Kinder Morgan CO_2 Company, L.P.

Final Reclamation Plan

Sand Canyon #3 (SC-3)
(API 05-083-06286)

August 2020

Prepared for

Kinder Morgan CO_2 Company, L.P.
17801 Highway 491
Cortez, Colorado 81321
Phone: (970) 882-2464

Developed by

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Reclamation Plan

Operator	Kinder Morgan CO_2 Company, L.P. (Kinder Morgan)
API Number	05-083-06286
Well Name	Sand Canyon 3 (SC-3)
Legal Location	Section 5, Township 36 North, Range 18 West

1.0 Introduction

This reclamation plan has been prepared to meet the requirements and guidelines of the Onshore Oil and Gas Order No. 1. This plan describes the final reclamation procedures; any changes, if applicable, based on the Bureau of Land Management's (BLM's) designated final land use; and any mitigation measures associated with final reclamation that would be performed by the operator in order to receive a Final Abandonment Notice (FAN) as part of a Sundry Notice associated with their SC-3 well and the amendment to the SF-299 Form for their existing pipeline ROW (COC-26390A). Final reclamation of the SC-3 location would be considered complete when the success criteria outlined in this plan have been met.

Recreationists have used the Sand Canyon 3 (SC-3) location as a parking area for access to off-road areas in the nearby vicinity. Other spots in the area have also been used for parking by recreationists. It was agreed upon between BLM and Kinder Morgan that the reclamation of this location, directly adjacent to the BLM road, would be a good opportunity to incorporate a designated public parking area into the general area. This reclamation plan seeks to achieve the final land use objective of the BLM to establish a parking area and complete the other final abandonment objectives and safe, continued operation of the existing Kinder Morgan facilities in the area.

The Kinder Morgan contact person for this reclamation plan is:

Mike Hannigan, P.E.
EHS Supervisor
Kinder Morgan CO_2 Company LP
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2.0 Pre-Reclamation Site Inspection

The pre-reclamation site inspection for the SC-3 was conducted on November 11, 2019 and a meeting was conducted on February 19, 2020 with Bureau of Land Management (BLM) representatives Tanner Nygren and Jen Jardine, Kelsey Cavanaugh of Energy Inspection Service, LLC (EIS), and Mike Hannigan and Jake Forsman of Kinder Morgan at Kinder Morgan's office to go over BLM's recommendations. During the inspection, an inventory of existing site conditions and equipment was conducted. Reclamation procedures were discussed, including re-contouring, turning the area into a parking area, seed mix selection, weed abatement procedures, and any additional requirements needed to assist in converting the area into a parking lot. The BLM provided Kinder Morgan with recommendations and design suggestions for the parking area proposal.

2.1 Vegetation Community

The vegetation community that best represents the surrounding project area is the Pinyon Juniper Vegetation Community. No Colorado Department of Agriculture Class A- or B- listed species were identified within the project area.

2.2 Proposed Reclamation Seed Mix

Disturbance that is not within the parking lot area would be re-contoured and topsoil would be redistributed and prepared for seeding by the construction contractor. Ripping, disking, and seeding of the site would be done by Kinder Morgan's construction contractor using the seed mix below, which is shown in Table 2-1. The proposed reclamation seed mix considers the existing vegetation on the proposed project site.

Table 2-1. Pinyon Juniper Community Seed Mix

Common Name	Scientific Name	Variety	Season	Form	PLS lbs/acre[1]
Muttongrass	*Poa fendleriana*	Ruin Canyon	Cool	Sod-forming	3.0
Indian ricegrass	*Achnatherum hymenoides*	Paloma or Rimrock	Cool	Bunch	5.0
Bottle brush squirreltail	*Elymus elymoides*	Tusas or VNS	Cool	Bunch	3.0
Needle and thread	*Hesperostipa comata*	VNS	Cool	Bunch	3.0
Antelope bitterbrush	*Purshia tridentata*	VNS	Cool	Shrub	2.0
Sterile triticale	*Triticosecale aestlvum*	Quick Guard	Cool	Bunch	8.0
Galleta	*Pleuraphis jamesii*	Viva florets	Warm	Bunch	3.0
Four-wing Saltbush	*Atriplex canescens*	VNS	Cool	Shrub	0.50

[1]Based on 60 PLS per square foot, drill seeded; double this rate (120 PLS per square foot) if broadcast or hydro-seeded.

