NueVida Resources, LLC's Odor Mitigation Plan

For the

Ardourel 33081718 Pad

October 2022

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1 INTRODUCTION

NueVida Resources, LLC (NueVida) is providing this Odor Mitigation Plan (Plan) to the Colorado Oil and Gas Conservation Commission (COGCC), Colorado Parks and Wildlife (CPW), La Plata County Planning Department, La Plata County Planning Commission, and La Plata County Board of County Commissioners (collectively LPC) in compliance with requirements under COGCC's Rule 304.C.(4) related to odor mitigation measures for minor oil and gas facilities, as well as LPC's Land Use Code (LUC) Section 90-108.II. The purpose of this Plan is to address the requirements and mitigate impacts from odor generated by the proposed project.

NueVida proposes to develop the Ardourel 33081718 Pad (Project), a natural gas extraction and transportation system within 34.51 acres of total disturbance. NueVida plans to initially drill two (2) test wells into the Mancos Formation utilizing horizontal drilling technologies on its leasehold within La Plata County, Colorado. Based on results of the initial wells, an additional six (6) wells may be drilled on the well pad for a total of eight (8) wells. To accommodate these wells, NueVida is proposing a multi-well gas location (well pad), access roads, pipeline, tank pad Temporary Use Area (TUA), and temporary pump pad on private land owned by the Ardourel Trust. The purpose of the wells would be to extract, separate, dehydrate, and transport natural gas from the wells to an above ground header system where three different gathering companies in the area have the ability to transport the gas for additional offsite treatment and processing for gas sales. When fully operational, the well pad location will include eight-inch inlet and outlet pipelines, two (2) 400-barrel steel water tanks, two (2) two-phase vertical indirect heated vessels, one (1) small vertical fuel gas separator, one (1) dehydrator skid, and one (1) enclosed combustor. The Ardourel tank pad TUA will have approximately fifteen (15) 40,000-barrel tanks and four (4) 20,000-barrel tanks. NueVida will bring in electricity to the well pad for use in its production facilities/operations. La Plata Electric Association (LPEA) has high voltage electricity available at the El Paso Compressor Station, located in the SE/SE of Section 13, Township 33 North, Range 9 West, N.M.P.M. There is currently a low voltage, two-phase overhead line that runs west to east (approximately 380 feet) from the El Paso Station into the SW/SW of Section 18, Township 33 North, Range 8 West, N.M.P.M. This overhead line terminates and is located approximately 400 feet north of County Road 318, along the lease access road to the well pad. LPEA will upgrade this 400-foot line to a higher voltage (TBD) three-phase line. From this end point, LPEA will install approximately 1,670 feet of new high voltage, three-phase overhead line to the NW end of the well pad. This new power line will run north paralleling the lease access road within existing ROW. LPEA will set an electric meter and supply 480 volt, three-phase service at the NW corner of the well pad. NueVida will set an electric panel from which it will run the electric supply to the various production units, motors/pumps and air supply. NueVida would install an eight (8)-inch HDPE (High Density Polyethylene) buried water pipeline and a ten (10)-inch steel buried gas pipeline from the northwestern corner of the well pad continuing north for 3,901.6 feet to an above ground header system where three different gathering companies would tie to. An additional eight (8)-inch HDPE buried water pipeline would be installed from the northwestern corner of the tank pad TUA continuing north for 966.9 feet to the northwestern corner of the well pad where it would tie to the aforementioned proposed eight (8) inch-HDPE buried water pipeline. Access to the Project would be from County Road 318 to an existing graveled access road that is currently utilized by a different operator. From the existing graveled access road, two separate access roads will connect with the tank pad TUA, and two separate access roads will connect to the well pad from the existing access road to accommodate for pass through traffic on both pads. Construction of the well pad and tank pad TUA and installation of the water storage tanks will take approximately 58 days to complete. Drilling operations

will take approximately 40 days to complete for the two wells. The drilling rig will then be removed, and a two-week period will begin for preparation to complete the wells. Completion operations for both wells will take approximately 30 days to complete. After completion, the tanks on the tank pad TUA will be removed, however, the produced water pad will remain in place while testing of the wells occurs to determine if additional wells may be drilled in subsequent years. The tank pad TUAs will be reseeded with use of tackifiers and/or erosion blankets after the removal of the tanks to stabilize the soils from potential erosion.

1.1 Project Location

The location for this proposed Project has been selected to meet a variety of technical and logistical needs. Key among these is an acceptable location between the field from which the gas is coming and the plant to which it is being delivered. This Project would be located near Ignacio, Colorado on Parcel Number 595318300056 and will be accessed from County Road 318, Ignacio, CO. The legal location for the project is the W/2 SW/4 of Section 18, Township 33 North, Range 8 West, N.M.P.M. This proposed location is currently occupied by sagebrush vegetation with sparse pinion pine and juniper trees scattered throughout. It is zoned for agricultural use. The location abuts other private properties on three sides and County Road 318 on the southern border.

