OXY USA Inc.

Cumulative Impacts Plan

Geothermal Limitless Approach to Drilling Efficiencies (GLADE) Project
NE/4 SE/4 Section 2, T3N R66W, 6th P.M.

Weld County, Colorado

April 2024

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INTRODUCTION

To reflect the overall anticipated impacts, this Cumulative Impacts Plan evaluates the total impacts from the development of the following locations:

- GLADE 2A Document: 403656949

The Cumulative impacts outlined in this plan are in the GLADE 2B Document number 403701631.

WATER RESOURCES:

ANTICIPATED IMPACTS:

Although water will be used for operations there are no anticipated impacts to the quality of either surface or subsurface water. A mixture of non-potable surface water, groundwater and recycled water will be used for completions operations.

DETAILS:

Water Use

OXY intends to use a total of 39,250 BBLs of water during drilling activities on this location. The specific volumes of water are shown in the chart below.

		Construction Water		Completions Water		Drilling Water		Total Water Usage - by Source
		%	BBLS	%	BBLS	%	BBLS	BBLS
GLADE	***Total Water Usage by Phase:***		*19,250*		*0*		*20,000*	***39,250***
	Surface Water	0%	0	0%	0	100%	20,000	**20,000**
	Ground Water	100%	19,250	0%	0	0%	0	**19,250**
	Recycled Water (produced water)	0%	0	0%	0	0%	0	**0**
	Recycled water (non-produced water)	0%	0	0%	0	0%	0	**0**
	Unspecified Sources	0%	0	0%	0	0%	0	**0**

MITIGATION MEASURES:

OXY protects water resources by carefully choosing the location, utilizing drainage control measures, and proper grading techniques. OXY segregates topsoil to protect soil resources. Enhanced soil compaction minimizes absorption and downward migration of fluids in the event of an incidental spill.

Both prior to, and after drilling operations, OXY contracts with a third-party professional to perform water sampling from water wells near the location. The baseline sampling helps establish existing conditions, and the post-development samples verify OXY operations are safe.

There are no riparian corridors, wetlands, or surface waters of the state within 2,640 feet of location.

ECOSYSTEM AND WILDLIFE RESOURCES

ANTICIPATED IMPACTS:

OXY can avoid impacts to wildlife at the GLADE location because of its position outside of HPH.

DETAILS:

The location was surveyed by a third-party biological contractor prior to permit submittal. There are trees suitable for nesting bald eagles (Haliaeetus leucocephalus) or golden eagles (Aquila chrysaetos) within 0.5 miles of the Location, however no eagle nests were observed within 0.5 miles.

GLADE

The nearest CPW-mapped bald eagle nest is approximately 1.18 miles south of the Location (Apex-mapped as BAEA_A060; Figure 3). This nest was unoccupied at the time of the March 12, 2024 survey. Of note, this nest is 1.34 miles south of the Latham Gas Plant and appears to have been established after construction of the plant, which started in the summer of 2018 (pers. comm. with B. Sacco [CPW]; Google Earth 2023). The nearest trees suitable for roosting within a CPW-mapped bald eagle winter night roost area are approximately 4.12 miles east of the Location, around Milton Reservoir.

MITIGATION MEASURES:

GLADE

If project activities start between February 1 and August 15, OXY will perform pre-construction surveys to determine if any nests are present.

For ground disturbances beginning between March 15 and August 31, the full three-survey CPW-protocol will be completed no more than seven days prior to the start of work. If burrowing owls are observed using burrows visible within 0.25 miles of the Location, OXY will consult with CPW to determine appropriate mitigation measures.

General Mitigation

Avian protection will be installed on openings larger than two inches. Approximately two weeks prior to construction start, the approved locations will be surveyed by third party biological contractor for nests. Automated emergency response systems and emergency shutdown systems will be installed. Remote monitoring systems will be utilized at these locations. Periodic inspections for nests and of avian protection will occur throughout the life of the project. Training is provided to employees and contractors on wildlife conservation practices, including no harassment, feeding of wildlife, or illegal hunting.

