

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Sarah Cottrell Propst
Cabinet Secretary

Todd E. Leahy, JD, PhD
Deputy Secretary

Dylan Fuge, Division Director
Oil Conservation Division



BY ELECTRONIC MAIL ONLY

June 2, 2023

Rebecca Moore
Frontier Field Services
10077 Grogans Mill Road, Ste. 300
The Woodlands, TX 77380
RMoore@durangomidstream.com

**RE: Frontier Field Services - Notice of an Administratively Complete Discharge Permit
Application for Dagger Draw Gas Plant**

Dear Ms. Moore:

The New Mexico Energy, Minerals and Natural Resource Department's Oil Conservation Division (OCD) has reviewed your amended discharge permit application, dated May 20, 2023, for Frontier Field Services' (Frontier), Dagger Draw Gas Plant. OCD has determined that the amended discharge permit application is administratively complete.

Given OCD's determination, Frontier must provide public notice within 30 days of receipt of this letter (i.e., July 2, 2023) in accordance with the requirements of 20.6.2.3108(B) NMAC to the general public in the locale of the Gas Plant by each of the methods listed below:

1. Prominently posting a synopsis of the public notice at least 2 feet by 3 feet in size, in English and in Spanish, outside of the Gas Plant's main administrative office at 278 Pipeline Road, Artesia, NM, 88210 and at the Artesia Public Library located at 205 W. Quay Avenue, Artesia, New Mexico, 88210 for 30 days;
2. Providing written notice of the discharge by mail or electronic mail, to owners of record of all properties within a 1/3 mile distance from the boundary of the property where the discharge site is located; if there are no properties other than properties owned by the discharger within a 1/3 mile distance from the boundary of property where the discharge site is located, Frontier shall provide notice to owners of record of the next nearest adjacent properties not owned by the discharger;
3. Providing notice by certified mail, return receipt requested, to the owner of the discharge site if the applicant is not the owner; and

4. Publishing a synopsis of the notice in English and in Spanish, in a display ad at least three inches by four inches **not** in the classified or legal advertisements section, in the Artesia Daily Press.

As per 20.6.2.3108(F) NMAC, the notice must also include the address and phone number within OCD by which interested persons may obtain information, submit comments, and request to be placed on a facility-specific mailing list for future notices and that OCD will accept comments and statements of interest regarding the application and will create a facility-specific mailing list for persons who wish to receive future notices. The following OCD contact information must be included in the notice:

Shelly Wells – Environmental Specialist Advanced
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505
(505) 469-7520
Shelly.Wells@emnrd.nm.gov

Within 15-days of completion of the public notice requirements in 20.6.2.3108(B) NMAC, Frontier must submit to the OCD proof of the notice, including affidavit of mailing(s) and the list of property owner(s), proof of publication, and an affidavit of posting, as appropriate.

Also, as part of the discharge permit application, Frontier was required to submit a Closure/Post Closure Plan for OCD approval. OCD has reviewed this plan and hereby approves the Closure/Post Closure Plan. The financial assurance (FA) associated with this plan is \$573,100. The FA must be on OCD-prescribed forms, or forms otherwise acceptable to the OCD, payable to the OCD. Bond forms can be found at the bottom of OCD's Forms Page located at <https://www.emnrd.nm.gov/ocd/ocd-forms/>. The FA is due to the OCD within 30-days of email receipt of this letter (i.e., July 2, 2023).

If you have any questions, please do not hesitate to contact me by phone at (505) 469-7520 or by email at Shelly.Wells@emnrd.nm.gov. On behalf of the OCD, I wish to thank you and your staff for your cooperation during this process.

Regards,

Shelly Wells

Shelly Wells
Environmental Specialist- Advanced

Rebecca Moore

Environmental Advisor
Durango Midstream
10077 Grogans Mill Rd
The Woodlands, TX 77380
rmoore@durangomidstream.com



May 20, 2023

Ms. Shelly Wells
Oil Conservation District
1220 South St. Francis Drive
Santa Fe, NM 87505

RE: Groundwater Discharge Permit Application
Dagger Draw Gas Plant

Dear Ms. Wells:

As requested in your March 23, 2023 letter, attached please find updates to the Groundwater Discharge Permit application for the Dagger Draw gas plant.

If additional information is needed, please call me at (346) 224-2455, or email at rmoore@durangomidstream.com.

Sincerely,

A handwritten signature in blue ink that reads "Rebecca Moore".

Rebecca Moore

CC: Mary Taylor, Environmental Manager
Darin Kennard, Vice President & GM
John Prentiss, Sr Area Manager
Bobby Mallett, Foreman Field Ops
James Collins, Field Maintenance Foreman

Groundwater Discharge Permit Application
Dagger Draw Gas Plant

May 20, 2023

Contents

Introduction	1
1.0 Facility Description.....	1
1.1 Facility Type	1
1.2 Contact Information.....	1
1.3 Facility Equipment Diagram	2
1.4 Facility Boundary Diagram	3
2.0 Site Characteristics.....	4
2.1 Topography	4
2.2 Surface Soils	4
2.3 Surface Waters.....	4
2.4 Groundwater.....	4
2.5 Regional Aquifer.....	4
2.6 Facility Lithology	5
2.7 Precipitation	6
2.8 Groundwater Quality	6
3.0 Potential and Intentional Discharges.....	8
3.1 Process Areas and Materials Storage.....	8
3.2 On-Site Disposal	9
3.3 Waste Management	9
3.4 Groundwater Contamination.....	10
3.5 Drainage Paths and Stormwater Containment Areas.....	10
3.6 Collection and Storage Systems.....	11
4.0 Inspection, Maintenance, and Reporting	12
4.1 Proposed Modifications	12
5.0 Contingency Plan for Releases	13
5.1 Internal Alert Procedure	13
5.2 External Alert Procedure.....	14
5.3 Immediate Action.....	14
5.4 Containment and Cleanup	15
5.5 Manpower, Equipment, and Resources.....	15

Groundwater Discharge Permit Application
Dagger Draw Gas Plant

May 20, 2023

6.0 Public Notice 16

7.0 Facility Closure/Post Closure Plan..... 19

 7.1 Facility Closure Preparation 19

 7.2 Site Decommissioning 19

 7.3 Site Environmental Assessment and Remediation Activities..... 20

 7.4 Site Reclamation 21

8.0 Certification..... 22

Figure 1, Annual Precipitation, Artesia Municipal Airport 6

Figure 2 Soil Sampling Locations 20

Introduction

This application provides information as specified in NMOCD's *Guidance Document for Ground Water Discharge Permit Applications at Refineries, Natural Gas Plants, Well Pad Tank Batteries, Gas Compressor Stations, Crude Oil Pump Stations, and Oil and Gas Service Companies (Revised 9-2022)* and requested by NMOCD by letter dated October 3, 2022. This submittal is in response to requested amendments detailed in the NMOCD's January 26, 2023 letter.

