to Prevent Future Air Deposition/Surface Contamination at the WMM Facility

a. Issue Identification

Under the NRC/Utah Primacy Agreement, the Utah Code, and DRC regulations, DRC maintains primary responsibility for regulating both "source material" and "by-product material" to protect public health and safety. *See* Section II(B), *supra*. As described in Section III(A), *supra*, the DRC has exerted some of its power as the primary Utah State regulator of Radioactive Material to regulate DUSA's impact on groundwater resources. In that context, DRC has monitored DUSA's groundwater discharge permit, included significant discussion of groundwater contamination issues in the SER, and included License Conditions in the RML addressing groundwater contamination. *See* SER at p. 31-35, RML Renewal License Conditions 9.5, 10.20, 11.3; *but see* Section III(A) (addressing deficiencies in DRC's groundwater regulation). The DRC has also taken the lead in the corrective action plan process for groundwater remediation at the WMM facility. SER at p. 31-32. The DRC has not, however, exerted the same regulatory power with regard to the regulation of DUSA's impact on both air resources and surface contamination resulting from the airborne deposition of Radioactive Material. Indeed, the SER and the RML Renewal contain only passing references to air quality and air deposition contamination issues at the WMM.

The Tribe asserts that DRC is failing in its duty to protect the public and UMU Tribal Members from air contamination and surface contamination caused by airborne deposition of Radioactive Material. The Tribe first notes that DAQ is not regulating the WMM facility to ensure maximum public health and safety as contemplated under Utah Admin. Code R313-12-2. The Tribe, through its Environmental Programs Department, has for years been concerned about the migration of Radioactive Material from the WMM facility via stackhouse emissions and via fugitive dust blowing off ore storage areas and stockpiles of ore and alternative feed materials at the WMM. The Tribe has engaged DAQ several times to express its concern about surface contamination

caused by airborne deposition of Radioactive Material. *See* RAA §III (A), describing September 4, 2007 Letter and other Tribal engagement of DAQ.

In 2007, the Tribe's Environmental Programs Department began working in cooperation with the United States Geologic Survey ("USGS") to assist the USGS with a Scientific Investigations Report ("USGS Report") concerning environmental conditions around White Mesa and the WMM. Pertinent figures from a draft of this USGS Report were provided to DAQ during the Air Approval Order ("AAO") comment period in 2010, and a full copy has been provided to DRC staff and is provided again now for DRC review as Exhibit L. This study shows that Radioactive Material (uranium and vanadium) has migrated east of the WMM facility. USGS Report Figures 29-41. The study indicates that the off-site migration begins with airborne deposition of Radioactive Material (through stackhouse emission and through fugitive dust) and then spreads when it is washed down drainages. USGS Report "Sediment," p. 95-103. The Tribe is concerned that the airborne deposition of Radioactive Material has resulted in the contamination of surface water, soils, and vegetation, and it may be indirectly contaminating livestock, wildlife resources, and other indirect pathways that impact human health, *see* Exhibit M. The Tribe is concerned that the lack of regulation of Radioactive Material (and particularly of fugitive dust) and the documented off-site migration pose a serious and long-term threat to human health and to the health and well-being of UMU Tribal Members and the local environment.

In 2010, the Tribe engaged in the DAQ modification of DUSA's air approval order by submitting comments regarding fugitive dust management at the WMM. On February 24, 2011, the DAQ issued a Memorandum regarding Response to Comments dismissing the Tribe's comments and claiming that DAQ lacked jurisdiction to regulate certain aspects of the radioactive materials. *See e.g.*, Exhibit N, "Memorandum in Response to Comments" (hereinafter "Response Memo") at p. 5 (claiming that DAQ cannot require DUSA to conduct vegetation sampling and that DAQ cannot require DUSA to modify its surety estimate to include remediation for the off-site contamination). The DAQ then issued DUSA an Air Approval Order ("AAO") that failed to mandate any work practice standards for fugitive dust management at the WMM and that failed to place any special conditions or restrictions that reflect an understanding that fugitive dust management at the WMM should be designed to prevent migration of Radioactive Material. *See* Exhibit O (AAO); Exhibit B. In short, the Final AAO appears to treat the WMM fugitive dust as if it does not contain Radioactive Material. Exhibit A (containing the November 5, 2011 Amanda Smith Letter (stating that "From an Air Quality standpoint, Denison is regulated the same as other aggregate production/processing facilities.")). In March of 2011, the Tribe filed a Request for Agency Action challenging the DAQ's AAO.

The Tribe also notes that DUSA's current Stormwater Plan contains conflicting information on stormwater movement that makes it difficult for the Tribe (and DRC) to assess how DUSA monitors and manages the movement of Radioactive Material deposited via air pathways. The Stormwater Plan indicates that Drainage Basin B2 drains into the area of concern identified by the individual small watersheds in the USGS report figures via Diversion Ditch No. 3. Stormwater Plan, Figure 2. However, the Spill Containment, Controls and Countermeasures Plan ("SPCC Plan"), included within the Stormwater Plan, states that "Diversion Ditch No. 3 ultimately drains into Diversion Ditch No. 2. This basin is not affected by mill operations." SPCC Plan, Appendix 1, p. 3. Figure 2 clearly shows that Diversion Ditch No. 3 flows southeast to a point, based on the topographical background, that would continue in that direction along the edge of basin B3, while Diversion Ditch No. 2 starts 1000 feet from Diversion Ditch No. 3 flowing in a northwesterly

(opposite) direction then turning north. So, either Diversion Ditch No. 3 does not flow into Diversion Ditch No. 2 as stated in the SPCC Plan, or if it does, it transports storm water with wind deposited material containing ore-source uranium and vanadium, and thus it is affected by mill operations. The Tribe asserts that DRC must re-evaluate DUSA's Stormwater Plan and require DUSA to address the stormwater component of Radioactive Material deposited by stack emissions and fugitive dust.

The Tribe was hopeful that, especially given DAQ's claim of limited jurisdiction, the DRC would include a more comprehensive review and regulation of air quality, air deposition/contamination issues, and stormwater deposition issues at the WMM in the RML Renewal and the SER. The Tribe was troubled to find that neither the RML Renewal nor the SER contains any discussion of airborne deposition of Radioactive Material or the evidence of off-site migration of Radioactive Material that was presented to the DAQ in 2010 and 2011. The SER does briefly describe semi-annual effluent monitoring (which includes air monitoring), but does not identify any air deposition contamination issues. From its review, the Tribe can only conclude that, while DRC has assessed, identified, and attempted to resolve known groundwater contamination issues at the WMM facility, the DRC is unaware that there are known environmental contamination issues at and near the WMM facility caused by airborne deposition of Radioactive Material.

The DRC's apparent lack of knowledge of airborne vectors of contamination also leads the Tribe to the conclusion that there is currently a regulatory gap in DEQ addressing air pollution at the WMM facility. The Tribe is concerned that the DRC is relying on the DAQ to regulate and monitor air pollution (including airborne deposition of Radioactive Material) at the facility, and at the same time, DAQ is refusing to regulate and monitor Radioactive Material differently than it regulates and monitors more benign fugitive dust. The Tribe is particularly concerned that DRC does not understand the regulatory parameters (or lack thereof) that DAQ has placed upon DUSA in the current AAO. For example, on page 9 of the SER, DRC staff notes that the Health Physics Interrogatories on the alternative feed program included a line of inquiry regarding wind dispersal of the alternative feed stacks on the ore storage pad. DRC appears to resolve this issue by noting that DUSA's response was that wind dispersal was addressed in dust minimization and work practice standards for fugitive dust. SER at p. 9. However, as the Tribe has noted in both the DAQ public comment period and in its RAA regarding the new AAO, DAQ has not mandated the use of any work practice standards for fugitive dust, and both the fugitive dust practices and fugitive dust control equipment at the WMM are far below BACT or BAT for the facility. *See* RAA III(B)(3). This indicates to the Tribe that DRC has not reviewed the new AAO or discussed important fugitive dust or air dispersal issues with DAQ to ensure that Radioactive Material is not allowed to migrate off the WMM facility.

