RioTinto
Kennecott Eagle Minerals
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April 28, 2009

Ms. Rebecca Harvey, Director
Region 5, UIC Branch
United States Environmental Protection Agency
77 West Jackson Boulevard
Chicago, Illinois 60604-3507

Re: **Response to March 13, 2009 Request for Inventory and Other Information Concerning Proposed Kennecott Eagle Mine**

Dear Ms. Harvey:

I am writing in response to your letter dated March 13, 2009. Your letter requested that Kennecott provide EPA with a "Class V" UIC well inventory form for the backfill stage of the mine operation. Your letter also requested additional technical information about the mine backfill operation and water usage in the mine.

This letter provides you with the requested additional technical information. In addition, this letter explains why we believe UIC regulations do not impose any inventory or other regulatory requirements on the Eagle Mine itself, or underground operations that will occur within the mine. Rapid reflooding and the highly unlikely potential for use of the mine for temporary emergency storage of TDRSA overflows do not implicate UIC requirements at this time. Even under the most expansive reading of the UIC regulations, Kennecott's activities may implicate only the UIC Class V permit by rule well inventory requirements, not the UIC permitting requirements.

I. Technical information regarding the mine.

In order to properly frame Kennecott's backfill and water usage from a regulatory standpoint, it is first necessary to place in context the technical aspect of these components of mine operations. Accordingly, the answers to each of the "Technical Questions Regarding the Mine" attached to your March 13 letter are as follows:

Questions about water utilized during various portions of the mining process:

- **What processes will utilize water underground?**

Kennecott will use water underground for dust control through operation of water trucks and in mine equipment for drilling and blasting. The term "mine utility water" collectively describes this water. All such water will be collected underground and removed for treatment or reused as described below. Kennecott will also use a much smaller amount of water to hydrate the cemented rock fill ("CRF") used to backfill primary stopes within the mine. "Stopes" are a series of voids along a mining level in the bedrock where ore has been removed. "Primary" stopes are stopes that will be backfilled with CRF. Secondary stopes are stopes in between primary stopes that will be filled with a mixture of limestone and waste rock from the mine.

This information is contained within Section 1 and Figures 2 and 3 of Appendix B of the Kennecott Eagle Minerals Company Class V Permit Application submitted to EPA two years ago in April 2007.

- **What is the source of the water for each of these processes?**

Water will enter the mine through a network of poorly-connected "features" (i.e., cracks and fissures) in the bedrock surrounding the mine. This water will be collected in sumps within the mine, and pumped to the WWTP for treatment at the surface. Treated water will meet all SDWA MCLs. Kennecott will then transmit some of this treated water back into the mine through pipes running along the mine decline. A relatively small amount of this water will go to the CRF mix plant. The rest will be loaded onto trucks for the transport and use in the mine as the utility water described above. This utility water will eventually mix with mine inflow water within the mine and be collected in the same sumps for treatment at the WWTP. Therefore, utility water usage within the mine during mining operations is essentially a closed-loop water recycling operation. In terms of water balance, there will be much more water coming out of the mine than going into the mine for reuse as utility water and in the CRF plant. Specifically, approximately 124 gpm of recycled utility water will be transmitted to the mine from the WWTP, and approximately 207 gpm (base case predicted mine inflow of 75 gpm plus 132 gpm recycled utility/CRF water) to 346 gpm (132 gpm recycled utility/CRF water plus 215gpm upper bed mine inflow prediction) will be pumped from the mine.

All of this information is contained within Section 1 and Figures 2 and 3 of Appendix B of the Kennecott Eagle Minerals Company Class V Permit Application submitted to EPA in April 2007.

- **How will the water for each of these processes be brought underground?**

See response above.

- **How much water is expected to be brought underground for each of these processes?**

As referenced above, Kennecott developed a water balance for the Eagle Mine Project. The balance is contained within Figures 2 and 3, Appendix B of the Kennecott Eagle Minerals Company Class V Permit Application.

As described in Figure 3, approximately 124 gpm will be used for utility water in the underground mine and between 0 and 8 gpm of water will be used for the CRF mix plant since it will be an intermittent operation (Note 1 on Figure 3).

