

State of Colorado Oil and Gas Conservation Commission

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CUMULATIVE IMPACTS DATA IDENTIFICATION

Per Rule 303, this form and all required components and attachments will be submitted for any Oil and Gas Development Plan.

Form Type: [X] OGDP [] Partial 2B - Rule 803.b.(2).A UIC Conversion

OPERATOR INFORMATION

OGCC Operator Number: 96850
Name of Operator: TEP ROCKY MOUNTAIN LLC
Address: 1058 COUNTY ROAD 215
City: PARACHUTE State: CO Zip: 81635
Contact Name and Telephone:
Name: Jeff Kirtland
Phone: (970) 263-2736
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OIL & GAS DEVELOPMENT PLAN INFORMATION

Oil & Gas Development Plan Name: South Leverich 13-09
Oil & Gas Development Plan Docket #: 220700189
Oil & Gas Development Plan ID #: Data not required
This OGDP is included in a Comprehensive Area Plan. CAP ID #:

OIL & GAS LOCATION DATA

1 Oil & Gas Location Name: South Leverich Number: 13-09 Pad Status: Active, built

OIL & GAS LOCATION INFORMATION

Form 2A Doc#: 403064316
Loc ID#: 335045
Oil & Gas Location: QTRQTR: LOT 3 Sec: 13 Twp: 7S Rng: 94W Meridian: 6
Total number of wells planned: 21

Operations Duration

Estimated total number of weeks to construct this Oil & Gas Location: 9
Estimated total number of weeks to drill all planned wells for this Oil & Gas Location: 17
Number of planned drilling occupations to drill all planned wells for this Oil & Gas Location: 1
Estimated total number of weeks to complete all planned wells for this Oil & Gas Location: 30
Number of planned completions occupations to complete all planned wells for this Oil & Gas Location: 1
Will there be simultaneous drilling and completions operations occurring at this Oil & Gas Location? Yes
Estimated total number of months the Oil & Gas Location will be active, prior to abandonment and reclamation: 360

Noise Impacts

Provide a qualitative evaluation of the incremental adverse noise impacts to the surrounding receptors during the pre-production activities at this Oil & Gas Location.

Pre-production (short-term) activities are typically shorter in nature and emit a higher noise level than long-term production operations. Noise from these activities could have impacts on surrounding receptors if located within close proximity of the proposed WPS.

During planning of the South Leverich 13-09 pad, TEP determined through on-site surveys and review of available aerial imagery that there are 4 residential building units within 2,000 feet of the proposed WPS (see Cultural Distances Map attached to the Form 2A). The nearest residential building unit is located approximately 1,195 feet from the WPS and is owned and occupied by Mr. and Mrs. Fischer. Another residential building unit is owned by the surface owner of the South Leverich 13-09 pad and is unoccupied, and the other two residential building units are owned by TEP and are unoccupied. A Noise Mitigation and Monitoring Plan was prepared by Behrens and Associates Environmental Noise Control for the planned operations associated with the South Leverich 13-09 OGD in accordance with COGCC Rule 304.c.(2) based on the requirements outlined under COGCC Rule 423. Predictive noise modeling was completed based on TEP planned operations on the South Leverich 13-09 pad and evaluated based on the permissible noise levels described in Rule 423 to demonstrate compliance with noise standards. Only drilling operations were evaluated because well completion operations will be conducted remotely from the Youberg RU 44-7 pad. As described in the Noise Mitigation Plan, the unmitigated noise modeling for drilling operations shows compliance with the high frequency (dBA) and low frequency (dBC) standards outline in Rule 423.b.(2).

Prior to planned drilling operation, an ambient sound level survey would be completed approximately 60 to 90 days prior to commencement of operations on the Oil and Gas Location. Continuous noise monitoring would be completed during drilling and completion operations as required by Rule 423.c.(1) as described in the Noise Mitigation Plan attached to the Form 2A.

With implementation of the measures included in TEP's Noise Mitigation Plan, it is unlikely for noise generated during pre-production operations (short-term) or production operations (long-term) to adversely affect members of the public.

TEP reviewed HPH within 1 mile of the South Leverich 13-09 pad and associated permanent pipelines. The pad and associated permanent pipelines are located outside of all HPH boundaries. HPH identified within 1 mile of the South Leverich 13-09 WPS includes Elk Production Area, Elk Winter Concentration Area, Cutthroat Trout Designated Crucial Habitat, and Aquatic Native Species Conservation Water (see Wildlife Habitat Drawing attached to the Form 2A). After review of the HPH layers and review of the topography within 1 mile of the location, TEP and CPW determined that the majority of the HPH is topographically isolated by a ridge line southeast and northwest of the Oil and Gas Location. Based on this evaluation, it is unlikely that noise during pre-production and production operations would adversely affect wildlife resources.

