**COTTER CORPORATION'S RESPONSE TO**
**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY'S**
**FEBRUARY 24, 2009 INFORMATION REQUEST**

## EXECUTIVE SUMMARY

Pursuant to a *Request to Provide Information Pursuant to the Clean Air Act* dated February 24, 2009 from the United States Environmental Protection Agency (EPA) (hereinafter the "Information Request"), Cotter Corporation (Cotter) hereby submits this Response and accompanying documents. In this Response, Cotter provides EPA with the following discussion: (1) the "Preamble" or a historical and legal discussion of the development of EPA's 40 CFR Part 61, Subpart W radon flux emission limit and work practice standards; and (2) the responses to EPA's specific questions.

Prior to providing the aforementioned "Preamble" and the responses to the specific questions in the Information Request, Cotter would like to provide EPA with a brief summary of the substance of its Response. First, as a general proposition, the scope of 40 CFR Part 61, Subpart W's radon flux emission limit and work practice standards are strictly limited to *uranium mill tailings piles/impoundments* that actively receive mill tailings from uranium recovery operations. Second, accordingly, the only facility at the Cotter Cañon City, Colorado conventional uranium milling site that is currently subject to Subpart W regulations (20 pCi/m2-s radon flux emissions limit or work practice standards) is the site's Primary Impoundment which (1) was put into operation in 1979, and (2) is the only mill tailings facility that is licensed to receive mill tailings from active operations. Third, due to the Primary Impoundment's construction date (1979) which is prior to the promulgation of Subpart W's work practice standards, Cotter's Primary Impoundment is only subject to Subpart W's radon flux emission limit of 20 pCi/m2-s. As a result, Cotter's answers to EPA's specific questions and the associated documents produced will be provided in accordance with Cotter's position discussed herein.

## PREAMBLE

### A. INTRODUCTION

As a general proposition, Cotter believes that EPA's "broad-based" application of 40 CFR Part 61, Subpart W and associated regulations to the entirety of a conventional uranium milling site is inconsistent with the purpose for which such regulations were promulgated. Instead, Cotter's position is that Subpart W's application to conventional uranium milling sites should be narrowly focused only on the milling site facilities that receive and store *mill tailings* from active uranium recovery operations, *including facilities on standby*, for the purpose of safe containment of such mill tailings until final site closure, license termination, and effective transfer of the mill site to the mandatory federal custodian (i.e., United States Department of Energy) for long-term surveillance and monitoring under the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA). Thus, based on a thorough review of the administrative rulemaking record and associated history, as well as the site-specific uranium milling processes and facilities employed by Cotter, it is Cotter's position that the provisions of 40 CFR Part 61, Subpart W radon flux emission limit and work practice standards referenced in the Information Request are not applicable to certain facilities at conventional uranium milling sites, including specifically "impoundments" or "ponds" used at Cotter's Cañon City, Colorado conventional uranium mill site such as evaporation or settling ponds or any other similar non-tailings impoundments/ponds as referenced in the Information Request.

## B. LEGAL AND REGULATORY FRAMEWORK

Currently, with respect to Atomic Energy Act (AEA) uranium recovery facilities (i.e., facilities generating 11e.(2) byproduct material), Congress has vested EPA with certain regulatory authorities pursuant to UMTRCA. In addition, Congress also has vested additional authority over certain aspects of such facilities through the Clean Air Act (CAA). In 1977, Congress enacted provisions of the CAA to address potentially hazardous radiological *air* emissions at a variety of facilities, including uranium recovery facilities. In response to this Congressional mandate, EPA promulgated 40 CFR Part 61 regulations to address such radiological *air* emissions. The following sections will address the development of these regulations.

### 1. Environmental Protection Agency 40 CFR Part 61, Subpart T Regulations for Uranium Mill Tailings Facilities

On December 15, 1989, 40 CFR Part 61, Subpart T *National Emission Standards for Radon Emissions from the Disposal of Uranium Mill Tailings* (hereinafter "Subpart T") was promulgated by EPA to address potential hazardous air pollutants (e.g., only *radon* presumably because particulate emissions were (and are) addressed effectively under EPA's 40 CFR Part 190 fuel cycle regulations) at uranium mill tailings facilities regulated under Title II of UMTRCA, which were *no longer operational*. Subpart T stated, in pertinent part:

> "Radon-222 emissions to the ambient air from *uranium mill tailings piles* that are no longer operational shall not exceed 20 pCi/($m^2$ /sec) (1.9 pCi/($ft^2$ /sec)) of radon-222."

Subsequently, after challenges to Subpart T were filed in the United States Court of Appeals for the District of Columbia Circuit (D.C. Circuit), Subpart T was the subject of settlement discussions between the American Mining Congress (AMC), now the National Mining Association (NMA)), EPA, and environmental groups, with NRC and Agreement States monitoring as interested, but not formally litigating, parties. These negotiations ultimately led to NRC revising its mill tailings regulations to require licensees to achieve enforceable "milestones" leading to accelerated placement of radon barriers at *non-operational* (i.e., no longer actively milling or on standby) Title II mill tailings disposal sites[1] to satisfy EPA's and the environmental groups' concerns that the potential threat from radon emissions be addressed by the prompt placement of radon barriers over disposal areas.[2] After NRC finalized its revisions to 10 CFR Part 40, Appendix A in accordance with this settlement, EPA rescinded Subpart T of its 40 CFR Part 61 regulations and, as such, its requirements no longer apply to conventional uranium mills.[3]

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[1] 59 Fed. Reg. 28220 (1994).

[2] EPA was clearly concerned with prompt placement of radon barriers over *mill tailings piles/impoundments* and EPA, thus, indicated that the primary purpose of the settlement was:

> "to ensure that owners of uranium mill tailings disposal sites ... bring those piles into compliance with the 20 pCi/$m^2$s[ec] flux standard as expeditiously as practicable considering technological feasibility . . . with the goal that all current disposal sites be closed and in compliance with the radon emission standard by the end of 1997, or within seven years of the date on which existing operations and standby sites enter disposal status."

59 Fed. Reg. 36280, 36282 (1994).

[3] *See* 61 Fed. Reg. 68972 (December 30, 1996) (emphasis added).

### 2. Environmental Protection Agency 40 CFR Part 61, Subpart W Regulations for Active Uranium Mill Tailings Facilities

Also on December 15, 1989, 40 CFR Part 61, Subpart W *National Emission Standards for Radon Emissions from Operating Mill Tailings* (hereinafter "Subpart W") was promulgated to address radon emissions at *active* (including standby) uranium mill tailings facilities. Thus, Subpart W applies to operators of uranium mill tailings facilities while they are processing uranium ores and creating 11e.(2) byproduct material:

> "The provisions of this subpart 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*. This subpart does not apply to the [final] disposal of *tailings*."

A 20 $pCi/m^2/s$ radon emission limit averaged over the entire area of a uranium mill tailings pile/impoundment was promulgated by EPA in 40 CFR § 61.252(a) as the NESHAP standard for all *active* uranium mill tailings impoundments existing on December 15, 1989, *because EPA determined that it was technologically infeasible to force licensees to conform existing mill tailings impoundments/piles to Subpart W's newly promulgated work practice standards*.

On the other hand, new tailings impoundments constructed after December 15, 1989 were required to comply with one of two *work practice* standards:[4] (1) *phased disposal* in lined impoundments of forty (40) acres that meet the requirements of 40 CFR § 192.32(a) with no more than two impoundments in operation at one time; or (2) *continuous disposal* of tailings that are dewatered and immediately disposed of with no more than ten acres uncovered at one time. Compliance with these *work practice* standards in Subpart W makes the measurement for radon emanations during active operations unnecessary. The annual reporting requirements in 40 CFR § 61.254 apply only to *existing* mill tailings impoundments as of December 15, 1989, that have to comply with the *emissions standard* in Subpart W. Compliance with the emission standard in Subpart W for existing mill tailings impoundments is to be determined annually by the use of Method 115 of Appendix B (40 CFR § 61.253). The owners of existing (pre-December 15, 1989) mill tailings piles/impoundments must report the results of compliance calculations required by Section 61.253 and the input parameters used in each year by March 31 of the following year (40 CFR § 61.254). EPA's radon measurement Method 115 requires measurement of the different "regions" of tailings disposal facilities except those covered by water.[5]

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[4] 40 CFR § 61.252(a) (2007).

[5] The Response to Comments to EPA's Final Rule on radon-222 emissions from licensed mill tailings demonstrates that EPA considered an emission standard and determined that "boundaries could be changed to comply with an emission standard which is not an acceptable practice under the CAA. Also, methods to determine emissions from tailings piles also have not been sufficiently developed to provide accurate and consistent measurements of radon emissions." United States Environmental Protection Agency, Office of Radiation Programs, *Final Rule for Radon-222 Emissions from Licensed Uranium Mill Tailings*, Response to Comments (August, 1986).

## C. COTTER CORPORATION'S ANALYSIS

After a thorough review of the administrative rulemaking record associated with the proposal and promulgation of both Subparts T and W and the processes and facilities used at conventional uranium milling sites, Cotter has determined that Subpart W work practice standards only apply to uranium mill tailings impoundments actively receiving *tailings* and do not apply to facilities such as evaporation or settling ponds as referenced in this Information Request. As stated above, the Proposed Rules for both Subparts T and W demonstrate that EPA was concerned about *uranium mill tailings piles/impoundments* and not impoundments or ponds used for evaporation or settling purposes. Nowhere in the titles of either of these two Subparts or in the language of either the Proposed or Final Rules does EPA indicate that they are intended to apply to anything other than *inactive* (Subpart T) or *active* (Subpart W) uranium mill tailings piles/impoundments (i.e., uranium mill tailings impoundments used to (or, if on standby, intended to be used to) receive tailings from active uranium milling operations), as opposed to impoundments or ponds used solely for evaporation or settling purposes.

