APPENDIX V

General Conformity Rule Applicability Analysis

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Texas GulfLink Project
Brazoria County, Texas

CLEAN AIR ACT GENERAL CONFORMITY RULE APPLICABILITY ANALYSIS

April 2020

CLEAN AIR ACT GENERAL CONFORMITY RULE APPLICABILITY ANALYSIS

1. INTRODUCTION

The 1990 amendments to the Clean Air Act (CAA) require federal agencies to ensure that their actions conform to the appropriate State Implementation Plan (SIP) in a nonattainment area. The SIP provides for implementation, maintenance, and enforcement of the National Ambient Air Quality Standards (NAAQS); it includes emission limitations and control measures to attain and maintain the NAAQS. Conformity to a SIP, as defined in the CAA, means conformity to a SIP's purpose of reducing the severity and number of violations of the NAAQS to achieve attainment of the standards. The federal agency responsible for a proposed action is required to determine if its proposed action conforms to the applicable SIP.

The US Environmental Protection Agency (USEPA) has developed two sets of conformity regulations; federal actions are differentiated into transportation projects and non-transportation-related projects:

- Transportation projects, which are governed by the "transportation conformity" regulations (40 CFR Parts 51 and 93), effective on December 27, 1993 and revised on August 15, 1997.

- Non-transportation projects, which are governed by the "general conformity" regulations (40 CFR Parts 6, 51 and 93) described in the final rule for *Determining Conformity of General Federal Actions to State or Federal Implementation Plans* published in the *Federal Register* on November 30, 1993. The general conformity rule became effective January 31, 1994 and was revised on March 24, 2010.

This general conformity applicability analysis is prepared as an appendix to the environmental impact statement (EIS) prepared by the US Coast Guard for the Texas GulfLink (TGL) Deepwater Port (DWP) project. Since the proposed action is a non-transportation project, only the general conformity rule applies.

2. GENERAL CONFORMITY

2.1 Attainment and Nonattainment Areas

The general conformity rule (GCR) applies to federal actions occurring in air basins designated as nonattainment areas for the NAAQS or in attainment areas subject to maintenance plans (maintenance areas). Federal actions occurring in air basins that are in attainment with the NAAQS are not subject to the conformity rule.

A criterion pollutant is a pollutant for which an ambient air quality standard has been established under the CAA. The designation of nonattainment is based on the exceedances or violations of the ambient air quality standard. A maintenance plan establishes measures to control emissions to ensure the ambient air quality standard is maintained in areas that have been re-designated as attainment from a previous nonattainment status.

Under the requirements of the 1970 Clean Air Act (CAA), as amended in 1977 and 1990, the USEPA established NAAQS for six criteria pollutants: carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), ozone (O_3), inhalable particulate matter (PM_{10} and $PM_{2.5}$), and lead (Pb).

Areas that meet the NAAQS for a criterion pollutant are designated as being in "attainment." Areas where a pollutant level exceeds the corresponding NAAQS is designated as being in "nonattainment." O_3 nonattainment areas are subcategorized based on the severity (marginal, moderate, serious, severe, or extreme). PM_{10} and CO nonattainment areas are classified as moderate or serious. When insufficient data exist to determine an area's attainment status, it is designated unclassifiable (or in attainment).

The TGL DWP project would partially take place in Brazoria County, Texas, a part of the Houston-Galveston-Brazoria **(**HGB) nonattainment area, an area that is currently designated as a serious nonattainment area for 8-hour O_3 NAAQS and an attainment area for the other criteria pollutants. O_3 is principally formed from nitrogen

oxides (NO_x) and volatile organic compounds (VOC) through chemical reactions in the atmosphere in the presence of sunlight.

2.2 De Minimis Emission Levels

To focus general conformity requirements on those federal actions which have the potential for significant air quality impacts, threshold (*de minimis*) emissions rates were established in the final rule. A formal conformity determination is required when the annual net total of direct and indirect emissions from a federal action (occurring in a nonattainment or maintenance area) for a criterion pollutant would equal or exceed the annual *de minimis* level for that pollutant. Table 1 lists the *de minimis* levels for each pollutant based on the area designation.

