**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**REGION 8**

1595 Wynkoop Street

Denver, CO 80202-1129

Phone 800-227-8917

www.epa.gov/region8



Ref: 8ARD

Mr. John W. Cash, President

Pathfinder Mines Corporation

10758 West Centennial Road, Suite 200

Littleton, Colorado 80127-4290

John.Cash@ur-energy.com

SENT BY ELECTRONIC MAIL – RECEIPT CONFIRMATION REQUESTED

**Re: Approval to Construct Shirley Basin Uranium In-Situ Recovery Project Holding Ponds for Uranium Byproduct Material**

**Carbon County, Wyoming**

Dear Mr. Cash:

The U.S. Environmental Protection Agency (EPA) is granting approval to Pathfinder Mines Corporation (PMC), in accordance with provisions of the Clean Air Act, as amended (42 U.S.C. et seq.), to construct up to six non-conventional impoundments at the Shirley Basin In-Situ Recovery (ISR) Uranium Project (henceforth “Shirley Basin ISR”) in Carbon County, Wyoming.

This approval is based on the original application that PMC submitted on July 2, 2019, and the supplementary and revised information provided to the EPA on November 15, 2019, pursuant to 40 CFR 61.07, for the Shirley Basin ISR in Carbon County, Wyoming. The EPA considers the above documents (collectively “Application”) as an “Application for approval of construction” pursuant to 40 CFR 61.07 for the construction of up to six non-conventional impoundments at Shirley Basin ISR. The EPA has determined that the non-conventional impoundments will be in compliance with 40 CFR 192.32(a). Based upon the information you provided to us, the EPA approves the construction of up to six non-conventional impoundments of 2.61 acres each, as described in the Application.

This approval, which is enclosed, contains conditions to ensure that the ISR project is in compliance with the National Emission Standards for Hazardous Air Pollutants, 40 CFR part 61, subparts A and W (National Emission Standards for Radon Emissions from Operating Mill Tailings). Failure to comply with any condition or term set forth in this approval or in the regulations, or failure to meet this standard, will be considered grounds for enforcement action pursuant to Section 113 of the Clean Air Act.

This Approval shall become effective immediately upon PMC’s receipt of the original signed Approval to Construct. If you have any questions, or for further discussion on the technical review, please contact Mr. Steven Merritt, of my staff, at (303) 312-6146 or at [merritt.steven@epa.gov](mailto:merritt.steven@epa.gov).

Sincerely,



Debra Thomas

Deputy Regional Administrator

Enclosure

1. Shirley Basin ISR Uranium Project Approval to Construct, with Conditions

cc: Ryan Schierman, WYDEQ Land Quality Division – by email [ryan.schierman@wyo.gov]

Bill VonTill, Chief – Uranium Recovery and Materials Decommissioning Branch, U.S. Nuclear Regulatory Commission – by email [bill.vontill@nrc.gov]

**ENCLOSURE**

Shirley Basin In-Situ Recovery (ISR) Uranium Project

Approval to Construct

Six Non-Conventional Impoundments under

40 CFR Part 61, Subpart W

National Emission Standards for Radon Emissions from Operating Mill Tailings

In compliance with the provisions of the Clean Air Act, as amended (42 U.S.C. §7401 et seq.), Pathfinder Mines Corporation, 10758 West Centennial Road, Suite 200, Littleton, Colorado 80127-4290, is granted approval to construct six non-conventional impoundments located at the Shirley Basin ISR Uranium Project W1/2, Section 34, T28N, R78W (latitude 42.369 N, longitude 106.167 W) in Carbon County, Wyoming, in accordance with the plans submitted with the Application and with the Federal regulations governing the National Emissions Standards for Hazardous Air Pollutants (40 CFR part 61) and any conditions attached to this document and made part of this approval. The Application indicated that the size of the proposed non-conventional impoundments are 295 feet by 385 feet each, or 2.61 acres (Application, Design Report, Page 1). This approval is to construct six non-conventional impoundments, as described in the Application.

This approval does not prevent the Administrator from implementing or enforcing applicable provisions in 40 CFR part 61, subparts A and W (Subpart W). This Approval to Construct grants no relief to the owner or operator from the legal responsibility for compliance with any applicable provisions of 40 CFR part 61, subparts A and W, or any other applicable federal, state, or local requirement. This approval shall be effective immediately upon receipt of the signed Approval to Construct by the applicant.



