

	ALASKA PIPELINE PROJECT DRAFT RESOURCE REPORT 9 AIR AND NOISE QUALITY APPENDIX 9A	USAG-UR-SGREG-000007 DECEMBER 2011 REVISION 0
	FERC Docket No. PF09-11-000	

TABLE 9A-20 GTP OPERATIONAL EMISSIONS: GTP STATIONARY SOURCES AND EMISSION FACTORS

Table 9A-20

GTP Operational Emissions: GTP Stationary Sources and Emission Factors

Operations Equipment	NOx	Units	Citation	CO	Units	Citation	SOx	Units	Citation	PM10	Units	Citation	PM2.5	Units	Citation	VOC	Units	Citation	CO2	Units	Citation	CH4	Units	Citation	N2O	Units	Citation
Train 1 - Sales Gas Compressor Turbine (GE 7EA)	25.00	ppm	Vendor	15.00	ppm	Vendor	19.13	lb/hr	Fuel Mass Balance	8.82	lb/hr	AP-42	8.82	lb/hr	AP-42	2.54	lb/hr	Vendor	147,107	lb/hr	Vendor	0.00860	lb/MMBtu	AP-42	0.00300	lb/MMBtu	AP-42
Train 2 - Sales Gas Compressor Turbine (GE 7EA)	25.00	ppm	Vendor	15.00	ppm	Vendor	19.13	lb/hr	Fuel Mass Balance	8.82	lb/hr	AP-42	8.82	lb/hr	AP-42	2.54	lb/hr	Vendor	147,107	lb/hr	Vendor	0.00860	lb/MMBtu	AP-42	0.00300	lb/MMBtu	AP-42
Train 3 - Sales Gas Compressor Turbine (GE 7EA)	25.00	ppm	Vendor	15.00	ppm	Vendor	19.13	lb/hr	Fuel Mass Balance	8.82	lb/hr	AP-42	8.82	lb/hr	AP-42	2.54	lb/hr	Vendor	147,107	lb/hr	Vendor	0.00860	lb/MMBtu	AP-42	0.00300	lb/MMBtu	AP-42
Train 4 - Sales Gas Compressor Turbine (GE 7EA)	25.00	ppm	Vendor	15.00	ppm	Vendor	19.13	lb/hr	Fuel Mass Balance	8.82	lb/hr	AP-42	8.82	lb/hr	AP-42	2.54	lb/hr	Vendor	147,107	lb/hr	Vendor	0.00860	lb/MMBtu	AP-42	0.00300	lb/MMBtu	AP-42
Train 1 - CO2 Compressor Turbine	25.00	ppm	Vendor	15.00	ppm	Vendor	7.17	lb/hr	Fuel Mass Balance	3.1	lb/hr	AP-42	3.1	lb/hr	AP-42	1.00	lb/hr	Vendor	50,858	lb/hr	Vendor	0.00860	lb/MMBtu	AP-42	0.00300	lb/MMBtu	AP-42
Train 2 - CO2 Compressor Turbine	25.00	ppm	Vendor	15.00	ppm	Vendor	7.17	lb/hr	Fuel Mass Balance	3.1	lb/hr	AP-42	3.1	lb/hr	AP-42	1.00	lb/hr	Vendor	50,858	lb/hr	Vendor	0.00860	lb/MMBtu	AP-42	0.00300	lb/MMBtu	AP-42
Train 3 - CO2 Compressor Turbine	25.00	ppm	Vendor	15.00	ppm	Vendor	7.17	lb/hr	Fuel Mass Balance	3.1	lb/hr	AP-42	3.1	lb/hr	AP-42	1.00	lb/hr	Vendor	50,858	lb/hr	Vendor	0.00860	lb/MMBtu	AP-42	0.00300	lb/MMBtu	AP-42
Train 4 - CO2 Compressor Turbine	25.00	ppm	Vendor	15.00	ppm	Vendor	7.17	lb/hr	Fuel Mass Balance	3.1	lb/hr	AP-42	3.1	lb/hr	AP-42	1.00	lb/hr	Vendor	50,858	lb/hr	Vendor	0.00860	lb/MMBtu	AP-42	0.00300	lb/MMBtu	AP-42
Power Generator Turbine (GE LM6000)	15.00	ppm	Vendor	25.00	ppm	Vendor	5.95	lb/hr	Fuel Mass Balance	2.67	lb/hr	AP-42	2.67	lb/hr	AP-42	1.65	lb/hr	Vendor	53,679	lb/hr	Vendor	0.00860	lb/MMBtu	AP-42	0.00300	lb/MMBtu	AP-42
Power Generator Turbine (GE LM6000)	15.00	ppm	Vendor	25.00	ppm	Vendor	5.95	lb/hr	Fuel Mass Balance	2.67	lb/hr	AP-42	2.67	lb/hr	AP-42	1.65	lb/hr	Vendor	53,679	lb/hr	Vendor	0.00860	lb/MMBtu	AP-42	0.00300	lb/MMBtu	AP-42
Power Generator Turbine (GE LM6000)	15.00	ppm	Vendor	25.00	ppm	Vendor	5.95	lb/hr	Fuel Mass Balance	2.67	lb/hr	AP-42	2.67	lb/hr	AP-42	1.65	lb/hr	Vendor	53,679	lb/hr	Vendor	0.00860	lb/MMBtu	AP-42	0.00300	lb/MMBtu	AP-42
Power Generator Turbine (GE LM6000)	15.00	ppm	Vendor	25.00	ppm	Vendor	5.95	lb/hr	Fuel Mass Balance	2.67	lb/hr	AP-42	2.67	lb/hr	AP-42	1.65	lb/hr	Vendor	53,679	lb/hr	Vendor	0.00860	lb/MMBtu	AP-42	0.00300	lb/MMBtu	AP-42
Power Generator Turbine (GE LM6000)	15.00	ppm	Vendor	25.00	ppm	Vendor	5.95	lb/hr	Fuel Mass Balance	2.67	lb/hr	AP-42	2.67	lb/hr	AP-42	1.65	lb/hr	Vendor	53,679	lb/hr	Vendor	0.00860	lb/MMBtu	AP-42	0.00300	lb/MMBtu	AP-42
Power Generator Turbine (GE LM6000)	15.00	ppm	Vendor	25.00	ppm	Vendor	4.91	lb/hr	Fuel Mass Balance	2.20	lb/hr	AP-42	2.20	lb/hr	AP-42	1.40	lb/hr	Vendor	44,278	lb/hr	Vendor	0.00860	lb/MMBtu	AP-42	0.00300	lb/MMBtu	AP-42
Essential Generator Turbine (PGT-25) - test	25.00	ppm	Vendor	25.00	ppm	Vendor	3.33	lb/hr	Fuel Mass Balance	1.49	lb/hr	AP-42	1.49	lb/hr	AP-42	0.09	lb/hr	Vendor	36,434	lb/hr	Vendor	0.00860	lb/MMBtu	AP-42	0.00300	lb/MMBtu	AP-42
Essential Generator Turbine (PGT-25) - test	25.00	ppm	Vendor	25.00	ppm	Vendor	3.33	lb/hr	Fuel Mass Balance	1.49	lb/hr	AP-42	1.49	lb/hr	AP-42	0.09	lb/hr	Vendor	36,434	lb/hr	Vendor	0.00860	lb/MMBtu	AP-42	0.00300	lb/MMBtu	AP-42
Essential Generator Turbine (PGT-25) - test	25.00	ppm	Vendor	25.00	ppm	Vendor	3.33	lb/hr	Fuel Mass Balance	1.49	lb/hr	AP-42	1.49	lb/hr	AP-42	0.09	lb/hr	Vendor	36,434	lb/hr	Vendor	0.00860	lb/MMBtu	AP-42	0.00300	lb/MMBtu	AP-42
Emergency Diesel Generator - test	2.99	g/KWh	Vendor	0.36	g/KWh	Vendor	0.004	lb/hr	Fuel Mass Balance	0.08	g/KWh	Vendor	0.08	g/KWh	Vendor	0.13	g/KWh	Vendor	431	lb/hr	Fuel Mass Balance	0.00005	lb/hp-hr	CCAR	0.00002	lb/hp-hr	CCAR
Essential Diesel Generator - test	9.54	g/KWh	Vendor	0.46	g/KWh	Vendor	0.062	lb/hr	Fuel Mass Balance	0.24	g/KWh	Vendor	0.24	g/KWh	Vendor	1.50	g/KWh	Vendor	49,051	lb/hr	Fuel Mass Balance	0.00005	lb/hp-hr	CCAR	0.00002	lb/hp-hr	CCAR
Heat Medium Auxiliary Heater	33	ppm	Vendor	63	ppm	Vendor	3.21	lb/hr	Fuel Mass Balance	0.005	lb/MMBtu HHV	Vendor	0.005	lb/MMBtu HHV	Vendor	0.06	lb UHC/MMBtu HHV	Vendor	118	lb/MMBtu	AP42	2.30000	lb/MMscf	AP-42	0.64000	lb/MMscf	AP-42
Heat Medium Auxiliary Heater	33	ppm	Vendor	63	ppm	Vendor	3.21	lb/hr	Fuel Mass Balance	0.005	lb/MMBtu HHV	Vendor	0.005	lb/MMBtu HHV	Vendor	0.06	lb UHC/MMBtu HHV	Vendor	118	lb/MMBtu	AP42	2.30000	lb/MMscf	AP-42	0.64000	lb/MMscf	AP-42
Heat Medium Auxiliary Heater	33	ppm	Vendor	63	ppm	Vendor	3.21	lb/hr	Fuel Mass Balance	0.005	lb/MMBtu HHV	Vendor	0.005	lb/MMBtu HHV	Vendor	0.06	lb UHC/MMBtu HHV	Vendor	118	lb/MMBtu	AP42	2.30000	lb/MMscf	AP-42	0.64000	lb/MMscf	AP-42
Diesel Air Compressor - test	25.33	lb/hr	Vendor	1.22	lb/hr	Vendor	0.01	lb/hr	Vendor	0.64	lb/hr	Vendor	0.64	lb/hr	Vendor	3.98	lb/hr	Vendor	1,733	lb/hr	Vendor	0.00005	lb/hp-hr	CCAR	0.00002	lb/hp-hr	CCAR
Main Firewater Pump (Diesel Engine) - test	7.90	lb/hr	Vendor	1.70	lb/hr	Vendor	0.03	lb/hr	Vendor	0.56	lb/hr	Vendor	0.56	lb/hr	Vendor	0.63	lb/hr	Vendor	481	lb/hr	Vendor	0.00005	lb/hp-hr	CCAR	0.00002	lb/hp-hr	CCAR
Flares and Vents (Pilot/Purge)	0.068	lb/MMBtu	AP-42	0.37	lb/MMBtu	AP-42	0.72	lb/hr	Fuel Mass Balance	40.00	lb/MMBtu	AP-42	40.00	lb/MMBtu	AP-42	0.06	lb/MMBtu	AP-42	2,660	lb/hr	Fuel Mass Balance	38.1677	Fuel Mass Balance - INGAA GHG Guideline	AP-42	0.01111	lb/hr	Fuel Mass Balance - INGAA GHG Guideline

Note: Heat Medium Auxiliary Heaters do not operate in normal conditions. They are used only in early operation during construction
6th GE LM6000 turbine operates only in July

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TABLE 9A-21 GTP OPERATIONAL EMISSIONS: GTP MOBILE SOURCES AND EMISSION FACTORS