The Tribe now comments to DRC that DRC is ultimately responsible for regulating and monitoring the off-site migration of Radioactive Material from the WMM facility. The Tribe also comments that DRC must in the RML Renewal clarify jurisdiction and regulatory responsibility over air pollution and airborne deposition of Radioactive Material.

b. List of Tribal Demands (Air Deposition/Surface Contamination)

- ❖ DRC must clearly identify in the RML Renewal that DRC is responsible for regulating and monitoring Radioactive Material.

- ❖ DRC must impose sufficient terms and conditions in the RML Renewal to prevent environmental contamination via airborne pathways. Central to this license revision will be an acknowledgement by DRC that fugitive dust from the WMM facility contains Radioactive Material and must be treated as such. This will likely include a provision requiring adherence to a new AAO issued by DAQ and adherence to additional conditions imposed by the DRC. *See Exhibits A and B to the RAA (providing examples of more stringent fugitive dust management practices).*
- ❖ The RML Renewal must allow DRC to open the AAO during future license renewals to ensure that the AAO and the RML License conditions require that future license renewals are not inimical to the health and safety of the public. In the alternative, DRC must be able to supplement and override conditions of a non-renewed AAO with terms and conditions placed in the RML Renewal.
- ❖ DRC must review the current AAO with DAQ and assess and address the Tribe's concerns, as put forth in the RAA, regarding the flexible provisions of the AAO, the chronic lack of enforcement, and the lack of even basic work practice standards for the management of fugitive dust.
- ❖ DRC must impose additional conditions, such as work practice standards or BAT/BACT for fugitive dust management, as a condition of the RML Renewal.
- ❖ DRC must investigate the evidence presented by the Tribe in the USGS Report and address the known off-site migration of Radioactive Material.
- ❖ DRC must investigate the inconsistencies in the Stormwater Plan and investigate stormwater pathways for the movement of deposited Radioactive Material.
- ❖ DRC must require DUSA to amend its Stormwater Management Plan to correctly identify and control pathways for the movement of air-deposited Radioactive Material.
- ❖ DRC must engage DUSA to begin formulating a CAP to remediate the surface contamination and to prevent future contamination.
- ❖ DRC must amend the SER and the RML Renewal to reflect the surface contamination issue. This includes amending the surety provision to require DUSA to adjust its surety amount to include remediation of off-site migration of radioactive fugitive dust.
- ❖ DRC must set hard deadlines for formulating the CAP and implementing the approved CAP measures.
- ❖ DRC must add a provision to the RML Renewal that allows DRC to revoke the RML License if DUSA fails to meet its obligations under the CAP.

2. The DRC Must Require DUSA to Identify and Promptly Minimize Airborne Contamination Pathways to Tribal Resources

a. Issue Identification

Section III(A)(3), *supra*, describes the new land use survey report requirement (License Condition 12.3) and DRC's intent to require DUSA to identify contamination pathways used by the public and by UMU Tribal Members. Section III(A)(3) also describes how the land use survey requirement currently does not require DUSA to assess or correct potential routes of exposure between WMM facilities and UMUT groundwater resources. The Tribe asserts here that the land use survey and the RML Renewal are not currently sufficient to require DUSA to assess or correct potential airborne contamination pathways between the WMM facility and UMU Tribal Members and UMU Tribal lands.

As asserted above, the language of License Condition 12.3 only requires DUSA to conduct an annual survey of off-site land use, and does not require DUSA to conduct an on-site survey of contamination pathways. The land use survey condition does not currently require DUSA to assess or minimize airborne contamination pathways between WMM facilities (including ore piles, stack emissions, and alternative feed material piles) and UMU Tribal Members and Tribal lands.

The RML Renewal and the SER do contain provisions discussing the semi-annual effluent monitoring program at the WMM facility. *See, e.g.*, SER at p. 30-31 (describing the monitoring and stating: "DRC staff concluded that the frequency and type of environmental monitoring for the White Mesa facility is adequate."). However, the Tribe is concerned that neither DUSA nor DRC have, through the approved semi-annual effluent monitoring program, detected the airborne migration problem identified in the USGS Report. Accordingly, the Tribe now asserts that DUSA and DRC must review the semi-annual effluent monitoring program to determine why the program is failing to detect the off-site migration identified in the USGS Report. The Tribe also reiterates that DRC must assess and address communication problems between DAQ and DRC so that when, for example, the Tribe notifies DAQ of an off-site Radioactive Material migration problem, DRC is able to timely address the problem.

b. List of Tribal Demands (Identification and Minimization of Airborne Pathways)

- ❖ The Tribe supports DRC's addition of the land use survey.
- ❖ DRC must amend License Condition 12.3 to require DUSA to identify, assess, and promptly minimize potential airborne migration pathways of exposure on and between the WMM facility and adjacent lands.
- ❖ DRC must review DUSA's semi-annual effluent monitoring program to determine why the monitoring did not detect the airborne migration of Radioactive Material and then require DUSA to modify the program to correct any deficiencies. *See* Exhibit P (providing initial technical comments on improvements to the semi-annual effluent monitoring program).
- ❖ DRC must review its communication policies with DAQ to determine why DAQ did not notify DRC of the pertinent data from the USGS Report delivered with AAO comments

prior to the issuance of the RML Renewal and set forth new procedures to coordinate communication between DRC and DAQ.

3. The RML Renewal Violates Applicable Federal Law By Allowing Simultaneous Operation of Five Tailings Cells

a. Issue Identification

The WMM facility is subject to the National Emission Standards for Radon Emissions from Operating Mill Tailings promulgated as a National Emission Standard for Hazardous Air Pollutants under the federal Clean Air Act and published in 40 C.F.R. Part 61, subpart W (“Subpart W NESHAP”). The Subpart W NESHAP imposes not only a Radon-222 air emission standard on the tailings impoundments at the WMM facility, but also imposes work practice standards for design, construction and operation of tailings impoundments that limit a uranium mill to only two tailings impoundments in operation at any one time.

The Tribe believes DUSA and the WMM facility are operating more tailings impoundments than the two allowed by the Subpart W NESHAP, and are, therefore, not in compliance with the Subpart W NESHAP. The RML Renewal fails to properly limit the number of impoundments in operation at the WMM facility to no more than two, as required by the Subpart W NESHAP.

As set forth in 40 C.F.R. § 61.252(b), the work practice standards applicable to the WMM facility under Subpart W NESHAP apply to tailings impoundments built after December 15, 1989, and provide:

(1) Phased disposal in lined tailings impoundments that are no more than 40 acres in area and meet the requirements of 40 CFR 192.32(a) as determined by the Nuclear Regulatory Commission. *The owner or operator shall have no more than two impoundments, including existing impoundments, in operation at any one time.*” (emphasis supplied).

And, as set forth in 40 C.F.R. § 61.252(c) of the Subpart W NESHAP, all active mill owners or operators are also required to “comply with the provisions of 40 C.F.R. 192.32(a) in the operation of tailings piles, the exemption for existing piles in 40 C.F.R. 192.32(a) notwithstanding.”

