

UTAH GROUND WATER DISCHARGE PERMIT NO. UGW370004

STATEMENT OF BASIS
Permit Modification

Energy Fuels Resources (USA) Inc.
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STATEMENT OF BASIS OUTLINE

- I. Purpose
- II. Facility Background
- III. Major Permit Modifications
 - A. Groundwater Compliance Limit Modifications
- IV. Minor Permit Modifications
 - A. Change to Facility Location Description
 - B. Compliance Schedule Removal – Slimes Drain Compliance Plan
 - C. Compliance Schedule Removal – Installation of New Groundwater Monitoring Wells MW-38, MW-39 and MW-40
 - D. Compliance Schedule Move – Background Groundwater Quality Report for Wells MW-38, MW-39 and MW-40
 - E. Compliance Schedule Inclusion – Background Groundwater Quality Report for Well MW-24A
 - F. Compliance Schedule Removal – Revised Groundwater Quality Assurance Plan to Include Dissolved Oxygen
- V. References

Attachments:

Attachment A – Proposed Permit Modification Changes – Redline Strike-out
Groundwater Discharge Permit UGW370004 (“Permit”)

I. PURPOSE

This Statement of Basis describes the technical and regulatory basis for modification to Utah Ground Water Discharge Permit, No. UGW370004, (“Permit”) issued for the Energy Fuels Resources (USA) Inc. (“Permittee”) White Mesa Uranium Milling Facility in San Juan County, Utah (“Facility”). The Facility is located in Sections 28, 29, 32, 33, Township 37, Range 22 East, Salt Lake Baseline and Meridian, San Juan County, Utah. Within San Juan County, the Facility is located on fee land and mill site claims, covering approximately 5,415 acres,

encompassing all or part of Sections 21, 22, 27, 28, 29, 32, and 33 of Township 37 South, Range 22 East, and Sections 4, 5, 6, 8, 9, and 16 of Township 38 South, Range 22 East, Salt Lake Base and Meridian.

The Permit is issued and modified pursuant to the Utah Water Quality Rules, Utah Administrative Code (UAC) R317-6, which requires that any person who operates any new facility or modifies an existing or new facility, not permitted by rule under UAC R317-6-6.2, obtain a Utah Ground Water Discharge Permit. UAC R317-6 provides that a groundwater permit may be reopened for modification on an as-needed basis.

The Director of the Utah Division of Waste Management and Radiation Control (“DWMRC”) has concluded that the Permit modifications discussed in this Statement of Basis are reasonable and are supported by the administrative record.

II. FACILITY BACKGROUND

The Facility was constructed during the years 1979 and 1980 and was originally licensed by the United States Nuclear Regulatory Commission (“NRC”) under Source Material License No. SUA-1358.

On August 16, 2004, the NRC relinquished the Utah uranium mill regulatory program to the State of Utah by approving Agreement State status. The DWMRC became the primary regulatory authority for the Facility and subsequently issued State Radioactive Material License No. UT1900479 (“RML”) and the separate Permit to the past operator, International Uranium (USA) Corporation on March 8, 2005; then to another past operator, Denison Mines (USA) Corp. on March 29, 2007. The Director of DWMRC (“Director”) approved the transfer of control of the Facility to the Permittee on June 27, 2012 when the Permit and License was again transferred.

The Permit was renewed effective on January 19, 2018 and was last modified on March 19, 2019. This is the second modification since the renewal.

III. MAJOR PERMIT MODIFICATIONS

A. GROUNDWATER COMPLIANCE LIMIT (GWCL) MODIFICATIONS (Part I.C. Table 2)

The Permittee has submitted three Source Assessment Reports (SAR’s) since the last Permit modification (March 19, 2019). The SAR’s were required by the Permit and were reviewed and approved by the Director. The table below lists the GWCL modifications that were approved and are included in the proposed Permit modification. Note that a list of Director review memorandums and correspondence letters is found in the reference section of this Statement of Basis. A copy of the memorandums and letters can be found on the DWMRC website

(<https://deq.utah.gov/waste-management-and-radiation-control/stipulated-consent-agreement-ugw13-03-white-mesa-uranium-mill-energy-fuels-resources-usa-inc>).