For O_3 nonattainment areas, USEPA's conformity rules establish *de minimis* emission levels for O_3 precursors, VOC and NO_x, on the presumption that VOC and NO_x reductions will contribute to reductions in O_3 formation. Since the project site is located in an O_3 serious nonattainment area, the *de minimis* levels of 50 tons per year (tpy) of NO_x and VOC apply for the conformity analysis.

Table 1: *De Minimis* Emission Levels for Criteria Air Pollutants

Pollutant	Nonattainment Designation	Tons/Year
Ozone*	Serious	50
	Severe	25
	Extreme	10
	Other nonattainment or maintenance areas outside ozone transport region	100
	Marginal and moderate nonattainment areas inside ozone transport region	50/100**
Carbon Monoxide	All	100
Sulfur Dioxide	All	100
Lead	All	25
Nitrogen Dioxide	All	100
Particulate Matter ≤ 10 microns	Moderate	100
	Serious	70
Particulate Matter ≤ 2.5 microns***	All	100

Notes:
* Applies to ozone precursors – volatile organic compounds (VOC) and nitrogen oxides (NO_X).
** VOC/NO_X;
*** Applies to PM2.5 and its precursors.

2.3 Analysis

This CAA General Conformity Rule (GCR) applicability analysis was conducted according to the guidance provided by *40 CFR Parts 6, 51, and 93. Determining Conformity of Federal Actions to State or Federal Implementation Plans,* (USEPA, November 30, 1993 and March 24, 2010).

The analysis was performed to determine whether a formal conformity analysis would be required. Pursuant to the GCR, all reasonably foreseeable emissions (both direct and indirect) associated with the implementation of the Proposed Action were quantified and compared to the applicable annual *de minimis* levels to determine if further analysis is required.

The conformity analysis for a federal action examines the combined impacts of the direct and indirect emissions from stationary and mobile sources. Direct emissions are emissions of a criterion pollutant or its precursors that are caused or initiated by a federal action and occur at the same time and place as the action. Indirect emissions, occurring later in time and/or further removed in distance from the action itself, must be included in the determination if both of the following apply:

- The federal agency can practicably control the emissions and has continuing program responsibility to maintain control.
- The emissions caused by the federal action are reasonably foreseeable.

Increased direct and indirect emissions of NO_x, and VOC would result from the following potential and construction activities associated with the proposed action:

- Construction of tanks and associated equipment for the Terminal, incoming and outgoing pipeline and access road to the Terminal
- Use of diesel and gas-powered construction equipment including marine vessels.
- Movement of trucks containing construction and removal materials.
- Commuting of construction workers.

Because the state SIP is applicable within the state territory that includes the offshore area within 9 nautical miles of shoreline, the GCR applicability analysis conducted and described in this appendix includes estimating construction and operation activity related nonattainment pollutant emissions within the state territory (i.e., onshore and offshore area within 9 nautical miles of shoreline) under the Proposed Action. The activities considered applicable include:

- Onshore construction and operational activities.
- Offshore pipeline construction within 9 nautical miles from the shoreline.

Therefore, the offshore pipeline construction activities beyond 9 nautical miles from the shoreline and the platform construction and operational activities are not considered applicable to the GCR and not included in this GCR applicability analysis.

3. CONSTRUCTION EMISSIONS ESTIMATE

This section presents actual emissions attributable to activities related to the Proposed Action that were analyzed for NO_x and VOC. It should be noted that emissions analysis presented in this section is based on construction schedule and analysis worksheets and references supplied by TGL.

3.1 Construction Activity Resource Data

Construction activities associated with the Proposed Action would involve onshore construction of Jones Creek Crude Storage Facility and offshore construction of the Deepwater Port Facility including the following components:

- New installed 9.45 miles of 36” pipeline from the Department of Energy (DOE) facility at Bryan Mound to the Jones Creek tank storage terminal.
- The proposed Jones Creek Crude Storage Terminal to be located in Brazoria County, Texas, on approximately 200 acres of land consisting of thirteen (13) above-ground external floating roof storage tanks, with a site-wide total storage capacity of approximately 9.2 million barrels of sweet crude oil.
- One 42-inch outside diameter, 12.83 mile long crude oil pipeline from the terminal to the shore.
- One 42-inch outside diameter, 28.3 nautical mile long offshore crude oil pipeline, within which, approximately 10 nautical mile long pipeline would be within the state territory.