The language of the Subpart W NESHAP explicitly limits an active uranium mill to only two tailings impoundments in operation at any one time, regardless of when those tailings impoundments were constructed. Moreover, the Subpart W NESHAP defines a tailings impoundment to be “in operation” from “the day that tailings are first placed in the impoundment *until the day that final closure begins.*” (emphasis supplied.) 40 C.F.R. § 61.251(e).

Both the RML Renewal and the Groundwater Discharge Permit for the WMM facility authorize tailings disposal in all five cells. The Groundwater Discharge Permit UGW3700A, Part I., Section 2, states “tailings disposal in existing Tailings Cells 1, 2, and 3 is authorized by this Permit as defined in Table 3 and Part I.D.1, above.” License Condition 9.1 of the RML Renewal states “Mill process and wastewater storage and tailings disposal shall be limited to existing engineering design, construction, and operation of Tailings Cells 1, 2, 3, 4A and 4B, as authorized in Part I.D of the Ground Water Discharge Permit ....”

Nothing in the RML Renewal limits the WMM to two operating impoundments as required by the Subpart W NESHAP. Moreover, nothing in the RML Renewal confirms that final “closure,” or reclamation, has actually begun with respect to any of the five approved tailings cells at the WMM facility. Under the pertinent NRC regulations in 10 C.F.R. Part 40, Appendix A (incorporated by reference into the UDRC regulations at Utah Admin. Code R313-24-4), the term “closure” is defined to mean: “the activities following operations to decontaminate and decommission the buildings and site used to produce byproduct materials and *reclaim the tailings and/or waste disposal area.*” (emphasis supplied.)

In short, the WMM facility has more than two tailings impoundments in operation, and the RML Renewal fails to restrict the number of operating tailings impoundments to no more than two as required by the NESHAP.

Finally, it is important to recognize that the State of Utah (and the DRC, under the NRC’s delegation of primacy to the State) has the primary responsibility for enforcing the Subpart W NESHAP at the WMM facility. *See, e.g.,* 40 C.F.R. § 61.252(b) (requiring the WMM to “meet the requirements of 40 C.F.R. 192.32(a) as determined by the Nuclear Regulatory Commission....”). Thus, DRC stands in the shoes of the NRC in enforcing the work practice, as well as the air emission standards of the Subpart W NESHAP.

b. List of Tribal Demands (Violation of Subpart W, NESHAP)

- ❖ DRC must evaluate DUSA’s compliance with the Subpart W work practice standard limitation to two cells.
- ❖ DRC must identify in the RML Renewal which two cells are authorized to be “in operation” under Subpart W and condition the RML Renewal to ensure compliance with the work practice standard limitation of the Subpart W NESHAP at all times.

**C. SPECIAL CONTAMINATION ISSUES WITH ALTERNATIVE FEED MATERIAL**

Pages 9-12 of the SER provide a brief discussion of two special contamination issues associated with the alternative feed program at the WMM. The Tribe will identify those two contamination issues and will then present a third issue regarding federal limitations on the receipt of alternative feed materials.

1. DRC Must Address the Increased Likelihood of Tailings Cell Liner Leakage Caused by Incompatibility Between the Liners and Alternative Feed Materials

a. Issue Identification

Page 11 of the SER identifies a second special contamination issue involving proper disposal of alternative feed material. The SER indicates that a new License Condition 10.1 has been added that prohibits the receipt of alternative feed material from new sites until DUSA has demonstrated sufficient disposal capacity, adequate disposal cell operation, and compliance with NRC alternative feed policy. SER at p. 11.

The Tribe asserts that the prohibition on the receipt of alternative feed material from new sites is insufficient to protect the public, UMU Tribal Members, and the local environment from high risk of environmental contamination. As noted above, Section III(A)(1), the Tribe is concerned that the thin PVC liners in Tailings Cells 1, 2, and 3 are incompatible with an acidic environment and that these cells are leaking and are causing (or will cause in the future) contamination of groundwater resources. In addition, the Tribe is concerned that the alternative feed material is incompatible with the PVC liners in Tailings Cells 1, 2, and 3 and that such incompatibility will exacerbate liner leakage in these cells. *See* RRD Letter § 2.3 (explaining how solvents in the alternative feed material exacerbate problems with PVC liner leakage); *see also* Exhibit Q (noting DRC's concern with liner incompatibility with alternative feed materials). Accordingly, the Tribe asserts that DRC should prohibit DUSA from receiving any new shipments of alternative feed material (from any site) and that DRC should require DUSA to cease putting any existing alternative feed material into Tailings Cells 1, 2, and 3. Here, the Tribe reiterates that DUSA should immediately be required to take the measures outlined in Section III(A), *supra*, to minimize the risk of catastrophic groundwater contamination (including the release of alternative feed material into the groundwater).

The Tribe also asserts that DRC should prohibit DUSA from placing alternative feed waste in Tailings Cells 4A and 4B and require DUSA to design a new tailings cell or cell portion that is designed to hold the wastes and solvents present in the alternative feed material. Here, the Tribe is concerned that some of the solvents in the alternative feed could, in certain concentrations, damage the liner systems in Cells 4A and 4B, and it asserts that DRC should act now to ensure that those liners are intact to receive by-product material from the WMM's normal mill processes.

b. List of Tribal Demands (Liner Incompatibility with Alternative Feed Materials)

- ❖ The Tribe supports License Condition 10.1.
- ❖ The Tribe supports the additional opportunity for public comment and license amendment noted on Page 11 of the SER.
- ❖ DRC should prohibit DUSA from receiving any new shipments of alternative feed material (from any site) until DUSA can meet the requirements of License Condition 10.1.
- ❖ DRC must keep the conditions of the License Condition 10.1 in place permanently to ensure that failure to have sufficient disposal capacity or adequate disposal cell operation is always a violation of the license.
- ❖ Given the potential incompatibility with the PVC liners and the known issues with the liners and LDS in Cells 1, 2, and 3, DRC must amend the RML Renewal to contain a new License condition prohibiting disposal or storage of alternative feed material in Cells 1, 2, and 3.
- ❖ Given the potential incompatibility of solvents in the alternative feed material and the liners in Cell 4A and 4B, DRC must amend the RML Renewal to contain a new License condition prohibiting disposal or storage of alternative feed material in Tailings Cells 4A and 4B.

- ❖ DRC must require DUSA to design and construct a new disposal cell or upgrade a portion of an existing cell for alternative feed material designed to BAT/BACT in 2011 for materials and solvents present in the alternative feed material.

2. DRC Must Prevent Wind Dispersal/Fugitive Dust from Alternative Feed Piles on the Ore Storage Pad

a. Issue Identification

As noted above, page 9 of the SER identifies a concern regarding fugitive dust/wind dispersal of alternative feed material stored on the Ore Storage Pad. The SER incorrectly asserts that the AAO from the DAQ addresses wind dispersal of alternative feed materials with dust minimization and fugitive dust work practice standards. The Tribe reiterates here that the current AAO does not require DUSA to adhere to work practice standards, and the Tribe reiterates that the current AAO does not require DUSA to install BAT/BACT fugitive dust management and equipment. *See generally* RAA. The Tribe also notes that the current enforcement of the AAO has been, and will likely continue to be, insufficient to prevent off-site migration of alternative feed stored on the Ore Storage Pad.

