

From: [Skyler Wildenstein](#)
To: [Chisler, Clinton, EMNRD](#)
Subject: [EXTERNAL] FW: Responses to agency comment letter dated 12/19/22 re Section 12 Reclamation
Date: Thursday, December 29, 2022 1:58:32 PM
Attachments: [SECTION 12 MINE SHAFT CLOSURE DESIGN draft for comment 122822.pdf](#)

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Hi Clint,
Please find below Alan's responses to the Division's comments.
Thank you,
Skyler

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From: Alan Kuhn <akkuhn41@gmail.com>
Sent: Wednesday, December 28, 2022 1:30 PM
To: Skyler Wildenstein <skyler@empiretrustinc.com>
Subject: Responses to agency comment letter dated 12/19/22 re Section 12 Reclamation

Agency comments in regular font. My responses in **bold italic**. I have attached a two-page file with a draft design for shaft closure, for comment

DRAWING COMMENTS

1. Figure CL03 6-25-22: The figure indicates construction debris will be placed in the debris pit in the waste repository. Based on previous discussions with the applicant, the applicant indicated that some of this material would be placed into the shaft, following the removal of the hoist house. MECS supports placement of construction debris in the shaft where possible. ***SRI intends to place mine debris in the shaft at the same time that some waste rock is also placed in the shaft. Debris that will not fit in the shaft will be placed in the repository. No changes to the drawings are needed for this modification.***

2. Figure CL04 6-25-22 and Figure CL02 6-25-22: Based on Figure CL02 6-25-22, it seems the clay borrow source material southwest of the hoist house has a lobe of material containing approximately 50-100 picocuries per gram (pCi/g) of Radium 226 and small areas of 15-50 pCi/g Radium 226. MECS recommends these areas be excluded from use in the reclamation activities. NMED and MMD joint guidance requires the cover materials to have radioactivity of equal to or less than the site standard. ***The material with elevated RA 226 in the lake bed area is waste rock that will be excavated and placed either in the shaft or the repository. Any material in the lake bed that exceeds the Ra 226 clean-up standard, whether waste rock or contaminated soil, will be removed before clean clayey lake sediments are excavated for the repository cover.***

EXCAVATION PLAN COMMENTS

1. 2022-10 Excavation Option – Please explain how the material will be determined to be suitable for use as cover and all criteria used to make this determination. Please submit a material handling plan that outlines the approach that will be used to delineate and segregate cover material that includes the types of personnel needed, frequency and type of Soil testing needed to meet cover suitability, radiation levels deemed acceptable, and how impacted or off-spec material will be handled and disposed of. What is the distance between the clean cover material and the impacted material? Please indicate if the clean cover material will be covered in some way to isolate it from windblown transfer from the adjacent impacted pile. ***Selection of cover soils has already occurred and is described in FINAL RECLAMATION PLAN, SECTION 12 MINE, MCKINLEY COUNTY, NEW MEXICO, Rev. 0 dated July 2020. Sections 2.0, 3.4, 4.1.1, 4.1.6, 4.2.7, and 6.*** Material handling is addressed in ***SPECIFICATION No. SEC12-01, EARTHWORK FOR MINE RECLAMATION, SECTION 12 MINE, MCKINLEY COUNTY, NEW MEXICO (Sections 4.2 and 5) and in CONSTRUCTION QUALITY MANAGEMENT PLAN, SECTION 12 MINE RECLAMATION, REV. 0, 2/13/2020 . The existing distances between clean cover material and the impacted material vary across the mine surface; see App.B of the reclamation plan for the distribution of radiological contamination. Once radiologically contaminated materials are removed from the site and concentrated in the shaft and repository, remaining site soils will be clean and available for use as cover material on the repository and the top of the shaft. The initial lift of clean cover soil will protect the repository from windblown release of the mine waste from the repository.***

HOIST HOUSE RADIOLOGICAL SURVEY COMMENTS

(NV5 WILL NEED TO RESPOND TO THESE COMMENTS)

ADDITIONAL COMMENTS

1. MMD requests that Southwest Resources Inc. submit shaft closure designs including but not limited to the following information.

a. Types of materials with associated quantities to be disposed of down the shaft. ***Mine debris to be placed in the shaft include the structural steel from the headframe; miscellaneous metal, glass, wood, and plastic trash scattered around the site. We estimate that approximately 2332 lineal feet of structural steel, various amounts of electrical and mechanical equipment, and assorted other solid debris totaling about 150 CY will be placed in the shaft, along about 4000 CY of waste rock.***