### 1. 40 CFR Part 61, Subparts T and W Demonstrate That Their Scope is Strictly Limited to Uranium Mill Tailings Piles/Impoundments

Both Subparts T and W, as finally promulgated, provide additional evidence of the limited scope of their application to uranium mill tailings piles/impoundments. On December 15, 1989, EPA published a Federal Register Notice promulgating its final Section 112 NESHAP standards governing radon emission standards for *non*-operational, operational uranium mill tailings impoundments, and future impoundments, analyzing the risks associated with radon emissions from such impoundments, and discussing the potential effects of the proposed 20 $pCi/m^2/s$ standard on such impoundments. The final rule makes no reference whatsoever to evaporation ponds at uranium mill sites, but does explicitly reference the types of radon source terms to which Subparts T and W were intended to apply. For example, when describing the process of uranium milling, EPA states:

> "The process of separating uranium from its ore creates waste material called uranium mill tailings….These tailings are collected in impoundments that vary in size from 20 to 400 acres….For the current radionuclides NESHAP rulemaking, EPA is promulgating rules for three different subcategories that deal with mill tailings: operating mill tailings—existing *piles*, operating mill tailings—new technology, and disposal of uranium mill tailings (as a separate source category…). Existing mill tailings *piles are large piles of wastes that emit radon*."

As discussed below, the use of the term mill tailings *piles* in this notice is consistent with the language used by Congress when defining "tailings" in UMTRCA:

> "the remaining portion of a metal-bearing ore after some or all of such metal, such as uranium, has been extracted."[6]

This notice also reinforced a commonly accepted premise that would suggest that an evaporation pond would not be a significant radon source term because, as EPA states, "[r]adon emissions from these *piles* are retarded by the presence of water. However, if operations cease,

[6] It is also common sense that a uranium mill tailings *pile* would not be an evaporation pond, because water generally does not collect in and take the form of a *pile*.

and the pit is allowed to dry out, emissions can increase significantly."[7] Thus, EPA expressly recognized that the presence of water *in tailings* will significantly retard radon emissions. Accordingly, evaporation ponds which contain process or waste water rather than mill tailings do not represent a significant potential source of radon emissions.

### 2. The Rescission of 40 CFR Part 61, Subpart T Also Demonstrates That Its Scope is Strictly Limited to Uranium Mill Tailings Piles/Impoundments

The rescission of Subpart T also provides additional evidence to support Cotter's position described above. On December 31, 1991, EPA proposed to rescind 40 CFR Part 61, Subpart T "as it applies to owners and operators of uranium mill tailings disposal sites that are licensed by the Nuclear Regulatory Commission (NRC) or an affected NRC Agreement State…."[8] EPA's proposed rescission notice included a section specifically devoted to the question of "whether the requirement extends to the evaporation pond thereby jeopardizing the other remedial aspects of the UMTRCA program."[9] This discussion recognized that evaporation ponds can play an important role in the UMTRCA remedial action programs at uranium mill tailings sites:

> "The regulations contemplated by this notice seek to control the emission of radon-222 by requiring the installation of an earthen cover over the *disposal piles* as expeditiously as practicable considering technological feasibility. However, there are other aspects to the UMTRCA regulatory scheme, including the long-term maintenance of the (once controlled) piles against erosion, and the reclamation and maintenance of groundwater….*These actions entail the use of evaporation ponds that in some instances….have been placed directly upon the disposal site.*"[10]

After discussing whether evaporation ponds were to be subject to its 40 CFR Part 61, Subpart T standard, EPA concluded:

> "EPA does not intend that the expeditious radon cover requirement extend to the areas where evaporation ponds are located, even if on the pile itself, to the extent that such evaporation pond is deemed by the implementing agency (NRC or an affected Agreement State) to be an appropriate aspect to the overall remedial program for the particular site involved."[11]

Indeed, EPA's Proposed Rule prescribed an approach to evaporation pond remediation as follows: "the evaporation pond area may be covered to control radon *after it is no longer in use and ready for covering.*"[12] EPA supported this conclusion by reasoning that:

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[7] 54 Fed. Reg. 51654 (December 15, 1989) (emphasis added).
[8] 56 Fed. Reg. 67561. This language demonstrates that EPA acknowledges that evaporation ponds are not to be considered as part of the class of facilities known as "uranium mill tailings piles/impoundments."
[9] *Id.*
[10] *Id.* (emphasis added). The fact that evaporation ponds could be (and have been) located on top of an inoperative tailings piles to de-water piles and assist in groundwater corrective action was made known to EPA by AMC negotiators during the settlement negotiations that ultimately led to the rescission of 40 CFR Part 61, Subpart T.
[11] *Id.*
[12] 56 Fed. Reg. 67561 (emphasis added).

> "the ponds themselves serve as an effective radon barrier, thus this decision is bolstered by the absence of any evidence that there is a significant public health risk presented by the radon emissions from these evaporation ponds during the period they are employed as part of the overall remediation of the site."[13]

Based on this determination, EPA concluded:

> "EPA believes the overall public health interest in comprehensively resolving the problems associated with each site is best served by requiring that the radon cover be expeditiously installed in a manner that does not require interruption of this other aspect of remediation….Rather, EPA believes that provided all other parts of the pile are covered with the earthen cover, compliance with the 20 $pCi/m^2$ standard will result…."[14]

EPA's conclusions about the potential radon source term from evaporation ponds being actively used in uranium mill tailings site reclamation efforts are no less valid for such ponds being used during *active* uranium recovery operations at an operational facility subject to Subpart W radon flux limit or work practice standards. Any such ponds/impoundments used during active recovery operations would have to be approved as necessary by the relevant AEA licensing authority (i.e., NRC or an Agreement State). In addition, on December 30, 1996, EPA's Final Rule rescinding Subpart T contained no statements indicating any change in its interpretation of the scope of Subpart W's work practice standards.

### 3. EPA's Final Rule for 40 CFR Part 61, Subpart W Further Demonstrates That Its Scope is Strictly Limited to Uranium Mill Tailings Piles/Impoundments

On November 15, 1993, EPA promulgated a Final Rule containing Amendments to its Subpart W and associated regulations applicable to operational NRC/Agreement State licensed uranium mill tailings facilities. In this Federal Register notice/Final Rule, EPA responded to a number of public comments, including comments related to the application of Subpart W requirements to evaporation ponds. As stated by EPA:

> "*EPA reiterates that the Agency does not intend the expeditious radon cover requirement to extend to areas where evaporation ponds are located*, even if on the pile itself, to the extent that such evaporation pond is deemed by the implementing agency…to be an appropriate aspect of the overall remedial program for the particular site."[15]

Obviously, in this Final Rule, EPA simply restated its conclusion from the Subpart T rescission administrative rulemaking record that active evaporation ponds do not represent a significant potential radon source term.[16]

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[13] *Id*.
[14] *Id*.
[15] 56 Fed. Reg. 67561 (emphasis added).
[16] *Id*.

### 4. Additional Evidence of the Limited Scope of 40 CFR Part 61, Subpart W Regulations

Per the above discussion, the entirety of the administrative rulemaking record associated with the proposal and promulgation of Subparts T and W and the subsequent rescission of Subpart T demonstrate that their provisions were intended to apply only to impoundments actually receiving mill tailings from active uranium recovery operations and not to impoundments used for evaporation or settling purposes *or even to impoundments designed for disposal of 11e.(2) byproduct material that are not associated with active uranium recovery operations*.[17] In addition to the administrative rulemaking record, aspects of current statutory and regulatory language pertaining to EPA's authority over uranium recovery facilities support Cotter's position. As will be demonstrated below, despite the fact that, in some cases, evaporation pond fluids contain some fines from conventional uranium mill processing (which can be considered "tailings-like" 11e.(2) byproduct material) that are suspended in the fluids and that will settle on the liner of the pond as such fluids evaporate, neither the fluids with entrained solid fines nor the fines themselves typically would be considered "tailings" in a pond used solely for evaporation purposes during *active*, uranium recovery groundwater corrective action or other site closure operations. An *active* tailings pile/impoundment would be one into which tailings (a mixture of sands, slimes, and fluids)[18] are placed during ongoing uranium recovery operations. The sands and slimes constitute the bulk of the material (typically 50% plus).

First, UMTRCA's definition of "tailings," as incorporated by EPA in 40 CFR Part 61 from UMTRCA, indicates: "[t]he term 'tailings' means *the remaining portion of a metal-bearing ore after some or all of such metal, such as uranium, has been extracted*."[19] Water stored in an evaporation pond from either active recovery operations or groundwater corrective action is not consistent with the UMTRCA definition of "tailings" as the water is added to the processing circuit for the ore (or removed from the groundwater), and is not part of "the remaining portion of the metal-bearing ore from which uranium was extracted." Given that EPA's regulations in 40 CFR Part 61, Subpart T incorporate the UMTRCA definition of "tailings,"[20] EPA has accepted the distinction between tailings in a tailings pile or impoundment and water related to uranium milling in an evaporation pond that may have resulted either from active uranium milling operations or from a groundwater corrective action program.