1.0 Facility Description

The Dagger Draw Gas Plant consists of a natural gas treatment plant that is designed to treat natural gas prior to delivery to a midstream transmission company. The natural gas is treated to remove water, oil and hydrogen sulfide. Recovered liquids are stored briefly at the facility and then moved to the transportation pipeline.

1.1 Facility Type

The Dagger Draw Gas Plant is an existing gas processing plant that receives sweet and sour gas, dehydrates, removes H₂S to pipeline specifications, and delivers to a third party for pipeline transportation.

1.2 Contact Information

- Facility Address: 278 Pipeline Rd, Artesia, NM 88210
Facility Phone: 575-677-5108
Plant Contact: John Prentiss
Email: JPrentiss@durangomidstream.com
- Owner/Operator Address: 10077 Grogans Mill Road, Suite 300, The Woodlands, TX 77380
Corporate phone: 346-224-1000
Technical Contact: Rebecca Moore
Email: RMoore@durangomidstream.com
- Operator OGRID number: 221115

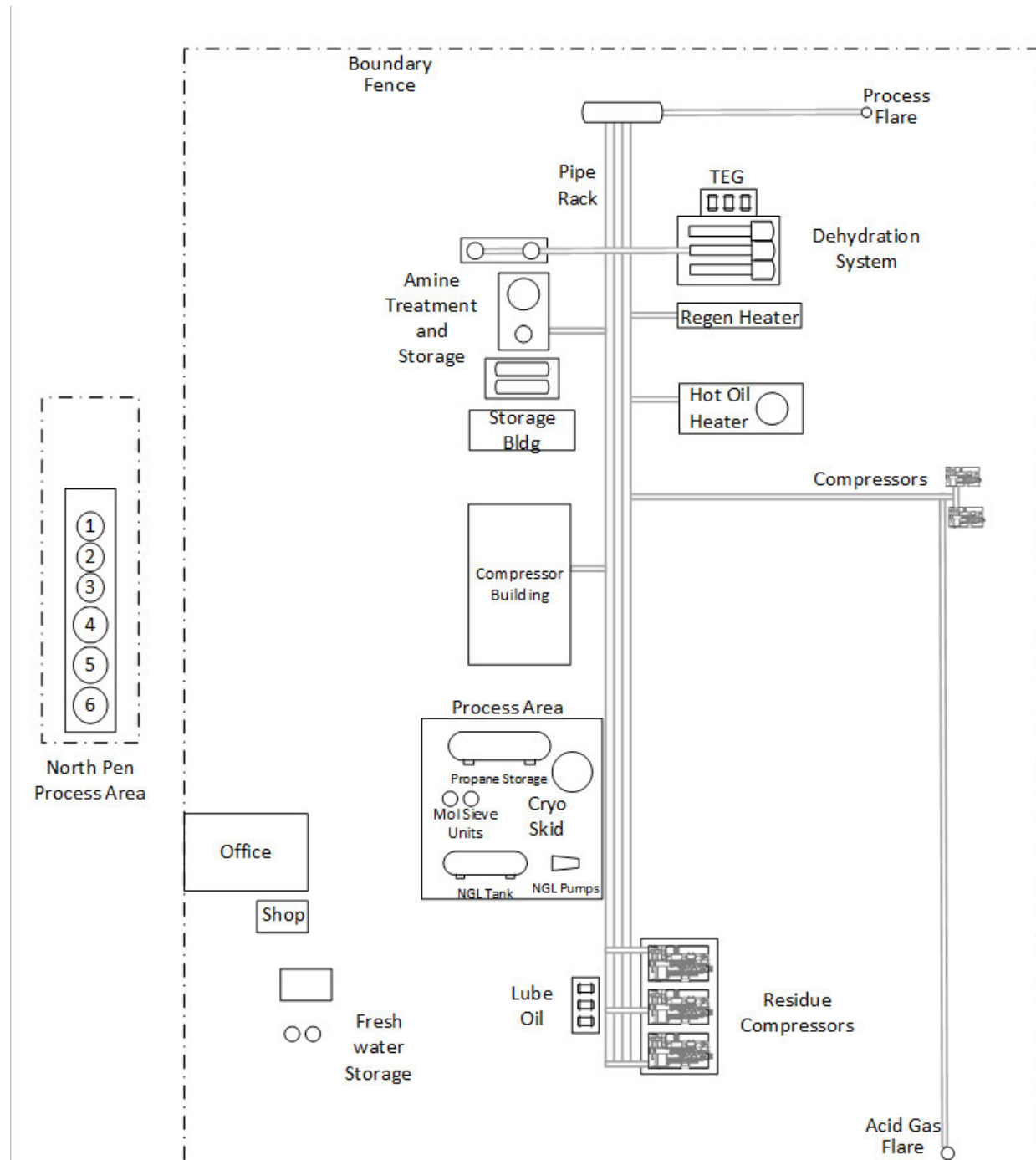
The facility is located in Section 25, Range 25E, Township 18S in UTM Zone 13, Eddy County, New Mexico. It is accessible by driving 9.2 miles south of Artesia on Highway 285, then right for 2.5 miles on Kincaid Road. Facility coordinates are 32°42'53", -104°26'45".

See the Facility Diagram on the next page for additional details.

Groundwater Discharge Permit Application
Dagger Draw Gas Plant

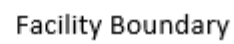
May 20, 2023

1.3 Facility Equipment Diagram



May 20, 2023

1.4 Facility Boundary Diagram



Scale 1" = 125'

2.0 Site Characteristics

2.1 Topography

The Dagger Draw facility is located between Carlsbad and Artesia, in the Great Plains region of southeast New Mexico. Topography in the immediate area of the plant is generally flat, with no discernable elevation change across the site (3470'). The surrounding areas show some relief, varying from 3450 – 3500 feet above sea level¹. Vegetation consists of plants typical to desertic plains, including creosote bush (*Larrea tridentata*), mesquite (*Prosopis glandulosa*), cacti (*Opuntia* spp.), black grama (*Bouteloua eriopoda*), tobosa (*Hilaria mutica*), and dropseeds (*Sporobolus* spp.)².

