COLORADO
Division of Reclamation, Mining and Safety
Department of Natural Resources

MINERALS PROGRAM INSPECTION REPORT
PHONE: (303) 866-3567

The Division of Reclamation, Mining and Safety has conducted an inspection of the mining operation noted below. This report documents observations concerning compliance with the terms of the permit and applicable rules and regulations of the Mined Land Reclamation Board.

MINE NAME: Colorado Moss Rock	**MINE/PROSPECTING ID#:** M-2011-039	**MINERAL:** Decorative Stone	**COUNTY:** Pueblo
INSPECTION TYPE: Surety-Related Inspection	**INSPECTOR(S):** Patrick Lennberg	**INSP. DATE:** May 21, 2020	**INSP. TIME:** 07:30
OPERATOR: Premier Moss Rock, LLC	**OPERATOR REPRESENTATIVE:** None	**TYPE OF OPERATION:** 110c - Construction Limited Impact	

REASON FOR INSPECTION: Surety Related	**BOND CALCULATION TYPE:** Complete Bond	**BOND AMOUNT:** $9,650.00
DATE OF COMPLAINT: NA	**POST INSP. CONTACTS:** None	**JOINT INSP. AGENCY:** None
WEATHER: Clear	**INSPECTOR'S SIGNATURE:** Patrick LJ	**SIGNATURE DATE:** May 27, 2020

The following inspection topics were identified as having Problems or Possible Violations. OPERATORS SHOULD READ THE FOLLOWING PAGES CAREFULLY IN ORDER TO ASSURE COMPLIANCE WITH THE TERMS OF THE PERMIT AND APPLICABLE RULES AND REGULATIONS. If a Possible Violation is indicated, you will be notified under separate cover as to when the Mined Land Reclamation Board will consider possible enforcement action.

INSPECTION TOPIC: Mine Sign
PROBLEM: The mine identification sign was not posted at the entrance of the mine site. This is a problem for failure to post a mine identification sign as required by Section 3.1.12(1) of the rule.
CORRECTIVE ACTIONS: The operator shall, at the entrance of the mine site, post a sign which shall be clearly visible from the access road with the following: the name of the operator, a statement that a reclamation permit for the operation has been issued by the Colorado Mined Land Reclamation Board; and the permit number. The operator shall submit photo documentation that a proper sign has been posted by the corrective action date.
CORRECTIVE ACTION DUE DATE: 7/10/20

INSPECTION TOPIC: Markers
PROBLEM: The affected area boundary markers are missing or incorrectly placed. This is a problem for failure to maintain boundary markers around the affected area as required by Section 3.1.12(2) of the rule.
CORRECTIVE ACTIONS: The operator shall conduct a survey and replace the boundary markers in the correct location(s). The Division recommends that the operator have independent survey contractor locate the missing boundary markers and verify the current marker locations. The operator shall provide proof to the Division that this has been done by the corrective action date.
CORRECTIVE ACTION DUE DATE: 7/10/20

INSPECTION TOPIC: Fuel Storage
PROBLEM: Improper storage and containment of an above ground fuel storage tank was present on site.
CORRECTIVE ACTIONS: All storage tanks, petroleum and any hazardous materials on site for any period of time shall have appropriate secondary containment. The site will also have to comply with all applicable SPCC requirements. Please supply photo documentation that any fuel or hazardous materials containers are stored properly - including applicable secondary containment structures by the corrective action date. Note that secondary containment structures shall consist of an impermeable containment which could contain all contents of the tanks and various containers (when full) plus 10% of the total capacity. The operator may also provide photo documentation that all containers have been removed from the site on or before the corrective action date.
CORRECTIVE ACTION DUE DATE: 7/10/20

INSPECTION TOPIC: Revegetation
PROBLEM: There are state-listed noxious weeds present on site. This is a problem for failure to employ weed control methods for state listed noxious weed species within the permitted area, and to reduce the spread of weeds to nearby areas as required by Section 3.1.10 (6) of the rule.
CORRECTIVE ACTIONS: Implement the approved weed control plan and provide proof to the Division that this has been done.
CORRECTIVE ACTION DUE DATE: 7/10/20

OBSERVATIONS

This was a surety-related inspection of the Colorado Moss Rock mine (Permit No. M-2011-039) conducted by Patrick Lennberg of the Division of Reclamation, Mining and Safety (Division/DRMS) in response to a Succession of Operators application (Revision No. SO-01) that was received by the Division on February 28, 2020. The Division approved SO-01 on April 27, 2020. The successor operator, Mr. Nick Simpson of Premier Moss Rock, LLC was not present during the inspection. The site was previously inspected by the Division on May 13, 2016.