Provide a qualitative evaluation of the incremental adverse noise impacts to the surrounding receptors during the production stage of this Oil & Gas Location.

With implementation of the measures included in TEP's Noise Mitigation Plan, it is unlikely for noise generated during production operations (long-term) to adversely affect members of the public.

TEP reviewed HPH within 1 mile of the South Leverich 13-09 pad and associated permanent pipelines. The pad and associated permanent pipelines are located outside of all HPH boundaries. HPH identified within 1 mile of the South Leverich 13-09 WPS includes Elk Production Area, Elk Winter Concentration Area, Cutthroat Trout Designated Crucial Habitat, and Aquatic Native Species Conservation Water (see Wildlife Habitat Drawing attached to the Form 2A). After review of the HPH layers and review of the topography within 1 mile of the location, TEP and CPW determined that the majority of the HPH is topographically isolated by a ridge line southeast and northwest of the Oil and Gas Location. Based on this evaluation, it is unlikely that noise during pre-production and production operations would adversely affect wildlife resources.

Light Impacts

Provide a qualitative evaluation of the incremental adverse light impacts to the surrounding receptors during the pre-production activities at this Oil & Gas Location.

Pre-production activities are typically shorter in nature and require sufficient lighting to ensure the safety of employees and contractors. Lighting from these activities could have minimal impacts on surrounding receptors if located within close proximity of the proposed WPS.

Because no residential building units are present within 2,000 feet it is unlikely for on-site lighting generated during pre-production operations to adversely impact members of the public.

During planning of the South Leverich 13-09 pad, TEP determined through on-site surveys and review of available aerial imagery that there are 4 residential building units within 2,000 feet of the proposed WPS (see Cultural Distances Map attached to the Form 2A). The nearest residential building unit is located approximately 1,195 feet from the WPS and is owned and occupied by Mr. and Mrs. Fischer. Another residential building unit is owned by the surface owner of the South Leverich 13-09 pad and is unoccupied, and the other two residential building units are owned by TEP and are unoccupied. TEP has developed and would follow a Lighting Mitigation Plan in accordance with COGCC Rule 304.c.(3) and based on the requirements outlined in COGCC Rule 424. It describes methods TEP would use to minimize lighting intensity outside the boundary of the Oil and Gas Location and ensure compliance with standards outlined under COGCC Rule 424. TEP's Lighting Mitigation Plan complies with COGCC Rule 424 and provides BMPs to reduce potential impacts from lighting.

With implementation of the BMPs included in TEP's Lighting Mitigation Plan, it is unlikely for lighting used during pre-production operations (short-term) to adversely affect members of the public.

TEP reviewed HPH within 1 mile of the South Leverich 13-09 pad and associated permanent pipelines. The pad and associated permanent pipelines are located outside of all HPH boundaries. HPH identified within 1 mile of the South Leverich 13-09 WPS includes Elk Production Area, Elk Winter Concentration Area, Cutthroat Trout Designated Crucial Habitat, and Aquatic Native Species Conservation Water (see Wildlife Habitat Drawing attached to the Form 2A). After review of the HPH layers and review of the topography within 1 mile of the location, TEP and CPW determined that the majority of the HPH is topographically isolated by a ridge line southeast and northwest of the Oil and Gas Location. Based on this evaluation, it is unlikely that lighting during pre-production operations would adversely affect wildlife resources.

Provide a qualitative evaluation of the incremental adverse light impacts to the surrounding receptors during the production stage of this Oil & Gas Location.

TEP does not plan to install any on-site lighting during production operations (long-term) and does not anticipate conducting any nighttime well maintenance operations requiring temporary lights. Therefore, light impacts to members of the public and wildlife resources are expected to be nonexistent during production operations (long-term).

Odor Impacts

Provide a qualitative evaluation of the incremental adverse odor impacts to the surrounding receptors during the pre-production activities at this Oil & Gas Location.

Pre-production and production activities have the potential to generate odors. Potential sources of odors during drilling operations include drilling rig generators, third-party vehicles, drying shaker assembly and centrifuge solids, drill cuttings storage, water base/bentonitic drilling mud, and mud tanks. Potential sources of odors during completion operations include frac pumps, bender, and frac tanks. Potential sources of odors during flowback operations include separators and tanks, and during production operations include separators, tanks, emissions combustion devices, and natural gas generators.