FERC Docket No. PF09-11-000

Table 9A-21

GTP Operational Emissions: GTP Mobile Sources and Emission Factors																				
Criteria and GHG Emission Factors											Fugitive PM Brakewear and tirewear		HAPs Emission Factors							
	NOx	CO	SOx	PM10	PM2.5	VOC	CO2	CH4	N2O		PM10	PM2.5	lb/hr 1,3-Butadiene	Acetaldehyde	Acrolein	Benzene	Formaldehyde	Naphthalene	PAH	Toluene
																				Xylenes
Nonroad Equipment																				
Air Compressor -900CFM (Sullair, caterpillar C-9 ATAAC engine)	0.244019	0.050708	0.000356002	0.01444	0.014006	0.019295	42.65586	0.015291	0.006855				0.00008211	0.0016107	0.00019425	0.0019593	0.002478	0.00017808	0.0003528	0.0008589
Dump Truck - Mack B70 (10 tires, 12 gph, 6 cylinders)	0.97824	0.213032	0.001687573	0.038886	0.03772	0.043956	227.8914	0.00413	0.000195	0.00523792	0.00523792		0.000230881	0.001090085	0.000132453	0.000397398	0.002960001	5.00758E-05	0	0
Motor Grader - Cat 16G (6 tires, 7gph, 6-cylinder engine)	0.294389	0.100361	0.000584877	0.028045	0.027203	0.02636	73.32697	0.012743	0.005712				0.000068425	0.00134225	0.000161875	0.00163275	0.002065	0.0001484	0.000294	0.00071575
Backhoe (CAT 966F)	0.058137	0.030868	6.94531E-05	0.006205	0.006019	0.008882	8.0956	0.011214	0.005027				0.000060214	0.00118118	0.00014245	0.00143682	0.0018172	0.000130592	0.00025872	0.00062986
Crane (small) - 50/60 ton, Grove, RT700E (Cummins QSB engine)	0.201717	0.042773	0.00033467	0.012782	0.012399	0.0166	40.72022	0.012233	0.005484				0.000065688	0.00128856	0.0001554	0.00156744	0.0019824	0.000142464	0.00028224	0.00068712
Crane (large) - 200 ton, Manitowoc 888 (Cummins M11 engine)	0.201717	0.042773	0.00033467	0.012782	0.012399	0.0166	40.72022	0.016821	0.00754				0.000090321	0.00177177	0.000213675	0.00215523	0.0027258	0.000195888	0.00038808	0.00094479
Crane (large) - 90 ton, Grove 890E (Cummins QSB engine)	0.201717	0.042773	0.00033467	0.012782	0.012399	0.0166	40.72022	0.014017	0.006284				7.52675E-05	0.001476475	0.000178063	0.001796025	0.0002715	0.00016324	0.000787325	0.000548625
Dozer - Cat D9, 475 HP	0.66146	0.261061	0.001033353	0.048762	0.047299	0.04329	124.069	0.024211	0.010853				0.000130008	0.002550275	0.000307563	0.003102225	0.0039235	0.00028196	0.0005586	0.001359925
Boom Truck (National Crane 800D)	0.309787	0.162908	0.00063577	0.012863	0.012477	0.036058	87.48909	0.007781	0.000233	0.00545356	0.00545356		0.000123929	0.001010005	0.000122728	0.000368221	0.002742671	1.65646E-05	0	0
Loader - Cat 988H, 501HP	0.747276	0.300814	0.001020819	0.051693	0.050142	0.047357	120.6351	0.025537	0.011447				0.000137124	0.002689869	0.000324398	0.003272031	0.00413826	0.000297394	0.000589176	0.001434363
Groundthaw Heater (E3000)	0.071661	0.017915	0.000757815	0.011824	0.011718	0.001218	80.17765	0.007697	0.00345				4.13287E-05	0.000810719	9.77725E-05	0.000986181	0.00124726	8.96336E-05	0.000177576	0.000432313
Trioga Heaters (600,000 Btu/hr heater)	0.112	0.028	0.0011844	0.01848	0.018314	0.001904	125.3108	0.012029	0.005392				6.45932E-05	0.001267084	0.00015281	0.001541316	0.00194936	0.00014009	0.000277536	0.000675668
Light Plants (Genie TML-4000)	0.022641	0.012062	2.59906E-05	0.001847	0.001791	0.002678	2.827375	0.000765	0.000343				4.1055E-06	0.000080535	9.7125E-06	0.000097965	0.0001239	0.000008904	0.00001764	0.000042945
Forklift - 15 Ton (Cat P30000)	0.138437	0.057927	0.000332104	0.020198	0.019592	0.013808	43.24558	0.007544	0.003382				4.05076E-05	0.000794612	0.00009563	0.000966588	0.00122448	8.78528E-05	0.000174048	0.00029526
Forklift - Cat (2P5000)	0.12024	0.070457	0.000189321	0.009296	0.009017	0.007116	23.23107	0.003109	0.001394				1.66957E-05	0.000327509	3.94975E-05	0.000398391	0.00050386	3.62096E-05	0.000071736	0.000174643
Snowblower/ Grader - 16' (Kodiak Northwest)	0.747276	0.300814	0.001020819	0.051693	0.050142	0.047357	120.6351	0.025486	0.011425				0.00013685	0.0026845	0.00032375	0.0032655	0.0002968	0.000588	0.0014315	0.0009975
Generator - 100 kW	0.202963	0.062597	0.000199693	0.013528	0.013122	0.018094	22.72457	0.006881	0.003085				3.69495E-05	0.000724815	8.74125E-05	0.000881685	0.0011151	0.000080136	0.00015876	0.000386505
Generator - 50 kW	0.099234	0.053408	0.000102593	0.009544	0.009258	0.01121	11.50269	0.003415	0.001531				1.83379E-05	0.000359723	4.33825E-05	0.000437577	0.00055342	3.97712E-05	0.000078792	0.000191821
Manlifts - 80' Genie (280/60)	0.027919	0.027045	2.92791E-05	0.004087	0.003974	0.005872	3.28059	0.003976	0.001782				2.13486E-05	0.000418782	0.000050505	0.000509418	0.00064428	4.63008E-05	0.000091728	0.000223314
Manlift - 45 Genie (Z45, Perkins 404D-22.4 cylinder engine)	0.023202	0.027249	2.47547E-05	0.004032	0.003911	0.00766	2.774088	0.0026	0.001165				1.39587E-05	0.000273881	3.30275E-05	0.000333081	0.00042126	3.02736E-05	0.000059976	0.000146013
Zoom Boom - Telehandler (used on warehouse), GTH-1056	0.180979	0.16298	0.000281083	0.02467	0.023539	0.016895	33.37906	0.006371	0.002856				3.42125E-05	0.000671125	8.09375E-05	0.000816375	0.0010325	0.0000742	0.000147	0.000357875
Tractor Trailer	0.97824	0.213032	0.001687573	0.038886	0.03772	0.043956	227.8914	0.00413	0.000195	0.00523792	0.00523792		0.000230881	0.001090085	0.000132453	0.000397398	0.002960001	5.00758E-05	0	0
Flatbed Truck (2 ton) (approx. F-450)	0.309787	0.162908	0.00063577	0.012863	0.012477	0.036058	87.48909	0.007781	0.000233	0.00545356	0.00545356		0.000213929	0.001010005	0.000122728	0.000368221	0.002742671	1.65646E-05	0	0
Fuel Truck (Kenworth T800)	0.97824	0.213032	0.001687573	0.038886	0.03772	0.043956	227.8914	0.00413	0.000195	0.00523792	0.00523792		0.000230881	0.001090085	0.000132453	0.000397398	0.002960001	5.00758E-05	0	0
Bobcat (2500 lb capacity, 75 hp, Kubota S250)	0.145126	0.103886	0.000201023	0.013459	0.013055	0.011746	23.18732	0.003823	0.001714				2.05275E-05	0.000402675	4.85625E-05	0.000489625	0.0006195	0.00004452	0.0000882	0.000214725
Welding Machines (in shop) (Lincoln Electric)	0.014118	0.013697	1.6193E-05	0.002225	0.002158	0.00348	1.829641	0.001835	0.000823				9.8532E-06	0.000193284	0.00002331	0.000235116	0.00029736	2.13696E-05	0.000042336	0.000103068
Water Truck - dust control (West Mark DST-S4000)	0.309787	0.162908	0.00063577	0.012863	0.012477	0.036058	87.48909	0.007781	0.000233	0.00545356	0.00545356		0.000213929	0.001010005	0.000122728	0.000368221	0.002742671	1.65646E-05	0	0
Grey and Black Water Truck (Kenworth T800)	0.97824	0.213032	0.001687573	0.038886	0.03772	0.043956	227.8914	0.00413	0.000195	0.00523792	0.00523792		0.000230881	0.001090085	0.000132453	0.000397398	0.002960001	5.00758E-05	0	0
Solid Waste Truck - Refuse (Kenworth T800)	0.781959	0.217863	0.00113231	0.034701	0.033661	0.043305	152.0793	0.004363	0.000207	0.00692013	0.00692013		0.000241719	0.001141257	0.000138671	0.000416053	0.003098947	4.46873E-05	0	0
Onroad Vehicles																				
Passenger Van, 16 person (Ford E-350 series, or GM chevy 3500)	0.293149	0.15753	0.000598102	0.012763	0.012381	0.035819	81.90009	0.00408	0.000195	0.00544257	0.00544257		0.000259733	0.001226304	0.00014901	0.000447052	0.003329735	6.4023E-05	0	0
Passenger Bus, 20 person (Blue Bird; 6.8 L engine)	0.293149	0.15753	0.000598102	0.012763	0.012381	0.035819	81.90009	0.00408	0.000195	0.00544257	0.00544257		0.000259733	0.001226304	0.00014901	0.000447052	0.003329735	6.4023E-05	0	0
Staff & Security Truck (3/4 ton crew cab)	0.256873	0.158363	0.000449808	0.011048	0.010717	0.039564	60.24368	0.010344	0.00023	0.00182279	0.00182279		0.000242574	0.00145291	0.000139167	0.000417519	0.003109758	1.42278E-05	0	0
Pickup Truck - Standard Bed (V8 engine)	1.379952	0.458073	0.001668366	0.064241	0.062316	0.097759	219.9991	0.008948	0.000243	0.00972095	0.00972095		0.000315866	0.001491331	0.000181215	0.000543669	0.00404936	1.87044E-05	0	0
Pickup Truck - Service Bed (Silverado HD2500)	1.379952	0.458073	0.001668366	0.064241	0.062316	0.097759	219.9991	0.008948	0.000243	0.00972095	0.00972095		0.000315866	0.001491331	0.000181215	0.000543669	0.00404936	1.87044E-05	0	0
Ambulance (GM ambulance)	0.256873	0.158363	0.000449808	0.011048	0.010717	0.039564	60.24368	0.010344	0.00023	0.00182279	0.00182279		0.000242574	0.00145291	0.000139167	0.000417519	0.003109758	1.42278E-05	0	0
General Materials Delivery Truck for general construction	0.97824	0.213032	0.001687573	0.038886	0.03772	0.043956	227.8914	0.00413	0.000195	0.00523792	0.00523792		0.000230881	0.001090085	0.000132453	0.000397398	0.002960001	5.00758E-05	0	0
Delivery Truck- Food	0.97824	0.213032	0.001687573	0.038886	0.03772	0.043956	227.8914	0.00413	0.000195	0.00523792	0.00523792		0.000230881	0.001090085	0.000132453	0.000397398	0.002960001	5.00758E-05	0	0
Delivery Truck - Chemicals	0.97824	0.213032	0.001687573	0.038886	0.03772	0.043956	227.8914	0.00413	0.000195	0.00523792	0.00523792		0.000230881	0.001090085	0.000132453	0.000397398	0.002960001	5.00758E-05	0	0
Delivery Truck - Misc. Parts	0.97824	0.213032	0.001687573	0.038886	0.03772	0.043956	227.8914	0.00413	0.000195	0.00523792	0.00523792		0.000230881	0.001090085	0.000132453	0.000397398	0.002960001	5.00758E-05	0	

