

January 29, 2014

Via Certified US Mail

Stephen P. Anthony
President/CEO
Energy Fuels Inc.
225 Union Blvd., Suite 600
Lakewood, Colorado, 80228

David C. Frydenlund
Registered Agent
Energy Fuels Inc.
225 Union Blvd, Suite 600
Lakewood, CO 80228

Plant Manager
White Mesa Uranium Mill
6425 S. Highway 191
P.O. Box 809
Blanding UT, 84511

Re: Notice of Intent to Sue Energy Fuels for Violations of the Clean Air Act at the White Mesa Uranium Mill

To Those Addressed Above,

On behalf of the Grand Canyon Trust and its members, we write to give Energy Fuels Incorporated (“Energy Fuels”) notice that the Grand Canyon Trust intends to file a civil action against Energy Fuels for violations of the federal Clean Air Act (“CAA”), 42 U.S.C. § 7401 *et seq.*, which have occurred and continue to occur at Energy Fuels’ White Mesa Uranium Mill (“Mill”) located in San Juan County, Utah.

The radon emissions from the Mill have violated and currently violate the numeric and work practice standards set forth in the National Emissions Standards for Hazardous Pollutants (“NESHAPs”) Subpart W. 40 C.F.R. § 60.250 *et seq.* Energy Fuels’ past and ongoing failure to meet the standards set forth in Subpart W violate section 112 of the CAA. 42 U.S.C. § 7412(f)(4) (“No air pollutant to which a standard under this subsection applies may be emitted from any stationary source in violation of such standard”); 42 U.S.C. § 7412(i)(3)(A) (“...no person may operate such source in violation of such standard, limitation or regulation ...”).

The CAA’s citizen suit provision authorizes the Grand Canyon Trust to file suit against Energy Fuels after this notice is served. 42 U.S.C. § 7604 (a)(1), (b). With this letter, the Trust is providing you with the required notice before proceeding to federal court.

A. Factual Background

1. Health Risks from Radon-222 Exposure

Radon-222 is a cancer-causing radioactive gas that is emitted from uranium mills and the stored wastes created by extraction of uranium. For every pound of yellowcake produced, approximately one ton of still-radioactive processing wastes are left at the mill. The United States Environmental Protection Agency (“EPA”) has stated that, “there is no safe level of radon – any exposure poses some risk of cancer.” United States Environmental Protection Agency, A Citizen’s Guide to Radon, *available at* <http://www.epa.gov/radon/pubs/citguide.html>. Tailings impoundments, the disposal pits for radioactive mill waste, are the most significant source of Radon-222 from uranium mills. Airborne Radon-222 atoms emitted from these tailings impoundments attach themselves to airborne dust particles and, in this form, can travel many miles before decaying. People breathing air downwind of tailings impoundments then inhale the radioactive dust. This dust sticks to the lining of the lungs where it irradiates the fluids and tissues, and increases the risk of lung cancer forming.

Radon-222 is the second leading cause of lung cancer in the United States where it causes 21,000 deaths annually. United States Environmental Protection Agency, A Citizen’s Guide to Radon, *available at* <http://www.epa.gov/radon/pubs/citguide.html>. In addition to causing lung cancer, exposure to Radon-222 is linked to genetic defects, increases in mortality, and increases in serious irreversible illness. *Id.* Vicinity to impoundments influences cancer rates, and the EPA has found that “the relatively few people who live within a few kilometers of tailings piles may receive individual exposures as much as a hundred times the exposures to individuals at greater distances.” Environmental Protection Agency: Office of Radiation Program, *Health Risks to Distant Populations from Uranium Mill Tailings Radon*, Technical Note ORP/TAD-80-1, 27 (May, 1981).

2. NESHAP Subpart W

The CAA establishes the National Emission Standards for Hazardous Air Pollutants. Radon is designated as a hazardous air pollutant under the CAA. 42 U.S.C. § 7412(b); 44 FR 21704 (April 11, 1979). The emissions of Radon-222 from uranium mills are regulated by NESHAP Subpart W, which applies to owners or operators of facilities licensed to manage uranium byproduct materials during and following the processing of uranium ores, facilities commonly referred to as uranium mills and their tailings. *See*, 54 Fed. Reg. 51703, 40 C.F.R. § 61.250 *et seq.* Through Subpart W, EPA has attempted to protect human and environmental health from the ongoing hazards posed by the disposal and storage of uranium tailings at active uranium mills – including exposure to Radon-222 emissions.

