



STATE OF
COLORADO

Eschberger - DNR, Amy <amy.eschberger@state.co.us>

SR-09 Adequacy Review #1 / Schwartzwalder Mine / M1977-300

Jim Harrington <jim@coloradolegacy.land>

Fri, Feb 5, 2021 at 3:52 PM

To: "Eschberger - DNR, Amy" <amy.eschberger@state.co.us>

Cc: Paul Newman <paul@coloradolegacy.land>, Eric Williams <eric@coloradolegacy.land>, Elizabeth Busby <ebusby@ensero.com>, Billy Ray <bray@ensero.com>, "Cunningham - DNR, Michael" <michaela.cunningham@state.co.us>, "Means - DNR, Russ" <russ.means@state.co.us>, Jeff Fugate <Jeff.Fugate@coag.gov>

Hi Amy,

Please see the attached response to your adequacy requests as well as information requested by Denver Water and Arvada Water.

Please let me know if there are any questions.

Best regards,

Jim

Jim Harrington

Managing Partner, CLL.

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February 5, 2021

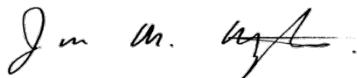
Ms. Amy Eschberger
Division of Reclamation, Mining, and Safety
Department of Natural Resources
1313 Sherman Street, Room 215
Denver, CO 80203

Subject: Response to Adequacy Review, Surety Reduction Request #9
Mine Land Reclamation Permit M-1977-300,
Schwartzwalder Mine, Golden, Colorado

Dear Ms. Eschberger:

In response to comments received by DRMS, Denver Water, and Arvada Water on Colorado Legacy Land's, LLC (CLL) Surety Reduction Request (SR-9) for the Schwartzwalder Mine Land Reclamation Permit M-1977-300. Enclosed is a copy a comment summary and response table. In response to comments received, CLL is revising their request for bond release to leave a total bond in place of \$7,639,027. This amount adds the \$15,880 additional bond for Black Forest mine closure, leaves the Denver Water contingency cost unchanged, but does reflect the completion of several reclamation projects and the initial in situ treatment project (see details in the attached table). If you have any questions regarding the subject document, please don't hesitate to contact me or the other managing directors of CLL, Paul Newman and Eric Williams.

Sincerely,



Jim Harrington, Managing Director
COLORADO LEGACY LAND
Jim@ColoradoLegacy.Land

cc: Michael Cunningham - DRMS, Senior Environmental Protection Specialist, michaela.cunningham@state.co.us
Paul Newman - CLL, Managing Director, paul@coloradolegacy.land
Eric Williams - CLL, Managing Director, eric@coloradolegacy.land
Billy Ray - Ensero Solutions, Project Manager, bray@ensero.com
Allan Steckelberg - Ensero Solutions, VP of Construction & Risk, asteckelberg@ensero.com
Elizabeth Busby - Ensero Solutions, Project Manager, ebusby@ensero.com

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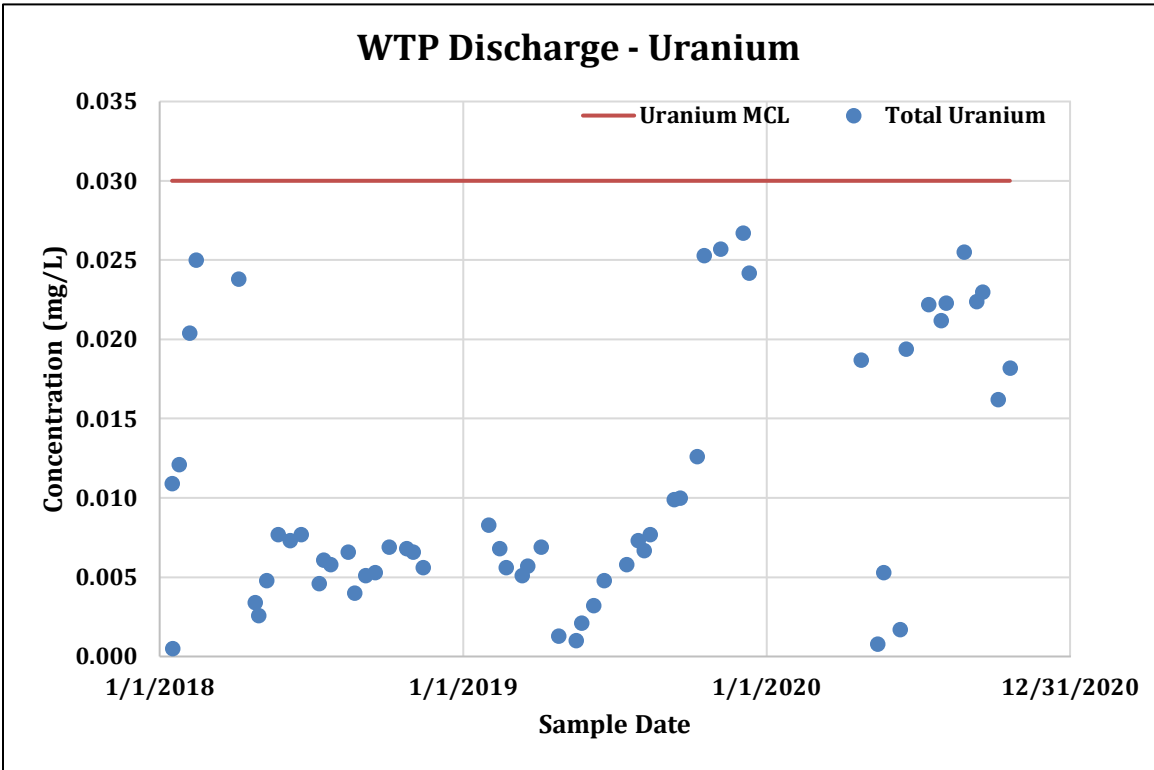
SURETY REDUCTION #9, M-1977-300 COMMENT AND RESPONSE SUMMARY TABLE

