

DOCD/DPP - AIR QUALITY

**OMB Control No. 1010-0151
OMB Approval Expires: xx/xx/xxxx**

COMPANY	
AREA	
BLOCK	
LEASE	
FACILITY	
WELL	
COMPANY CONTACT	
TELEPHONE NO.	
REMARKS	

LEASE TERM PIPELINE CONSTRUCTION INFORMATION:		
YEAR	NUMBER OF PIPELINES	TOTAL NUMBER OF CONSTRUCTION DAYS
2020		
2021		
2022		
2023		
2024		
2025		
2026		
2027		
2028		
2029		

AIR EMISSIONS COMPUTATION FACTORS

Fuel Usage Conversion Factors	Natural Gas Turbines		Natural Gas Engines		Diesel Recip. Engine		Diesel Turbines		REF.	DATE	Reference Links
	SCH/tp-hr	9.524	SCH/tp-hr	7.143	GAL/tp-hr	0.0514	GAL/tp-hr	0.0514			
Equipment/Emission Factors	units	TSP	PM10	PM2.5	SOx	NOx	VOC	PB	CO	NH3	
Natural Gas Turbine	gtp-hr	0.0086	0.0086	0.0026	1.4515	0.0005	N/A	0.3719	N/A		AP42 3.1-6 3.1-2a
RECIP - 2 Cycle Lean Natural Gas	gtp-hr	0.1293	0.1293	0.0020	6.9986	0.4582	N/A	1.2009	N/A		AP42 3.1-1
RECIP - 4 Cycle Lean Natural Gas	gtp-hr	0.0002	0.0002	0.0020	2.8814	0.4034	N/A	1.8949	N/A		AP42 3.2-2
RECIP - 4 Cycle Rich Natural Gas	gtp-hr	0.0523	0.0523	0.0020	7.7224	0.1021	N/A	3.1968	N/A		AP42 3.1-3
Diesel Recip. < 600 hp	gtp-hr	1	1	1	0.0279	14.1	1.04	N/A	3.03	N/A	AP42 3.1-1
Diesel Recip. > 600 hp	gtp-hr	0.32	0.182	0.178	0.0055	10.9	0.29	N/A	2.5	N/A	AP42 3.4-1 & 3.4-2
Diesel Boiler	lbs/hr	0.0480	0.0400	0.0105	0.0089	1.0080	0.0084	5.14E-05	0.2100	0.0236	AP42 3.4-6, PG and HFC, WAF/RE (090018)
Diesel Turbine	gtp-hr	0.0381	0.0137	0.0137	0.0048	2.7941	0.0013	4.45E-05	0.0105	N/A	AP42 3.1-4 & 3.2-9
Dual Fuel Turbine	gtp-hr	0.0381	0.0137	0.0137	0.0048	2.7941	0.0009	4.45E-05	0.0119	0.0000	AP42 3.1-16 3.1-2b, AP42 3.1-1 & 3.1-2a
Vessels - Propulsion	gtp-hr	0.320	0.1931	0.1873	0.0047	7.6669	0.2204	2.24E-05	1.2025	0.0022	USEPA 2017 NEI TSP refer to Diesel Recip. > 600 hp reference
Vessels - Drilling Prime Engine, Auxiliary	gtp-hr	0.320	0.1931	0.1873	0.0047	7.6669	0.2204	2.24E-05	1.2025	0.0022	USEPA 2017 NEI TSP refer to Diesel Recip. > 600 hp reference
Vessels - Diesel Boiler	gtp-hr	0.0468	0.1493	0.1417	0.0400	1.4914	0.0020	3.78E-05	0.1491	0.0003	USEPA 2017 NEI TSP (units converted) refer to Diesel Boiler reference
Vessels - Weld Simulation	gtp-hr	0.320	0.1931	0.1873	0.0047	7.6669	0.2204	2.24E-05	1.2025	0.0022	USEPA 2017 NEI TSP refer to Diesel Recip. > 600 hp reference
Natural Gas Heater/Boiler/Burner	lbs/MMscf	7.60	1.90	1.90	0.60	190.00	5.50	5.00E-04	84.00	3.2	AP42 3.4-1 & 3.4-2, PG and HFC, WAF/RE (090018)