2.2 Surface Soils

The area surrounding the Dagger Draw Processing Plant is covered by alluvial deposits of clay, silts, and gravel from the Rio Peñasco and Pecos Rivers. These two rivers and their tributary systems dominate the local geomorphology. The area has undergone substantial oil and gas development. An agricultural zone is located along the Pecos River approximately 5 miles to the east and is supplied by shallow subsurface aquifers due to issues with poor Pecos River water quality.

2.3 Surface Waters

The Rio Peñasco stream meanders approximately 0.5 miles to the north of the facility. It is an intermittent waterbody which is part of the Pecos River watershed. No groundwater discharges exist within a mile of the facility. A surface depression that may hold water during precipitation events is located approximately 0.5 miles to the west-southwest of the facility; however, it is typically dry.

2.4 Groundwater

Based on the New Mexico Water Rights Database³ from the New Mexico Office of the State Engineer, three freshwater wells are located within a one-mile radius of the Dagger Draw facility. These wells are shallow, ranging in depth from 211 to 455 feet.

Based on the New Mexico Water Rights Database⁴ from the New Mexico Office of the State Engineer, two freshwater wells are located within a one quarter-mile radius of the Dagger Draw facility. One well is for commercial purposes, owned by Lucid Artesia Company (a predecessor of Frontier). The other well is for sanitary sewer services at Remuda Energy.

2.5 Regional Aquifer

The Roswell Basin aquifer system is the main source of groundwater in an area extending from Roswell to Carlsbad, New Mexico. It consists of an underlying carbonate-rock aquifer and a hydraulically connected, overlying alluvial aquifer. The carbonate-rock aquifer primarily has been formed by solution openings in extensive limestone and dolomite formations of Permian age. The alluvial aquifer is in

¹ USGS US Topo 7.5-minute map for Dayton, NM, January 8, 2020

² NM State University, New Mexico Range Plants Circular 374, November 2011.

³ https://gis.ose.state.nm.us/gisapps/ose_pod_locations/

⁴ https://gis.ose.state.nm.us/gisapps/ose_pod_locations/

unconsolidated gravel, sand, silt, and clay that overlies the eastern part of the carbonate-rock aquifer. The alluvial aquifer hydraulically connects the carbonate-rock aquifer with surface flow in the Pecos River, which flows through the Roswell Basin⁵.

2.6 Facility Lithology

The depth to the base of the freshwater aquifer in the Roswell Basin is variable⁶. In the immediate vicinity of the facility, the base is around 400 feet, consistent with the nearby freshwater well boring logs.⁷ Away from Dagger Draw facility, the base of the aquifer becomes deeper, and freshwater penetrates into carbonate rocks, including the San Andres Formation. Adjacent to the Pecos River, freshwater in the San Andres and overlying carbonate rocks is an important source of irrigation water⁸. However, freshwater is absent in the San Andres at the Dagger Draw and therefore not at risk from the facility operations.

The Dagger Draw facility is located on the Northwest Shelf of the Permian Basin. Sediments in the area date back to the Cambrian Bliss Sandstone (Broadhead, 2017), and overlay Precambrian granites. These late Cambrian transgressive sandstones were the initial deposits within a shallow marine sea that covered most of North America and Greenland. With continued down warping or sea-level rise, a broad, relatively shallow marine basin formed. The Ellenberger Formation (0 – 1000') is dominated by dolostones and limestones that were deposited on a restricted carbonate shelves (Broadhead, 2017; Loucks and Kerans, 2019). Tectonic activity near the end of Ellenberger deposition resulted in subaerial exposure and karstification of these carbonates which increased the unit's overall porosity and permeability.

During Middle to Upper Ordovician time, the seas once again covered the area and deposited the carbonates, sandstones and shales of, first, the Simpson Group (0 – 1000') and then the Montoya Formation (0 – 600'). This is the time period when the Tobosa Basin formed due to the Pedernal uplift and development of the Texas Arch shedding Precambrian crystalline clasts into the basin. Reservoirs in New Mexico are typically within the shoreline sandstones. Another subaerial exposure and karstification event followed the deposition of the Simpson Group. The Montoya Formation marked a return to dominantly carbonate sedimentation with minor siliciclastic sedimentation within the Tobosa Basin (Broadhead, 2017; Harrington and Loucks, 2019). Like the Ellenberger and Simpson carbonates, the subaerial exposure event at the end of Montoya deposition resulted in karstification.

⁵ Ground Water Atlas of the United States, US Geological Survey, Reston VA, 1995.

⁶ Maddox, 1969

⁷ New Mexico Water Rights Database from the New Mexico Office of the State Engineer

⁸ Hendrickson and Jones, 1952.

2.7 Precipitation

As may be expected in a desert climate, average annual precipitation near the facility is low, with typically less than 10 inches of rain and snowfall per year. Figure 1 shows precipitation records for the past decade in the Artesia area⁹.

Figure 1, Annual Precipitation, Artesia Municipal Airport

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
2020	0.22	0.30	2.16	0.07	0.00	0.48	0.66	0.36	0.02	0.03	0.14	0.00	4.44
2019	0.00	0.05	0.41	0.18	0.04	1.51	0.21	0.34	2.13	1.33	1.02	0.00	7.22
2018	0.01	0.25	0.10	0.00	0.54	1.30	0.40	0.76	0.69	1.62	0.01	0.46	6.14
2017	0.78	0.20	0.02	0.76	0.03	0.23	0.76	0.86	1.39	0.24	0.10	0.00	5.37
2016	0.00	0.18	0.01	0.37	0.59	0.40	0.02	5.54	1.96	0.34	0.17	0.25	9.83
2015	0.63	0.17	0.09	0.58	0.31	0.86	0.76	1.48	0.76	4.81	0.13	0.05	10.63
2014	0.00	0.03	0.06	0.28	0.19	0.93	0.57	0.28	M	M	M	0.11	2.45i
2013	0.35	0.00	0.03	0.00	0.21	0.15	1.18	0.00	1.91	0.00	0.39	0.07	4.29
2012	0.04	0.09	0.00	0.00	1.21	0.03	1.76	0.38	1.32	0.00	0.05	0.17	5.05
2011	0.00	0.00	0.00	0.00	0.00	0.40	0.60	0.14	0.65	0.25	0.00	0.28	2.32
2010	0.19	0.63	0.17	0.19	0.22	2.37	0.60	0.23	0.92	0.05	0.00	0.02	5.59

Flooding in Southeast New Mexico is not uncommon, however, impacts from these events have been limited due to the relatively flat topography, combined with the Pecos River's well defined drainage systems and wide floodplain containing and channeling precipitation¹⁰. The facility is not located in a flood plain. No known flooding of the facility has occurred, even during the recent major rainfall events of 2015.