2.3 Vegetation Reclamation Standards

The SC-3 project area is located on-lease within public lands managed by the BLM and within Kinder Morgan's McElmo Dome Unit. For the portion of the project outside of the designated parking area that would be revegetated, the vegetation reclamation standards would be vegetation cover of at least 80% of the vegetation cover in surrounding, undisturbed areas (background) within the same vegetative community. These standards must be met on BLM-managed lands during post-disturbance monitoring procedures in order for the BLM-TRFO to sign off on the attainment of vegetation reclamation standards.

2.4 Project Maps and Parking Area Diagrams

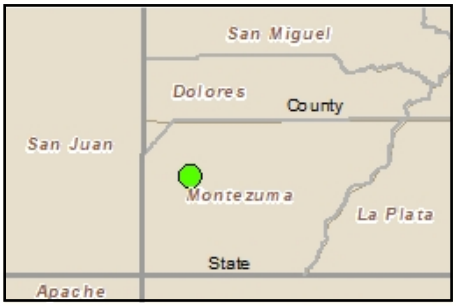
Kinder Morgan CO2 Company LP SC-3
Proposed Location Area Map

Legend

- Proposed Project
- PLSS Township
- PLSS Section
- PLSS Intersected

Feet
0 500 1,000 2,000

N



Operator:

KINDER MORGAN

Contractor:

