FINAL REPORT

2007 EMISSIONS INVENTORY
Toronto Pearson International Airport
Toronto, Ontario

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EXECUTIVE SUMMARY

The Greater Toronto Airport Authority (GTAA) retained RWDI AIR Inc. (RWDI) to develop a detailed greenhouse gas (GHG) and criteria air contaminants (CAC) emission inventory for the Toronto Pearson International Airport (TPIA) reflective of 2007 operating conditions. The emissions inventory was developed using the FAA's EDMS model (version 5.1). The sources included in the assessment were categorized as follows:

- Aircraft
- Auxiliary Power Units (APUs)
- Ground Support Equipment (GSE)
- Roadways and Parking Lots
- On-site Service Vehicles (Airside vehicles)
- Stationary Sources (e.g., boilers, co-gens, and backup diesel generators); and
- Fire Training Facility

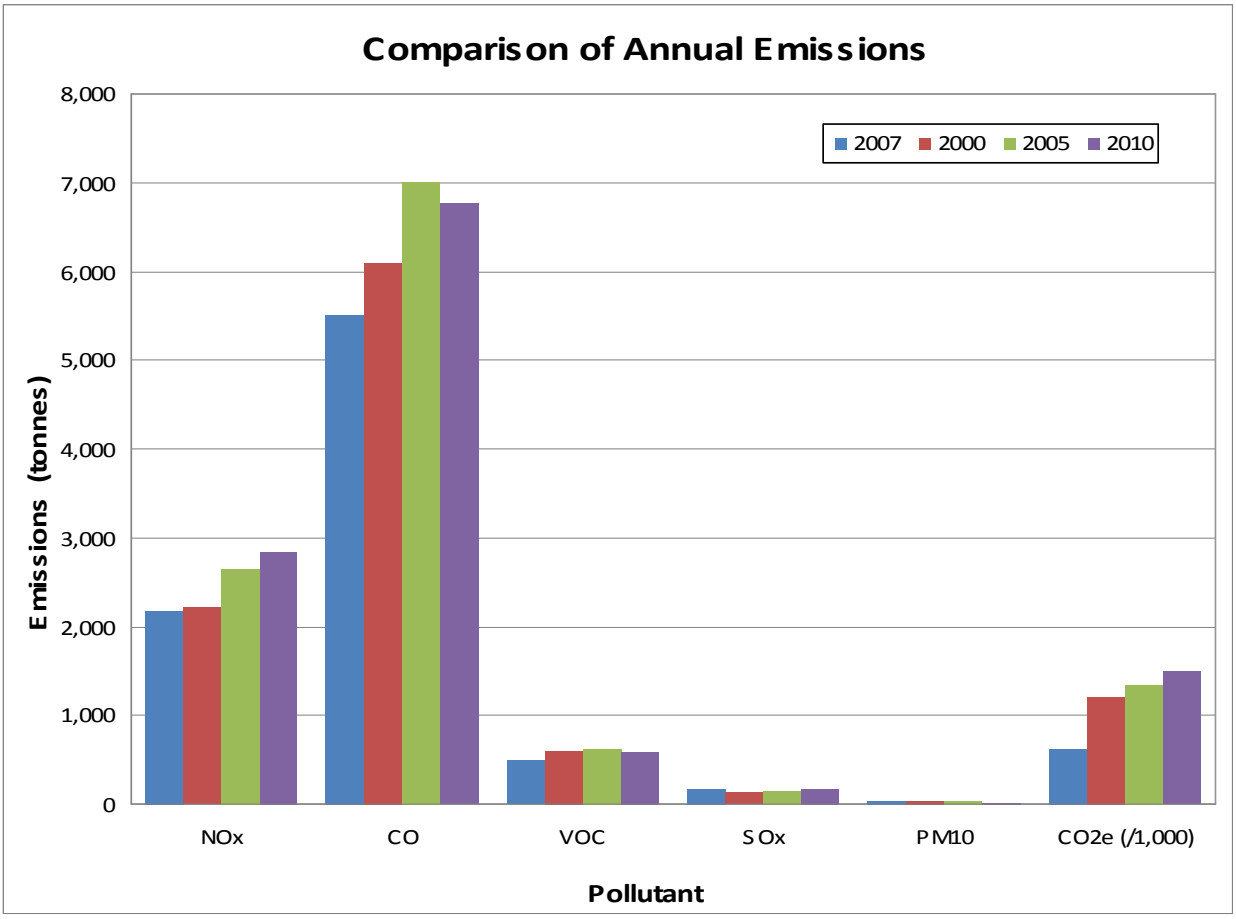
Airport operations data for 2007 was provided to RWDI for inclusion to the model. This included aircraft traffic, GSE operations, parking lot traffic data, road traffic data and fuel consumption for stationary sources and on-site vehicle fuel consumption.

EDMS version 5.1 has substantially improved functionality over the version used in the previous study (EDMS version 4.03). This allowed for more comprehensive emissions calculations than previous studies. In particular:

- Particulate matter emissions and fuel consumption estimates for aircraft
- Emission factors for training fires

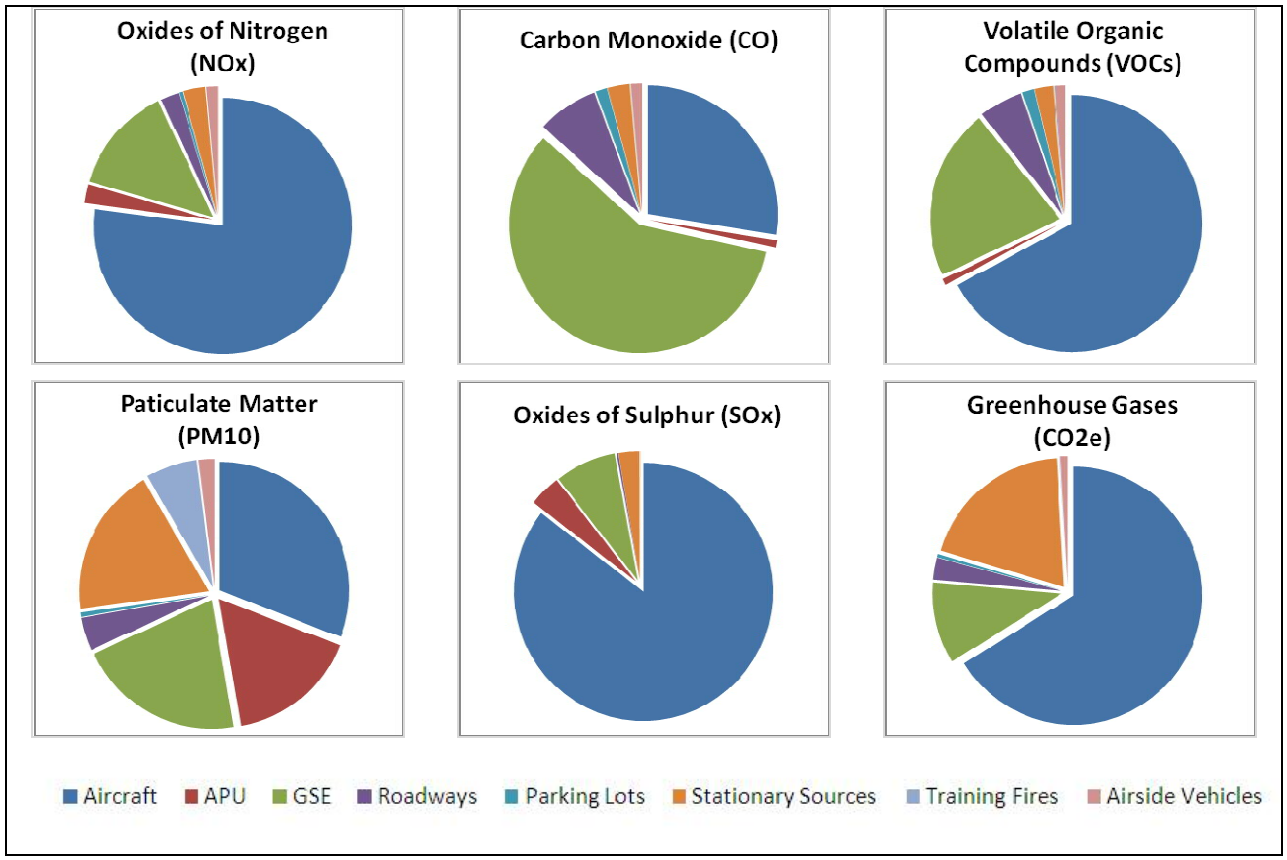
The emission inventory results for this study and their comparison to the emission inventory from previous study are shown in Figure E-1. A breakdown of the emissions by category is presented in Figure E-2.