- **How are each of these processes expected to affect the water?**

As described in Section 1, Appendix B of the Kennecott Eagle Minerals Company Class V Permit Application, the chemical characteristics of the composite mine drainage water (i.e., mine inflows and used utility water) will depend on the background characteristics of the groundwater that infiltrates into the mine and the impact of mine utility water contacting the mine workings. The composite mine drainage water will contain readily soluble substances, mineral oxidation products, and colloidal materials that will result from the short term contact between water and naturally occurring minerals present in the mine. A water quality summary of upper bedrock groundwater, lower saline bedrock groundwater and composite mine drainage are contained within Table 1-1, Appendix B of the Kennecott Eagle Minerals Company Class V Permit Application.

The chemical characteristics of the upper bedrock and lower saline bedrock groundwater in the area of the Eagle mine were determined from sampling and analysis work conducted by Golder Associates, Ltd. This information is provided in Attachment 1, Appendix B of the Kennecott Eagle Minerals Company Class V Permit Application. The incremental increases in concentrations of the various constituents of the groundwater due to contact with the mine workings were calculated based on geochemical characterization studies conducted by Geochimica Inc. This information is described in Attachment 2, Appendix B of the Kennecott Eagle Minerals Company Class V Permit Application.

- **What is the fate of these wastewaters?**

As described in Section 1.1.1, and Figures 2 and 3, within Appendix B of the Kennecott Eagle Minerals Company Class V Permit Application and as explained above, mine drainage water will be collected in underground sumps and will be pumped to the Contact Water Basins (CWBs). Water from the CWBs will be pumped to the WWTP. A portion of the WWTP discharge is then recycled back to the mine as utility water. Thus, there is no disposal or storage of wastewater within the mine itself during mine operations: all water entering the mine is pumped to the surface and treated, with a small amount recycled for use as utility water.

Questions regarding the mine backfill process:

- **Describe the mine backfill processes proposed for the project.**

The Eagle project will utilize two types of backfill material: Development Rock Backfill, and Cemented Rock Backfill (CRF).

Development Rock Backfill will be placed in secondary stopes, and consists of blasted material removed during excavations to access the ore zone and limestone. Development Rock Backfill will come either directly from an underground excavation to the backfill area (i.e. – the material will never exit the mine), or, if a backfill area is not immediately available, it will come from the Temporary Development Rock Storage Area (TDRSA) on surface. All material placed on the TDRSA will be reclaimed and placed back underground as backfill areas become available. There is no water usage involved with any aspect of this process. Development Rock Backfill is delivered to the backfill areas underground with underground trucks. These trucks dump the backfill materials into the stopes.

CRF consists of aggregate, Portland cement, and a small amount of water. All solid material required to make CRF will be delivered dry to an underground mix plant via a series of chutes drilled through the rock, connecting the underground CRF plant to a surface bulk storage facility.

Importantly, the CRF is not a fluid or semi-solid. Aggregate in the CRF is bound together by the cement and provides the bulk to the concrete and a surface for the solids to form. Cement is largely comprised of calcium silicate. When the aggregate cement mixture is combined with water to hydrate the lime water molecules break down to form hydroxide ions which in turn forms calcium silicate hydrate and calcium hydroxide, producing a solid which comprises the strength of the cemented rock backfill. Unlike conventional cement used for foundations or the paste or tailing slurry backfills contemplated by the Class V mine well requirements, KEMC will not be piping or pouring the CRF and thus much less water will be required. The CRF is a solid with plastic properties with no free water. In this regard, the CRF is being designed consistent with ASTM standard C143 for essentially a zero to very low slump. Due to the lack of fluid properties, like the Development Rock Backfill, CRF will be delivered from the underground mix plant to the underground backfill site via a dedicated fleet of dump trucks, dumped out and then a fleet of underground bulldozers work to distribute and compact the CRF into the underground voids.

- **At what stage of the mining operation does the backfill process begin?**

Backfill processes begin after the construction phase and shortly after the start of production and continue throughout the mine life. As ore material is extracted, the void is immediately filled with backfill material, prior to re-commencement and continuation of mining activities.

- **What components (i.e., rock, water, fly ash, etc.) will make up the backfill?**

Development Rock Backfill consists of development rock and limestone. CRF consists of washed aggregate, Portland cement, and small amounts of water.

- **How will each of the various components be physically brought into the mine?**

Development Rock Backfill is moved and delivered to the backfill areas underground with a dedicated fleet of underground trucks.

