

# Uranium Watch

## Report

### **REGULATORY CONFUSION: FEDERAL AND STATE ENFORCEMENT OF 40 C.F.R. PART 61 SUBPART W**

#### **INTRODUCTION**

1. This Uranium Watch Report, *Regulatory Confusion: Federal and State Enforcement of 40 C.F.R. Part 61 Subpart W*, documents and discusses Environmental Protection Agency (EPA) and Utah Division of Air Quality (DAQ) regulatory confusion and regulatory failures associated with the administration and enforcement of 40 C.F.R. Part 61 Subpart W, National Emission Standards for Radon Emissions From Operating Mill Tailings. The report examines how Subpart W has been, and is being, applied at the White Mesa Uranium Mill, San Juan County, Utah.

2. The DAQ, a Division of the Utah Department of Environmental Quality, administers and enforces Subpart W and other federal radioactive National Emission Standards for Hazardous Air Pollutants (NESHAPS) in the State of Utah. The DAQ also implements the general provisions of 40 C.F.R. Part 61 Subpart A, which includes provisions for applications and approvals of new uranium mills and new processing waste impoundments at existing facilities. Subpart W was promulgated by the EPA on December 15, 1989—over 23 years ago.<sup>1</sup> The State of Utah assumed authority for the radioactive NESHAPS from the EPA in 1995.<sup>2</sup>

#### **APPLICABILITY OF SUBPART W**

3. According to 40 C.F.R. § 61.250, the provisions of Subpart W “apply to owners or operators of facilities licensed to manage uranium byproduct materials during and following the processing of uranium ores, commonly referred to as uranium mills, and their associated tailings.” Therefore, the White Mesa Uranium Mill is subject to the Subpart W requirements. Subpart W does not apply to the disposal of tailings; that is, after closure of a uranium mill or a tailings impoundment.

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<sup>1</sup> 54 Fed. Reg. 51654, December 15, 1989

<sup>2</sup> 60 Fed. Reg. 13912, March 15, 1995

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### **IMPLEMENTATION OF 40 C.F.R. SECTION 61.252(b)(1) — HOW MANY IMPOUNDMENTS ARE ALLOWED?**

4. Regulation: Section 61.252(b)(1) — *The owner or operator shall have no more than two impoundments, including existing impoundments, in operation at any one time.*

5. White Mesa Mill Implementation: The White Mesa Mill currently has six (6) impoundments “in operation.” This is a direct violation of the requirement for no more than two (2) impoundments in operation at any one time. Cells 3 and 4B receive solid tailings, and Cells 1 and 4B receive processing liquids. A fifth impoundment, Roberts Pond, also receives liquid wastes. The 6th tailings impoundment, Cell 2, also should be considered “in operation,” according to the definition of “operation,” in Section 61.251 (e). See discussion of Cell 2 starting at 16, below.

6. Ever since 1990, when Subpart W became effective, there have been three (3) or more impoundments in operation at the White Mesa Mill. Cell 2 was completed in May 1980, Cell 1 in June 1981, and Cell 3 in September 1982.<sup>3</sup> The EPA issued their approval of the construction of Cell 4A in March 1989, and the cell was constructed that year.<sup>4</sup> UW does not know when Roberts Pond was constructed, when it began receiving processing wastes, or if or when it was approved by the EPA or DAQ.

7. Currently, EPA Region 8 acknowledges that Mill is out of compliance with the limitation on the number of impoundments allowed by Subpart W. However, according to the EPA, since two of the impoundments are being used to hold liquids, the mass radon flux is calculated to be zero. Therefore, the EPA is not planning to pursue enforcement at this time, because they have determined that there are no calculated health impacts from the additional impoundments being used as holding ponds for liquids. The radon emissions from the ponds have not actually been measured.

8. Regulatory Confusion: It appears that for many years there has been regulatory confusion and regulatory indifference regarding whether impoundments that receive liquids count as tailings impoundments for the purposes of Subpart W compliance. According to Subpart W definitions, “operation” means that an impoundment is being used for the continued placement of new tailings.<sup>5</sup> The definition also states: “An impoundment is in operation from the day that tailings are first placed in the impoundment until the day that final closure begins.” Subpart W defines tailings (or uranium byproduct material) as “the waste produced by the extraction or concentration of uranium from any ore

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<sup>3</sup> Denison Mines White Mesa Mill, Application for Approval of Modification of an Existing Source Under 40 CFR 61.07, State of Utah Division of Air Quality, Approval Order Number DAQE-AN0112050008-08, Denison Mines (USA) Corporation, April 13, 2010.

<sup>4</sup> [http://www.uraniumwatch.org/whitemesamill/EFR-DAQ\\_SupartWAnnualRpt.130329.pdf](http://www.uraniumwatch.org/whitemesamill/EFR-DAQ_SupartWAnnualRpt.130329.pdf)

<sup>5</sup> 40 C.F.R. § 61.251(e).