The Tribe is concerned that DUSA is not currently capable of monitoring or minimizing air dispersal of alternative feed or other Radioactive Material at the WMM facility. Here, the Tribe believes that neither DRC nor DUSA maintains records of the chemical compounds and radioisotope mixtures present in the different types of alternative feed material. The Tribe also understands that DUSA's semi-annual effluent monitoring program is limited to measuring gross gamma radiation, natural uranium (U-238) and its progeny Th-230 and Ra-226, and Pb-210 and Rn-222. *See Exhibit R, §1*. This means that DUSA is not properly monitoring air dispersal of components of the alternative feed material.

The Tribe's review of DUSA's MILDOS-AREA model for dose assessments to the public and to UMU Tribal Members indicates that the model does not include alternative feed material values for specific activity levels in the pCi/g, bulk density estimates and the Derived Air Concentration values. The Tribe asserts that the lack of knowledge about the composition of the alternative feed material, the likelihood that alternative feed material is more susceptible to wind dispersion<sup>3</sup>, and the absence of empirical information for alternative feed material in the MILDOS-AREA model indicate that DUSA is not estimating the dose assessment of alternative feed material to the public. This compounds the problem described in Section III(B)(2), *supra* (that lack of knowledge about dispersal through air pathways and stormwater pathways makes it difficult to assess and control threats to the health of the public, UMU Tribal Members, and the local environment).

b. List of Tribal Demands (Fugitive Dust from Alternative Feed Material)

- ❖ DRC must, as part of its investigation into air deposition and surface contamination, re-evaluate its initial inquiry into wind dispersal of the alternative feed material.

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<sup>3</sup> *See Exhibit R, § 2*.

- ❖ DRC must require DUSA to identify and analyze the concentration of the chemical compounds and radioisotope mixtures present in alternative feed material and disclose that information to DRC and the public (and/or Tribe) for review.
  - ❖ DRC must require DUSA to modify its semi-annual effluent monitoring to detect the migration of the identified chemical compounds and radioisotope mixtures of alternative feed and include these modifications to the MILDOS-AREA model for dose assessments to the public and to UMU Tribal Members. *See* Exhibits P, R (offering specific technical changes to the semi-annual effluent monitoring program).
  - ❖ DRC must require DUSA to modify its Stormwater Plan to contain the migration of any air-deposited alternative feed material.
  - ❖ DRC must require DUSA to properly model the dose assessment of the alternative feed material to the public and to UMU Tribal Members.
3. DRC Should Not Allow the Continued Transfer of Alternative Feed Material and Other Material to the WMM Facility Unless and Until DUSA Properly Controls Groundwater, Surface Water, and Soil Contamination under DRC-Approved Corrective Action Plans
- a. Issue Identification

The Tribe is concerned that groundwater, surface water, and soil contamination and uncontrolled continuing releases of such contamination at the WMM facility render the facility ineligible or at least inappropriate for the receipt of alternative feed material or other waste materials. At the WMM facility, there is documented evidence of: (1) alternative feed material constituents in the groundwater, *see* Exhibit S; (2) other hazardous substances indicating the possibility of Radioactive Material and other chemicals in the groundwater, *see* Section III(A), *supra*; and (3) air dispersal of Radioactive Material into surface water and soil, *see* Section III(B), *supra*.

The WMM facility has already received significant quantities of alternative feed material, and Section 10 of the RML Renewal (even with the addition of License Condition 10.1) contemplates the future transfer of alternative feed material to the WMM facility. *See* SER at p. 11. The off-site transfer of any hazardous substance, pollutant or contaminant, from sites being remediated under the Comprehensive Environmental Response, Compensation, and Liability Act, as amended (CERCLA) is subject to the mandate in Section 121(d)(3) of CERCLA and 40 C.F.R. § 300.440 of the National Contingency Plan (also known as the “Off-Site Rule”) that such material may only be transferred to a facility that is operating in compliance with applicable federal and state law. The Off-Site Rule is designed to ensure that wastes from CERCLA response actions are only disposed of in properly controlled and compliant off-site facilities and to avoid having such wastes contribute to present or future environmental problems at those facilities. *See, e.g.*, 58 FR 49200-01 (“The purpose of this off-site regulation is to avoid having CERCLA wastes from CERCLA-authorized or -funded response actions contribute to present or future environmental problems by directing these wastes to management units determined to be environmentally sound. Congress and EPA have always believed that a CERCLA cleanup should be more than a relocation of environmental problems, and have attempted to ensure the proper treatment and disposal of

CERCLA wastes removed from a CERCLA site.”). The Off-Site Rule is the law and it is wise policy for protecting the public and the environment from inappropriate disposal of waste materials.

DUSA has shown continued slow progress in formulating, much less actually implementing, corrective action plans to address groundwater contamination at the WMM facility. DUSA has also failed to take adequate actions to prevent air dispersal of Radioactive Material at the WMM facility. DUSA has refused to remediate known groundwater and air dispersal contamination. The Tribe believes these problems raise serious questions as to whether the WMM facility is or should be qualified to receive CERCLA waste under the Offsite Rule.

The Tribe recognizes that the Off-Site Rule charges the U.S. Environmental Protection Agency with determining if there are releases of hazardous substances or violations at a facility that would preclude the facility from receiving CERCLA waste and urges that agency to do so. However, DRC is charged with regulating the WMM facility and enforcing applicable state and delegated federal law governing the WMM facility. The Off-Site Rule relies on state regulatory agencies like DRC to identify and disclose when a facility is out of compliance with applicable state and delegated federal law. Here, the Tribe comments that it may be difficult for the Environmental Protection Agency to determine compliance with the Off-Site Rule because of DRC’s prolonged processes for requiring corrective action plans for known contamination, *see* Section III(A), *supra*, and because DRC often fails to document or clarify when DUSA is in violation of applicable state laws, *see generally* Section III, *supra*.

Finally, given the documented contamination issues at the WMM facility, the Tribe is concerned that DRC is contemplating the transfer of Radioactive Material waste from other sites to the WMM facility. *See, e.g.*, UDRC’s proposed Amendment 6 to License Number UT 0900480 for the Uranium One America’s Inc. Shootaring Canyon Uranium Mill Facility. The Tribe asserts that DRC should not authorize the transfer of decommissioning waste from DRC-regulated facilities in Utah to the WMM facility until DUSA has fully remediated known environmental contamination at the facility.

b. List of Tribal Demands (Receipt of Alternative Feed and Other Waste Materials)

- ❖ DRC must consult with the United States Environmental Protection Agency to determine whether DUSA can still legally receive the alternative feed material. During this consultation, DRC must clarify to EPA where DUSA has violated applicable Utah laws.
- ❖ DRC must immediately ensure that DUSA is bound to adequate corrective action plans to control known groundwater and airborne deposition releases of Radioactive Material and alternative feed material.
- ❖ DRC should add cleanup of groundwater and airborne deposition contamination as a condition of License Condition 10.1 outlined in the SER.
- ❖ DRC should re-evaluate including the WMM facility as a facility to accept waste from decommissioning plans for other DRC-regulated facilities so long as there are outstanding environmental contamination issues at the WMM facility.