	ALASKA PIPELINE PROJECT DRAFT RESOURCE REPORT 9 AIR AND NOISE QUALITY APPENDIX 9A	USAG-UR-SGREG-000007 DECEMBER 2011 REVISION 0
	FERC Docket No. PF09-11-000	

TABLE 9A-22 GTP OPERATIONAL EMISSIONS: GTP OPERATIONAL EMISSIONS INVENTORY (UNIT: LB PER HOUR)

GTP Operational Emissions: GTP Operational Emissions Inventory (unit: lb per hour)

Operation Equipment	HP	Fuel	# Eqt	Hrs/Eqt/Mon th	Criteria Pollutant Emissions (lb/hr)						Greenhouse Gas Emissions (lb/hr)						Major Hazardous Air Pollutant Emissions (lb/hr)																
					NO _x	CO	SO _x	PM ₁₀	PM _{2.5}	VOC	CO ₂	CH ₄	N ₂ O	1,3-Butadiene	2,2,4-trimethylpentane	Acetaldehyde	Acrolein	Benzene	Dibenzofuran	Dichlorobenzene	Ethylbenzene	Formaldehyde	Hexane	Isopropylbenzene	Methanol	Naphthalene	PAH	POM	Propylene oxide	Toluene	Xylenes		
Train 1 - Sales Gas Compressor Turbine (GE 7EA)	115000	S	1	C	126.16	42.52	19.13	8.82	8.82	2.54	147107.00	13.37	4.66	6.68E-04	0.00E+00	6.22E-02	9.95E-03	1.87E-02	0.00E+00	0.00E+00	4.97E-02	1.10E+00	0.00E+00	0.00E+00	0.00E+00	2.02E-03	3.42E-03	0.00E+00	4.51E-02	2.02E-01	9.95E-02		
Train 2 - Sales Gas Compressor Turbine (GE 7EA)	115000	S	1	C	126.16	42.52	19.13	8.82	8.82	2.54	147107.00	13.37	4.66	6.68E-04	0.00E+00	6.22E-02	9.95E-03	1.87E-02	0.00E+00	0.00E+00	4.97E-02	1.10E+00	0.00E+00	0.00E+00	0.00E+00	2.02E-03	3.42E-03	0.00E+00	4.51E-02	2.02E-01	9.95E-02		
Train 3 - Sales Gas Compressor Turbine (GE 7EA)	115000	S	1	C	126.16	42.52	19.13	8.82	8.82	2.54	147107.00	13.37	4.66	6.68E-04	0.00E+00	6.22E-02	9.95E-03	1.87E-02	0.00E+00	0.00E+00	4.97E-02	1.10E+00	0.00E+00	0.00E+00	0.00E+00	2.02E-03	3.42E-03	0.00E+00	4.51E-02	2.02E-01	9.95E-02		
Train 4 - Sales Gas Compressor Turbine (GE 7EA)	115000	S	1	C	126.16	42.52	19.13	8.82	8.82	2.54	147107.00	13.37	4.66	6.68E-04	0.00E+00	6.22E-02	9.95E-03	1.87E-02	0.00E+00	0.00E+00	4.97E-02	1.10E+00	0.00E+00	0.00E+00	0.00E+00	2.02E-03	3.42E-03	0.00E+00	4.51E-02	2.02E-01	9.95E-02		
Train 1 - CO ₂ Compressor Turbine	58000	S	1	C	49.00	17.00	7.17	3.10	3.10	1.00	50858.00	4.91	1.71	2.46E-04	0.00E+00	2.28E-02	3.66E-03	6.85E-03	0.00E+00	0.00E+00	1.83E-02	4.06E-01	0.00E+00	0.00E+00	0.00E+00	7.43E-04	1.26E-03	0.00E+00	1.66E-02	7.43E-02	3.66E-02		
Train 2 - CO ₂ Compressor Turbine	58000	S	1	C	49.00	17.00	7.17	3.10	3.10	1.00	50858.00	4.91	1.71	2.46E-04	0.00E+00	2.28E-02	3.66E-03	6.85E-03	0.00E+00	0.00E+00	1.83E-02	4.06E-01	0.00E+00	0.00E+00	0.00E+00	7.43E-04	1.26E-03	0.00E+00	1.66E-02	7.43E-02	3.66E-02		
Train 3 - CO ₂ Compressor Turbine	58000	S	1	C	49.00	17.00	7.17	3.10	3.10	1.00	50858.00	4.91	1.71	2.46E-04	0.00E+00	2.28E-02	3.66E-03	6.85E-03	0.00E+00	0.00E+00	1.83E-02	4.06E-01	0.00E+00	0.00E+00	0.00E+00	7.43E-04	1.26E-03	0.00E+00	1.66E-02	7.43E-02	3.66E-02		
Train 4 - CO ₂ Compressor Turbine	58000	S	1	C	49.00	17.00	7.17	3.10	3.10	1.00	50858.00	4.91	1.71	2.46E-04	0.00E+00	2.28E-02	3.66E-03	6.85E-03	0.00E+00	0.00E+00	1.83E-02	4.06E-01	0.00E+00	0.00E+00	0.00E+00	7.43E-04	1.26E-03	0.00E+00	1.66E-02	7.43E-02	3.66E-02		
Power Generator Turbine (GE LM6000)		S	1	C	24.00	24.60	5.95	2.67	2.67	1.65	53679.00	4.08	1.42	2.04E-04	0.00E+00	1.90E-02	3.04E-03	5.70E-03	0.00E+00	0.00E+00	1.52E-02	3.37E-01	0.00E+00	0.00E+00	0.00E+00	6.17E-04	1.04E-03	0.00E+00	1.38E-02	6.17E-02	3.04E-02		
Power Generator Turbine (GE LM6000)		S	1	C	24.00	24.60	5.95	2.67	2.67	1.65	53679.00	4.08	1.42	2.04E-04	0.00E+00	1.90E-02	3.04E-03	5.70E-03	0.00E+00	0.00E+00	1.52E-02	3.37E-01	0.00E+00	0.00E+00	0.00E+00	6.17E-04	1.04E-03	0.00E+00	1.38E-02	6.17E-02	3.04E-02		
Power Generator Turbine (GE LM6000)		S	1	C	24.00	24.60	5.95	2.67	2.67	1.65	53679.00	4.08	1.42	2.04E-04	0.00E+00	1.90E-02	3.04E-03	5.70E-03	0.00E+00	0.00E+00	1.52E-02	3.37E-01	0.00E+00	0.00E+00	0.00E+00	6.17E-04	1.04E-03	0.00E+00	1.38E-02	6.17E-02	3.04E-02		
Power Generator Turbine (GE LM6000)		S	1	C	24.00	24.60	5.95	2.67	2.67	1.65	53679.00	4.08	1.42	2.04E-04	0.00E+00	1.90E-02	3.04E-03	5.70E-03	0.00E+00	0.00E+00	1.52E-02	3.37E-01	0.00E+00	0.00E+00	0.00E+00	6.17E-04	1.04E-03	0.00E+00	1.38E-02	6.17E-02	3.04E-02		
Power Generator Turbine (GE LM6000)		S	1	C	24.00	24.60	5.95	2.67	2.67	1.65	53679.00	4.08	1.42	2.04E-04	0.00E+00	1.90E-02	3.04E-03	5.70E-03	0.00E+00	0.00E+00	1.52E-02	3.37E-01	0.00E+00	0.00E+00	0.00E+00	6.17E-04	1.04E-03	0.00E+00	1.38E-02	6.17E-02	3.04E-02		
Power Generator Turbine (GE LM6000)		S	1	C ²	20.00	20.28	4.91	2.20	2.20	1.40	44278.00	3.37	1.17	1.68E-04	0.00E+00	1.57E-02	2.50E-03	4.70E-03	0.00E+00	0.00E+00	1.25E-02	2.78E-01	0.00E+00	0.00E+00	0.00E+00	5.09E-04	8.61E-04	0.00E+00	1.13E-02	5.09E-02	2.50E-02		
Essential Generator Turbine (PGT-25) - test		S	1	10	23.00	13.76	3.33	1.49	1.49	0.99	36434.00	2.28	0.80	1.14E-04	0.00E+00	1.06E-02	1.70E-03	3.18E-03	0.00E+00	0.00E+00	8.49E-03	1.88E-01	0.00E+00	0.00E+00	0.00E+00	3.45E-04	5.84E-04	0.00E+00	7.70E-03	3.45E-02	1.70E-02		
Essential Generator Turbine (PGT-25) - test		S	1	10	23.00	13.76	3.33	1.49	1.49	0.99	36434.00	2.28	0.80	1.14E-04	0.00E+00	1.06E-02	1.70E-03	3.18E-03	0.00E+00	0.00E+00	8.49E-03	1.88E-01	0.00E+00	0.00E+00	0.00E+00	3.45E-04	5.84E-04	0.00E+00	7.70E-03	3.45E-02	1.70E-02		
Essential Generator Turbine (PGT-25) - test		S	1	10	23.00	13.76	3.33	1.49	1.49	0.99	36434.00	2.28	0.80	1.14E-04	0.00E+00	1.06E-02	1.70E-03	3.18E-03	0.00E+00	0.00E+00	8.49E-03	1.88E-01	0.00E+00	0.00E+00	0.00E+00	3.45E-04	5.84E-04	0.00E+00	7.70E-03	3.45E-02	1.70E-02		
Dormitory Emergency Diesel Generator - test		D	1	5	1.64	0.20	0.00	0.04	0.04	0.07	431.21	0.02	0.01	9.17E-05	0.00E+00	1.80E-03	2.17E-04	2.19E-03	0.00E+00	0.00E+00	0.00E+00	2.77E-03	0.00E+00	0.00E+00	0.00E+00	1.99E-04	3.94E-04	0.00E+00	0.00E+00	9.95E-04	6.68E-04		
Essential Diesel Generator - test		D	1	10	106.20	5.12	0.08	2.67	2.67	1.67	49051.19	0.38	0.15	0.00E+00	0.00E+00	1.20E-03	3.74E-04	3.68E-02	0.00E+00	0.00E+00	0.00E+00	3.74E-03	0.00E+00	0.00E+00	0.00E+00	6.17E-03	1.01E-02	0.00E+00	0.00E+00	1.33E-02	9.16E-03		
Diesel Air Compressor - test	300	D	1	5	25.33	1.22	0.01	0.64	0.64	3.98	1732.62	0.05	0.02	0.00E+00	0.00E+00	1.59E-04	4.86E-05	4.89E-03	0.00E+00	0.00E+00	0.00E+00	4.97E-04	0.00E+00	0.00E+00	0.00E+00	8.19E-04	1.34E-03	0.00E+00	0.00E+00	1.77E-03	1.22E-03		
Main Firewater Pump (Diesel Engine) - test	250	D	1	5	7.90	1.70	0.03	0.56	0.56	0.63	481.34	0.01	0.01	6.84E-05	0.00E+00	1.34E-03	1.62E-04	1.63E-03	0.00E+00	0.00E+00	2.07E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-04	2.94E-04	0.00E+00	0.00E+00	7.16E-04	4.99E-04		
Flares and Vents (Pilot/Purge)		S	1	C	3.33	18.10	0.72	1.33	1.33	3.08	2660.01	39.17	0.01	2.47E-05	0.00E+00	2.29E-03	3.67E-04	6.88E-04	0.00E+00	0.00E+00	1.84E-03	4.07E-02	0.00E+00	0.00E+00	0.00E+00	7.46E-05	1.26E-04	0.00E+00	1.66E-03	7.46E-03	3.67E-03		
TOTAL					1,054.04	448.98	150.66	72.95	72.95	48.58	1,268,191.57	142.33	36.39	5.37E-03	0.00E+00	4.89E-01	7.84E-02	1.91E-01	0.00E+00	0.00E+00	3.88E-01	8.61E+00	0.00E+00	0.00E+00	0.00E+00	2.31E-02	3.87E-02	0.00E+00	3.51E-01	1.59E+00	7.87E-01		
Onroad and Offroad Support Equipment and Vehicles																																	
General Materials Delivery Truck for general construction	400	D	1	10	0.98	0.21	0.00	0.04	0.04	0.04	227.89	0.00	0.00	2.31E-04	0.00E+00	1.09E-03	1.32E-04	3.97E-04	0.00E+00	0.00E+00	0.00E+00	2.96E-03	0.00E+00	0.00E+00	0.00E+00	5.01E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
Delivery Truck- Food	400	D	1	150	0.31	0.16	0.00	0.02	0.02	0.04	87.49	0.01	0.00	2.31E-04	0.00E+00	1.09E-03	1.32E-04	3.97E-04	0.00E+00	0.00E+00	0.00E+00	2.96E-03	0.00E+00	0.00E+00	0.00E+00	5.01E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
Delivery Truck - Chemicals	400	D	18	12	5.58	2.93	0.01	0.34	0.32	0.65	1,574.80	0.14	0.00	4.16E-03	0.00E+00	1.96E-02	2.38E-03	7.15E-03	0.00E+00	0.00E+00	0.00E+00	5.33E-02	0.00E+00	0.00E+00	0.00E+00	9.01E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
Delivery Truck - Misc. Parts	400	D	1	10	0.31	0.16	0.00	0.02	0.02	0.04	87.49	0.01	0.00	2.31E-04	0.00E+00	1.09E-03	1.32E-04	3.97E-04	0.00E+00	0.00E+00	0.00E+00	2.96E-03	0.00E+00	0.00E+00	0.00E+00	5.01E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
Special Maintenance Personnel Truck	400	D	1	20	0.98	0.21	0.00	0.04	0.04	0.04	227.89	0.00	0.00	2.31E-04	0.00E+00	1.09E-03	1.32E-04	3.97E-04	0.00E+00	0.00E+00	0.00E+00	2.96E-03	0.00E+00	0.00E+00	0.00E+00	5.01E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
Electrical and Control Systems Delivery Truck	400	D	1	10	0.31	0.16	0.00	0.02	0.02	0.04	87.49	0.01	0.00	2.31E-04	0.00E+00	1.09E-03	1.32E-04	3.97E-04	0.00E+00	0.00E+00	0.00E+00	2.96E-03	0.00E+00	0.00E+00	0.00E+00	5.01E-05	0.00E+00	0.00E+00	0.00E+00				

