



STATE OF WASHINGTON

RADIOACTIVE MATERIALS LICENSE

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Pursuant to the Nuclear Energy and Radiation Control Act, RCW 70.98, and the Radiation Control Regulations, Chapters 246-220 through 246-254 WAC, and in reliance on statements and representations heretofore made by the licensee designated below, a license is hereby issued authorizing such licensee to transfer, receive, possess and use the radioactive material(s) designated below; and to use such radioactive materials for the purpose(s) and at the place(s) designated below. **This license is subject to all applicable rules and regulations promulgated by the State of Washington Department of Health.**

<p>1. Licensee Name:</p> <p>DAWN MINING COMPANY, L.L.C</p>	<p>3. License Number:</p> <p>WN-1043-2 is amended in its entirety to read as follows:</p>
<p>2. Address:</p> <p>5326 URANIUM CITY ROAD FORD, WASHINGTON 99013</p> <p>Attn: Bill Lyle, Vice President / General Manager</p>	<p>4. Expiration Date:</p> <p>May 31, 2019</p> <p>5. Reference Number(s):</p>

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| <p>6. Radioactive Material (element and mass number).</p> <p>6.A. 11.e(2) byproduct material.</p> | <p>7. Chemical and/or Physical Form.</p> <p>7.A. Any.</p> | <p>8. Maximum quantity licensee may possess at any one time.</p> <p>8.A. Unlimited.</p> |
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CONDITIONS

9. Authorized use.
 - A. Possession of byproduct material generated by the licensee's past milling operations.
10. The authorized place for use shall be the licensee's facility, located at 5326 Uranium City Road, Ford, Washington.
11. The licensee shall comply with the provisions of RCW 70.121.030, "Mill Tailings--Licensing and Perpetual Care;" Chapter 246-220 WAC, "Radiation Protection--General Provisions;" Chapter 246-221 WAC, "Radiation Protection Standards;" Chapter 246-222 WAC, "Radiation Protection--Worker Rights;" Chapter 246-232 WAC -- "Radioactive Material -- Licensing Applicability," Chapter 246-235 WAC, "Radioactive Materials--Specific Licenses;" and Chapter 246-252 WAC, "Radiation Protection--Uranium and/or Thorium Milling," and is subject to the rules, regulations, and orders of



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the Department of Health now or hereafter in effect, and to the additional conditions specified or incorporated in this license.

12. Reference to the "department" in this license shall mean the Department of Health, Waste Management Section, or successor agency.

GENERAL OPERATION

13. The licensee is hereby exempted from the requirements of Chapter 246-221-120(8) and (9) for areas and containers within the millsite, provided that all entrances to the property are conspicuously posted in accordance with WAC 246-221-120 and with the words, "CAUTION--ANY AREA OR CONTAINER WITHIN THIS AREA MAY CONTAIN RADIOACTIVE MATERIALS."
14. Radioactive material shall be used by, or under the supervision of the General Manager, the licensee's Radiation Safety Officer (RSO), the licensee's Operations Manager, or the licensee's Radiation Safety Technician (RST), as defined in Dawn Mining Operations Procedure 01 (DMOP 01).
15. The licensee's RSO shall be responsible for matters dealing with radiological safety aspects of the licensed facility, and shall be ultimately responsible to the company President for matters related to radiation safety.
16. The RSO and his/her designee shall be qualified as specified in DMOP 01.
17. The RSO and his/her designee shall have the authorities and responsibilities which are contained in DMOP 01. The RST shall receive a minimum of 8 hours of related health and safety refresher training every two years.
18. Individuals designated as authorized users shall report to the RSO on matters dealing with radiological safety. The RSO or his/her designee shall be accessible to the authorized users at all times. Authorized users shall have qualifications as specified in DMOP 01 or equivalent. Any person newly hired as an authorized user shall have all work reviewed and approved by the RSO as part of a comprehensive training program until appropriate course training is complete.
19. A The licensee shall notify the department immediately by telephone and/or email followed by written notification upon learning of the departure of any General Manager, Operations Manager, RSO, or RST.



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- B. The licensee shall notify the department in writing within 30 days of the appointment of any new General Manager, Operations Manager, RSO, or RST. This notification shall clearly demonstrate how the proposed appointee meets or exceeds the requirements specified in DMOP 01.
- C. The licensee shall notify the department in writing at least 30 days prior or as soon as practical to any changes in the licensee's corporate structure.