COMMENT No.	COMMENT	RESPONSE TO COMMENT																																							
1	<p>The operator is requesting the release of \$215,494 held for excavating radionuclide-impacted alluvial soils from the valley and disposing of this material on site. The amount requested for release is 75% of the total amount held for this task, which is \$287,325. This would leave \$71,831 for the excavation and on-site disposal of the remaining impacted alluvial soils in the valley. The Division has the following comments regarding this item.</p> <p>(A) Please provide a map of the valley excavation project area showing completed portions and estimated portions remaining to be excavated.</p> <p>(B) The operator estimates that to date 56,000 cubic yards of material have already been excavated. Please specify the anticipated volume of material remaining to be excavated to complete the project.</p> <p>(C) In the recently approved Amendment application (AM-05), the operator requested an additional underground disposal location for the impacted soils as the estimated volume of material remaining to be excavated increased during the project, exceeding the remaining capacity of the previously approved disposal location. This would indicate the estimated volume could potentially change again as the project proceeds. How was it determined that 75% of the radionuclide-impacted alluvial soils have been removed? Is the portion of the valley soils remaining to be excavated easier to define than the portion that has already been excavated? Have the remaining areas to be excavated been surveyed to depth? Please provide additional information demonstrating that 75% of the alluvial excavation project has been completed.</p> <p>(D) Please provide additional information demonstrating the \$71,831 that would remain upon approval of a 75% release of the currently held amount would be sufficient to cover the costs of excavating the remaining radionuclide-impacted alluvial soils in the valley and hauling this material to the approved underground locations for disposal.</p>	<p>Figures 1-7 (attached) and Table 2 of Appendix B Technical Revision #14 (TR-14) provides the material volume calculations for the alluvial valley excavation project:</p> <div data-bbox="1827 429 2520 1001" data-label="Table"> <table> <tr> <th colspan="3">Table 2. Results of Soil Volume Calculations</th></tr> <tr> <td colspan="3">Base Volume Estimate (between TopRa7pCi/g and BotRa7pCi/g surfaces)</td></tr> <tr> <td>North Zone:</td><td>27,680</td><td>cyds</td></tr> <tr> <td>South Zone:</td><td>4,880</td><td>cyds</td></tr> <tr> <td>Total:</td><td>32,560</td><td>cyds</td></tr> <tr> <td colspan="3">Additional Contingency Volume Estimate (between BotRa7pCi/g and NatAlluvium surfaces in contingency zones)</td></tr> <tr> <td>North Zone:</td><td>20,780</td><td>cyds</td></tr> <tr> <td>South Zone:</td><td>560</td><td>cyds</td></tr> <tr> <td>Total:</td><td>21,340</td><td>cyds</td></tr> <tr> <td colspan="3">Total Contingency Volume Estimate (base estimate plus additional contingency volume)</td></tr> <tr> <td>North Zone:</td><td>48,460</td><td>cyds</td></tr> <tr> <td>South Zone:</td><td>5,440</td><td>cyds</td></tr> <tr> <td>Total:</td><td>53,900</td><td>cyds</td></tr> </table> </div> <p>There are two excavation areas: the North Zone which represents 90% of the total exaction volume (48,460 cubic yards [CY] / 53,990 CY = 90%) and the South Zone, which represents 10% of the total excavation volume (5,440 CY / 53,990 CY = 10%).</p> <p>CLL has completed excavating the North Zone. This “completion” is verified with field gamma scans which indicate that mining-impacted soils have been removed. Only materials from the North Zone have been “...surveyed to depth...” because field scans are collected during the excavation process. (Note: Survey data for the South Zone are presented in TR-14 and summarized above in Table 2.) Please note that the operator is only requesting a surety reduction for “Excavation, Hauling and Placement” of materials. The DRMS will retain bond monies associated with the final status survey (ex: lab analysis of soils and water samples).</p> <p>A total of 56,000 CY of material have been placed in the Minnesota Adit from the North Zone. This represents a volume increase of 15% over what was initially scoped in TR-14:</p> <p><u>North Zone Volume Calculations:</u> $Actual\ Volume\ (56,000\ CY) - Calculated\ Volume(48,460\ CY) = Overage\ Volume\ (7,540\ CY)$</p> <p>$Overage\ (7,540\ CY) / Calculated\ Volume\ (48,460\ CY) = Overage\ Percent\ (15\%)$</p> <p>Data from TR-14 indicate that an additional 5,440 CY of material in the South Zone remain to be excavated. As documented in TR-14 the alluvial valley is narrower in the South Zone, and bedrock is encountered at a shallower depth compared to the North Zone. These site conditions reduce the available volume of soils to be excavated and reduce the likelihood for overages. However, for a conservative estimate, CLL is assuming the same 15% overage shall be encountered in the South Zone:</p> <p><u>South Zone Volume Calculations:</u> $Overage\ Percent\ (15\%) \times Calculated\ Volume\ (5,440\ CY) = Estimated\ Overage\ Volume\ (6,256\ CY)$</p>	Table 2. 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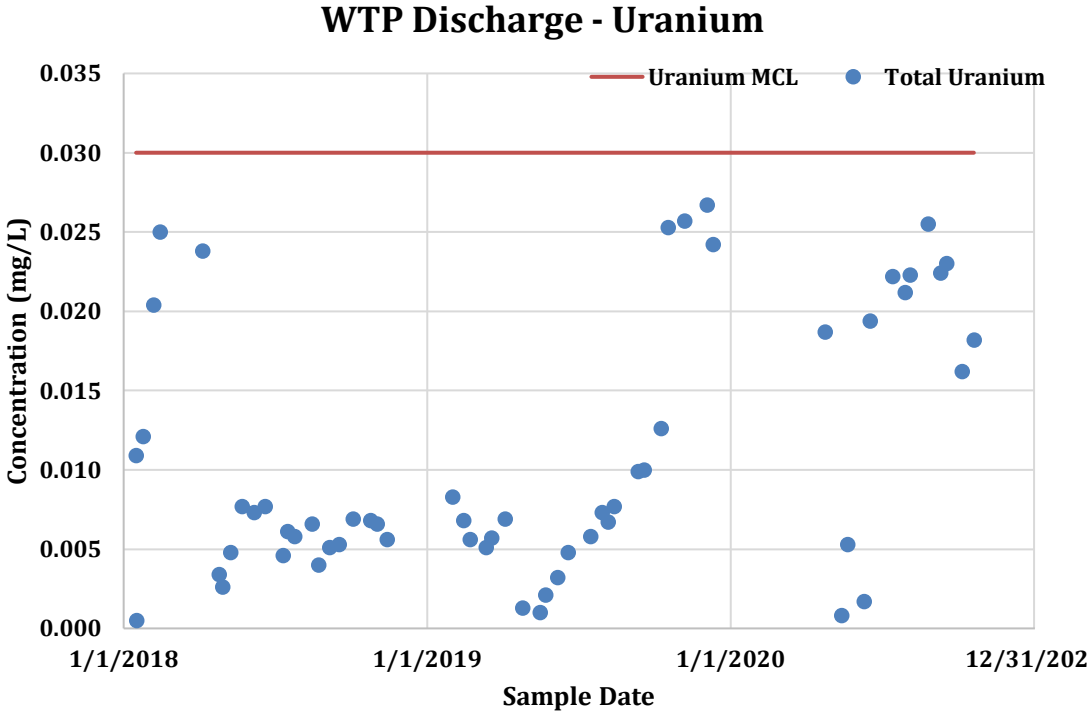
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		<p>CLL anticipates that the volume of material remaining to be excavated to complete the project is 6,256 CY or less. Although these data indicate that CLL is 90% complete with the excavation work, CLL is only requesting a release of 75% of the funds associated with the “Excavation, Hauling, and Placement” of contaminated soils. The DRMS will retain \$71,831 for this task.</p> <p>The current surety amount for “Excavation, Hauling, and Placement” utilizes a unit rate of \$5.33 per cubic yard (\$215,494/53,900 CY = \$5.33/CY). Applying this same unit rate to the remaining volume yields a remining surety amount of \$33,344.48 (6,256 CY x \$5.33 = \$33,344.48) indicating that the remaining surety amount (\$71,831.00) is sufficient to complete the project. Additionally, with the approval of Application Amendment #5 (AM-05) CLL shall be hauling and placing excavated materials into the Black Forest Mine. This will greatly reduce the haul distance and allow CLL to utilized larger capacity haul trucks and reduce rehandling requirements that slowed placement in the Minnesota Adit, which will further reduce the unit cost for the remaining work.</p>																				
2	<p>The operator is requesting a release of the \$350,000 held for the initial in-situ treatment of the mine pool and a release of \$250,000 from the total amount of \$1,187,529 held as the Denver Water contingency cost for water treatment. Please be advised, the Division will not release any portion of the financial warranty associated with the long-term treatment and management of the mine pool until the operator has complied with Conditions No. 2 and 3 of the Division’s approval of the Succession of Operators to Colorado Legacy Land, LLC (see enclosed SO-01 approval letter, dated February 20, 2018). This includes amending the permit to include a conceptual site model, a plan for addressing the physical and chemical stabilization of the mine pool, and to address the long-term costs of operating the water treatment plant and managing the mine pool. The Division anticipates such demonstration will be based on three consecutive years of data which verify the physical and chemical stabilization of the mine pool. Per Condition No. 3 of SO-01 approval, upon such demonstration, the operator may then request a reduction in financial warranty for that portion of the financial warranty attributable to the water treatment and management of the mine pool.</p>	<p>CLL has reviewed AM-04 and the SO conditions specified in the DRMS letter dated February 20, 2018. It is clear from the discussion in January and February 2018 between CLL (Jim Harrington, Paul Newman, and Eric Williams), DRMS (Tony Waldron and Wally Erickson) and Denver Water (Nicole Poncelet), that the SO conditions <u>only</u> addressed the additional \$1,187,529 that was attributed to the negotiated amount above the previously approved DRMS surety value of \$7,712,471. Consequently, CLL will retract its request for release of \$250,000 at this time for the cost of placing a larger pump in the Jefferey Air Shaft to allow CLL to lower the level of the mine pool to even deeper levels protective of Ralston Creek.</p> <p>CLL maintains that the request for release of the \$350,000 for the ”Initial InSitu Treatment” is a valid request and should be released as that scope has been completed. That scope was first approved by DRMS in the Amendment No. 4 (AM-04) put forth by Cotter Corporation. The initial work was detailed in Section E-5.2.2 of the AM-04 Application dated May 1, 2012. That process for the initial in situ treatment was approved, conducted in 2013, with additional work performed to maintain the initial treatment in 2015, and completed then in 2017 – prior to the CLL SO application and subsequent SO conditions. A summary of that project was provided in CLL’s document supporting the 2020 Surety Reduction. Cotter supplied the line item for the initial in situ treatment for several years in its surety table. Cotter began negotiations with CLL in 2017 for the transfer of the Schwartzwalder Mine and this value was carried forward by CLL in the surety for the SO request. It is also important to note that the work is specifically called the “Initial” treatment. The next line item in the surety table is entitled “Maintain InSitu Mine Pool Treatment.” This is the task that CLL is currently working on now as the Initial Treatment was clearly completed in 2017.</p> <p>Moreover, email discussions between Nicole Poncelet (Denver Water) and Jim Harrington (CLL) at the time of the SO negotiations in February 2018 clearly showed that the scope of the SO conditions <u>only</u> applied to the \$1,187,529 and did <u>not</u> affect or pertain in any way the scope items and costs included in DRMS’s \$7,712,471 approved surety calculation. Consequently, it is correct now for DRMS to release the \$350,000 cost per its regulations.</p>																				
3	<p>For its recent approval of AM-05 (on January 13, 2021), the Division calculated an additional required financial warranty in the amount of \$15,880 for the proposed backfill plan to reclaim the Black Forest mine openings. This additional amount as not yet been submitted by the operator. Therefore, please ensure this amount is incorporated into the financial warranty proposed in SR-09.</p>	<p>In response to Comment #2 and Comment #3 from DRMS, SR-9 has been revised to include the financial warranty identified in AM-05 and withdrawal of monies associated with the Denver Water “contingency” (<i>i.e.</i>, \$250,000). A copy of the revised Surety Table is also attached with a total new Surety amount of \$7,639,027. The resulting surety reduction is summarized below:</p> <table><tr><th>Completed Scope</th><th>Value</th></tr><tr><td>Initial In Situ Treatment</td><td>\$350,000</td></tr><tr><td>Demo and Debris Removal</td><td>\$246,400</td></tr><tr><td>Excavate, Haul and Place (75%)</td><td>\$215,494</td></tr><tr><td>Concrete V-ditch Storm Water Drain</td><td>\$133,363</td></tr><tr><td>Waste Rock Pile Cap</td><td>\$88,389</td></tr><tr><td>Black Forest mine opening closure</td><td>(\$15,880)</td></tr><tr><td>Subtotal:</td><td>\$1,017,776</td></tr><tr><td>DRMS Indirect Costs:</td><td>\$243,207</td></tr><tr><td>Total Surety Reduction:</td><td>\$1,260,983</td></tr></table>	Completed Scope	Value	Initial In Situ Treatment	\$350,000	Demo and Debris Removal	\$246,400	Excavate, Haul and Place (75%)	\$215,494	Concrete V-ditch Storm Water Drain	\$133,363	Waste Rock Pile Cap	\$88,389	Black Forest mine opening closure	(\$15,880)	Subtotal:	\$1,017,776	DRMS Indirect Costs:	\$243,207	Total Surety Reduction:	\$1,260,983
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4	Please review the enclosed objection letters submitted by the City of Arvada and Denver Water and inform the Division how the operator intends to address the concerns expressed in these letters.	Please see responses below and be advised that the data presented in the response will further analyzed included in Application Amendment #6 (AM-06). This amendment shall be submitted to comply with Conditions No. 2 and 3 of the Division’s approval of the Succession of Operators to Colorado Legacy Land, LLC (dated February 20, 2018) and resolve any ambiguity associated with the surety for the project.										
5	<p>The City of Arvada (“City”) has reviewed the request for surety reduction submitted by Colorado Legacy Land LLC for the Schwartzwalder Mine. We do not support this request and recommend it be denied.</p> <p>We appreciate the progress Colorado Legacy Land (“CLL”) has made and continues to make with remediations at Schwartzwalder Mine. As you know, Schwartzwalder Mine discharges directly impact the drinking water supply to a large number of Colorado residents, including residents of the City. The City has a vested interest in the public health, safety and welfare of its citizens. Increased levels of uranium or other contaminants can harm public health as well as cause increased treatment and residual disposal costs due to TENORM. When the City is required to dispose of TENORM, the cost is 700% higher than our standard disposal cost. Accordingly, it is imperative that CLL maintain the appropriate treatment processes and continue to address any seepage or stormwater issues now and into the future. Although we acknowledge CLL’s request to reduce the surety due to progress it has made so far, we need to ensure that all commitments from the Revised Approval of SO-01 dated Feb 20, 2018 between CLL and the Colorado Division of Reclamation, Mining and Safety are met before we can support this endeavor. To date, we are not aware of receiving any water quality data from CLL and were not aware that we were allowed to sample at the sampling taps at Schwartzwalder. Although we understand that this may have been due to changes in personnel at the City, we simply do not have enough information at this time to support the request. In addition, Denver Water and its consultants are currently evaluating water quality data obtained from the mine pool to determine if treatment processes are working. We would like several year’s worth of data to substantiate any claims of improvement. In fulfilling its responsibilities to its citizens, the City prefers a conservative approach based on water quality data that our drinking water sources will be protected to the utmost. We are wary due to past experiences around Colorado which have had devastating impacts to water resources.</p> <p>In addition, we received notice this week of an increase in surety requirements for the site associated with an amendment to the Schwartzwalder Mine permit. The amount of the increase was \$15,880. In light of this, we further recommend that the full \$8,915,880.00 continue to be held in surety.</p> <p>In summary, at this time, the City does not support the request to reduce the surety for CLL, and we support Denver Water’s concerns as well. The protection of our drinking water source is our primary concern. For future consideration of a surety reduction request, we expect to see, at minimum, the completion of the conceptual site model, the stabilization of the mine pool through optimized treatment operation, and assurance of long-term operation and management of the treatment processes.</p> <p>We welcome discussion and partnership with CLL in regards to Schwartzwalder Mine and hope that they are able to fully complete their commitments and have a prosperous outcome.</p>	<p>Since operating the site, CLL has not discharged any radiological constituents of potential concern (COPC) from the water treatment plant (WTP) and therefore is not impacting Arvada Water’s treatment costs for TENORM. The following figure summarizes water treatment plant (WTP) discharge data for total uranium from January 1, 2018 to January 1, 2021:</p> <div><p>WTP Discharge - Uranium</p><table><caption>Approximate data points from WTP Discharge - Uranium plot</caption><thead><tr><th>Sample Date</th><th>Total Uranium (mg/L)</th></tr></thead><tbody><tr><td>1/1/2018</td><td>0.001, 0.011, 0.012, 0.020, 0.025</td></tr><tr><td>1/1/2019</td><td>0.002, 0.003, 0.004, 0.005, 0.006, 0.007, 0.008, 0.009, 0.010, 0.011, 0.012, 0.013, 0.025, 0.026, 0.027</td></tr><tr><td>1/1/2020</td><td>0.001, 0.002, 0.003, 0.004, 0.005, 0.006, 0.007, 0.008, 0.009, 0.010, 0.011, 0.012, 0.013, 0.018, 0.019, 0.022, 0.023, 0.024, 0.025, 0.026</td></tr><tr><td>12/31/2020</td><td>0.001, 0.002, 0.003, 0.004, 0.005, 0.006, 0.007, 0.008, 0.009, 0.010, 0.011, 0.012, 0.013, 0.016, 0.017, 0.018, 0.019, 0.022, 0.023, 0.024, 0.025</td></tr></tbody></table></div> <p>These data illustrate that CLL is in full compliance with its discharge permit. WTP operations are producing water that is consistently below the U.S. Environmental Protection Agency Primary Drinking Water Standard (U.S. EPA MCL) for uranium. All site data are publicly available from the following websites:</p> <ul style="list-style-type: none">CDPHE Website (Search by Discharge Permit No.: CO-0001244): https://cdphe.colorado.gov/water-quality-records-center-and-requestsDRMS Website (Search by Mine Land Reclamation Permit No: “M-1977-300”): https://www.colorado.gov/pacific/drms/data-search <p>Following the project stakeholder call on Friday January 29, 2021. CLL received contact information for the City of Arvada and shall include Brad Wyant, Water Treatment Manager (bwyant@arvada.org) and Evelyn Rhodes, Water Quality Administrator (erhodes@arvada.org) on future data submittals. The Schwartzwalder Mine sampling program (ex: sampling location, sample frequency and analytical sample suites) are described in Exhibit E of Application Amendment #5.</p> <p>When the 2021 treatment season begins in May 2021, we will welcome the City of Arvada to come and tour Schwartzwalder mine and view the ongoing reclamation and water treatment operations.</p>	Sample Date	Total Uranium (mg/L)	1/1/2018	0.001, 0.011, 0.012, 0.020, 0.025	1/1/2019	0.002, 0.003, 0.004, 0.005, 0.006, 0.007, 0.008, 0.009, 0.010, 0.011, 0.012, 0.013, 0.025, 0.026, 0.027	1/1/2020	0.001, 0.002, 0.003, 0.004, 0.005, 0.006, 0.007, 0.008, 0.009, 0.010, 0.011, 0.012, 0.013, 0.018, 0.019, 0.022, 0.023, 0.024, 0.025, 0.026	12/31/2020	0.001, 0.002, 0.003, 0.004, 0.005, 0.006, 0.007, 0.008, 0.009, 0.010, 0.011, 0.012, 0.013, 0.016, 0.017, 0.018, 0.019, 0.022, 0.023, 0.024, 0.025
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SURETY REDUCTION #9, M-1977-300 COMMENT AND RESPONSE SUMMARY TABLE