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Table 9A-22

GTP Operational Emissions: GTP Operational Emissions Inventory (unit: lb per hour)

Operation Equipment	HP	Fuel	# Eqt	Hrs/Eqt/Mon	Criteria Pollutant Emissions (lb/hr)						Greenhouse Gas Emissions (lb/hr)			Major Hazardous Air Pollutant Emissions (lb/hr)																		
					NO _x	CO	SO _x	PM ₁₀	PM2.5	VOC	CO2	CH4	N2O	1,3-Butadiene	2,2,4-trimethylpentane	Acetaldehyde	Acrolein	Benzene	Dibenzofuran	Dichlorobenzene	Ethylbenzene	Formaldehyde	Hexane	Isopropylbenzene	Methanol	Naphthalene	PAH	POM	Propylene oxide	Toluene	Xylenes	
Grey and Black Water Truck (Kenworth T800)	400	D	1	180	0.98	0.21	0.00	0.04	0.04	0.04	227.89	0.00	0.00	2.31E-04	0.00E+00	1.09E-03	1.32E-04	3.97E-04	0.00E+00	0.00E+00	0.00E+00	2.96E-03	0.00E+00	0.00E+00	0.00E+00	5.01E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Solid Waste Truck - Refuse (Kenworth T800)	400	D	1	300	1.96	0.43	0.00	0.09	0.09	0.09	455.78	0.01	0.00	4.83E-04	0.00E+00	2.28E-03	2.77E-04	8.32E-04	0.00E+00	0.00E+00	0.00E+00	6.20E-03	0.00E+00	0.00E+00	0.00E+00	8.94E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Passenger Van, 16 person (Ford E-350 series, or GM chevy 3500)	320	D	4	180	3.91	0.85	0.01	0.18	0.17	0.18	911.57	0.02	0.00	1.04E-03	0.00E+00	4.91E-03	5.96E-04	1.79E-03	0.00E+00	0.00E+00	0.00E+00	1.33E-02	0.00E+00	0.00E+00	0.00E+00	2.56E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Passenger Bus, 20 person (Blue Bird, 6.8 L engine)	360	D	1	120	0.98	0.21	0.00	0.04	0.04	0.04	227.89	0.00	0.00	2.60E-04	0.00E+00	1.23E-03	1.49E-04	4.47E-04	0.00E+00	0.00E+00	0.00E+00	3.33E-03	0.00E+00	0.00E+00	0.00E+00	6.40E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Staff & Security Truck (3/4 ton crew cab)	300	D	1	360	1.96	0.43	0.00	0.09	0.09	0.09	455.78	0.01	0.00	4.89E-04	0.00E+00	2.29E-03	2.78E-04	8.36E-04	0.00E+00	0.00E+00	0.00E+00	6.22E-03	0.00E+00	0.00E+00	0.00E+00	2.85E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pickup Truck - Standard Bed (V8 engine)	360	D	18	360	14.67	3.20	0.03	0.67	0.65	0.66	3,418.37	0.06	0.00	4.74E-03	0.00E+00	2.24E-02	2.72E-03	8.16E-03	0.00E+00	0.00E+00	0.00E+00	6.07E-02	0.00E+00	0.00E+00	0.00E+00	2.81E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pickup Truck - Service Bed (Silverado HD2500)	397	D	18	360	14.67	3.20	0.03	0.67	0.65	0.66	3,418.37	0.06	0.00	4.74E-03	0.00E+00	2.24E-02	2.72E-03	8.16E-03	0.00E+00	0.00E+00	0.00E+00	6.07E-02	0.00E+00	0.00E+00	0.00E+00	2.81E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ambulance (GM ambulance)	260	D	1	12	0.24	0.05	0.00	0.01	0.01	0.02	42.66	0.02	0.01	2.43E-04	0.00E+00	1.15E-03	1.39E-04	4.18E-04	0.00E+00	0.00E+00	0.00E+00	3.11E-03	0.00E+00	0.00E+00	0.00E+00	1.42E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
TOTAL					157.09	37.81	0.27	7.41	7.13	7.97	36,802.45	1.05	0.11	2.54E-02	0.00E+00	1.89E-01	2.29E-02	1.47E-01	0.00E+00	0.00E+00	0.00E+00	4.06E-01	0.00E+00	0.00E+00	0.00E+00	1.29E-02	2.00E-02	0.00E+00	0.00E+00	4.87E-02	3.39E-02	
Storage Tanks																																
Diesel Air Compressor Day Tank			1	C	-	-	-	-	-	0.00	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.99E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.19E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Diesel Fuel Storage Tank			1	C	-	-	-	-	-	0.00	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.27E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Emergency Diesel Generator Day Storage			1	C	-	-	-	-	-	0.00	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.24E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.64E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Essential Diesel Generator Day Storage (2 tanks)			2	C	-	-	-	-	-	0.00	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.94E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Diesel Fueling Station Storage Drum			1	C	-	-	-	-	-	0.00	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.91E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.05E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Firewater Pump Diesel Day Storage Drum			1	C	-	-	-	-	-	0.00	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.06E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.26E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
AGRU Solvent Storage Tank			1	C	-	-	-	-	-	0.00	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
AGRU Fresh Solvent Storage Tank			1	C	-	-	-	-	-	0.00	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
TEG Makeup Storage Tank			1	C	-	-	-	-	-	0.00	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
TEG Inventory Tank			1	C	-	-	-	-	-	0.00	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
TEG/Water Makeup Tank			1	C	-	-	-	-	-	0.00	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Methanol Storage Tank			1	C	-	-	-	-	-	0.00	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.47E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Waste Lube Oil Tank			1	C	-	-	-	-	-	0.00	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Waste Chemicals Tank			1	C	-	-	-	-	-	0.00	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Gasoline Tank			1	C	-	-	-	-	-	0.01	-	-	-	1.09E-06	3.98E-04	0.00E+00	0.00E+00	1.57E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.36E-04	1.65E-05	0.00E+00	1.48E-05	0.00E+00	0.00E+00	0.00E+00	6.12E-04	6.73E-04	
TOTAL					-	-	-	-	-	0.02	-	-	-	1.09E-06	3.98E-04	0.00E+00	0.00E+00	1.57E-04	1.14E-07	0.00E+00	0.00E+00	0.00E+00	3.36E-04	1.65E-05	2.47E-03	1.72E-05	0.00E+00	0.00E+00	0.00E+00	6.12E-04	6.73E-04	
Fugitive VOC Emissions (valves, pump compressors, pressure relief valves, open-ended lines, and flanges)																																
Total Fugitive VOC Emissions			59.879	C	-	-	-	-	-	18.89	-	22.95	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.37E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
TOTAL					1,211.13	486.79	150.93	80.36	80.08	75.46	1,304,994.02	166.34	36.50	3.07E-02	3.98E-04	6.78E-01	1.01E-01	3.82E-01	1.14E-07	0.00E+00	3.88E-01	9.02E+00	3.36E-04	1.65E-05	2.47E-03	3.60E-02	5.88E-02	0.00E+00	3.51E-01	1.64E+00	8.22E-01	
TOTAL HAPs																															1.35E+01	

1. 6th LM6000 operates only 1 month per year (July)
NO = Not Operating; Fuel: (D: Diesel, S: Sales gas)