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[17] *See Letter from William P. Yellowtail, Regional Administrator, United States Environmental Protection Agency to Thomas B. Cochran, Director, Nuclear Programs, Natural Resources Defense Council,* (October 16, 1997) ("Subpart W limits radon-222 emissions from uranium tailings impoundments in existence as of December 15, 1989 (and licensed to receive additional tailings) and those constructed after this date. Operationally, these impoundments are in active use or standby status. *There is a fundamental difference between the type of facility regulated under Subpart W and the Envirocare facility. Subpart W is applicable to facilities engaged in uranium extraction from ores. However, the Envirocare facility, specifically the 11e.(2) cell, is limited to waste disposal (wastes from the processing of uranium and thorium ore*.") (emphasis added).

[18] *See* United States Environmental Protection Agency, *Final Rule for Radon-222 Emissions from Licensed Uranium Mill Tailings: Background Information Document* at 3-19 (August, 1986)

[19] 42 U.S.C. § 7911(8)

[20] It should be noted that Subpart W's definition of "uranium byproduct material or tailings" adopts essentially the same definition of "11e.(2) byproduct material" in Section 11(e) of the AEA, as amended by UMTRCA.

Second, as discussed above, EPA's 40 CFR Part 61, Subpart W work practice standards consistently utilize the terms "tailings *pile*" and "tailings *impoundment*" when discussing site facilities that are covered by Subpart W work practice standards, which, on their face, do not apply to a liquid storage facility. For example, 40 CFR § 61.221 states in pertinent part:

> "As used in this subpart, all terms not defined here have the meanings given them in the Clean Air Act or subpart A of part 61. The following terms shall have the following specific meanings:
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> (a) *Long term stabilization* means the addition of material on a uranium mill *tailings pile* for the purpose of ensuring compliance with the requirements of 40 CFR 192.02(a). These actions shall be considered complete when the Nuclear Regulatory Commission determines that the requirements of 40 CFR 192.02(a) have been met."[21]

In addition, when prescribing the 20 $pCi/m^2/s$ standard in former Subpart T, EPA states:

> "(a) Radon-222 emissions to the ambient air from uranium mill *tailings piles* that are no longer operational shall not exceed 20 $pCi/(m^2/sec)$ (1.9 $pCi/(ft^2/sec)$) of radon-222.
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> (b) Once a uranium mill *tailings pile or impoundment* ceases to be operational it must be disposed of and brought into compliance with this standard within two years of the effective date of the standard. If it is not physically possible for an owner or operator to complete disposal within that time, EPA shall, after consultation with the owner or operator, establish a compliance agreement which will assure that disposal will be completed as quickly as possible."[22]

EPA's Subpart W regulations use both the term "tailings pile" and the term "tailings impoundment" when discussing the facilities to which Subpart W's 20 $pCi/m^2/s$ radon emission standard applies and the work practice standards for post-December 15, 1989 operational and potential future tailings facilities.[23] The use of the term "pile" is consistent with prior practices at uranium mill tailings sites where mill tailings were routinely placed in a "pile" rather than the current practice of placing mill tailings in an "impoundment." However, the random use of the terms "pile" and "impoundment" suggests that as technology was transforming, the terms were being interchangeably applied to mill "tailings" disposal facilities. As a result, Subpart W applies to "tailings" as described in EPA's rulemaking materials, whether the term "piles" or "impoundments" is used.

Additional evidence for the positions espoused above can be found in EPA's background and guidance documents on its final NESHAPs Rules in Subparts T and W, their application to uranium mill tailings piles/impoundments, and the appendix setting out Method 115 entitled

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[21] 40 CFR §§ 61.221(a-b).

[22] 40 CFR §§ 61.222(a-b).

[23] *Compare* 40 CFR § 61.252(a); 40 CFR § 61.252(b-c). This is entirely consistent with the history of the development of uranium mill tailings disposal facilities in that the older uranium mills constructed "piles" for disposal of tailings; but by the time that EPA's CAA regulations were being developed and promulgated, the technology had advanced to use "impoundments" which were, and are, more stable and controllable in both the short and long-term context than the old "piles."

*Monitoring for Radon Emissions*. Initially, EPA's NESHAP documents expressly recognize that the scope of the Subpart W work practice standards was intended to reach *tailings* stored in on-site tailings piles/impoundments *and not* to other site facilities such as evaporation ponds:

> "As with any ore-processing operation, uranium milling produces large quantities of waste rock. Uranium mill wastes, *or tailings,* are usually stored in an impoundment located on the mill site."[24]

Further, EPA's guidance on Subpart W requirements includes a discussion of potential procedures for controlling radon emissions from milling operations that result in tailings. These procedures include the use of "earthen covers" to be applied to tailings to reduce potential fugitive emissions such as radon:

> "Earth covers which consist of layered soil approximately 3 meters deep are frequently used on waste piles, reclaimed lands, or inactive surface mining areas to reduce both particulate and radon emissions."[25]

However, the use of an earthen cover to retard radon emissions from an evaporation pond full of process fluids rather than a mill tailings pile/impoundment is unnecessary because the water in the pond retards such emissions. EPA recognizes that, when the pond is no longer actively used, it will be dried out and covered or, if lined, its liner will be disposed in a mill tailings pile as 11e.(2) material.

EPA's background document for its Subpart W regulations contains additional evidence to support the conclusion that such standards do not apply to evaporation ponds. When describing what is encompassed by the term "tailings," EPA states:

> "Tailings include the barren crushed ore material plus process solutions. These tailings consist of mixtures of sands and slimes (coarse and fine tailings). *Evaporation ponds used to contain excess liquid from tailings impoundments also contain suspended…tailings….*"[26]

This statement supports the fact that the term "tailings" is intended to apply to the materials in a site's active mill tailings piles/impoundment and not to fluids in impoundments used solely as evaporation ponds, as evaporation ponds are considered a separate point of analysis from mill tailings impoundments. EPA's Response to Comments also demonstrates that the Subpart W requirements were not intended to apply to evaporation ponds due to their minimal radon emissions:

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[24] United States Environmental Protection Agency, *Radionuclides: Background Information Document for Final Rules*, Volume I at 4-29 (October, 1984).

[25] United States Environmental Protection Agency, *Final Rule for Radon-222 Emissions from Licensed Uranium Mill Tailings: Background Information Document* at 7-2 to 7-3 (August, 1986).

[26] *Id.* at 3-19. In addition, the statement following this quote further demonstrates that EPA considered fluids in evaporation ponds to not be a radon source term: "*If exposed,* these solids are assumed to emit radon-222 at the same specific flux as tailings impoundments." The low nature of tailings covered by water is also noted by EPA in Volume I of its Background Information Document on *Radionuclides*: "When tailings impoundment areas are almost completely covered by water, radionuclide emissions will be low."

> "Recent technical assessments of radon emission rates from tailings indicate that radon emissions from tailings covered with less than one meter of water, or merely saturated with water, are about 2% of emissions from dry tailings. *Tailings covered with more than one meter of water are estimated to have a zero emissions rate. The Agency believes this calculated difference between 0% and 2% is negligible. The Agency used an emission rate of zero for all tailings covered with water or saturated with water in estimating radon emissions.*"[27]

Additionally, as Method 115, paragraph 2.1.3 states, "radon flux measurements shall be made within each region on the pile, *except for those areas covered with water*." Paragraph 2.1.3(a) also states, "*Water covered area*--no measurements required as radon flux assumed to be *zero*."[28] Thus, the administrative rulemaking records associated with both Subpart T and Subpart W, as well as EPA's Method 115 rationale and procedures demonstrates that evaporation or water storage ponds at conventional uranium milling facilities do not have to comply with nor do they warrant the application of a 20 $pCi/m^2/sec$ radon flux limit or a work practice standard to control radon emissions.

### 5. Cotter Corporation's Site-Specific Process Operation Demonstrates That Application of 40 CFR Part 61, Subpart W Regulations to Conventional Uranium Mill Sites is Strictly Limited to Uranium Mill Tailings Piles/Impoundments

In addition, as stated above, the nature of the process and the types of facilities used at Cotter's Cañon City conventional uranium mill demonstrates that Subpart W requirements only apply to those site facilities that actively receive *tailings* (i.e., uranium mill tailings impoundments) and do not apply to facilities such as evaporation or settling ponds, as referenced in this Information Request.

When operational, Cotter produces tailings via grinding of ore, acid leaching at elevated temperature and pressure and solids/liquids separation or washing. Cotter does not use any mechanical methods for dewatering. Typically such dewatering methods are defined by the use of filter belts, drum filters, disk filters, plate and frame filters and paste technology, among others which Cotter does not use.

Other liquid process wastes are combined with the washed, newly generated uranium mill tailings, neutralized and pumped to the Primary Impoundment. Liquid wastes from groundwater remediation are added to the Primary or Secondary impoundments via the Water Distribution Pond. The Colorado Department of Public Health and Environment (CDPHE) has licensed the

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[27] United States Environmental Protection Agency, *Final Rule for Radon-222 Emissions from Licensed Uranium Mill Tailings: Response to Comments* at 11 (October, 1984).

[28] Emphasis added. *See also* Method 115, Paragraph 2.1.6 *Radon Flux Measurement*…The radon collector is placed *on the surface* of the pile area to be measured and allowed to collect radon for a time period of 24 hours. The detailed measurement procedure provided in Appendix A of EPA 520/5-85-0029(1) shall be used to measure the radon flux on the uranium mill tailings except the *surface of tailings* shall not be penetrated by the lip of the radon detector as directed in the procedure, rather the collector shall be carefully positioned *on a flat surface* with soil or tailings used to seal the edge. Nothing in Method 115 addresses placing radon collectors on the surface of water in *any* pond/impoundment, nor as a practical matter, could it do so.