EIS

NAD 1983 UTM Zone 13N Author: TP Date:6/29/2020

N

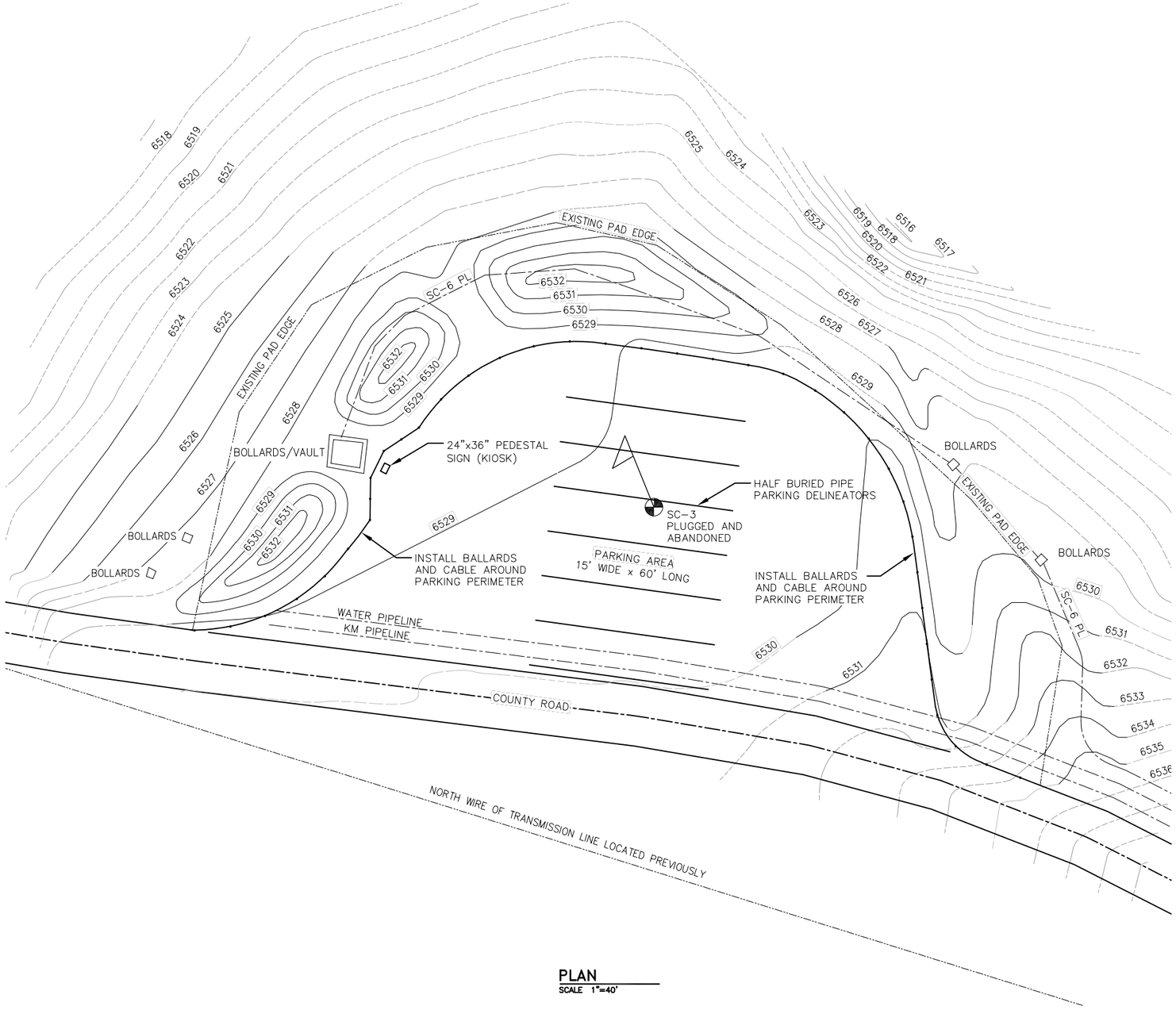
PLANT

0 20 40

1"=40'
DWG. SCALE IS BASED ON
11"x17" SHEET SIZE

LEGEND

- T-POST LOCATION
- LATH/PIN FLAG
- U-POST/LATH
- RIG ANCHOR
- 6" SLIDE VALVE
- CULVERTS
- DIVERSION DITCH



PLAN
SCALE 1"=40'

NOTES:

INFORMATION BASED ON A SURVEY OR SURVEYS ON THE GROUND PROVIDED BY;
HUDDLESTON LAND SURVEYING
P.O. BOX KK - CORTEZ, CO. 81321
(970) 565-3330

REVISIONS				
0	ISSUED FOR REVIEW	2/12/20	GEG	

KINDER MORGAN
CO2 COMPANY, L.P.
17801 HWY 491
Cortez, CO 81321

REFERENCE TITLE SHEET DRAWING:

CO2 WELL PAD SITE PLAN
SAND CANYON SC-3 WELL PAD
INTERIM RECLAMATION PLAN

SOUTH GATHERING FACILITIES — MONTEZUMA COUNTY, COLORADO

DRAWN BY: GEG 2/12/20	REVIEWED BY:	SCALE: AS NOTED	
CHECKED BY: JF	APPROVED BY:	DRAWING NUMBER: WP-SC-3-PERM-001	

Aug 27, 2020 - 6:37am by gummgle1 - Path = C:\Users\gummgle1\McElmo Dome Facilities\South Gathering\SG Gathering\Civil\WP-SC-3-PERM-001 well pad.dwg

SC-3 Well Pad
Storm Water and Reclamation Map

Section 5, Township 36N, Range 18W
API 05-083-06286

Legend

- Kiosk
- Trailers Not Recommended Sign
- Vehicle Parking Sign
- Diversion Ditch
- Straw Wattles
- SC3_Line_PadEdge
- SC3_Line_PipelineWater
- SC3_Line_PipelineSouth
- SC3_Line_PipelineNorth
- SC3_Line_FenceCable
- SC3_Line_ParkingDelineator
- BMP_Polygons
- Undalations
- Area to be Re-Contoured
- Undisturbed Area

N

0 20 40 80 Feet

1:480

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Kinder Morgan

KINDER MORGAN
CO_2 COMPANY, L.P.

DRAWN BY: Jake Forsman	PAPER SIZE: 11"x17"
DATE: 08/27/2020	

3.0 Reclamation Techniques

3.1 Equipment and Facilities Removal

- In areas that would be reclaimed, the gravel present would be stripped and moved to the parking lot area.
- Existing bollards would be painted BLM's Shale Green color so as to blend into the surrounding area.
- Existing underground pipe valve set associated with the existing pipeline ROW would remain as it is.

Figure 1. Existing Site Condition of the Proposed Area for Parking Lot

3.2 Parking Area Design

The proposed parking lot would occupy an area measuring approximately 115-foot by 150-foot, approximately 0.4 acre that would be compacted and maintained as a parking area as opposed to being revegetated and fully reclaimed. This would provide the public a designated area for parking and for unloading ATVs and other recreational transportation for use on the surrounding public lands.

- The area between the parking lot and reclaimed/revegetated disturbance would be fenced with metal pipe posts and metal cable strung through the pipes (see Figure 5) to prohibit treading and off-site disturbances to reclaimed areas. Posts would be capped pipe, standing at a height of three

feet above the ground level and spaced 10 to 15 feet apart. Pipes and cable would have a rusty look over time and would be free of printing or paint.