DRAFT

Operation Equipment	HP	Fuel	# Eqt	Hrs/Eqt/Mon th	Major Hazardous Air Pollutant Emissions (lb/mo)																		
					1,3-Butadiene	2,2,4-trimethylpentane	Acetaldehyde	Acrolein	Benzene	Dibenzofuran	Dichlorobenzene	Ethylbenzene	Formaldehyde	Hexane	Isopropylbenzene	Methanol	Naphthalene	PAH	POM	Propylene oxide	Toluene	Xylenes	
Grey and Black Water Truck (Kenworth T800)	400	D	1	180	4.16E-02	0.00E+00	1.96E-01	2.38E-02	7.15E-02	0.00E+00	0.00E+00	0.00E+00	5.33E-01	0.00E+00	0.00E+00	0.00E+00	9.01E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
Solid Waste Truck - Refuse (Kenworth T800)	400	D	1	300	1.45E-01	0.00E+00	6.85E-01	8.32E-02	2.50E-01	0.00E+00	0.00E+00	0.00E+00	1.86E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
Passenger Van, 16 person (Ford E-350 series, or GM chevy 3500)	320	D	1	180	1.87E-01	0.00E+00	8.83E-01	1.07E-01	3.22E-01	0.00E+00	0.00E+00	0.00E+00	2.40E+00	0.00E+00	0.00E+00	0.00E+00	4.61E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
Passenger Bus, 20 person (Blue Bird 6.8 L engine)	360	D	1	120	3.12E-02	0.00E+00	1.47E-01	1.79E-02	5.36E-02	0.00E+00	0.00E+00	0.00E+00	4.00E-01	0.00E+00	0.00E+00	0.00E+00	7.68E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
Staff & Security Truck (3/4 ton crew cab)	300	D	1	360	1.75E-01	0.00E+00	8.25E-01	1.00E-01	3.01E-01	0.00E+00	0.00E+00	0.00E+00	2.24E+00	0.00E+00	0.00E+00	0.00E+00	1.02E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
Pickup Truck - Standard Bed (V8 engine)	360	D	18	360	1.71E+00	0.00E+00	8.05E+00	9.79E-01	2.94E+00	0.00E+00	0.00E+00	0.00E+00	2.19E+01	0.00E+00	0.00E+00	0.00E+00	1.01E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
Pickup Truck - Service Bed (Silverado HD2500)	397	D	18	360	1.71E+00	0.00E+00	8.05E+00	9.79E-01	2.94E+00	0.00E+00	0.00E+00	0.00E+00	2.19E+01	0.00E+00	0.00E+00	0.00E+00	1.01E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
Ambulance (GM ambulance)	260	D	1	12	2.91E-03	0.00E+00	1.37E-02	1.67E-03	5.01E-03	0.00E+00	0.00E+00	0.00E+00	3.73E-02	0.00E+00	0.00E+00	0.00E+00	1.71E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
TOTAL					5.91E+00	0.00E+00	4.61E+01	5.58E+00	3.72E+01	0.00E+00	0.00E+00	0.00E+00	9.70E+01	0.00E+00	0.00E+00	0.00E+00	3.08E+00	5.24E+00	0.00E+00	0.00E+00	1.27E+01	8.88E+00	
Storage Tanks																							
Diesel Air Compressor Day Tank			1	C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.18E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.52E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Diesel Fuel Storage Tank			1	C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.03E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Emergency Diesel Generator Day Storage			1	C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.39E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Essential Diesel Generator Day Storage (2 tanks)			2	C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.15E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Diesel Fueling Station Storage Drum			1	C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.24E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Firewater Pump Diesel Day Storage Drum			1	C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.11E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
AGRU Solvent Storage Tank			1	C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
AGRU Fresh Solvent Storage Tank			1	C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
TEG Makeup Storage Tank			1	C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
TEG Inventory Tank			1	C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
TEG/Water Makeup Tank			1	C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Methanol Storage Tank			1	C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Waste Lube Oil Tank			1	C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Waste Chemicals Tank			1	C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Gasoline Tank			1	C	7.98E-04	2.91E-01	0.00E+00	0.00E+00	1.15E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.45E-01	1.21E-02	0.00E+00	1.08E-02	0.00E+00	0.00E+00	0.00E+00	4.47E-01	4.91E-01	
TOTAL					7.98E-04	2.91E-01	0.00E+00	0.00E+00	1.15E-01	8.33E-05	0.00E+00	0.00E+00	0.00E+00	2.45E-01	1.21E-02	1.80E+00	1.25E-02	0.00E+00	0.00E+00	0.00E+00	4.47E-01	4.91E-01	
Fugitive VOC Emissions (valves, pump compressors, pressure relief valves, open-ended lines, and flanges)																							
Total Fugitive VOC Emissions			59.870	C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.19E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
TOTAL					8.47E+00	2.91E-01	3.77E+02	5.85E+01	1.69E+02	8.33E-05	0.00E+00	2.65E+02	5.97E+03	2.45E-01	1.21E-02	1.80E+00	1.39E+01	2.35E+01	0.00E+00	2.40E+02	1.09E+03	5.39E+02	
TOTAL HAPs																						8.76E+03	

1. 6th LM6000 operates only 1 month per year (July)
NO = Not Operating; Fuel: (D: Diesel, S: Sales gas)

Operation Equipment					Major Hazardous Air Pollutant Emissions (tpy)																	
					1,3-Butadiene	2,2,4-Trimethylpentane	Acetaldehyde	Acrolein	Benzene	Dibenzofuran	Dichlorobenzene	Ethylbenzene	Formaldehyde	Hexane	Isopropylbenzene	Methanol	Naphthalene	PAH	POM	Propylene oxide	Toluene	Xylenes
HP	Fuel	# Eq	Hrs/EquipMon	th																		
Train 1 - Sales Gas Compressor Turbine (GE 7EA)	115000	S	1	C	2.93E-03	0.00E+00	2.72E-01	4.36E-02	8.17E-02	0.00E+00	4.36E-01	1.76E-05	0.00E+00	1.63E-03	2.61E-04	4.90E-04	0.00E+00	2.61E-03	1.05E-07	0.00E+00	9.80E-06	1.57E-06
Train 2 - Sales Gas Compressor Turbine (GE 7EA)	115000	S	1	C	2.93E-03	0.00E+00	2.72E-01	4.36E-02	8.17E-02	0.00E+00	4.36E-01	1.76E-05	0.00E+00	1.63E-03	2.61E-04	4.90E-04	0.00E+00	2.61E-03	1.05E-07	0.00E+00	9.80E-06	1.57E-06
Train 3 - Sales Gas Compressor Turbine (GE 7EA)	115000	S	1	C	2.93E-03	0.00E+00	2.72E-01	4.36E-02	8.17E-02	0.00E+00	4.36E-01	1.76E-05	0.00E+00	1.63E-03	2.61E-04	4.90E-04	0.00E+00	2.61E-03	1.05E-07	0.00E+00	9.80E-06	1.57E-06
Train 4 - Sales Gas Compressor Turbine (GE 7EA)	115000	S	1	C	2.93E-03	0.00E+00	2.72E-01	4.36E-02	8.17E-02	0.00E+00	4.36E-01	1.76E-05	0.00E+00	1.63E-03	2.61E-04	4.90E-04	0.00E+00	2.61E-03	1.05E-07	0.00E+00	9.80E-06	1.57E-06
Train 1 - CO2 Compressor Turbine	58000	S	1	C	1.08E-03	0.00E+00	1.00E-01	1.60E-02	3.00E-02	0.00E+00	1.60E-01	6.45E-06	0.00E+00	6.00E-04	9.61E-05	1.90E-04	0.00E+00	9.61E-04	3.07E-08	0.00E+00	3.60E-06	5.76E-07
Train 2 - CO2 Compressor Turbine	58000	S	1	C	1.08E-03	0.00E+00	1.00E-01	1.60E-02	3.00E-02	0.00E+00	1.60E-01	6.45E-06	0.00E+00	6.00E-04	9.61E-05	1.90E-04	0.00E+00	9.61E-04	3.07E-08	0.00E+00	3.60E-06	5.76E-07
Train 3 - CO2 Compressor Turbine	58000	S	1	C	1.08E-03	0.00E+00	1.00E-01	1.60E-02	3.00E-02	0.00E+00	1.60E-01	6.45E-06	0.00E+00	6.00E-04	9.61E-05	1.90E-04	0.00E+00	9.61E-04	3.07E-08	0.00E+00	3.60E-06	5.76E-07
Train 4 - CO2 Compressor Turbine	58000	S	1	C	1.08E-03	0.00E+00	1.00E-01	1.60E-02	3.00E-02	0.00E+00	1.60E-01	6.45E-06	0.00E+00	6.00E-04	9.61E-05	1.90E-04	0.00E+00	9.61E-04	3.07E-08	0.00E+00	3.60E-06	5.76E-07
Power Generator Turbine (GE LM6000)		S	1	C	8.94E-04	0.00E+00	8.32E-02	1.33E-02	2.49E-02	0.00E+00	0.00E+00	6.65E-02	1.48E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-03	4.57E-03	0.00E+00	6.03E-02	2.70E-01	1.33E-01
Power Generator Turbine (GE LM6000)		S	1	C	8.94E-04	0.00E+00	8.32E-02	1.33E-02	2.49E-02	0.00E+00	0.00E+00	6.65E-02	1.48E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-03	4.57E-03	0.00E+00	6.03E-02	2.70E-01	1.33E-01
Power Generator Turbine (GE LM6000)		S	1	C	8.94E-04	0.00E+00	8.32E-02	1.33E-02	2.49E-02	0.00E+00	0.00E+00	6.65E-02	1.48E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-03	4.57E-03	0.00E+00	6.03E-02	2.70E-01	1.33E-01
Power Generator Turbine (GE LM6000)		S	1	C	8.94E-04	0.00E+00	8.32E-02	1.33E-02	2.49E-02	0.00E+00	0.00E+00	6.65E-02	1.48E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-03	4.57E-03	0.00E+00	6.03E-02	2.70E-01	1.33E-01
Power Generator Turbine (GE LM6000)		S	1	C ¹	6.14E-05	0.00E+00	5.71E-03	9.14E-04	1.71E-03	0.00E+00	0.00E+00	4.57E-03	1.01E-01	0.00E+00	0.00E+00	0.00E+00	1.86E-04	3.14E-04	0.00E+00	4.14E-03	1.86E-02	9.14E-03
Essential Generator Turbine (PGT-25) - test		S	1	10	6.85E-06	0.00E+00	6.37E-04	1.02E-04	1.91E-04	0.00E+00	0.00E+00	5.10E-04	1.13E-02	0.00E+00	0.00E+00	0.00E+00	2.07E-05	3.50E-05	0.00E+00	4.62E-04	2.07E-03	1.02E-03
Essential Generator Turbine (PGT-25) - test		S	1	10	6.85E-06	0.00E+00	6.37E-04	1.02E-04	1.91E-04	0.00E+00	0.00E+00	5.10E-04	1.13E-02	0.00E+00	0.00E+00	0.00E+00	2.07E-05	3.50E-05	0.00E+00	4.62E-04	2.07E-03	1.02E-03
Essential Generator Turbine (PGT-25) - test		S	1	10	6.85E-06	0.00E+00	6.37E-04	1.02E-04	1.91E-04	0.00E+00	0.00E+00	5.10E-04	1.13E-02	0.00E+00	0.00E+00	0.00E+00	2.07E-05	3.50E-05	0.00E+00	4.62E-04	2.07E-03	1.02E-03
Dormitory Emergency Diesel Generator - test		D	1	5	2.75E-06	0.00E+00	5.40E-05	6.51E-06	6.56E-05	0.00E+00	0.00E+00	8.30E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.97E-06	1.18E-05	0.00E+00	0.00E+00	2.88E-05	2.00E-05
Essential Diesel Generator - test		D	1	10	0.00E+00	0.00E+00	7.18E-05	2.24E-05	2.21E-03	0.00E+00	0.00E+00	2.25E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.70E-04	6.04E-04	0.00E+00	0.00E+00	8.00E-04	5.50E-04
Diesel Air Compressor - test	300	D	1	5	0.00E+00	0.00E+00	4.76E-06	1.49E-06	1.47E-04	0.00E+00	0.00E+00	0.00E+00	1.49E-05	0.00E+00	0.00E+00	0.00E+00	2.46E-05	4.01E-05	0.00E+00	0.00E+00	5.31E-05	3.65E-05
Main Firewater Pump (Diesel Engine) - test	250	D	1	5	2.05E-06	0.00E+00	4.03E-05	4.86E-06	4.90E-05	0.00E+00	0.00E+00	6.20E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.45E-06	8.82E-06	0.00E+00	0.00E+00	2.15E-05	1.50E-05
Flares and Vents (Pilot/Purge)		D	1	C	1.08E-04	0.00E+00	1.01E-02	1.61E-03	3.02E-03	0.00E+00	0.00E+00	8.04E-03	1.78E-01	0.00E+00	0.00E+00	0.00E+00	3.27E-04	5.53E-04	0.00E+00	7.29E-03	3.27E-02	1.61E-02
TOTAL					2.07E-02	0.00E+00	1.92E+00	3.08E-01	5.79E-01	0.00E+00	2.06E+00	5.07E-01	1.12E+01	7.74E-03	1.24E-03	2.32E-03	2.10E-02	4.79E-02	4.99E-07	4.59E-01	2.06E+00	1.01E+00
Onroad and Offroad Support Equipment and Vehicles																						
General Materials Delivery Truck for general construction	400	D	1	10	1.39E-05	0.00E+00	6.54E-05	7.95E-06	2.38E-05	0.00E+00	0.00E+00	0.00E+00	1.78E-04	0.00E+00	0.00E+00	0.00E+00	3.00E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Delivery Truck - Food	400	D	1	150	2.08E-04	0.00E+00	9.81E-04	1.19E-04	3.58E-04	0.00E+00	0.00E+00	0.00E+00	2.66E-03	0.00E+00	0.00E+00	0.00E+00	4.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Delivery Truck - Chemicals	400	D	18	12	2.99E-04	0.00E+00	1.41E-03	1.72E-04	5.15E-04	0.00E+00	0.00E+00	0.00E+00	3.84E-03	0.00E+00	0.00E+00	0.00E+00	6.49E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Delivery Truck - Misc. Parts	400	D	1	10	1.39E-05	0.00E+00	6.54E-05	7.95E-06	2.38E-05	0.00E+00	0.00E+00	0.00E+00	1.78E-04	0.00E+00	0.00E+00	0.00E+00	3.00E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Special Maintenance Personnel Truck	400	D	1	20	2.77E-05	0.00E+00	1.31E-04	1.59E-05	4.77E-05	0.00E+00	0.00E+00	0.00E+00	3.55E-04	0.00E+00	0.00E+00	0.00E+00	6.01E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Electrical and Control Systems Delivery Truck	400	D	1	10	1.39E-05	0.00E+00	6.54E-05	7.95E-06	2.38E-05	0.00E+00	0.00E+00	0.00E+00	1.78E-04	0.00E+00	0.00E+00	0.00E+00	3.00E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Azimuth and Elevation Drive (Communications) Delivery Truck	400	D	1	10	1.39E-05	0.00E+00	6.54E-05	7.95E-06	2.38E-05	0.00E+00	0.00E+00	0.00E+00	1.78E-04	0.00E+00	0.00E+00	0.00E+00	3.00E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Water Delivery Trucks	400	D	8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vacuum Truck	300	D	1	20	2.57E-05	0.00E+00	1.21E-04	1.47E-05	4.42E-05	0.00E+00	0.00E+00	0.00E+00	3.29E-04	0.00E+00	0.00E+00	0.00E+00	1.99E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Garbage Trucks	400	D	1	150	2.08E-04	0.00E+00	9.81E-04	1.19E-04	3.58E-04	0.00E+00	0.00E+00	0.00E+00	2.66E-03	0.00E+00	0.00E+00	0.00E+00	4.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hazardous Waste Trucks	400	D	1	10	1.45E-05	0.00E+00	6.85E-05	8.32E-06	2.50E-05	0.00E+00	0.00E+00	0.00E+00	1.86E-04	0.00E+00	0.00E+00	0.00E+00	2.68E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Air Compressor - 900CFM (Sullair; caterpillar C-9 ATAAC engine)	300	D	1	120	1.18E-04	0.00E+00	2.32E-03	2.80E-04	2.82E-03	0.00E+00	0.00E+00	0.00E+00	3.57E-03	0.00E+00	0.00E+00	0.00E+00	2.56E-04	5.08E-04	0.00E+00	0.00E+00	1.24E-03	8.62E-04
Dump Truck - Mack B70 (10 tires, 12 gph, 6 cylinders)	400	D	1	300	1.66E-03	0.00E+00	7.85E-03	9.54E-04	2.86E-03	0.00E+00	0.00E+00	0.00E+00	2.13E-02	0.00E+00	0.00E+00	0.00E+00	3.61E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Motor Grader - Cat 16G (6 tires, 7gph, 6-cylinder engine)	250	D	1	300	1.23E-04	0.00E+00	2.42E-03	2.91E-04	2.94E-03	0.00E+00	0.00E+00	0.00E+00	3.72E-03	0.00E+00	0.00E+00	0.00E+00	2.67E-04	5.29E-04	0.00E+00	0.00E+00	1.29E-03	8.98E-04
Backhoe (CAT 966F)	220	D	1	60	2.17E-05	0.00E+00	4.25E-04	5.13E-05	5.17E-04	0.00E+00	0.00E+00	0.00E+00	6.54E-04	0.00E+00	0.00E+00	0.00E+00	4.70E-05	9.31E-05	0.00E+00	0.00E+00	2.27E-04	1.58E-04
Crane (small) - 50/60 ton, Grove, RT700E (Cummins QSB engine)	240	D	1	120	9.45E-05	0.00E+00	1.86E-03	2.24E-04	2.26E-03	0.00E+00	0.00E+00	0.00E+00	2.85E-03	0.00E+00	0.00E+00	0.00E+00	2.05E-04	4.06E-04	0.00E+00	0.00E+00	9.89E-04	6.89E-04
Crane (large) - 200 ton, Manitowoc 888 (Cummins M11 engine)	330	D	1	60	3.25E-05	0.00E+00	6.38E-04	7.69E-05	7.76E-04	0.00E+00	0.00E+00	0.00E+00	9.81E-04	0.00E+00	0.00E+00	0.00E+00	7.05E-05	1.40E-0				