Figure E-1: Annual Emissions by Year (2007 is current study, year 2000 is previous reported study, 2005 and 2010 are forecast from previous study)



In general, the emissions from 2007 are most similar to the reported emissions of 2000, with the exception of Greenhouse Gas emissions, which were estimated to be much higher in the previous study. The main reason for this difference is that aircraft fuel consumption estimates generated by EDMS were used to estimate emissions in the current study, whereas the previous study relied on fuel consumption estimates from the Intergovernmental Panel on Climate Change (RWDI 2003, Appendix F), which provides a much coarser estimate.

Figure E-2: Breakdown of 2007 Annual Emissions



As expected aircraft are the dominant source of emissions for most pollutants – the exception being carbon monoxide emissions, which are primarily due to ground support equipment operations. It is also noted that emissions from airside vehicles, training fires and parking lots are relatively small for all pollutants.

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1. INTRODUCTION

The Greater Toronto Airport Authority (GTAA) retained RWDI AIR Inc. (RWDI) to develop a detailed greenhouse gas (GHG) and criteria air contaminants (CAC) emission inventory for the Toronto Pearson International Airport (TPIA) reflective of 2007 operating conditions.

1.1 Sources Considered

Emissions to air from aircraft, auxiliary power units (APUs), ground support equipment (GSE), roadways, airside vehicles, parking lots, stationary sources and training fires have been included in this assessment. It had been agreed during the scoping of this project that emissions from storage tanks for fuels would not be included in this assessment. This decision had been based on the results of our previous assessment, which had demonstrated that fuel tank emissions are a very small contributor to only one of the six pollutant types considered in this study (i.e. VOC emissions)[1]. RWDI's 2003 report showed that fuel tanks account for (approximately 1% of the airport's VOC emissions inventory).

1.2 Pollutants Considered

Criteria Air Contaminants (CACs)

Environment Canada defines CACs as follows: There are seven air pollutants that are considered Criteria Air Contaminants (CAC) that are emitted predominantly to the air. The seven contaminants are Total Particulate Matter, Particulate Matter with a diameter less than 10 microns, Particulate Matter with a diameter less than 2.5 microns, Carbon Monoxide, Nitrogen Oxides, Sulphur Oxides, and Volatile Organic Compounds [5].

For the purposes of this assessment Particulate Matter with a diameter less than 10 microns (PM_{10}), Carbon Monoxide (CO), Nitrogen Oxides (NO_X), Sulphur Oxides (SO_X), and Volatile Organic Compounds (VOCs) have been included.

Greenhouse Gases (GHGs)

Carbon dioxide (CO_2), nitrous oxide (N_2O), methane (CH_4), hydrofluorcarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF_6) are the GHGs considered by Environment Canada [2]. However, HFCs, PFCs and SF_6 have not been included in this assessment since these pollutants are emitted in very small amounts (< 2% of Canada's national GHG emissions [2]), and the emissions sources identified at TPIA are not typical sources of these pollutants.

2. METHODOLOGY

Emissions to air of CACs and GHGs were estimated for the relevant sources at TPIA as listed in Section 1.1. The primary tool used in deriving these estimates was the Emissions and Dispersion Modeling System (EDMS) version 5.1. EDMS is a combined emissions and dispersion model for assessing air quality at civilian airports and military air bases that was developed by the Federal Aviation Administration (FAA) in cooperation with the United States Air Force (USAF). For the purposes of this assessment, the model was used to produce an inventory of emissions only – a dispersion analysis may be performed in a subsequent study.

Provided below are descriptions of the methodologies used, assumptions made and EDMS inputs and features used for each of the source types included in the emissions inventory.

2.1 Aircraft

Annual emissions from aircraft were estimated for NO_X, CO, VOCs, SO_X, PM_{10}, CO_2, N_2O and CH_4. Emissions of CACs (NO_X, CO, VOCs, SO_X, PM_{10}) were estimated using the EDMS model. Emissions of GHGs (CO_2, N_2O, CH_4) were estimated using fuel consumption rates reported by the EsDMS model and fuel-based emission factors reported by Environment Canada.

For modelling purposes, EDMS separates each landing and take-off (LTO) cycle into six categories. The six categories, referred to as modes of operation, are approach, taxi in, start-up, taxi out, takeoff and climb out and are defined as follows:

Approach: The airborne segment of an aircraft's arrival extending from the start of the flight profile or the mixing height, whichever is lower, to touchdown on the runway. Note, that for the purposes of this study the EDMS default mixing height of 3,000 ft (915 m) was used. Emissions during this mode of operation were estimated using EDMS's performance module as described below.

Taxi-In: The landing ground roll segment (from touchdown to runway exit, including reverse thrust) of an arriving aircraft and the taxiing from runway exit to gate. Taxi times were derived using EDMS's sequencing module as described below.

Start-up: Aircraft main engine start-up occurs at the gate. This methodology is only applied to aircraft with ICAO certified engines (i.e. approximately 96% of the GTAA fleet). Start-up emissions are not calculated for other aircraft non-ICAO certified engines.

Taxi Out: Taxiing from gate to runway end. Taxi times were derived using EDMS's sequencing module as described below.

Takeoff: The portion from the start of the ground roll on the runway, through wheels off, and the airborne portion of the ascent up to cutback during which the aircraft operates at maximum thrust. Emissions during this mode of operation were estimated using EDMS's performance module as described below.

Climb Out: The portion from engine cutback to the end of the flight profile, or the mixing height (3,000 ft), whichever is lower. Emissions during this mode of operation were estimated using EDMS's performance module as described below.

Data for each of the 182,122 LTOs that occurred at TPIA during 2007 were obtained from airport records. This allowed for a very detailed assessment of aircraft emissions by incorporating these data directly into EDMS using the aircraft schedule feature. For each flight, the aircraft schedule contains aircraft and engine models, date and time (touch-down time for arrivals and pushback time for departures), and the gates and runways used. The data provided by TPIA contained 1,103 blank fields for runways used and 1,162 blank fields for gates used, which had to be rectified in order to be accounted for in the model. To rectify blank runways, it was assumed that the same runway was used as the flight immediately prior for the same operation type (arrivals versus departures). This is a reasonable assumption since runway assignments are based primarily on wind speed and direction, which do not typically change drastically in short time frames. Since the 1,162 blank gate fields represents only 0.3% of all flights (1,162/366,586), it was deemed acceptable to fill blank gate fields by randomly assigning gates.

