



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8

1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
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AUG 04 2011

Certified Mail Return Receipt Requested

Ref: 8P-AR

Mr. Frank Filas, P.E.
Energy Fuels Resources Corporation, Environmental Manager
44 Union Boulevard, Suite 600
Lakewood, Colorado 80228

Re: Whirlwind Mine Approval for Construction under
40 CFR Part 61 Subparts A and B

Dear Mr. Filas:

The U.S. Environmental Protection Agency (EPA) is granting approval to Energy Fuels Resources Corp (Energy Fuels), in accordance with provisions of the Clean Air Act, as amended (42 U.S.C. § 7401 et seq.), and regulations promulgated thereunder, to construct Phase I and Phase II of the Whirlwind Uranium Mine. This Approval is based upon the plan submitted to EPA on March 7, 2011 (titled *Application for Approval of Construction; Whirlwind Mine; Mesa County; Colorado* (Revised March 2011)). This Approval, which is enclosed, ensures that the mine is in compliance with the National Emissions Standards for Hazardous Air Pollutants, 40 CFR Part 61, Subparts A and B (National Emission Standards for Radon Emissions from Underground Uranium Mines).

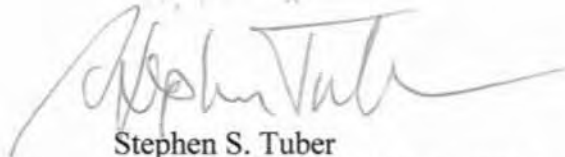
Since the Whirlwind Uranium Mine is expected to produce up to 50,000 tons of ore per year and over 100,000 tons of ore over the lifetime of the mine, the designation requirements for underground uranium mines as specified in 40 CFR §61.20 (a) and (b) are applicable to this mine.

The Whirlwind Uranium Mine property straddles the Colorado/Utah state line and consists of 206 unpatented claims. This approval only applies to operations within the state of Colorado. Any operations covered by 40 CFR Part 61, Subparts A and B, at the mine in the state of Utah will require a separate approval by the state of Utah, which has the authority over these actions.

This Approval to Construct includes conditions of approval to ensure the facility operates in compliance with the standard at 40 CFR §61.22, which requires that "[e]missions of radon-222 to the ambient air from an underground uranium mine shall not exceed those amounts that would cause any member of the public to receive in any year an effective dose equivalent to 10 mrem/y." Additionally, failure to comply with any condition or term set forth in this approval or in the regulations, or failure to meet this standard, may subject Energy Fuels to an enforcement action pursuant to section 113 of the Clean Air Act, 42 U.S.C. § 7413.

This approval shall become effective immediately upon Energy Fuels' receipt of the Approval to Construct. If you have any questions, or for further discussion, please contact Deborah Lebow Aal of my staff at (303) 312-6223 or lebow-aal.deborah@epa.gov.

Sincerely,

A handwritten signature in dark ink, appearing to read "Stephen Tuber", with a long horizontal flourish extending to the right.

Stephen S. Tuber
Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance

Enclosure: Whirlwind Uranium Mine Approval to Construct, with conditions

cc: J. Morris, Utah Division of Air Quality
R. Means, Colorado Division of Reclamation, Mining and Safety
C. Pray, Colorado Air Pollution Control Division
S. Gerwe, Grand Junction Bureau of Land Management
S. Tarlton, Colorado Department of Public Health and Environment
S. Clow, Environmental Director, Ute Mountain Ute Indian Tribe
T. Johnson, Environmental Director, Southern Ute Indian Tribe
M. Natchees, Environmental Coordinator, Ute Indian Tribe


Whirlwind Mine
Approval to Construct
Under
40 CFR Part 61, Subparts A and B
National Emission Standards for Radon Emissions from Underground Uranium Mines

In compliance with the provisions of the Clean Air Act, as amended (42 U.S.C. § 7401 et seq.), and the regulations promulgated thereunder, Energy Fuels Resources Corporation (Energy Fuels), 44 Union Boulevard, Suite 600, Lakewood, Colorado 80228, is granted approval to construct the underground uranium mine located at the Energy Fuels Whirlwind Mine, 30100 5/10 Road, Gateway, CO 81522. This approval is granted in accordance with the plans and materials submitted with the March 7, 2011 Application and with the Federal regulations governing the National Emissions Standards for Hazardous Air Pollutants 40 CFR Part 61, Subparts A and B, and the conditions attached to this document and made part of this approval. This Approval applies only to radon emission sources located within the State of Colorado.