FACILITY OPERATIONS

- 20. The licensee shall not allow eating, drinking, smoking, or chewing of tobacco in the restricted areas.
- 21.
 - A. The licensee shall maintain and utilize only those Operating Procedures, Emergency Response Procedures and Quality Assurance Procedures (DMOPs, DMEPs and DMQPs) approved by the department. Any change to those procedures must be approved by the department. The licensee shall have all written procedures reviewed and approved by the RSO before a change in a procedure is proposed to the department.
 - B. For operations not previously reviewed by the department, the licensee may propose revised operations of limited time and scope-of-work, for departmental review and approval, so that revised operations may be tested prior to formal adoption.
 - C. An up-to-date copy of each written procedure (DMOP, DMEP, DMQP), including accident and fire protection plans, shall be kept in the millsite office.
- 22. The licensee shall require the radiation safety staff to perform and document inspections of all work areas at least monthly. The licensee shall initiate corrective action for any deficiencies noted during the inspection within seven working days. The results of the inspections and any necessary corrective actions shall be reported in the annual ALARA (as low as reasonably achievable) Report as described in License Condition 23.
- 23. The licensee shall perform an annual ALARA audit of the radiation safety program which shall be led by the RSO. This audit must be completed and submitted to the department by May 31 of each year. The audit team should include the General



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Manager. The report shall include summaries of the analytical results of the radiological surveys and any recommendations to further reduce personnel exposures or environmental releases of uranium or radon and radon progeny.

In order to evaluate the ALARA objective, the licensee shall, at a minimum, review the following records:

- A. Bioassay results, including any actions taken when the results exceeded the action levels listed in DMOP 03.
 - B. Records of external and internal exposure.
 - C. Safety meeting minutes, attendance records, and training program records.
 - D. Any radiological inspection reports required by this license.
 - E. Radiological survey and monitoring data, as well as environmental radiological effluent and monitoring data.
 - F. Surveys required by special work permits (SWPs).
 - G. Reports of overexposure submitted to the department.
24. The licensee shall maintain a bioassay program in accordance with procedure DMOP 03.
25. The licensee shall conduct annual operational training that covers all aspects of operational safety, quality, and emergency procedures for site employees. The DMOPs, DMEPs and DMQPs shall be used to conduct operations training to ensure consistency and thoroughness. Additionally, the annual ALARA audit report required by Condition 23 of this license shall be a part of the annual refresher training.
26. In addition to the required personnel monitoring, the licensee shall monitor the following locations to demonstrate compliance with WAC 246-221. The licensee shall:
- A. Monitor all routinely occupied structures within the site perimeter for air concentrations of radon and radon decay products.
 - B. Monitor the site perimeter for direct gamma radiation dose, radon concentration, and radionuclide concentrations in airborne particulates, at locations and



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frequencies specified in the Site-Wide Sampling and Analysis Plan described in License Condition 30B.

- C. Utilize personnel lapel sampling in accordance with DMOP 05.
27. Release of equipment from the restricted area shall be in accordance with DMOP 04.

TDA 4 FILLING AND STABILIZING OPERATIONS

28. The licensee must submit a Tailing Disposal Area 4 Facility Utilization Report (TDA-4 FUR) to the department by March 31 of each year. The Facility Utilization Report shall include, as a minimum the following:
- A. A millsite aerial photograph representing site conditions in the Fall of the previous year.
 - B. A summary of the previous year TDA-4 activities.
 - C. The TDA-4 impounded volume of fill materials for all sources including a summary of material disposed in TDA-4 during the previous year.
 - D. A surveyed footprint and surface elevations of materials disposed in TDA-4 during the previous year.
 - E. A TDA-4 settlement monitoring summary report for the previous year.
 - F. An as-built report for temporary and annual covers completed over material disposed in TDA-4 the previous year.
 - G. A summary of proposed TDA-4 operations changes for the coming year.
29. For the duration of pumping of the TDA-4 underdrain system, the licensee must submit quarterly operational update reports for the TDA-4 monitoring and pumping wells, and discharge water quality as specified in the Site-wide Sampling and Analysis Plan, and settlement monitoring data.



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ENVIRONMENTAL

30. The licensee shall conduct activities at the site to detect, monitor and address the potential radioactive material contribution to the environment.

A. Annual Environmental Report

The licensee shall monitor groundwater, surface water, sediment, gamma dose rate, radon gas concentration, soil, and air particulate for radionuclide concentrations consistent with the Site-wide Sampling and Analysis Plan and will report these data from the previous calendar year in a comprehensive annual report. The licensee shall submit the Annual Environmental Report of the previous calendar year to the department for review no later than May 31 each year. The Annual Environmental Report shall be submitted in accordance with the department's document "Recommended Content and Format for Annual Environmental Reports".

The Annual Environmental Report shall also include data transmittal of all environmental resources identified for sampling and monitoring in the Site-Wide Sampling and Analysis Plan for the previous calendar year. This report shall include a narrative description of all the sampling and monitoring activities conducted during this period and shall provide graphical data presentations to assist with the identification of trends or anomalous analytical or monitoring results. At a minimum, the Annual Environmental Report shall discuss statistical trend analyses and all anomalous results and actions taken to evaluate the anomalous results. The Annual Environmental Report shall include a written description of any proposed Site-Wide Sampling and Analysis Plan modifications and the rationale for such modifications.