OXY maintains a Standard Operating Procedure (SOP) for water suction hoses and transportation Tanks that meets 1202.a.(2).A requirements with 3rd party contractors when moving equipment from locations. The contractor will use a CPW-approved disinfectant solution capable of killing whirling disease spores and other aquatic nuisance species defined by CPW.

Reclamation

GLADE project will disturb approximately 13 acres and be reduced to 11 acres during the evaluation phase. Once the wells are plugged and abandoned the site will be fully reclaimed.

Air Resources

ANTICIPATED IMPACTS:

Short-term impacts: During pre-evaluation activities OXY anticipates the release of 4,211 tons of emissions. OXY expects 66.54 pounds of Hazardous Air Pollutants (HAP) during pre-evaluation.

Long-term Impacts: During one year of evaluation phase OXY anticipates the release of zero tons of emissions. OXY expects zero pounds of HAP during one year of evaluation phase.

DETAILS:

To ensure the wellbeing of those working and living near operations, OXY contracts with a third-party environmental air quality expert to perform continuous air monitoring during drilling.

Pre-Evaluation Emissions	NOx	CO	VOCs	Methane	Ethane	CO2	N2O
GLADE	103.28	55.94	.002	0.16	2.03	4050.21	0.03

Evaluation phase Emissions	NOx	CO	VOCs	Methane	Ethane	CO2	N2O
GLADE	0	0	0	0	0	0	0

Pre-Evaluation HAP	Benzene	Toluene	Ethylbenzene	Xylenes	N-Hexane	2,2,4-TMP	H2S	Formaldehyde	Methanol	Total
GLADE	38.55	14.06	0.011	9.60	0.30	0.02	0	3.91	0	66.54

MITIGATION MEASURES:

OXY anticipates minimal impact to air resources from its operations. OXY's continued efforts to reduce emissions from pre-production and production create a very low emission footprint. Based on the Colorado Regulation 7 Emission Inventory, OXY has the lowest intensity of any oil and gas operator in the State of Colorado. As a result of OXY's proactive approach to emissions, OXY has already met the 2030 intensity targets set in the CDPHE's recently adopted Regulation 22. OXY's calculated 2022 intensity is 2.93 mtCO2e/kBOE and the year 2030 Regulation 22 targets are set at 6.80mtCO2e/kBOE. Although, OXY is well ahead of the efforts to reduce emissions, OXY continues to strive to find and apply innovative opportunities for emissions reduction across all operations.

Over 8,500 air samples have been collected and analyzed for benzene and other hazardous air pollutants following EPA methods during pre-production operations. Results of all validated samples have been below Health Guidance Values complied by CDPHE. See Section 11 of the attached Air Monitoring Program on how the monitoring results are compared to the health guidance values (HGVs).

OXY will continuously monitor for volatile organic compounds (VOC) and benzene monitors during drilling operations following the CDPHE approved monitoring plan for this location.

During Drilling: Perform continuous air monitoring during drilling.

During Completions: There are no Completions activities associated with this geothermal test project.

During Flowback: There are no Flowback activities associated with this geothermal test project.

During Production: N/A

PUBLIC HEALTH RESOURCES

ANTICIPATED IMPACTS:

OXY does not anticipate any negative impacts to public health.

MITIGATION MEASURES:

OXY does not anticipate any impact to public health by its operations. As a part of the CPRN (Colorado Preparedness Response Network) OXY will work alongside other operators to facilitate training drills.

The IOC staffed 24 hours per day, seven days per week, will remotely monitor the wells and facility. This enables OXY to deploy appropriate resources quickly, efficiently, and to collaborate with local emergency response agencies as necessary. This system also helps reduce traffic.

PUBLIC WELFARE: NOISE, LIGHT, DUST, ODOR, VIEW

ANTICIPATED IMPACTS:

During the short-term pre-production activities OXY anticipates an increase in truck traffic, minimal to no increase in noise and light. There are no anticipated odor impacts.