Failure to comply with any conditions or terms set forth in this approval may result in an enforcement action under section 113 of the Clean Air Act, 42 U.S.C. § 7413. This approval does not prevent the Administrator from implementing or enforcing applicable provisions in 40 CFR Parts 60 and 61 or any applicable Federal, State or local regulations.

This approval to construct grants no relief to Energy Fuels from the legal responsibility for compliance with any applicable provisions of 40 CFR Part 61 Subparts A and B, 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.

Date AUG 04 2011


Stephen S. Tuber
Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance

TERMS AND CONDITIONS OF APPROVAL FOR THE WHIRLWIND MINE

I. General Approval

- A. This Approval applies to the Whirlwind Mine underground uranium mine located at:

30100 5/10 Road,
Gateway, Colorado 81522

Specifically, the uranium mine Colorado claims lie in:

Section 31, T51N, R19W; Section 6, T50N, R19W;
Sections 25, 26, 35, and 36 of T51N, R20W; and
Sections 1, 2, 11 and 12 of T50N, R20W, New Mexico Principal
Meridian

- B. Energy Fuels Resources Corp. (Energy Fuels), as owner and/or operator of the mine, is approved to construct the Whirlwind Mine for the radon emission sources located only within the State of Colorado.
- C. This Approval for Construction requires that the Whirlwind Mine meet the standard at 40 CFR §61.22, as follows: Emissions of radon-222 to the ambient air from an underground uranium mine shall not exceed those amounts that would cause any member of the public to receive in any year an effective dose equivalent of 10 mrem/year.
- D. This Approval for Construction requires that Whirlwind Mine comply with all requirements in 40 CFR Part 61 Subpart B

II. Approval Limitations

- A. This Approval to Construct will remain in effect as long as the Whirlwind Mine is operated as an active underground uranium mine by Energy Fuels. In the event that ownership of Whirlwind Mine is transferred from Energy Fuels to a new company, this Approval to Construct will be transferred to the new owner only if operation continues as approved by EPA. Any changes made at Whirlwind Mine by the new owner that constitutes a modification or construction require the submittal of a Modification/Construction Approval request to the EPA Administrator and prior approval by EPA, as required by 40 CFR §61.07.
- B. The total radon discharge from the Whirlwind Mine is limited to 10 mrem/year effective dose equivalent to any member of the public. The 10 mrem/year limit corresponds to a total

measured radon discharge rate of 1,100 Ci/year from the facility using default input data for the COMPLY-R model. Prior to implementing a new radon Ci/yr discharge rate equivalent to 10 mrem/year, Energy Fuels must submit a new application to EPA for review and approval by the Administrator. Any proposed new discharge rate must be based on monitoring data collected in accordance with 40 CFR Part 61, Appendix B, Method 115, and the EPA's *Guidance on Implementing the Radionuclide NESHAPS* (July, 1991).

- C. If radon measurements exceed 825 Ci/yr (which is 75% of the 10 mrem/yr standard), Energy Fuels shall immediately implement the appropriate corrective action(s) from those specified below, and further described in the Application.
- a. Increase the ventilation flow rate
 - b. Reroute ventilation flow
 - c. Reroute ventilation to a new vent
 - d. Modify the vent stack
 - e. Decrease vent stack diameter
 - f. Increase vent stack release height
 - g. Construct additional bulkheads
 - h. Conduct bulkhead bleeding with GAC treatment
 - i. Use Lumsden Canyon wind data

Energy Fuels shall notify the Administrator of this exceedence, and the corrective action taken, within 30 days of the exceedence.