B. Site-Wide Sampling and Analysis Plan

The Site-Wide Sampling and Analysis Plan (SW SAP) may be modified at any time as warranted by millsite conditions after the department has reviewed and approved proposed modifications, or when the department determines that modifications are necessary. Any Site-Wide Sampling and Analysis Plan modifications proposed by the licensee shall include a detailed description of the proposed modifications, the technical basis for the modifications and the schedule to implement the modifications. All modifications to the Site-Wide Sampling and Analysis Plan, whether licensee proposed or directed by the department, during a calendar year shall be documented in the Annual



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Environmental Report for that calendar year.

C. Corrective Actions and Groundwater Protection Plan

Pursuant to WAC 246-252-030, Criterion 5, the licensee shall conduct corrective actions at the site to address groundwater that exceeds groundwater protection standards as set forth by the department. All corrective actions, including monitoring specific to corrective actions, shall be detailed in the Groundwater Protection Plan (GWPP). The licensee shall submit an outline for the Groundwater Protection Plan to the department by October 31, 2014. The Groundwater Protection Plan shall be reviewed annually by the licensee and the department, updated as appropriate, and submitted to the department for review by June 30 each year, starting in 2015. The licensee shall implement the following actions within the Groundwater Protection Plan:

1. The Corrective Action Plan for the Stockpile Area groundwater plume, reviewed and approved by the department, April 2014, shall be incorporated into the Groundwater Protection Plan.
2. Following implementation of the Stockpile Area Corrective Action Plan, the licensee shall evaluate the Tailings Disposal Area (TDA) Groundwater Corrective Action Plan, including any new data or information and any new technologies that may be applicable to the Tailings Disposal Area groundwater plume. If revisions to the Tailings Disposal Area Corrective Action Plan are warranted, the licensee shall propose revisions, and the basis for proposed revisions, to the Tailings Disposal Area Corrective Action Plan, by March 31, 2016 to the department for review.
3. The licensee shall update the Groundwater Protection Plan to ensure that it includes all millsite corrective measures to address groundwater that exceeds standards set forth in the department's letter November 27, 1989, or otherwise determined by the department.

D. Data Evaluation and Reporting

The licensee shall review, evaluate and report sampling and monitoring data consistent with Dawn Mining Company Quality Assurance Procedures (DMQPs).



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EVAPORATION SYSTEM OPERATIONS

31. The licensee shall operate the evaporation system consistent with procedures DMOP 13 and DMOP 20 and the following specific conditions:
- A. The licensee shall discharge meteoric water consistent with department-approved procedures and Washington State Department of Ecology's State Waste Discharge Permit No. ST0005230.
 - B. The licensee shall prepare and submit to the department evaporation pond operations pre-season and end-of-season reports by April 30 and December 31 of each year. The pre-season report shall include updates on pond water volume and the strategy for the upcoming operational season. The end-of-season report should include post-operational conditions and performance.

INTEGRATED PROJECT SCHEDULE

32. The licensee shall submit an update of the Integrated Project Schedule (IPS) by March 31 of each year. The report shall include descriptions of each major task sufficient for independent department review, the schedule and interdependency of tasks, and an updated financial surety estimate. The Integrated Project Schedule shall include all tasks sufficient to meet Chapter 246-252 WAC, approved closure plan, final environmental review documents, and all applicable requirements of this license.
- A. The Integrated Project Schedule must address the following major tasks:
 - 1. ENVIRONMENTAL MONITORING
 - 2. GROUNDWATER CORRECTIVE ACTIONS
 - 3. EVAPORATION SYSTEM OPERATIONS
 - 4. MILLSITE DECOMMISSIONING AND DISPOSAL OPERATIONS
 - 5. CONTAMINATED SOIL CLEANUP AND DISPOSAL OPERATIONS
 - 6. TDAs 1,2, 3 and 4 RECLAMATION AND STABILIZATION OPERATIONS



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7. BORROW SOURCE AREA OPERATIONS
8. FLOOD DIVERSION CONSTRUCTION
9. MONITORING AND STABILIZATION OPERATIONS
10. LICENSE TERMINATION
11. LONG-TERM SURVEILLANCE AND MAINTENANCE PLANNING

B. The Integrated Project Schedule shall provide the actual or anticipated task initiation date, task duration and the estimated task completion date.