Secondary Impoundment for the interim storage[29] of the tailings removed from the Old Tailings Pond Area via placement in the Secondary Impoundment by truck and scraper. That transfer operation related to the old tailings was completed in 1983. Placement of new tailings in the Secondary Impoundment has not now nor in the past been authorized by CDPHE. Other impoundments at the Cañon City Milling Facility (CCMF), namely, the Water Distribution Pond and New Pond 3, receive process solutions, storm water runoff and groundwater remediation liquids.

Thus, as can be seen from the discussion above, Cotter reiterates its position that Subpart W's radon flux emission limit or its work practice standards apply only to uranium mill tailings piles/impoundments actively receiving mill tailings from uranium recovery operations. More specifically, Subpart W's radon flux emission limit and work practice standards *do not apply* to evaporation or settling ponds as referenced in this Information Request. As a result of this position, the amount of data and documentation to be made available to EPA pursuant to this Information Request will be specifically tailored to the Cotter facilities to which 40 CFR Part 61, Subpart W and any Method 115 monitoring requirements apply. Further, Cotter's response to the specific questions offered by EPA in its Information Request will incorporate, to the extent relevant, aspects of this position.

## RESPONSE TO SPECIFIC QUESTIONS

**Question #1: Please list each uranium mill located in the United States of America that has been, or is currently, owned or operated, by Cotter or affiliated corporations located in the United States of America. Include the exact location of each uranium mill by map and legal property description.**

**Response to Question #1:** Cotter is providing the requested information below but would like to point out that the scope of EPA's inquiry as to what constitutes a "uranium mill" should be properly defined. For purposes of this Information Request, the use of the term "uranium mill" is inappropriate given the current status of NRC interpretation of what activities fall within the scope of "uranium milling." Under the AEA, as amended, NRC is granted preemptive regulatory authority over active regulation of "uranium milling" activities as such activities result in the generation of 11e.(2) byproduct material[30], which is an AEA material. Pursuant to this authority, NRC has determined that conventional uranium milling (i.e., crushing and grinding of ore), uranium in-situ leaching (i.e., the extraction of uranium from underground ore body by circulating native groundwater with lixiviant such as oxygen or carbon dioxide), and heap leaching all constitute "uranium milling" and, as such, all generate 11e.(2) byproduct material. As a result, EPA's use of the term "uranium mill" is inappropriate for this question as any of the three aforementioned types of facilities are deemed to be "uranium mills" by NRC.

Thus, for purposes of the response to this question, Cotter considers the term "uranium mill" to mean conventional uranium milling sites with associated mill tailings impoundment(s) that require eventual transfer to a mandatory federal custodian for long-term surveillance and monitoring under Section 83 of the AEA. The following table provides the list of Cotter sites subject to this Information Request.

[29] *See* Footnote 17 infra.
[30] *See* 10 CFR § 40.4 (definition of "uranium milling").

| Corporate Entity | Conventional Uranium Milling Site | Geographic Location | Description |
|---|---|---|---|
| Cotter Corporation Cañon City Milling Facility | Figure 1, 2 and 3 | Figure 1, 2 and 3 | Attachment 1 |

None of Cotter's current affiliates operates any conventional uranium mill in the United States of America. In 2000, Cotter became affiliated with the General Atomics group of companies. Prior to such time, its current remote affiliated entity, Rio Grande Resources Corporation (RGR) (acquired by the General Atomics group of companies in 1991), operated a conventional uranium mill site at Panna Maria, Texas. RGR ceased its Panna Maria operation in 1992, and surface reclamation at the mill site (including its mill tailings pile) was completed in 1998. The RGR conventional uranium mill is no longer subject to Subpart W regulations; but while the Panna Maria site was in operation by RGR, Subpart W compliance reports were sent to EPA. As a result, this Response does not include any answers or document production regarding the RGR Panna Maria, Texas site.

**Question #2: Please list each uranium in-situ leaching facility located in the United States of America that has been, or is currently, owned or operated by Cotter or affiliated corporations. Please include the exact location of each uranium mill by map and legal property description.**

**Response to Question #2:** As discussed in the Response to Question #1 above, Cotter is remotely affiliated with RGR. Prior to Cotter's affiliation with RGR, RGR completed decommissioning and decontamination of a uranium in-situ leaching facility at La Palangana, Texas, including groundwater restoration such that the AEA license was terminated and the site was released for unrestricted use in 1999. RGR had acquired such facility from Chevron in 1991 and RGR never engaged in any active uranium in-situ leaching operations. RGR's La Palangana site is not currently engaged in active (including standby) uranium recovery operations. It should be noted that uranium in-situ leaching facilities are not subject to 40 CFR Part 61, Subpart W radon flux emission limits or work practice standards because they do not generate uranium mill tailings. As a result, the site-specific information provided in this Response does not include the RGR site.

**Question #3: Please provide the following information for each uranium mill and uranium in-situ leaching facility identified in questions 1 and 2:**

**3(a). A complete description of each uranium mill and uranium in-situ leaching facility's operational status (e.g., permanently shut down, temporarily shut down, standby status, in full or partial operation), method of operation (continuous disposal, phased disposal or other method) and methods by which compliance with the NESHAP standards, specified at 40 CFR § 61.252, is ensured (meeting emission limit in Section 61.252(a) and work practices in (b) and (c)). Include a description of the type of facility (conventional, in situ-leach, heap leach or combination);**

**Response to Question #3(a):** As stated above in the Response to Question #2, neither Cotter nor any of its current affiliated companies currently owns or has operated any uranium in-situ leaching facilities in the United States of America. The specific conventional uranium mill site facility (Canon City, Colorado), its operational status and purpose of operation, date of

construction, and NESHAP compliance method is provided in the table below. In addition, as stated above, EPA's inquiry into any conventional uranium milling site operated by Cotter or any other operator should be focused on the relevant facilities used at such site and not on the entire site.

As will be shown in the table below, only one uranium mill tailings impoundment at the Cotter mill (i.e., the Primary Impoundment) is actively receiving tailings, or on standby, and, thereby, is required to comply with 40 CFR Part 61, Subpart W and its associated requirements. Thus, the NESHAP standards specified at 40 CFR § 61.252, including radon-222 emission limits in Section 61.252(a) and work practices in Sections 61.252(b) and (c) apply only to those facilities at conventional uranium milling sites that actively receive and store uranium mill tailings (which, again, for the Cotter mill includes only the Primary Impoundment) and not to other site facilities such as evaporation or settling ponds as referenced in EPA's Information Request.

| **Conventional Uranium Mill Site Facility** | **Operational Status** | **Purpose of Operation** | **Date of Construction** | **NESHAP Compliance Method*** |
|---|---|---|---|---|
| Primary Impoundment | Standby | Continued placement of new tailings and other 11e.(2) materials | Fall 1979 | EPA Method 115 starting calendar year 1990 |

*It should be noted that "NESHAP Compliance Method" references both the NESHAP standard in 40 CFR § 61.252(a) and work practices in 40 CFR § 61.252(b) and (c).

**3(b). A history of operation since 1975, including:**

- **(i) the original date of construction of each uranium mill and uranium in-situ leaching facility;**
- **(ii) the plan of operation and plans to shut-in or close active operation;**
- **(iii) ownership changes; and**
- **(iv) whether the uranium mill and uranium in-situ leaching facility is existing, new, or has plans for reactivating any operations that have been curtailed**

**Response to Question #3(b):** Prior to providing answers to this specific question, Cotter believes the following discussion is warranted. Cotter has been authorized by Agreement State License to "accept, receive, possess, handle ores and other [11e.(2)] materials for the commercial processing and recovery of uranium" at the Canon City, Colorado milling site. Cotter is also authorized to "utilize and maintain the designated on-site impoundments in accordance with Department approved parameters." These parameters are contained in the milling site's license application, license conditions, procedures, plans and correspondence referenced in the Agreement State License. Accordingly, Cotter has placed new uranium mill tailings in the Primary Impoundment which is the only site impoundment authorized for the placement of such tailings. Cotter has utilized other site impoundments, namely the Secondary Impoundment, the Water Distribution Pond and New Pond 3, for the storage and evaporation of process water and other liquids/fluids. The Secondary Impoundment is utilized for the storage of old uranium mill tailings generated prior to 1980.

Cotter was incorporated in the State of New Mexico in 1956 and remains the mill owner and licensee through the present. No ownership changes of the Canon City, Colorado milling site have occurred.

| **Conventional Uranium Mill Site Facility*** | **Date of Construction** | **Plan of Operation** | **Ownership Changes** | **Existing, New or Reactivation** |
|---|---|---|---|---|
| Pond 1 | Between September 1958 and 1976 | Slurry deposition of new tailings | None | Reclaimed |
| Ponds 2 through 10 | Between 1958 and 1979 | Storage of fluids and other 11e.(2) materials | None | Reclaimed |
| Primary Impoundment | 1979 | Slurry deposition of new tailings and other 11e.(2) materials | None | Existing |

*****As stated above, neither Cotter nor any of its current affiliated companies currently owns or has operated any uranium in-situ leaching facilities in the United States of America.

**3(c). The number and size (in acres), dimensions, locations within the facility or plant site, capacity in gallons and lining material of each "existing mill impoundment", as that term is used in 40 CFR Subpart W, and any other waste holding areas such as evaporation or settling ponds;**

**Response to Question #3(c):** As discussed above, Cotter believes that EPA's Information Request should narrowly focus on the specific facilities at conventional uranium milling sites that are subject to 40 CFR Part 61, Subpart W radon flux emission limit or work practices rather than focusing on the entire conventional uranium mill site. With that said, in order to properly identify which conventional uranium milling site facilities would be subject to such standard or work practices, Cotter believes it is important to distinguish between uranium mill tailings and other conventional uranium mill process wastes that are classified as 11e.(2) byproduct material but are not mill tailings as contemplated by Congress in UMTRCA.