Construction of the onshore and offshore facility components listed above would result from the following equipment and activities:

- Fossil fuel-fired construction equipment including marine equipment exhausts.
- Fossil fuel-fired trucks and commuting vehicle exhaust.

3.2 Equipment Operations and Emissions

The quantity and type of equipment necessary were determined based on the activities necessary to implement the proposed action as described above. All equipment was assumed to be diesel-powered.

Estimates of equipment emissions were based on the estimated hours of usage and emission factors for each mobile source for the project. Emission factors related to diesel nonroad equipment were primarily estimated from USEPA's Motor Vehicle Emission Simulator (MOVES, Version MOVES2014b). The national default input parameters applicable for Brazoria County where the Proposed Project is located were used in emissions factor modeling. For those marine vessels, the emissions factors were estimated using Bureau of Ocean Energy Management (BOEM) Offshore Wind Energy Facilities Emission Estimating Tool (BOEM, August 1, 2017).

The USEPA recommends the following formula to calculate hourly emissions from non-road engine sources including marine vessels:

$$M_i = N \times HP \times LF \times EF_i$$

where:

M_i = mass of emissions of ith pollutants during inventory period;
N = source population (units);
HP = average rated horsepower;
LF = typical load factor; and
EF_i = average emissions of i^{th} pollutant per unit of use (e.g., grams per horsepower-hour).

The emission factors and estimated equipment annual emissions are presented in Tables 2 through 4 below.

The overall construction duration is currently projected to last over three years (between 2020 and 2022) with offshore construction projected to start in 2021. Tables 2 through 4 provide the equipment types and annual operating hours for each construction phase over the three construction years.

Table 2. Construction Equipment Emissions in 2020

Phase	Equipment List	Emission Unit HP for Equipment	Hour Use	Emission Factor (grams/HP)		Annual Emission (tons/year)	
				NO_X	VOC	NO_X	VOC
Tank Construction	Forklifts	75	0	2.595	0.062	0.000	0.000
	Excavators (200hp)	200	1248	0.510	0.034	0.140	0.009
	Cranes (250hp)	250	0	0.869	0.060	0.000	0.000
	Generators (135hp)	135	0	3.262	0.239	0.000	0.000
	Welding Machines	25	0	4.494	0.860	0.000	0.000
	Sidebooms (240hp)	240	0	0.602	0.044	0.000	0.000
	Backhoe & Frontend Loader (120hp)	120	1248	2.680	0.420	0.442	0.069
	Vertical Drill Rig (150hp)	150	624	3.053	0.237	0.315	0.024
	Pile Driver (200hp)	200	0	0.869	0.060	0.000	0.000
	Air Compressor (115hp)	115	0	1.686	0.097	0.000	0.000
	Water Pumps (50hp)	50	624	3.518	0.294	0.121	0.010
	Grader (300)	300	0	0.583	0.042	0.000	0.000
	Ground Compactor (25hp)	25	0	3.925	0.410	0.000	0.000
	Dump Trucks (400hp) - Onsite	400	1248	0.504	0.031	0.278	0.017
Onshore Pipeline	Welders	25	0	4.494	0.860	0.000	0.000
	Excavators (200hp)	200	0	0.510	0.034	0.000	0.000
	Cranes (250hp)	250	0	0.869	0.060	0.000	0.000
	Generators (100hp)	100	0	3.650	0.351	0.000	0.000
	Welding Machines	25	0	4.494	0.860	0.000	0.000
	Sidebooms (240hp)	240	0	0.602	0.044	0.000	0.000
	Backhoe & Frontend Loader (120hp)	120	0	2.680	0.420	0.000	0.000
	HDD RIG	500	0	2.969	0.190	0.000	0.000
	Air Compressor (115hp)	115	0	1.686	0.097	0.000	0.000
	Grader (300)	300	0	0.583	0.042	0.000	0.000
	Ground Compactor (25hp)	25	0	3.925	0.410	0.000	0.000
	Dump Trucks (400hp) - Onsite	400	0	0.504	0.031	0.000	0.000
Offshore 28.3 Nautical Mile Pipeline	Pipelay Barge	3500	0	7.080	0.184	0.000	0.000
	Rig Pull Back Barge	1500	0	5.088	0.301	0.000	0.000
	SPM Installation Tug	7500	0	7.100	0.132	0.000	0.000
	Crew Boat	1200	0	4.864	0.317	0.000	0.000
	Pipe Haul Barge - Main	3200	0	7.100	0.132	0.000	0.000
	Pipe Haul Barge - Aux	860	0	7.532	0.104	0.000	0.000
	Offshore Welders	25	0	4.494	0.860	0.000	0.000
	Cranes (250hp)	250	0	0.869	0.060	0.000	0.000
	Generators (100hp)	100	0	3.650	0.351	0.000	0.000
	burial pumps	300	0	2.822	0.203	0.000	0.000
	HPU (50hp)	50	0	3.658	0.343	0.000	0.000