The Colorado Moss Rock site is located in Pueblo County approximately 1.75 miles west-southwest of Rye, Colorado. The affected land is owned by the successor operator. The approved post-mining land use is residential.

A mine sign was not observed at the entrance to the mine as required by Rule 3.1.12 and has been cited as a problem in this report. The southeast and northeast permit boundary markers of the larger rock collection area could not be located and this matter is also being cited as a problem in this report pursuant to Rule 3.1.12(2).

The Colorado Moss Rock site is a 9.9-acre 110c Construction Materials Reclamation Permit. The primary commodity mined at the site is decorative rock. Mining at the site involves using an excavator or loader to remove the decorative stone from the surrounding landscape. The stone is then palletized and staged near the mine entrance where it is then shipped offsite. The reclamation plan for the site calls for topsoil to be replaced 3 to 4 inches. The majority of the vegetation reclamation will be done by hand raking and broadcast seeding. Larger areas that have been compacted by the excavator and loader will be scarified by machine and then raked by hand and broadcast seeded. If an area is large enough it will be drill seeded and mulch (2 tons/acre) will be crimped.

Near the mine entrance at the staging area, the inspector noted that an above ground fuel tank did not have any secondary containment around it. Failure to have secondary containment is being cited as a problem in this report. There were noxious weeds at the staging area, Common Mullein a List C species and Musk Thistle a List B species. Enclosed with this report are the fact sheets for both plants created by the Colorado Department of Agriculture. Common Mullein was noted in the previous inspection report and the operator was advised, at that time, to begin weed management. During the inspection it was observed that the concentrations of these two plant species was greater onsite than the land surrounding site. Failure to control noxious weeds at the site is being cited as a problem in this report.

It appears that the mining operation has affected 4 to 6 acres over the life of mine. There were several stockpiles of product and pallets of stacked rock scattered around the site, mainly in the picking area. The internal site haul roads and the access road appeared to be stable and well maintained. It appears that mining is progressing from west to east. During the inspection hikers were noted to be crossing the permit area within feet of the excavator. On the far western boundary of the permit area there is a hiking trail that accesses the Greenhorn Mountain Wilderness Area. The barbed wire fence that was along this trail and permit boundary has fallen over. The Division recommends that the operator re-establish this fence to prevent hikers from accidently wandering into the active mine area.

The financial warranty was recalculated as part of this inspection. A copy of the Division's estimate will be sent to the operator for review under a separate cover letter.

Photographs taken during the inspection are attached.

Please contact Patrick Lennberg (303)866-3567 ext. 8114 or email at patrick.lennberg@state.co.us if you have any questions regarding this report.

Inspection Contact Address
Nick Simpson
Premier Moss Rock, LLC
5120 Windsor Avenue
Edina, MN 55436

Enclosure: Common Mullein Fact Sheet
Musk Thistle Fact Sheet

cc: Jared Ebert, DRMS

ec: Nick Simpson, Premier Moss Rock, LLC, njsimpson01@gmail.com

PHOTOGRAPHS

Photo 1: Looking east across the staging area

Photo 2: Above ground storage tank with no secondary containment

Photo 3: Typical boundary marker at staging area

Photo 4: Typical Musk Thistle growing in the staging area

Photo 5: Typical Common Mullein (yellow arrows) growing in staging area

Photo 6: Looking west across the staging area near the mine entrance

Photo 7: Mine entrance

Photo 8: Palletized stone waiting to be shipped in mining area

Photo 9: Excavator used for rock picking

Photo 10: Southwest permit boundary marker looking north with Greenhorn Mountain hiking trail adjacent to permit

Photo 11: Northwest permit boundary marker (yellow arrow) looking south with Greenhorn Mountain hiking trail adjacent to permit