In the mid-1970s, Congress identified uranium mill tailings generated at conventional uranium mills as a significant, potential threat to public health and safety and the environment. However, due to a perceived lack of authority on the part of NRC under the AEA, Congress enacted UMTRCA with the specific intent of creating a comprehensive statutory and regulatory scheme for the short and long-term oversight of uranium mill tailings. For example, Section 2 of UMTRCA states that one of its purposes is to establish:

> "a program to regulate *mill tailings* during uranium or thorium *ore* processing at active mill operations and after termination of such operations in order to stabilize and control

such tailings in a safe and environmentally sound manner and to minimize or eliminate radiation health hazards to the public."[31]

The perceived threat was associated with the nature of typical uranium mill tailings generated at conventional uranium mill facilities. Uranium mill tailings are described by EPA as "the remaining portion of a metal-bearing ore after some or all of such metal, such as uranium, has been extracted." Typically, uranium mill tailings generated at conventional uranium mills can be defined as earthen materials generally ranging in size from medium grained sand to clay sized particles and consist of ground ore from which uranium has been removed. Typical mill tailings exit a mill process in the form of solid/water slurry and are approximately fifty to fifty-five percent solids by weight. Particle size distributions for mill tailings samples can vary widely depending on the collection point in the impoundment from five percent fines and ninety-five percent sand to ninety-three percent fines and seven percent sands. Upon deposition in a tailings impoundment, tailings tend to classify by size with the coarser materials accumulating closer to the discharge with finer (clay-sized) materials accumulating farthest from the discharge. Uranium mill tailings generally are a buff to tan/brown color due to the oxidation process in the mill circuit and may be acidic or alkaline-like in terms of pH. As a result, waste management programs at conventional uranium mills focus primarily on the safe storage and containment of uranium mill tailings in licensed uranium mill tailings piles/impoundments and the transfer of such tailings to a mandatory federal custodian for long-term surveillance and monitoring pursuant to Section 83 of the AEA, as amended by UMTRCA.

However, conventional uranium mill waste management programs are not solely devoted to such tailings. As stated above, when UMTRCA was first enacted, Congress' intent was to address both the potential radioactive and *non*-radioactive hazards associated with uranium mill tailings. However, it was determined that additional waste streams generated at these facilities, while not being typical uranium mill tailings, should be contained on-site as part of the uranium milling waste management process. As a result, the waste classification of 11e.(2) byproduct material was determined to include *all* wastes (including the demolished mill buildings and other site equipment and material that cannot be decontaminated for unrestricted use), and not just uranium mill tailings, associated with the conventional uranium milling process. Thus, to address the management, safe storage, and containment of all such wastes, a program for eventual transfer of the site and its 11e.(2) byproduct material to a mandatory federal custodian for long-term surveillance and monitoring under a general license from NRC in perpetuity, was implemented pursuant to Section 83 of the AEA, as amended by UMTRCA.

As part of the overall waste management plan of a conventional uranium mill facility and to address waste streams other than uranium mill tailings such as process wastewater, such facilities utilize evaporation ponds and other types of impoundments or ponds (e.g., catchment basins, settling ponds, storage ponds) to temporarily contain fluids for process water management and for erosion control. It is also possible that some conventional mills may utilize storage ponds for water intended for reuse in the milling

[31] 42 U.S.C. § 7901.

process. However, the *waste* streams[32] placed in these ponds or impoundments are not considered to be uranium mill tailings, but merely another type of 11e.(2) byproduct material. Thus, conventional uranium milling facilities generate different types of 11e.(2) byproduct material such as process wastewater that are not considered to be uranium mill tailings and, as such, do not require the same radiation protection or handling procedures. Therefore, when evaluating which impoundments or ponds are potentially subject to Subpart W's radon flux limit or work practice standards, it is important to differentiate between uranium mill tailings and other process waste streams that are not considered to be tailings.

The Cotter conventional uranium mill site is operated no differently from the generic process description described above. Site specific information is provided at the end of Section C(5) of the Preamble.

As stated in the Response to Questions #2 and #3(a) above, neither Cotter nor any of its current affiliated companies currently owns or has operated any uranium in-situ leaching facilities in the United States of America. Detailed information on other waste water holding areas, such as evaporation and settling ponds as referenced in the Information Request, utilized at Cotter's conventional uranium milling site is summarized in the table below. The location of each impoundment or pond is within Section 16, Township 19 South, Range 70 West, 6 East New Mexico Principal Meridian. Please refer to Figures 1, 2 and 3 for other location information.

| Mill Site Facility | Purpose of Operation | Size (acres) | Dimensions (feet) | Location* | Capacity (acre-feet) | Lining Material (if applicable) |
|---|---|---|---|---|---|---|
| Primary Impoundment | Continued placement of new tailings and other 11e.(2) materials | 107 | Irregular, approx 3,000' by 1,500' | See above | 2,250 | Clay, Hypalon® |
| Secondary Impoundment | Evaporation, groundwater remediation. Retention of Old Tailings | 51 | Irregular, approx 1,300' by 1,700' | See above | 1,150 | Clay, Hypalon® |
| Water Distribution Pond | Evaporation, groundwater remediation | 2.7 | Irregular, approx 375' by 325' | See above | 16.5 | Clay, Hypalon® |
| New Pond 3 | Temporary storage of storm water runoff | 0.7 | 175' by 175' | See above | 4.9 | Hypalon® |

[32] It is possible that impoundments could be used for storage of "clean," pre-process fluids which, of course, would not be classified as a waste. As a result, such fluids would not be classified as 11e.(2) byproduct material and, thus, are not subject to Subpart W regulations.

*The "location" description is based on the identified mill site facility location in proximity to the mill process building.

**3(d). For each "existing mill impoundment, evaporation pond, and settling pond" identified in response this request, identify the date(s) each was:**

**(i) constructed;**
**(ii) used for the continued placement of new tailings;**
**(iii) placed on "standby status;" and**
**(iv) closed, and during what periods they were operational.**

**Response to Question #3(d):** Dates associated with construction and operation of each "existing mill impoundment, evaporation pond, and settling pond" identified in Response to Question #3(c) above are provided in the table below.

| Mill Site Facility | Purpose of Operation | Date Constructed | Date Used for Continued Placement of New Tailings | Date Placed on "Standby Status" (if applicable) | Date Closed or Operational Period |
|---|---|---|---|---|---|
| Primary Impoundment | Continued placement of new tailings and other 11e.(2) materials | 1979 | 1979 | March 2006 | 1979 to present |
| Secondary Impoundment | Evaporation groundwater remediation. Retention of Old Tailings | 1980 | N/A | N/A | N/A |
| Water Distribution Pond | Evaporation, disposal of 11e.(2) materials | 1988 | N/A | N/A | N/A |
| New Pond 3 | Temporary storage of storm water runoff | 2008 | N/A | N/A | N/A |

In addition, with respect to the dates of construction for site ponds or impoundments used for purposes other than the active receipt of uranium mill tailings, Cotter maintains that such facilities are not subject to Subpart W. However, if Subpart W requirements were deemed applicable to such facilities, the date of their construction would be important, because any such pond or impoundment subject to Subpart W's requirements that was constructed and/or in use prior to December 15, 1989 would not be subject to either Subpart W work practice standard, but rather to the aforementioned radon flux limit of 20 $pCi/m^2s$.

**<u>Question #4</u>: For each existing mill impoundment, evaporation pond, and settling pond identified in response to request 3.d above:**

Prior to providing specific responses to each subsection of Question #4, Cotter believes that it is important to provide additional discussion regarding the Subpart W rulemaking and its conclusion that evaporation ponds are not within the scope of Subpart W. As stated above in the Preamble, EPA evaluated all potential sources of radon emissions at conventional uranium milling facilities. The scope of this evaluation included traditional uranium mill tailings piles/impoundments, as well as evaporation ponds or other similar ponds or impoundments. With respect to traditional uranium mill tailings piles/impoundments, the Final Rule for Subpart W identified three different subcategories of mill tailings facilities, "operating mill tailings—existing *piles*, operating mill tailings—new technology, and disposal of uranium mill tailings (*as a separate source category*." With respect to mill tailings piles/impoundments, EPA states, "[e]xisting mill tailings piles are large piles of wastes that emit radon." Existing tailings piles/impoundments were identified by EPA as a potential significant source of radon that must comply with the flux limit and post-December 15, 1989 new facilities were deemed to require compliance with Subpart W work practice standards.

However, with respect to evaporation ponds or other similar ponds/impoundments, EPA separately evaluated such facilities because the characteristics of the stored wastewater are significantly different from uranium mill tailings. Indeed, this statement is supported by EPA's Subpart T rulemaking when it stated:

> "The regulations contemplated by this notice seek to control the emission of radon-222 by requiring the installation of an earthen cover over the disposal piles as expeditiously as practicable considering technological feasibility. However, there are other aspects to the UMTRCA regulatory scheme, including the long-term maintenance of the piles (once controlled) against erosion, and the reclamation and maintenance of groundwater…*These actions entail the use of evaporation ponds that in some instances….have been placed directly upon the disposal site*."[33]

When evaluating evaporation ponds as a potentially significant radon emissions source, EPA stated, "*the ponds themselves serve as an effective radon barrier*." This was true, in part because, as stated by EPA, "[r]adon emissions from these piles are retarded by the presence of water…." Indeed, as stated in the Background Information Document to EPA's *Final Rule for Radon-222 Emissions from Licensed Uranium Mill Tailings*:

> "Water-covered tailings have a radon-222 flux of about 0.02 pCi/$m^2$/s per pCi of radium-226 per gram of tailings compared with a dry tailings flux of about 1 pCi/$m^2$/s per pCi of radium-226 per gram, *or a radon-222 reduction efficiency of about 98 percent*….