COMMENT No.	COMMENT	RESPONSE TO COMMENT
	<p>I am writing on behalf of Denver Water to object to Colorado Legacy Land, LLC's ("CLL") December 7, 2020 request to release a portion of the performance and financial warranties for the Schwartzwalder Mine reclamation permit.</p> <p>Denver Water currently serves drinking water to 1.5 million customers in the City and County of Denver and surrounding suburbs. Denver Water owns and operates Ralston Reservoir, an on-channel drinking water reservoir located a few miles downstream of Schwartzwalder Mine. As a terminal drinking water reservoir, Ralston currently feeds Denver Water's Moffat Treatment Plant and will feed its new Northwater Treatment Plant beginning as early as 2023. Constituents of concern discharged by the Schwartzwalder Mine, including uranium, arsenic and sulfate, can impact Denver Water's treatment process and operations.</p> <p>CLL is seeking a release of \$1,526,853.00 of the \$8,900,000.00 financial warranty for the Schwartzwalder Mine. The request is based on CLL's completion of activities related to reclamation of alluvial fill material disposed in Ralston Creek and storm water improvements to previously reclaimed waste rock piles. This amount also includes a request to release \$250,000 for a Denver Water contingency for testing the six month treatment cycle at the mine pool.</p> <p>Denver Water acknowledges that CLL has accomplished several reclamation tasks, and deserves recognition for its work to date. However, the full amount of the current financial warranty is needed as a surety for the potential long-term operation and maintenance of the mine pool pumping and in-situ treatment system until CLL has provided sufficient data to demonstrate that the recent reclamation activities are self-sustaining and CLL has met the conditions of DRMS's February 20, 2018 transfer request approval letter.</p> <p>In the transfer request approval letter, DRMS required a financial warranty to be "maintained at a level which reflects the current cost of reclamation, which includes all measures taken to assure the protection of water resources." At that time, DRMS concluded that an amount of \$8,900,000.00 would be sufficient. This amount is "subject to adjustment and may be increased or reduced as necessary to ensure the completion of reclamation in the event of permit revocation and forfeiture of financial warranty."</p> <p>The transfer request approval letter provides that as a condition of release of the financial warranty, several terms and conditions must be met, including requirements that CLL provide:</p> <ul style="list-style-type: none"> • A conceptual site model, and provide all underlying assumptions and data used in the model to Denver Water and City of Arvada. • A plan addressing the physical and chemical stabilization of the mine pool and specifically addressing the concentrations of dissolved uranium and other constituents as required under the conditions of the permit, and updating the reclamation and environmental protection plans. <p>To date neither of these critical items have been met. Although CLL has shared a slide deck containing a cartoon of the mine site, it has yet to develop a reliable model that can be used to make informed reclamation and long-term water treatment decisions. The Schwartzwalder Mine site is an extremely complex site with several data gaps as identified in the U.S. Geological Survey's ("USGS") 2011 Report. To help fill these data gaps, the USGS recommended the development of a numerical groundwater flow model, tracer dilution studies in Ralston Creek to help accurately locate and quantify groundwater inflows to the stream and the chemistry of those inflows, and additional uranium and sulfur isotopic measurements of all sampled water. As a first step to developing a reliable conceptual site model, CLL</p>	<p>In response to the concern that, <i>"Constituents of concern discharged by the Schwartzwalder Mine, including uranium, arsenic and sulfate, can impact Denver Water's treatment process and operations..."</i></p> <p>Data do not indicate that the Schwartzwalder Mine is discharging constituents of concern (e.g., uranium, arsenic, and sulfate) offsite that would impact Denver Water's treatment process or operations. The following concentration trend plots summarize discharge data with respect to the U.S. EPA MCLs. These data are from January 1, 2018 to January 1, 2021 and demonstrate that CLL is in full compliance with their discharge permit.</p> <div data-bbox="1641 580 2738 1314">  <p>WTP Discharge - Uranium</p> <p>Legend: — Uranium MCL, • Total Uranium</p> <p>Concentration (mg/L)</p> <p>Sample Date</p> </div>