Debra Thomas

Deputy Regional Administrator

CONDITIONS

1. **General Approval**
   1. The facility is approved to construct up to six non-conventional impoundments of 2.61 acres each, as described in the Application.
   2. During operation and until final closure begins, the liquid level in the impoundment(s) shall be maintained so that solid materials in the impoundment(s) are not visible above the liquid surface, verified by daily inspections documented through notations and by digital photographic evidence collected at least weekly. Should inspection reveal that solid materials in the impoundment(s) are visible above the liquid surface, the owner or operator must correct the situation within seven days, or other such time as specified by the Administrator. (40 CFR 61.252(b)).
   3. The owner or operator of Shirley Basin ISR must maintain records that confirm that the non-conventional impoundment(s) subject to Subpart W at the facility meet the requirements in 40 CFR 192.32(a)(1). These records shall include, but not be limited to, the results of liner compatibility tests. (40 CFR 61.255(a)).
   4. The owner or operator of Shirley Basin ISR with non-conventional impoundments must maintain written records from daily inspections and other records confirming that any sediments have remained saturated in the non-conventional impoundments at the facility. Periodic digital photographic evidence, with embedded date stamp and other identifying metadata, shall be collected no less frequently than weekly to demonstrate compliance with the requirements of §61.252(b). Should inspection reveal that a non-conventional impoundment is not in compliance with the requirements of §61.252(b), the owner or operator shall collect photographic evidence before and after the non-compliance is corrected. (40 CFR 61.255(b)).
   5. The records required by 40 CFR 61.255 (a) and (b) must be kept at the uranium recovery facility for the operational life of the facility and must be made available for inspection by the Administrator, or his authorized representative. (40 CFR 61.255(c)).
   6. Digital photographs taken to demonstrate compliance with the requirements of §61.252(c) shall be submitted electronically using the Subpart W Impoundment Photographic Reporting (SWIPR) system that is accessed through the EPA's Central Data Exchange (CDX) (cdx.epa.gov) at least monthly. Owners and operators must also submit information identifying the facility and facility location, the name or other designation of each impoundment, and the date and time of each photograph. If the reporting form specific to this subpart is not available in SWIPR, the owner or operator must retain the digital photographs at the facility and provide them to the EPA or authorized state upon request, along with the supporting information required above. (40 CFR 61.255(c)(1)).
   7. The owner or operator of Shirley Basin ISR shall furnish the EPA with electronic copies of any future revisions to the Shirley Basin ISR Project Standard Operating Procedure OPS-023 entitled “Non-Conventional Pond Operation, Maintenance, and Monitoring” submitted to EPA as part of this Application.
   8. The owner or operator of Shirley Basin ISR shall advise the EPA of the final resolution of any Wyoming Department of Environmental Quality’s Uranium Recovery Program license conditions pertaining to the construction, operation, maintenance, and closure of the non-conventional impoundments, as mentioned in the Application.
2. **Approval Limitations**
   1. This Approval will remain in effect as long as the Shirley Basin ISR Uranium Project non-conventional impoundments approved herein are being used for the continued placement of new tailings/uranium byproduct or are in standby status for such placement. An impoundment is in operation from the day that tailings/uranium byproduct are first placed in the impoundment until the day that final closure begins. If ownership of the Shirley Basin ISR Uranium Project is transferred from Pathfinder Mines Corporation to a new company, this Approval to Construct will be transferred to the new owner only if operation continues as approved by the EPA. Any change made at the ISR project by the new owner that constitutes a modification or construction requires the submittal of a Modification/Construction Approval request to the EPA and prior approval by the EPA, as required by 40 CFR 61.07.
   2. The owner or operator may submit to the Administrator a written application for a determination of whether actions intended to be taken by the owner or operator constitutes construction or modification, or commencement thereof, of a source subject to Subpart W, pursuant to 40 CFR 61.06. The Administrator will notify the owner or operator of a determination within 30 days after receiving sufficient information to evaluate the application. (40 CFR 61.06).
   3. If an intended action to be taken by the owner or operator is determined by the Administrator to constitute construction or modification which affects an existing source, the new approval and conditions shall supersede and/or amend the existing Approval.
   4. Updates in notification and phone contacts will not affect the conditions of this Approval.
3. **Notification of Commencement of Construction and Startup**
   1. The owner or operator shall furnish the Administrator with written notification as follows:
      * 1. A notification of the anticipated date of initial startup of the source not more than 60 days nor less than 30 days before that date (40 CFR §61.09(a)(1)); and
        2. A notification of the actual date of initial startup of the source within 15 days after that date (40 CFR 61.09(a)(2)).
   2. If any state or local agency requires a notice which contains all the information required in the notifications in paragraph III(a), sending the Administrator a copy of that notification will satisfy paragraph III(a).
4. **Severability**

The provisions of this Approval to Construct are severable, and, if any provision of this Approval to Construct is held invalid, the remainder of this Approval to Construct shall not be affected thereby.

1. **Other Applicable Regulations**

This approval does not prevent the Administrator from implementing or enforcing all applicable provisions in 40 CFR part 61, subparts A and W, and any other applicable regulation.

1. **Agency Correspondence**

All correspondence and notifications as required by this Approval to Construct shall be sent to:

Branch Chief, Air and Toxics Enforcement Branch

Enforcement and Compliance Assurance Division

Mail Code: 8ENF-AT

U.S. Environmental Protection Agency, Region 8

1595 Wynkoop Street

Denver, CO 80202-1129

A courtesy copy shall be sent to:

Director, Air and Radiation Division

Mail Code: 8ARD-IO

U.S. Environmental Protection Agency, Region 8

1595 Wynkoop Street

Denver, CO 80202-1129

1. **Effective Date of Approval**

EPA’s Approval of Construction, in accordance with 40 CFR 61.08 for the Shirley Basin ISR Uranium Project located in W1/2, Section 34, T28N, R78W (latitude 42.369 N, longitude 106.167 W) in Carbon County, Wyoming, shall be effective immediately upon receipt of the original signed Approval to Construct by the Applicant.

1. **Paperwork Reduction Act**

Any requirements established by this Approval for the gathering and reporting of information are not subject to review by the Office of Management and Budget (OMB) under the Paperwork Reduction Act because this Approval is not an “information collection request” within the meaning of 44 U.S.C. §§ 3502(4), 3502(11), 3507, 2512, and 3518. Furthermore, this Approval and any information-gathering and reporting requirements established by this Approval are exempt from OMB review under the Paperwork Reduction Act because it is directed to fewer than ten persons, 44 U.S.C. §§ 3502(4) and 2502(11); 5 CFR §1320.5(a).