[33] *Id.* (emphasis added). The fact that evaporation ponds could be (and have been) located on top of an inoperative tailings piles to de-water piles and assist in groundwater corrective action was made known to EPA by AMC negotiators during the settlement negotiations that ultimately led to the rescission of 40 CFR Part 61, Subpart T.

> *Emission estimates of zero are frequently used for ponded and saturated areas, and that assumption is used throughout this report.*"[34]

As noted above, this conclusion is supported by Method 115, Paragraph 2.1.3 states, "radon flux measurements shall be made within each region on the pile, *except for those areas covered with water*." Paragraph 2.1.3(a) also states, "*Water covered area*--no measurements required as radon flux assumed to be *zero*."[35] As a result and due to the need for active evaporation ponds during site remedial action efforts, EPA concluded:

> "*EPA does not intend that the expeditious radon cover requirement extend to the areas where evaporation ponds are located*, even if on the pile itself, to the extent that such evaporation pond is deemed by the implementing agency (NRC or an affected Agreement State) to be an appropriate aspect to the overall remedial program for the particular site involved."[36]
>
> To support this decision, EPA stated, with respect to evaporation ponds:
>
> "this decision is bolstered by the absence of any evidence that there is a significant public health risk presented by the radon emissions from these evaporation ponds during the period they are employed as part of the overall remediation of the site."[37]

In addition, in the Subpart W portion of the rulemaking, EPA reaffirmed this position by concluding:

> "*EPA reiterates that the Agency does not intend the expeditious radon cover requirement to extend to areas where evaporation ponds are located*, even if on the pile itself, to the extent that such evaporation pond is deemed by the implementing agency…to be an appropriate aspect of the overall remedial program for the particular site."[38]

The logic of this conclusion is equally applicable to such ponds or impoundments that are licensed by NRC or its Agreement States as "an appropriate aspect" of the operational uranium recovery program at the particular site. Therefore, based solely on the analysis provided by EPA in its Subparts T and W administrative rulemaking records, Cotter reiterates its position that Subpart W standards and work practices do not apply to conventional uranium milling site evaporation or settling ponds as referenced in the Information Request.

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[34] United States Environmental Protection Agency, *Final Rule for Radon-222 Emissions from Licensed Uranium Mill Tailings, Final Report, Background Information Document* at 7-9 (August 1986) (emphasis added).

[35] Emphasis added. *See also* Method 115, Paragraph 2.1.6 *Radon Flux Measurement*, ("The radon collector is placed *on the surface* of the pile area to be measured and allowed to collect radon for a time period of 24 hours. The detailed measurement procedure provided in Appendix A of EPA 520/5-85-0029(1) *shall be used* to measure the radon flux on the uranium mill tailings except the *surface of tailings* shall not be penetrated by the lip of the radon detector as directed in the procedure, rather the collector shall be carefully positioned *on a flat surface* with soil or tailings used to seal the edge") (emphasis added).

[36] *Id*.

[37] *Id*.

[38] 56 Fed. Reg. 67561 (emphasis added).

**4(a). identify whether the "continuous disposal" method is used, 40 C.F.R. Section 61.252(b)(2) is used;**

**Response to Question #4(a):** As stated above in the Preamble and the Response to Question #3, conventional uranium milling sites utilize a variety of facilities, some of which actively receive and store uranium mill tailings and some of which do not. For example, at the Cotter site, the Primary Impoundment actively receives uranium mill tailings during mill operational periods, but the Secondary Impoundment, Water Distribution Pond and New Pond 3 do not. Thus, at the Cotter site, while all wastes generated on-site are classified as 11e.(2) byproduct material, the milling process generates a defined waste stream known as uranium mill tailings (as defined in the Response to Question #3(c)) and other waste streams including process wastewater that are not classified as uranium mill tailings.

With respect to the site's uranium mill tailings impoundment, it is logical to determine that, to the extent it is actively receiving and storing tailings, such an impoundment would be subject to either Subpart W radon flux limit or one of the two work practice standards depending on their date of construction. However, unlike the site's uranium mill tailings Primary Impoundment, which receives tailings from time-to-time and which may or may not at any particular time be actively receiving tailings, the Cotter's site's evaporation and other similar ponds merely receive groundwater remediation liquids and process wastewater pending final disposition via evaporation or, in some cases, recycling for use in the conventional milling process.

Additionally, it is important to note that EPA's Subpart W analysis has determined that two forty (40) acre tailings impoundments operating at any one time are adequately protective of public health and safety. As a result, EPA should permit the use of whatever size and number of evaporation or other ponds or impoundments, because the Subpart W rulemaking concluded that even water covered tailings are a zero source term. As stated above, the information requested is provided in the table below.

| **Mill Site Facility** | **Date of Construction** | **Purpose of Operation** | **Operational Status** | **Does "Continuous Disposal" Apply?** |
|---|---|---|---|---|
| Primary Impoundment | 1979 | Continued placement of new tailings and other 11e.(2) materials | Standby | No |
| Secondary Impoundment | 1980 | Evaporation, groundwater remediation. Retention of Old Tailings | N/A | N/A |
| Water Distribution Pond | 1988 | Evaporation, temporary storage of 11e.(2) | N/A | N/A |
| New Pond 3 | 2008 | Temporary storage of storm water runoff | N/A | N/A |

**4(b). describe the mechanical methods used to dewater tailings, the process used to dispose of tailings, the precise location of any and all disposal areas used for dewatered tailings, and the method used to cover such tailings;**

**Response to Question #4(b):** This portion of Question #4 is inapplicable to evaporation or settling ponds as referenced in the Information Request, because these facilities do not receive *mill tailings*. As stated above, conventional uranium milling sites utilizing evaporation ponds, settling ponds or catchment basins generate process wastewater that requires a waste management program that does not resemble the program used for management and storage of uranium mill tailings. While uranium mill tailings impoundments are designed specifically to meet UMTRCA's mandatory long-term closure requirements as delineated in 10 CFR Part 40, Appendix A and 40 CFR Part 192, evaporation or other ponds or impoundments do not have similar requirements as they are not designed to meet any such long-term closure requirements. Traditionally, conventional uranium mills utilize such ponds or impoundments on a temporary basis until their usefulness is exhausted; normally, this occurs at the conclusion of active operations and/or groundwater corrective action prior to license termination. At such time, these ponds or impoundments are reclaimed and tested to ensure that appropriate site soils standards are met. EPA distinguishes between uranium mill tailings piles/impoundments and evaporation or other ponds/impoundments in its Subpart W rulemaking:

> "The regulations contemplated by this notice seek to control the emission of radon-222 by requiring the installation of an earthen cover over the disposal piles as expeditiously as practicable considering technological feasibility. However, there are other aspects to the UMTRCA regulatory scheme, including the long-term maintenance of the piles (once controlled) against erosion, and the reclamation and maintenance of groundwater…*These actions entail the use of evaporation ponds that in some instances….have been placed directly upon the disposal site*."[39]

This language demonstrates that, while stressing the need for a "cover" on tailings disposal areas, EPA also anticipated "ancillary" facilities such as evaporation ponds that do not involve the storage of tailings, but rather are used to be a part of the site's remedial program do not need to be subject to the expeditious radon cover requirement while in active use. This is reflected in EPA's subsequent statement in this rulemaking:

> "EPA does not intend that the expeditious radon cover requirement extend to the areas where evaporation ponds are located, even if on the pile itself, *to the extent that such evaporation pond is deemed by the implementing agency (NRC or an affected Agreement State) to be an appropriate aspect to the overall remedial program for the particular site involved*."[40]

By distinguishing between these two types of facilities, EPA demonstrates that the requirements imposed upon uranium mill tailings piles/impoundments (Subpart W), do not apply to other "ancillary" site facilities such as evaporation or other ponds or impoundments.

[39] *See* Footnote 10 infra.
[40] *See* Footnote 11 infra.

Cotter does not use any mechanical methods for dewatering. Typically such methods are defined by the use of filter belts, drum filters, disk filters, plate and frame filters and paste technology, among others, which methods Cotter does not use.

With respect to the Cotter conventional uranium milling site's facilities, the information requested above is summarized in the table below.

| **Uranium Mill Site Facility** | **"Dewatered Tailings" Requirements Applies?** | **Mechanical Method for Dewatering** | **Disposal Process** | **Tailings Cover Method** |
|---|---|---|---|---|
| Primary Impoundment | No | N/A | Slurry deposition of tailings | Truck placement of earthen cover as needed |

**4(c). provide *all* disposal records maintained by you, including any records that reflect the manner of disposal and the method of covering such tailings;**

**Response to Question #4(c):** The scope of the disposal records provided in Response to Question #4(c) is strictly limited to the types of facilities used at conventional uranium milling sites that can be classified as uranium mill tailings piles/impoundments. As stated above in the Response to Question #3, conventional uranium milling processes generate different waste streams that require different waste management programs. Initially, the primary waste stream generated by conventional uranium milling processes is uranium mill tailings, which are described in the Response to Question #3. These tailings are stored and managed in uranium mill tailings piles/impoundments for which Subpart W's radon flux limit and work practice standards were promulgated. Then, conventional uranium mill processes generate process waste water streams that are transferred from the mill process facility to any licensed impoundment, including evaporation or settling ponds, for final disposition by evaporation or recycling for future use. At no time do these ponds/impoundments receive what are traditionally referred to as mill tailings. Additionally, these ponds/impoundments were expressly excluded from the scope of Subpart W by EPA during its administrative rulemaking and, thus, are not included in the scope of Cotter's response to this question.