Taxi-in and taxi-out times for each flight were provided by TPIA for each LTO. These data were input into EDMS as the average taxi-in and average taxi-out times for each combination of aircraft and engine. The taxi times were calculated as the difference in time between leaving the gate and take-off. It was noted that for some records, the taxi times were quite long. This was found to be the result of an aircraft going for maintenance, de-icing or other activity where the aircraft was not taxiing. It was therefore decided that the average taxi times would be based on all movements where the taxi time was less than 100 minutes, this being the maximum value that is acceptable in the EDMS model. The average taxi times per aircraft type were between 15 to 18 minutes for passenger aircraft and 25 minutes for north field cargo aircraft.

An alternative approach for calculating taxi emissions is to use the EDMS sequencing module, which uses data in the aircraft schedule along with information about the layout of the airport's runways, taxiways and gates to model the ground movement of aircraft. For departure flights this includes any queuing that might occur along taxiways leading to runway entrances as predicted by the WWLMINET delay model (note that EDMS assumes that arrivals are able to taxi unimpeded to their gates). EDMS then consolidates this information into taxi time estimates

for each flight listed in the aircraft schedule. It is important to note that for dispersion modelling, the EDMS model will only use the taxi times calculated by the WWLMINET delay model.

The flight data obtained from TPIA indicated that 36 different aircraft models made use of the airport during 2007. A summary of these 36 aircraft models along with associated engine models can be found in Appendix A. It should be noted that, when available EDMS, default engine models were used, otherwise typical engine models were assigned for the given aircraft model.

For the purposes of this study, aircraft emissions during the airborne segments and approach ground roll were estimated using EDMS's performance module. The performance module dynamically models each flight by taking into account aircraft type, engine, weight, approach angle for arrivals, elevation and hourly weather data. The methodology used for the performance module is based on that presented in the Society of Automotive Engineers (SAE) Aerospace Information Report (AIR) 1845 and provides a much more precise and accurate assessment over the ICAO times in mode defaults that are available within EDMS.

For aircraft, EDMS outputs include total annual emissions of CACs (NO_X, CO, VOCs, SO_X and PM_{10}) in kilograms as well as total annual fuel consumption. Annual emissions of GHGs were estimated based on annual fuel consumption in conjunction with emission factors published by Environment Canada [5]. Details of the GHG calculations can be found in Appendix C and a summary of EDMS inputs can be found in Appendix B1.

2.2 Auxiliary Power Units

Annual emissions from auxiliary power units (APUs) were estimated for CACs (NO_X, CO, VOCs, SO_X and PM_{10}) using the EDMS model. APUs are essentially small jet engines that operate in one power setting only; therefore, EDMS calculates emissions accordingly by using a methodology adapted from the U.S. EPA's Procedures for Emission Inventory Preparation, Volume IV, Chapter 5. Emissions are calculated for each LTO cycle based on emission factors

and APU run times. The emission factors used were based on the default APU model assignments made by EDMS. APU run times were assumed to be 13 minutes per arrival and 13 minutes per departure, which are also EDMS defaults.

The GHG emission calculation for aircraft, as described in section 2.1, is based on total fuel consumption; therefore, it is assumed that GHG emissions from APUs have been accounted for under aircraft emissions.

2.3 Ground Support Equipment

Annual emissions from ground support equipment (GSE) were estimated for NO_X, CO, VOCs, SO_X, PM_{10}, CO_2, N_2O and CH_4. Emissions of CACs (NO_X, CO, VOCs, SO_X, PM_{10}) were estimated using the EDMS model, whereas emissions of GHGs (CO_2, N_2O, CH_4) were estimated using fuel consumption rates and Environment Canada emission factors.

Default GSE assignments based on aircraft type are available in EDMS and were applied in this assessment, with a few exceptions, as per the Servisair GSE Utilization summary provided in Appendix A and correspondence with TPIA personnel. A few notable details pertaining to modelled GSE are:

- All water service to aircraft was modelled as electric service available through airport gates.
- For wide body aircraft (B747, B767, B777, A310, A330, A340), the push tractor used by Servisair (Diesel powered Stewart & Stevenson Tug GT110) is not available in EDMS. Therefore, closest match was used (Diesel powered Stewart & Stevenson Tug GT-50H).
- The default operating times for baggage tractors and cargo loaders were doubled since two tractors are used per flight.
- Changed fuel type for Lavatory Truck from EDMS default (diesel) to gasoline.

EDMS output for GSE includes total annual fuel consumption, which was used in conjunction with emission factors published by Environment Canada [6]. Details of the GHG calculations are provided in Appendix C.

2.4 Roadways

Annual emissions from roadways in the vicinity of TPIA were estimated for CACs (NO_X, CO, VOCs, SO_X, PM_{10}) and GHGs (CO_2, CH_4, N_2O).

The data provided by GTAA consisted of annual traffic volumes for on-site roads, including those extending between (but not including) Airport Road, Highway 409, Highway 427, and the terminal buildings and those between Highway 401 and the infield area. Emission estimates for all pollutants were based on emission factors from MOBILE6, which were updated to be reflective of 2007 conditions along with the 2010 projected traffic volumes, roadway layouts based on a current TPIA site plan and the EDMS default travel speed of 56 km/h.

2.5 Parking Facilities

Annual emissions from TPIA parking lots were estimated for CACs (NO_X, CO, VOCs, SO_X, PM_{10}) using the EDMS model. GHGs (i.e. CO_2, CH_4, N_2O) using fuel consumption data and emission factors from Environment Canada's National Greenhouse Gas Inventory Report (1990 – 2005).

2007 annual parking volumes were provided by TPIA for the airports three main parking lots: Terminal 1, Terminal 2 and area 6A. Typical travel distances (total distance travelled per vehicle in the parking lot) were conservatively estimated based on TPIA site plans. In estimating travel distances it was assumed that on arrival vehicles travelled the circumference of the lot once per level, up to the middle level before parking, but travel directly to the exit on departure. EDMS defaults for idling time (1.5 minutes) and travel speed (16 kph) were used in this assessment.

GHG emissions are based on the travel distances, idling times and travel speeds described above in conjunction with fuel efficiency data from MOBILE6 and emission factors published by Environment Canada [6]. Details of GHG calculations are provided in Appendix C.

2.6 Airside Vehicles

Annual emissions from On-site Service Vehicles (Airside vehicles) were estimated for CACs and GHGs using fuel consumption data provided by TPIA in conjunction with MOBILE6 emission factors. Details of emissions calculations for CACs (NO_X, CO, VOCs, SO_X, PM_{10}) and GHGs (CO_2, CH_4, N_2O) are provided in Appendices D and C respectively.

2.7 Stationary Sources

A description of each stationary source (ID, Location, Engine Make) and their associated operational data (i.e. Rated Size, Run time, Fuel Usage, and Emission Factors) are presented in Appendix B1.

2.7.1 Cogen Turbines

Annual emissions from the turbines CTG1 and CTG2 at the GTAA Cogen Facility were estimated for NO_X, CO, VOCs, SO_X, PM_{10}, CO_2, CH_4 and N_2O and included in the emissions inventory. Emission factors for stationary gas turbines are not included in the library of emission factors within EDMS 5.1; however, EDMS allows users to enter custom emission factors that are used in computation of annual emissions for CO, NO_X, SO_X, and PM_{10}. Units of kilograms per thousand cubic metres of fuel burned were chosen for the custom emission factors.