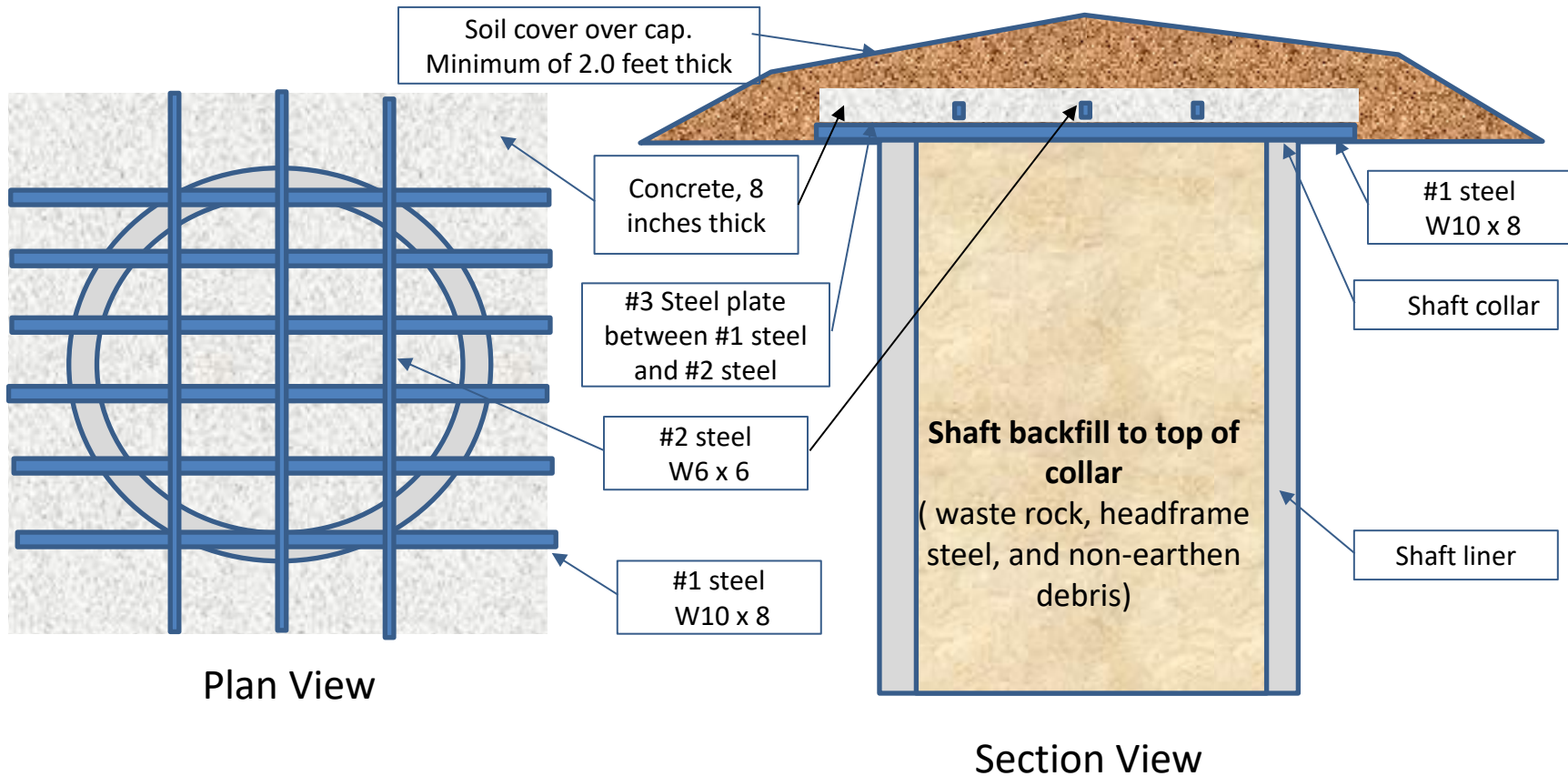
b. Shaft capping design including cover placed for positive drainage and vegetative cover. ***The shaft cap will consist of a rectangular grid of approximately 300 lineal feet of structural steel beams salvaged from the headframe supporting approximately 160 square feet of steel plate salvaged from the ore hopper, with a circular cast-in-place concrete top. A mound of loam soil will be placed over the concrete top.***

c. Headframe disposal details. ***Headframe steel will be scanned for radiological contamination. Contaminated steel will be placed in the shaft, and non-contaminated steel can be recycle for off-site use or placed in the shaft.***

I hope this will satisfy MMD/NMED.

Alan

SECTION 12 MINE SHAFT CLOSURE DESIGN



LIST OF MATERIALS - SHAFT CAP				
Item #	Quantity	Material	Lengths, each, ft	Source
1	6	steel, W10 x 8	18	headframe demolition
2	3	steel, W6 x 6	18	headframe demolition
3	7	steel plate, 0.25-0.50 inch	8-10	ore chute and hopper demolition
4	6 CY	Concrete		C&E Concrete

SECTION 12 MINE SHAFT CLOSURE DESIGN DETAILS

SHAFT BACKFILLING

- 1) Place remaining headframe demolition debris and other mine debris into shaft, alternating with waste rock and contaminated soil to minimize risk of leaving voids around debris.
- 2) Drop structural steel vertically into the shaft.
- 3) When the backfill surface is within 20 feet of the shaft collar, discontinue debris placement and fill the remaining space to the collar with waste rock and soil.
- 4) Allow the shaft backfill to settle for at least two weeks. Top off the backfill as needed to fill the shaft to top of collar.

CAP CONSTRUCTION

- 1) Steel beams and steel plate salvaged from headframe demolition
- 2) Shaft collar surface repaired as necessary to support #1 steel beams
- 3) Six #1 beams placed in parallel, 2.8-3.0 feet apart
- 4) #3 steel plate place over #1 beams, tack-welded together
- 5) #2 steel beams placed orthogonally to #1 beams, on top of #3 plate, tack- welded to plate
- 6) Concrete formed over #3 plate and #2 beams, poured to 8 inches thickness
- 7) Place loam 1.5 to 2.0 feet thick over the structural cap at least 28 days after concrete is poured.