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processed primarily for its source material content.”<sup>6</sup> Tailings fluids and processing liquids are included in the definition of 11.e.(2) byproduct material, or tailings. Therefore, an impoundment that receives liquids is also a tailings impoundment and should be counted when determining the number of impoundments “in operation.” However, 23 years after Subpart W was promulgated, there is still confusion regarding the implement and enforcement of the limitation on the number of operational impoundments.

9. Only recently has the EPA given any indication that there might be a problem with the number of tailings impoundments at White Mesa. Only recently, did the EPA acknowledge that all impoundments that received 11e.(2) byproduct material, whether solids or liquids, counted when determining the number of operational impoundments.

10. As recently as April 13, 2010, the owner of the White Mesa Mill applied for approval of the construction of tailings cell 4B, pursuant to 40 C.F.R. § 61.07. In that application, Denison Mines assumed that only impoundments receiving solid tailings were considered “impoundments” for the purposes of Section 61.252(b)(1) compliance.

11. The DAQ approved the construction of cell 4B, even though the Cells 1, 3, 4A, and Roberts Pond were being used as impoundments for the placement of 11.e.(2) byproduct material. Clearly, the DAQ did not include the impoundments that were receiving liquid waste when determining the number of operating impoundments.

12. In March 29, 2013, Energy Fuels Resources (USA) Inc. (Energy Fuels), the new name of the owner of the White Mesa Mill, submitted the 2012 Annual Subpart W Compliance Report to the DAQ.<sup>7</sup> The DAQ completed a compliance review of the NESHAP Part 61 Subpart W Annual Report.<sup>8</sup> The April 17, 2013, DAQ compliance review addressed compliance with the Section 61.252 Standard for radon emissions for Cells 2 and 3 and the 61.254 Annual Reporting Requirements. However, the compliance review did not address compliance with the Section 61.252(b)(1) limitations on the number of operating impoundments. So, the DAQ conveniently omitted any mention of the Mill’s compliance with this significant section of the Subpart W standard.

13. The DAQ made no determination regarding the Mill’s compliance with Section 61.252(b)(1). Since the DAQ avoided any determination of Section 61.252(b)(1) compliance, there was no finding of non-compliance, and, thus, no need for Energy Fuels

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<sup>6</sup> 40 C.F.R. § 61.251(g).

<sup>7</sup> White Mesa Uranium Mill, National Emissions Standards for Radon Emission from Operating Mill Tailings Transmittal of 2012 Annual Radon Flux Monitoring Reports; Energy Fuels Resources (USA) Inc. to Bryce Bird, Director, Division of Air Quality; March 29, 2013.

<sup>8</sup> Memorandum, File - Denison Mines - White Mesa Mill; from Sarah Malluche, Environmental Scientist, through Jay Morris, Minor Source Compliance Section Manager; DAQ-213-004531; PCE, Minor, San Juan County, AIRS #037-00017; April 17, 2013.

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to take any actions to bring the Mill into compliance. This was a clear abrogation of the DAQ's Subpart W administrative and enforcement responsibilities.

14. As discussed above, EPA Region 8 acknowledges that Mill is out of compliance with the limitation on the number of impoundments allowed by Subpart W. But, not to worry, such non-compliance is not important enough to trigger the issuance of a Notice of Violation (NOV). Again, there is evidence of regulatory confusion.

15. There is an EPA NESHAP standard, but non-compliance with the standard at the only operating conventional uranium mill in the US is perfectly all right—if the EPA determines that there is no health impact. There is no mention of such an exemption in Subpart W. Normally, when a licensee or permittee seeks an exemption from compliance with a regulatory requirement or standard, it must make a request for an exemption and justify the exemption. In this case, apparently, the EPA has taken the initiative to exempt the White Mesa Mill from the Subpart W standard that limits the number of operating impoundments at a uranium mill. This exemption occurs at the same time that the emissions from another impoundment, Cell 2, have been found to be greater than the Subpart W radon flux standard.

16. Clearly there has been regulatory confusion regarding compliance with the limitation of the number of impoundments. Clearly there has been a conscious effort on the part of the DAQ and EPA to circumvent enforcement of that standard at the White Mesa Mill.