Table 3. Construction Equipment Emissions in 2021

Phase	Equipment List	Emission Unit HP for Equipment	Hour Use	Emission Factor (grams/HP)		Annual Emission (tons/year)	
				NO_X	VOC	NO_X	VOC
Tank Construction	Forklifts	75	4368	2.569	0.056	0.928	0.020
	Excavators (200hp)	200	2496	0.377	0.027	0.208	0.015
	Cranes (250hp)	250	9672	0.715	0.048	1.906	0.129
	Generators (135hp)	135	3432	3.007	0.218	1.536	0.111
	Welding Machines	25	24960	4.397	0.793	3.025	0.545
	Sidebooms (240hp)	240	936	0.490	0.036	0.121	0.009
	Backhoe & Frontend Loader (120hp)	120	5928	2.411	0.376	1.890	0.295
	Vertical Drill Rig (150hp)	150	1872	2.825	0.219	0.875	0.068
	Pile Driver (200hp)	200	624	0.715	0.048	0.098	0.007
	Air Compressor (115hp)	115	2184	1.460	0.081	0.404	0.022
	Water Pumps (50hp)	50	3744	3.374	0.267	0.696	0.055
	Grader (300)	300	1248	0.470	0.034	0.194	0.014
	Ground Compactor (25hp)	25	1872	3.884	0.395	0.200	0.020
	Dump Trucks (400hp) - Onsite	400	1872	0.374	0.025	0.309	0.021
Onshore Pipeline	Welders	25	16224	4.397	0.793	1.966	0.354
	Excavators (200hp)	200	4680	0.377	0.027	0.389	0.028
	Cranes (250hp)	250	1560	0.715	0.048	0.307	0.021
	Generators (100hp)	100	1560	3.435	0.320	0.591	0.055
	Welding Machines	25	9984	4.397	0.793	1.210	0.218
	Sidebooms (240hp)	240	3432	0.490	0.036	0.445	0.033
	Backhoe & Frontend Loader (120hp)	120	2184	2.411	0.376	0.696	0.109
	HDD RIG	500	936	2.742	0.174	1.414	0.090
	Air Compressor (115hp)	115	1560	1.460	0.081	0.289	0.016
	Grader (300)	300	936	0.470	0.034	0.145	0.011
	Ground Compactor (25hp)	25	1872	3.884	0.395	0.200	0.020
	Dump Trucks (400hp) - Onsite	400	1248	0.374	0.025	0.206	0.014
Offshore 28.3 Nautical Mile Pipeline	Pipelay Barge	3500	3682	7.08	0.18	5.03	0.13
	Rig Pull Back Barge	1500	1248	6.91	0.18	2.85	0.07
	SPM Installation Tug	7500	12	7.10	0.13	0.70	0.01
	Crew Boat	1200	4992	6.82	0.10	0.46	0.01
	Pipe Haul Barge - Main	3200	624	7.10	0.13	6.25	0.12
	Pipe Haul Barge - Aux	860	1872	7.53	0.10	2.94	0.04
	Offshore Welders	25	51293	4.40	0.79	6.22	1.12
	Cranes (250hp)	250	7363	0.72	0.05	1.45	0.10
	Generators (100hp)	100	3682	3.43	0.32	1.39	0.13
	burial pumps	300	998	2.60	0.19	0.86	0.06
	HPU (50hp)	50	1622	3.56	0.32	0.32	0.03