The custom emission factors used for CO and NO_X were back calculated from continuous emission monitoring (CEM) results available in the Pinchin Report [4]. The following sample calculation demonstrates how the custom emission factor, which was used as input for EDMS, was calculated for CO for CTG1. From the table entitled, "Facility Year CEMS Report 2007",

of the Pinchin Environmental Report, the total annual mass of CO emitted from CTG1 is 108.7 tonnes, and the total annual natural gas consumption is 1,057,153,601 (1,017,629,224 + 39,524,377) cubic feet (assumed STP). Therefore, the CTG1 CO emission factor, *CO Emisfact*, was calculated as:

$$CO\ Emissions = CO\ Emisfact \times Total\ Volume\ Fuel\ Consumed$$

$$\Rightarrow CO\ Emisfact = \frac{CO\ Emissions\,[\text{kg}]}{Total\ Volume\ Fuel\ Consumed\,[1000\,\text{m}^3]}$$

$$\Rightarrow CO\ Emisfact = \frac{108.7\,[\text{tonnes}]}{1{,}057{,}153{,}601[\text{ft}^3]} \times \frac{1[\text{ft}^3]}{0.0283[\text{m}^3]} \times \frac{1000[\text{kg}]}{1[\text{tonnes}]} \times \frac{1000[\text{m}^3]}{1[1000\,\text{m}^3]}$$

$$\Rightarrow CO\ Emisfact = 3.63\,[\text{kg}/1000\,\text{m}^3]$$

The NO_X emission factor for CT1 and CO and NO_X emission factors for CTG2 were calculated similarly. This approach was necessary to allow the emissions data to be input to the EDMS model, a necessary step for the development of a comprehensive EDMS model, which can be used for a complete air quality assessment in the future.

The emission factors for SO_X, PM_{10}, CO_2, and N_2O were taken from Section 3.1, Stationary Gas Turbines, of the U.S. EPA's compilation of emission factors (AP-42). The following sample calculation demonstrates the conversion from imperial units, as provided in the AP-42 section, to the metric units required by EDMS. From Table 3.1-2a of AP-42 Section 3.1, the emission factor for SO_2 is 0.94S lb/MMBTU, where S is the percentage sulphur content in the natural gas being burned. However, since the sulphur content of the natural gas is unknown, the emission factor 3.4 E-03 lb/MMBTU was used as per note "h" of the table. Assuming a heat of combustion of natural gas of 1020 BTU/SCF and assuming that all the sulphur in the fuel is converted to SO_2, the SO_X emission factor, *SO_X Emisfact*, was calculated as:

$$SO_x\ Emisfact = 3.4 \times 10^{-3}\ \frac{[\text{lb}]}{[\text{MMBTU}]} \times 1020 \frac{[\text{BTU}]}{[\text{SCF}]} \times \frac{1[\text{MMBTU}]}{10^6\,[\text{BTU}]} \times \frac{1[\text{kg}]}{2.20[\text{lb}]} \times \frac{1[\text{SCF}]}{0.0283[\text{m}^3]} \times \frac{1000[\text{m}^3]}{1[1000\,\text{m}^3]}$$

$$= 0.0557\,[\text{kg}/1000\,\text{m}^3]$$

Emission factors for PM_{10}, CO_2, CH_4 and N_2O for both CTG1 and CTG2 were calculated similarly.

VOC emissions were calculated by using, as a surrogate, Total Hydrocarbon (THC) emission factors published in AP-42.

2.7.2 Central Utility Plant Boilers

Annual emissions from the four boilers at the GTAA's Central Utility Plant (CUP) were estimated for NO_X, CO, VOCs, SO_X, PM_{10}, CO_2, CH_4 and N_2O and included in the emissions inventory.

The boilers burn natural gas primarily, but use No. 2 fuel oil as a backup fuel. Emissions from both fuel types were included and are based on default emission factors in EDMS. Emissions due to the combustion of natural gas are inventoried under source ID's B1-NG, B2-NG, B3-NG and B4-NG and are based on emission factors for uncontrolled, wall-fired boilers rated at < 100 million BTU/hr. Emissions due to the combustion of No. 2 fuel oil are inventoried under source ID's B1-No2, B2-No2, B3-No3 and B4-No2 and are based on emission factors for boilers rated at less than 100 million BTU/hr that burn distillate oil. Also, in calculating SO_X emissions from No. 2 fuel oil combustion, a sulphur content of 0.02% is used, which is based on the "Combustion Sources Input Sheet" of the Pinchin Report [4]. In each case, annual fuel consumption was also obtained from the Pinchin Report.

2.7.3 Backup Generators (< 600 hp)

Annual emissions from 8 backup generators that are rated less than 600 hp were estimated for NO_X, CO, VOCs, SO_X, PM_{10}, and CO_2 and included in the emissions inventory.

Emission estimates for NO_X, CO, VOCs, SO_X, and PM_{10} are based on default emission factors in EDMS for diesel powered emergency generators using EPA methodology, along with the total annual run time and rated power for each generator. The annual run times and rated powers (rated electrical output power in kW) were obtained from the TPIA document, "Annual Standby Generator Run Time Report", which has been included in Appendix A. Since EDMS requires the rated power to be given in terms of rated mechanical input power (hp), it was

necessary to convert from electrical output power, *kWe*, to mechanical input power, *kWm*. This was accomplished by assuming that generator fans consume approximately 10% of mechanical input power and that the alternator is 95% efficient [3]. For example, generator 78-0165, which is rated at 750 kW, was calculated to have a mechanical power of:

$$\begin{aligned} kWm &= \frac{kWe}{0.9 \times 0.95} \times \frac{1.341[\text{hp}]}{1[\text{kW}]} \\ &= \frac{750[\text{kW}]}{0.9 \times 0.95} \times \frac{1.341[\text{hp}]}{1[\text{kW}]} \\ &= 1176[\text{hp}] \end{aligned}$$

Emission estimates for greenhouse gases (CO_2) are based on emission factors from Section 3.3 of AP-42, along with the total annual run time and rated power for each generator.

2.7.4 Backup Generators (> 600 hp)

Annual emissions from 16 backup generators that are rated greater than 600 hp were estimated for NO_X, CO, VOCs, SO_X, PM_{10}, and CO_2 and included in the emissions inventory. Emission factors for backup generators rated greater than 600 hp are not included in the library of emission factors within EDMS 5.1; however, EDMS allows users to enter custom emission factors that are used in computation of annual emissions for CO, NO_X, SO_X, PM_{10}, and TOCs. Units of kilograms per hour of operation were chosen for the custom emission factors.

The emission factors for SO_X and CO_2 were taken from Section 3.4, Large Stationary Diesel and All Stationary Dual-fuel Engines, of AP-42. The following sample calculation demonstrates the conversion from imperial units, as provided in the AP-42 section, to the metric units required by EDMS. From Table 3.4-1 of AP-42 Section 3.4, the emission factor for SO_2 is 8.09 E-03S lb/hp-hr, where S is the percentage sulphur content in the diesel being burned. The sulphur content of diesel was assumed to be 0.5% and it was assumed that all the sulphur in the fuel is converted to SO_2. For generator 78-0165 (rated at 1176 hp using the conversion from electrical power to mechanical power from Section 2.7.3 above) the SO_X emission factor, *SO_X Emisfact*, was calculated as:

$$SO_x\ Emisfact = 8.09 \times 10^{-3} \left[\frac{\text{lb}}{\text{hp} \cdot \text{hr}}\right] \times 0.5\,[\%] \times 1176\,[\text{hp}] \times \frac{1\,[\text{kg}]}{2.20\,[\text{lb}]}$$
$$= 2.16\,[\text{kg/hr}]$$

Emission factors for CO_2 for all generators rated greater than 600 hp were calculated similarly.