#### **IMPLEMENTATION OF 40 C.F.R. SECTION 61.252(b)(1) — WHEN IS AN IMPOUNDMENT OPERATIONAL?**

17. Regulation: Section 61.252(b)(1) — *The owner or operator shall have no more than two impoundments, including existing impoundments, in operation at any one time.*

Definition: Section 61.251(g) — *An impoundment is in operation from the day that tailings are first placed in the impoundment until the day that final closure begins.*

18. White Mesa Mill Implementation: Cell 2 no longer receives tailings; however, it does not appear that “closure” has begun for Cell 2. Most of the information about Cell 2 does not support the conclusion that “closure” has begun for Cell 2. Most of the information about Cell 2 supports a finding that Cell 2 is still subject to the Subpart W standard as an operational impoundment. The following facts are relevant:

A. Energy Fuels has continued to monitor the radon flux for Cell 2 and submit the results to the DAQ on an annual basis. The 2012 Subpart W Compliance Report included data on the radon flux for Cell 2 and found that Cell 2 was not in compliance with the Subpart W radon flux standard. In response to that report, the DAQ confirmed that Cell 2 was not in compliance with the Subpart W radon flux standard. The April 17, 2013, DAQ compliance review states that “due to the exceedance from Cell #2, monthly

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reports are required to be submitted,” and that “the first report will be submitted April 2013.”<sup>9</sup>

B. Energy Fuels determined that the increase in the radon flux was the result of the dewatering of Cell 2. The Energy Fuels’ Annual Compliance Report proposed mitigative measures to reduce the radon emissions from Cell 2 in order to bring it within the radon flux standard in Section 61.252(a). The 2012 Compliance Report reiterated the applicability of the Subpart W standard to Cell 2. If closure had begun for Cell 2, Subpart W would no longer apply to Cell 2, because the impoundment was no longer “in operation.”

C. The 2012 Annual Compliance Report states: “At present, there are no Subpart T uranium mill tailings at this site.”<sup>10</sup> Subpart T, in part, applies to “owners and operators of non-operational uranium mill tailings disposal sites that are licensed by the NRC or an affected Agreement State.” The lack of any Subpart T mill tailings at the site means that there are no tailings disposal cells at the White Mesa Mill that are non-operational.

D. Neither Energy Fuels, nor the previous Mill owner, informed the Utah Division of Radiation Control (DRC) that Cell 2 is not operational and undergoing closure. There has been no license amendment that states that Cell 2 is undergoing closure.

E. The DRC's draft renewed source material license for the White Mesa Mill is for the operation of Tailings Cells 1, 2, 3, 4A, and 4B (License Condition 9.1).<sup>11</sup>

F. The Utah Division of Water Quality, Ground Water Discharge Permit (GWDP), Permit No. UGW370004, for the White Mesa Mill, dated August 30, 2012, states: “Existing Tailings Cell Construction Authorized - tailings disposal in existing Tailings Cells 1, 2, and 3 is authorized by this Permit as defined in Table 3 and Part I.D.1. above.” The DRC administers and enforces the GWDP for the White Mesa Mill, on behalf of the Division of Water Quality.

G. EPA regulations at 40 C.F.R.Part 192 also apply to Cell 2. Section 192.32(a)(3)(i) states:

(3)(i) Uranium mill tailings piles or impoundments that are nonoperational and subject to a license by the Nuclear Regulatory

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<sup>9</sup> [http://www.uraniumwatch.org/whitemesamill/EFR-DAQ\\_SupartWAnnualRpt.130329.pdf](http://www.uraniumwatch.org/whitemesamill/EFR-DAQ_SupartWAnnualRpt.130329.pdf)

<sup>10</sup> National Pollution Standards for Hazardous Air Pollutants, 2012 Radon Flux Measurement Program, White Mesa Mill, June 2012 Sampling Results, Telco Environmental, page 2, at 3.

<sup>11</sup> [http://www.uraniumwatch.org/denisonmill.ut/drc\\_draft\\_whitemesa\\_LicenseRenewal\\_redline.111012.pdf](http://www.uraniumwatch.org/denisonmill.ut/drc_draft_whitemesa_LicenseRenewal_redline.111012.pdf)

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Commission or an Agreement State shall limit releases of radon-222 by emplacing a permanent radon barrier. This permanent radon barrier shall be constructed as expeditiously as practicable considering technological feasibility (including factors beyond the control of the licensee) after the pile or impoundment ceases to be operational. **Such control shall be carried out in accordance with a written tailings closure plan (radon) to be incorporated** by the Nuclear Regulatory Commission or Agreement State **into individual site licenses.** [Emphasis added.]

EPA regulation at 40 C.F.R. Section 192.31(n) defines “Tailings Closure Plan”:

(n) Tailings Closure Plan (Radon) means the Nuclear Regulatory Commission or Agreement State approved plan detailing activities to accomplish timely emplacement of a permanent radon barrier. A tailings closure plan shall include a schedule for key radon closure milestone activities such as wind blown tailings retrieval and placement on the pile, interim stabilization (including dewatering or the removal of freestanding liquids and recontouring), and emplacement of a permanent radon barrier constructed to achieve compliance with the 20 pCi/m<sup>2</sup>-s flux standard as expeditiously as practicable considering technological feasibility (including factors beyond the control of the licensee).