Table 4. Construction Equipment Emissions in 2022

Phase	Equipment List	Emission Unit HP for Equipment	Hour Use	Emission Factor (grams/HP)		Annual Emission (tons/year)	
				NO_X	VOC	NO_X	VOC
Tank Construction	Forklifts	75	0	2.554	0.053	0.000	0.000
	Excavators (200hp)	200	0	0.284	0.021	0.000	0.000
	Cranes (250hp)	250	0	0.577	0.040	0.000	0.000
	Generators (135hp)	135	0	2.728	0.195	0.000	0.000
	Welding Machines	25	0	4.317	0.737	0.000	0.000
	Sidebooms (240hp)	240	0	0.385	0.029	0.000	0.000
	Backhoe & Frontend Loader (120hp)	120	0	2.248	0.348	0.000	0.000
	Vertical Drill Rig (150hp)	150	0	2.625	0.203	0.000	0.000
	Pile Driver (200hp)	200	0	0.577	0.040	0.000	0.000
	Air Compressor (115hp)	115	0	1.290	0.069	0.000	0.000
	Water Pumps (50hp)	50	1248	3.240	0.241	0.223	0.017
	Grader (300)	300	0	0.367	0.028	0.000	0.000
	Ground Compactor (25hp)	25	0	3.852	0.383	0.000	0.000
	Dump Trucks (400hp) - Onsite	400	0	0.283	0.019	0.000	0.000
Onshore Pipeline	Welders	25	0	4.317	0.737	0.000	0.000
	Excavators (200hp)	200	0	0.284	0.021	0.000	0.000
	Cranes (250hp)	250	0	0.577	0.040	0.000	0.000
	Generators (100hp)	100	0	3.187	0.283	0.000	0.000
	Welding Machines	25	0	4.317	0.737	0.000	0.000
	Sidebooms (240hp)	240	0	0.385	0.029	0.000	0.000
	Backhoe & Frontend Loader (120hp)	120	0	2.248	0.348	0.000	0.000
	HDD RIG	500	0	2.552	0.161	0.000	0.000
	Air Compressor (115hp)	115	0	1.290	0.069	0.000	0.000
	Grader (300)	300	0	0.367	0.028	0.000	0.000
	Ground Compactor (25hp)	25	0	3.852	0.383	0.000	0.000
	Dump Trucks (400hp) - Onsite	400	0	0.283	0.019	0.000	0.000
Offshore 28.3 Nautical Mile Pipeline	Pipelay Barge	3500	624	7.08	0.18	0.85	0.02
	Rig Pull Back Barge	1500	0	6.91	0.18	0.00	0.00
	SPM Installation Tug	7500	12	7.10	0.13	0.70	0.01
	Crew Boat	1200	624	6.82	0.10	0.06	0.00
	Pipe Haul Barge - Main	3200	0	7.10	0.13	0.00	0.00
	Pipe Haul Barge - Aux	860	0	7.53	0.10	0.00	0.00
	Offshore Welders	25	3744	4.40	0.79	0.45	0.08
	Cranes (250hp)	250	1248	0.72	0.05	0.20	0.01
	Generators (100hp)	100	624	3.43	0.32	0.22	0.02
	burial pumps	300	0	2.60	0.19	0.00	0.00
	HPU (50hp)	50	0	3.56	0.32	0.00	0.00

3.3 Vehicle Operations and Emissions

The quantity and trips of construction commuter vehicles and material hauling trucks were estimated based on the projected manpower and material required for onshore construction activities.