For the CRF, Portland cement and aggregate will be delivered dry through drilled boreholes acting as chutes from the surface to the underground backfill plant. Water will be supplied via the common mine-water distribution system (HDPE piping) running through the decline to the underground backfill plant.

II. The mine in and of itself is not a "well." Further, the bedrock formation surrounding the mine is not an aquifer or underground source of drinking water, and there will be no subsurface emplacement of fluids in the mine during mine operations. Therefore, UIC requirements do not apply to construction of the mine itself, to Kennecott's underground backfill, or to other operations during mining.

Your March 13, 2009 letter contains the claim that "the mine may qualify as a well" under the UIC regulations. Your letter further notes that the "construction of any well required to have a permit is prohibited until the permit has been issued." Taken together, these statements suggest that EPA is considering requiring an inventory submission and possibly even a permit before construction of the underground mine can begin. This approach would be an unprecedented extension of the existing UIC program that is not supported by the federal Safe Drinking Water Act ("SDWA"), UIC regulations, or EPA studies and guidance concerning UIC issues associated with underground mines. This approach would also be at odds with UIC programs implemented by states that administer their own UIC programs. It would result in EPA deciding, for the first time and decades after Congress created the UIC program, that UIC regulations are the single federal regulatory program for underground mines in the United States, without basis in law or facts.

A. The mine itself is not a "well."

The SDWA UIC provisions (42 U.S.C. § 300h - 300h-1), as implemented in the detailed EPA regulations set forth in 40 C.F.R. § 144, provide no authority for regulating an underground mine – in and of itself – as a "well." The SDWA authorizes regulation of "underground injection" that may lead to "endangerment of drinking water resources." 42 U.S.C. § 300h(d). "Underground injection" is defined as the "subsurface emplacement of fluids by well injection." 42 U.S.C. § 300h(d)(1)(A). UIC regulations define "well" as "a bored, drilled or driven shaft whose depth is greater than the largest surface dimension; or a dug hole whose depth is greater than the largest surface dimension; or an improved sink hole, or a subsurface distribution system." 40 C.F.R. § 144.3. An underground mine is not itself a "shaft" ("a long, narrow, thin often vertical passage sunk into the earth" (American Heritage College Dictionary)), nor does it have an open surface dimension. An underground mine is not a "subsurface distribution system," because it is not "an assemblage of perforated pipes, drain tiles, or other mechanisms intended to distribute fluids below the surface of the ground." 40 C.F.R. § 143.3. These statutory and regulatory definitions do not, by their plain terms, encompass underground mines as "wells."

Neither does the balance of the UIC regulations include mines within the concept of a well. The UIC Class V regulations (which regulate injection wells associated with mine operations) describe as an example of a Class V well "backfill wells used to inject a mixture of water and sand, mill tailings or other solids *into* mined-out portions of subsurface mines…." 40 C.F.R. § 144.81 (emphasis added). Therefore, these regulations clearly distinguish between mines themselves and wells used in conjunction with mining.

In short, nothing in the plain language of the SDWA or UIC definitional or other regulatory provisions includes the subterranean void created by extraction of ore as a "well," nor can such an interpretation be reasonably derived from this language.[1]

EPA studies and guidance have also emphasized this clear distinction between mines themselves and "wells" that may be used in conjunction with mining.

1987 EPA Study

In 1987, EPA prepared an assessment of Class V well injection practices in the United States, as required by the 1986 amendments to the SDWA. The assessment summarized the Class V well inventory reports submitted under both the federally-delegated and state-run UIC programs to date, and included technical recommendations for use in development of future regulations. This study, documented in a report entitled "Class V Injections Wells – Current Inventory; Effects on Groundwater; and Technical Recommendations" ("1987 Report"), is, in many respects, the foundational document in EPA's administration of the Class V UIC program, reflecting the agency's initial effort to identify, classify and evaluate risks associated with the many different types of Class V wells in use throughout the country.

In this report EPA identified wells used in the mining industry as a distinct category of Class V wells. (1987 Report, Executive Summary, Table I.) EPA stated that mining wells are wells "used to inject a mixture of fluid and sand, mill tailings, and other solids into mined-out portions of subsurface mines...." (*Id.*) (Emphasis added.) EPA further identified the mine itself as the receiving "injection zone," as opposed to the well. (*Id.*) Therefore, EPA reiterated the regulatory distinction between mines and "wells," very early on in its application of the UIC program to the mining industry.