Wells/parameters subject to GWCL modifications

Monitoring Well No.	Parameter	Current GWCL	Modified GWCL
MW-11	Manganese	164.67 µg/L	237 µg/L ^(a)
MW-25	Cadmium	1.5 µg/L	1.6 µg/L ^(a)
MW-30	Uranium	8.32 µg/L	9.82 µg/L ^(a)
MW-30	Selenium	47.2 µg/L	53.6 µg/L ^(b)

- (a) Director Approval Letter Dated September 5, 2019
- (b) Director Approval Letter Dated July 9, 2019
- (c) Director Approval Letter Dated November 26, 2019

IV. MINOR PERMIT MODIFICATIONS

A. CHANGE TO FACILITY LOCATION DESCRIPTION (Permit Cover Page)

The Permit cover page Facility location description was expanded to include all township and range sections in which the Permittee has land and Facility claims. This change was made in order to be consistent with the Facility description in the Radioactive Materials License. The previous Facility location description which included only the land sections in which the Facility is located was not removed, the description was expanded.

Specifically the following location description language was included with the previous Facility location description, “*Within San Juan County, the Facility is located on fee land and mill site claims, covering approximately 5,415 acres, encompassing all or part of Sections 21, 22, 27, 28, 29, 32, and 33 of T37S, R22E, and Sections 4, 5, 6, 8, 9, and 16 of T38S, R22E, Salt Lake Base and Meridian.*”

The full Facility description on the Permit cover page now reads:

“The Facility is located in Sections 28, 29, 32, 33, Township 37, Range 22 East, Salt Lake Baseline and Meridian, San Juan County, Utah. Within San Juan County, the Facility is located on fee land and mill site claims, covering approximately 5,415 acres, encompassing all or part of Sections 21, 22, 27, 28, 29, 32, and 33 of Township 37 South, Range 22 East, and Sections 4, 5, 6, 8, 9, and 16 of Township 38South, Range 22 East, Salt Lake Base and Meridian.”

B. COMPLIANCE SCHEDULE REMOVAL – SLIMES DRAIN COMPLIANCE PLAN (Part I.H.1)

The Slimes Drain Compliance Plan was received by the Division on January 21, 2020 (Dated January 16, 2020). Per Division review it was determined that the received Plan was in conformance with the Compliance Schedule requirement. The Plan was reviewed and approved

by the Division on February 18, 2020. The compliance schedule is therefore being removed from the Permit.

C. COMPLIANCE SCHEDULE REMOVAL – INSTALLATION OF NEW GROUNDWATER MONITORING WELLS MW-38, MW-39 AND MW-40 (Part I.H.2)

Monitoring wells MW-38, MW-39 and MW-40 were installed during the period of February 12, 2018 through February 21, 2018 and an As-Built Report was submitted by the Permittee to the Division dated June 12, 2018. The As-Built was reviewed by the Division and approved on October 3, 2018. All requirements of the compliance schedule were completed by the Permittee; therefore, it is being removed from the Permit. Monitoring wells MW-38, MW-39 and MW-40 are currently in the process of background monitoring and the modified Permit carries forward the requirement to provide a background report at which time the monitoring wells will be included in the Permit with appropriate associated GWCL's.

D. COMPLIANCE SCHEDULE MOVE – BACKGROUND GROUNDWATER QUALITY REPORT FOR WELLS MW-38, MW39 AND MW-40 (From Part I.H.3 to Part I.H.1)

The Permit compliance schedule item I.H.3 was moved to I.H.1. This change was needed to account for the deletion of two compliance schedules in the current Permit modification.

E. COMPLIANCE SCHEDULE INCLUSION – BACKGROUND GROUNDWATER QUALITY REPORT FOR WELL MW-24A (Part I.H.2)

Per Division review of a Permittee June 27, 2019 Source Assessment Report (SAR) regarding parameters at monitoring well MW-24 with two or more exceedances of the groundwater compliance limit (MW-24 Out of Compliance Parameters), it was noted that recent increasing trends for certain parameters resulted in the out-of-compliance status and warrants further investigation. Based on DWMRC review findings and a conference call discussion with the Permittee on September 3, 2019 it was decided that additional source assessment needs to be conducted for monitoring well MW-24. The Permittee discussed during the call, that there is a potential that MW-24 monitoring well construction could be the cause of the out of compliance parameters and that additional evaluation to determine if this is the cause could include the construction of a nearby monitoring well (MW-24A) and subsequent tandem sampling of the two wells to determine if well construction is an issue. Based on discussion this was determined to be a useful and reasonable element to evaluate the non-compliance.