#### **IV. TRIBAL CONCERNS REGARDING LONG-TERM ISSUES OF RECLAMATION AND SURETY ESTIMATES**

##### **A. DUSA’S RECLAMATION PLAN DOES NOT PROTECT THE LONG TERM HEALTH AND SAFETY OF THE PUBLIC AND OF UTE MOUNTAIN UTE TRIBAL MEMBERS.**

###### **1. DRC Should Not Approve Reclamation Plan 5.0 Provisions Regarding Tailings Cell 1**

###### **a. Issue Identification**

Pages 25-30 of the SER describe DRC work with DUSA to finalize the Reclamation Plan (and in particular, to justify the tailing cover design and surety estimate for the facility). The SER notes that DRC work on Reclamation Plan 5.0 is ongoing and that the Executive Secretary has “unilaterally prohibited future construction of any new tailings cells (beyond Cell 4B)” until DUSA secures final approval of the revised Reclamation Plan. *See* SER at p. 29, RML Renewal License Condition 9.11. The Tribe understands that the Executive Secretary has imposed this limitation to require DUSA to promptly finalize the Reclamation Plan and the surety estimate, but notes here that this limitation will likely be insufficient to require DUSA to finalize these items during the life of the RML Renewal.

The Tribe’s first concern with Reclamation Plan 5.0 relates to provisions regarding the closure of Tailings Cell 1. These provisions indicate that, when decommissioning commences, DUSA anticipates de-watering Cell 1, moving the contents of Cell 1 into a the last “active” tailings cell, and creating a new “cell” within the cell 1 footprint for the receipt of demolition materials and contaminated soil. Reclamation Plan 5.0, Attachment A, I.3.c, p. A-4. The Tribe has several concerns with the plan for Cell 1. First, as noted above, the Tribe is concerned that the current, 30-mil PVC liner on Cell 1 is leaking or in danger of having catastrophic liner leakage. *See* Sections III(A), (C), *supra*. The Tribe reiterates here that, to protect the public health, UMU Tribal Member health, and the environment, DRC must require DUSA to take action now closing Cell 1, either re-lining the cell with liners meeting BAT/BACT in 2011 or disposing of liquid waste in another cell with an adequate liner system.

Second, the Tribe is concerned that the new “area of contaminated materials disposal” in the area currently occupied by Cell 1 will pose a significant threat of environmental contamination. As explained by the Tribe’s expert, the proposed 12-inch clay liner on this “area” is unreliable, unsuitable for the disposal of uranium mill demolition debris, and not in compliance with regulatory standards. RRD Letter § 1.0; Exhibit T, “Reclamation Plan Deficiencies” § 1. The Tribe’s expert recommends that disposal cells for uranium mill demolition debris meet the standards set forth for Cells 4A and 4B (at a minimum), but also recognizes that the second 60-mil liner may not be necessary if the demolition cell does not contain liquids. RRD Letter § 1.3; *but see* Exhibit T “Reclamation Plan Deficiencies” § 1(b) (describing issues with storm water leakage from the planned sediment retention basin).

Third, the Tribe is concerned that the new stormwater discharge design within the area currently occupied by Cell 1 will pose a significant threat of environmental contamination. Reclamation Plan 5.0 indicates that DUSA plans to discharge storm water from the Mill Yard into a sediment retention basin (located in the area currently occupied by Cell 1 and just adjacent to the

“area of contaminated materials disposal”) and out a discharge channel to the west. *See* Reclamation Plan Deficiencies § 2. The Tribe asserts that this plan violates DUSA’s Stormwater Plan, which currently shows no stormwater discharge to the west of Cell 1 and which shows stormwater entering Cell 1 from several directions. *Id.* The Reclamation Plan 5.0 proposal to discharge water west of Cell 1 may result in the movement of Radioactive Material and other chemicals from the Mill Yard into the washes and creeks west of Cell 1. *Id.* The Tribe also asserts that placing the sediment retention basin just adjacent to the “area of contaminated materials disposal” could allow water to leak or seep into the “area,” which could result in water, chemicals, and Radioactive Material leaking through the Area’s 12-inch clay liner. Reclamation Plan Deficiencies § 1(b); RRD Letter §1.3 (addressing the necessity for a second, 60-mil liner).

b. Tribal Demands

- ❖ DRC must not approve Reclamation Plan 5.0 provisions regarding Tailings Cell 1. In particular, DRC must not approve the proposed “area of contaminated materials disposal” as designed (with a 12-inch clay liner), and DRC must not approve the adjacent stormwater basin discharging material from the Mill Yard to the west of Cell 1 until mill decommissioning is complete and all contaminated soil that has the potential to transport radioactive or other hazardous material has been removed from all areas draining into the current Cell 1 location and DRC has verified and approved the work.
- ❖ DRC should require DUSA to close, de-water, re-design, and re-line Tailings Cell 1 to BAT/BACT for 2011. In the alternative, DRC could require DUSA to close, de-water, and remove the contents of Cell 1 and to re-direct storm water from the Mill Yard to a safe, contained location.
- ❖ DRC should allow for public comment on any new alternative put forth by DUSA to address cleanup and closure of Cell 1.

2. DRC Should Require DUSA to Add Additional Items to the Final Cover Design

a. Issue Identification

Section 3 of Reclamation Plan 5.0, Attachment A, “Plans and Technical Specifications,” and Appendix D, “Updated Tailings Cover Design” (including figures titled “WHITE MESA MILL TAILINGS RECLAMATION”) provide a new tailings cell cover design for the WMM tailing impoundments. The Tribe recognizes that DUSA has made improvements to its tailing cell cover design between Reclamation Plan 4.0 and Reclamation Plan 5.0. However, the Tribe’s experts are still concerned that the planned cap at the WMM omits several important components, including a biotic intrusion layer, a geotextile and capillary break, and an HDPE membrane (which are all components of the capping system at the Monticello facility). *See* RRD Letter § 3.1. Without such components, particularly given the evidence of existing groundwater contamination and the likelihood that the liners in Tailings Cells 1, 2, and 3 are inadequate, the Tribe asserts that the final cover design is still deficient.

b. Tribal Demands

- ❖ DRC must require DUSA to amend its final cover design to include a biotic intrusion layer, a geotextile and capillary break, and an HDPE liner comparable to the cap in place in Monticello.

3. Additional Deficiencies in Reclamation Plan 5.0

a. DRC Must Require DUSA to Comply with the Current AAO During Final Reclamation

Section 1.5 of Reclamation Plan 5.0, Attachment A, Technical Plans and Specifications, states that reclamation will comply with State of Utah Air Quality Approval Order (DAQE-AN1205005-06, issue date July 20, 2006). DRC must require DUSA to amend the Reclamation Plan to comply with the most current Air Approval Order for the facility and with RML Renewal License Conditions regarding air quality and the airborne migration of Radioactive Material and alternative feed material. *See* Sections III(A), (C), *supra*.

b. DRC Must Require DRC Approval of Any Design Modifications of the Reclamation Plan

Section 1.8b of Reclamation Plan 5.0, Attachment A, Technical Plans and Specifications, describes “Possible submittal to, and review by, DRC for approval” of design modifications. DRC must review and approve all design modifications to the Reclamation Plan.

c. DRC Must Require DUSA To Amend the Reclamation Plan to Require Disposal of All Contaminated Soil in the Last Operational Tailings Disposal Cell

The Reclamation Plan contains several conflicting references regarding the placement of contaminated soil. Reclamation Plan Deficiencies § 3. As explained in Section IV(A)(1), *supra*, DRC should not approve DUSA’s “area of contaminated materials disposal.” DRC should also require DUSA to clarify that all contaminated soil from the WMM be disposed of in the last operational tailings disposal cell. *See* Reclamation Plan Deficiencies § 3.

d. DRC Must Require DUSA to Re-Design the Scoping Survey and Soil Sampling Methods

The scoping survey proposed in the Reclamation Plan is currently insufficient to protect the public health, and thus the locations for soil sampling may not be representative of all contaminated soils. Reclamation Plan Deficiencies §§ 3, 5. DRC must require DUSA to design a scoping survey that measures more than ten percent of the facility.