During planning of the South Leverich 13-09 pad, TEP determined through on-site surveys and review of available aerial imagery that there are 4 residential building units within 2,000 feet of the proposed WPS (see Cultural Distances Map attached to the Form 2A). The nearest residential building unit is located approximately 1,195 feet from the WPS and is owned and occupied by Mr. and Mrs. Fischer. Another residential building unit is owned by the surface owner of the South Leverich 13-09 pad and is unoccupied, and the other two residential building units are owned by TEP and are unoccupied. TEP has developed and would follow an Odor Mitigation Plan in accordance with Rule 304.c.(4) and Rule 426. It describes how TEP would comply with Rule 426 and provides BMPs to reduce potential impacts from odor.

Provide a qualitative evaluation of the incremental adverse odor impacts to the surrounding receptors during the production stage of this Oil & Gas Location.

With implementation of the BMPs included in TEP's Odor Mitigation Plan, it is unlikely for odor generated during production operations (long-term) to adversely affect members of the public.

WATER RESOURCES

This Oil & Gas Location is listed as a sensitive area for water resources.

This Oil & Gas Location is within 2,640 feet of a surface Water of the State.

Estimated depth to groundwater: 90

Estimated total planned on-location storage capacity of the Oil & Gas Location for:

	Number of Tanks	Total Volume (bbls)
Oil	0	0
Condensate	6	3000
Produced Water	0	0
Other volumes of stored fluids, hydrocarbons, chemicals, or E&P Waste Fluids	6	208

List, with volumes, the "Other" fluids planned to be stored on the Oil & Gas Location, including, but not limited to: hydrocarbons, chemicals, or E&P Waste fluids.

2 - 80 bbl blowdown & vent tanks = 160 bbls
 4 - 500 gal chemical tanks = 47.62 bbls

Potential Impacted Surface Water Resources

Provide the distance and direction of the contaminant migration pathway from the Oil & Gas Location to the nearest downstream riparian corridors, wetlands, and surface Waters of the State. Also provide an evaluation of the baseline condition of the nearest downstream riparian corridors, wetlands, and surface Waters of the State.

Enter 2,640 for distances greater than 1/2-mile. Distances are measured along the migration pathway, not a straight line from the edge of the Oil & Gas Location.

	Distance	Direction	Evaluation of Baseline Condition
Riparian Corridor	640	NW	Perennial Stream, Beaver Creek
Wetland	640	NW	Perennial Stream; Potential wetland (NWI - Riverian); Beaver Creek
Surface Waters of the State	640	NW	Perennial Stream, Beaver Creek

Potential Impacts to Public Water Resources

Provide the distance, direction, and evaluation of potential impacts to the nearest Public Water System Intake. Enter 5,280 for distances greater than 1-mile.

	Distance	Direction	Evaluation of Baseline Condition
Public Water System Intake	5280	N	No PWS intakes within 1-mile of WPS

Estimated Water Usage

Provide the estimated total volumes of the following that are anticipated to be used during the drilling and completions stage of the Oil & Gas Location activity.

Water Source	Volume (bbls)		Volume (bbls)		Volume (bbls)		Percentage Recycled Water	
Surface Water	97500	Recycled Water (Produced Water)	252000	Unspecified Source	0		96	%
			0					
Ground Water	0	Recycled Water (non-Produced Water)	0	Total Water Usage	261750			
					0			

If an unspecified water source is planned to be used, provide a description of the source.

NA

Evaluate the measures being taken to reduce freshwater use, including reusing and recycling produced water.

Fresh water will only be used for drilling operations and dust control operations associated with development of the proposed wells on the South Leverich 13-09 pad. Water for well completion would be sourced from recycled produced water. Fresh water required for drilling operations (surface, intermediate, and production casing) and dust control, would be transported by truck from either the Giles Fresh Water Takeout or Airport Land Partners Limited Takeout. The Giles Fresh Water Takeout is located on the Colorado River on TEP property. The Airport Land Partners Limited Takeout is located on the Last Chance Ditch north of the Rifle Airport. Water trucks would utilize existing county and lease roads and would follow existing truck routes where applicable.

ECOSYSTEM & WILDLIFE RESOURCES

List High Priority Habitats (HPH) that occur within one mile of the Oil & Gas Location and list the distance from working pad surface. If the location is partially or entirely within a HPH list the distance as '0' and provide the estimated acreage disturbance of that HPH by the location construction.

High Priority Habitat (HPH) Name:	Distance	Estimated Acreage Disturbed
Aquatic Native Species Conservation Waters	141	0
Cutthroat Trout Designated Crucial Habitat	141	0

Elk Production Area	4456	0
Elk Winter Concentration Area	5244	0

List total size of disturbed acreage and disturbed High Priority Habitat (HPH) area (in acres) during the Oil & Gas Location construction and after interim reclamation.