Subpart W sets forth both a Radon-222 emissions limit and work practice standards. The emissions limit mandates that Radon-222 emissions from impoundments not exceed 20 pCi/m²-sec. 40 C.F.R. § 61.252 (a). The work practice standard limits mills to two operational impoundments. *Id.* at (b)(1). In addition, all cells built after 1989 are restricted to a maximum area of 40 acres. *Id.*

Subpart W's emissions limit and the work practice standards are intended both to protect human health from Radon-222 exposure, and to ensure timely reclamation of mill sites. Environmental Protection Agency, *National Emissions Standards for Hazardous Air Pollutants (NESHAPs): Standards for Radon-222 Emission from Licensed Uranium Mill Tailings: Final Rule*, 51 Fed. Reg. 34055, 34059, 34061 (September 24, 1986) (*hereinafter* Final Rule). With regard to the work practice standards, EPA recognized that the volatile nature of the uranium industry could lead to periods of non-operation when tailings impoundments could dry and emit more Radon-222. This informed EPA's decision to limit the number of operational impoundments and, by doing so, "significantly reduce[s] the amount of unreclaimed tailings at the end of a mill's lifetime...By making final reclamation easy, the potential for larger areas of dry tailings to remain uncovered is avoided, and this too, greatly reduces radon emissions." *Id.* at 34061. Similarly, limits on the size of the impoundments reduce Radon-222 emissions by diminishing the acreage that must dry out before final closure occurs. *Id.* at 34062.

3. Energy Fuels' White Mesa Uranium Mill

The White Mesa Uranium Mill, currently owned by Energy Fuels, is the only conventional uranium mill operating in the United States. The Mill is located in San Juan County, Utah, within ten kilometers of two communities. Three hundred members of the Ute Mountain Ute tribe live five kilometers downwind and downgradient (south) of the mill in White Mesa, Utah. The largest city in San Juan County, Blanding Utah – population 3,000 – is located approximately ten kilometers north of the Mill.

Energy Fuels operates the Mill for two main purposes. First, Energy Fuels uses the Mill to process conventional uranium ore that is mined from Energy Fuel's uranium mines on the Colorado Plateau. The majority of the Mill's operations serve a second purpose – namely the processing and disposal of radioactive waste material from sites across the United States. Alternate feed, an informally coined agency term for this radioactive waste, is defined as uranium-bearing residues from uranium processing facilities, industrial and military remediation efforts, as well as soils contaminated with natural uranium. The Mill has been paid to accept and process radioactive waste from sites across the United States, including sites designated through the Formerly Utilized Remedial Action Program. *See, e.g.*, Amendment 10.12 to License Number UT 0900479 ("the licensee is authorized to proceed and process source material from the Ashland 1 and Seaway Area D Formerly Utilized Sites Remedial Action Program (FUSRAP) site."). Energy Fuels is currently proposing to accept radioactive waste from the Midnite Mine Superfund Site located near Spokane Washington. Energy Fuels, *Statement of Basis for Dawn Mining Amendment to Radioactive Material License No. UT 1900479*, August 2013.

B. Energy Fuels' Violations of Subpart W

1. Radon-222 Emissions from Cell 2 Exceed the 20 pCi/m²-sec Emission Limit

As set forth in 40 C.F.R. § 61.252 (a), Subpart W's emissions limit provides:

(a) Radon-222 emissions to the ambient air from an existing uranium mill tailings pile shall not exceed 20 pCi/m²-sec (1.9 pCi/(ft²-sec) of radon-222.

Compliance with the 20 pCi/m²-sec limit is determined annually through the use of Method 115 of appendix B. *Id.* at § 61.253.

In 2012, both the State of Utah and Energy Fuels found Radon-222 emissions from Cell 2 violated the limit. According to Energy Fuels, monitoring performed in 2012 documented emissions that averaged 25.9 pCi/m²-sec. *Energy Fuels, NESHAP Part 61 Subpart W Annual Report* (April 17, 2013) (*hereinafter* Annual Report). As Energy Fuels acknowledged in its Annual Report to Utah Division of Air Quality, this exceeded the 20.0 pCi/m²-sec standard established in the Subpart W NESHAP. *Id.* at 1.

As a result of these 2012 violations, Energy Fuels commenced monthly monitoring in April of 2013 as required by Subpart W and the State of Utah. 40 C.F.R. § 61.254. Energy Fuels submitted nine monthly reports in 2013, the results of which are summarized in the table below. Averaging the results of Energy Fuels' nine monthly monitoring reports in 2013 results in a total annual radon-222 emission of 20.42 pCi/m²-sec. As in 2012, Energy Fuels again exceeded the 20 pCi/m²-sec standard in 2013.