1999 EPA Study

In 1999, EPA published another study of wells regulated under the Class V program, again with the purpose of evaluating risks associated with these wells and determining whether additional regulation was warranted. Once again, EPA articulated the distinction between the underground mine itself and regulated wells used to inject fluid mixtures into the mines. Vol. 10 of Class V Underground Injection Control Study (September 1999) ("September 1999 Report") (pg. 1). EPA further clarified that mine shafts, as well as pipelines within a mine, may be considered wells, *if* used to transmit fluid mixtures for injection into underground mines. (*Id.*) Therefore, shafts, pipes and potentially other structures connecting the mine to the surface or connecting different areas within a mine may qualify as Class V "wells" *only if* utilized for injection/transmission of backfill or other materials that qualify as "fluid."[2] But, EPA maintained the continuing, long-standing distinction between the mine itself and "wells" accessing the mine, including shafts or other appurtenances that could be used as injection conduits. As to this latter category of potential wells, it is important to emphasize that UIC Class

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[1] Importantly, the EPA Environmental Appeals Board recognizes that the UIC program and permitting process is "narrow in its focus." *In Re* Core Energy, LLC, UIC Appeal 07-02, 2007 WL 4472274 (U.S. EPA Envtl. Appeals Bd. December 20, 2007). Thus, straying from the clear meaning of these regulations to the great extent necessary to bring mines, in and of themselves, with the UIC program's regulatory ambit is fraught with legal infirmities.

[2] 40 C.F.R. § 144.3 defines "fluids" as material that flows or "moves" within formations whether in a liquid, semi-solid, gas or other form.

V regulations apply only to those who "own or operate a Class V well." 40 C.F.R. § 144.81. Therefore, to the extent use of a mine shaft, decline, or pipeline is subject to UIC Class V requirements, such requirements would apply only at such time as the shaft or other appurtenance is used as an injection "well." The regulations have no provisions for a presumptive submission of Class V inventory information for appurtenances which may never be utilized as wells until many years after mine construction, if at all.

States where EPA has delegated UIC authority also make a distinction between the mine and wells that may be used in conjunction with the mine. These states are listed in attached Table 1.

Taken all together then, the SDWA, UIC regulations, EPA's own studies and the approach adopted by UIC-delegated states establish that underground mines are not, in and of themselves, "wells." Therefore, there is no Class V inventory requirement or pre-construction permit required to build the mine itself or conduct ore extraction within the mine.

B. Kennecott's backfill and other underground operations within the mine do not implicate UIC requirements.

The mine itself is not a well. In addition, it is clear that once built, no aspect of underground operations or use of stopes, piping or other appurtenances in conjunction with those operations implicate UIC requirements, because the bedrock formation comprising and surrounding the mine is neither itself an aquifer nor would mining activities within this formation endanger any underground sources of drinking water. Moreover, there will be no subsurface emplacement of fluids anywhere in the mine during normal operations.

As a threshold consideration, it is important to understand that the bedrock formation comprising and surrounding the mine does not qualify as an "aquifer" or an "underground source of drinking water" as defined in UIC regulations, EPA guidance interpreting these regulations or under broadly accepted application of these terms in the technical literature or well-drilling industry. "Aquifer" is defined in 40 C.F.R. § 143.3 as a "geological formation. . .capable of yielding a significant amount of water." "Underground source of drinking water" ("USDW") means an aquifer that has a sufficient quantity of groundwater to supply a public water system – i.e., a system of pipes or other conveyances with at least 15 service connections or regularly serving at least 25 individuals. 40 C.F.R. § 143.3; 42 U.S.C. § 300f.4(A).

UIC regulations do not specify what "significant" water yields are for determining formations that qualify as "aquifers." EPA guidance on the matter maintains the notion that formations yielding as little as 1 gpm qualify as "aquifers" and USDWs for UIC purposes (U.S. EPA, Technical Program Overview: Underground Injection Control Regulations, Appx. B.22 (2002)), but do so without reference or analysis to standard literature on the subject broadly accepted outside the agency. This literature categorizes formations generally into one of three categories: "aquitards," "aquicludes" and "aquifers." In terms of hydraulic conductivity, formations with conductivities of 10^{-5} cm/s and lower do not qualify as an "aquifer."(Freeze and Cherry, 1979).