The Permittee subsequently installed monitoring well MW-24A during the week of December 2, 2019 and submitted an as-built report in compliance with the Permit dated January 29, 2020 and received by the Division on January 31, 2020. The Division sent a letter to the Permittee dated February 11, 2020 closing-out the Division Review of the As-Built Report.

Based on the completion of construction the Division is including a new compliance schedule item requiring eight consecutive quarters of background monitoring at MW-24A and Permittee submission of a background report for MW-24A. Based on review of the future background report, monitoring well MW-24A and associated GWCL's will be included in the Permit in a future modification.

F. COMPLIANCE SCHEDULE REMOVAL – REVISED GROUNDWATER QUALITY ASSURANCE PLAN TO INCLUDE DISSOLVED OXYGEN (Part LH.4.)

The Facility Quality Assurance Plan (QAP) was updated on May 14, 2019 (QAP Version 7.5 to include dissolved oxygen as a field monitoring parameter (QAP Section 6.2.2). The Division approved the changes via letter dated May 30, 2019 and collection and reporting of dissolved oxygen commenced at the Facility during the 3rd Quarter of 2019. Therefore, all requirements of this compliance schedule was completed and has been approved by the Division. The compliance schedule is therefore being removed from the Permit.

V. REFERENCES

¹Energy Fuels Resources (USA) Inc., November 7, 2012, *Second Revision Hydrogeology of the Perched Groundwater Zone in the Area Southwest of the Tailings Cells White Mesa Uranium Mill Site*. Prepared by Hydro Geo Chem, Inc.

²Energy Fuels Resources (USA) Inc. January 15, 2019. *Source Assessment Report for MW-30, White Mesa Mill*. Prepared by Intera.

³Energy Fuels Resources (USA) Inc. June 27, 2019. *Source Assessment Report for MW-11 and MW-24, White Mesa Mill*. Prepared by Intera.

⁴Energy Fuels Resources (USA) Inc. June 28, 2019. *Reanalysis of Uranium Data for the Calculation of a Groundwater Compliance Limit in MW-30*. Prepared by Intera.

⁶Energy Fuels Resources (USA) Inc. September 23, 2019. *Source Assessment Report for MW-25, White Mesa Mill*. Prepared by Intera.

⁷Utah Division of Waste Management and Radiation Control. July 8, 2019. *DWMRC Staff Review of the Energy Fuels Resources (USA) Inc. January 15, 2019 Source Assessment Report for Monitoring Well MW-30*.

⁸Utah Division of Waste Management and Radiation Control. September 4, 2019. *DWMRC Staff Review of the Energy Fuels Resources June 27, 2019 Source Assessment Report for Monitoring Wells MW-11 and MW-24*.

⁹Utah Division of Waste Management and Radiation Control. November 20, 2019. *DWMRC Staff Review of the Energy Fuels Resources September 23, 2019 Source Assessment Report for Monitoring Well MW-25.*

¹⁰Utah Division of Waste Management and Radiation Control. July 9, 2019. *DWMRC Letter Regarding Review of the EFR January 15, 2019 Source Assessment Report for Monitoring Well MW-30.*

¹¹Utah Division of Waste Management and Radiation Control. September 5, 2019. *DWMRC Letter Regarding Review of the EFR June 27, 2019 Source Assessment Report for Monitoring Wells MW-11 and MW-24.*

¹²Utah Division of Waste Management and Radiation Control, November 26, 2019. *DWMRC Letter Regarding Review of the EFR September 23, 2019 Source Assessment Report for Monitoring Well MW-25.*

Attachment A
Proposed Permit Changes -- Redline Strike-out Groundwater Discharge Permit UGW370004