The emission factor for PM_{10} was taken from Table 3.4-2 of Section 3.4 of AP-42 for total PM_{10}. For most generators, an estimate of the rate of fuel consumption in gallons per hour was taken from, "Approximate Fuel Consumption Chart", published by Diesel Service and Supply Inc., which has been included in Appendix A. However, for generator 78-0220, the fuel consumption rate was deduced from the Equipment Summary Table of [4]. Power ratings for each generator were taken from the TPIA report, "Annual Standby Generator Run Time Report". The following sample calculation demonstrates calculation of the emission factor that was entered into EDMS for PM_{10} emissions from generator 78-0165. The estimated rate of fuel consumption for this 1176 hp generator is 53.4 gal/hr and from Table 3.4-2 of AP-42, the appropriate emission factor is 0.0573 lb/MMBTU. Therefore, assuming a heat of combustion of 137,000 BTU/gal for diesel, the emission factor for PM_{10}, *PM_{10} Emisfact*, in the units required for EDMS is calculated as:

$$PM_{10}\ Emisfact = 0.0573 \left[\frac{\text{lb}}{\text{MMBTU}}\right] \times 137{,}000 \left[\frac{\text{BTU}}{\text{gal}}\right] \times \frac{1\,[\text{MMBTU}]}{10^6\,[\text{BTU}]} \times \frac{1\,[\text{kg}]}{2.20\,[\text{lb}]} \times 53.4\,[\text{gal/hr}]$$

$$PM_{10}\ Emisfact = 0.191\,[\text{kg/hr}]$$

2.8 Training Fires

The TPIA fire training facility burns propane during emergency fire simulations. In 2007, approximately 177,600 litres of propane were burned. Annual emissions were estimated for NO_X, CO, VOCs, SO_X, PM_{10}, CO_2, CH_4 and N_2O and were included in the emissions

inventory. Emissions of NO_X, CO, VOCs, SO_X, and PM_{10} are based on default emission factors within EDMS, whereas GHG emissions are based on emission factors published by Environment Canada [2]. Details of the GHG calculations are provided in Appendix C.

3. RESULTS

Detailed results of 2007 annual CAC emissions are provided in Appendices D. Detailed results of 2007 annual GHG emissions are provided in Appendix C. The following sections summarize the findings of this assessment and compare them to the results of the previous study.

3.1 Carbon Monoxide

The results of the CO emissions inventory are presented in Table 1.

Table 1: Carbon Monoxide Emissions for 2007 and a comparison to previous estimates

	Annual Emissions (tonnes)			
	Current Study	Previous Study[1]		
Source Category	Year 2007	Year 2000	Year 2005	Year 2010
Aircraft	1,518	1,051	1,301	1,410
APU	53	n/a	n/a	n/a
Ground Support Equipment	3,221	2,271	2,817	3,022
Roadways	420	2,289	2,408	1,835
Parking Lots	79	486	476	487
Stationary Sources	153	2	5	6
Training Fires	1	1	1	1
Airside Vehicles	77	n/a	n/a	n/a
Total	5,522	6,098	7,008	6,762

Note: [1] 2005 and 2010 emissions are based on projections provided to RWDI for the previous report, published in 2003

These results show that emissions are less than predicted in our previous study, with a redistribution of the CO inventory, towards aircraft and GSE emissions. Roadway emissions are substantially less than what had been predicted the previous studies. This is considered to be the result of the use of more recent emission factors in EDMS and the use of 2007-monitored traffic

data, which is substantially lower than the traffic that had been predicted in the projections from our earlier study. While stationary source emissions are substantially higher than the previous inventory, they are still very small contributors to the overall inventory.

3.2 Nitrogen Oxides

The results of the NO_X emissions inventory are presented in Table 2.

Table 2: Nitrogen Oxides Emissions for 2007 and a comparison to previous estimates

	Annual Emissions (tonnes)			
	Current Study	Previous Study[1]		
Source Category	Year 2007	Year 2000	Year 2005	Year 2010
Aircraft	1,687	1,594	2,012	2,265
APU	52	n/a	n/a	n/a
Ground Support Equipment	296	277	248	266
Roadways	51	324	345	263
Parking Lots	9	25	24	26
Stationary Sources	61	6	20	26
Training Fires	<1	<1	<1	<1
Airside Vehicles	32	n/a	n/a	n/a
Total	2,188	2,226	2,651	2,846

Note: [1] 2005 and 2010 emissions are based on projections provided to RWDI for the previous report, published in 2003

These results show that emissions are less than predicted in our previous study, with a substantial reduction in aircraft emissions compared to predicted levels. Roadway and parking lot emissions are also substantially less than what was predicted. This is considered to be the result of the use of more recent emission factors in EDMS and the use of 2007-monitored traffic data, which is substantially lower than the traffic that had been predicted in the projections from our earlier study. While stationary source emissions are substantially higher than the previous inventory, they are still very small contributors to the overall inventory.

3.3 Sulphur Dioxide

The results of the SO_2 emissions inventory are presented in Table 3.

Table 3: Sulphur Dioxide Emissions for 2007 and a comparison to previous estimates

	Annual Emissions (tonnes)			
	Current Study	Previous Study[1]		
Source Category	**Year 2007**	**Year 2000**	**Year 2005**	**Year 2010**
Aircraft	151	110	129	144
APU	7	n/a	n/a	n/a
Ground Support Equipment	13	11	10	11
Roadways	<1	14	17	13
Parking Lots	<1	1	1	1
Stationary Sources	5	4	<1	<1
Training Fires	<1	<1	<1	<1
Airside Vehicles	<1	n/a	n/a	n/a
Total	177	140	157	169

Note: [1] 2005 and 2010 emissions are based on projections provided to RWDI for the previous report, published in 2003

These results show that total sulphur dioxide emissions are slightly higher than the range of emissions predicted for the bracket years of 2005 and 2010. There is an increased weighting towards aircraft and GSE compared to roadway emissions.

3.4 Volatile Organic Compounds

The results of the VOC emissions inventory are presented in Table 4.

Table 4: Volatile Organic Compound (VOC) Emissions for 2007 and a comparison to previous estimates

	Annual Emissions (tonnes)			
	Current Study	Previous Study[1]		
Source Category	**Year 2007**	**Year 2000**	**Year 2005**	**Year 2010**
Aircraft	337	217	205	222
APU	4	n/a	n/a	n/a
Ground Support Equipment	108	79	84	91
Roadways	27	254	276	210
Parking Lots	7	47	45	44
Stationary Sources	12	3	8	11
Training Fires	1	1	1	1
Airside Vehicles	6	n/a	n/a	n/a
Total	502	601	619	579
Total with Fuel Tanks	n/a	609	630	589

Note: [1] 2005 and 2010 emissions are based on projections provided to RWDI for the previous report, published in 2003

These results show that emissions are less than predicted in our previous study, with a substantial increase in the contribution of aircraft and GSE emissions compared to predicted levels. Stationary source emissions are substantially lower than the previous inventory.

3.5 Inhalable Particulate Matter (PM_{10})

The results of the PM_{10} emissions inventory are presented in Table 5.

Table 5: PM_{10} Emissions for 2007 and a comparison to previous estimates

	Annual Emissions (tonnes)			
	Current Study	Previous Study[1]		
Source Category	Year 2007	Year 2000	Year 2005	Year 2010
Aircraft	12	n/a	n/a	n/a
APU	6	12	11	12
Ground Support Equipment	8	15	15	11
Roadways	2	1	1	1
Parking Lots	<1	<1	1	1
Stationary Sources	7	2	2	4
Training Fires	2	n/a	n/a	n/a
Airside Vehicles	1	30	29	28
Total	39	33	32	31

Note: [1] 2005 and 2010 emissions are based on projections provided to RWDI for the previous report, published in 2003

Unfortunately the previous version of EDMS did not have emission factors available for PM_{10} from aircraft. Nevertheless, the emissions from GSE are slightly lower than previously predicted. Stationary sources are a substantially larger source of emissions than was previously estimated.

3.6 Greenhouse Gas Emissions

The results of the GHG emissions inventory are presented in Table 6.