DETAILS:

Noise

OXY contracted a third party to model noise and create a noise mitigation plan. Site-specific noise models were used to predict the future noise impact of the proposed operations and determine what noise mitigation measures, if any, would be required to demonstrate compliance with the ECMC maximum permissible noise levels. Noise modeling results were calculated and include the effects of local topography, buildings, barriers, and ground cover. The results of the noise modeling can be found in the Noise Mitigation and Monitoring Plans.

Pre-production Phase:

Under ECMC Rule 423 and WOGLA Regulation Section 21-5-435, noise points of compliance can only be identified with respect to existing RBUs or BUs within 2,000 feet of the proposed location. Since there are no existing RBUs or BUs within 2,000 feet of the proposed location, there are no noise points of compliance provided for the proposed GLADE location regarding either code. The location will therefore be in compliance.

Production:

Unmitigated evaluation/production operations noise levels are anticipated to be within allowable limits for both Weld County and ECMC requirements, therefore no mitigation is required.

Light

Site specific three-dimensional lighting models were developed for each of the phases of this development to determine their associated lighting impacts. The lighting fixtures used in the models were selected based on currently operated representative sites and research conducted into available

vendor lighting systems. All calculated values fall well below the prescribed regulatory limits with all calculated light values falling below 1 lx. This light level is similar to a clear night with a full moon.

GLADE

Calculated Lighting Impact Results Building Units			
Location Unit No.	Drilling	Production	Regulatory Limit
1	< 0.1 lux	< 0.1 lux	4 lux
2	< 0.1 lux	< 0.1 lux	4 lux
3	< 0.1 lux	< 0.1 lux	4 lux
4	< 0.1 lux	< 0.1 lux	4 lux
5	< 0.1 lux	< 0.1 lux	4 lux
6	< 0.1 lux	< 0.1 lux	4 lux
7	< 0.1 lux	< 0.1 lux	4 lux
8	< 0.1 lux	< 0.1 lux	4 lux
9	< 0.1 lux	< 0.1 lux	4 lux
10	< 0.1 lux	< 0.1 lux	4 lux

Truck Traffic

OXY anticipates at total of 8,215 (1,643 monthly) truck trips during the pre-evalaution phase. When the locations reach evaluation phase the truck traffic will be reduced to 2,192 annual (182 monthly) trips.

MITIGATION MEASURES:

Noise:

Although operations are conducted 24/7, at night OXY aims to minimize all non-essential work. OXY has gone to considerable lengths to modify the rigs available to significantly reduce noise by not only using the quietest shale shaker model available, but also installing vibrating pads below shaker mounts. Extreme grade exhaust silencers are used on engines and drawworks traction motor. The generator house is fully enclosed with sound dampening louver boxes.

Light:

OXY uses Light-emitting diode (LED) fixtures to the extent possible that are angled downward and inward toward the location and away from homes and businesses to reduce skyglow. LED lights not only use less energy and last longer, but they also emit light in a specific direction unlike incandescent and Compact Fluorescent lamps (CFL) bulbs which emit light in all directions. Lights are directed to task areas only and switched off when not needed. Light masts are automatically switched off/on based on lighting sensors. Low power (63W) LED lights are used for the drill rig. Lighting within the Production area has been reduced to provide OSHA's minimum acceptable value for safe operations.

Truck Traffic:

See Transportation Plan.

Dust:

Road dust will be controlled by implementing a strict 10 mph speed limit on the lease roads and 5 mph speed limit on location. If necessary OXY will spray down the lease roads with water. OXY will attempt to

minimize the tracking of mud onto roads. Street sweepers will be utilized if mud tracking becomes an issue. Access roads and Vehicle Tracking Control will receive maintenance as needed throughout operations. OXY will respond quickly and work with the jurisdiction responsible to address any concerns related to county road damages.

Odor:

Although no odor impacts are anticipated, OXY will suppress odors using closed loop systems and use water based drilling fluid. OXY will address any citizen concerns regarding odor within 24 hours.