Cotter tracks additions of solid materials placed in the Primary Impoundment. As of the date of this Response, the total ore processed and slurried to the Primary Impoundment is 937,845 tons. Direct disposal of 11e.(2) materials has to date totaled 982,952 tons. Cotter evaluates the physical and radiological properties of non-slurried materials and places those materials in the Primary Impoundment, usually by dump truck, in accordance with requirements for size, location and potential to emit radon. These disposal practices are in accordance with the application for license renewal, license conditions and procedures. These activities have been found to be protective of human health and the environment.

The records maintained by Cotter for such activities include operational shift reports, daily, weekly and monthly inspections and measurements, other disposal records and summaries of quantities. These records are quite voluminous and can be provided to EPA only after considerable effort and expense on Cotter's part. Cotter therefore requests that EPA be more specific about the type of record sought.

**4(d). provide all emissions data collected by you, or anyone working on your behalf, that show that emissions from disposed materials have "emissions consistent with applicable Federal standards" as defined in 40 C.F.R. § 61.252(a);**

**Response to Question #4(d):** As a preliminary matter, this portion of Question #4 is extremely vague as previous questions have specifically identified the "materials" to which they applied; in most cases, uranium mill tailings. However, this portion merely references "disposed materials." As stated in Footnote 17 above, there is a difference between 11e.(2) byproduct material that is and that is not subject to Subpart W requirements.[41]

With that said, Cotter's response to this portion of Question #4 is strictly limited to the site's uranium mill tailings Primary Impoundment that receives tailings for storage and management, either now or at a previous time. As stated above, Cotter's site evaporation or settling ponds as referenced in the Information Request are not subject to the Subpart W radon flux limit or work practice standards, because they do not receive and store tailings. Please see the Preamble and the Response to Question #3 for additional discussion.

**4(e). provide information to demonstrate and describe the method of complying with the requirement that there be no more than 10 acres uncovered at any one time, as specified in 40 CFR Section 61.252(b)(2);**

**Response to Question #4(e):** This portion of Question #4 requests processes and procedures for complying with 40 CFR Part 61.252(b)(2)'s requirement for the "continuous disposal" requirement. As stated above, Cotter's response to this request is strictly limited to the mill site's uranium mill tailings Primary Impoundment for a number of reasons. First, as stated throughout this Response, Cotter's position is that Subpart W's radon flux limit or work practice standards do not apply to conventional uranium milling site evaporation, settling or other ponds and impoundments. Evaporation ponds are designed to handle process waste water or waste that is almost entirely, if not entirely, composed of water. In any event, evaporation ponds do not require covers when they are in use during active operations or for groundwater corrective action programs. Further, as process wastewater is continuously flowing into these ponds and water does not remain in one portion of the pond over time, it is impractical to employ a "partial cover" requirement.

In addition, as stated above, EPA's Subpart W administrative rulemaking record expressly excludes evaporation ponds from its radon flux limit and work practice standards due to their necessary role in site activities and the lack of any evidence of a potential radon emissions hazard. Evaporation ponds have been identified by EPA as an integral part of site operations and reclamation at conventional uranium mills, including active uranium ore processing and groundwater corrective action programs. As a result, EPA determined that, "EPA does not intend that the expeditious radon cover requirement extend to the areas where evaporation ponds are located…."[42]

Cotter has no uranium mill tailings impoundment constructed after December 15, 1989 and is therefore not subject to the work practice referenced in Question 4(e).

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[41] *See* Footnote #17 infra.
[42] *See* 56 Fed. Reg. 67561 (December 31, 1991).

**4(f). provide proof that your activities comport with the requirements of EPA regulations found at 40 C.F.R. § 192.32(a), including all pertinent documents and correspondence to and from the Nuclear Regulatory Commission (NRC);**

**Response to Question #4(f):** This portion of Question #4 requests evidence or "proof" that Cotter's conventional uranium milling site comports with EPA regulations at 40 CFR § 192.32(a). Cotter's position on this portion of Question # 4 is that 40 CFR § 192.32(a) does not apply to any site evaporation, settling or other similar ponds/impoundments.

Initially, as a general matter, 40 CFR Part 192 entitled *Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings* was promulgated by EPA pursuant to UMTRCA as part of its Congressional mandate to issue generally applicable standards for uranium mill tailings impoundments. Section 192.32(a) (part of Subpart D entitled *Standards for Management of Uranium Byproduct Materials Pursuant to Section 84 of the Atomic Energy Act of 1954, as Amended*) specifically applies to uranium mill tailings impoundments that are engaging in active processing operations. These standards apply specifically to "surface impoundments subject to this subpart." Throughout Section 192.32, EPA refers to these surface impoundments as "uranium mill tailings and impoundments" and proceeds to discuss the requirements for such piles/impoundments, including emplacement of *permanent* radon barriers/covers. These requirements traditionally have been applied to "surface impoundments" that contain uranium mill tailings, as discussed throughout this Response, and not to facilities such as evaporation or settling ponds. These requirements are critical to uranium mill tailings impoundments because such impoundments are subject to Section 83 of the AEA's requirements for long-term surveillance and monitoring, while evaporation ponds that are part of the site to be transferred do not have such stringent requirements for covers and stabilization.

Next, as stated several times in this Response, Cotter asserts that the Subpart W requirements, which are implicated in this portion of Question #4, do not apply to conventional uranium milling site evaporation, settling or other ponds/impoundments. Please see the Preamble and the Response to Question #3 above and under cover dated March 13, 2009 for more discussion.

Finally, given that 40 CFR Part 192 and other provisions of NRC and EPA regulations pertaining to uranium mill tailings recognize that site radon emissions are a potential threat to public health and safety, it is important to note that EPA's Subpart W rulemaking expressly states that, due to the water content in such ponds/impoundments, potential radon emissions default to zero and have not exhibited any evidence that they pose a significant radon emissions risk. Please see the response to Question #3 above for additional discussion.

Cotter provides the State of Colorado with the measurement results and dose calculations showing that the facility complies with 40 CFR §192.32(a) standards in the Annual Reports. Cotter maintains a State of Colorado Department of Public Health and Environment (CDPHE) detection monitoring program. Cotter has received a Notice of Violation for groundwater contamination migrating off-site and is currently in a corrective action investigation program approved by the State of Colorado. The Canon City milling site is a zero discharge facility for surface waters. Cotter has received approval from CDPHE for construction of all on-site impoundments. All of the above are subject to annual audits and reviews by CDPHE to ensure compliance with all applicable State lead regulations.

**4(g). provide a copy of all construction and modification applications required by 40 C.F.R. § 61.07, a copy of all notifications of startup pursuant to § 61.09 and a copy of any approvals issued pursuant to and § 61.08 or any state authority, indicating by whom these approvals were issued (state or federal officials);**

**Response to Question #4(g):** Cotter made application to CDPHE to process, store and dispose of radioactive materials. Included in the application and associated documents were the operational boundaries for the Primary Impoundment. Cotter has not enlarged the Primary Impoundment since its construction was completed in 1979, but Cotter operates the impoundment within the boundaries specified in the License, e.g. creating new tailings surface area via slurry placement of tailings, among others. As long as Cotter operates the Primary Impoundment within the boundaries established by license condition no "changes" have been made that would require Administrator approval. With respect to other site facilities such as evaporation or settling ponds referenced in the Information Request, please see the Response to Question #4(f) above.

**4(h). provide copies of any other permits that have been applied for and/or received under the Clean Air Act;**

**Response to Question #4(h):** Copies of permits issued under the Clean Air Act are part of this Response's document production and are referenced on Attachment 2 to this Response.

**4(i). provide copies of any licenses or license applications for construction or operation issued by or filed with the NRC;**

**Response to Question #4(i):** As stated above, Cotter's Cañon City conventional uranium milling site is licensed under the AEA, as amended, by the State of Colorado pursuant to an AEA Section 274 Agreement with NRC whereby NRC would relinquish regulatory authority over uranium milling and 11e.(2) byproduct material within the State's boundaries. Pursuant to this Section 274 Agreement, the State of Colorado has served as the regulatory authority for issuing permits to Cotter under the AEA since 1968. As a result, Cotter is not in possession of any licenses/ permits issued by NRC. Cotter has provided copies of licenses received from the Atomic Energy Commission between approximately 1958 and the late 1960's and are referenced in Attachment 2 to this Response.

**4(j). provide copies of any other licenses issued by states under state authority;**

**Response to Question #4(j):** As stated in the Response to Question #4(i), the State of Colorado has served as the regulatory authority for issuing licenses/permits under the AEA for conventional uranium milling operations since 1968. Copies of license and/or permits issued by the State with respect to the facilities identified in Response to Question #3(a) above include documents referenced on Attachment 2 to this Response.

**4(k). provide current license status, indicating whether any license modifications are planned or have been agreed to;**

**Response to Question #4(k):** Cotter's license, Amendment 50, has an expiration date of January 30, 2012 and is in full force and effect. Cotter will propose groundwater corrective action by January, 2010, which may take the form of a commitment letter. Cotter plans to renew the license in accordance with regulation and guidance. It is possible that during the license renewal process Cotter will request a license amendment to process ores beginning in 2014. Cotter will

request CDPHE concurrence with changes to the Site Solids and Liquids Management Plan and for approval of a work plan for interim closure of the Secondary Impoundment. Cotter has a pending request before CDPHE for wood-stave tank removal. Other license modifications, either through license amendment or letter of commitment, may be made to resolve EPA 5-year review issues.

