

UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WASTE MANAGEMENT AND RADIATION CONTROL
RADIOACTIVE MATERIAL LICENSE

Pursuant to Utah Code Annotated, Title 19, Chapter 3 and R313 of the Utah Administrative Code (Radiation Control Rules) 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 designated below; and to use such radioactive material for the purpose(s) and at the place(s) designated below. This licensee is subject to all applicable rules, and orders now or hereafter in effect and to any conditions specified below.

- LICENSEE) 3. License Number UT 0900480
) Amendment # 98
1. Name Anfield Resources Holdings, Corp.) *****
) 4. Expiration Date
2. Address 10808 South River Front Parkway) April 30, 2014
Suite 321) (Under Timely Renewal)
South Jordan, Utah 84095
10708 South 1300 East Suite 120
Sandy, UT 84094
) *****
) 5. License Category 2-b

- 6. Radioactive material (element and mass number) 7. Chemical and/or physical form 8. Maximum quantity licensee may possess at any one time
Natural Uranium 11(e).2 By-product Material Any Unlimited

Section 9: Administrative Conditions

- 9.1 The authorized place of use shall be the licensee's Shootaring Canyon uranium milling facility, located at latitude 37° 42' 30", longitude 110° 41' 30 West in Garfield County, Utah.
9.2 All written notices and reports to the Director required under this license, with the exception of incident and event notifications under the Utah Administrative Codes (UAC) R313-15-1202 and UAC R313-19-50 (Nuclear Regulatory Commission (NRC), Code of Federal Regulations (CFR), Title 10, Part 20, Section 20.2202 and 10 CFR 40.6 incorporated by reference), requiring telephone notification, shall be addressed to the Director, Division of Waste Management and Radiation Control, Utah Department of Environmental Quality (DEQ). Incident and event notifications that require telephone notification shall be made to

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the Director at (801) 536-0200 during normal business hours or after hours to the DEQ Duty Officer at (801) 536-4123.

[Applicable NRC Amendment: 7, 8]

- 9.3 The licensee shall conduct operations in accordance with statements, representations and conditions contained in Sections 1-9 of the license renewal application dated March 1, 1996, as revised by submittals to the NRC dated September 16, and November 15, 1996, and April 17, 1997, except where amendments have superseded license conditions herein.

Whenever the word "will" is used in the above referenced sections, it shall denote a requirement.

[Applicable NRC Amendment: 1]

- 9.4 A. The licensee may, without prior Director approval, and subject to the conditions specified in Part B of this condition:
- (1) Make changes in the facility or process, as presented in the approved license application.
 - (2) Make changes in the procedures presented in the approved license application.
 - (3) Conduct tests or experiments not presented in the approved license application.
- B. The licensee shall file an application for an amendment to the license, unless the following conditions are satisfied.
- (1) The change, test, or experiment does not conflict with any requirement specifically stated in this license, or impair the licensee's ability to meet all applicable State and Federal regulations.
 - (2) There is no degradation in the essential safety or environmental commitments in the license application, or provided by the approved reclamation plan.
 - (3) The change, test, or experiment is consistent with the conclusions of actions analyzed and selected in the Environmental Assessment (EA) dated April 1997.

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- C. The licensee's determinations concerning Part B of this condition shall be made by a Safety and Environmental Review Panel (SERP). The SERP shall consist of a minimum of three individuals. One member of the SERP shall have expertise in management and shall be responsible for managerial and financial approval changes; one member shall have expertise in operations and/or construction and shall have responsibility for implementing any operational changes; and, one member shall be the corporate radiation safety officer (CRSO) or equivalent, with the responsibility of assuring changes conform to radiation safety and environmental requirements. Additional members may be included in the SERP as appropriate, to address technical aspects such as health physics, groundwater hydrology, surface-water hydrology, specific earth sciences, and other technical disciplines. Temporary members or permanent members, other than the three above-specified individuals, may be consultants. At least one member of the SERP shall be designated as Chairman.
- D. The licensee shall maintain records of any changes made pursuant to this condition until license termination. These records shall include written safety and environmental evaluations, made by the SERP, that provide the basis for determining changes are in compliance with the requirements referred to in Part B of this condition. The licensee shall furnish, in an annual report to the Director, a description of such changes, tests, or experiments, including a summary of the safety and environmental evaluation of each. In addition, the licensee shall annually submit to the Director, a summary of changes made to the approved license application and copies of the revised documents that reflect the changes made under this condition. The licensee's SERP shall function in accordance with the standard operating procedures submitted to the NRC by letter dated December 19, 1997.