	Total Acreage (acres)	Total HPH Acreage (acres)	Provide any further information regarding the location's HPH disturbance.
Construction	6.43	0	The South Leverich 13-09 well pad is not located within High Priority Habitat.
Post-interim Reclamation	1.74	0	

Provide the acreage of the existing land use types that occur within one mile of the Oil & Gas Location. Note: a circle with a one mile radius is approximately 2010 acres.

	Existing Acreage	Existing Acreage	Existing Acreage	Existing Acreage	
Crop Land: Irrigated	_____	Non-Irrigated	_____	Conservation Reserve Program(CRP)	_____
Non-Crop Land: Rangeland	2060	Forestry	198	Recreation	_____
Subdivided: Industrial	_____	Commercial	_____	Residential	_____
				Other	_____

If any land use is industrial, provide a description of the use or operation of the industrial facilities.

If any land use is "Other", provide a description of the land use.

If any portion of the land use for the proposed oil and gas location includes Rangeland, Forestry, or Recreation, provide a list of the plant community or communities and estimated acreage disturbed for each:

	Estimated Disturbed Acreage	Estimated Disturbed Acreage	Estimated Disturbed Acreage	Estimated Disturbed Acreage	
Disturbed Grassland	_____	Shrub Land	2060	Mountain Riparian	_____
Native Grassland	_____	Plains Riparian	_____	Forest Land	198
				Wetland Aquatic	_____
				Alpine	_____

Provide a qualitative evaluation of incremental adverse impacts to ecosystems, including any plant communities, as a result of Oil and Gas Operations associated with the proposed Oil & Gas Location.

The loss of mature mountain shrubs, including Gambel oaks, would be long-term, but these species are common throughout the region, and the loss would be negligible at both a project and regional level. Gradual re-establishment of a portion of the affected shrubland is likely following reclamation. TEP has designed the project to incorporate existing infrastructure in order to minimize impact to the ecosystem and wildlife that rely on available habitats in the vicinity surrounding the existing South Leverich 13-09 pad to be re-constructed. As a result of incorporating existing infrastructure into the development plan, impacts to existing wildlife habitat would be minimal and impacts on wildlife would be reduced compared to less developed or undeveloped areas because some habituation of the animals to oil and gas operation and other human activities would be expected (see Wildlife Plan attached to the Form 2A for detailed BMPs proposed to minimize impacts to wildlife). Hydraulic fracturing operations would use recycled produced water pumped through an existing buried water collection system avoiding use of truck traffic to deliver water for well completions and avoiding potential wildlife impacts. TEP would also install five temporary surface steel frac lines to support remote frac and flowback operations for the 21 wells on the South Leverich 13-09 pad. The temporary surface frac lines would be installed following the existing access roads and existing pipeline rights-of-ways minimizing short-term disturbance to wildlife during hydraulic fracturing. To minimize traffic during operations, TEP would install buried natural gas and produced water pipelines. As mentioned above, disturbance associated with pipeline construction would be promptly revegetated with native species consistent with CPW's recommended seed mix when the pipeline is completed (see Reclamation Plan attached to the Form 2A). TEP would utilize remote telemetry equipment to minimize well site visitation reducing the vehicles traveling on dirt/gravel roads. To minimize the potential for wildlife related traffic accidents, TEP would implement speed restrictions for all roads and will require that all TEP employees and contractors adhere to posted speed limits. TEP has scheduled reconstruction of the South Leverich 13-09 pad and installation of pipeline infrastructure during November 2022, which is outside the nesting season for migratory birds (April 1 to August 31). If vegetation removal must occur during the nesting season, TEP will implement hazing or other exclusionary measures prior to April 1 to avoid take of migratory birds. Alternatively, TEP may conduct a migratory bird survey prior to vegetation removal as required by COGCC Rule 1202.a.(8) to avoid take of migratory birds. Additionally, TEP would conduct raptor surveys within 0.25 mile or 0.5 mile of proposed well development activities prior to construction and implement appropriate buffers around active nests during the species' nesting seasons to avoid impacts. To minimize the potential spread and infestation of invasive, non-native plants within areas used for expansion of the South Leverich 13-09 pad and installation of infrastructure that could degrade wildlife habitat and out-compete native vegetation, TEP would implement a weed management program. This includes control or reduction of invasive weeds and non-native populations that have been established in the South Leverich 13-09 OGD prior to development, as well invasive plant species that may be introduced during project development and reclamation activities. Interim and final reclamation of disturbed areas would use seed mixes that are certified to be weed-free. Reclamation would be monitored annually until reclamation is successful, and if noxious weeds are documented, TEP would use methods to treat the weeds as outlined within the Pesticide Use Permit on record with BLM (see Reclamation Plan attached to the Form 2A). These measures would minimize impacts on existing vegetation communities within the Project area as well as maintain native vegetation for the continued use of wildlife in the Project area.