Table 6: Greenhouse Gas Emissions for 2007 and a comparison to previous estimates

	Annual Emissions (tonnes CO_2e)			
	Current Study	Previous Study[1]		
Source Category	Year 2007	Year 2000	Year 2005	Year 2010
Aircraft	410,668	1,132,526	1,261,039	1,435,475
APU	n/a	n/a	n/a	n/a
Ground Support Equipment	63,377	n/a	n/a	n/a
Roadways	17,415	67,614	82,441	64,354
Parking Lots	2,497	4,306	4,853	5,535
Stationary Sources	120,822	616	18	22
Training Fires	270	n/a	n/a	n/a
Airside Vehicles	5,594	n/a	n/a	n/a
Total	620,643	1,205,063	1,348,351	1,505,386

Note: [1] 2005 and 2010 emissions are based on projections provided to RWDI for the previous report, published in 2003

GHG emissions for aircraft are substantially lower than what was predicted in the previous study. This has been attributed to the updated approach using fuel consumption figures from EDMS. Stationary source emissions are orders of magnitude higher in this study compared to the previous study. This is due the substantially higher consumption of natural gas in the power plant. For the Year 2000, natural gas consumption at the power plant had been 2.6 million cubic metres. In 2007, Gas Turbines CGT1 and CGT2 combined consumed 59 million cubic metres.

3.7 Impact of Taxi Times Calculation Method

The results reported above are based on the average taxi times provided by TPIA for each aircraft-engine combination. An alternative approach is to allow EDMS to calculate taxi times based on departure times and estimated queuing for aircraft waiting to depart off the same runway. The TPIA-provided data is expected to be more accurate than the EDMS calculation, since it is based on actual data. However, the taxi time in the TPIA data is based purely on the

difference between pushback time and departure time. If there are any unexpected delays due to weather and aircraft equipment malfunctions, it is possible that the "taxi clock" will continue to run, in spite of the fact that aircraft engines may be shut down or be operating at much lower levels than what would be considered typical taxi loads.

An evaluation of the impact of taxi-time calculation method on reported aircraft emissions is presented in Table 7. It can be seen that there is a substantial difference in Taxi Out emissions and a less substantial impact on Taxi In emissions. Overall aircraft emissions differ by between 8% and 37%, depending on the pollutant under consideration.

We understand that TPIA has put a substantial effort into the minimization of on-the-ground delays, which should help to bring average taxi times closer to those estimated by the EDMS model. In order to develop a proper evaluation of the impact of these efforts, we recommend a longitudinal evaluation of taxi times over multiple years.

Table 7: Impact of Taxi-time calculation method on aircraft emissions.

Mode of Operation	Taxi Time Calc. Method	2007 Annual Emissions (tonnes)				
		NO_x	CO	VOCs	SO_x	PM_{10}
Taxi Out	GTAA Times	184	904	167	47	4
	EDMS Times	79	387	74	20	2
	% difference	-57%	-57%	-56%	-57%	-57%
Taxi In	GTAA Times	125	468	95	27	2
	EDMS Times	93	429	82	23	2
	% difference	-26%	-8%	-13%	-16%	-17%
Aircraft Total	GTAA Times	1,687	1,518	337	151	12
	EDMS Times	1,548	962	232	120	10
	% difference	-8%	-37%	-31%	-21%	-20%

4. RECOMMENDATIONS

Recommendations for this stage of the air quality management analysis are grouped into two main sections: (i) identifying the next steps in modelling refinement and (ii) developing a framework for completing the air quality management plan. We recognise that, while the determination of facility impacts has not been fully updated with the new EDMS version, there is sufficient information at this stage to identify the key source of emissions on site and to identify candidate options for further reducing air quality impacts in the surrounding area.

4.1 Refinements to the Emissions Inventory

It is expected that the results of this assessment provide a reasonably accurate reflection of the airport's CAC and GHG emissions for the year 2007. However, the accuracy of the model would be improved with the inclusion of up-to-date road traffic volumes and roadway configurations should current data become available. We have scheduled time in the coming months to update the model once this data is provided to us. Other areas to improve the emissions inventory include the following:

- Resolution of emissions from annual totals into 15-minute operational profiles.
- Refinement of the GSE profiles (i.e. fuel type, power rating) by airline / service provider.
- Consideration of seasonal variation in APU usage

For the dispersion modelling assessment, it will be necessary to ensure that the physical distribution of emissions sources has been properly accounted for. For this, we will require feedback from the GTAA on the following items:

- Location of typical on-site vehicle operation routes
- Confirmation of typical taxi routes for flights

4.2 Developing Framework for Air Quality Management Plan

In addition to the development of the emissions model and the dispersion model, it will be critical that the airport continue to develop the other elements of the Air Quality Management Plan. The other elements of the Plan include the following:

- Revision of cumulative effects from surrounding sources.
- Determining the pollutants of greatest concern to the public and their health.
- Identification of candidate solutions for air emission reductions.

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APPENDIX A

TPIA 2007 Aircraft Summary

RWDI Project #0925039A

YYZ Code	Assumed EDMS Code (ACCODE)	Aircraft Description	Assumed EDMS Engine Code (UID)	Engine Description	Flight Count	% of Total Flights
310	A310-2	Airbus A310-200 Series	1GE013	CF6-80A3	4260	1.2%
318	A318-1	Airbus A318-100 Series	7CM048	CFM56-5B8/P SAC	14	0.0%
319	A319-1	Airbus A319-100 Series	3CM028	CFM56-5B6/P	29119	7.9%
320	A320-2	Airbus A320-200 Series	1IA003	V2527-A5	36558	10.0%
321	A321-1	Airbus A321-100 Series	1IA005	V2530-A5	9754	2.7%
330	A330-2	Airbus A330-200 Series	CF680C	CF6-80CB42	4002	1.1%
333	A330-3	Airbus A330-300 Series	1GE033	CF6-80E1A2	5	0.0%
340	A340-2	Airbus A340-200 Series	1CM010	CFM56-5C2	4857	1.3%
343	A340-3	Airbus A340-300 Series	1CM011	CFM56-5C3	8	0.0%
727	B727-2	Boeing 727-200 Series	1PW014	JT8D-17A	52	0.0%
737	B737-7	Boeing 737-700 Series	3CM031	CFM56-7B22	52992	14.5%
747	B747-3	Boeing 747-300 Series	1GE009	CF6-50E2	1506	0.4%
757	B757-2	Boeing 757-200 Series	4PW073	PW2040	3980	1.1%
762	B767-2	Boeing 767-200 Series	1GE010	CF6-80A	41	0.0%
763	B767-3	Boeing 767-300 Series	2GE055	CF6-80C2B7F 1862M39	41	0.0%
767	B767-4	Boeing 767-400	3GE058	CF6-80C2B8FA 1862M39	23964	6.5%
777	B777-2	Boeing 777-200 Series	2PW061	PW4077	3636	1.0%
BEC	BEECH400	Raytheon Beechjet 400	1PW037	JT15D-5, -5A, -5B	17509	4.8%
CRJ	CRJ7	Bombardier CRJ-700	5GE083	CF34-8C1	56808	15.5%
DC9	DC9-4	Boeing DC-9-40 Series	1PW008	JT8D-11	3038	0.8%
DH8	DHC8-3	DeHavilland DHC-8-300	PW123	PW123	39014	10.6%
EMB	EMB120	Embraer EMB120 Brasilia	PW118	PW118	16099	4.4%
ERJ	ERJ170	Embraer ERJ170	6GE094	CF34-8E5 LEC	27257	7.4%
L11	L1011-3	Lockheed L-1011 Tristar	1RR005	RB211-524B series Phase 2	66	0.0%
M83	MD83	Boeing MD-83	4PW071	JT8D-219 Environmetal Kit (E_Kit)	5052	1.4%
M90	MD90	Boeing MD-90	1IA002	V2525-D5	2	0.0%
CCJ	CL600	Bombardier Challenger 600	1TL001	ALF 502L-2	9756	2.7%
EM3	ERJ135	Embraer ERJ135	6AL012	AE 3007A1/3 Type 2	8154	2.2%
EM4	ERJ145	Embraer ERJ145	4AL003	AE3007A	7702	2.1%
J28	DO328JET	Dornier 328 Jet	7PW078	PW306B Annular	1174	0.3%
E75	ERJ175	Embraer ERJ175	6GE094	CF34-8E5 LEC	84	0.0%
E90	ERJ190	Embraer ERJ190	6GE094	CF34-8E5 LEC	59	0.0%
77W	B777-3ER	Boeing 777-300 ER	7GE099	GE90-115B DAC	11	0.0%
IL6	IL62	Ilyushin 62 Classic	1AA003	D-30KU	6	0.0%
M11	MD11	Boeing MD-11	2GE049	CF6-80C2D1F 1862M39	4	0.0%
77L	B777-3	Boeing 777-300 Series	2PW062	PW4084	2	0.0%