SURETY REDUCTION #9, M-1977-300 COMMENT AND RESPONSE SUMMARY TABLE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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	<p>should be working to fill these data gaps, but Denver Water is unaware of any efforts by CLL to begin to develop a conceptual site model, let alone to collect the necessary data to develop such a model.</p> <p>In addition, Denver Water remains very concerned that CLL has not developed a plan to achieve long-term stability of mine pool chemistry. A review of historic data and trends in the mine pool shows that concentrations of dissolved uranium within the mine pool are not stable and continue to increase. Although in-situ treatment helps to decrease uranium concentrations on a temporary basis, the upward trend of uranium concentrations appears to resume after each treatment. The injection of reverse osmoses (“RO”) brine from the treatment system into the mine pool appears to also be contributing to a lack of stabilization of the mine pool. A graph showing trends in uranium concentrations in the mine pool is enclosed as Attachment 1. In addition, with regard to the Denver Water contingency, we currently lack sufficient data to make a determination of how the mine pool is responding to the six-month treatment schedule. As of the date of this letter, we only have four months of observational data, so it is premature to draw any conclusions about the long-term viability of CLL’s treatment approach based upon the limited amount of data that is available.</p> <p>Because of the long-term operation and maintenance costs associated with CLL’s planned reclamation effort, in 2018 Denver Water requested a financial warranty of \$17.6 million as a condition of CLL’s permit transfer request. Denver Water was willing to accede to an \$8.9 million financial warranty subject in part to the understanding that upon CLL’s completion of the alluvial mining activities, that portion of the financial warranty would be committed to cover the long-term costs of the operation and maintenance of the mine pool in-situ treatment system. This understanding is documented in Denver Water’s February 21, 2018 letter to Ms. Virginia Brannon, a copy of which is attached.</p> <p>In closing, at this time Denver Water objects to the release of any portion of CLL’s financial warranty and requests that CLL be required to focus on developing a reliable conceptual site model before any future permit amendments are approved. While CLL has made progress in stabilizing the waste rock piles and addressing mine tailings disposed in alluvial fill material, additional data and time is required to measure whether the reclamation efforts have been successful at stabilizing the mine pool and reducing the need for long term treatment.</p> <p>Please do not hesitate to contact me if you have any questions regarding the contents of this letter.</p>	<div><div><div>WTP Discharge - Arsenic</div><table><caption>Approximate Data Points from WTP Discharge - Arsenic Graph</caption><thead><tr><th>Sample Date</th><th>Total Arsenic (mg/L)</th></tr></thead><tbody><tr><td>1/1/2018</td><td>0.007</td></tr><tr><td>2/1/2018</td><td>0.005</td></tr><tr><td>3/1/2018</td><td>0.003</td></tr><tr><td>4/1/2018</td><td>0.002</td></tr><tr><td>5/1/2018</td><td>0.001</td></tr><tr><td>6/1/2018</td><td>0.002</td></tr><tr><td>7/1/2018</td><td>0.001</td></tr><tr><td>8/1/2018</td><td>0.002</td></tr><tr><td>9/1/2018</td><td>0.001</td></tr><tr><td>10/1/2018</td><td>0.002</td></tr><tr><td>11/1/2018</td><td>0.001</td></tr><tr><td>12/1/2018</td><td>0.002</td></tr><tr><td>1/1/2019</td><td>0.003</td></tr><tr><td>2/1/2019</td><td>0.004</td></tr><tr><td>3/1/2019</td><td>0.007</td></tr><tr><td>4/1/2019</td><td>0.007</td></tr><tr><td>5/1/2019</td><td>0.009</td></tr><tr><td>6/1/2019</td><td>0.011</td></tr><tr><td>7/1/2019</td><td>0.004</td></tr><tr><td>8/1/2019</td><td>0.005</td></tr><tr><td>9/1/2019</td><td>0.008</td></tr><tr><td>10/1/2019</td><td>0.007</td></tr><tr><td>11/1/2019</td><td>0.005</td></tr><tr><td>12/1/2019</td><td>0.004</td></tr><tr><td>1/1/2020</td><td>0.003</td></tr><tr><td>2/1/2020</td><td>0.008</td></tr><tr><td>3/1/2020</td><td>0.006</td></tr><tr><td>4/1/2020</td><td>0.007</td></tr><tr><td>5/1/2020</td><td>0.006</td></tr><tr><td>6/1/2020</td><td>0.007</td></tr><tr><td>7/1/2020</td><td>0.006</td></tr><tr><td>8/1/2020</td><td>0.007</td></tr><tr><td>9/1/2020</td><td>0.006</td></tr><tr><td>10/1/2020</td><td>0.007</td></tr><tr><td>11/1/2020</td><td>0.006</td></tr><tr><td>12/1/2020</td><td>0.007</td></tr><tr><td>1/1/2021</td><td>0.006</td></tr><tr><td>2/1/2021</td><td>0.007</td></tr><tr><td>3/1/2021</td><td>0.006</td></tr><tr><td>4/1/2021</td><td>0.007</td></tr><tr><td>5/1/2021</td><td>0.006</td></tr><tr><td>6/1/2021</td><td>0.007</td></tr><tr><td>7/1/2021</td><td>0.006</td></tr><tr><td>8/1/2021</td><td>0.007</td></tr><tr><td>9/1/2021</td><td>0.006</td></tr><tr><td>10/1/2021</td><td>0.007</td></tr><tr><td>11/1/2021</td><td>0.006</td></tr><tr><td>12/1/2021</td><td>0.007</td></tr><tr><td>1/1/2022</td><td>0.006</td></tr><tr><td>2/1/2022</td><td>0.007</td></tr><tr><td>3/1/2022</td><td>0.006</td></tr><tr><td>4/1/2022</td><td>0.007</td></tr><tr><td>5/1/2022</td><td>0.006</td></tr><tr><td>6/1/2022</td><td>0.007</td></tr><tr><td>7/1/2022</td><td>0.006</td></tr><tr><td>8/1/2022</td><td>0.007</td></tr><tr><td>9/1/2022</td><td>0.006</td></tr><tr><td>10/1/2022</td><td>0.007</td></tr><tr><td>11/1/2022</td><td>0.006</td></tr><tr><td>12/1/2022</td><td>0.007</td></tr><tr><td>1/1/2023</td><td>0.006</td></tr><tr><td>2/1/2023</td><td>0.007</td></tr><tr><td>3/1/2023</td><td>0.006</td></tr><tr><td>4/1/2023</td><td>0.007</td></tr><tr><td>5/1/2023</td><td>0.006</td></tr><tr><td>6/1/2023</td><td>0.007</td></tr><tr><td>7/1/2023</td><td>0.006</td></tr><tr><td>8/1/2023</td><td>0.007</td></tr><tr><td>9/1/2023</td><td>0.006</td></tr><tr><td>10/1/2023</td><td>0.007</td></tr><tr><td>11/1/2023</td><td>0.006</td></tr><tr><td>12/1/2023</td><td>0.007</td></tr><tr><td>1/1/2024</td><td>0.006</td></tr><tr><td>2/1/2024</td><td>0.007</td></tr><tr><td>3/1/2024</td><td>0.006</td></tr><tr><td>4/1/2024</td><td>0.007</td></tr><tr><td>5/1/2024</td><td>0.006</td></tr><tr><td>6/1/2024</td><td>0.007</td></tr><tr><td>7/1/2024</td><td>0.006</td></tr><tr><td>8/1/2024</td><td>0.007</td></tr><tr><td>9/1/2024</td><td>0.006</td></tr><tr><td>10/1/2024</td><td>0.007</td></tr><tr><td>11/1/2024</td><td>0.006</td></tr><tr><td>12/1/2024</td><td>0.007</td></tr><tr><td>1/1/2025</td><td>0.006</td></tr><tr><td>2/1/2025</td><td>0.007</td></tr><tr><td>3/1/2025</td><td>0.006</td></tr><tr><td>4/1/2025</td><td>0.007</td></tr><tr><td>5/1/2025</td><td>0.006</td></tr><tr><td>6/1/2025</td><td>0.007</td></tr><tr><td>7/1/2025</td><td>0.006</td></tr><tr><td>8/1/2025</td><td>0.007</td></tr><tr><td>9/1/2025</td><td>0.006</td></tr><tr><td>10/1/2025</td><td>0.007</td></tr><tr><td>11/1/2025</td><td>0.006</td></tr><tr><td>12/1/2025</td><td>0.007</td></tr><tr><td>1/1/2026</td><td>0.006</td></tr><tr><td>2/1/2026</td><td>0.007</td></tr><tr><td>3/1/2026</td><td>0.006</td></tr><tr><td>4/1/2026</td><td>0.007</td></tr><tr><td>5/1/2026</td><td>0.006</td></tr><tr><td>6/1/2026</td><td>0.007</td></tr><tr><td>7/1/2026</td><td>0.006</td></tr><tr><td>8/1/2026</td><td>0.007</td></tr><tr><td>9/1/2026</td><td>0.006</td></tr><tr><td>10/1/2026</td><td>0.007</td></tr><tr><td>11/1/2026</td><td>0.006</td></tr><tr><td>12/1/2026</td><td>0.007</td></tr><tr><td>1/1/2027</td><td>0.006</td></tr><tr><td>2/1/2027</td><td>0.007</td></tr><tr><td>3/1/2027</td><td>0.006</td></tr><tr><td>4/1/2027</td><td>0.007</td></tr><tr><td>5/1/2027</td><td>0.006</td></tr><tr><td>6/1/2027</td><td>0.007</td></tr><tr><td>7/1/2027</td><td>0.006</td></tr><tr><td>8/1/2027</td><td>0.007</td></tr><tr><td>9/1/2027</td><td>0.006</td></tr><tr><td>10/1/2027</td><td>0.007</td></tr><tr><td>11/1/2027</td><td>0.006</td></tr><tr><td>12/1/2027</td><td>0.007</td></tr><tr><td>1/1/2028</td><td>0.006</td></tr><tr><td>2/1/2028</td><td>0.007</td></tr><tr><td>3/1/2028</td><td>0.006</td></tr><tr><td>4/1/2028</t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Date	