**4(l). indicate whether all facilities and ponds/impoundments were constructed and are being operated in accordance with all permits and federal regulations;**

**Response to Question #4(l):** The Cañon City Milling Facility was constructed in accordance with all federal and state regulatory requirements in effect at the time of construction. The State of Colorado in 2007 determined that there is "physical evidence pointing to an impoundment release. Groundwater monitoring of the impoundment wells shall continue." The finding has not been finalized and Cotter fully expects that the finding will be withdrawn once all data has been evaluated.

**4(m). provide a description of any pollution control equipment and any pollution control methods utilized by you; and**

**Response to Question #4(m):** Commencing with the use of the Primary Impoundment in 1979, Cotter has utilized a variety of control and minimization methods for both particulate and radon control. These methods have consisted of, but are not limited to, water cover and spraying, dirt cover, soil tactifiers and mulch. These methods have been used as required by State regulations, Cotter's radioactive materials license, air permits and the Remedial Action Plan (RAP). The table below provides a summary of the aforementioned control and minimization methods:

| Mill Site Facility | Purpose of Operation | Lining Material (if applicable) | Pollution Control Equipment |
|---|---|---|---|
| Primary Impoundment | Continued placement of new tailings and other 11e.(2) materials | Clay, Hypalon® | Earthen material, water sprays, soil tactifier, wind fences, and water cover |
| Secondary Impoundment | Evaporation, groundwater remediation. Retention of Old Tailings | Clay, Hypalon® | Earthen cover and water cover |

**4(n). state whether each of Cotter's uranium mills and uranium in-situ leaching facilities is subject to the requirements of the National Emissions Standard for Hazardous Air Pollutants (NESHAP) for Radon Emissions from Operating Mill Tailings as defined under 40 C.F.R. §§ 61.250 et seq. If not, explain why not.**

**Response to Question #4(n):** As discussed above, EPA's request for a statement on whether any of Cotter's "uranium mills" and "uranium in-situ leaching" facilities are subject to NESHAP standards is inappropriate. Initially, as stated above, neither Cotter nor any of its current affiliated companies currently owns or has operated any uranium in-situ leaching facilities in the United States of America. Then, with respect to "uranium mills," Cotter reiterates that only its conventional uranium mill site uranium mill tailings Primary Impoundment is subject to the aforementioned NESHAP standards and such standards do not apply to other site facilities, including evaporation or settling ponds as referenced in the Information Request. Specifically,

the following impoundments are not subject to the referenced NESHAPs standards: Secondary Impoundment, Water Distribution Pond and New Pond 3.

The CDPHE determined that the Secondary Impoundment is required for groundwater remediation at the site pursuant to the provisions of the CERCLA remedial action plan (RAP), and as shown by the following language from Sections 4 and 5 from Appendix A, RAP to the Consent Decree, Order, Judgment and Reference to Special Master, Civil Action No. 83-C-2389, *State of Colorado v. Cotter Corporation*, United States District Court, District of Colorado which states, in part:

> In conjunction with the main impoundment and water distribution pond, the secondary impoundment will provide the capability to manage the accumulation of excess water, if any, which results from the implementation of this RAP.

In addition, Cotter's Radioactive Materials License, Amendment 13, issued by CDPHE March 12, 1981, contained the following language:

> 21.1.1 The licensee shall eliminate the liquid effluents presently being released from all remaining old tailings piles by completing the removal of these piles to the new Secondary Impoundment *without reprocessing* by March 31, 1983, as stated in LC 11.26, but no later than March 31, 1984 (emphasis added).

The December, 1995 Liquid and Solids Management Plan, incorporated by reference into the Radioactive Materials License, contains the following language:

> The Evaporation Area of the Secondary Impoundment will be used to evaporate liquids from the following remedial and milling operations:
> - water from the water distribution pond
> - solution pumped directly from the Primary Impoundment
> - solution from the Primary Impoundment reprocessed through the solvent extraction circuit
> - any solution generated from the dewatering of solid wastes
> - other compatible liquids low in suspended solids
>
> No additional solid tailings will be placed in the Secondary Impoundment Evaporation Pond.

The maximum pool level will be regulated via an overflow spillway which discharges into the Primary Impoundment to ensure no more than a nominal 2 feet of solution will be placed over the entire surface of the pond.

Therefore, Cotter reiterates its position that EPA must look at the specific facilities at each conventional uranium mill site to determine which facilities indeed are subject to the aforementioned NESHAP standards. Please see the Preamble and the Response to Question #3 for additional discussion.

In addition, with respect to its uranium mill tailings Primary Impoundment, Cotter notes that the date of construction of the Primary Impoundment is determinative as to whether the Subpart W radon flux limit or work practice standards are applicable. If the impoundment were constructed prior to December 15, 1989, then the Subpart W NESHAP standard of 20 $pCi/m^2$-s is applicable. Cotter's Primary and Secondary Impoundments were both constructed between 1976

and 1980, over ten (10) years before the December 15, 1989 date. Further, as stated above, Cotter reiterates that the Primary Impoundment is the only impoundment at the Cotter mill site which is subject to the aforementioned NESHAP standards to the extent that it is receiving mill tailings from active uranium milling operations. The Secondary Impoundment has only received tailings which were moved between 1981 and 1983 from the old tailings ponds area, and it never received on-going operational tailings at any time.

Cotter measured radon flux from the 11e.(2) waste disposal site and reported a flux rate to CDPHE for the Secondary Impoundment. Such measurements are contained in the documents included with this Response. At the time Cotter took the measurements, the company was negotiating with the State of Colorado regarding the continued use of the Secondary Impoundment for evaporation during operational periods. Since the Secondary Impoundment was not licensed to accept new uranium mill tailings, it was not then, and it is not now, subject to the Subpart W standard. Cotter undertook the radon flux measurements to comply with its license-based "as low as reasonably achievable" (ALARA) requirements. Radon flux levels at the Secondary Impoundment were shown by the test to exceed ALARA goals. Accordingly, Cotter placed earthen materials to reduce radon levels to the workers in that area. Cotter then performed an additional test in 2009 and determined that radon levels were in compliance with the ALARA goals.

**Question #5: Submit complete results of all air and radon emission tests, emissions characterizations, or emissions studies, conducted or attempted at each facility since January 1, 1980. Indicate whether these tests were conducted as specified in 40 C.F.R. §§ 61.253 and 61.255. Include with this information relevant operating parameters measured and all data recorded during these tests or studies, including the water level and moisture content as well as how it was determined that the "long term radon flux from the pile" was represented during the time of measurement, pursuant to 40 C.F.R. Part 61, Appendix B, Method 115, 2.1.1;**

**Response to Question #5:** As a preliminary matter, the language of Question #5 is extremely broad and vague. It references Subpart W NESHAPs requirements, but is also written in a fashion that could be interpreted to ask for *any and all* emissions tests, data, studies or similar information for the last three decades, whether or not such items are required by Subpart W. Thus, in an effort to be reasonably responsive to EPA's Information Request, Cotter is including in its document production several reports and other documents, including air monitoring data from several sources and data from other media that are not subject to the Subpart W NESHAPs regulations. For example, in addition to the NESHAPs reports containing radon flux measurements from 1990 to 2007, which also are responsive to Question #4(d) and which are contained at documents numbered Cotter 0026947-0027727, Cotter has included its annual reports submitted to CDPHE from 1980 to the present (*see e.g.*, documents numbered Cotter 0000001 - 0012976). In addition, Cotter is providing documents that contain emissions data for several facilities which are not subject to the Subpart W NESHAPs regulations (*see, e.g. only*, the Risk Assessment reports at documents numbered Cotter 0022125-0024947; and air emissions data for other sources not subject to the Subpart W NESHAPs regulations, *e.g.*, Cotter 0025269-0025656; 0029609-0029753; 0030076-0030139; 0030233-0030286).

Cotter reiterates that EPA expressly excluded evaporation or other similar ponds or impoundments from the scope of Subpart W during its administrative rulemaking, and that the Primary Impoundment is the only facility at the Cotter uranium mill which is subject to the Subpart W radon flux requirements. Please see the Preamble and the Response to Question #3

above for additional discussion. Please see documents referenced in Attachment 2 to this Response.

**Question #6: Provide copies of all monthly and annual compliance reports prepared and submitted to EPA, as specified in 40 C.F.R. § 61.254, or similar reports submitted to all other regulatory agencies. To the extent, that you have not submitted any such report(s) provide the reasons for not having done so, and reasons, if any, you claim as a basis for not submitting such reports.**

**Response to Question #6:** For the reasons discussed above, the scope of Cotter's response to this question is strictly limited to the timeframe within which its uranium mill tailings impoundment was actively operating, because, pursuant to 40 CFR § 61.254, a uranium recovery licensee is only required to comply with this reporting requirement to the extent that they are "[t]he owners or operators of *operating existing* mill impoundments…."[43] As stated throughout this Response, Cotter's uranium mill tailings impoundment currently is not operating and have not actively received tailings from either conventional uranium milling, alternate feed processing or direct disposal since March, 2006. As a result, Cotter's response to this question will apply to the timeframes when such impoundment was actively receiving tailings. See documents referenced in Attachment 2 to this Response.

[43] *See* 40 CFR § 61.254 (emphasis added).