C. The Integrated Project Schedule shall provide an updated estimate of the funds necessary to complete closure.

ENGINEERING

33. Before engaging in any major construction-related activities the licensee shall submit to the department an ALARA evaluation. The licensee must obtain prior approval from the department before proceeding with any construction project.
34. Detailed design and specifications must be prepared for each major construction activity, reviewed and approved by a Washington State licensed engineer, and submitted to the department for approval, prior to commencement of construction for that activity. When approved, detailed design and specifications shall be placed under document control procedures. Any modifications of detailed design and specifications must be approved by the department.
35. The detailed design and specifications for each major construction activity shall include Quality Control procedures that are consistent with the Quality Assurance Program of this license.
36. Within 120 days after completion of each construction activity, the licensee shall provide a construction completion report that includes: (1) as-built documents; and (2) a stamped, licensed engineer review verifying that construction was concluded and meets design plans and specifications.



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CLOSURE

37. Consistent with Criterion 6A(a) of WAC 246-252, the licensee shall meet the following milestone: complete construction of the Final Radon Barrier over Tailings Disposal Areas 1,2,3, and 4 (TDAs 1-4) by December 31, 2016. The Final Radon Barrier must address radon emanation, gamma rates, and erosion protection. This license condition may be amended by the department as necessary for reasons of inclement weather, litigation resulting in delays, or other factors beyond the control of the licensee.
38. The licensee shall complete construction of the Tailings Disposal Area surface water diversion ditch by December 31, 2016, in order to protect the Final Radon Barrier of Tailings Disposal Areas 1, 2, 3 and 4.
39. Six months prior to completion of the Final Radon Barrier and completion of the surface water diversion ditch to protect Tailings Disposal Areas 1,2,3 and 4, the licensee shall provide a Monitoring and Stabilization Plan (MSP) The Monitoring and Stabilization Plan shall include the period after tailings reclamation construction, and prior to license termination. The purpose of the Monitoring and Stabilization Plan is to provide specific monitoring and inspection requirements to verify construction performance. The Monitoring and Stabilization Plan shall include action levels and/or performance criteria, and actions necessary to assure continued compliance with the Tailings Reclamation Plan, detailed design plans, and specifications. Specifically, the Monitoring and Stabilization plan must address a monitoring program that addresses evaluation of performance for erosion protection and long-term success of re-vegetation of the surface reclamation and Final Radon Barrier.

FINANCIAL

40. The licensee shall maintain a department-approved financial surety arrangement consistent with WAC 246-252-090, Criterion 9. This requirement may be satisfied by a department-approved financial surety bond or other acceptable financial instrument.

The licensee shall submit updated closure cost estimates annually by March 31, and provide the closure cost estimates within the Integrated Project Schedule report. The licensee shall also submit updated closure cost estimates no later than 60 days following any modification or re-evaluation of the closure plan that affects closure costs, and no later than 60 days after the department may otherwise request an update. For each update of estimated closure costs, the licensee shall submit to the department supporting documentation showing a breakdown of the costs and the



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basis of the updated cost estimate, with adjustments for inflation, changes in engineering plans, activities performed, and any other conditions affecting the estimated costs for site closure. Following the licensee's submission of any updated closure cost estimate, the department will review and comment in writing on the closure cost estimate. Such comments may concur with or may order revisions to the licensee's closure cost estimate. The licensee shall be entitled to obtain review of a department order directing any material revisions to the licensee's closure cost estimate. Such review shall be by adjudicative proceeding, conducted pursuant to Chapter 246-10 WAC, including the right to judicial review in accordance with WAC 246-10-706. The licensee shall revise its financial assurance in accordance with a final order of the department.

41. The licensee shall notify the department, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any Chapters of Title 11 (Bankruptcy) of the United States Code (USC) by or against:
- A. The licensee;
 - B. An entity [as the term is defined in 11 USC, Section 101(14)] controlling a licensee or listing the license or licensee as property of the estate; or
 - C. An affiliate [as the term is defined in 11 USC, Section 101(2)] of the licensee, and
 - D. The licensee's notification must also indicate the bankruptcy court in which the petition for bankruptcy was filed; and
 - E. The date of the filing of the petition.

INCORPORATION BY REFERENCE

42. Except as specifically provided by this license, the licensee shall possess and use radioactive material described in Condition 6 of this license in accordance with statements, representations, and procedures contained in the documents listed below. The department's "Rules and Regulations for Radiation Protection," Title 246 WAC, shall govern the licensee's statements in applications or letters, unless statements are more restrictive than the regulations.
- A. The Groundwater Protection Plan.



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- B. Closure plan dated May 1994, and letter and attachments dated December 28, 1994.
- C. Revised license renewal application, and attachments dated December 31, 2011.
- D. The portions of the 2014 Construction Plan that pertain to the construction of the Final Radon Barrier over Tailings Disposal Areas 1, 2, and 3, submitted March 2014.

FOR THE STATE OF WASHINGTON DEPARTMENT OF HEALTH

Date: 24 June 2014

BY

Mikel J. Eisen, Supervisor
Waste Management Section
Office of Radiation Protection