Summary of Cell 2 Emissions Violations

Date	Radon-222 Emissions (pCi/m ² -sec)
June 2012	23.10
September 2012	26.60
October 2012	27.70
November 2012	26.10
Annual Average for 2012	25.90
April 2013	18.00
May 2013	22.60
June 2013	23.20
July 2013	24.30
August 2013	30.20
September 2013	17.00
October 2013	19.00
November 2013	19.50
December 2013	10.00
Annual Average for 2013	20.42

2. Violations of Work Practice Standards

Subpart W imposes two work practice standards for the design, construction, and operation of tailings impoundments. A uranium mill is limited to two tailing impoundments in operation at one time, and each impoundment built after 1989 can be no larger than 40 acres. 40 C.F.R. § 61.252 (b)(1). As set forth in 40 C.F.R. § 61.252 (b), the work practice standards applicable to the Mill provide

“(1) Phased disposal in lined tailing impoundments that are no more than 40 acres in area and meet the requirements of 40 CFR 192.32 (a) as determined by the Nuclear Regulatory Commission. *The owner or operator shall have no more than two impoundments, including existing impoundments, in operation at any one time.*” (emphasis added).

The standard applies regardless of when those tailing impoundments were constructed. The Subpart W NESHAP defines a tailings impoundment to be “in operation” from “the day that tailings are first placed in the impoundment until the day that final closure begins.” 40 C.F.R. § 61.251(e); 42 U.S.C. § 7412(i)(3)(A)(allowing a 3 year transition period from 1990 for existing sources).

A. Energy Fuels Has Six Impoundments in Operation

State documents detail the violations of the impoundment limit that have been ongoing for the past five years. The Mill’s Radioactive Material License Renewal and the Groundwater Discharge Permit for the Mill authorize tailings disposal in five separate impoundments. Energy Fuels’ Groundwater Discharge Permit states “tailings disposal in existing Tailings Cells 1, 2, and 3 is authorized by this Permit.” Utah Division of Water Quality, Groundwater Discharge Permit No. UGW370004, Part I. D. 2. Energy Fuels’ Radioactive Material License Renewal states “Mill process and wastewater storage and tailings disposal shall be limited to existing engineering design, construction, and operation of Tailings Cells 1, 2, 3, 4A, and 4B, as authorized in Part I. D. of the Groundwater Discharge Permit...” Utah Division of Radiation Control, Radioactive Material License UT 1900479, Section 9.1.

In addition to the impoundments termed Cells 1, 2, 3, 4A and 4B, Roberts Pond also qualifies as an impoundment because it receives uranium byproduct material. Subpart W applies to the management of “uranium byproduct materials” created during the operation of a facility. 40 C.F.R. § 61.250. As defined in 40 C.F.R. § 61.251 (g), “uranium byproduct material or tailings means waste produced by the extraction or concentration of uranium from any ore processed primarily for its source material content.” The Utah Division of Radiation Control has described the Roberts Pond as an impoundment for containing and storing “process spills and overflows.” Email from Harold R. Roberts, Executive Vice President and Chief Operating Officer of Energy Fuels, to Lauren Morton, Environmental Program Manager at Utah Division of Radiation Control (Feb. 19, 2004). These process spills and overflows are “uranium byproduct material,” which renders Roberts Pond an impoundment subject to Subpart W.

Cells 1, 2, 3, 4A, 4B, and Roberts Pond are all “in operation” in violation of Subpart W’s requirement that only two impoundments be in operation at one time. There is nothing in the Radioactive Material License Renewal, the Groundwater Discharge Permit, or any other document that indicates that final “closure” has actually begun with respect to any of the six impoundments. Indeed, Energy Fuels’ *NESHAP Part 61 Subpart W Annual Report* confirms that impoundments are in operation, and have not yet entered closure. Annual Report, Attachment 1A: *Tellco Report on Annual Radon Flux Monitoring*, 2, (“[a]t present there are no Subpart T uranium mill tailings at this site...”).

The simultaneous operation of six impoundments significantly increases the amount of unreclaimed tailings that will be present at the end of the Mill's operations. Consequently, there is greater likelihood that larger areas of tailings will experience drying, and that nearby populations and the environment will experience increased exposure to Radon-222.

B. Cell 4A and 4B Exceed 40 Acres in Area

Subpart W's work practice standard limits the maximum area of tailings impoundments built after December 15, 1989 to "no more than 40 acres in area..." 40 C.F.R. § 61.252 (b)(1). Initially, EPA proposed limiting size of impoundments to 20-acres, but ultimately decided that "[t]he 40-acre impoundment is the maximum size allowed under the rule; an operator can choose to build a smaller one." Final Rule at 34062.