2.8 Groundwater Quality

Ground water in the western part of the carbonate aquifer in the Roswell Basin generally contains a preponderance of dissolved calcium, magnesium, and sulfate and is classified as either a calcium sulfate or a calcium magnesium sulfate type water. Calcium concentrations generally range from 100 to 500 milligrams per liter, magnesium concentrations generally range from 50 to 130 milligrams per liter, and sulfate concentrations generally range from 300 to 1,400 milligrams per liter. The water is of similar chemical composition to that in other carbonate-rock aquifers where active dissolution of limestone, dolomite, and gypsum is occurring.

The water is classified as very hard. Dissolved-solids concentrations generally range from 700 to 2,600 milligrams per liter. Along the northeastern margin of the carbonate-rock aquifer, dissolved sodium and chloride concentrations in the water can be large; consequently, the water is classified as a sodium chloride type. Sodium concentrations in this area generally range from 1,500 to 3,000 milligrams per liter, and chloride concentrations range from 2,000 to 5,000 milligrams per liter (fig. 103). The water in

⁹ National Weather Service, National Oceanic and Atmospheric Administration

¹⁰ USGS

Groundwater Discharge Permit Application
Dagger Draw Gas Plant

May 20, 2023

this area is classified as very hard. Dissolved-solids concentrations range from 7,000 to 12,000 milligrams per liter. Water of large sodium chloride (salt) content is of particular concern in the Roswell Basin because most water is used for irrigation, and many crops can be damaged by excessive salt in the water and soil. The source of the large chloride concentrations in the carbonate-rock aquifer is uncertain but might be brine that moved across the relatively impermeable eastern boundary of the aquifer. Seasonal water-level declines in the carbonate-rock aquifer might temporarily reverse the direction of groundwater movement across the eastern boundary and enable brines in the deeper parts of the San Andres Limestone to move westward into the carbonate-rock aquifer. Chloride concentrations in water in the eastern part of the aquifer generally are larger near the end of the pumping season when water-level declines are large; concentrations decrease in the winter and early spring when water levels have returned to non-pumping levels. Large chloride concentrations in water samples from the bottom of some wells indicate that these concentrations are larger at greater depth in water in the eastern part of the carbonate-rock aquifer.¹¹

¹¹ Ground Water Atlas of the United States, US Geological Survey, Reston VA, 1995.

Groundwater Discharge Permit Application
Dagger Draw Gas Plant

May 20, 2023

3.0 Potential and Intentional Discharges

The Dagger Draw Gas Plant consists of a natural gas treatment plant that is designed to treat natural gas prior to delivery for transportation to markets. There are no intentional discharges of chemicals, process liquids, or stormwater at the facility.

3.1 Process Areas and Materials Storage

Materials that may be stored at the facility are listed in the table below.

Category	Material Name	Solid or Liquid	Type of Container	Estimated Volume	Secondary Containment	Location
Amine Process	Diethanolamine	Liquid	3,000-gallon tank	3,000 gallons	Concrete berm	Amine Treatment Area Storage Bldg
Acids/Caustics	Sodium Hydroxide	Liquid	500 ml glass container	1,000 ml	N/A	Shop
	Sulfuric acid	Liquid	500 ml glass container	1,000 ml	N/A	Shop
Detergents	Bio-degradable Industrial Detergent, F-20 Low pH	Liquid	400-gallon Poly Tank	400 gallon	Concrete berm	Compressor Building
Solvents, inhibitors and degreasers	A-142 Solvent	Liquid	500-gallon tank	500 gallons	Concrete berm	Compressor Building
	A-142 Solvent	Liquid	500-gallon tank	500 gallons	Concrete berm	Shop
	Methanol	Liquid	2,000-gallon Tank	2,000 gallons	Concrete berm	Process Area
	Methanol	Liquid	500 ml bottle	2,000 ml	N/A	Process Area
	Methanol	Liquid	500-gallon poly tank	500 gallons	Concrete berm	Process Area
	Defoamer 1017E	Liquid	Drum	100 gallons	Concrete berm	Process Area
	Stoddard Solvent - Parts Washer	Liquid	Parts Washer Vat	15 gallons	Concrete pad	Shop
	Orton R-856 Corrosion Inhibitor	Liquid	300-gallon poly tote	300 gallons	Concrete berm	Compressor building
Oils and Other Products	Lubrication Oil - LSO 32	Liquid	100-gallon tank	100 gallons	Concrete berm	Residue Compressors

Groundwater Discharge Permit Application
Dagger Draw Gas Plant

May 20, 2023

Category	Material Name	Solid or Liquid	Type of Container	Estimated Volume	Secondary Containment	Location
Oils and Other Products	Gear Oil - Super EP220	Liquid	4- 25-gallon tanks	100 gallons	Concrete pad	Compressor building
	Gear Oil - Super EP220	Liquid	Drum	110 gallons	Fiberglass	Shop
	SA - 40 Engine Oil	Liquid	6000-gallon tank	600 gallons	Concrete berm	Residue compressors
	Chevron Oil - ISO 32	Liquid	Drum	55 gallons	Fiberglass	Shop
	Chevron Hydraulic Oil - AW ISO 68	Liquid	5-gallon pail	20 gallons	Fiberglass	Shop
	Condensate	Liquid	3-500 bbl tanks, Tk 4-6	1,500 bbl	Metal berm	North Pen Process area
	ChemTherm 550	Liquid	Drum	110 gallons	Fiberglass	Shop
	Ethylene glycol	Liquid	500-gallon tank	500 gallons	Concrete berm	Compressor Building
	Skid drain liquids	Liquid	300 bbl tank, Tk-1	300 bbl	Metal berm	North Pen process area
	Molecular Sieves	Solid	2,000 lb Super Sack	10 super sacks	N/A	Amine Treatment and Storage
	Produced Waste Water	Liquid	2-300 bbl tanks, Tk-2, Tk-3	500 bbls	Metal berm	North Pen Process area
	Waste Oil	Liquid	420 bbl tank	420 bbls	Earthen berm with liner	Compressor building
	Sodium chloride	Solid	40 lb bags	50 bags	N/A	Shop

All of the tanks on site are located inside secondary containment structures. The secondary containments are sufficient to meet OCD size requirements. All of the equipment is contained on concrete skids.

3.2 On-Site Disposal

No on-site disposal facilities exist or are in use at the Dagger Draw plant. No surface impoundments, leach fields, pits, or landfarms are present at the facility.

3.3 Waste Management

Oily water and waste oils are stored in tanks in bermed areas prior to being collected and sent through an oil/water separator to remove saleable product and minimize the amount of waste sent for disposal.