Combustion Flare (no smoke)	bs/MMscf	0.00	0.00	0.00	0.57	71.40	35.93	N/A	325.5	N/A	AP42 13.5-1, 13.5-2
Combustion Flare (light smoke)	bs/MMscf	2.10	2.10	2.10	0.57	71.40	35.93	N/A	325.5	N/A	AP42 13.5-1, 13.5-2
Combustion Flare (medium smoke)	bs/MMscf	10.50	10.50	10.50	0.57	71.40	35.93	N/A	325.5	N/A	AP42 13.5-1, 13.5-2
Combustion Flare (heavy smoke)	bs/MMscf	21.00	21.00	21.00	0.57	71.40	35.93	N/A	325.5	N/A	AP42 13.5-1, 13.5-2
Liquid Flaring	lb/day	0.42	0.0966	0.0951	5.964	0.84	0.01428	5.14E-05	0.21	0.0236	AP42 3.3-1 through 3.3-3 and 3.3-5
Storage Tank	tons/yr/tank						4.300				2014 Gulfwide Inventory, Avg. emits (upper bound of 99% CI)
Fluorides	lbs/hr/component						0.0005				API Study
Glycol Dehydrator	tons/yr/dehydrator						19.240				2011 Gulfwide Inventory, Avg. emits (upper bound of 99% CI)
Cold Vent	tons/yr/vent						44.747				2014 Gulfwide Inventory, Avg. emits (upper bound of 99% CI)
Waste Incinerator	lb/hr	15.0	15.0	2.5	2.0	N/A	N/A	20.0	N/A		AP42 2.1-2
On-ice - Loader	lbs/gal	0.043	0.043	0.040	0.604	0.049	N/A	0.130	0.003		USEPA NONROAD2008 model: TSP (units converted) refer to Diesel Recip. <600 reference
On-ice - Other Construction Equipment	lbs/gal	0.043	0.043	0.043	0.040	0.604	0.049	N/A	0.130	0.003	USEPA NONROAD2008 model: TSP (units converted) refer to Diesel Recip. <600 reference
On-ice - Other Survey Equipment	lbs/gal	0.043	0.043	0.043	0.040	0.604	0.049	N/A	0.130	0.003	USEPA NONROAD2008 model: TSP (units converted) refer to Diesel Recip. <600 reference
On-ice - Tractor	lbs/gal	0.043	0.043	0.043	0.040	0.604	0.049	N/A	0.130	0.003	USEPA NONROAD2008 model: TSP (units converted) refer to Diesel Recip. <600 reference
On-ice - Truck (for gravel island)	lbs/gal	0.043	0.043	0.043	0.040	0.604	0.049	N/A	0.130	0.003	USEPA NONROAD2008 model: TSP (units converted) refer to Diesel Recip. <600 reference
On-ice - Truck (for surveys)	lbs/gal	0.043	0.043	0.043	0.040	0.604	0.049	N/A	0.130	0.003	USEPA NONROAD2008 model: TSP (units converted) refer to Diesel Recip. <600 reference
Man Camp - Operation (max. people/day)	tons/person/day		0.0004	0.0004	0.0004	0.006	0.001	N/A	0.001	N/A	BOEM 2014 1001
Vessels - Ice Management Diesel	gtp-hr	0.320	0.1931	0.1873	0.0047	7.6669	0.2204	2.24E-05	1.2025	0.0022	USEPA 2017 NEI TSP refer to Diesel Recip. > 600 hp reference
Vessels - Hovercraft Diesel	gtp-hr	0.320	0.1931	0.1873	0.0047	7.6669	0.2204	2.24E-05	1.2025	0.0022	USEPA 2017 NEI TSP refer to Diesel Recip. > 600 hp reference