- D. Energy Fuels may submit to the EPA Administrator a written application for determination of whether an action intended to be taken by Energy Fuels constitutes a modification or construction of a source subject to 40 CFR Part 61, Subpart B, pursuant to 40 CFR §61.06. The Administrator will notify Energy Fuels of his/her determination of whether the intended action constitutes modification or construction, requiring an Application for Construction or Modification under 40 CFR §61.07.
- E. If an intended action to be taken by Energy Fuels is determined by the Administrator to constitute construction or modification which affects an existing source, the approval and conditions for the new construction or modification shall supersede and/or amend the existing Approval. Updates in notification and phone contacts will not affect the conditions of this approval.
- F. If Energy Fuels elects to model a reduced occupancy time for exposure to the nearest resident, they shall submit to the EPA Administrator for approval a plan detailing how the reduced occupancy time is verified. The plan must be approved by EPA prior to it being used in the annual report required by 40 CFR 61.24.

III. Facility Operation

- A. To ensure the accuracy of the dispersion model, Energy Fuels shall install a meteorological station to collect site-specific wind rose data. The location of a site-specific meteorological station shall be submitted to the Administrator for approval prior to installation.
- B. Energy Fuels shall prepare Quality Assurance Project Plans (QAPPs) for:
 - 1) The meteorological station, in accordance with EPA's Meteorological Monitoring Guidance for Regulatory Modeling Applications (EPA-454/R-99-005).
 - 2) The radon monitors, in conformance with the programs described for Continuous Radon Monitors and Alpha Track Detectors in EPA 520/1-89-009 (40 CFR Part 61 Appendix B, Method 115 1.2.4).

The QAPPs shall be submitted to the Administrator for approval prior to data collection.

IV. Monitoring, Reporting, and Recordkeeping Requirements

- A. Energy Fuels shall monitor the radon discharge concentration continuously whenever the mine ventilation system is operational, in accordance with 40 CFR §61.23 and Test Method A-6, of Appendix B, Method 115. [Note: prior approval for another method to be used at this mine, such as Method A-7 Alpha Track Detectors, must be approved by the EPA prior to use.]
- B. Energy Fuels shall measure each mine vent exhaust flow rate at least four times per year, as required by 40 CFR Part 61 Appendix B, Method 115 1.1.1(b). The measurements shall be taken to represent operating conditions during venting. Test Method 2 of Appendix A to 40 CFR Part 60 should be used to determine velocity and volumetric flow rates (40 CFR Part 61 Appendix B, Method 115 1.2.2).
- C. Energy Fuels shall use 40 CFR Part 61, Appendix B, Method 115 1.1.1(c), to calculate and record a weekly radon-222 emission rate for the mine.
- D. Energy Fuels shall use 40 CFR Part 60, Appendix A, Method 1 to determine velocity traverses. The sampling point in the duct shall be either the centroid of the cross section or the point of average velocity (40 CFR Part 61 Appendix B, Method 115 1.2.1).
- E. Energy Fuels shall submit annual reports in accordance with 40 CFR §61.24 while the mine is active. The reports shall cover the emissions of a calendar year and shall be sent to EPA by March 31 of the following year. An "Active" mine means "an underground uranium mine which is being ventilated to allow workers to enter the mine for any purpose" (40 CFR §61.21(a)).
- F. Energy Fuels shall maintain the records specified in 40 CFR §61.25, either at the mine or in Energy Fuel's offices, for at least five years, and upon request, make the records available

for inspection by the Administrator or his/her authorized representative.

V. Notification of Commencement of Construction and Startup

A. Energy Fuels 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)).
- 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)).

B. If any State or local agency requires a notice which contains all the information required in the notifications in paragraph V.A., sending the Administrator a copy of that notification will satisfy paragraph V.A.

VI. 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.

VII. 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 B, and any other applicable regulation.

VIII. Agency Correspondence

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

Director, Air and Toxics Technical Enforcement Program
Office of Enforcement, Compliance and Environmental Justice
Mail Code 8ENF-AT
1595 Wynkoop Street
Denver, CO 80202-1129

A courtesy copy shall be sent to:

Director, Air Program
Office of Partnerships and Regulatory Assistance
Mail Code 8P-AR
1595 Wynkoop Street
Denver, CO 80202-1129

IX. Effective Date of Approval

EPA's Approval of Construction in accordance with 40 CFR §61.08 for the Whirlwind Mine located at 30100 5/10 Road, Gateway, Colorado 81522 shall be effective immediately upon receipt of the signed Approval to Construct by the Applicant.

X. 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, 3512 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 3502(11); 5 CFR §1320.5(a).