Soil Resources

List all soil map units that occur within the Oil & Gas Location and list the estimated total area (in acres) disturbance of each soil map unit.

NRCS Map Unit Name:	Estimated Disturbed Acreage
45 - Morval-Tridell complex, 6 to 25 percent slopes	4.31
16 - Cimarron loam, 2 to 12 percent slopes	2.12

PUBLIC WELFARE

This Oil & Gas Location lies within a Disproportionately Impacted Community as defined in the 100-series rules.

Building Units within 1-mile

0'-2,000' 2,001'-5,280'

Total number of Residential Building Units:	4	8
Total Number of non-school AND non child care center High Occupancy Building Units:	0	0
Total number of School Facilities:	0	0
Total number of Child Care Centers:	0	0

Recreation and Scenic Value

List all State Parks, State Trust Lands, or State Wildlife Area within 1-mile of the Oil & Gas Location.

There are no State Parks, State Trust Lands, or State Wildlife Areas within 1 mile of the South Leverich 13-09 pad per COGCC mapping.

List all Designated Outdoor Activity Areas within 1-mile of the Oil & Gas Location.

There are no Designated Outdoor Activity Areas within 1 Mile of the Oil and Gas Location.

List all mapped trails that support any of the following recreational activities within 1-mile of the Oil & Gas Location: Hiking, Biking, Horseback Riding, Motorcycle Riding, ATV Riding, OHV, Nordic Skiing, Snowmobiling, or Snowshoeing.

There is one (1) mapped trail within 1 mile of the South Leverich 13-09 pad. The trail / road is call Beaver Creek Road (824.1). The trailhead for it is located at the National Forest Service property boundary south of the South Leverich 13-09 well pad and east of Beaver Creek. TEP reviewed the NFS Transportation layer and Colorado Trails Explorer to evaluate existing trails in the vicinity of the Oil and Gas Location.

AIR RESOURCES

Pre-Production Emissions

Complete the following chart based on the estimated total equipment emissions (in tons) for the Oil & Gas Location during the pre-production (construction, drilling, completions) stage for Criteria Pollutants by equipment type.

	NOx	CO	VOCs	Methane	Ethane	CO2	N2O
Process Heaters or Boilers	0.56	0.47	0.03	0.01	0.02	676.77	0.01
Storage Tanks	0	0	0	0	0	1.04	0
Venting or Blowdowns	0	0	0	0	0	0	0
Combustion Control Devices	0	0	0	0	0	0	0
Non-Road Internal Combustion Engines	170.87	141.16	7.51	38.28	3.12	15898.15	0
Drill Mud	0	0	1.55	0	0	0	0
Flowback or Completions	0	0	0	0	0	0	0
Loadout	0	0	0	0	0	0	0

Production Emissions

Complete the following chart based on the estimated full facility equipment emissions (in tons) for the Oil & Gas Location once the Oil & Gas Location has entered the production stage, for Criteria Pollutants. The table should be filled out based on ONE year of operation.

	NOx	CO	VOCs	Methane	Ethane	CO2	N2O
Stationary Engines or Turbines	0	0	0	0	0	0	0
Process Heaters or Boilers	1.53	1.29	0.08	0.04	0.05	1835.74	0
Storage Tanks	1.77	8.07	8.82	8.21	3.98	2186.96	0.06
Dehydration Units	0	0	0	0	0	0	0
Pneumatic Pumps	0	0	0	0	0	0	0
Pneumatic Controllers	0	0	1.26	8.38	1.14	0.02	0
Separators	0	0	0	0	0	0	0
Fugitives			0.17	1.12	0.15	0	
Venting or Blowdowns	0	0	0	0	0	0	0
Combustion Control Devices	0	0	0	0	0	0	0
Loadout	0.06	0.25	0.21	0.19	0.09	68.26	0
Non-Road Internal Combustion Engines	0	0	0	0	0	0	0
Well Bradenhead	0	0	0	0	0	0	0
Well Maintenance	0	0	0.57	3.78	0.52	0.01	0

Diesel Vehicle Road Miles

Complete the following chart for diesel vehicle road miles during each stage of oil and gas location operations.

During Construction: 207 During Completions: 1812
 During Drilling: 1455 During Interim Reclamation: 22
 During Production: 135

PUBLIC HEALTH RESOURCES

Pre-Production Emissions

Complete the following chart based on the estimated total equipment emissions (in lbs) for the Oil & Gas Location during the pre-production (construction, drilling, completions) stage for Hazardous Air Pollutants (HAP).