Importantly, the lower bedrock formation where mining activity will occur does not qualify as an aquifer even if under EPA's overbroad conceptualization of the term. Kennecott's pump testing in the lower bedrock indicates that it would be impossible to put in a well of any reasonable length through the lower bedrock formation and maintain a 1 gpm flow. (The pump tests indicated that it would take a 10,000 foot well through the lower bedrock to maintain a 1 gpm rate.) And using the more broadly accepted understanding of the term, there is no question that both the lower and upper bedrock formations fail to qualify as aquifers and, therefore, a USDW.). Hydraulic conductivities in the lower bedrock (i.e. 300 feet from the top of the bedrock and below) where the mine will be range as low as 10^{-9}cm/s and overall, the bulk matrix hydraulic conductivity of the bedrock is estimated to be about 5×10^{-8} cm/s. Using a nomographic approach developed by the U.S. Dept. of Interior Water and Power Resources Service (1977) this corresponds to a predicted well yield (specific capacity) of about 0.0001 gpm/ft, which is considered infeasible even for low yield domestic supply needs. According to the 1977 DOI report, well yields below 0.01 gpm/ft. are considered poor to infeasible for domestic supply rates. Even upper bedrock (top of bedrock to 300 feet depth) has a bulk hydraulic conductivity of only 2×10^{-6} cm/s, still an order of magnitude below what could be considered an "aquifer" in the technical literature. In addition to insufficient water yields, background water quality in the bedrock – particularly the lower bedrock - effectively precludes use of this formation as a USDW as a practical matter. This water exceeds primary drinking water MCLs for arsenic and secondary drinking water MCLs for chloride, iron, manganese, and TDS, further disqualifying it as a potential USDW as a practical matter. This water is also alkaline, moderately saline, reducing, and very hard. The water is dominated by sodium and chloride concentrations of 1000 mg/l and 2000 mg/l respectively. For all these reasons, there is no supply use within this type of bedrock formation near the mine site (based on a 75 square mile search area).

Clearly then, mine operations will not take place within an aquifer or USDW. And neither will these operations endanger an USDW. First, no aspect of Kennecott's underground operations entails emplacement of fluids into formations or through mine shafts, pipes or appurtenances. As described above, the backfill materials are solid materials that will be placed in the stopes by dump trucks. This material is not capable of "flowing" or movement (unless physically moved by trucks and other equipment), therefore it is not a "fluid." And even if the underground mine operation did entail emplacement of fluids, there is no mechanism for the fluids to migrate up through the upper bedrock formation to the alluvial aquifer. There are no vertical hydraulic gradients measured through the upper and lower bedrock, and the water in these formations has very different chemical signatures. These data, coupled with pump testing done as part of the bedrock hydrogeological characterization, established a very poor connection, if any, between the lower bedrock where mining will occur and the upper bedrock. These tests also established no connection whatsoever between drawdowns in the lower bedrock and the alluvial aquifer. Therefore, even if we assume that fluids of any kind were somehow to flow out of the mine into surrounding bedrock during mine operations (a hydrogeologic and practical impossibility) there is no way for that water to migrate to the alluvial aquifer.

Neither does delivery of dry cement and aggregate to the underground mix plant through chutes extending to the surface does not implicate the UIC program. First, the material is dry and incapable of movement into the glacial and bedrock formations surrounding the boreholes. Thus, the material does not qualify as a "fluid," or a "backfill well used to inject a *mixture* of water and sand, mill tailings or other solids into the mined out portions of subsurface mines." *See* 40 C.F.R. § 144.3, 144.81 (emphasis added). Neither is this material being "emplaced" in any mined out portion of the mine or other formation: these materials are being delivered directly to an underground plant.

Finally, the utility water transmitted underground through HDPE piping is not "emplaced" or distributed into the mine. Instead, this water is continuously reclaimed, treated, and reused in a closed-loop recycle operation that takes more water out of the mine than going in.