Groundwater Discharge Permit Application
Dagger Draw Gas Plant

May 20, 2023

Recoverable oil is sold to customers, and wastewater is disposed at a permitted OCD Class II disposal well operated by Basic Energy Services.

Solid wastes are containerized and disposed as needed at the appropriate, OCD-approved disposal facility based on waste type. Typical waste streams may include hydrocarbon-contaminated soil, office trash (municipal solid waste), and non-hazardous industrial wastes such as empty containers. Lea Land is the disposal facility approved for these materials. Recyclable materials, such as used solvents and oily filters, are recycled through the product vendor. Vendors for recycling services include Safety-Kleen and Thermo Fluids. Per company policies and regulatory requirements, all wastes are characterized, handled, and disposed in accordance with state and federal laws.

Reverse osmosis wastewater and septic system water is treated appropriately and discharged into their designate areas onsite, located just south of the office building. Reverse osmosis (RO) wastewater is generated from operation of the reverse osmosis water purification system onsite. The RO system is in place to improve the characteristics of water by removing some dissolved solids inherent in the local drinking water supply. The RO system works by passing facility potable water through a membrane filtration system. The filtered water is then routed to a storage tank for use in facility processes. The amine treatment system requires ultra pure water to ensure that it operates correctly without impacting the equipment. The RO membrane primarily removes entrained calcium from the water to ensure the mineral does not adversely affect process conditions.

RO wastewater is generated during the normal operation of the RO system. The RO system maintains itself by continuously washing down the filtration membrane, thereby keeping it clean and ready for use. Water that has washed down the membranes is called RO wastewater; however, it is technically potable water as the characteristics of the RO wastewater meet EPA-compliant drinking water. This fresh water is discharged into the facility septic system for management along with normal sanitary sewer effluent.

3.4 Groundwater Contamination

No known groundwater contamination exists at the Dagger Draw facility. No facilities for monitoring groundwater quality exist at the facility.

3.5 Drainage Paths and Stormwater Containment Areas

Storm water does not leave the facility boundary and is contained by several mechanisms. Precipitation that reaches the storage vessels is contained within the secondary containment structures. The secondary containment is kept free from spills and leaks and is impervious to liquids. Therefore, stormwater that collects within secondary containment is removed via evaporation.

Precipitation that collects on the equipment skids is drained with the sump system. The facility sump system drains to a common collection point which is then routed to a slop water tank. This tank will be periodically emptied via tanker truck (as needed) and sent offsite for liquids disposal. Precipitation that reaches the ground surface is not in contact with oils or chemicals and remains within facility boundaries since the surface is flat with no discernible sloping. Stormwater typically collects in the center of the facility. There is no evidence of drainage channels, streams, or other water erosion features that would indicate surface water flows out of the facility.

Groundwater Discharge Permit Application
Dagger Draw Gas Plant

May 20, 2023

Based on the current and anticipated operations at the Facility, storm water will continue to be contained within the facility boundaries. All ongoing construction projects at the facility will continue to preserve the integrity of the storm water system. Furthermore, the materials storage vessels are and will continue to be located within secondary containment structures that are suitable for containment of the contents of the storage vessels.

3.6 Collection and Storage Systems

Plant operations consist of largely contained processes which may occasionally leak or drip into surrounding containment basins. The facility is designed with an open drain system that consists of buried piping. All secondary containment is piped into the common drainage system, which serves the dehydrator coalescing filters, separator/coalescer skid, glycol regeneration skis, NGL pumps, process skid, residue compressors, air compressors, mol sieve dehydration, and amine treatment unit.

Liquids drain to a common slop oil tank, which is hauled as needed for disposal. When liquids in the slop oil tank approach the 180-barrel threshold, a tanker truck is dispatched to offload the oily liquids and transport them to a liquids disposal facility. Due to the very low volumes of precipitation, hauling the slop oil tank occurs rarely occurs (<once annually). The sump tank is bermed using an impervious metal wall containment system. Underground piping consists of new steel pipes that are coated, wrapped and cathodically protected.

Groundwater Discharge Permit Application
Dagger Draw Gas Plant

May 20, 2023

4.0 Inspection, Maintenance, and Reporting

The facility is manned continuously and inspected on a daily basis. Routine duties include checking equipment for leaks or conditions that may lead to a release. Plant personnel act responsibly to avoid spills and leaks that may harm the environment and result in wasted product and lost revenue. Housekeeping measures require prompt identification and correction of leaks, drips, and spills. Maintenance activities are scheduled as needed to prevent releases of process fluids or other industrial materials.

4.1 Proposed Modifications

No modifications to current systems are proposed.

5.0 Contingency Plan for Releases

Prevention is key for eliminating discharges and associated risks of spills. The following procedures will be followed for spill prevention. The first line of defense is to educate and train operating personnel to assure reduction in human error and in the availability and use of pollution prevention equipment.

1. The plant supervisor or his designee will inspect the facility on a regular basis, noting the condition of any dikes, valves, lines, tanks or other equipment that may need repair or replacement on the daily report. Immediately, orally report to the operations supervisor any spills, leaks or any other circumstances requiring immediate action and noting the report on the daily report. These inspections are to be part of the regular visitations to the facility. Daily reports will be maintained for three years.
2. Any leaks or spills shall be reported to all proper agencies and a record of those reports shall be kept in the facility file.
3. All repairs and needed maintenance will be made to avoid discharge events. All major changes, repairs and replacements will be reported facility plans will be modified accordingly.

The second line of defense is secondary containment, where appropriate, to prevent any accidental discharge from reaching navigable waters. Where secondary containment is not practical an oil spill contingency plan, including management's support of and commitment to, have been adopted. The plan discusses the necessary manpower and materials for mobilization to initiate immediate cleanup of a spill.

Contingency plans will be maintained, and revised as changes in facility design, construction, operation, or maintenance occur that materially affect the facilities potential to discharge oil in quantities that may be harmful. The personnel responsible for all training, revisions, and updates concerning this plan are the company Environmental Engineer and the Environmental Coordinator.

Any person observing a spill or receiving a spill notice will notify company personnel as soon as possible. All information concerning the spill should be relayed as accurately and concisely as possible. If applicable, specific instructions will be issued to the reporting employee concerning containment and cleanup operations in regard to the spill. Obvious steps should be taken to stop or minimize the volume of the spill. Make sure all steps taken are in accordance with good safety practices.

5.1 Internal Alert Procedure

This alert procedure becomes effective immediately upon the observation of a reportable oil spill at any company facility. The information should include:

- Exact lease name and location, and if applicable, address and telephone number of facility.
- The spill date and time.
- The type of material spilled.
- Estimates of the total quantity spilled.