The following list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each

(AR) RECORDS---------- Y	**(FN) FINANCIAL WARRANTY-------- Y**	**(RD) ROADS---------- Y**
(HB) HYDROLOGIC BALANCE---------- Y	**(BG) BACKFILL & GRADING---------- Y**	**(EX) EXPLOSIVES--------- N**
(PW) PROCESSING WASTE/TAILING---- N	**(SF) PROCESSING FACILITIES------- N**	**(TS) TOPSOIL---------- N**
(MP) GENL MINE PLAN COMPLIANCE- Y	**(FW) FISH & WILDLIFE---------- N**	**(RV) REVEGETATION---- PB**
(SM) SIGNS AND MARKERS---------- PB	**(SP) STORM WATER MGT PLAN---- N**	**(RS) RECL PLAN/COMP-- N**
(ES) OVERBURDEN/DEV. WASTE--------- N	**(SC) EROSION/SEDIMENTATION--- Y**	**(ST) STIPULATIONS------- N**
(AT) ACID OR TOXIC MATERIALS------- N	**(OD) OFF-SITE DAMAGE----------N**	**(OR) OTHER----------PB**

Y = Inspected and found in compliance / N = Not inspected / NA = Not applicable to this operation / PB = Problem cited / PV = Possible violation cited

Common mullein

Colorado Department of Agriculture

305 Interlocken Pkwy
Broomfield, CO 80021

(303) 869-9030
weeds@state.co.us

Key ID Points

Updated on:
08/09

Identification and Management

Identification and Impacts

Common mullein (*Verbascum thapsus*) is a biennial forb native to Europe and Asia. The first year of the plant it produces a basal rosette. Basal rosettes can grow to 30 inches in diameter. The leaves are light-green in color and are covered in fine soft hairs. The woolly leaves are alternate and overlapping each other and can grow over a foot long. In spring of the second year the plant bolts an erect stem, that grows 2 to 6 feet tall. The flowers of the plant are borne in terminal spikes. These terminal spikes may reach up to 20 inches in length. The flowers are sulfur-yellow in color and have five petals. The flowers range from 3/4 of an inch to 1 1/2 inches in diameter. Numerous two chambered fruits produce 100,000 to 250,000 seeds per plant. Flowering and seed production typical occur from June to August. The plant has a deep taproot along with a fiberous root system.

Habitats for Common mullein are roadsides, waste places, right-of-ways, pastures, hay fields, and abandoned lands. It prefers gravelly soil types, but can grow in other soil types. Livestock will avoid eating Common mullein, due to the hairy leaves of the plants. The plants were originally introduced as a medicinal plant. The Europeans used the flowers for tea, and the leaves for many remedies like burns and rashes. Both the Europeans and the Indians smoked the dried leaves to treat bronchitis.

The key to effective control of Common mullein is preventing the production of seeds. This plant is difficult to control due to the large amount of seed produced and seed bank left in the soil. Mechanical, cultural, biological and chemical treatments can be successful if utilized together in an integrated weed management plan. Details on the back of this sheet can help to create a management plan compatible with your site ecology.

Common mullein is designated as a "List C" species on the Colorado Noxious Weed Act. It is required to be either eradicated, contained, or suppressed depending on the local jurisdictions managing this species. For more information, visit www.colorado.gov/ag/weeds or call the State Weed Coordinator at the Colorado Department of Agriculture, Conservation Services Division, 303-239-4100.

Photos © All Photos from Kelly Uhing, Department of Agriculture; Except Bottom left Mary Ellen (Mel) Harte, United States

Verbascum thapsus

Management Recommendations

Common mullein

CULTURAL
Cultural control can be effective in assistance with other treatment options. Once the parent plants have been removed, cultivating the area with desirable grasses and forbs may outcompete Common mullein seedlings. For specific seed recommendations contact your local Natural Resources Conservation Services for seed mixes.

BIOLOGICAL
Gymnetron tetrum, a seed eating weevil, biological control has been found in eastern Washington State and is currently working on populations there. The weevil has not yet been approved for use in Colorado. Contact the Palisade Insectary of the Colorado Department of Agriculture at 970-464-7916 for more information.

MECHANICAL
Hand pull or dig when soil is moist, prior to flowering and seed production can be effective. If flowers are present, bag specimens carefully so as not to scatter any potential seeds. The key to effective control is to prevent seed production and/or spread.

Integrated Weed Management:

Preventing the establishment and the seed production of Common mullein is key to controlling populations. If the population is established, using a combination of cultural, chemical, biological and mechanical treatments can aid in suppressing population size. Since plants produce thousands of seed treatments need to occur over an extended period of time.

HERBICIDES

NOTE: The following are recommendations for herbicides that can be applied to range and pasturelands. Rates are approximate and based on equipment with an output of 30 gal/acre. Please read label for exact rates. Always read, understand, and follow the label directions. The herbicide label is the LAW!