Total Arsenic (mg/L)	1/1/2018	0.007	2/1/2018	0.005	3/1/2018	0.003	4/1/2018	0.002	5/1/2018	0.001	6/1/2018	0.002	7/1/2018	0.001	8/1/2018	0.002	9/1/2018	0.001	10/1/2018	0.002	11/1/2018	0.001	12/1/2018	0.002	1/1/2019	0.003	2/1/2019	0.004	3/1/2019	0.007	4/1/2019	0.007	5/1/2019	0.009	6/1/2019	0.011	7/1/2019	0.004	8/1/2019	0.005	9/1/2019	0.008	10/1/2019	0.007	11/1/2019	0.005	12/1/2019	0.004	1/1/2020	0.003	2/1/2020	0.008	3/1/2020	0.006	4/1/2020	0.007	5/1/2020	0.006	6/1/2020	0.007	7/1/2020	0.006	8/1/2020	0.007	9/1/2020	0.006	10/1/2020	0.007	11/1/2020	0.006	12/1/2020	0.007	1/1/2021	0.006	2/1/2021	0.007	3/1/2021	0.006	4/1/2021	0.007	5/1/2021	0.006	6/1/2021	0.007	7/1/2021	0.006	8/1/2021	0.007	9/1/2021	0.006	10/1/2021	0.007	11/1/2021	0.006	12/1/2021	0.007	1/1/2022	0.006	2/1/2022	0.007	3/1/2022	0.006	4/1/2022	0.007	5/1/2022	0.006	6/1/2022	0.007	7/1/2022	0.006	8/1/2022	0.007	9/1/2022	0.006	10/1/2022	0.007	11/1/2022	0.006	12/1/2022	0.007	1/1/2023	0.006	2/1/2023	0.007	3/1/2023	0.006	4/1/2023	0.007	5/1/2023	0.006	6/1/2023	0.007	7/1/2023	0.006	8/1/2023	0.007	9/1/2023	0.006	10/1/2023	0.007	11/1/2023	0.006	12/1/2023	0.007	1/1/2024	0.006	2/1/2024	0.007	3/1/2024	0.006	4/1/2024	0.007	5/1/2024	0.006	6/1/2024	0.007	7/1/2024	0.006	8/1/2024	0.007	9/1/2024	0.006	10/1/2024	0.007	11/1/2024	0.006	12/1/2024	0.007	1/1/2025	0.006	2/1/2025	0.007	3/1/2025	0.006	4/1/2025	0.007	5/1/2025	0.006	6/1/2025	0.007	7/1/2025	0.006	8/1/2025	0.007	9/1/2025	0.006	10/1/2025	0.007	11/1/2025	0.006	12/1/2025	0.007	1/1/2026	0.006	2/1/2026	0.007	3/1/2026	0.006	4/1/2026	0.007	5/1/2026	0.006	6/1/2026	0.007	7/1/2026	0.006	8/1/2026	0.007	9/1/2026	0.006	10/1/2026	0.007	11/1/2026	0.006	12/1/2026	0.007	1/1/2027	0.006	2/1/2027	0.007	3/1/2027	0.006	4/1/2027	0.007	5/1/2027	0.006	6/1/2027	0.007	7/1/2027	0.006	8/1/2027	0.007	9/1/2027	0.006	10/1/2027	0.007	11/1/2027	0.006	12/1/2027	0.007	1/1/2028	0.006	2/1/2028	0.007	3/1/2028	0.006	4/1/2028	0.007	5/1/2028	0.006	6/1/2028	0.007	7/1/2028	0.006	8/1/2028	0.007	9/1/2028	0.006	10/1/2028	0.007	11/1/2028	0.006	12/1/2028	0.007	1/1/2029	0.006	2/1/2029	0.007	3/1/2029	0.006	4/1/2029	0.007	5/1/2029	0.006	6/1/2029	0.007	7/1/2029	0.006	8/1/2029	0.007	9/1/2029	0.006	10/1/2029	0.007	11/1/2029	0.006	12/1/2029	0.007	1/1/2030	0.006	2/1/2030	0.007	3/1/2030	0.006	4/1/2030	0.007	5/1/2030	0.006	6/1/2030	0.007	7/1/2030	0.006	8/1/2030	0.007	9/1/2030	0.006	10/1/2030	0.007	11/1/2030	0.006	12/1/2030	0.007	1/1/2031	0.006	2/1/2031	0.007	3/1/2031	0.006	4/1/2031	0.007	5/1/2031	0.006	6/1/2031	0.007	7/1/2031	0.006	8/1/2031	0.007	9/1/2031	0.006	10/1/2031	0.007	11/1/2031	0.006	12/1/2031	0.007	1/1/2032	0.006	2/1/2032	0.007	3/1/2032	0.006	4/1/2032	0.007	5/1/2032	0.006	6/1/2032	0.007	7/1/2032	0.006	8/1/2032	0.007	9/1/2032	0.006	10/1/2032	0.007	11/1/2032	0.006	12/1/2032	0.007	1/1/2033	0.006	2/1/2033	0.007	3/1/2033	0.006	4/1/2033	0.007	5/1/2033	0.006	6/1/2033	0.007	7/1/2033	0.006	8/1/2033	0.007	9/1/2033	0.006	10/1/2033	0.007	11/1/2033	0.006	12/1/2033	0.007	1/1/2034	0.006	2/1/2034	0.007	3/1/2034	0.006	4/1/2034	0.007	5/1/2034	0.006	6/1/2034	0.007	7/1/2034	0.006	8/1/2034	0.007	9/1/2034	0.006	10/1/2034	0.007	11/1/2034	0.006	12/1/2034	0.007	1/1/2035	0.006	2/1/2035	0.007	3/1/2035	0.006	4/1/2035	0.007	5/1/2035	0.006	6/1/2035	0.007	7/1/2035	0.006	8/1/2035	0.007	9/1/2035	0.006	10/1/2035	0.007	11/1/2035	0.006	12/1/2035	0.007	1/1/2036	0.006	2/1/2036	0.007	3/1/2036	0.006	4/1/2036	0.007	5/1/2036	0.006	6/1/2036	0.007	7/1/2036	0.006	8/1/2036	0.007	9/1/2036	0.006	10/1/2036	0.007	11/1/2036	0.006	12/1/2036	0.007	1/1/2037	0.006	2/1/2037	0.007	3/1/2037	0.006	4/1/2037	0.007	5/1/2037	0.006	6/1/2037	0.007	7/1/2037	0.006	8/1/2037	0.007	9/1/2037	0.006	10/1/2037	0.007	11/1/2037	0.006	12/1/2037	0.007	1/1/2038	0.006	2/1/2038	0.007	3/1/2038	0.006	4/1/2038	0.007	5/1/2038	0.006	6/1/2038	0.007	7/1/2038	0.006	8/1/2038	0.007	9/1/2038	0.006	10/1/2038	0.007	11/1/2038	0.006	12/1/2038	0.007	1/1/2039	0.006	2/1/2039	0.007	3/1/2039	0.006	4/1/2039	0.007	5/1/2039	0.006	6/1/2039	0.007	7/1/2039	0.006	8/1/2039	0.007	9/1/2039	0.006	10/1/2039	0.007	11/1/2039	0.006	12/1/2039	0.007	1/1/2040	0.006	2/1/2040	0.007	3/1/2040	0.006	4/1/2040	0.007	5/1/2040	0.006	6/1/2040	0.007	7/1/2040	0.006	8/1/2040	0.007	9/1/2040	0.006	10/1/2040	0.007	11/1/2040	0.006	12/1/2040	0.007	1/1/2041	0.006	2/1/2041	0.007	3/1/2041	0.006	4/1/2041	0.007	5/1/2041	0.006	6/1/2041	0.007	7/1/2041	0.006	8/1/2041	0.007	9/1/2041	0.006	10/1/2041	0.007	11/1/2041	0.006	12/1/2041	0.007	1/1/2042	0.006	2/1/2042	0.007	3/1/2042	0.006	4/1/2042	0.007	5/1/2042	0.006	6/1/2042	0.007	7/1/2042	0.006	8/1/2042	0.007	9/1/2042	0.006	10/1/2042	0.007	11/1/2042	0.006	12/1/2042	0.007	1/1/2043	0.006	2/1/2043	0.007	3/1/2043	0.006	4/1/2043	0.007	5/1/2043	0.006	6/1/2043	0.007	7/1/2043	0.006	8/1/2043	0.007	9/1/2043	0.006	10/1/2043	0.007	11/1/2043	0.006	12/1/2043	0.007	1/1/2044	0.006	2/1/2044	0.007	3/1/2044	0.006	4/1/2044	0.007	5/1/2044	0.006	6/1/2044	0.007	7/1/2044	0.006	8/1/2044	0.007	9/1/2044	0.006	10/1/2044	0.007	11/1/2044	0.006	12/1/2044	0.007	1/1/2045	0.006	2/1/2045	0.007	3/1/2045	0.006	4/1/2045	0.007	5/1/2045	0.006	6/1/2045	0.007	7/1/2045	0.006	8/1/2045	0.007	9/1/2045	0.006	10/1/2045	0.007	11/1/2045	0.006	12/1/2045	0.007	1/1/2046	0.006	2/1/2046	0.007	3/1/2046	0.006	4/1/2046	0.007	5/1/2046	0.006	6/1/2046	0.007	7/1/2046	0.006	8/1/2046	0.007	9/1/2046	0.006	10/1/2046	0.007	11/1/2046	0.006	12/1/2046	0.007	1/1/2047	0.006	2/1/2047	0.007	3/1/2047	0.006	4/1/2047	0.007	5/1/2047	0.006	6/1/2047	0.007	7/1/2047	0.006	8/1/2047	0.007	9/1/2047	0.006	10/1/2047	0.007	11/1/2047	0.006	12/1/2047	0.007	1/1/2048	0.006	2/1/2048	0.007	3/1/2048	0.006	4/1/2048	0.007	5/1/2048	0.006	6/1/2048	0.007	7/1/2048	0.006	8/1/2048	0.007	9/1/2048	0.006	10/1/2048	0.007	11/1/2048	0.006	12/1/2048	0.007	1/1/2049	0.006	2/1/2049	0.007	3/1/2049	0.006	4/1/2049	0.007	5/1/2049	0.006	6/1/2049	0.007	7/1/2049	0.006	8/1/2049	0.007	9/1/2049	0.006	10/1/2049	0.007	11/1/2049	0.006	12/1/2049	0.007	1/1/2050	0.006	2/1/2050	0.007	3/1/2050	0.006	4/1/2050	0.007	5/1/2050	0.006	6/1/2050	0.007	7/1/2050	0.006	8/1/2050	0.007	9/1/2050	0.006	10/1/2050	0.007	11/1/2050	0.006	12/1/2050	0.007	1/1/2051	0.006	2/1/2051	0.007	3/1/2051	0.006	4/1/2051	0.007	5/1/2051	0.006	6/1/2051	0.007	7/1/2051	0.006	8/1/2051	0.007	9/1/2051	0.006	10/1/2051	0.007	11/1/2051	0.006	12/1/2051	0.007	1/1/2052	0.006	2/1/2052	0.007	3/1/2052	0.006	4/1/2052	0.007	5/1/2052	0.006	6/1/2052	0.007	7/1/2052	0.006	8/1/2052	0.007	9/1/2052	0.006	10/1/2052	0.007	11/1/2052	0.006	12/1/2052	0.007	1/1/2053	0.006	2/1/2053	0.007	3/1/2053	0.006	4/1/2053	0.007	5/1/2053	0.006
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SURETY REDUCTION #9, M-1977-300 COMMENT AND RESPONSE SUMMARY TABLE