Sulfur Content Source	Value	Units
Fuel Gas	3.38	ppm
Diesel Fuel	0.0015	% weight
Produced Gas (Flare)	3.38	ppm
Produced Oil (Liquid Flaring)	1	% weight

Density and Heat Value of Diesel Fuel	
Density	7.05 lbs/gal
Heat Value	19,300 Btu/lb

Heat Value of Natural Gas	
Heat Value	1,050 MMBtu/MMscf

Natural Gas Flare Parameters	Value	Units
CO2 Content of Flare Gas	0.8525	lb VOC/lb mol gas
Natural Gas Flare Efficiency	98	%

AREMISSIONS CALCULATIONS - 1ST YEAR

COMPANY	AREA	BLOCK	LEASE	FACILITY	WELL						CONTACT	PHONE	REMARKS																										
OPERATIONS	EQUIPMENT	EQUIPMENT ID	RATING	MAX FUEL GALLONS	ACT FUEL GALLONS	RUN TIME	MAXIMUM POUNDS PER HOUR													ESTIMATED TONS																			
							SOx	NOx	VOC	Pb	CO	NH3	TSP	PM10	PM2.5	SOx	NOx	VOC	Pb	CO	NH3																		
														MP	SCFHR	SCFD	HRID	DYR	TSP	PM10	PM2.5	SOx	NOx	VOC	Pb	CO	NH3	TSP	PM10	PM2.5	SOx	NOx	VOC	Pb	CO	NH3			
Drilling														Diesel Engines																									
DRILLING	VESELS - Drilling - Propulsion Engine - Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESELS - Drilling - Propulsion Engine - Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	VESELS - Drilling - Propulsion Engine - Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	VESELS - Diesel Boiler		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	VESELS - Drilling Prime Engine, Auxiliary		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
PIPELINE	VESELS - Pipeline Laying Motor - Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
INSTALLATION	VESELS - Pipeline Burying - Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
FACILITY INSTALLATION														Heavy Lift Vessel/Derrick Barge Diesel																									
PRODUCTION	RECIP-4000hp Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	RECIP-4000hp Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	VESELS - Shuttle Tankers		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	VESELS - Well Stimulation		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Natural Gas Turbine		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Diesel Turbine		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Dual Fuel Turbine		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	RECIP - 2 Cycle Lean Natural Gas		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	RECIP - 4 Cycle Lean Natural Gas		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	RECIP - 4 Cycle Rich Natural Gas		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	Diesel Boiler		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Natural Gas Heater/Boiler/Burner		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
MISC.														BPD																									
STORAGE TANK														SCFHR													COUNT												
COMBUSTION FLARE - no smoke														0													0												
COMBUSTION FLARE - light smoke														0													0												
COMBUSTION FLARE - medium smoke														0													0												
COMBUSTION FLARE - heavy smoke														0													0												
SOLVENT														0													0												
FLUPTIVES														0													0												
SLURRY DEHYDRATOR														0													0												
WASTE INCINERATOR														0													0												
DRILLING	Line Piping		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
WELL TEST	COMBUSTION FLARE - no smoke		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	COMBUSTION FLARE - light smoke		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	COMBUSTION FLARE - medium smoke		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	COMBUSTION FLARE - heavy smoke		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
ALASKA-SPECIFIC SOURCES														MW													HRID			DYR									
VESELS - Ice Management Diesel														0													0			0									
2020 Facility Total Emissions														0.00													0.00			0.00									
EXEMPTION CALCULATION														DISTANCE FROM LAND IN MILES													0.0			0.00									
DRILLING	VESELS - Crew Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	VESELS - Supply Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	VESELS - Tug Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
PIPELINE	VESELS - Support Diesel, Laying		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
INSTALLATION	VESELS - Support Diesel, Burying		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	VESELS - Crew Diesel	</																																					

AIR EMISSIONS CALCULATIONS - 2ND YEAR

COMPANY	AREA	BLOCK	LEASE	FACILITY	WELL	CONTACT	PHONE	REMARKS																			
OPERATIONS	EQUIPMENT	EQUIPMENT ID	RATING	MAX FUEL GALLONS	ACT FUEL GALLONS	RUN TIME	MAXIMUM POUNDS PER HOUR											ESTIMATED TONS									
							HF SCFHR	SCFD	HRID	DYR	TSP	PM10	PM2.5	SOx	NOx	VOC	Pb	CO	NH3	TSP	PM10	PM2.5	SOx	NOx	VOC	Pb	CO
<p>Drilling</p> <p>VESELS Drilling - Propulsion Engine - Diesel VESELS Drilling - Propulsion Engine - Diesel VESELS Drilling - Propulsion Engine - Diesel VESELS - Diesel Boiler VESELS - Drilling Prime Engine, Auxiliary</p>																											
<p>Pipeline</p> <p>VESELS - Pipeline Laying Motor - Diesel VESELS - Pipeline Burying - Diesel</p>																											
<p>Facility Installation</p> <p>VESELS - Heavy Lift Vessel/Derrick Barge Diesel</p>																											
<p>Production</p> <p>RECIP-400hp Diesel RECIP-400hp Diesel VESELS - Shuttle Tankers VESELS - Well Stimulation Natural Gas Turbine Diesel Turbine Dual Fuel Turbine RECIP - 2 Cycle Lean Natural Gas RECIP - 4 Cycle Lean Natural Gas RECIP - 4 Cycle Rich Natural Gas Diesel Boiler Natural Gas Heater/Boiler/Burner</p>																											
<p>MISC.</p> <p>STORAGE TANK COMBUSTION FLARE - no smoke COMBUSTION FLARE - light smoke COMBUSTION FLARE - medium smoke COMBUSTION FLARE - heavy smoke SOLVENT FLUPTIVES SLURRY DEHYDRATOR WASTE INCINERATOR</p>																											
<p>Drilling</p> <p>Drilling - no smoke</p>																											
<p>Well Test</p> <p>COMBUSTION FLARE - light smoke COMBUSTION FLARE - medium smoke COMBUSTION FLARE - heavy smoke</p>																											
<p>Alaska-Specific Sources</p> <p>VESELS VESELS - Ice Management Diesel</p>																											
<p>2022 Facility Total Emissions</p>																											
<p>Exemption Calculation</p> <p>0.0 DISTANCE FROM LAND IN MILES</p>																											
<p>Drilling</p> <p>VESELS - Crew Diesel VESELS - Supply Diesel VESELS - Tug Diesel</p>																											
<p>Pipeline</p> <p>VESELS - Support Diesel, Laying VESELS - Crew Diesel</p>																											
<p>Facility Installation</p> <p>VESELS - Material Top Diesel VESELS - Crew Diesel VESELS - Supply Diesel</p>																											
<p>Production</p> <p>On-ice Equipment Man Camp - Operation (maximum people per day) VESELS VESELS - Loader On-ice - Other Construction Equipment On-ice - Other Survey Equipment On-ice - Tractor On-ice - Truck (for gravel island) On-ice - Truck (for surveys) Man Camp - Operation VESELS - Helicopter Diesel</p>																											
<p>2022 Man-Camp Total Emissions</p>																											