[Applicable NRC Amendment: 1]

- 9.5 The licensee shall have 30 days from the signatory date of this license to submit an updated revised surety estimate in accordance with the latest approved reclamation and decommissioning plan for Director approval consistent with UAC R313-24-4 (10 CFR 40, Appendix A, Criterion 9 and 10, as incorporated by reference). The Licensee shall maintain a financial surety arrangement that satisfies the requirements of UAC R313-24 naming the Director as the beneficiary to this arrangement. The surety arrangement shall assure that sufficient funds will be available to carry out the decontamination and decommissioning of the mill and site and for the reclamation of any tailings or waste disposal areas, ground water restoration as warranted and the long-term surveillance fee, if accomplished by a third party.

Within 30 days of receipt of the Director-approved revised surety estimate, the licensee shall submit, for Director approval, corresponding financial surety documents if the amount in the revised surety estimate exceeds the amount covered in the existing financial surety. The

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revised surety shall then be in effect immediately upon receipt of written Director approval. Annual Updates to the surety amount, required by UAC R313-24 (10 CFR 40, Appendix A, Criteria 9 and 10, incorporated by reference) shall be submitted to the Director on or before April 23, of each year. If the Director has not approved a proposed revision to the surety coverage 30 days prior to the expiration date of the existing surety arrangement, the licensee shall extend the existing surety arrangement for 1 year. Along with each proposed revision or annual update, the licensee shall submit supporting documentation showing a breakdown of the costs and the basis for the cost estimates with adjustments for inflation, maintenance of a minimum 15 percent contingency fee, changes in engineering plans, activities performed, and any other conditions affecting estimated costs for site closure. The basis for the cost estimate is the Director-approved reclamation/decommissioning plan or Director approved revisions to the plan. The previously provided guidance entitled "Recommended Outline for Site Specific Reclamation and Stabilization Cost Estimates" outlines the minimum considerations used by the NRC in the review of site closure estimates. Reclamation/decommissioning plans and annual updates should follow this outline. The currently approved financial surety arrangement, a Surety Trust Agreement between Uranium One Americas, Inc. and Wells Fargo Bank, National Association, shall be continuously maintained in an amount no less than \$8,110,771 for the purpose of complying with UAC R313-24 (10 CFR 40, Appendix A, Criteria 9 and 10, as incorporated by reference) until a replacement is authorized by the Director.

[Applicable UDRC Amendments: 2, 3, 4, 5.]

[Applicable NRC Amendments: 2, 5, 6, 8, 9, 11] The amount of funds to be ensured by such surety arrangements must be based on Director-approved cost estimates in an Director-approved plan for decontamination and decommissioning of mill buildings and the milling site to levels which allow unrestricted use of these areas upon decommissioning, and the reclamation of tailings and/or waste areas in accordance with technical criteria delineated in UAC R313-24. The licensee shall submit this plan in conjunction with an environmental report that addresses the expected environmental impacts of the milling operation, decommissioning and tailings reclamation, and evaluates alternatives for mitigating these impacts. The surety must also cover the payment of the charge for long-term surveillance and control required by R313-24-4. In establishing specific surety arrangements, the licensee's cost estimates must take into account total costs that would be incurred if an independent contractor were hired to perform the decommissioning and reclamation work. The licensee's surety mechanism will be reviewed annually by the Director to assure that sufficient funds are available for completion of the reclamation plan. The amount of surety liability shall be adjusted to recognize any increases or decreases resulting from inflation, changes in engineering plans, activities performed, and any other conditions affecting costs. Regardless of whether reclamation is phased through the life of the operation or takes place at the end of operations, an appropriate portion of surety liability must be retained until final compliance with the reclamation plan is determined by the Director.

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- 9.6 Written procedures shall be established for site reclamation, personnel and environmental monitoring, and survey instrument calibrations. These procedures shall be reviewed and approved in writing by the CRSO before implementation and whenever a change in procedure is proposed to ensure that proper radiation protection principles are being applied. In addition, the CRSO shall perform a documented review of all existing site procedures at least annually. An up-to-date copy of each written procedure shall be kept by the CRSO.