2 PROJECT DESCRIPTION

The 34.51 acres of disturbance is comprised of 29.61 acres of area of disturbance, 4.31 acres of pipeline ROW, and 0.59 acre of existing graveled and two-track roads. The 29.61-acre of area of disturbance would include a 6.54-acre level pad area for the well facilities and an additional 14.34-acre leveled pad for the tank pad TUA, 0.09 acre of new access roads, 0.42-acre temporary pump pad, 2.73 acres for TUA topsoil storage, and 5.09 acres of area that could be utilized for storm water management areas. The total 4.41 acres of pipelines will be both within the area of disturbance (0.10 acre) and on 4.31 acres of right-of-way (ROW) outside of the area of disturbance. The associated cut and fill slopes, additional room to implement necessary mitigations and Best Management Practices (BMP), soil storage, and a tank pad TUA are included in the overall surface disturbance. There is an existing graveled and two-track access road that totals 0.59 acre of disturbance. The well pad and all access roads will be graveled and maintained for the pre-production phases of the Project. After drilling and completion phases are finalized, the tank pad TUA, its associated access roads, and a portion of the well pad will be fully reclaimed (approximately 25.31 acres) for the production phase of the Project. Approximately 2.90 acres of the well pad will be leveled and reseeded only, leaving a total of 1.40 acres of long-term disturbance to remain as a graveled surface on the well pad and its associated access roads (see Table 2-1). The existing access road does provide access to an existing well pad location and will continue to be utilized by both NueVida and the existing well pad operator for the life of both wells.

The two houses nearest the Project are to the south and southwest of the Project location. Each is within the 2,000-foot setback distance. Wildlife species, specifically mule deer, do have High Priority Habitat (HPH) within the disturbance area of the Project (see Attachment 1). This HPH is considered Mule Deer Severe Winter Range and typically operators are requested to restrict new construction or development activities during the winter closure period of December 1 through April 30. NueVida would not perform any pre-production construction or drilling operations during the closure period.

Table 2-1. Project Disturbance Estimates for the Proposed Ardourel 33081718 Pad

Area of Disturbance Surface Disturbance (acres)					
Feature	**Total Disturbance**	**New Disturbance**	**Fully Reclaimed**	**Reseeded Only**	**Long-term Disturbance**
Well Pad	6.54	6.54	2.61	2.90	1.03
Temporary Storage Pad	14.34	14.34	14.34*	-	-
Pump Pad	0.42	0.42	0.42*	-	-
Pipeline Corridor	0.1	0.1	0.1	-	-
New Access Roads for Well Pad	0.07	0.07	-	-	0.07
New Access Roads for Temporary Storage Pad	0.02	0.02	0.02*	-	-
Existing Access Roads	0.3	-	-	-	0.3
TUA (Topsoil Storage for Well Pad)	1.55	1.55	1.55	-	-
TUA (Topsoil Storage for Temporary Storage Pad)	1.18	1.18	1.18*	-	-
Area of Disturbance for Stormwater BMPs	5.09	5.09	5.09	-	-
Total Area of Disturbance Total:	**29.61**	**29.31**	**25.31**	**2.90**	**1.40**
Outside Area of Disturbance Surface Disturbance (acres)					
Pipeline Corridor	4.31	-	4.31	-	-
Existing Access Roads	0.59	-	-	-	0.59
Outside Area of Disturbance Total:	**4.9**	**-**	**4.31**	**-**	**0.59**
Overall Disturbance Total:	**34.51**	**29.31**	**29.62**	**2.90**	**1.99**

* Blue text indicates temporary disturbance that may remain for up to 5 years, all other temporary disturbance will be reclaimed no later than 2 years from the start of construction.

3 Odor Sources and Best Management Practices

NueVida has considered possible sources of odor that could be emitted from the pre-production and production phases of the Project. Odor sources may be emitted from the following:

- Drilling mud
- Drill Cuttings and Centrifuge Solids

- Transfer area for hauling drill cuttings and mud
- Produced fluids
- Emissions from production facilities
- Produced water for fracture stimulation
- Water storage tanks

A closed loop mud system will be used in all phases of drilling operations. No surface pits will be used, and drill cuttings will be put into 3-sided bins for processing and hauling. Dump trucks used to transport the drill cuttings to the nearest disposal site, will utilize tarps or screens to cover the dump trucks to minimize the release of drill cutting materials during transport. Drill cuttings will be mixed with fly-ash to absorb any excess moisture prior to hauling off location. If drilling fluids are not actively being used in the active mud system, they will be stored in closed, upright tanks. A freshwater mud system will be utilized for drilling both the surface hole and the intermediate hole sections of the wellbore. The production string section of the wellbore will be drilled either with a freshwater weighted mud system or a weighted synthetic Oil-Based Mud (OBM) system. If an OBM is needed, the type used will be considered as classification Type II mud system by the International Petroleum Industry Environmental Conservation Association (IPIECA) and the International Association of Oil and Gas Producers (OGP). It will be non-aqueous fluids (NAFs) and Type II mud system with lower toxicity mineral oil and with less than one percent aromatics. In an effort to further reduce odor from emanating from the freshwater and/or oil base cuttings, NueVida will frequently haul cuttings to an approved disposal facility. Odors will be managed by adding an Ecosorb product (or equivalent product) and fluid absorbent (fly-ash) to the drill cuttings within the three-sided bins they will be temporarily held in. All the fluids and odors are expected to be bound to a solid or granular form prior to transportation of the drill cuttings to the disposal site. Any additional drilling fluids will be hauled in a closed tank system to an approved commercial disposal site with no expected releases for odor. NueVida will not stockpile cuttings or store any large amounts of cutting on the location. Trucks will run as needed during the daylight hours to keep the volume of cuttings on the location, and potential odors from them, at a bare minimum. Furthermore, due to the low volatile organic compounds (VOC), benzene, toluene, ethylbenzene, and xylene (BTEX) counts of a synthetic OBM, odor neutralizer is not anticipated to be needed. Upon tripping out of the holes, the outer diameter and inner diameter of the drill pipe will be wiped to remove any residual mud. A catch-can system will be mounted around the blowout preventer (BOP) to catch any mud that falls through the rotary table to prevent any spillage and source of odor.