Truck and commuting vehicle operations would result in indirect emissions. MOVES2014b was used by TGL to predict truck and commuter vehicle running emission factors. As stated earlier, projected vehicle operations and associated emissions were provided by TGL and are summarized in the Table 5 below and include MOVES emission factors, and annual travel distances in miles.

3.4 Combined Construction Emissions

The estimated total construction emissions on an annual basis were summarized in Table 6 for onshore activities and Table 7 for offshore pipeline construction activities, respectively. The total combined annual construction emissions within the state territory for which the GCR is applicable are summarized in Table 8.

Table 5. Construction Vehicle Emissions

Phase	Year	Type	Travel Miles	Emission Factor (grams/mile)		Annual Emission (tons/year)	
				NO_X	VOC	NO_X	VOC
All Phases	2020	Passenger Car	11,794	0.088	0.014	0.001	0.000
		Material Hauling Truck	9,600	2.185	0.210	0.023	0.002
	2021	Passenger Car	246,725	0.074	0.012	0.020	0.003
		Material Hauling Truck	106,880	1.921	0.179	0.226	0.021
	2022	Passenger Car	13,229	0.062	0.010	0.001	0.000
		Material Hauling Truck	3,200	1.700	0.153	0.006	0.001

Table 6. Estimated Onshore Construction Emissions

Year	Source	Pollutant Emissions (tons/year)	
		NO_X	VOC
2020	Off Site Vehicle	0.02	0.00
	Tank Construction	1.30	0.13
	Total	1.32	0.13
2021	Off Site Vehicle	0.25	0.02
	Tank Construction	12.39	1.33
	On-shore Pipeline	7.86	0.97
	Total	20.51	2.32
2022	Off Site Vehicle	0.01	0.00
	Tank Construction	0.22	0.02
	On-shore Pipeline	0.00	0.00
	Total	0.23	0.02

Table 7. Estimated Offshore Pipeline Construction Emissions

Area	Pipeline (nautical mile)	Year	Pollutant Emissions (tons/year)	
			NO_X	VOC
Entire Offshore	28.3	2021	28.48	1.82
		2022	2.48	0.15
State Territory	10	2021	9.97	0.64
		2022	0.87	0.05

Table 8. Estimated Construction Emissions within State Territory

Year	Pollutant Emissions (tons/year)	
	NO_X	VOC
2020	1.32	0.13
2021	30.48	2.96
2022	1.10	0.07

4. OPERATION EMISSIONS

The emissions analysis presented in this section is based on the estimates supplied by TGL in conjunction with its PSD and Title V applications.

4.1 Helicopter and Support Vessel Operation

The earliest phase of TGL DWP operations anticipated to start from 2022 would involve operation of support vessel and helicopter resulting in NOx and VOC emissions over the state territory. The annual helicopter landing and takeoffs and vessel engine running hours were estimated for this phase of mobile source operations as shown in Table 9. Helicopter and supply vessel operational emissions were calculated using the vessel engine emission factors predicted from BOEM Offshore Wind Energy Facilities Emission Estimating Tool (BOEM, August 1, 2017) and helicopter emission factors extracted from Year 2014 Gulfwide Emissions Inventory Study (BOEM June 2017) for a twin medium engine helicopter as summarized in Table 9.

Table 9. Helicopter/Support Vessel Operational Emissions

Source	Annual Landing and Takeoff or Vessel Engine Running Hours	Horsepower	Emission Factor (grams/hr-HP for vessel – Pound/LOT for helicopter)		Annual Emission (tons/year)	
			NO_X	VOC	NO_X	VOC
Helicopter	48 (LTO)	--	2.280	0.111	0.055	0.111
Supply Vessel	384 (hours)	1800	7.04	0.125	2.15	0.04

4.2 TGL Jones Creek Crude Storage Facility Operation

After the completion of construction activities, the proposed facility would involve various fossil fuel-fired combustion sources and volatile organic liquid tank operations. Table 10 lists the identified emissions sources within the facility.