In summary:

- The mine itself is not a well. No UIC requirements attach to construction of the mine.
- The lower bedrock formation where mining will take place and the upper bedrock formation above the mine are not aquifers or an USDW.
- There will be no emplacement of fluids into the mine or bedrock surrounding the mine. A small amount of water will be used in the CRF at the mix plant, but this creates a solid material moved in the mine by dump trucks, not through wells. And even if EPA were to depart from the regulatory definition of "fluid" and the definition of Class V mining well (requiring a *mixture* of water and other materials) it is clear that none of the materials in the mine pose a threat to an alluvial aquifer lying on top of the 300 foot thick roof of upper bedrock over the mine.

For all of these reasons, no aspect of mine construction or underground operations implicate the UIC program at all – let alone require an individual permit. Indeed, Kennecott is not aware of any case where EPA or states implementing the UIC programs required individual permits for any aspect of underground mine operations.

III. Emergency use of the mine for development rock storage area overflows and rapid reflooding of the mine to eliminate the potential of acid rock drainage forming in the mine after closure does not implicate Class V or other UIC requirements at this time.

The 1999 EPA study suggests that a certain atypical aspect of mine operations—i.e. use of the piping in the decline to transmit overflow TDRSA water to the mine for temporary storage – and rapidly reflooding the mine during reclamation could implicate UIC regulations.

With respect to potential use of the mine for storage of overflow TDRSA water, however, it is highly unlikely that Kennecott would ever resort to the use of the underground mine workings for any emergency overflows since the existing water retention and collection facilities have been designed to meet the largest of the 100-year 24-hour rainfall event or the 50-year combined rainfall and snowmelt runoff event.. Further, even if such an unlikely event occurred, Kennecott would quickly collect the water and pump it out of the mine after the event. Thus, there is no "emplacement" of the water as contemplated by the UIC program. For these reasons, Kennecott does not believe these activities implicate the UIC program at all. At the very least, and as noted above, Class V well inventory requirements should not attach unless and until such time such a contingency arises—i.e. the point at which Kennecott would become the owner or operator of a well arguable falling within the Class V requirements. .

Neither should the rapid reflooding of the mine during reclamation implicate UIC requirements at this time, if at all. This operation will not take place until perhaps as much as a decade or more from now, and in any event entails the movement of clean water into to the mine to *prevent* conditions that could pose risks to a USDW. As such, only the Class V well inventory and permit by rule provisions should be implicated, and only at such time as the details of this reclamation activity become finalized I light of future conditions. Indeed, it would be impossible to complete an inventory from – let alone a permit application – for the reflooding of the mine until water volumes and content are known.

For all of these reasons, Kennecott does not believe construction, operation or reclamation of the Eagle Mine implicates the UIC Class V inventory requirements or its permitting provisions at this time. If you should have any further questions, please contact me or Vicky Peacey directly at Kennecott.

Sincerely,

Jonathan C. Cherry
General Manager

Table 1: A Sample of Mines Currently Using CRF Backfill in the Unites States

Company	Mine	City	State	Status	EPA UIC Permit	State issued UIC permit under delegated authority	Comments
Kinross Gold	Lamefoot	Republic	Washington	Operating	Delegated	No	No UIC permit for CRF or utility water.
Newmont	Midas	Carlin	Nevada	Operating	Delegated	No	No UIC permit for CRF or utility water.
Newmont	Deep Post	Carlin	Nevada	Operating	Delegated	No	No UIC permit for CRF or utility water.
Newmont	Leeville	Carlin	Nevada	Operating	Delegated	No	No UIC permit for CRF or utility water.
Barrick	Meikle	Carlin	Nevada	Operating	Delegated	No	No UIC permit for CRF or utility water.
Barrick	Getchell	Winnemucca	Nevada	Operating	Delegated	No	No UIC permit for CRF or utility water.
Stillwater	Stillwater	Nye	Montana	Operating	Yes	NA	No UIC permit for CRF or utility water.
Hecla	Rosebud	Winnemucca	Nevada	Closed	Delegated	No	No UIC permit for CRF or utility water.
Newmont	Carlin East	Carlin	Nevada	Closed	Delegated	No	No UIC permit for CRF or utility water.
Newmont	Rain	Carlin	Nevada	Closed	Delegated	No	No UIC permit for CRF or utility water.
Asmera Minerals	Cannon	Wenatchee	Washington	Closed	Delegated	No	No UIC permit for CRF or utility water.
Doe Run Co'	Buick	Boss	Missouri	Closed	Delegated	No	UIC Permit Coordinator for the state not aware of any UIC permits for mines using CRF in Missouri