Groundwater Discharge Permit Application
Dagger Draw Gas Plant

May 20, 2023

- Estimates of the quantity spilled into navigable waters.
- The source and cause of the spill.
- A description of the affected medium (air, water and soil).
- Any damages or injuries caused by the spill.
- Actions being used to stop, remove and mitigate the effects of the discharge.
- Whether an evacuation may be needed.
- Names of individuals and/or organizations who have also been contacted.

5.2 External Alert Procedure

The non-company agencies listed below will be notified as appropriate.

<u>SPILL TYPE</u>	<u>AGENCIES TO BE NOTIFIED</u>
Threatens water Call First	National Response Center-NRC 1-(800) 424-8802
Enters navigable waters	Environmental Protection Agency-EPA (214) 665-2222 (24 Hours)
Hazardous Substances Over RQ or EHS's	State Emergency Response (505) 827-9226 Local Emergency Planning Commission (LEPC) Chaves County (505) 624-6770 Lea County (505) 397-3636 Eddy County (505) 885-2111
<i>Report all spills via the OCD's e-Permitting System on Form C-141, and verbally if necessary</i>	New Mexico Oil Conservation Division (575) 241-7063 Hobbs (505) 629-6116 Artesia (575) 626-0830 After Hours
Report per "Guidelines for Reporting Breaks, Spills, or Leaks	Bureau of Land Management (BLM) (505) 235-5972 or 234-5904 Carlsbad (505) 627-0272 or 627-0275 Roswell

5.3 Immediate Action

If a spill occurs, a company employee will eliminate the spill source by closing valves and any other measures as practical and determine the type and extent of spill.

Contract personnel and equipment will be dispatched to the spill area with material necessary to initiate a clean-up program.

Groundwater Discharge Permit Application
Dagger Draw Gas Plant

May 20, 2023

5.4 Containment and Cleanup

Containment of an oil spill will be accomplished by building an earthen dam or excavating a pit, if necessary, at such a location that utilization of natural drainage patterns will afford the most efficient entrapment. If a spill reaches navigable waters, the spill will be contained by booms, if possible, and operations will be put into place to recover the oil with mechanical skimmers, sorbets, or suction equipment.

The trapped materials will be reclaimed by removing released materials, storage of debris in a weatherproof enclosure, and transported for disposal, as appropriate. Removal and disposal of discharged fluid or contaminated soil must be in compliance with state and EPA regulations. The facility and spill area will then be restored to normal and corrective action taken to eliminate a reoccurrence.

5.5 Manpower, Equipment, and Resources

Company personnel directly responsible for reporting, first response, and cleanup include:

- Plant Operator,
- Plant Supervisor,
- Operations Manager,
- Environmental Engineer, and
- Environmental Coordinator.

Company spill response equipment includes office materials, vehicles, and computers/telephones for communications.

Contract personnel on call for spill response include:

- First available trucking company with vacuum trucks.
- First available service company with dump trucks and backhoe.
- First available service company with roustabout crews.
- Local safety-oriented company, if applicable.

The first company employee in a supervisory capacity, that receives notification, shall insure that action has been initiated to mobilize, contain and cleanup operations.

6.0 Public Notice

Locations for signs with a synopsis of the public notice in Spanish and in English to be posted include the Dagger Draw Plant Office, and at the Artesia Public Library. Property owners within 0.3 miles of the facility will be notified in writing via mail. The notice will also be published in the local newspaper, the Artesia Daily Press. Proof of the publications and notices will be provided to the NMOCD within 15 days of completion. Text of the public notice is detailed below.

PUBLIC NOTICE

Frontier Field Services, LLC has submitted an application to the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division for issuance of a discharge plan permit (GW-185) for their Dagger Draw Gas Plant located in Section 25, Range 25E, Township 18S in UTM Zone 13, Eddy County, New Mexico. It is located approximately 9 miles south of Artesia on Highway 285. Facility coordinates are 32°42'53", -104°26'45". The physical address of the facility is 278 Pipeline Rd, Artesia, NM 88210.

The facility processes natural gas that is transferred to the facility from various fields in a pipeline gathering system. The facility is a 75 MMcfd cryogenic gas plant and gathering system. The facility utilizes a cryogenic process to remove simple alkanes (i.e. ethane, propane, pentane and hexane) from natural gas and third party y-grade (liquid hydrocarbons). The unprocessed material is transported to the facility via pipelines. The gas is compressed and sent to an amine system to remove carbon dioxide and hydrogen sulfide, dehydrated and cooled. Natural gas liquid and residue gas products leave the facility by means of pipelines. The facility uses scrubbers, exchangers, separators, chillers, flash tanks, and compressors for the various processes. The end products, residue gas and natural gas liquids, are sold to various petroleum processing or use companies.

Approximately 1,000 barrels (bbl) of wastewater from wash down, pressure separators, scrubbers, and slug catchers is generated monthly and sent off site to a third party. Approximately 200 bbl of spent amine and water is collected each month in the amine waste tank and disposed off site in an OCD approved Class II well. Approximately 300 bbl of wastewater a year from the reverse osmosis backflush is discharged onsite. Approximately 15 gallons of Stoddard solvent is generated in the parts washer and recycled off site by the product vendor. Approximately 100 bbl of waste oil, including engine, gear and lubricating oil, is collected in the dirty slop oil tank and disposed off site in an OCD approved Class II well. All storage tanks are within properly engineered secondary containments.

The Roswell Basin aquifer is the most likely to be affected and is approximately 400 feet below ground surface. It consists of an underlying carbonate-rock aquifer and a hydraulically connected, overlying alluvial aquifer. The carbonate-rock aquifer primarily has been formed by solution openings in extensive limestone and dolomite formations of Permian age. The alluvial aquifer is in unconsolidated gravel, sand, silt, and clay that overlies the eastern part of the carbonate-rock aquifer.. The total dissolved solids concentration of the primary aquifer is above the 1,000 mg/l NM WQCC standard.

Groundwater Discharge Permit Application
Dagger Draw Gas Plant

May 20, 2023

The OCD contact by which interested parties may obtain information, submit comments, and request to be placed on a facility-specific mailing list for future notices is Shelly Wells, 505-469-7520, Shelly.Wells@emnrd.nm.gov. The OCD mailing address is 1220 South St. Francis Drive, Santa Fe, New Mexico, 87505. The OCD will accept comments and statements of interest regarding the discharge permit application and will create a facility-specific mailing list for persons who wish to receive future notices.