					Major Hazardous Air Pollutant Emissions (tpy)																	
Operation Equipment	HP	Fuel	# Eqt	Hrs/Eqt/Mon	1,3-Butadiene	2,2,4-trimethylpentane	Acetaldehyde	Acrolein	Benzene	Dibenzofuran	Dichlorobenzene	Ethylbenzene	Formaldehyde	Hexane	Isopropylbenzene	Methanol	Naphthalene	PAH	POM	Propylene oxide	Toluene	Xylenes
Grey and Black Water Truck (Kenworth T800)	400	D	1	180	2.49E-04	0.00E+00	1.18E-03	1.43E-04	4.29E-04	0.00E+00	0.00E+00	0.00E+00	3.20E-03	0.00E+00	0.00E+00	0.00E+00	5.41E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Solid Waste Truck - Refuse (Kenworth T800)	400	D	2	300	8.70E-04	0.00E+00	4.11E-03	4.99E-04	1.50E-03	0.00E+00	0.00E+00	0.00E+00	1.12E-02	0.00E+00	0.00E+00	0.00E+00	1.61E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Passenger Van, 16 person (Ford E-350 series, or GM chevy 3500)	320	D	4	180	1.12E-03	0.00E+00	5.30E-03	6.44E-04	1.93E-03	0.00E+00	0.00E+00	0.00E+00	1.44E-02	0.00E+00	0.00E+00	0.00E+00	2.77E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Passenger Bus, 20 person (Blue Bird, 6.8 L engine)	360	D	1	120	1.87E-04	0.00E+00	8.83E-04	1.07E-04	3.22E-04	0.00E+00	0.00E+00	0.00E+00	2.40E-03	0.00E+00	0.00E+00	0.00E+00	4.61E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Staff & Security Truck (3/4 ton crew cab)	300	D	2	360	1.05E-03	0.00E+00	4.95E-03	6.01E-04	1.80E-03	0.00E+00	0.00E+00	0.00E+00	1.34E-02	0.00E+00	0.00E+00	0.00E+00	6.15E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pickup Truck - Standard Bed (V8 engine)	360	D	18	360	1.02E-02	0.00E+00	4.83E-02	5.87E-03	1.76E-02	0.00E+00	0.00E+00	0.00E+00	1.31E-01	0.00E+00	0.00E+00	0.00E+00	6.06E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pickup Truck - Service Bed (Silverado HD2500)	397	D	18	390	1.02E-02	0.00E+00	4.83E-02	5.87E-03	1.76E-02	0.00E+00	0.00E+00	0.00E+00	1.31E-01	0.00E+00	0.00E+00	0.00E+00	6.06E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ambulance (GM ambulance)	260	D	1	12	1.75E-05	0.00E+00	8.25E-05	1.00E-05	3.01E-05	0.00E+00	0.00E+00	0.00E+00	2.24E-04	0.00E+00	0.00E+00	0.00E+00	1.02E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TOTAL					3.55E-02	0.00E+00	2.76E-01	3.35E-02	2.23E-01	0.00E+00	0.00E+00	0.00E+00	5.82E-01	0.00E+00	0.00E+00	0.00E+00	1.85E-02	3.14E-02	0.00E+00	0.00E+00	7.65E-02	5.33E-02
Storage Tanks																						
Diesel Air Compressor Day Tank			1	C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.71E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Diesel Fuel Storage Tank			1	C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.62E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.49E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Emergency Diesel Generator Day Storage			1	C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.83E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Essential Diesel Generator Day Storage (2 tanks)			2	C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.23E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Diesel Fueling Station Storage Drum			1	C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.34E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.98E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Firewater Pump Diesel Day Storage Drum			1	C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.01E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
AGRU Solvent Storage Tank			1	C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
AGRU Fresh Solvent Storage Tank			1	C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEG Makeup Storage Tank			1	C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEG Inventory Tank			1	C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEG/Water Makeup Tank			1	C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methanol Storage Tank			1	C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waste Lube Oil Tank			1	C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waste Chemicals Tank			1	C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Gasoline Tank			1	C	4.79E-06	1.74E-03	0.00E+00	0.00E+00	6.87E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-03	7.24E-05	0.00E+00	6.49E-05	0.00E+00	0.00E+00	0.00E+00	2.68E-03	2.95E-03
TOTAL					4.79E-06	1.74E-03	0.00E+00	0.00E+00	6.87E-04	5.00E-07	0.00E+00	0.00E+00	0.00E+00	1.47E-03	7.24E-05	1.08E-02	7.52E-05	0.00E+00	0.00E+00	0.00E+00	2.68E-03	2.95E-03
Fugitive VOC Emissions (valves, pump compressors, pressure relief valves, open-ended lines, and flanges)																						
Total Fugitive VOC Emissions				59.879	C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.91E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TOTAL						5.62E-02	1.74E-03	2.20E+00	3.41E-01	9.94E-01	5.00E-07	2.06E+00	5.07E-01	1.18E+01	9.21E-03	1.31E-03	3.96E-02	7.93E-02	4.99E-07	4.59E-01	2.14E+00	1.07E+00
TOTAL HAPs																						2.18E+01

1. 6th LM6000 operates only 1 month per year (July)
NO = Not Operating; Fuel: (D: Diesel, S: Sales gas)

	ALASKA PIPELINE PROJECT DRAFT RESOURCE REPORT 9 AIR AND NOISE QUALITY APPENDIX 9A	USAG-UR-SGREG-000007 DECEMBER 2011 REVISION 0
	FERC Docket No. PF09-11-000	

TABLE 9A-23 GTP OPERATIONAL EMISSIONS: GTP OPERATIONAL EMISSIONS INVENTORY (UNIT: TON OR METRIC TON PER YEAR)