Servisair

GSE Utilization

Narrow Body Aircraft	Assigned GSE		Fuel	Arr Time (min)	Dep Time (min)
B727, B737, B757 A318, A319, A320, A321	Push Tractor	Stewart & Stevenson Tug GT50	Diesel	0	8
	Baggage Tractor	Stewart & Stevenson Tug MA50	Gas	37	38
	Baggage Tractor	Stewart & Stevenson Tug MA50	Gas	37	38
	Baggage Tractor	MX4 AC	Electric	7	10
	Belt Loader	Stewart & Stevenson Tug 660	Gas	24	24
	Belt Loader	Stewart & Stevenson Tug 660	Gas	24	24
	Cabin Service Truck	Hi Way F650	Diesel	10	10
	Lavatory Truck	Wollard (F350) / Vesterguard	Gas	15	0

Wide Body Aircraft	Assigned GSE		Fuel	Arr Time (min)	Dep Time (min)
B747, B767, B777 A310, A330, A340	Push Tractor	Stewart & Stevenson Tug GT110	Diesel	0	8
	Baggage Tractor	Stewart & Stevenson Tug MA50	Gas	60	60
	Baggage Tractor	Stewart & Stevenson Tug MA50	Gas	60	60
	Baggage Tractor	MX4 AC	Electric	11	17
	Cargo Loader	FMC Comander 15 / TLD Lantis	Diesel	40	40
	Cargo Loader	FMC Comander 15 / TLD Lantis	Diesel	40	40
	Belt Loader	Stewart & Stevenson Tug 660	Gas	17	18
	Cabin Service Truck	Hi Way F650	Diesel	17	18
	Lavatory Truck	Wollard (F350) / Vesterguard	Gas	25	0

GTAA STANDBY DIESEL

The following list contains (name plate data) information about various Diesel Generators located at all over the airport facilities. Portable small generators are not part of this list. Missing information has been estimated and shown in red colour.

GENERATOR SET LOCATION	GENERATOR SIZE AND DESCRIPTION	ENGINE, MAKE SIZE AND DESCRIPTION	DIES.FUEL TANK CAPACITY
Central Utility Plant (CUP) Room No: 132	**2000 KW** S No:4GN00687 Model: SR-4B	**CATERPILLAR** 2145 KW @ 1800 RPM S No:6HN00884 Model:3516B	2200 Lit (indoor) 2x40,000 Lit outdoor shared with CUP Boilers
Field Electrical Center Room No: FEC No:1	**750 KW** S No: 677961 ORDER: LBIA-12-216	**CUMMINS** 1340 HP (999.6 KW) @ 1800 RPM S No: 37176579 Model:OST30G3	1110 Lit (Indoor) 10,000 Lit (Outdoor)
North Fire Hall Room No:106	**40 KW** I D No: A980685256 Frame: UC1224C1	**PERKINS** 50 KW Estimate S No:U776290B List No: LD35008	455 Lit
AESC and South Fire Hall Room: Outside	**120 KW** S No:12B4829-M120 Model: SB208/120/416	**PERKINS** 135KW Estimate S No:U638642B Model: YD50517	2x200 gallons (Inside Enclosure)
Sewage Pump Station Area 2B Room No: 10 Silver Dart	**30 KW** S.No: 91562-1 Model: 30 C	**CUMMINS** 66 HP (49.2) KW) @ 1800 RPM S No: 44668068 Model:4B3.9-G	227 Lit (Indoor)
Air Maintenance Facility (AMF) Room No: 121	**300 KW** S.No:M275569-G Model: D300-CU/S9	**CUMMINS** 465 HP (346.9 KW) @1800 RPM S.No:12006274 Model:NTA-855-G2	2x1110 Lit (Indoor)
Administration Building Room No: Penthouse	**650 KW** S.No: 7937 Frame: 684	**DETROIT** 725 KW Estimate S.No:16VF005044 Model:81637305	Small Day tank Inside **(Main 4500 Lit. tank under ground)**
Peel Police Building Room: Outside	**230 KW** S.No:2055733 Model: 20A01141-S	**GENERAC** 275KW Estimate S.No:2055733 Model: 20A01141-S	747 gallons **(** integral part of Gen. set **)**

GENERATOR SET LOCATION	GENERATOR SIZE AND DESCRIPTION	ENGINE, MAKE SIZE AND DESCRIPTION	DIES.FUEL TANK CAPACITY
3 Bay Hangar Room No: Outside	**500 KW** S.No:CER00636 Model: SR-4	**CATERPILLAR** 764 HP(569.9kw) @1800 RPM S No:7WG00928 Model:3456	500 gallons (Inside Enclosure)
Infield Terminal (IFT) Room: Outside Enclosure	**500 KW** S.No: JOOO163284 Model:HC544C	**MITSUBISHI** 575 KW Estimate S.No:32629 Model:S6A3-PTA	Day Tank: 227 Lit Main tank inside building
Terminal 1 Generator No: 1 Room No: ED 1057B	**1500 KW** S.No:8NN00995 Model: SR-4B	**CATERPILLAR** 1879 KW @ 1800 RPM S.No:25ZO7048 Model: 3516	1135 Lit Day tank
Terminal 1 Generator No: 2 Room No: FD 1034	**2000 KW** S No:4GN00902 Model: SR-4B	**CATERPILLAR** 2145 KW @ 1800 RPM S No:IHZ 02203 Model:3516	1135 Lit Day tank
Terminal 1 Generator No: 3 Room No: GC 1019A	**2000 KW** S No:4GN00835 Model: SR-4B	**CATERPILLAR** 2145 KW @ 1800 RPM S No:6HN01708 Model:3516	1135 Lit Day tank
Terminal 1 Generator No: 4 Room No: ED 1057B	**1500 KW** S.No:8NN01001 Model: SR-4B	**CATERPILLAR** 1879 KW @ 1800 RPM S.No:25Z07052 Model: 3516	1135 Lit Day tank
Terminal 1 Generator No: 5 Room No: FG 1039A	**1500 KW** S.No:8NN01230 Model: SR-4B	**CATERPILLAR** 1879 KW @ 1800 RPM S.No:GZR00127 Model: 3516	1135 Lit
Terminal 1 T1 Parking Garage Room No:133-3	**1750 KW** S.No:8NN00928 Model: SR-4B	**CATERPILLAR** 1879 KW @ 1800 RPM S.No:252007048 Model: 3516	Small Day tank plus 25000 Lit tank indoors
Terminal 1 East Satellite Building Room:Outside Enclosure	**450 KW** S No:GF99200/1 Model:LSA471L9	**MITSUBISHI** 500 KW Estimate S.No:32237 Model: S6A3-PTAS	1140 Lit (Inside Enclosure)
APM Station 6100 Viscount Rd Room:Outside	**500 KW** S.No: FO40652378 Model: DFEK-5673294	**CUMMINS** 750 HP (559.5KW) @1800 RPM S.No:79052154 Model:2SX15-	400 gallons (Integral part of Gen.set)