[Applicable NRC Amendment: 10]

- 9.7 The licensee shall have an archeological survey performed prior to disturbing any previously unsurveyed areas. The licensee shall immediately notify the Director and the Office of State Historic Preservation if artifacts are discovered during disturbance.
- 9.8 The licensee is hereby authorized to possess 11e.(2) byproduct material as defined in 10 CFR 20.103 and adopted by the UAC R313-12-3, in the form of uranium waste tailings and other uranium byproduct waste generated by the licensee's milling operations authorized by this license within the State of Utah where the Division maintains jurisdiction for regulating the byproduct material. Mill tailings shall not be transferred from the site without specific prior approval of the Director in the form of a license amendment. The licensee shall maintain a permanent record of all transfers made under the provisions of this condition.
- 9.9 The licensee is hereby exempted from the requirements of Section 20.1902(e) of 10 CFR Part 20 incorporated by reference UAC R313-15-902(5) for areas within the mill, provided that all entrances to the mill are conspicuously posted in accordance with Section 20.1902(e) [UAC R313-15-902(5)] and with the words, "Any Area Within this Mill May Contain Radioactive Material."
- 9.10 The licensee shall have a training program for all site employees as described in the NRC Regulatory Guide 8.31 "Information Relevant To Ensuring That Occupational Radiation Exposures At Uranium Recovery Facilities Will Be As Low As Is Reasonably Achievable", and Section 5.3 of the approved license application. The CRSO, or the licensee's designee, shall have the education, training and experience as specified in NRC Regulatory Guide 8.31. The CRSO shall also receive 40 hours of related health and safety refresher training every two years. Individuals designated as the Radiation Technician (RT) shall report directly to the CRSO on matters dealing with radiological safety. In addition, the CRSO shall be accessible to the RT at all times. The RT shall have the qualifications specified in NRC Regulatory Guide 8.31, or equivalent. Any person newly hired as an RT shall have all work reviewed and approved by the CRSO as part of a comprehensive training program until appropriate course training is completed, and at least for six months from the date of appointment.

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[Applicable NRC Amendments: 1,10]

- 9.11 Prior to termination of this license, the licensee shall provide for transfer of title to byproduct material and land, including any interests therein (other than land owned by the United States or the State of Utah), which is used for the disposal of such byproduct material or is essential to ensure the long-term stability of such disposal site to the United States or the State of Utah, at the State's option.

[Applicable NRC Amendment: 10]

- 9.12 The licensee shall submit an application for license renewal by June 30, 2016. The following activities will occur as part of the renewal application process:
- A. A meeting shall be held between the licensee and the division to determine the information to be covered in the renewal application.
 - B A public comment period with a public comment meeting will be conducted to allow the public to comment on the information to be covered in the renewal application.
 - C. Comments from the public comment period shall be addressed by the licensee as part of the license renewal application.

[Applicable DWMRC Amendments: 7]

Section 10: Operational Controls, Limits, and Restrictions

- 10.1 Prior to changing the status of the Mill from a standby status (current status) to an operational status, all construction activities shall not commence until an evaluation is conducted as per R313-22-33(1)(f). This evaluation shall also include an engineering, an environmental monitoring (including groundwater), and a radiation safety evaluation. Therefore, in order to bring the Mill back into operation, facilities at the Mill will have to meet the Best Available Technology requirements found under UAC R317-6.

[Applicable DWMRC Amendment: 7]

- 10.2 DELETED by NRC Amendment No. 10.
- 10.3 DELETED by NRC Amendment No. 10.

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10.4 DELETED by NRC Amendment No. 10.

10.5 DELETED by NRC Amendment No. 10.

10.6 DELETED by NRC Amendment No. 10.

10.7 DELETED by NRC Amendment No. 10.

10.8 DELETED by NRC Amendment No. 10.

10.9 All radiation monitoring, sampling, and detection equipment shall be recalibrated after each repair and as recommended by the manufacturer, or at least annually, whichever is more frequent. In addition, all radiation survey instruments shall be operationally checked with a radiation source each day when in use.

[Applicable NRC Amendment: 1]

10.10 The licensee shall reclaim the tailings disposal area in accordance with the Tailings Reclamation and Decommissioning Plan for the Shootaring Canyon Uranium Project submitted by letter to the NRC dated October 24, 2002, as amended by NRC submittals dated February 24, April 24, July 30, September 5, November 26, 2003, January 3, 2005, and January 10, 2005.

[Applicable UDRC Amendment: 1]

A. DELETED by NRC Amendment No. 12.

B. DELETED by NRC Amendment No. 10.

C. DELETED by NRC Amendment No. 10.

[Applicable NRC Amendment: 12]

Section 11: Monitoring, Recording, and Bookkeeping Requirements

11.1 The results of sampling, analyses, surveys and monitoring, the results of calibration of equipment, reports on audits and inspections, all meetings and training courses required by this license and any subsequent reviews, investigations, and corrective actions, shall be documented. Unless otherwise specified by the Director, the licensee shall retain the records for five (5) years after the record is made.

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- 11.2 The licensee shall conduct the environmental monitoring program described in Table 5.5-8 of the license renewal application and UAC R313-24-3.