Table 9A-23

Table 9A-23																																	
Operation Equipment				GTP Operational Emissions: GTP Operational Emissions Inventory (unit: ton or metric ton per year)																													
				Criteria Pollutant Emissions (tpy)					Greenhouse Gas Emissions (tonnes/yr)					Major Hazardous Air Pollutant Emissions (tpy)																			
HP	Fuel	# Eq	Hrs/EquiMonth	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}	VOC	CO ₂	CH ₄	N ₂ O	CO ₂ e	1,3-Butadiene	2,2,4-trimethylpentane	Acetaldehyde	Acrolein	Benzene	Dibenzofuran	Dichlorobenzene	Ethylbenzene	Formaldehyde	Hexane	Isopropylbenzene	Methanol	Naphthalene	PAH	POM	Propylene oxide	Toluene	Xylenes		
Train 1 - Sales Gas Compressor Turbine (GE 7EA)	115000	S	1	C	552.58	186.24	83.78	38.61	38.61	11.14	579,895.79	52.69	18.38	586,700.12	2.93E-03	0.00E+00	2.72E-01	4.36E-02	8.17E-02	0.00E+00	4.36E-01	1.76E-05	0.00E+00	1.63E-03	2.61E-04	4.90E-04	0.00E+00	2.61E-03	1.05E-07	0.00E+00	9.80E-06	1.57E-06	
Train 2 - Sales Gas Compressor Turbine (GE 7EA)	115000	S	1	C	552.58	186.24	83.78	38.61	38.61	11.14	579,895.79	52.69	18.38	586,700.12	2.93E-03	0.00E+00	2.72E-01	4.36E-02	8.17E-02	0.00E+00	4.36E-01	1.76E-05	0.00E+00	1.63E-03	2.61E-04	4.90E-04	0.00E+00	2.61E-03	1.05E-07	0.00E+00	9.80E-06	1.57E-06	
Train 3 - Sales Gas Compressor Turbine (GE 7EA)	115000	S	1	C	552.58	186.24	83.78	38.61	38.61	11.14	579,895.79	52.69	18.38	586,700.12	2.93E-03	0.00E+00	2.72E-01	4.36E-02	8.17E-02	0.00E+00	4.36E-01	1.76E-05	0.00E+00	1.63E-03	2.61E-04	4.90E-04	0.00E+00	2.61E-03	1.05E-07	0.00E+00	9.80E-06	1.57E-06	
Train 4 - Sales Gas Compressor Turbine (GE 7EA)	115000	S	1	C	552.58	186.24	83.78	38.61	38.61	11.14	579,895.79	52.69	18.38	586,700.12	2.93E-03	0.00E+00	2.72E-01	4.36E-02	8.17E-02	0.00E+00	4.36E-01	1.76E-05	0.00E+00	1.63E-03	2.61E-04	4.90E-04	0.00E+00	2.61E-03	1.05E-07	0.00E+00	9.80E-06	1.57E-06	
Train 1 - CO2 Compressor Turbine	58000	S	1	C	214.62	74.46	31.38	13.58	13.58	4.38	200,482.24	19.36	6.76	202,983.00	1.08E-03	0.00E+00	1.00E-01	1.60E-02	3.00E-02	0.00E+00	1.60E-01	6.45E-06	0.00E+00	6.00E-04	9.61E-05	1.80E-04	0.00E+00	9.61E-04	3.87E-08	0.00E+00	3.60E-06	5.76E-07	
Train 2 - CO2 Compressor Turbine	58000	S	1	C	214.62	74.46	31.38	13.58	13.58	4.38	200,482.24	19.36	6.76	202,983.00	1.08E-03	0.00E+00	1.00E-01	1.60E-02	3.00E-02	0.00E+00	1.60E-01	6.45E-06	0.00E+00	6.00E-04	9.61E-05	1.80E-04	0.00E+00	9.61E-04	3.87E-08	0.00E+00	3.60E-06	5.76E-07	
Train 3 - CO2 Compressor Turbine	58000	S	1	C	214.62	74.46	31.38	13.58	13.58	4.38	200,482.24	19.36	6.76	202,983.00	1.08E-03	0.00E+00	1.00E-01	1.60E-02	3.00E-02	0.00E+00	1.60E-01	6.45E-06	0.00E+00	6.00E-04	9.61E-05	1.80E-04	0.00E+00	9.61E-04	3.87E-08	0.00E+00	3.60E-06	5.76E-07	
Train 4 - CO2 Compressor Turbine	58000	S	1	C	214.62	74.46	31.38	13.58	13.58	4.38	200,482.24	19.36	6.76	202,983.00	1.08E-03	0.00E+00	1.00E-01	1.60E-02	3.00E-02	0.00E+00	1.60E-01	6.45E-06	0.00E+00	6.00E-04	9.61E-05	1.80E-04	0.00E+00	9.61E-04	3.87E-08	0.00E+00	3.60E-06	5.76E-07	
Power Generator Turbine (GE LM6000)		S	1	C	106.12	107.75	26.08	11.70	11.70	7.22	211,602.62	16.09	5.61	213,680.61	8.94E-04	0.00E+00	8.32E-02	1.33E-02	2.49E-02	0.00E+00	0.00E+00	6.65E-02	1.48E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-03	4.57E-03	0.00E+00	6.03E-02	2.70E-01	1.33E-01
Power Generator Turbine (GE LM6000)		S	1	C	106.12	107.75	26.08	11.70	11.70	7.22	211,602.62	16.09	5.61	213,680.61	8.94E-04	0.00E+00	8.32E-02	1.33E-02	2.49E-02	0.00E+00	0.00E+00	6.65E-02	1.48E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-03	4.57E-03	0.00E+00	6.03E-02	2.70E-01	1.33E-01
Power Generator Turbine (GE LM6000)		S	1	C	106.12	107.75	26.08	11.70	11.70	7.22	211,602.62	16.09	5.61	213,680.61	8.94E-04	0.00E+00	8.32E-02	1.33E-02	2.49E-02	0.00E+00	0.00E+00	6.65E-02	1.48E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-03	4.57E-03	0.00E+00	6.03E-02	2.70E-01	1.33E-01
Power Generator Turbine (GE LM6000)		S	1	C	106.12	107.75	26.08	11.70	11.70	7.22	211,602.62	16.09	5.61	213,680.61	8.94E-04	0.00E+00	8.32E-02	1.33E-02	2.49E-02	0.00E+00	0.00E+00	6.65E-02	1.48E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-03	4.57E-03	0.00E+00	6.03E-02	2.70E-01	1.33E-01
Power Generator Turbine (GE LM6000)		S	1	C	106.12	107.75	26.08	11.70	11.70	7.22	211,602.62	16.09	5.61	213,680.61	8.94E-04	0.00E+00	8.32E-02	1.33E-02	2.49E-02	0.00E+00	0.00E+00	6.65E-02	1.48E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-03	4.57E-03	0.00E+00	6.03E-02	2.70E-01	1.33E-01
Power Generator Turbine (GE LM6000)		S	1	C	106.12	107.75	26.08	11.70	11.70	7.22	211,602.62	16.09	5.61	213,680.61	8.94E-04	0.00E+00	8.32E-02	1.33E-02	2.49E-02	0.00E+00	0.00E+00	6.65E-02	1.48E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-03	4.57E-03	0.00E+00	6.03E-02	2.70E-01	1.33E-01
Power Generator Turbine (GE LM6000)		S	1	C	106.12	107.75	26.08	11.70	11.70	7.22	211,602.62	16.09	5.61	213,680.61	8.94E-04	0.00E+00	8.32E-02	1.33E-02	2.49E-02	0.00E+00	0.00E+00	6.65E-02	1.48E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-03	4.57E-03	0.00E+00	6.03E-02	2.70E-01	1.33E-01
Power Generator Turbine (GE LM6000)		S	1	C	106.12	107.75	26.08	11.70	11.70	7.22	211,602.62	16.09	5.61	213,680.61	8.94E-04	0.00E+00	8.32E-02	1.33E-02	2.49E-02	0.00E+00	0.00E+00	6.65E-02	1.48E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-03	4.57E-03	0.00E+00	6.03E-02	2.70E-01	1.33E-01
Power Generator Turbine (GE LM6000)		S	1	C	106.12	107.75	26.08	11.70	11.70	7.22	211,602.62	16.09	5.61	213,680.61	8.94E-04	0.00E+00	8.32E-02	1.33E-02	2.49E-02	0.00E+00	0.00E+00	6.65E-02	1.48E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-03	4.57E-03	0.00E+00	6.03E-02	2.70E-01	1.33E-01
Power Generator Turbine (GE LM6000)		S	1	C	106.12	107.75	26.08	11.70	11.70	7.22	211,602.62	16.09	5.61	213,680.61	8.94E-04	0.00E+00	8.32E-02	1.33E-02	2.49E-02	0.00E+00	0.00E+00	6.65E-02	1.48E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-03	4.57E-03	0.00E+00	6.03E-02	2.70E-01	1.33E-01
Power Generator Turbine (GE LM6000)		S	1	C	106.12	107.75	26.08	11.70	11.70	7.22	211,602.62	16.09	5.61	213,680.61	8.94E-04	0.00E+00	8.32E-02	1.33E-02	2.49E-02	0.00E+00	0.00E+00	6.65E-02	1.48E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-03	4.57E-03	0.00E+00	6.03E-02	2.70E-01	1.33E-01
Power Generator Turbine (GE LM6000)		S	1	C	106.12	107.75	26.08	11.70	11.70	7.22	211,602.62	16.09	5.61	213,680.61	8.94E-04	0.00E+00	8.32E-02	1.33E-02	2.49E-02	0.00E+00	0.00E+00	6.65E-02	1.48E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-03	4.57E-03	0.00E+00	6.03E-02	2.70E-01	1.33E-01
Power Generator Turbine (GE LM6000)		S	1	C	106.12	107.75	26.08	11.70	11.70	7.22	211,602.62	16.09	5.61	213,680.61	8.94E-04	0.00E+00	8.32E-02	1.33E-02	2.49E-02	0.00E+00	0.00E+00	6.65E-02	1.48E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-03	4.57E-03	0.00E+00	6.03E-02	2.70E-01	1.33E-01
Power Generator Turbine (GE LM6000)		S	1	C	106.12	107.75	26.08	11.70	11.70	7.22	211,602.62	16.09	5.61	213,680.61	8.94E-04	0.00E+00	8.32E-02	1.33E-02	2.49E-02	0.00E+00	0.00E+00	6.65E-02	1.48E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-03	4.57E-03	0.00E+00	6.03E-02	2.70E-01	1.33E-01
Power Generator Turbine (GE LM6000)		S	1	C	106.12	107.75	26.08	11.70	11.70	7.22	211,602.62	16.09	5.61	213,680.61	8.94E-04	0.00E+00	8.32E-02	1.33E-02	2.49E-02	0.00E+00	0.00E+00	6.65E-02	1.48E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-03	4.57E-03	0.00E+00	6.03E-02	2.70E-01	1.33E-01
Power Generator Turbine (GE LM6000)		S	1	C	106.12	107.75	26.08	11.70	11.70	7.22	211,602.62	16.09	5.61	213,680.61	8.94E-04	0.00E+00	8.32E-02	1.33E-02	2.49E-02	0.00E+00	0.00E+00	6.65E-02	1.48E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-03	4.57E-03	0.00E+00	6.03E-02	2.70E-01	1.33E-01
Power Generator Turbine (GE LM6000)		S	1	C	106.12	107.75	26.08	11.70	11.70	7.22	211,602.62	16.09	5.61	213,680.61	8.94E-04	0.00E+00	8.32E-02	1.33E-02	2.49E-02	0.00E+00	0.00E+00	6.65E-02	1.48E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-03	4.57E-03	0.00E+00	6.03E-02	2.70E-01	1.33E-01
Power Generator Turbine (GE LM6000)		S	1	C	106.12	107.75	26.08	11.70	11.70	7.22	211,602.62	16.09	5.61	213,680.61	8.94E-04	0.00E+00	8.32E-02	1.33E-02	2.49E-02	0.00E+00	0.00E+00	6.65E-02	1.48E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-03	4.57E-03	0.00E+00	6.03E-02	2.70E-01	1.33E-01
Power Generator Turbine (GE LM6000)		S	1	C	106.12	107.75	26.08	11.70	11.70	7.22	21																						