**B. THE RML RENEWAL FAILS TO REQUIRE DUSA TO PROVIDE ADEQUATE SURETY FOR THE FACILITY**

1. Issue Identification

Under the NRC/Utah Primacy Agreement, the State of Utah must require DUSA to make financial surety arrangements sufficient to “ensure compliance with those standards established by the Commission pertaining to bonds, sureties, and financial arrangements to ensure adequate reclamation and long-term management of such byproduct material and its disposal site.” Article

IX(B). The DRC is responsible for ensuring that DUSA posts a surety sufficient to “carry out the decontamination and decommissioning of the mill and site and for the reclamation of any tailings or waste disposal areas.” Utah Admin. Code R313-24-4 (adopting 10 C.F.R. Part 40, App. A, Criterion 9); *see also* Utah Admin Code R313-22-35. Importantly, DRC is responsible for ensuring that DUSA’s surety estimate takes into account “total costs that would be incurred if an independent contractor were hired to perform the decommissioning and reclamation work.” Utah Admin. Code R313-24-4 (adopting 10 C.F.R. Part 40, App. A, Criterion 9).

The SER indicates that DRC staff is now working with DUSA to increase the WMM surety from its current amount of roughly \$16 million. Pages 25-27 of the SER describe changes and new requirements to the surety amount, including a new requirement to provide surety for groundwater contamination and an amendment to include costs for new tailings cell cover designs. License Condition 9.11 currently requires DUSA to submit an Interim Surety Cost Estimate Report by October 1, 2011 that includes, among other things, that DUSA include a new cover design. That condition states, “Under no circumstances shall the surety amount be less than that already approved by the Executive Secretary on December 20, 2010 (\$18,777,388). Despite DRC’s clear statement on the surety minimum, on September 29, 2011, DUSA submitted to DRC an Interim Surety Cost Estimate that provided only \$17.7 million. The SER states that DRC will “not accept this Surety on good faith” and that the surety will be kept at a minimum of \$18,777,388 until the ICTM report and the Reclamation Plan are approved. *See* SER at p. 26.

The Tribe asserts that the DRC’s minimum surety estimate is grossly insufficient to ensure adequate decontamination and decommissioning of the WMM facility. Here, the Tribe’s expert undertook both a benchmarking cost review and an evaluation of DUSA’s built-up estimates, which is provided to DRC now in Section 3.2 of the RRD Letter.

In the built-up cost estimate review, the Tribe’s expert focused on evaluating whether DUSA’s surety estimate will ensure that sufficient funds exist to properly close and secure the site in the event that DUSA or a future owner walks away. RRD Letter at § 3.2.3. Here, the Tribe’s expert noted that DUSA’s surety estimate does not currently anticipate a third-party or government completing the reclamation work. RRD Letter at § 3.2.3; *see also* Utah Admin. Code R313-24-4 (adopting 10 C.F.R. Part 40, App. A, Criterion 9). The expert then adjusted labor rates, equipment rates, fuel rates, quality control cell dewatering, and the indirect cleanup costs. *Id.* The adjusted estimate, which excluded any groundwater and air deposition remediation and which excluded the increased cost to an upgraded tailings cell cover design, was \$36,466,431 (roughly \$51 million in 2020 dollars). *See* RRD Letter Table 3.6. The built-up cost estimate demonstrates that both DUSA’s current proposal and DRC’s current minimum are grossly insufficient to cover basic remediation at the WMM facility.

In the benchmarking cost review, the Tribe’s expert reviewed closure costs for more than 110 sites worldwide (with more than half being uranium mill tailings sites). Here, the Tribe’s expert found that the median and average per acre closure costs were \$350,000 and \$600,000 respectively, but that the current estimate of \$17.7 million calculates only \$78,000 per acre of tailings. RRD Letter § 3.2.2. The expert noted that the most directly relevant site closure is the cleanup of the uranium mill facility in Monticello, Utah, which cost \$520 million, or \$1.4 million per acre, in 2010 dollars. The expert also performed per-ton calculations for closure of the WMM facility and found, using a Department of Energy measure, that closure costs per ton calculate to roughly \$470 million for the facility. RRD Letter § 3.2.2.

Leaving aside the \$470 million DOE per-ton calculation, the expert calculated the benchmarking estimate for the WMM facility to be \$91,254,000 (which adjusts to \$97,753,566 when escalated to 2012, and \$128,722, 779 when escalated to 2020). *See* RRD Letter Table 3.7. The benchmarking study demonstrates that the more probable cost of remediating the WMM facility will be closer to the average cost of closure for United States uranium mill facilities, which is \$107 million. Indeed, the Tribe asserts that the cost of a government remediation of the WMM facility may place the WMM facility above average, given the volume of tailings present at the facility and given that significant groundwater and surface contamination have been identified already at the WMM facility.

The Tribe is concerned that, unless and until DRC revises its minimum surety estimate to reflect real closure costs for the WMM facility and DRC conditions the RML Renewal on DUSA providing adequate surety by a firm deadline, DUSA will continue to provide unreasonable surety estimates to the DRC. The Tribe is particularly concerned that DUSA will continue to dispute the surety estimate amount with DRC over this license renewal period and future license renewal periods so that DUSA can minimize its ultimate surety liability and simply leave the WMM facility contamination to the State of Utah or the DOE as a legacy site. The Tribe is also concerned that the operation of the WMM facility with the ultimate reclamation and surety plan to be a DOE legacy site will allow DUSA to avoid liability for environmental contamination and will allow DUSA to operate the WMM facility in a manner that poses an increased threat to both the short-term and the long-term health and safety of UMU Tribal Members.

## 2. Tribal Demands

- ❖ DRC must require DUSA to increase the minimum interim surety amount to \$51 million in 2020 dollars (to reflect an accurate built-up estimate). DRC must require DUSA to post the minimum surety estimate within 30 days.
- ❖ The Tribe supports License Condition 9.11(E), which requires DUSA to add groundwater contamination to that minimum amount. DRC must add a new License Condition to require DUSA to add air-deposited surface contamination to that minimum amount.
- ❖ DRC should review the new surety amount using a benchmarking approach as outlined in the RRD Letter.
- ❖ DRC must set a new date by which DUSA must respond to DRC with a new interim surety estimate.
- ❖ DRC must allow public review and comment of the final surety amount.
- ❖ DRC must set a final date by which DUSA must have the new surety amount in place.
- ❖ DRC must set forth license conditions that allow DRC to revoke the RML Renewal for failure to meet deadlines or secure the surety amount and allow DRC to amend the RML Renewal after public comment on the final surety amount.