Each license renewal, major license amendment, or before engaging in any activity not previously assessed by the Director or specified in the license application or this License, the licensee shall prepare and record an Environmental Analysis environmental evaluation of such activity(s). When the evaluation indicates that such activity may result in a significant adverse environmental impact that was not assessed or that is greater than that assessed, the licensee shall provide a written evaluation describing the proposed action, a statement of its purposes, and the environment affected. The environmental report shall present a discussion of the following: (a) An assessment of the radiological and nonradiological impacts to the public health from the activities to be conducted pursuant to the license or amendment; (b) An assessment of any impact on waterways and groundwater resulting from the activities conducted pursuant to the license or amendment; (c) Consideration of alternatives, including alternative sites and engineering methods, to the activities to be conducted pursuant to the license or amendment; and (d) Consideration of the long-term impacts including decommissioning, decontamination, and reclamation impacts, associated with activities to be conducted. Commencement of such activities prior to issuance of the license or amendment shall be grounds for denial of the license or amendment. The Director shall provide a written analysis of the environmental report, which shall be available for public notice and comment pursuant to R313-17-2.

A. DELETED by NRC Amendment No. 10.

B. DELETED by NRC Amendment No. 10.

- 11.3 The licensee shall implement a groundwater detection-monitoring program to ensure compliance with UAC R317-6, Ground Water Quality Protection and UAC R313-24 (10 CFR 40, Appendix A, as incorporated by reference) as follows:

A. The licensee shall sample monitoring wells RM1, RM2R, RM7, RM12, RM14, RM18, and RM19, on a semiannual basis, with samples taken at least 4 months apart. The samples shall be analyzed for arsenic, chloride, selenium, U-nat, sulfate, barium, cadmium, chromium, copper, lead, mercury, molybdenum, silver, zinc, ammonia, fluoride, nitrate, nitrite, conductivity, total dissolved solids, and pH.

The licensee shall measure water level in monitoring wells RM1, RM2R, RM7, RM8, RM12, RM14, RM18, RM19, RM20, RM21, and RM22, on a semiannual basis, with measurements taken at least 4 months apart.

B. The licensee shall compare the analysis results against the following threshold values:

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| | | |
|----------|---|---------------------|
| Arsenic | = | 0.022 mg/l, |
| Chloride | = | 40 mg/l, |
| Selenium | = | 0.022 mg/l, |
| U-nat | = | 0.037 mg/l, and |
| pH | = | 6.8 standard units. |

If the threshold values listed above or in UAC R313-24-4 are exceeded (for pH, an exceedance is a pH less than 6.8) the licensee shall propose, within 60 days of a measured exceedance, an expanded detection monitoring program to define the extent and concentration of hazardous constituents in the uppermost aquifer.

- C. The licensee shall submit the data and comparison results required under subsections A and B, respectively, with the semiannual reports required under UAC R313-24-3 (10 CFR 40.65, as incorporated by reference).
- D. The licensee shall report at least annually in accordance with the reporting requirements specified in subsection C and UAC R313-24-3, the rate and direction of groundwater flow under the tailings impoundment.

[Applicable NRC Amendment: 10, 12]

11.4 DELETED by NRC Amendment No. 10.

11.5 DELETED by NRC Amendment No. 10.

11.6 DELETED by NRC Amendment No. 10.

11.7 The licensee shall perform an annual ALARA audit of the radiation safety program in accordance with R313-15-101 and in the NRC Regulatory Guide 8.31, "Information Relevant to Ensuring that Occupational Radiation Exposures at Uranium Recovery Facilities Will Be As Low As Is Reasonably Achievable".

Section 12: Reporting Requirements

12.1 DELETED by NRC Amendment No. 10.

12.2 The Licensee shall, within 60 days after January 1 and July 1 of each year, submit a report to the Director. The report which must specify the quantity of each of the principal radionuclides released to unrestricted areas in liquid and in gaseous effluents during the previous six months of operation, and such other information as the Director may require to estimate maximum potential annual radiation doses to the public resulting from effluent

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releases. The report shall specifically cover quantities of radioactive materials released during the reporting period to ensure compliance with the licensee's requirements. On the basis of such reports and any additional information the Director may obtain from the licensee or others, the Director may from time to time require the licensee to take such action as the Director deems appropriate. The results of all effluent and environmental monitoring data required by this license shall be reported in accordance with requirements of 10 CFR 40.65 incorporated by reference in UAC R313-24-3 and UAC R313-17-2, to the Executive Secretary. Monitoring data provided in accordance with the requirements of 10 CFR 40.65 shall be reported in the format shown in the NRC guidance entitled, "Sample Format for Reporting Monitoring Data."

UTAH DIVISION OF WASTE MANAGEMENT AND RADIATION CONTROL

Douglas J. Hansen ~~Ty L. Howard~~, Director

Date