The Part 192 regulations are also incorporated into Nuclear Regulatory Commission (NRC) regulations at 10 C.F.R. Part 40, Appendix A, Criterion 6A. Appendix A, Criterion 6A, applies to Utah, as an NRC Agreement State for 11e.(2) byproduct material.

H. The White Mesa Mill License<sup>12</sup> does not include an approved Closure Plan—or any Reclamation Plan. If, in fact, Cell 2 was undergoing closure and final closure had begun, the License would include Cell 2 reclamation milestones for the removal of free-standing liquids (dewatering), placement of the interim cover, and placement of the final radon barrier. However, no enforceable reclamation milestones for the closure and reclamation of Cell 2 have been incorporated into the License as license conditions.

I. The 2012 Annual Compliance Report submittal (page 1) states that the Cell 2 dewatering activities are mandated by the mill's State of Utah GWDP. There is no reference in the Energy Fuels' Report to dewatering activities mandated by the mill's closure plan or a reference to an enforceable reclamation milestone for the removal of free-standing liquids from Cell 2. The EPA rescinded 40 C.F.R. Part 61 Subpart T under the assumption that enforceable reclamation milestones would be incorporated into uranium mill licenses as part of the Closure Plan.<sup>13</sup>

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<sup>12</sup> [http://www.uraniumwatch.org/denisonmill.ut/drc\\_draft\\_whitemesa\\_LicenseRenewal\\_redline.111012.pdf](http://www.uraniumwatch.org/denisonmill.ut/drc_draft_whitemesa_LicenseRenewal_redline.111012.pdf)

<sup>13</sup> 59 FR 36302, July 15, 1994

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19. In sum, there is nothing on the record for the White Mesa Mill that demonstrates the closure has begun for tailings impoundment Cell 2 or indicates the date that final closure began. Therefore, Cell 2 must be considered “operational” for the purposes of compliance with the Section 61.252(b)(1) requirement that the mill “owner or operator shall have no more than two impoundments, including existing impoundments, in operation at any one time.”

20. It is apparent that the Subpart W program neglects the interface with the regulatory program for uranium mills under the Atomic Energy Act, as administered and enforced by the NRC or an NRC Agreement State. In Utah there seems to be little if any communication between the DAQ and the DRC regarding the issue of when, exactly, is the day that final closure begins, or other aspects of the closure of a tailings impoundment.

21. Regulatory Confusion: The situation with the status of tailings Cell 2 at the White Mesa Mill reveals regulatory confusion and brings forth a number of questions. As outlined above, there is no information that supports the conclusion that “closure” has commenced for Cell 2. There is no information regarding the date that final closure began for Cell 2.

22. Neither the EPA nor the DAQ have addressed the issue of when closure begins for a uranium mill impoundment on a programmatic or site-specific basis. Important questions have not been answered, including:

- When, exactly, does “closure” begin?
- What action or event triggers the commencement of “closure”?
- Who or what defines the day that closure begins?

23. The regulatory agencies have failed to provide any information regarding the specific regulatory action that takes an impoundment out from under the Subpart W regulatory requirements, because closure has commenced and the impoundment is no longer operational?

## **OTHER ISSUES**

24. The application to the DAQ for Cell 4B states that the surface area for Cell 4A is 44 acres, not 40 acres. Other information provided by Energy Fuels states that after the installation of Cell 4B, both cells are 41 acres. Therefore, these cells are larger than the 40-acre requirement in 40 C.F.R. 61.252(b). Subpart W does not provide guidance regarding the exceedance of the 40-acre construction standard.

25. Roberts Pond. According to the licensee, Roberts Pond also receives liquid wastes. Therefore, it is an impoundment. There is no evidence that the licensee requested approval of the operation of Roberts Pond, pursuant to 40 C.F.R. § 61.07; that it was

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approved by the EPA or DAQ, pursuant to 40 C.F.R. § 61.08; or (if the pond was constructed prior to 1990), the licensee provided the EPA with information required for existing sources, pursuant to § 61.10. It is now known why Energy Fuels is being permitted to use Roberts Pond for 11e.(2) byproduct material.

## CONCLUSION

- Since 1990, Subpart W has not been properly administered and enforced by either the EPA or DAQ. This failure to properly administer and enforce Subpart W continues to impact the only operating conventional uranium mill in the United States, the White Mesa Mill.
- There has been confusion about what, exactly, counts as a tailings impoundment when determining the number of operating impoundments.
- There is an ongoing failure to enforce the Subpart W standard for the number of operational impoundments. In other words, the law is not the law.
- There is confusion regarding when an exemption to the Subpart W standard is allowed and the process under which such an exemption can be obtained.
- There is confusion about when an impoundment is “operational,” for purposes of Subpart W compliance, and when “final closure” actually begins.

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