V. **COMPREHENSIVE LIST OF TRIBAL DEMANDS**

<b>Section</b>	<b>Subject</b>	<b>Demand</b>
II.B	Mandate Clean-up Actions	The Tribe asserts that the DRC has a responsibility in the RML Renewal process to mandate cleanup actions and timelines to DUSA to avoid catastrophic water and resource contamination resulting from known sources of contamination.
II.B	Account for Lack of DRC Resources	The Tribe believes that the DRC could compensate for the lack of staff resources by: (1) setting forth clear license conditions requiring additional quality control measures, standard operating procedures, and more specific monitoring requirements; and (2) providing clear instructions and hard deadlines for DUSA to accomplish monitoring, licensing, and cleanup and remediation work.
III.A.1.b	Nitrate Clean-up Deadlines; Deadlines in RML	The Tribe supports deadlines put forth in the License and in the SER to require DUSA to submit a corrective action plan by November 30, 2011 and to have the surety estimate include groundwater remediation by March 4, 2012. Given the history of relaxed timelines for DUSA to address this issue, DRC must put deadlines on DUSA to complete the remediation work. Here, the Tribe suggests that DRC either: (1) amend the RML Renewal in December 2011 to place the deadlines in the renewal document; or (2) amend the RML Renewal to place a hard deadline for DUSA to implement the work outlined in the CAP.
III.A.1.b	Groundwater Clean-up Deadline Too Far in Future; Uncertain	The Tribe does <u>not</u> support the deadline put forth in the Amended Stipulated Consent Agreement requiring completion of groundwater remediation at the time of transfer to federal authority. <i>See</i> Exhibit J, “Amended Stipulated Consent Agreement” at p. 8, September 30, 2011. The Tribe does not support the amount of time DRC has allowed DUSA between the identification of groundwater pollution and the corrective action plan. Amended Stipulated Consent Agreement at pp. 1-4. DRC must add a provision to the RML Renewal that allows DRC to revoke the RML License if DUSA fails to perform prompt remediation of the nitrate plume and other obligations under the CAP.
III.A.1.b	MW-22 Contamination	The Tribe does not support DUSA’s lack of attention to the MW-22 contamination. DRC must revisit the status of MW-20 and MW-22 and conduct a source identification assessment of these wells, as described in Permit UGW370004 Part IE.2, page 5.
III.A.1.b	MW-22	DRC must designate MW-20 and MW-22 as Point of

	Contamination	Compliance Wells and immediately require DUSA to implement the concurrent closure and other groundwater protection measures necessary to protect human health and the environment.
III.A.1.b	Nitrate CAP Comments	DRC must provide an additional opportunity to review and comment on the nitrate plume corrective action plan and to suggest and comment on any amendments to the RML Renewal addressing the CAP. Here, the Tribe puts forth its preliminary comments on the corrective action plan.
III.A.1.b	Nitrate CAP	Require DUSA to immediately implement groundwater pumping to prevent further contamination.
III.A.1.b	Nitrate CAP	Require DUSA to permanently close Tailings Cell 2.
III.A.1.b	Nitrate CAP	Require DUSA to cease putting any additional material into Tailings Cell 3 (including ISL Waste) and to permanently close Tailings Cell 3.
III.A.1.b	Nitrate CAP	Require that DUSA place adequate permanent cap systems on Tailings Cells 2 and 3.
III.A.1.b	Nitrate CAP	Require DUSA to cease putting any additional material (liquid or otherwise) into Tailings Cell 1. Here, the Tribe recommends that DRC require DUSA to re-line Tailings Cell 1 with a liner that meets BAT/BACT for 2011 so that the WMM has a functional liquids disposal cell for the life of the facility and to provide an adequate stormwater catchment basin during reclamation of the facility. In the alternative, DRC could require DUSA to close and de-water Cell 1, place the remaining contents of Cell 1 in a disposal cell, and re-route stormwater from the Mill Yard.
III.A.2.b	Leak Detection	Closure of Tailings Cells 2 and 3 with adequate permanent caps will reduce the likelihood of catastrophic groundwater contamination caused by leaking liners and a flawed LDS. The same is true of Cell 1; however, if DUSA re-lines Cell 1, DUSA must design a new LDS that has a collection system that does not allow for vertical migration of leaks.
III.A.3.b	Land Use Survey	DRC must amend License Condition 12.3 to require DUSA to identify, assess, and promptly minimize potential routes of exposure <u>on its facility</u> to land uses on adjacent lands.
III.A.3.b	Well Pathways	DRC must add the Deep Supply Well and other wells under Cells 3 and 4 as potential routes for exposure of contaminants and dose to the general public and to UMU Tribal Members.
III.A.3.b	Well Pathways	DRC must put a firm and short deadline (no longer than 60 days from the January 2012 assessment deadline in the GWDP) on DUSA to correct any deficiencies on the

		well casing for the Deep Supply Well.
III.B.1.b	Air--DRC Responsibility	DRC must clearly identify in the RML Renewal that DRC is responsible for regulating and monitoring Radioactive Material.
III.B.1.b	Impose Terms in RML to Control Radioactive Dust Migration	DRC must impose sufficient terms and conditions in the RML Renewal to prevent environmental contamination via airborne pathways. Central to this license revision will be an acknowledgement by DRC that fugitive dust from the WMM facility contains Radioactive Material and must be treated as such. This will likely include a provision requiring adherence to a new AAO issued by DAQ and adherence to additional conditions imposed by the DRC. <i>See</i> Exhibits A and B to the RAA (providing examples of more stringent fugitive dust management practices).
III.B.1.b	Ability to Reopen or Override AAO	The RML Renewal must allow DRC to open the AAO during future license renewals to ensure that the AAO and the RML License conditions require that future license renewals are not inimical to the health and safety of the public. In the alternative, DRC must be able to supplement and override conditions of a non-renewed AAO with terms and conditions placed in the RML Renewal.
III.B.1.b	Coordination with DAQ and Correction of Deficiencies in Regulation of Radioactive Dust	DRC must review the current AAO with DAQ and assess and address the Tribe's concerns, as put forth in the RAA, regarding the flexible provisions of the AAO, the chronic lack of enforcement, and the lack of even basic work practice standards for the management of fugitive dust.
III.B.1.b	BAT/BACT for Fugitive Dust	DRC must impose additional conditions, such as work practice standards or BAT/BACT for fugitive dust management, as a condition of the RML Renewal.
III.B.1.b	Off-site Migration of Radioactive Material	DRC must investigate the evidence presented by the Tribe in the USGS Report and address the known off-site migration of Radioactive Material.
III.B.1.b	Stormwater Plan Inconsistent	DRC must investigate the inconsistencies in the Stormwater Plan and investigate stormwater pathways for the movement of deposited Radioactive Material.
III.B.1.b	Stormwater Plan Deficient	DRC must require DUSA to amend its Stormwater Management Plan to correctly identify and control pathways for the movement of air-deposited Radioactive Material.
III.B.1.b	Surface Contamination Corrective Action	DRC must engage DUSA to begin formulating a CAP to remediate the surface contamination and to prevent future contamination.
III.B.1.b	Surface Contamination in	DRC must amend the SER and the RML Renewal to reflect the surface contamination issue. This includes

	SER/RML and Surety	amending the surety provision to require DUSA to adjust its surety amount to include remediation of off-site migration of radioactive fugitive dust.
III.B.1.b	Hard Deadlines in Surface Contamination Corrective Action	DRC must set hard deadlines for formulating the CAP and implementing the approved CAP measures.
III.B.1.b	Ability to Revoke RML	DRC must add a provision to the RML Renewal that allows DRC to revoke the RML License if DUSA fails to meet its obligations under the CAP.
III.B.2.b	Land Use Survey	DRC must amend License Condition 12.3 to require DUSA to identify, assess, and promptly minimize potential airborne migration pathways of exposure on and between the WMM facility and adjacent lands.
III.B.2.b	Audit/ Review of Air Monitoring Program	DRC must review DUSA's semi-annual effluent monitoring program to determine why the monitoring did not detect the airborne migration of Radioactive Material and then require DUSA to modify the program to correct any deficiencies. <i>See</i> Exhibit P (providing initial technical comments on improvements to the semi-annual effluent monitoring program
III.B.2.b	Review Inter-divisional Communication	DRC must review its communication policies with DAQ to determine why DAQ did not notify DRC of the pertinent data from the USGS Report delivered with AAO comments prior to the issuance of the RML Renewal and set forth new procedures to coordinate communication between DRC and DAQ.
III.B.3.b	40 C.F.R. Part 61 Subpart W Work Practice Standards	DRC must evaluate DUSA's compliance with the Subpart W work practice standard limitation to two cells.
III.B.3.b	40 C.F.R. Part 61 Subpart W Work Practice Standards	DRC must identify in the RML Renewal which two cells are authorized to be "in operation" under Subpart W and condition the RML Renewal to ensure compliance with the work practice standard limitation of the Subpart W NESHAP at all times.
III.C.1.b	Alternative Feed Prohibition	DRC should prohibit DUSA from receiving any new shipments of alternative feed material (from any site) until DUSA can meet the requirements of License Condition 10.1.
III.C.1.b	Alternative Feed Control	DRC must keep the conditions of the License Condition 10.1 in place permanently to ensure that failure to have sufficient disposal capacity or adequate disposal cell operation is always a violation of the license.
III.C.1.b	Alternative Feed Disposal, Cells 1, 2, and 3	Given the potential incompatibility with the PVC liners and the known issues with the liners and LDS in Cell 3, DRC must amend the RML Renewal to contain a new