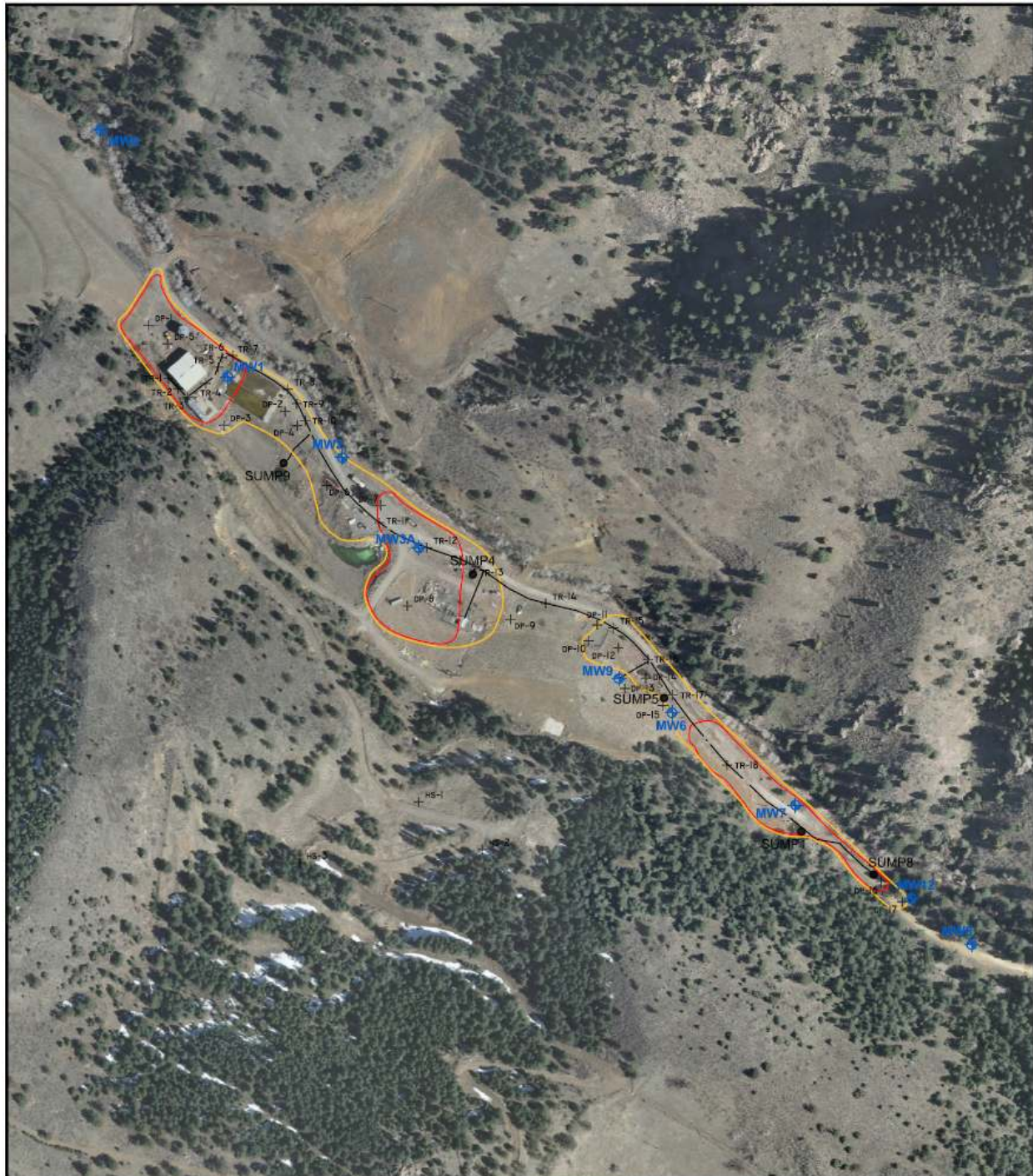
SURETY REDUCTION #9, M-1977-300 COMMENT AND RESPONSE SUMMARY TABLE																																												
COMMENT No.	COMMENT	RESPONSE TO COMMENT																																										
		<p>CLL has developed and communicated their operations management plan for the site to Denver Water and DRMS through the CSM, several subsequent site visits, and consistent data sharing. This plan will be formally documented with 3-years of supporting data in Application Amendment #6 (AM-06).</p> <p>The long-term operation strategy is to maintain the mine pool elevation below the permitted level (150-feet below the Steve Adit) by operating the WTP for 6 months or less. In addition to the 6-month operation strategy, CLL intends to perform in situ treatment of the mine pool as data indicated its necessary. CLL has successfully managed the site this way for three years:</p> <table><tr><th>Year</th><th>WTP Operations Summary</th><th>Mean Mine Pool Concentration, Dissolved Uranium*</th><th>Mine Pool Dewatering Summary</th><th>Notes</th></tr><tr><td>2018</td><td>Operated 47% of the year. Online = 171 days. Offline =194 days.</td><td>12.19 mg/L</td><td>Feet Gained = 51 feet Max. Depth = 201 fbS (6,251 ft amsl)</td><td>Insitu injection in December 2017.</td></tr><tr><td>2019</td><td>Operated 66% of the year. Online = 241 days. Offline = 124 days.</td><td>13.73 mg/L</td><td>Feet Gained = 46 feet Max. Depth = 246 fbS (6,206 ft amsl)</td><td>Installed new 60hp dewatering pump at ~400 fbS.</td></tr><tr><td>2020</td><td>Operated 47% of the year. Online = 172 days. Offline = 194 days.</td><td>12.56 mg/L</td><td>Feet Gained = 99 feet Max. Depth = 345 fbS (6,107 ft amsl)</td><td>Insitu injection January 2020.</td></tr></table> <p>These data are public record and CLL has consistently shared all site data (2018 to present) with Denver Water and DRMS. These data demonstrate that CLLs 6-month operating strategy is not only suitable for the site conditions, but it is incredibly effective and efficient.</p> <p>In response to the concern that, <i>“The injection of reverse osmoses (“RO”) brine from the treatment system into the mine pool appears to also be contributing to a lack of stabilization of the mine pool...”</i></p> <p>This statement is incorrect. Mine pool data from three years of CLL’s operations (2018 – 2020) do not indicate that intermittent or seasonal operation is generating COPC. Mine pool data do not indicate that injecting RO brine is destabilizing the mine pool.</p> <table><tr><th colspan="4">Annual Mean Concentration of the Mine Pool (mg/L)</th></tr><tr><th>Year</th><th>Dissolved Uranium</th><th>Dissolved Arsenic</th><th>Sulfate</th></tr><tr><td>2018</td><td>12.19</td><td>0.013</td><td>1,573</td></tr><tr><td>2019</td><td>13.73</td><td>0.020</td><td>1,287</td></tr><tr><td>2020</td><td>12.56</td><td>0.010</td><td>1,351</td></tr></table> <p>These data demonstrate stability and affirm the long-term operating strategy; CLL does not need to operate the WTP on a continuous basis because the data do not warrant it. Further, year-round operation do not present optimal conditions for in situ treatment which is best done during quiescent conditions that are best realized during the fall-winter shut down period.</p>			Year	WTP Operations Summary	Mean Mine Pool Concentration, Dissolved Uranium*	Mine Pool Dewatering Summary	Notes	2018	Operated 47% of the year. Online = 171 days. Offline =194 days.	12.19 mg/L	Feet Gained = 51 feet Max. Depth = 201 fbS (6,251 ft amsl)	Insitu injection in December 2017.	2019	Operated 66% of the year. Online = 241 days. Offline = 124 days.	13.73 mg/L	Feet Gained = 46 feet Max. Depth = 246 fbS (6,206 ft amsl)	Installed new 60hp dewatering pump at ~400 fbS.	2020	Operated 47% of the year. Online = 172 days. Offline = 194 days.	12.56 mg/L	Feet Gained = 99 feet Max. Depth = 345 fbS (6,107 ft amsl)	Insitu injection January 2020.	Annual Mean Concentration of the Mine Pool (mg/L)				Year	Dissolved Uranium	Dissolved Arsenic	Sulfate	2018	12.19	0.013	1,573	2019	13.73	0.020	1,287	2020	12.56	0.010	1,351
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Attachment 2