- The posts would be anchored in the ground with concrete.
- The cable fence would go around the kiosk in a square shape.
- Gravel across the parking area would be compacted to create a hard driving surface.
- The individual parking spaces would be delineated with half buried pipe anchored securely into the ground, capped on either end, straight, continuous, and parallel to each other. (See Figure 6).
- A gradual slope of 2-3% from the south and draining north would be built into the parking area to avoid water accumulation on the parking lot.
- A kiosk would be placed on the edge of the reclamation and parking lot area to inform the public about recreational uses and regulations in this area.
    - This sign would have a pedestal top that would be 36” by 24” with 4 mounting holes, a 5” by 5” double square post and cross rebar anchor with a 0.5” by 0.5” steel bar spacer, and a 3/16” steel sign mounting plate. It would be powder coated with rust texture.
    - One 36” by 24” .125 aluminum sign with narrative would be provided by BLM in full color and have the BLM logo.
- Two signs would be placed on the road, one east of the parking lot as visitors arrive and one west of the parking lot as they leave or drive past the parking lot.
    - The signs would be no shorter than 3 feet tall with 2-inch white lettering on a brown background and the BLM logo. The sign itself would be 12 inches high and 18 inches wide.
    - Eastern sign as you arrive would say “Vehicle Parking Area”.
    - Western sign as you leave the parking area would say “Large Vehicles/Trailers not Recommended Beyond this Point”.
- Kinder Morgan would be responsible for the maintenance of the parking lot area until Kinder Morgan receives a FAN for the SC-3 from the BLM. Kinder Morgan expects the BLM to approve the FAN when the parking lot is in adequate condition (i.e. no erosion issues, no visible noxious weeds), and the reclaimed areas of SC-3 have met the reclamation standards proposed in in Section 2.3, 3.9 and 4.0 of this plan then the BLM would take over the maintenance of the parking lot. Maintenance would include the following:
    - Weed control
    - Graveled surface
    - Lane delineation
- Maintenance of the signs and fences would be the responsibility of the BLM.
- The parking lot area would be easily accessed and able to accommodate trucks and trailers with several 60-foot by 15-foot parking spaces. There would also be an area for cars to park (20-foot by 12-foot per space) so as to accommodate both vehicle types and to clearly avoid the issue of cars parking in truck and trailer spaces designed for unloading/loading of recreational vehicles and/or horses.

Figure 2. BLM Kiosk Reference.

Figure 3. BLM Kiosk Reference.

Figure 4. BLM Kiosk Reference.

Figure 5. Cable Fence Fencing Reference.

Figure 6. Parking Lot Delineation Reference.

3.3 Topsoil/ Soil Replacement and Soil Amendments

It was determined that no soil amendments are needed for the soil on site based upon field observation. Weed free and non-contaminated topsoil or fill dirt with amendments would be brought in to provide a viable topsoil layer to assist in the successful establishment of vegetation. In order to not interfere with the existing ground cover currently overlying Kinder Morgan's pipeline running around the pad area, a weed-free, non-contaminated, with the same soil texture/consistency as the surrounding area would be brought in to help recontour the pad area that is planned for full reclamation and revegetation. This would help the area to blend in with the natural surrounding landscape. Recontouring would be done by adding soil to the location in such a way that it creates undulating topography to mimic a more natural ground surface. A gentle slope at the edge of the pad would be created and pockets to collection moisture would be developed. Spreading of topsoil would not be done when the ground or topsoil is wet.

3.4 Vegetation and Site Clearing

No existing vegetation will be stripped or cleared from the site. These areas currently have good growth which helps with soil stability and assists in protecting the pipeline ROW. Soil that will be brought in to recontour the pad would not be placed over any existing vegetative areas.

3.5 Water Management/Erosion Control Features

Proposed water management features can be found depicted on the Proposed Reclamation and Stormwater Map in Section 2.4. The proposed project is located on a slight hill with erosion occurring on the cut slope. To accommodate the expected runoff and prevent erosion, multiple diversion ditches, bumps, troughs, biodegradable wattles, and check dams would be installed across the reclamation area. Wattles would be replace and maintained as needed until vegetation has been established and then the wattles would be removed. See Figure 2.4 for placement of water management features.