		License condition prohibiting disposal or storage of alternative feed material in Cells 1, 2, and 3.
III.C.1.b	Alternative Feed Disposal, Cells 4A and 4B	Given the potential incompatibility of solvents in the alternative feed material and the liners in Cell 4A and 4B, DRC must amend the RML Renewal to contain a new License condition prohibiting disposal or storage of alternative feed material in Tailings Cells 4A and 4B.
III.C.1.b	Construct New BAT/BACT Cell for Alternative Feed Tailings Disposal	DRC must require DUSA to design and construct a new disposal cell or upgrade a portion of an existing cell for alternative feed material designed to BAT/BACT in 2011 for materials and solvents present in the alternative feed material.
III.C.2.b	Alternative Feed Dust	DRC must, as part of its investigation into air deposition and surface contamination, re-evaluate its initial inquiry into wind dispersal of the alternative feed material.
III.C.2.b	Disclosure of all Alternative Feed Chemical Compositions	DRC must require DUSA to identify and analyze the concentration of the chemical compounds and radioisotope mixtures present in alternative feed material and disclose that information to DRC and the public (and/or Tribe) for review.
III.C.2.b	Alternative Feed Monitoring	DRC must require DUSA to modify its semi-annual effluent monitoring to detect the migration of the identified chemical compounds and radioisotope mixtures of alternative feed and include these modifications to the MILDOS-AREA model for dose assessments to the public and to UMU Tribal Members. <i>See Exhibits P, R (offering specific technical changes to the semi-annual effluent monitoring program).</i>
III.C.2.b	Modify Stormwater Plan for Alternative Feed Migration	DRC must require DUSA to modify its Stormwater Plan to contain the migration of any air-deposited alternative feed material.
III.C.2.b	Proper Dose Modeling From Alternative Feeds	DRC must require DUSA to properly model the dose assessment of the alternative feed material to the public and to UMU Tribal Members.
III.C.3.b	Consult with U.S. EPA about CERCLA Off-site Rule	DRC must consult with the United States Environmental Protection Agency to determine whether DUSA can still legally receive the alternative feed material. During this consultation, DRC must clarify to EPA where DUSA has violated applicable Utah laws.
III.C.3.b	Corrective Action to Control Migration of Alternative Feed Materials	DRC must immediately ensure that DUSA is bound to adequate corrective action plans to control known groundwater and airborne deposition releases of Radioactive Material and alternative feed material.
III.C.3.b	Enhance RML Condition 10.1	DRC should add cleanup of groundwater and airborne deposition contamination as a condition of License

		Condition 10.1 outlined in the SER.
III.C.3.b	Receipt of Waste from Other DRC-Regulated Facilities	DRC should re-evaluate including the WMM facility as a facility to accept waste from decommissioning plans for other DRC-regulated facilities so long as there are outstanding environmental contamination issues at the WMM facility.
IV.A.1.b	Cell 1 Area Reclamation Plan- Disposal Cell and Stormwater	DRC must not approve Reclamation Plan 5.0 provisions regarding Tailings Cell 1. In particular, DRC may not approve the proposed “area of contaminated materials disposal” as designed (with a 12-inch clay liner), and DRC must not approve the adjacent stormwater basin discharging material from the Mill Yard to the west of Cell 1 until mill decommissioning is complete and all contaminated soil that has the potential to transport radioactive or other hazardous material has been removed from all areas draining into the current Cell 1 location and DRC has verified and approved the work.
IV.A.1.b	Rebuild Cell 1	DRC should require DUSA to close, de-water, re-design, and re-line Tailings Cell 1 to BAT/BACT for 2011. In the alternative, DRC could require DUSA to close, de-water, and remove the contents of Cell 1 and to re-direct storm water from the Mill Yard to a safe, contained location.
IV.A.1.b	Public Comment on Cell 1 Rebuild	DRC should allow for public comment on any new alternative put forth by DUSA to address cleanup and closure of Cell 1.
IV.A.2.b	Tailing Cell Cover Design	DRC must require DUSA to amend its final cover design to include a biotic intrusion layer, a geotextile and capillary break, and an HDPE liner comparable to the cap in place in Monticello.
IV.A.3.a	Apply AAO to Reclamation	DRC Must Require DUSA to Comply with the Current AAO During Final Reclamation.
IV.A.3.b	Modifications Approval	DRC Must Require DRC Approval of Any Design Modifications of the Reclamation Plan.
IV.A.3.c	Contaminated Soil Disposal	DRC Must Require DUSA To Amend the Reclamation Plan to Require Disposal of All Contaminated Soil in the Last Operational Tailings Disposal Cell.
IV.A.3.d	Scoping Survey and Soil Sampling	DRC Must Require DUSA to Re-Design the Scoping Survey and Soil Sampling Methods.
IV.B.2	Surety Estimate Insufficient	DRC must require DUSA to increase the minimum interim surety amount to \$51 million in 2020 dollars (to reflect an accurate built-up estimate). DRC must require DUSA to post the minimum surety estimate within 30 days.
IV.B.2	Surety for Groundwater Contamination	The Tribe supports License Condition 9.11(E) to require DUSA to add groundwater contamination to that minimum amount. DRC must add a new License

	Liability	Condition to require DUSA to add air-deposited surface contamination to that minimum amount.
IV.B.2	Use Benchmarking for Surety Estimate	DRC should review the new surety amount using a benchmarking approach as outlined in the RRD Letter.
IV.B.2	Set Firm Date for Revised Surety Estimate	DRC must set a new date by which DUSA must respond to DRC with a new interim surety estimate.
IV.B.2	Public Review of Surety Proposal	DRC must allow public review and comment of the final surety amount.
IV.B.2	Final Date for Proof of Surety Amount	DRC must have a final date by which DUSA must have the new surety amount in place.
IV.B.2	RML Renewal Failure and Final Surety Estimate	DRC must set forth license conditions that allow DRC to revoke the RML Renewal for failure to meet deadlines or secure the surety amount and allow DRC to amend the RML Renewal after public comment on the final surety amount.

The Tribe appreciates your time and attention to these comments. If you have any questions, please do not hesitate to contact Special Counsel H. Michael Keller at (801) 237-0287, Associate General Counsel Celene Hawkins at (970) 564-5642, or Scott Clow, Environmental Programs Director, at (970) 564-5432.

Sincerely

Celene Hawkins  
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Ute Mountain Ute Tribe

H. Michael Keller  
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