Produced water for the completion-fracture stimulation operations will be transferred from various operators via pipeline (see water plan for details) and stored at the tank pad TUA in large storage tanks. The produced water will initially be treated with biocides prior to the transfer to the tank pad TUA. Stored water in the tanks will be tested weekly for bacterial growth and treated as needed to control the bacteria and nuisance odors. No venting or flaring of gas is anticipated during completion operations. Refer to the gas capture plan for additional detail.

During the production phase of the project, only dry gas and formation water are expected to be extracted from the well. There will be no associated hydrocarbon liquids in the gas and/or fluid stream, resulting in no expected hydrocarbon vapors found in the production tanks. Any produced water extracted, will be transferred from the 2-phase separator into two (2) 400-barrel steel tanks. From here, the produced water will then be transferred from the production tanks via pipeline to the Fassett #1 Saltwater Disposal (SWD) (API No.: 05-067-08397), located in the SWSW of Section 7, Township 33N and Range 8W, LaPlata County, CO.

NueVida is committed to the continued management of odor sources during all phases of the Project by the implementation of Best Management Practices (BMP). The BMPs that would be adhered to for the Project to eliminate and mitigate odor from activities associated with the Project include the following:

BMPs for All Phases

- NueVida will conduct all of its operational activities to be in compliance with the Department of Public Health and Environment, Air Quality Control Commission, Regulation No. 2 Odor Emission (5 C.C.R. 1001-4), Regulation No. 3 (5 C.C.R. 1001-5), and Regulation No. 7 Section XVII.B.1 (a-c) and Section XII.

BMPs for Pre-Production Phases

- Timing restrictions during December 1 to April 30 in which there will be no construction activity.
- A closed loop mud system will be used during all phases of drilling operations.
- No surface pits will be used, and drill cuttings will be sent to 3-sided bins for processing and hauling.
- The drill cuttings will be mixed with fly-ash to absorb any excess moisture prior to hauling off location.
- Dump trucks transporting drill cuttings will utilize tarps or screens during transport to minimize the release of material while in transit.
- Any drilling fluids not being used in the active mud system will be stored in closed, upright tanks.
- A freshwater mud system will be utilized for drilling both the surface hole and intermediate hole sections of the wellbore.
- The production string section of the wellbore will be drilled either with a freshwater weighted mud system or a weighted synthetic Oil Based Mud (OBM) system.
- In an effort to keep odor from the freshwater and/or oil base cuttings as low as possible, NueVida will frequently haul cuttings to an approved disposal facility. Prior to the transporting of the cuttings, odors would be managed by adding an Ecosorb product (or equivalent product) and fluid absorbent (fly-ash) to the drill cuttings within the three-sided bins they will be temporarily held in. NueVida shall not stockpile cuttings or store any large amounts of cuttings on the location. Trucks will run as needed during the daylight hours to keep the volume of cuttings on location, and potential odors from them, at a bare minimum.
- A catch-can system will be mounted around the blowout preventer (BOP) to catch any mud that falls through the rotary table preventing any spillage and source of odor.
- Produced water for the completion-fracture stimulation operations will be transferred from various operators via pipeline (see water plan for details) and stored at the tank pad TUA in large storage tanks.
- The produced water will initially be treated with biocides prior to transfer to the tank pad TUA. Stored water in the tanks will be tested weekly for bacterial growth and treated as needed to control the bacteria and nuisance odors.
- No venting or flaring of gas is anticipated during completion operations. Refer to the gas capture plan for additional detail.

BMPs for Production Phase:

- NueVida will install all new production equipment on the well pad that will be compliant with current BMP standards for air emissions per COGCC regulations.

- Emission testing will be performed on all gas fired vessels to ensure the emission control devices are operating properly.
- The produced water will be transferred from the 2-phase separator into two (2) 400-barrel steel tanks. The produced water will then be transferred from the production tanks via pipeline to the Fassett #1 Saltwater Disposal (SWD) (API No.: 05-067-08397), located in the SWSW of Section 7, Township 33N and Range 8W, LaPlata County, CO.

4 List of Appendices

Appendix I. Map of Potentially Impacted Resources