Schwartzwalder Mine, Jefferson County, CO

Schwartzwalder Mine, Jefferson County, CO

Updated DRMS Bond Calculation - February 2021			
Source	Amount	Description	Notes
	\$ 926,668	Additional Scope Items (Total Cost)	
TR-12	\$ 30,000	200 gpm water treatment plant	Demo of new water treatment plant building
TR-18	\$ 134,526	Cutoff Wall and 18" Creek bypass pipe line	Habitat restoration remaining
	\$ 575,000	Groundwater monitoring	\$77,000 for 5 years; \$38,000 for an additional 5 years
	\$ 15,000	Adit closure - Minnesota and CV/Charley/Intakes areas	Two mine openings @ \$7,500 each
	\$ 26,000	Groundwater well abandonment	Abandon 13 monitor wells @ \$2,000 per well
	\$ 780,526	Subtotal (Direct Costs)	
		<u>Additional Scope Items (DRMS Indirect Costs)</u>	
	\$ 15,767	Liability Insurance	2.02% of Direct Costs
	\$ 8,196	Performance Bond	1.05% of Direct Costs
	\$ -	Job superintendent	Site personnel covered in RO system operation
	\$ 78,052.60	Profit	10% of Direct Costs
	\$ 102,015	Subtotal (Indirect Costs)	
		<u>Additional Scope Items (Eng/Management)</u>	
	\$ -	Engineering Word &/or Contract/Bid Prep	4.25% of Direct and Indirect Costs
	\$ 44,127	Reclamation management &/or Admin.	5% of Direct and Indirect Costs
	\$ 44,127	Subtotal (Eng/Management)	
AM-04	\$ 4,511,426	Mine Dewatering & InSitu Treatment (Total Cost)	
		<u>Mine Dewatering & InSitu Treatment (Direct Costs)</u>	
	\$ 515,000	Maintain InSitu Mine Pool Treatment	10 yrs. quarterly treatments for maintenance.
	\$ 1,546,360	RO System Operation - yr 1 to 10	Yr 1 to 5: RO system runs half-time (@ \$139,636/yr) and on standby half-time (@ \$15,000/yr); see attached detail
	\$ 1,546,360	RO system Operation - yr 11 to 20	Yr 6 to 10: Continue to run as in Yr 1 to 5
	\$ -	WebMaster Remote Monitoring System	Included in cost of RO systems
	\$ 22,200	Mine Pool Sampling	Yrs 1 to 10
	\$ 22,200	Mine Pool Sampling	Yrs 11 to 20
	\$ 3,652,120	Subtotal (Direct Costs)	
		<u>Mine Dewatering & InSitu Treatment (DRMS Indirect Costs)</u>	
	\$ 73,773	Liability Insurance	2.02% of Direct Costs
	\$ 38,347	Performance Bond	1.05% of Direct Costs
	\$ -	Job superintendent	Site personnel covered in RO system operation
	\$ 365,212	Profit	10% of Direct Costs
	\$ 477,332	Subtotal (Indirect Costs)	
		<u>Mine Dewatering & InSitu Treatment (Eng/Management)</u>	
	\$ 175,502	Engineering Word &/or Contract/Bid Prep	4.25% of Direct and Indirect Costs
	\$ 206,473	Reclamation management &/or Admin.	5% of Direct and Indirect Costs
	\$ 381,974	Subtotal (Eng/Management)	
AM-04	\$ 997,524	Alluvial Fill (Total Cost)	
		<u>Alluvial Fill (Direct Costs)</u>	
	\$ 74,000	Mobilization	Demob - all heavy equipment already on site
	\$ 71,831	Excavate, Haul and Place	Kessler Quote per TR-23, excavate, haul and place on waste rock piles, 1 construction season.
	\$ 10,000	Lab Analysis Soils	50 verification samples
	\$ 15,000	Lab Analysis Water	100 samples during excavation.
	\$ 48,000	Modify/Demo sumps	Pipes, pumps, electrical modifications.
	\$ 24,000	Modify monitor wells	Possible 3 new/relocated monitor wells @ \$8k ea - includes
	\$ 138,600	Purchase Inert Fill	Inert fill to come from site, no credit taken for discount
	\$ 214,500	Haul and Place Fill	Inert fill from site - haul charge reduced to essentially zero.
	\$ 50,750	Purchase Top Soil	Purchase 3,500 cy of top soil
	\$ 112,000	Haul and Place Top Soil	Haul and place 3,500 cy of top soil
	\$ 28,000	Revegetate	Purchase and distribute 3.5 acres
	\$ 786,681	Subtotal (Direct Costs)	
		<u>Alluvial Fill (DRMS Indirect Costs)</u>	
	\$ 15,891	Liability Insurance	2.02% of Direct Costs
	\$ 8,260	Performance Bond	1.05% of Direct Costs
	\$ 23,565	Job superintendent	322.59 hrs @ \$65.41
	\$ 78,668	Profit	10% of Direct Costs
	\$ 126,384	Subtotal (Indirect Costs)	
		<u>Alluvial Fill (Eng/Management)</u>	
	\$ 38,805	Engineering Word &/or Contract/Bid Prep	4.25% of Direct and Indirect Costs
	\$ 45,653	Reclamation management &/or Admin.	5% of Direct and Indirect Costs
	\$ 84,459	Subtotal (Eng/Management)	
AM-05	\$ 15,880	Black Forest Mine opening closure	
Other	\$ 1,187,529	Denver Water - Water Treatment (Contingent cost)	
Total Bond	\$ 7,639,027		



EXPLANATION

- HORIZONTAL EXTENT - BASE ZONE
- HORIZONTAL EXTENT - CONTINGENCY ZONE
- + TR-15 SOIL SAMPLE LOCATION
- SUMP9
- + MW9 MONITORING WELL
- WATER TREATMENT TRENCH EXCAVATION