NOTICIA PÚBLICA

Frontier Field Services, LLC ha presentado una solicitud a la División de Conservación de Petróleo del Departamento de Energía, Minerales y Recursos Naturales de Nuevo México para la emisión de un permiso de plan de descarga (GW-185) para su Dagger Draw Gas Planta ubicada en la Unidad N de la Sección 25, Municipio 18 Sur, Rango 25 Este en el condado de Eddy, Nuevo México. La dirección física de la instalación es 278 Pipeline Rd, Artesia, NM 88210. La instalación está ubicada aproximadamente a 9 millas al sur de Artesia, Nuevo México.

La instalación procesa gas natural que se transfiere a la instalación desde varios campos en un sistema de recolección de tuberías. La instalación es una planta de gas criogénico y un sistema de recolección de 90 MMcfd. La instalación utiliza un proceso criogénico para eliminar alcanos simples (es decir, etano, propano, pentano y hexano) del gas natural y grado Y de terceros (hidrocarburos líquidos). El material sin procesar se transporta a la instalación a través de tuberías. El gas se comprime y se envía a un sistema de amina para eliminar el dióxido de carbono y el sulfuro de hidrógeno, deshidratarlo y enfriarlo. Los productos de gas natural líquido y gas residual salen de la instalación a través de tuberías. La instalación utiliza depuradores, intercambiadores, separadores, enfriadores, tanques de expansión y compresores para los diversos procesos. Los productos finales, gas residual y líquidos de gas natural, se venden a varias empresas petroleras.

Aproximadamente 1000 barriles (bbl) de aguas residuales de lavado, separadores de presión, depuradores y colectores de babosas se generan mensualmente y se envían fuera del sitio a un tercero. Aproximadamente 200 bbl de amina gastada y agua se recolectan cada mes en el tanque de desechos de amina y se desechan fuera del sitio en un pozo Clase II aprobado por OCD. Aproximadamente 300 bbl de aguas residuales del retrolavado de ósmosis inversa se descargan en el loccacion. Aproximadamente 15 galones de solvente Stoddard se generan en la lavadora de piezas y una empresa comercial los desecha fuera del sitio. Aproximadamente 100 bbl de aceite de desecho, incluido el aceite de motor, de engranajes y lubricante, se recolectan en el tanque de aceite de desecho sucio y se eliminan fuera del sitio en un pozo Clase II aprobado por OCD. Todos los tanques de almacenamiento están dentro de contenedores secundarios debidamente diseñados.

El acuífero de la cuenca de Roswell es el más probable que se vea afectado y se encuentra aproximadamente a 400 pies por debajo de la superficie del suelo. Consiste en un acuífero de roca carbonatada subyacente y un acuífero aluvial suprayacente conectado hidráulicamente. El acuífero de

Groundwater Discharge Permit Application
Dagger Draw Gas Plant

May 20, 2023

roca carbonatada se ha formado principalmente por aberturas de solución en formaciones extensas de piedra caliza y dolomita de edad Pérmica. El acuífero aluvial se encuentra en grava no consolidada, arena, limo y arcilla que recubre la parte oriental del acuífero de roca carbonatada. La concentración total de sólidos disueltos del acuífero primario está por encima del estándar WQCC de 1000 mg/l NM.

El contacto de OCD a través del cual las partes interesadas pueden obtener información, enviar comentarios y solicitar que se les incluya en una lista de correo específica de la instalación para futuros avisos es Shelly Wells, 505-469-7520, Shelly.Wells@emnrd.nm.gov. La dirección postal de la OCD es 1220 South St. Francis Drive, Santa Fe, New Mexico, 87505. La OCD aceptará comentarios y declaraciones de interés con respecto a la solicitud de permiso de descarga y creará una lista de correo específica de la instalación para las personas que deseen recibir información en el futuro avisos.

.

7.0 Facility Closure/Post Closure Plan

Upon permanent cessation of facility operations by Frontier Field Services, a closure plan to prevent the exceedance of standards of 20.6.2.3103 NMAC in groundwater will be enacted. The closure plan will consist of removing materials associated with gas plant operations which pose a potential risk of polluting surface or groundwater. Elements of this closure plan are detailed below.

7.1 Facility Closure Preparation

Initial closure activities will be to remove unused drummed or containerized products onsite that are used in the facility processes or supporting activities. Drummed products include but are not limited to containers of lube oils, amine solution, triethylene glycol, degreasers, and cleaning products. Unused products will be returned to vendors or relocated to operational facilities for beneficial use.

Solid wastes collected onsite will also be inventoried, packaged for shipment, and disposed in a manner consistent with their waste type. Oily filters will be sent offsite for recycling. Used solvent will be returned to the vendor (SafetyKleen). Office or non-industrial trash will be shipped offsite to a municipal landfill. Empty product containers will be returned to the vendor (preferred method) or disposed according to the proper handling protocol associated with each container.

After properly handling useful products and solid waste materials, decommissioning of equipment and disposal of liquid wastes will begin. Equipment storing hydrocarbon materials will be blind-flanged, then steam and/or pressure-washed to remove any traces of hydrocarbons that could leak into soils or come into contact with precipitation. Alternatively, equipment may be disassembled and removed from site for beneficial use at a new location. Secondary containment structures that remain onsite will be steam and/or pressure washed. Resulting liquid waste will be routed to the facility sump, then slop water storage tanks.

When all process equipment has been removed or cleaned, the facility sump system will be washed down and purged to the slop water storage tanks. Slop water liquids will be trucked out for disposal via an injection well. After all cleaning and purging activities are completed, the facility sump system will be isolated via coverings on equipment skids and blind flanging the slop water tanks. Slop water tanks will also be emptied and cleaned.

Estimated costs for facility closure preparation: \$22,850

7.2 Site Decommissioning

Decommissioning activities will consist primarily of removal of equipment and disposal of non-reusable items. As with other products at the facility, beneficial reuse is the preferred handling method for used equipment. The process equipment, including dehydrators and associated vessels, amine system with heaters, and cryogenic tower and associated vessels, flares, pumps, and remaining equipment will be disassembled and either sold or relocated to an operating site and returned to service. Compressors and associated engines will be removed and returned to the equipment vendor's operating fleet.

Above ground piping will be removed and sold for scrap metal. Underground piping will be excavated and also sold for scrap. Office and warehouse buildings will be sold, dismantled, and moved offsite.

Miscellaneous debris, including fencing, office items, or spare parts will be shipped to a landfill that accepts non-hazardous industrial wastes, such as Lea Land.