AIR EMISSIONS CALCULATIONS - 5TH YEAR

COMPANY	AREA	BLOCK	LEASE	FACILITY	WELL	CONTACT	PHONE	REMARKS																			
OPERATIONS	EQUIPMENT	EQUIPMENT ID	RATING	MAX FUEL GALLONS	ACT FUEL GALLONS	RUN TIME	MAXIMUM POUNDS PER HOUR												ESTIMATED TONS								
							HF SCFHR	SCFD	HRID	DYR	TSP	PM10	PM2.5	SOx	NOx	VOC	Pb	CO	NH3	TSP	PM10	PM2.5	SOx	NOx	VOC	Pb	CO
<p>DRILLING</p> <p>VESELS Drilling - Propulsion Engine - Diesel VESELS Drilling - Propulsion Engine - Diesel VESELS Drilling - Propulsion Engine - Diesel VESELS - Diesel Boiler VESELS - Drilling Prime Engine, Auxiliary</p>																											
<p>PIPELINE</p> <p>VESELS - Pipeline Laying - Diesel VESELS - Pipeline Burying - Diesel</p>																											
<p>FACILITY INSTALLATION</p> <p>VESELS - Heavy Lift Vessel/Derrick Barge Diesel</p>																											
<p>PRODUCTION</p> <p>RECIP-4500hp Diesel RECIP-4500hp Diesel VESELS - Shuttle Tankers VESELS - Well Stimulation Natural Gas Turbine Diesel Turbine Dual Fuel Turbine RECIP - 2 Cycle Lean Natural Gas RECIP - 4 Cycle Lean Natural Gas RECIP - 4 Cycle Rich Natural Gas Diesel Boiler Natural Gas Heater/Boiler/Burner</p>																											
<p>MISC.</p> <p>STORAGE TANK COMBUSTION FLARE - no smoke COMBUSTION FLARE - light smoke COMBUSTION FLARE - medium smoke COMBUSTION FLARE - heavy smoke SOLVENT FLUPTIVES SLURRY DEHYDRATOR WASTE INCINERATOR</p>																											
<p>DRILLING</p> <p>Well Fracking</p>																											
<p>WELL TEST</p> <p>COMBUSTION FLARE - no smoke COMBUSTION FLARE - light smoke COMBUSTION FLARE - medium smoke COMBUSTION FLARE - heavy smoke</p>																											
<p>ALASKA-SPECIFIC SOURCES</p> <p>VESELS VESELS - Ice Management Diesel</p>																											
<p>2020 Facility Total Emissions</p>																											
<p>EXEMPTION CALCULATION</p> <p>DISTANCE FROM LAND IN MILES</p>																											
<p>DRILLING</p> <p>VESELS - Crew Diesel VESELS - Supply Diesel VESELS - Tug Diesel</p>																											
<p>PIPELINE</p> <p>VESELS - Support Diesel, Laying VESELS - Support Diesel, Burying</p>																											
<p>INSTALLATION</p> <p>VESELS - Crew Diesel VESELS - Supply Diesel</p>																											
<p>FACILITY</p> <p>VESELS - Material Top Diesel VESELS - Crew Diesel</p>																											
<p>INSTALLATION</p> <p>VESELS - Supply Diesel VESELS - Support Diesel</p>																											
<p>PRODUCTION</p> <p>On-ice Equipment</p>																											
<p>ALASKA-SPECIFIC SOURCES</p> <p>Max Camp - Operation (maximum people per day) VESELS On-ice - Loader On-ice - Other Construction Equipment On-ice - Other Survey Equipment On-ice - Tractor On-ice - Truck (for gravel island) On-ice - Truck (for surveys) Max Camp - Operation VESELS - Helicopter Diesel</p>																											
<p>2020 New Facility Total Emissions</p>																											

AIR EMISSIONS CALCULATIONS

COMPANY	AREA	BLOCK	LEASE	FACILITY	WELL				
0									
Year	Facility Emitted Substance								
	TSP	PM10	PM2.5	SOx	NOx	VOC	Pb	CO	NH3
2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2023	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2024	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2025	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2026	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2027	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2028	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2029	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allowable	0.00			0.00	0.00	0.00		0.00	