0 150' 300'
Scale



Cotter Corporation N.S.L.
7800 E. Dorado Pk., Suite 210
Englewood, CO 80111

Cotter Schwarzwald Mine

FIGURE 1
SOIL SAMPLE LOCATIONS AND ESTIMATED HORIZONTAL EXTENTS OF ABOVE-THRESHOLD MATERIAL

File: SchwartzSiteMap32b.dwg

Date: 4/26/2011





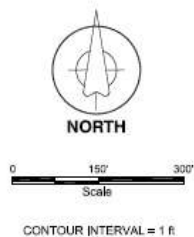
Scale: 1" = 300' 1:3,600



Drawn/Checked By: NP/SW

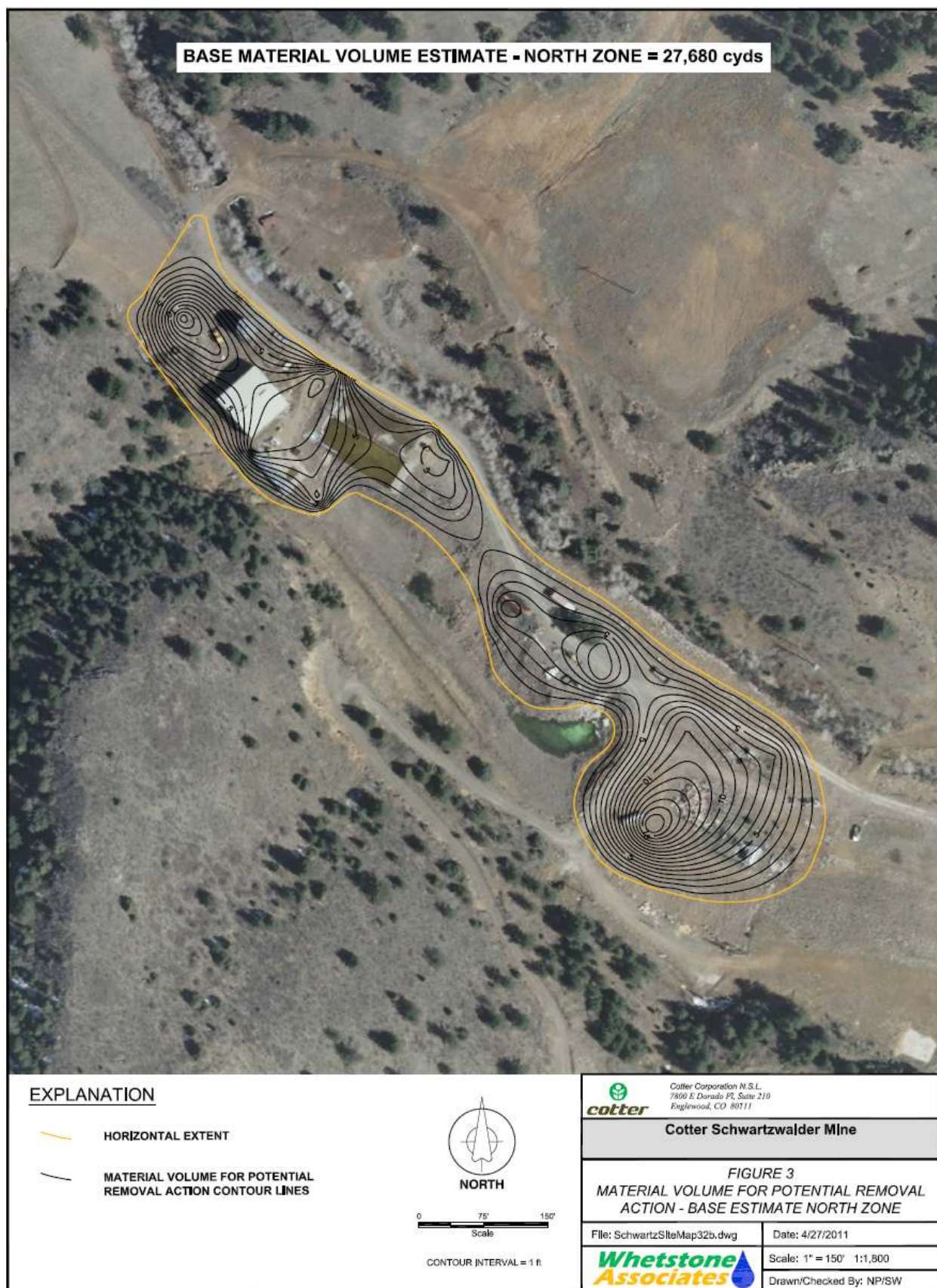


EXPLANATION

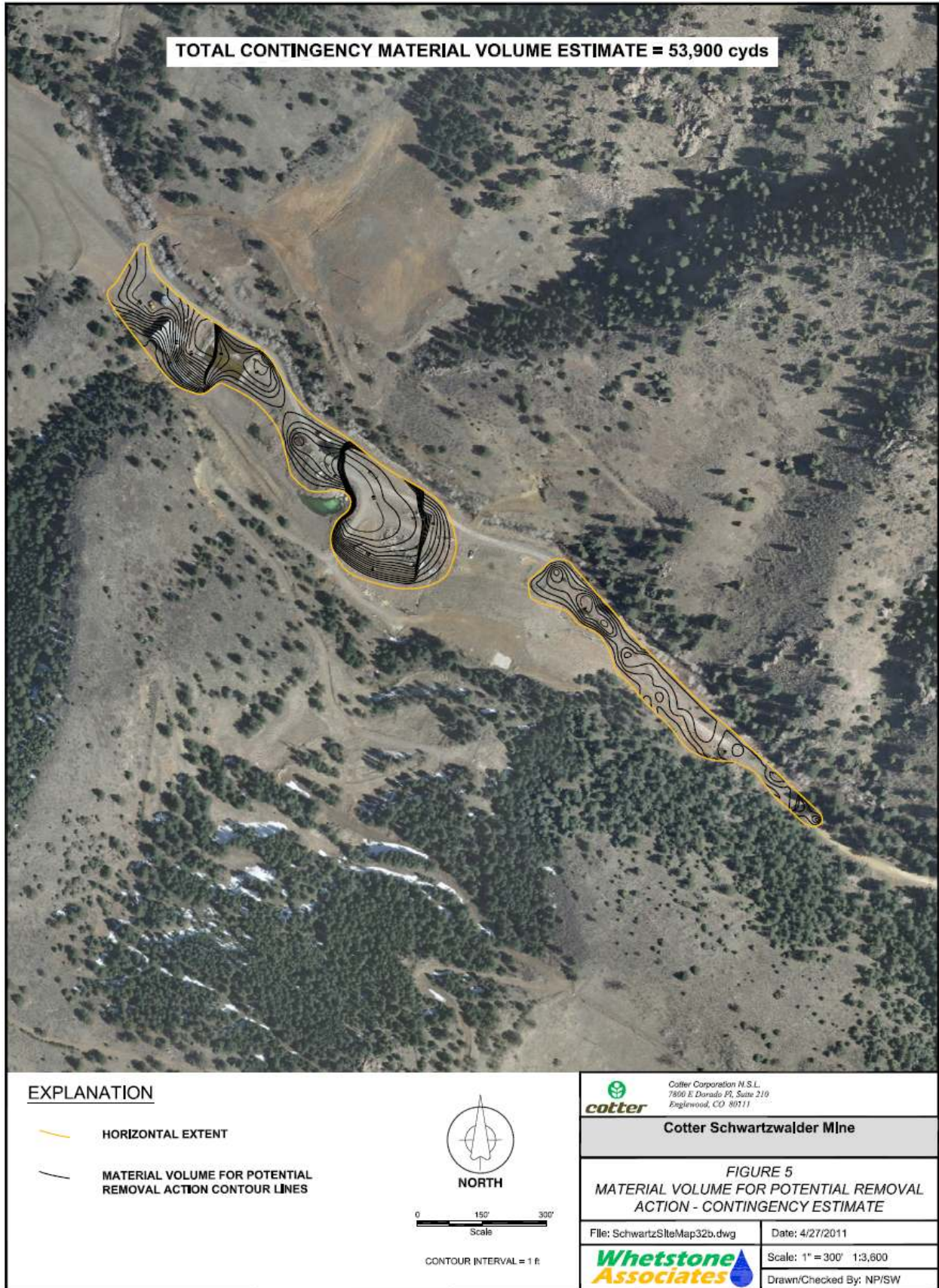
-  HORIZONTAL EXTENT
-  MATERIAL VOLUME FOR POTENTIAL REMOVAL ACTION CONTOUR LINES



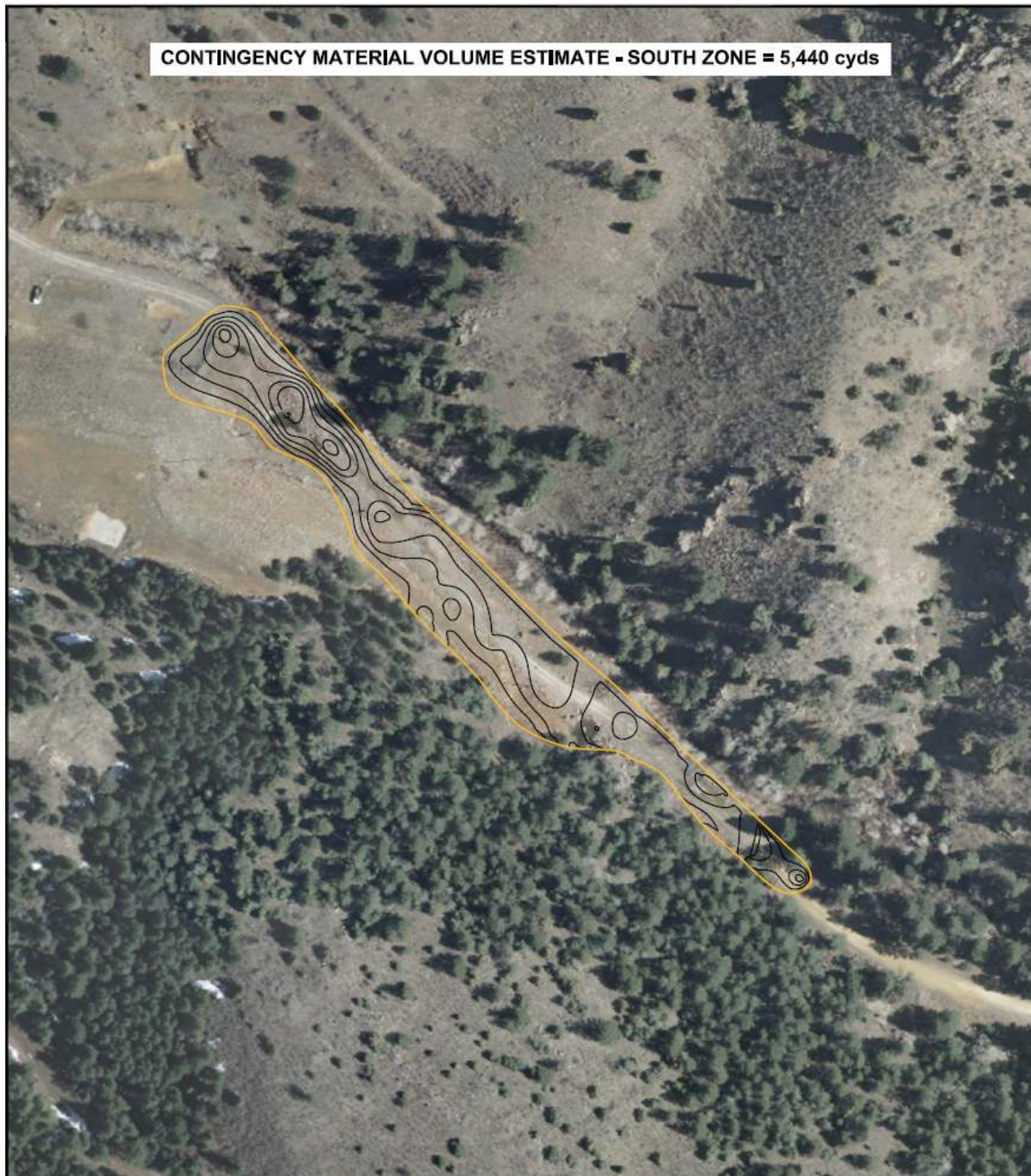
 Cotter Corporation N.S.L. 7800 E Dorado Pk, Suite 210 Englewood, CO 80111	
Cotter Schwartzwalder Mine	
FIGURE 2 MATERIAL VOLUME FOR POTENTIAL REMOVAL ACTION - BASE ESTIMATE	
File: SchwartzSiteMap32b.dwg	Date: 4/26/2011
	Scale: 1" = 300' 1:3,600
Drawn/Checked By: NP/SW	













CONTINGENCY MATERIAL VOLUME ESTIMATE - SOUTH ZONE = 5,440 cyds

EXPLANATION

-  HORIZONTAL EXTENT
-  MATERIAL VOLUME FOR POTENTIAL REMOVAL ACTION CONTOUR LINES



0 75' 150'
Scale

CONTOUR INTERVAL = 1 ft



Cotter Corporation N.S.L.
7800 E. Dorado Pk, Suite 210
Englewood, CO 80111

Cotter Schwartzwalder Mine

FIGURE 7
MATERIAL VOLUME FOR POTENTIAL REMOVAL
ACTION - CONTINGENCY ESTIMATE SOUTH ZONE

File: SchwartzSiteMap32b.dwg

Date: 4/27/2011



Scale: 1" = 150' 1:1,500

Drawn/Checked By: NP/SW