	BEN	TOL	ETH	XYL	NHE	TMP	H2S	FDE	MET	HAP
Process Heaters or Boilers	0	0	0	0	0	0	0	0.846	0	0.85
Storage Tanks	0.0762 13973	0	0	0	0.0894 45565	0	0	0	0	0.1654
Venting or Blowdowns	0	0	0	0	0	0	0	0	0	0
Combustion Control Devices	0	0	0	0	0	0	0	0	0	0
Non-Road Internal Combustion Engines	261	121	7	60	68	0	0	3561	0	4079
Drill Mud	0	112	152	6	112	0	0	0	112	494
Flowback or Completions	0	0	0	0	0	0	0	0	0	0

Loadout	0	0	0	0	0	0	0	0	0	0
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Production Emissions

Complete the following chart based on the estimated total equipment emissions (in lbs) for the Oil & Gas Location once the Oil & Gas Location has entered the production stage, for Hazardous Air Pollutants (HAP). The table should be filled out based on ONE year of operation.

	BEN	TOL	ETH	XYL	NHE	TMP	H2S	FDE	MET	HAP
Stationary Engines or Turbines	0	0	0	0	0	0	0	0	0	0
Process Heaters or Boilers	0	0	0	0	0	0	0	2	0	2
Storage Tanks	89	0	0	0	365	0	0	0	0	454
Dehydration Units	0	0	0	0	0	0	0	0	0	0
Pneumatic Pumps	0	0	0	0	0	0	0	0	0	0
Pneumatic Controllers	13	20	0	9	83	9	0	0	0	134
Separators	0	0	0	0	0	0	0	0	0	0
Fugitives	2	0	0	0	5	0	0	0	0	7
Venting or Blowdowns	0	0	0	0	0	0	0	0	0	0
Combustion Control Devices	0	0	0	0	0	0	0	0	0	0
Non-Road Internal Combustion Engines	0	0	0	0	0	0	0	0	0	0
Loadout	1	0	0	0	7	0	0	0	0	8
Well Bradenhead	0	0	0	0	0	0	0	0	0	0
Well Maintenance	6	9	0	4	38	4	0	0	0	61

Provide a qualitative evaluation of any potential acute or chronic, short- or long-term incremental impacts to public health as a result of the estimated total pre-production hazardous air pollutant emissions.

As part of an air quality assessment performed for the Balzac Gulch EA (BLM 2017b), individual HAP emissions from pre-production operations were quantified. The total HAPs emissions, 0.20 tpy include benzene, toluene, ethylbenzene, xylenes, n-hexane, and formaldehyde emissions of 0.08, 0.04, 0.0005, 0.02, 0.04, and 0.007 tpy, respectively. These HAP emissions are of similar magnitude to the level of project pre-production HAP emissions (benzene, toluene, ethylbenzene, xylenes, n-hexane, and formaldehyde) presented above (0.13, 0.12, 0.08, 0.03, 0.09, and 1.78 tpy, respectively).

Impacts from pre-production HAP emissions were not estimated or analyzed as part of the Balzac Gulch EA (BLM 2017b) given that the emissions from pre-production activities are from short-term activities and do not occur over the lifetime of the project. Also, these HAP emissions are less than those which could occur from production activities. As part of the Balzac Gulch EA (BLM 2017b) impacts from production HAP (benzene, toluene, ethylbenzene, xylenes, n-hexane, and formaldehyde) emissions in the vicinity of the well pads were analyzed and the potential maximum acute (short-term; 1-hour) and long-term (annual) HAP concentrations were estimated to be well below applicable health thresholds for these HAPs. Therefore, it is estimated the HAP emissions resulting from the reconstruction of the South Leverich 13-09 well pad and drilling of 21 natural gas wells would not cause or contribute to any potential acute or chronic, short-or long-term incremental impacts to public health.

2,2,4-trimethylpentane, hydrogen sulfide, and methanol HAP emissions from pre-production activities were estimated and are shown in Table 4. These emissions are estimated as 0.0, 0.0, and 0.06 tpy, respectively. Although these HAPs were not specifically modeled in the BLM 2017 study, the emissions levels are less than the project benzene emissions (which were modeled). Given that the applicable short-term; 1-hour) and long-term (annual) health thresholds for these HAPs are above the levels applicable to benzene it is estimated the short-term and long-term concentrations for these HAPs would be well below applicable health thresholds.

Provide a qualitative evaluation of any potential acute or chronic, short- or long-term incremental impacts to public health as a result of the estimated annual production hazardous air pollutant emissions.