3.6 Seedbed Preparation

Disturbed areas would be re-contoured to blend with the surrounding landscape, emphasizing restoration of the existing drainage patterns and landform to pre-construction condition, to the extent practicable. As mentioned above, recontouring would be done to create an undulating topographic pattern across the area. Imported topsoil would be evenly redistributed across the reclaimed area prior to final seedbed preparation. Topsoil would not be redistributed when the ground or topsoil is wet. Seedbed preparation within compacted areas would include ripping to a minimum depth of 18 inches, unless and to the extent bed rock is encountered at a shallower depth. Spacing furrows would be 1-foot apart. Ripping would be conducted perpendicularly in two phases, where practicable. If large clumps/clods result from the ripping process, disking would be conducted perpendicular to slopes in order to provide terracing and minimize runoff and erosion. Final seedbed preparation would consist of raking or harrowing the spread topsoil prior to seeding to promote a firm (but not compacted) seedbed without surface crusting.

3.7 Seeding

The seed mix chosen for this project area is listed in Table 2-1. Seeding would occur immediately following recontouring and seedbed preparation. A disc-type seed drill with two boxes for various seed sizes would be utilized for seeding the disturbed areas of the site. Kinder Morgan or its reclamation subcontractor would ensure that perennial grasses and shrubs are planted at the appropriate depth. In situations where differing planting depths are not practicable with the equipment being used, the entire mix would be planted no deeper than 0.25 inch. A drag, packer, or roller would follow the seeder to ensure uniform seed coverage and adequate compaction. Seeding would be run perpendicular to slopes in order to minimize runoff and erosion.

Drill seeding may be used on well-packed and stable soils that occur on gentler slopes and where tractors and drills can safely operate. Where drill seeding is not practicable due to topography, the contractor would hand-broadcast seed using a “cyclone” hand seeder or similar broadcast seeder. Broadcast application of seed requires a doubling of the drill-seeding rate. The seed would then be raked into the ground so the seed is planted no deeper than 0.25 inch below the surface.

3.8 Mulching

To increase moisture retention, reduce erosion, and increase the success of revegetation, all reseeded areas would be mulched. Approximately two tons per acre of certified weed free straw or hay mulch would be applied and mechanically crimped into the soil by the reclamation contractor immediately upon reseeding.

3.9 Noxious and Invasive Weed Control

Kinder Morgan would control any noxious and invasive weeds by having annual inspections of the site. If any noxious weeds arise, they would be properly handled in accordance with Kinder Morgan’s Weed Management Plan. Lets double check the inspection schedule of KM’s general plan

4.0 Monitoring and Maintenance Requirements

After the earthwork and seeding is completed, Kinder Morgan will submit a Sundry Notice informing the BLM that reclamation has been completed, as well as requesting an inspection of the earthwork and seeding. A joint inspection may be conducted by Kinder Morgan and the BLM. Kinder Morgan would monitor the revegetation of these sites on an annual basis to insure progress and reclamation success. Reclamation would be deemed successful once a uniform vegetative cover has been established with a total plant cover being at least 80 percent of the average cover in the surrounding area. Additionally, the

total cover of noxious weeds (including species designated as "undesirable" by the county) must not be any greater than that which exists in the surrounding area. Non-noxious plant cover is defined as the vertical projection of non-noxious plant canopies (including herbaceous and shrub species) when viewed from above. Non-noxious plant cover shall be measured or estimated using a valid and reliable method, such as point-intercept.

During annual inspections, the evidence of the following criteria would need to be observed and documented on an inspection form. In addition to the percent cover, the following criteria will be evaluated and considered in the success of reclamation:

- A self-sustaining, vigorous, diverse, native (or otherwise approved) plant community is established on the site, with a density sufficient to control erosion and invasion by non-native plants and to reestablish wildlife habitat or forage production.
    - The established plant community should consist of species included in the seed mix and/or desirable species occurring in the nearby natural vegetation. See Table 3-2 and Table 3-3 for species.
- Erosion control is sufficient so that water naturally infiltrates into the soil and gullying, head cutting, slumping, and deep or excessive rills (greater than three inches) are not observed.
- Erosion features are equal to or less than surrounding area.
- The site is free of state- or county-listed noxious weeds, oil field debris and equipment, and contaminated soil. Invasive and non-native weeds are controlled.

5.0 References

43 CFR Part 3160, “Onshore Oil and Gas Order No. 1; Onshore Oil and Gas Operations; Federal and Indian Oil and Gas Leases; Approval of Operations,” 72 Federal Register 44 (March 2007), pp.