HERBICIDE	RATE	APPLICATION TIMING
Chlorsulfuron (Telar XP)	1-3 oz/acre	Apply to rosette stages in spring or fall prior to bolting. Add non-ionic surfactant @ 0.32 oz/gal water or 1 pt/100 gal water.
2,4-D Picloram (Grazon P+D *this is a Restricted Use Pesticide*)	4 pts/acre	Apply to rosette stages in spring or fall prior to bolting. Add non-ionic surfactant @ 0.32 oz/gal water or 1 pt/100 gal water. DO NOT apply near trees/shrubs/high water table.
Picloram (Tordon 22K *this is a Restricted Use Pesticide*)	1-2 qts/acre	Apply to rosette stages to early growth stages in spring or fall. Add non-ionic surfactant @ 0.32 oz/gal water or 1 pt/100 gal water. DO NOT Apply near trees/shrubs/high water table.
Metsulfuron (Cimmaron)	1.0 oz/acre	Apply to rosette stages in spring or fall. Add non-ionic surfactant @ 0.32 oz/gal water or 1 pt/100 gal water.

Photos © Top to Bottom; Kelly Uhing, Colorado Department of Agriculture; Whitney Cranshaw, Colorado State University, Bugwood.org; Kelly Uhing, Colorado Department of Agriculture

Musk Thistle Identification and Management

List B

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Musk thistle *Carduus nutans* L. is a non-native biennial forb that reproduces solely by seed. During the first year of growth, a rosette forms in spring or fall. During the second year in mid to late spring, the stem bolts, flowers, sets seed, and the plant dies.

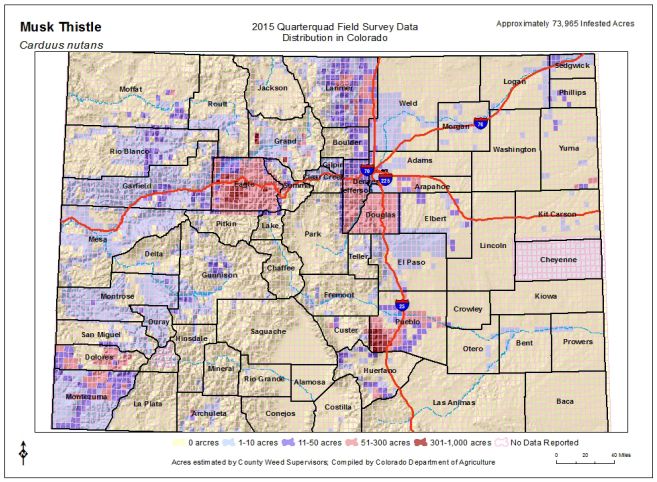
Musk thistle can grow up to 6 feet tall. The leaves have spines, are waxy, and dark green in color with a prominent light green to white midrib that can be seen from a distance. Leaves are dentately lobed; leaf bases sometimes extend down below the point of attachment. The terminal flower heads are purple, large in size (1.5 to 3 inches in diameter) and bend over as if nodding. These flower heads are made up of only disk flowers. They are surrounded by numerous, wide and stout lance-shaped, spine-tipped bracts that resemble an open pineapple. The pappus has plumose bristles that appear barbed under magnification. Musk thistle produces many flower heads. The tallest shoots flower first; lateral shoots develop in leaf axils. A robust plant may produce 100 or more flowering heads. Reproduction is usually via out-crossing through insect pollination, but self-pollination also occurs. Flowers emerge in May through September. Seeds develop shortly after flowers emerge. Flower buds can contain viable seeds from self-pollination. Seeds can mature on severed bud and flowerheads. Seeds remain viable in the soil for up to about 14 years. Seeds can germinate and emerge from spring through fall.

Musk thistle habitat is found in a variety of environments extending from shortgrass prairie to alpine. It is strongly associated with heavily disturbed sites, where over-use occurs or where site conditions are poor due to land management practices. This includes over-grazed areas, large fires, trails, ditches and roadsides. Infested livestock pasturs suffer from significantly decreased carrying capacity.

Because musk thistle reproduces solely from seed, the key for successful management is to prevent seed production. Once flowers emerge and start to produce seed, effective management options will become limited. Once sites are infested, musk thistle can form dense stands. Prevention, adjusting land management practices, a robust integrated treatment plan and restoration are critical to eliminating this species.