Table 9A-23

Table 9A-23																																	
GTP Operational Emissions: GTP Operational Emissions Inventory (unit: ton or metric ton per year)																																	
Operation Equipment	HP	Fuel	# Eq	Hrs/EquiMon th	Criteria Pollutant Emissions (tpy)					Greenhouse Gas Emissions (tonnes/yr)					Major Hazardous Air Pollutant Emissions (tpy)																		
					NO _x	CO	SO _x	PM ₁₀	PM2.5	VOC	CO2	CH4	N2O	CO2e	1,3- Butadiene	2,2,4- trimethyl pentane	Acetalde hyde	Acrolein	Benzene	Dibenzof uran	Dichlorob enzene	Ethylben zene	Formalde hyde	Hexane	Isopropyl benzene	Methanol	Naphthal ene	PAH	POM	Propylen e oxide	Toluene	Xylenes	
Emergency Diesel Generator Day Storage			1	C	-	-	-	-	-	0.00	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.83E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Essential Diesel Generator Day Storage (2 tanks)			2	C	-	-	-	-	-	0.00	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.23E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Diesel Fueling Station Storage Drum			1	C	-	-	-	-	-	0.00	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.34E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.98E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Firewater Pump Diesel Day Storage Drum			1	C	-	-	-	-	-	0.00	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.01E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
AGRUSolvent Storage Tank			1	C	-	-	-	-	-	0.01	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
AGRUFresh Solvent Storage Tank			1	C	-	-	-	-	-	0.00	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
TEG Makeup Storage Tank			1	C	-	-	-	-	-	0.00	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
TEG Inventory Tank			1	C	-	-	-	-	-	0.00	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
TEG/Water Makeup Tank			1	C	-	-	-	-	-	0.00	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Methanol Storage Tank			1	C	-	-	-	-	-	0.01	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Waste Lube Oil Tank			1	C	-	-	-	-	-	0.00	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Waste Chemicals Tank			1	C	-	-	-	-	-	0.00	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Gasoline Tank			1	C	-	-	-	-	-	0.04	-	-	-	-	4.79E-06	1.74E-03	0.00E+00	0.00E+00	6.87E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-03	7.24E-05	0.00E+00	6.49E-05	0.00E+00	0.00E+00	0.00E+00	2.68E-03	2.95E-03
TOTAL					-	-	-	-	-	0.07	-	-	-	-	4.79E-06	1.74E-03	0.00E+00	0.00E+00	6.87E-04	5.00E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-03	7.24E-05	1.08E-02	7.52E-05	0.00E+00	0.00E+00	0.00E+00	2.68E-03	2.95E-03
Fugitive VOC Emissions (valves, pump compressors, pressure relief valves, open-ended lines, and flanges)																																	
Total Fugitive VOC Emissions			59,879	C	-	-	-	-	-	82.73	-	90.48	-	1,900.17	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.91E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
TOTAL					3,833.09	1,717.88	596.92	283.92	283.56	205.92	4,416,106.49	624.31	133.53	4,470,610.37	5.62E-02	1.74E-03	2.20E+00	3.41E-01	9.94E-01	5.00E-07	2.08E+00	5.07E-01	1.18E+01	9.21E-03	1.31E-03	1.31E-02	3.96E-02	7.83E-02	4.99E-07	4.59E-01	2.14E+00	1.07E+00	
TOTAL HAPs																																2.18E+01	

1. 6th LM6000 operates only 1 month per year (July)
NO = Not Operating; Fuel: (D) Diesel, (S) Sales gas)

	ALASKA PIPELINE PROJECT DRAFT RESOURCE REPORT 9 AIR AND NOISE QUALITY APPENDIX 9A	USAG-UR-SGREG-000007 DECEMBER 2011 REVISION 0
	FERC Docket No. PF09-11-000	

TABLE 9A-24 NORMAL OPERATIONAL EMISSIONS FOR ONE COMPRESSOR STATION

Table 9A-24

Normal Operational Emissions for One Compressor Station

Operation Equipment	Fuel	# Eq	Hrs/Eq t/Mont h	Criteria Pollutant Emissions (lb/hr)						Greenhouse Gas Emissions (lb/hr)				Major Hazardous Air Pollutant Emissions (lb/hr)																			
				NO _x	CO	SO _x	PM ₁₀	PM2.5	VOC	CO2	CH4	N2O		1,3- Butadiene	1,3-Dichloropro- pane	1,1,2-trichloroet- hane	1,1,2,2-tetrachloro- ethane	2-Methylnaph- thalene	3-Methylchlor- anthrene	7,12-Dimeth- ylbenz(a)ant- hacene	Acenaphth- ene	Acenaphth- ylene	Acetaldehy- de	Acrolein	Anthracene	Benz(a)anthra- cene	Benzene	Benzo(a)pyre- ne	Benzo(b)fluoran- thene	Benzo(g,h,i)pery- lene	Benzo(k)pyre- ne	Carbon Tetrachlorid- e	
GE PGT25+G4 DLE Compressor	NG	1	8,760	28.45	17.32	4.29	3.00	3.00	5.95	38,266.58	0.67	0.07		1.31E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-02	1.95E-03	0.00E+00	0.00E+00	3.66E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waukesha VGF-P48GSI Generator	NG	1	8,760	2.19	4.57	0.11	0.08	0.08	1.60	1,108.81	2.38	0.00		2.39E-03	4.58E-05	5.52E-05	9.12E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-02	9.48E-03	0.00E+00	0.00E+00	5.70E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.38E-05
Waukesha VGF-P48GSI Generator	NG	1	8,760	2.19	4.57	0.11	0.08	0.08	1.60	1,108.81	2.38	0.00		2.39E-03	4.58E-05	5.52E-05	9.12E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-02	9.48E-03	0.00E+00	0.00E+00	5.70E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.38E-05
Utility Glycol Heaters	NG	1	8,760	0.24	0.20	0.03	0.02	0.02	0.01	280.53	0.01	0.00		0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.69E-08	4.26E-09	3.79E-08	4.26E-09	4.26E-09	0.00E+00	0.00E+00	5.69E-09	4.26E-09	4.98E-06	2.84E-09	4.26E-09	2.84E-09	4.26E-09	0.00E+00	0.00E+00
Waste Handling Incinerator	NG	1	8,760	0.14	1.41	0.18	1.06	1.06	1.06	99.98	0.04	0.00		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TOTAL				33.22	28.07	4.73	4.24	4.24	10.22	40,864.71	5.47	0.08		4.91E-03	9.16E-05	1.10E-04	1.82E-04	5.69E-08	4.26E-09	3.79E-08	4.26E-09	4.26E-09	3.23E-02	2.09E-02	5.69E-09	4.26E-09	1.51E-02	2.84E-09	4.26E-09	2.84E-09	4.26E-09	1.28E-04	
Fugitive VOC Emissions (valves, flanges, pump seals, connectors, open-ended lines, and others)																																	
Total Fugitive VOC Emissions		696	8,760	-	-	-	-	-	0.18	-	1.11	-		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.55E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
TOTAL				33.22	28.07	4.73	4.24	4.24	10.40	40,864.71	6.58	0.08		4.91E-03	9.16E-05	1.10E-04	1.82E-04	5.69E-08	4.26E-09	3.79E-08	4.26E-09	4.26E-09	3.23E-02	2.09E-02	5.69E-09	4.26E-09	1.54E-02	2.84E-09	4.26E-09	2.84E-09	4.26E-09	1.28E-04	
TOTAL HAPs																																	

Operation Equipment	Fuel	# Eq	Hrs/Eq t/Mont h	Criteria Pollutant Emissions (tpy)						Greenhouse Gas Emissions (tonnes/year)				Major Hazardous Air Pollutant Emissions (tpy)																				
				NO _x	CO	SO _x	PM ₁₀	PM2.5	VOC	CO2	CH4	N2O	CO2e	1,3- Butadiene	1,3- Dichloropro pene	1,1,2- trichloroet hane	1,1,2,2- tetrachloro ethane	2- Methylnapht halene	3- Methylchlora nthrene	7,12_Dimeth ylbenz(a)ant hacene	Acenaphth ene	Acenaphth ylene	Acetaldehy de	Acrolein	Anthracen e	Benz(a)an thracene	Benzene	Benzo(a)pyre ne	Benzo(b) fluoranth ene	Benzo(g, h,i)peryle ne	Benzo(k)pyre ne	Carbon Tetrachlorid e		
GE PGT25+G4 DLE Compressor	NG	1	8,760	124.60	75.84	18.81	13.14	13.14	26.06	150,846.88	2.65	0.26	150,984.60	5.74E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Waukesha VGF-P48GSI Generator	NG	1	8,760	9.61	20.03	0.49	0.35	0.35	7.01	4,370.93	9.37	0.01	4,569.90	1.05E-02	2.01E-04	2.42E-04	3.99E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.40E-02	4.15E-02	0.00E+00	2.49E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.79E-04
Waukesha VGF-P48GSI Generator	NG	1	8,760	9.61	20.03	0.49	0.35	0.35	7.01	4,370.93	9.37	0.01	4,569.90	1.05E-02	2.01E-04	2.42E-04	3.99E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.40E-02	4.15E-02	0.00E+00	2.49E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.79E-04
Utility Glycol Heaters	NG	1	8,760	1.04	0.87	0.15	0.08	0.08	0.06	1,105.85	0.02	0.00	1,106.94	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E-07	1.87E-08	1.66E-07	1.87E-08	1.87E-08	0.00E+00	0.00E+00	2.49E-08	1.87E-08	2.18E-05	1.25E-08	1.87E-08	1.25E-08	1.87E-08	0.00E+00	0.00E+00	
Waste Handling Incinerator	NG	1	8,760	0.62	6.18	0.77	4.64	4.64	4.64	394.12	0.14	0.02	402.69	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
TOTAL				145.48	122.95	20.71	18.55	18.55	44.77	161,088.70	21.55	0.30	161,634.04	2.15E-02	4.01E-04	4.83E-04	7.99E-04	2.49E-07	1.87E-08	1.66E-07	1.87E-08	1.87E-08	1.41E-01	9.16E-02	2.49E-08	1.87E-08	6.59E-02	1.25E-08	1.87E-08	1.25E-08	1.87E-08	5.59E-04		
Fugitive VOC Emissions (valves, flanges, pump seals, connectors, open-ended lines, and others)																																		
Total Fugitive VOC Emissions		696	8,760	-	-	-	-	-	0.79	-	4.39	-	92.16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
TOTAL				145.48	122.95	20.71	18.55	18.55	45.55	161,088.70	25.94	0.30	161,726.19	2.15E-02	4.01E-04	4.83E-04	7.99E-04	2.49E-07	1.87E-08	1.66E-07	1.87E-08	1.87E-08	1.41E-01	9.16E-02	2.49E-08	1.87E-08	6.75E-02	1.25E-08	1.87E-08	1.25E-08	1.87E-08	5.59E-04		
TOTAL HAPs																																		

1. Utility Glycol Heaters consist of one (1) skid with eight (8) units

Major Hazardous Air Pollutant Emissions (lb/hr)

[illegible]

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