The area of Cell 4A has exceeded the forty-acre work practice standard set forth in NESHAP Subpart W for the last five years. The Mill's most recent reclamation plan states, "this project involves the construction of a 42 acre double lined tailings cell (Cell 4A)." Denison Mines, *White Mesa Mill Reclamation Plan: Blanding Utah, Radioactive Material License UT1900479 Revision 5.0, Appendix D: Updated Tailings Cover Design Report*, White Mesa Mill, 437 (September, 2011).

The area of Cell 4B has exceeded the forty-acre work practice standard set forth in NESHAP Subpart W since its construction in 2010. The Mill's most recent reclamation plan states, "this project involves the construction of a 42 acre double lined tailings cell (Cell 4B)." *Id.* at 507. The plan also states, "[t]he results of this analysis suggest that a maximum average annual percolation through the 3 foot soil layer above the liquid will be approximately 12 ft³ per acre or 504 ft³ (3,770 gal.) for the entire Cell4B area of 42 acres. (emphasis added)." *Id.* at 515. The Groundwater Discharge Permit states that "the floor and inside slopes of Cell 4B encompass about 44 acres." Utah Division of Water Quality, Groundwater Discharge Permit No. UGW370004, Part I.D.12.c.

Subpart W's 40 acres limit on impoundment area is designed both to limit radon emissions, and to ensure timely and efficient reclamation. Final Rule at 34062. Energy Fuels' operation of oversized impoundments is an independent violation of Subpart W, and compounds the problem of Energy Fuels operating six impoundments.

C. Notice and Relief to be Sought

The citizen suit provision of the Clean Air Act allows the Grand Canyon Trust to commence suit in a United States district court against you for violations of an emission standard or limitation. 42 U.S.C. § 7604(a)(1). An emission standard or limitation includes, among others, any requirement under 42 U.S.C. § 7412, any condition or requirement applicable under a SIP approved by the EPA, and any permit term or condition. 42 U.S.C. § 7604(f)(3), (4).

This letter serves as your notice that the Grand Canyon Trust intends to file suit in federal district court to enforce the Clean Air Act for the violations described above. The Grand Canyon Trust will ask the district court to impose appropriate injunctive relief, civil penalties of up to

\$37,500 per day per violation, a beneficial environmental project, 42 U.S.C. § 7604(g)(2), mitigation, and the Grand Canyon Trust's costs of litigation including attorneys' fees.

D. Party Giving Notice

The party giving notice is the Grand Canyon Trust. Grand Canyon Trust has its headquarters located at 2601 N. Fort Valley Road, Flagstaff, AZ 86001. The Grand Canyon Trust requests that all communication be provided to its attorneys:

Anne Mariah Tapp
2601 N. Fort Valley Road
Flagstaff, AZ 86001
(928) 774-7488
atapp@grandcanyontrust.org

Neil Levine
2601 N. Fort Valley Road
Flagstaff, AZ 86001
(303) 455-0604
nlevine@grandcanyontrust.org

And

Travis Stills
Energy and Conservation Law
1911 Main Avenue Suite 238
Durango, Colorado 81301
(970) 375-9231
stills@frontier.net

If you believe any of the facts described above are in error or have any information indicating that you have not violated the Clean Air Act, we urge you to contact the undersigned counsel immediately. Given that public and environmental health are at stake, the Grand Canyon Trust is interested in obtaining prompt resolution of these violations and is willing to discuss the claims alleged. However, if these discussions do not occur, the Grand Canyon Trust will file suit.



Anne Mariah Tapp
Attorney for Grand Canyon Trust

/s/

Travis Stills
Energy and Conservation Law

COPIES SENT BY CERTIFIED MAIL TO:

Gina McCarthy
Administrator
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue N.W.
Washington, D.C. 20460

Shaun McGrath
Regional Administrator
U.S. EPA Region 8
1595 Wynkoop Street
Denver, CO 80202

Eric Holder, Jr.
United States Attorney General
U.S. Department of Justice
950 Pennsylvania Avenue N.W.
Washington D.C., 20530-0001

Governor Gary Herbert
Office of the Governor
350 North State Street, Suite 200
PO Box 142220
Salt Lake City, UT 84114-2220

Amanda Smith
Executive Director
Utah Department of Environmental Quality
195 North 1950 West
PO Box 144810
Salt Lake City, UT 84114-4810

Bryce Bird
Director
Utah Division of Air Quality
PO Box 144820
Salt Lake City, Utah 84114-4820