As part of an air quality assessment performed for the Balzac Gulch EA (BLM 2017b), individual HAP emissions from production operations were quantified. The total HAPs emissions, 1.01 tpy include benzene, toluene, ethylbenzene, xylenes, n-hexane, and formaldehyde emissions of 0.16, 0.23, 0.01, 0.09, 0.48, and 0.04 tpy, respectively. These HAP emissions are of similar magnitude to the level of project production HAP emissions (benzene, toluene, ethylbenzene, xylenes, n-hexane, and formaldehyde) presented above (0.06, 0.01, 0.0, 0.01, 0.2, and 0.001 tpy, respectively).

As part of the Balzac Gulch EA (BLM 2017b) , impacts from production HAP emissions (benzene, toluene, ethylbenzene, xylenes, n-hexane, and formaldehyde) in the vicinity of the well pads were analyzed and the potential maximum acute (short-term; 1-hour) and long-term (annual) HAP concentrations were estimated to be well below applicable health thresholds for these HAPs. In addition, long-term exposures to emissions of suspected carcinogens (benzene, ethylbenzene and formaldehyde) were evaluated based on estimates of the increased latent cancer risk over a 70-year lifetime. The estimated cancer risk from these HAPs is shown to be below acceptable cancer risk levels. Therefore, it is estimated the HAP emission resulting from the production activities from 21 natural gas wells on the South Leverich 13-09 pad would not cause or contribute to any potential acute or chronic, short-or long-term incremental impacts to public health.

2,2,4-trimethylpentane, hydrogen sulfide, and methanol HAP emissions from production activities were estimated and are shown in Table 5. These emissions are estimated as 0.007, 0.0, and 0.0 tpy, respectively. Although these HAPs were not specifically modeled in the Balzac Gulch EA (BLM 2017b) study, the emissions levels are less than the project benzene emissions (which were modeled). Given that the applicable short-term (1-hour) and long-term (annual) health thresholds for these HAPs are above the levels applicable to benzene, it is estimated that the short-term and long-term concentrations for these HAPs would be well below applicable health thresholds.

Dust Impacts

The following are the estimated number of truck trips traveling on or off the Oil & Gas Location.

Total	During Construction	During Drilling	During Completions	During Interim Reclamation	During Production
Monthly	199	577	221	77	38
Annual	399	2329	1546	77	454

Estimated total pounds (lbs) of proppant to be used during completions activities. 5250000
0

Provide the type of proppant(s) that are planned to be used during completions activities.

100 Mesh Northern White Proppant

Provide an evaluation of the proposed proppant management system that will be used to minimize dust during completions activities, including the estimated amount of silica dust that will leave the Oil & Gas Location.

Sand will be trucked to location using pre pneumatic dry bulk trailers. On location, the proppant is transferred via hose pneumatically from the air blower on the dry bulk trailer to the sand storage silos. Sand storage silos utilize a self-contained filtration system to capture dust while off-loading sand. Sand is transferred from the sand storage silo to the blender bulk hopper via gravity feed chute. Blender hopper will be covered with a vacuum system and fugitive dust will be contained to filtered cannisters. All dust is contained during this transfer process and no silica dust will leave location.

EXISTING OIL & GAS

Total number of oil & gas locations within 1-mile of the Oil & Gas Location:

	Total Number of Locations		Total Number of Wells
Active, built	5	Active, built	4
Permitted by COGCC, unbuilt	0	Permitted by COGCC, unbuilt	0
Permitted by Relevant Local Government & not COGCC, unbuilt	0	Proposed	18
Proposed	0	Plugged and Abandoned	2

Total acreage disturbance during construction of the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location: 22.28

Source for acreage total:

- Field Observation/Measurement
- COGCC Location Files
- Aerial Photos/Other
- Other

If "Other" is selected, please describe the source use to determine the acreage total for construction disturbance of the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location.

Total permitted capacity of on-location storage (in number of pits and tanks) of the active and proposed oil & gas locations within 1-mile of the Oil & Gas Location :
NOTE: providing the existing number of pits and tanks on surrounding existing locations is optional.

Source for storage totals:		Permitted Onsite Storage Capacity	Existing Onsite Storage Capacity
<input checked="" type="checkbox"/> Field Observation/Measurement	Oil	0	0
<input checked="" type="checkbox"/> COGCC Location Files	Condensate	11	9
<input type="checkbox"/> Aerial Photos/Other	Produced Water	2	2
<input type="checkbox"/> Other	Pits	0	0

If "Other" is selected, please describe the source use to determine the tank totals for the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location.

OIL & GAS DEVELOPMENT PLAN-SCALE DATA

List High Priority Habitats (HPH) that are estimated be disturbed by the construction of new roads, including access roads, pipelines, and utilities for this OGDG, along with the estimated disturbed acreage of each HPH.