The anticipated annual emissions from combustion sources such as generators were estimated using the USEPA's Compilation Of Air Pollutant Emission Factors (AP-42) handbook or applicable factors per the New Source Performance Standards (NSPS). These emissions factors were multiplied with the projected maximum operational hours on an annual basis for each source to estimate the annual emissions.

The VOC emissions from tank leaks were estimated using TANKS software (Version 4.09D) with various parameters such as tank type and size, fuel turnover rate, annual throughput, etc.. Although TANK software is no longer supported by USEPA, it is a computer software program applied by the applicant in preparing the applicable air permit applications that can estimate VOC emissions from fixed- and floating-roof storage tanks. The emission estimation procedures in TANKS are based on Chapter 7 of AP-42**.**

The estimated operational NOx and VOC emissions from the TGL Jones Creek Crude Storage Facility are presented in Table 11.

Table 10. Emission Sources in Jones Creek Crude Storage Facility

Source Description	Pollutant Emitted
External Floating Roof (EFR) crude oil storage tanks	VOC
Tank landing and refill emissions for changing crude oil stored (segregation)	VOC
Fugitive emissions from above-ground pipeline component Leaks	VOC
500-gal diesel fuel storage tank (fixed roof) for emergency firewater pump	VOC
500-gal diesel fuel storage tank (fixed roof) for emergency electric generator	VOC
Laboratory roof vent	VOC
Sampling activities	VOC
Routine pump maintenance	VOC
Pipeline pigging operations	VOC
Periodic tank cleanings (where roof is landed) Portable VCU used to control VOC vapors	VOC and NOx
Periodic maintenance testing of firewater pump	VOC and NOx
Periodic maintenance testing of electric generator	VOC and NOx

Table 11. Estimated Emissions from TGL Jones Creek Crude Storage Facility

Year	Source	Pollutant Emissions (tons/year)	
		NO_X	VOC
2023 and after	12 Crude Oil Tanks	-	45.80
	Emergency Generator	0.14	0.01
	Tank 1 (500-gal diesel) for FWP	-	0.00
	Tank 2 (500-gal diesel) for Emergency Generator	-	0.00
	Piping Fugitives	-	0.33
	Pigging Operations	-	0.46
	Laboratory Roof Vents	-	0.05
	Sampling Activities	-	0.05
	Pump Maintenance	-	0.005
	Storage Tank Cleaning	0.42	0.43
	Firewater Pump	0.11	0.01
	Total	**0.66**	**47.14**

5. CONFORMITY COMPLIANCE

Table 12 presents estimated annual emissions which are below the corresponding *de minimis* levels. Therefore, the proposed action would be in compliance with the CAA GCR conformity requirements and would not be subject to the GCR determination.

Table 12. Total Construction and Operation Emissions

Year	Activity	NOx (tpy)	VOC (tpy)
2020	Construction	1.32	0.13
2021	Construction	30.48	2.96
2022	Construction/ Partial Operation	3.31	0.22
2023 and after	Operation	2.87	47.29
Annual De minimis Level		*50*	*50*
Below Annual De minimis Level		*yes*	*yes*

6. REFERNCE

Abadie, Tyler. April 20, 2020. Construction Equipment Emissions Worksheets.
Bureau of Ocean Energy Management. August 1, 2017. Offshore Wind Energy Facilities Emission Estimating Tool.

Bureau of Ocean Energy Management. June 2017. Year 2014 Gulfwide Emissions Inventory Study.

US Environmental Protection Agency. November 30, 1993. 40 CFR Parts 6, 51, and 93. Determining Conformity of Federal Actions to State or Federal Implementation Plans. Final Rule.

US Environmental Protection Agency. March 24, 2010. 40 CFR Parts 51 and 93. Revisions to the General Conformity Regulations.

US Environmental Protection Agency. 2018. MOVES2014b (Motor Vehicle Emission Simulator). Modeling and Inventories. Retrieved from https://www.epa.gov/moves/latest-version-motor-vehicle-emission-simulator-moves.

US Environmental Protection Agency. 1995 - 2018. AP-42, Fifth Edition Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources.