



Missouri Department of Natural Resources  
Missouri Geological Survey  
Land Reclamation Program  
Open Pit Inspection

Date of Inspection: 05/07/2024	Inspector: Colin Priest	County: Jackson
Permit # 1105	Company Name: Star Excavation, LLC	
Site # 2516	Site Name: The Family Ranch Reclamation Project	
Inspection Type: Regular	Commodity: Limestone	Acres: 59
Company Personnel: Chris Travalant	Contact Phone # 816-835-1918	
Date of Last Inspection: 10/19/2022	Date of Permit Expiration: 05/01/2025	Public Notice Expires: 05/01/2034
CC & P Date Started:	Verified End Date:	Outstanding Watershed: No

**Checklist Key:** X = In-Compliance O = Non-Compliance \* = Noted N/A = Not Applicable

Inspection

Comments – Action Needed and Proposed End Date

A - PERMITTING			
1	N/A	The site has permit exemptions. <b>RSMo 444.766</b>	
2	X	The permit for the site is current. <b>RSMo 444.770.1.</b>	
3	X	Affected areas where overburden is removed or placed are permitted. <b>RSMo 444.765(1)</b> *Stockpile and processing areas are exempt as part of development. <b>RSMo 444.766.2.</b>	

B - POST-MINING LAND USE ACREAGE (10 CSR 40-10.050(7))							
	Wildlife Habitat		Agriculture	70	Development		Water Impoundment
Comments:							

C - SUBSTITUTION			
1	N/A	Any land being used for substitution? <b>RSMo 444.774.1. (12) 3.</b>	

D - ACCESS-RIGHT OF ENTRY			
1	X	Access of entry? <b>RSMo 444.777</b>	

E - LATERAL SUPPORT (DISTANCE TO RIGHT-OF-WAYS)			
1	X	Excavation is <b>NOT</b> within 50' of road right-of-way. <b>RSMo 444.774.1.(5)</b>	
2	X	Excavation is a minimum of 25', plus 1.5 times the depth of unconsolidated material, from road right-of-ways where unconsolidated surface is more than 16.67 feet deep. <b>RSMo 444.774.1.(5)</b>	
3	N/A	If excavation exists within the minimum distance of a road right-of-way, is there a road authority approved variance granted by the commission to mine closer than the minimum distance? <b>RSMo 444.774.1.(5)</b>	

F - SAFETY BARRIER			
1	X	If highwall is within 50' of public road right-of-way, a 3' tall adequate barrier is present. <b>RSMo 444.774.1.(6)</b>	
2	X	If highwall is within 50' of property line and serious or obvious threats to public safety are observed, a 3' tall adequate barrier is present. <b>RSMo 444.774.1.(6)</b>	

G - EROSION AND SILTATION CONTROL			
1	X	<b>No excess</b> sediment being discharged or deposited off permit area(s). <b>10 CSR 40-10.050(4)</b>	
2	N/A	<b>Damaging</b> erosion of permitted areas that have been reclaimed or are under reclamation is controlled. <b>RSMo 444.774.1.(2)</b>	
3	*	<b>No</b> damaging erosion features present that would prevent the post-mining land use(s) from being met. <b>10 CSR 40-10.050(4)</b>	see comment 1
4	N/A	Erosion control structures have been constructed to USDA, NRCS standards. <b>10 CSR 40-10.050(4)3.</b>	
5	X	Sediment ponds constructed sufficiently to control damaging runoff. <b>10 CSR 40-10.050(4)5.</b>	

H - ACID FORMING MATERIALS			
1	X	No indications of acid-forming materials present, including iron or aluminum precipitates in the water, development of salts or barren, acid, "hot spots." <b>RSMo 444.774.1.(8)</b>	
2	N/A	If present, acid-forming materials are covered with 2" of non-toxic soil material. <b>RSMo 444.774.1.(8)</b>	

I - GRADING			
1	N/A	Affected areas are graded to rolling topography traversable by farm machinery (recommended 3:1 slope). <b>RSMo 444.774.1.(1)</b>	
2	N/A	Affected areas are graded to a free draining stable landform that minimizes effects of erosion suitable for intended land use. <b>10 CSR 40-10.050(5)</b>	
3	N/A	Are exceptions to the grading requirements present at site? <b>10 CSR 40-10.050(5)(B)</b> -Consolidated highwalls -Existing slopes not traversable by farm machinery prior to mining -Areas under water -25% of total acreage for wildlife reclaimed each year graded to not a rolling topography -Slopes of ponds, terraces, and other erosion control structures	

<b>J - TOPSOIL HANDLING</b>			
1	X	Topsoil stripped at least 10' ahead of highwall. <b>10 CSR 40-10.050 (6)(A)4.</b>	
2	N/A	Topsoil or top 12" of soil medium stripped and stockpiled for redistribution on lands designated as agricultural. <b>10 CSR 40-10.050(6)(A)</b>	
3	X	Topsoil stockpiles adequately protected from erosion by seeding and/or mulching. <b>10 CSR 40-10.050 (6)(B)</b>	
4	N/A	Is topsoil bonding required? Topsoil bonding may be required when sufficient topsoil is not stored on site to reclaim agriculture land at \$4,500 per acre. <b>10 CSR 40-10.050 (6)(E)2.</b>	
5	X	Sufficient amount of topsoil stockpiled on-site for reclamation. Excess topsoil allowed to be sold off-site. <b>10 CSR 40-10.050 (6)(E)1.</b>	
6	N/A	Required 12" topsoil replaced on areas designated as agricultural land use. <b>10 CSR 40-10.050 (6)(A)1.</b>	
7	N/A	Topsoil is redistributed and graded to a uniform thickness and is not excessively compacted. <b>10 CSR 40-10.050 (6)(C)1.</b>	
8	N/A	Slopes 5:1 ratio or greater or where erosion occurs and where topsoil has been redistributed, are protected by mulch or other approved measures. <b>10 CSR 40-10.050 (6)(C)1.C.</b>	
9	N/A	If needed, fertilizer and soil amendments been applied in manner sufficient to achieve vegetative cover. <b>10 CSR 40-10.050 (6)(C)2.</b>	