No HPH Identified

List the total estimated of disturbed acreage and the total disturbed High Priority Habitat (HPH) area (in acres) during construction and the acreage that will remain disturbed after interim reclamation of the following for the entire OGDG:

	Construction		Post-interim Reclamation	
	Total Acreage (acres)	Total HPH Acreage (acres)	Total Acreage (acres)	Total HPH Acreage (acres)
New roads, including access roads	0	0	New roads, including access roads	0
Pipelines	1.83	0	Pipelines	0.69
Utilities	0	0	Utilities	0

Provide any further information regarding the HPH disturbance from the construction of new roads, including access roads, pipelines, and utilities for this OGDG.

All proposed project disturbance is outside of High Priority Habitat. Pipeline disturbance acreage at interim reclamation is associated with the existing access road.

Number of miles of the existing lease road that are planned to be used to access these location(s): 0.65

BENEFICIAL IMPACT INFORMATION

Equipment and Facility Removal

Total number of existing wells that are planned to be plugged and abandoned as part of this OGDG: 0

Total number of existing locations that are planned to be closed and undergo final reclamation as part of this OGDG: 0

Total number of acres that are planned to be reclaimed through the closing of existing locations: 0

Total number of existing pits that are planned to be closed and undergo final reclamation as part of this OGDG: 0

Estimated number of vehicle trips that are planned to be prevented from the above mentioned facility closures and equipment upgrades (on an annual basis): 0

Total number of tanks planned to be removed from existing locations through the approval of this OGDG:

Oil Tanks: 0

Condensate Tanks: 0

Produced Water Tanks: 0

Provide a qualitative evaluation of any incremental beneficial impacts to the surrounding community directly and indirectly from this OGD.

The communities of Rifle and Silt would benefit most notably from the employment and tax revenues generated by the proposed development plan. In addition to the direct jobs created by the project, the development plan would support jobs in local businesses that support the project and its employees, including retail trade, lodging and eating establishments, construction, real estate, and other services.

Taxes paid by TEP on production would support infrastructure and community services in Rifle and across the county. In Garfield County ad valorem (property) taxes on production fund local governments; education and health care facilities; and fire protection, water conservation, and sanitation services including the City of Rifle, Garfield School District No. Re-2, Rifle Downtown Development District, Grand River Hospital, West Divide Water Conservancy District, Rifle Branch of the Garfield County Public Library District, and Colorado River Fire Rescue.

In addition to ad valorem taxes, Rifle and other Garfield County residents would receive a portion of state severance taxes and federal mineral royalties paid on production in the OGD through services provided. Severance tax on oil and gas production in Colorado is progressive, starting at 2% and increasing with sales volume. Half of severance taxes paid to the state is returned to local governments impacted by oil, gas, and mineral production. Nearly half (49%) of federal mineral royalties, which are generally 12.5% of production value, are returned to Colorado, a portion of which is allocated to local governments and school districts impacted by mineral development.

While production-based taxes would produce the greatest benefits to local governments, Garfield County and the City of Rifle would also receive tax revenues from property taxes paid on physical assets and sales and use taxes paid on equipment purchases associated with the development plan.

Provide a qualitative evaluation of any incremental beneficial impacts to the surrounding wildlife and ecosystems directly and indirectly from this OGD.

TEP would minimize impacts to wildlife and surrounding ecosystems by using existing infrastructure, recycling produced water thereby reducing truck trips, installation of buried pipelines, coordination with CPW, ground clearing outside of migratory bird habitat restrictions, and implementation of a weed management program.

MITIGATION INFORMATION

No Mitigation Measures Listed

OPERATOR COMMENTS AND SUBMITTAL

TEP Rocky Mountain LLC (TEP) is proposing the South Leverich 13-09 Oil & Gas Development Plan which will include reconstruction of the existing South Leverich 13-09 well pad to support drilling, completion, and production operations for twenty-one (21) proposed directional natural gas wells. The well pad currently has 4 producing wells.

Print Name: Melissa Luke

Title: Regulatory Specialist

Email: mluke@terraep.com

Date: _____

Based on the information provided herein, this Cumulative Impacts Data Identification Form 2B complies with COGCC Rules and is hereby accepted into the Cumulative Impacts Data Evaluation Repository (CIDER database). Contact OGLA Staff for consultation.

COGCC Approved: _____

Director of COGCC

Date: _____

Attachment Check List

Att Doc Num

Name

<u>Att Doc Num</u>	<u>Name</u>

Total Attach: 0 Files

General Comments

User Group

Comment

Comment Date

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
		Stamp Upon Approval

Total: 0 comment(s)