Musk thistle is designated as a "List B" species in the Colorado Noxious Weed Act. It is required to be eradicated; some populations may be contained or suppressed depending on state regulations. For management directions for each county, refer to the most recent Rule, or visit www.colorado.gov/ag/coweedcontacts for details.

2015 Quarter Quad Survey



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Key ID Points

1. Leaf with white midrib and leaf margins with spines.
2. Pappus with plumose barbed bristles.
3. Wide, stout lance-shaped bracts with spiny tips.

Musk thistle

Carduus nutans L.

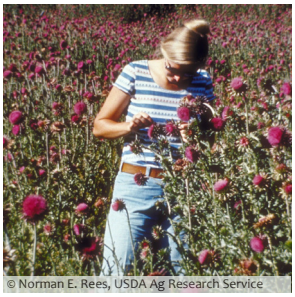
List B

Integrated Weed Management Recommendations

Musk thistle

Carduus nutans L.

Effective integrated management means using a variety of eradication methods that also includes restoration, prevention of seed production and dispersal, and monitoring. Maintain robust healthy native landscapes and restore degraded sites. Avoid soil disturbance. As with most biennials, prevent seed production in the first and second year of musk thistle growth. Prevent seed from dispersing, such as on contaminated equipment. Rest sites until they are effectively restored. Change land use practices. Use methods appropriate for the site.



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CULTURAL CONTROL METHODS

Musk thistle is not tolerant of competition and needs light to germinate seeds. Cultural methods should aim to maintain or restore a competitive assemblage of forbs, cool and warm season grasses. Implement whole site restoration of soils, plants and water regimes where stands of musk thistle exist where needed. Use locally adapted species that are ecologically appropriate for the site to improve competitiveness. Include annual as well as perennial species. Incorporate soil amendments, soil microbes and mycorrhizal fungi in restoration and land management efforts. Minimize soil compaction and disturbance, especially in wetlands and moist soil. Irrigation can increase competitive species.

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BIOLOGICAL CONTROL METHODS

Although horses, cattle, goats and sheep may eat flower heads on a few plants, seeds pass through their digestive tracks unaltered and spread. The leaf and stalk spines can cause domestic livestock to avoid mature musk thistle. Thus, musk thistle can become an "increaser" in over-grazed systems. Properly managed grazing can improve vigor of desired species and indireclty reduce musk thistle. *Trichosirocalus horridus* is the only biological control agent available for musk thistle in Colorado. The other species, *Rhinocyllus conicus*, is not host specific and will damage native thistles, and therefore cannot be released as an agent in Colorado. For more information, visit the Colorado Department of Agriculture's Palisade Insectary website at www.colorado.gov/ag/biocontrol.

© Friends of NV Wilderness Stewardship Team

MECHANICAL CONTROL METHODS

Methods, such as tilling, hoeing and digging, are best for infestations smaller than 0.5 acres; weigh this against other plants present, ecology and site condition. Sever roots below the soil surface during the first year before the plant stores energy, and in the second year before flower production. Mowing, chopping and deadheading stimulates more flower production; these methods require consecutive years of season-long treatments. All flowerbuds and heads must be collected, bagged, and disposed of or destroyed; seeds will mature and germinate if left on the ground. Prescribed fire that results in high soil burn severity damage roots and above ground biomass, but is not recommended due to impacts on desired plants. Fire generally favors musk thistle germination.

CHEMICAL

NOTE: The following are recommendations for herbicides that can be applied to pastures and rangeland. Rates are approximate and based on equipment with an output of 30 gal/acre. Follow the label for exact rates. Always read, understand, and follow the label directions. The herbicide label is the LAW!

HERBICIDE	RATE	APPLICATION TIMING
Aminopyralid* (Milestone)	6 oz./acre + 0.25% v/v non-ionic surfactant	Apply in spring rosette to early bolting growth stages or in fall to rosettes. *Product not permitted for use in the San Luis Valley.
Chlorsulfuron** (Telar)	1-2.6 oz. product/ acre + 0.25% v/v non-ionic surfactant	Apply in spring from rosette through very early flower growth stages. (Can prevent viable seed formation if applied no later than the first viable flowers begin to open.) **This herbicide has residual soil activity that will affect all broadleaf seedlings germinating after application has occurred.
Clopyralid (Transline)	0.67-1.33 pints product/acre + 0.25% v/v non-ionic surfactant	Apply to rosettes through flower bud stage in spring, or to fall rosettes.

Colorado Department of Agriculture - Conservation Services
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www.colorado.gov/ag/weeds

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