Estimated costs for facility decommissioning: \$179,000

7.3 Site Environmental Assessment and Remediation Activities

During the decommissioning process, the facility will be investigated for indicators of environmental impacts from operations. At this time, there is no evidence that hydrocarbon-impacted soils exist onsite. However, for the purposes of estimating costs for a site assessment and potential site remediation, the following assumptions are made.

The process area will be defined as the area of land beneath existing equipment with a 10-foot added perimeter around the equipment. For the purposes of the site assessment, this area will be sampled for chlorides and hydrocarbons to determine if plant operations have impacted the soils. One sample will be collected in approximately 20-foot square grid in process areas. For piping runs where the likelihood of impacts are low, samples will be collected in 30-ft intervals. If visible evidence indicates a location is impacted, areas of visible staining or likely hydrocarbon-impacted soils will be marked for excavation.

The area will be excavated and containerized for

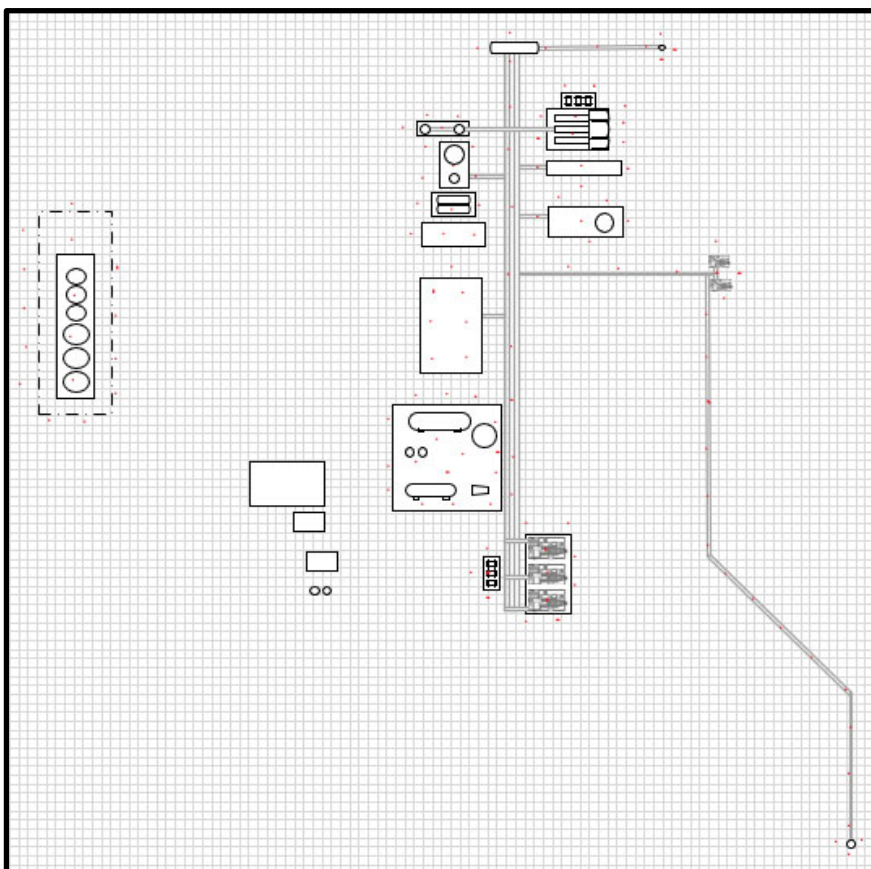
characterization and disposal prior to sampling. Figure 2 illustrates process areas and proposed sampling locations marked in red.

Estimated costs for sample collection and analysis:
\$17,500

Potential impacts are most likely to exist in areas beneath process equipment with moving parts, such as the compressor engines. For cost estimation purposes, it is assumed that the areas beneath the compressors will be excavated and shipped offsite for disposal in a nonhazardous industrial landfill. Resampling to verify that impacts have been removed will be completed,

and the area refilled with clean backfill. Costs include removal of approximately 100 yards of impacted

Figure 2, Soil Sampling Locations



Groundwater Discharge Permit Application
Dagger Draw Gas Plant

May 20, 2023

soil, sampling and backfilling, as well as characterization sampling, transportation, and disposal of impacted materials.

Estimated costs for excavation, sampling, and disposal: \$133,750

Estimated costs for assessment and remediation: \$151,250

7.4 Site Reclamation

When sampling verifies that remediation activities have been completed to the appropriate landowner and regulatory standards, the reclamation process will be initiated. Steps in the reclamation process include soil management and revegetation.

Soil management will include excavation and removal of ground hardening materials such as caliche or gravel, to return the site to native soils. Where the removal of paving materials creates major pits or depressions, topsoil backfill will be applied as needed. Areas that have been excavated may require soil stabilization activities such as mechanical packing to consolidate loose soils. Topography of the land surrounding the Dagger Draw Plant is generally flat, with a very slight slope to the northeast. The site will be regraded to match the naturally occurring topography. Given the flatness of the terrain, it is unlikely that erosion or drainage control structures will be required after grading.

After completing the soil stabilization and contouring activities, the site will be prepared for revegetation. If needed, seed bed preparation activities such as tilling or mulching will be done prior to seeding. The Dagger Draw Gas plant is on the northern border of the Chihuahuan Desert and the southern border of the Southwestern Tablelands ecosystems. The predominant flora in this area are shrubs and grasses. Grasses include purple three-awn (*Aristida purpurea*), black grama (*Bouteloua eriopoda*), and sideoats grama (*Bouteloua curtipendula*). Common shrubs include yucca and sagebrush (*Artemisia tridentata*). A seed mix representative of surrounding areas will be prepared and applied.

The seeded land will be monitored on a monthly basis to ensure progress towards completing revegetation. Watering may be conducted to enhance or accelerate growth. The expected duration of monitoring and maintenance to restore native conditions is two growing seasons. Costs to completely restore the land may be highly variable depending on the amount of soils moved, watering required, and success of revegetation.

Estimated cost for revegetation activities: \$220,000

Total costs for facility shutdown through site restoration are estimated at \$573,100.

Groundwater Discharge Permit Application
Dagger Draw Gas Plant

May 20, 2023

8.0 Certification

I hereby certify that the information submitted with this application is true, accurate, and complete to the best of my knowledge and belief.



Signed

Rebecca Moore

Name

May 20, 2023

Date

Durango Midstream

Company

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 149330

CONDITIONS

Operator: FRONTIER FIELD SERVICES, LLC 10077 Grogans Mill Rd. The Woodlands, TX 77380	OGRID: 221115
	Action Number: 149330
	Action Type: [UF-DP] Discharge Permit (DISCHARGE PERMIT)

CONDITIONS

Created By	Condition	Condition Date
scwells	None	6/2/2023