<b>K - REVEGETATION</b>			
1	N/A	Vegetation is sufficient to control erosion. <b>10 CSR 40-10.050 (7)(B)2.</b>	
2	N/A	If needed, fertilizer and soil amendments for establishing or improving vegetative cover are applied based on soil test results. <b>10 CSR 40-10.050 (7)(B)3.</b>	

<b>L - CLEANUP</b>			
1	*	Site free of mine generated waste not allowed by the reclamation plan. <b>10 CSR 40-10.050(8)</b>	see comment 1

<b>M - GRADING AND REVEGETATION SCHEDULES-SUCCESS OF VEGETATION</b>			
1	N/A	Grading and revegetation contemporaneous. <b>10 CSR 40-10.050(10)</b>	
2	N/A	Grading and topsoil replacement within 12 months of completion of mining. <b>10 CSR 40-10.050(10)(A)</b>	
3	N/A	Site planted with approved permanent seed mixture within 24 months of completion of mining. <b>10 CSR 40-10.050(10)(B)</b>	

\* All areas are subject to this timetable unless proven that the operator needs the area as part of the active operations or there are minable reserves remaining. **10 CSR 40-10.050(10)(C)**

N - PERMANENT IMPOUNDMENTS															
1	N/A	Water impoundments designed and constructed to NRCS PONDS 378 standards for Missouri (earthen dams only).													
2	N/A	Minimum top width for the dam is correct. <table><tr><td>Minimum Dam Height</td><td>Top Width</td></tr><tr><td>&lt; 10'</td><td>6'</td></tr><tr><td>10 - 14.9'</td><td>8'</td></tr><tr><td>15 - 19.9'</td><td>10'</td></tr><tr><td>20 - 24.9'</td><td>12'</td></tr><tr><td>25 - 34.9'</td><td>14'</td></tr></table>	Minimum Dam Height	Top Width	< 10'	6'	10 - 14.9'	8'	15 - 19.9'	10'	20 - 24.9'	12'	25 - 34.9'	14'	
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< 10'	6'														
10 - 14.9'	8'														
15 - 19.9'	10'														
20 - 24.9'	12'														
25 - 34.9'	14'														
3	N/A	Combined up-stream and downstream side slopes of dam embankment is not less than a 6:1 grade, with no slope being steeper than 2.5:1 and stable.													
4	N/A	Principal spillway pipe elevation correct in relation to auxiliary spillway elevation - at least six- inches below auxiliary spillway and principal spillway pipe diameter at least four inches.													
5	N/A	Auxiliary spillway constructed in a trapezoidal configuration and includes an inlet channel, control section, and exit channel of appropriate length and width.													
6	N/A	<u>No</u> notable slumps or stress fractures.													
7	N/A	<u>No</u> notable seeps, leaks or aquatic vegetation on the dam out-slope.													
8	N/A	Is the freeboard depth correct? Crest of dam two feet higher than the bottom of the auxiliary spillway.													
9	N/A	Fence present to exclude livestock.													
10	N/A	<u>No</u> immediate downstream structures in harms way in case of catastrophic failure.													
11	N/A	Dams greater than 35’ in height, measured from the lowest point on the toe of the dam up to the water crest elevation, have designs approved by the state MDNR, Dam and Reservoir Safety Program.													
12	N/A	Impoundment water meet NPDES standards where NPDES permits are in place.													

O - SIGNS			
1	X	Sign identifying the mine company properly displayed at the main entrance. <b>10 CSR 40-10.050(11)</b>	

**P - OTHER/ COMMENT(S) SUMMARY**

1	<p>Site is in reclamation as the permit from the city to mine on the property expired August 2023. Operator is steadily backfilling the central pit with layers of rock, clay, limestone fines and shale scraped from the west pit. The site is sloped so all the water drains to the central pit, where one of the rooms from past underground mining is still accessible as a drain.</p> <p>Topsoil was pushed north of the highwall to act as a berm along NW Quarry Park Road and neighboring properties. There are signs of erosion on the berms where they face the pit, as the slopes are near-vertical. The topsoil will need to be graded to a more gentle slope and seeded to control erosion before the site can be declared reclaimed and released. The operator is working to determine what level the pit must be backfilled to so the topsoil can be graded properly.</p>
2	<p>Most equipment and buildings on-site have been removed, except those being used in reclamation efforts. Scrap material is being gathered in the NW corner of the site and will likely be sold. The pile of fines along the south border is alternately being used for backfill and sold. There is a stockpile of higher-quality clay dirt in the southwest corner of the property to use on top of the fill when the operator is ready to seed the ground.</p> <p>No compliance concerns.</p>
3	

Copy of inspection checklist delivered in the field: Yes ☐ No ☒

Notice of Violation to be Issued: Yes ☐ No ☒

**If you have any questions concerning this Inspection Report, please contact me by telephone at (573) 751-4041 or in writing at P.O. Box 176, Jefferson City, Missouri 65102-0176.**

Inspector Signature: Colin J. Priest Digitally signed by Colin Priest  
Date: 2024.05.09 08:50:51 -05'00' 05/09/2024