GENERATOR SET LOCATION	GENERATOR SIZE AND DESCRIPTION	ENGINE, MAKE SIZE AND DESCRIPTION	DIES.FUEL TANK CAPACITY
Terminal 3 Sub Stn A-Gen1 Room No:F 002 Basement	**1500 KW** S.No:6AA01093 Model:SR-4	**CATERPILLAR** 2168 HP (1617 KW)@1800 RPM S.No:3YF00388 Model:3512-SID	464 Lit Day tank Main tank: 6000 gal.
Terminal 3 SubStn B-Gen 2 Room:K 003A Basement	**1500 KW** S.No:6AA01094 Model:SR-4	**CATERPILLAR** 2168 HP (1617 KW)@1800 RPM S.No:3YF00387 Model:3512-SID	464 Lit Day tank Main tank: 6000 gal.
Terminal 3 Satellite Building Room No:SB 1	**545 KW** S.No:05848/ 02 Type:HC 534F2	**CUMMINS** 900 HP (671.4 KW) @1800 RPM S.No:25175386 Model:VTA 28G2	120 gal. Day tank Main tank: 1200 gal.
T3 Taxi Limo Compound Pre Arranged Building Room:Outside	**35 KW** S.No: HO10275718 Model: DGBB-4964816	**CUMMINS** 51 KW @ 1800 RPM S.No:46133489 Model:4B39-G2	150 Lit Estimate (Integral part of the Gen.Set)
T3 Taxi Limo Compound CVHA Building Room:Outside	**60 KW** S.No: HO10275719 Model: DGCB-4964812	**CUMMINS** 76 KW @ 1800 RPM S.No:46138393 Model:4BT39-G4	200 Lit Estimate (Integral part of the Gen.Set)
T3-Sewage Pumping Station Area 6A	**200 KW** S.No:189179/1 Frame:LL5024J	**CATERPILLAR** 325 HP(242.5 KW)@1800 RPM S.No:OLY00000-ENNSO1967	1485 Lit (Integral part of Gen.Set)

GTAA STANDBY DIESEL FIRE

The following list contains (name plate data) information about standby Diesel Fire Pumps, located at the 3 Bay Hangar. Missing information has been estimated and shown in red colour. These machines are test run every month @ rated load.

FIRE PUMP LOCATION	ENGINE MAKE AND DESCRIPTION	RATED SIZE	DIES.FUEL TANK CAPACITY
3 Bay Hangar Deluge Pump No: 1 Room No: 160	**Water Fire Pump (Clark-Detroit)** S.No: 8RF-015101 Model:DDFPL8FA	**500 HP** (373 KW) @ 2100 RPM	2270 Lit Indoors
3 Bay Hangar Deluge Pump No: 2 Room No: 160	**Water Fire Pump (Clark-Detroit)** S.No: 8RF-015104 Model:DDFPL8FA	**500 HP** (373 KW) @ 2100 RPM	2270 Lit Indoors
3 Bay Hangar Deluge Pump No:3 Room No: 160	**Water Fire Pump (Clark-Detroit)** S.No: 8RF-015098 Model:DDFPL8FA	**500 HP** (373 KW) @ 2100 RPM	2270 Lit Indoors

GENERATOR SET LOCATION	GENERATOR SIZE AND DESCRIPTION	ENGINE, MAKE SIZE AND DESCRIPTION	DIES.FUEL TANK CAPACITY
3 Bay Hangar Deluge Pump No: 4 Room No: 160	**Water Fire Pump (Clark-Detroit)** S.No: 8RF-015094 Model:DDFPL8FA	**500 HP** (373 KW) @ 2100 RPM	2270 Lit Indoors
3 Bay Hangar Deluge Pump No: 5 Room No: 160	**Water Fire Pump (Clark-Detroit)** S.No: 8RF-015102 Model:DDFPL8FA	**500 HP** (373 KW) @ 2100 RPM	2270 Lit Indoors
3 Bay Hangar Foam Fire Pump No: 1 Room No: 160	**Foam Fire Pump (John Deere)** S.No: 10091 Model:EM14099T	**94 HP** (70KW) @ 1760 RPM	100 gal. indoors
3 Bay Hangar Foam Fire Pump No: 2 Room No: 160	**Foam Fire Pump (John Deere)** S.No: 10093 Model:EM14099T	**94 HP** (70KW) @ 1760 RPM	100 gal. indoors
3 Bay Hangar Foam Fire Pump No: 3 Room No: 160	**Foam Fire Pump (John Deere)** S.No: 10092 Model:EM14099T	**94 HP** (70KW) @ 1760 RPM	100 gal. indoors

GTAA STANDBY DIESEL HYDRAULIC MOTORS (APM-TRAINS)

The following list contains (name plate data) information about two Standby Diesel Hydraulic Motors , located at the APM station. These are test run every week for few minutes.These hydraulic motors are not meant for regular running of trains, but used only to bring trains back to the station, in case the elecric power fails. Missing information has been estimated and shown in red colour. Average load factor has been estimated as 60%.

DIESEL HYDRAULIC MOTOR LOCATION	ENGINE MAKE AND DESCRIPTION	RATED SIZE	DIES.FUEL TANK CAPACITY
APM Station Diesel Hydraulic Motor No. 1 Room: 201A	**CUMMINS S No 35086711 Model: M11-C**	**300 HP** (223.8 KW) @ 2100 RPM	160 Lit (Integral part of the Engine Pump set.)
APM Station Diesel Hydraulic Motor No. 2 Room: 201A	**CUMMINS S No 35079703 Model: M11-C**	**300 HP** (223.8 KW) @ 2100 RPM	160 Lit (Integral part of the Engine Pump set.)

Diesel
SERVICE & SUPPLY INC
755 N 9th Ave. Brighton, Colorado 80603
Sales@DieselServiceandSupply.com
800-853-2073 | 303-659-2073 | 303-659-7923 fax
www.dieselserviceandsupply.com

Approximate Fuel Consumption Chart

This chart approximates the fuel consumption of a diesel generator based on the size of the generator and the load at which the generator is operating at. Please note that this table is intended to be used as an estimate of how much fuel a generator uses during operation and is not an exact representation due to various factors that can increase or decrease the amount of fuel consumed.

Generator Size (kW)	1/4 Load (gal/hr)	1/2 Load (gal/hr)	3/4 Load (gal/hr)	Full Load (gal/hr)
20	0.6	0.9	1.3	1.6
30	1.3	1.8	2.4	2.9
40	1.6	2.3	3.2	4.0
60	1.8	2.9	3.8	4.8
75	2.4	3.4	4.6	6.1
100	2.6	4.1	5.8	7.4
125	3.1	5.0	7.1	9.1
135	3.3	5.4	7.6	9.8
150	3.6	5.9	8.4	10.9
175	4.1	6.8	9.7	12.7
200	4.7	7.7	11.0	14.4
230	5.3	8.8	12.5	16.6
250	5.7	9.5	13.6	18.0
300	6.8	11.3	16.1	21.5
350	7.9	13.1	18.7	25.1
400	8.9	14.9	21.3	28.6
500	11.0	18.5	26.4	35.7
600	13.2	22.0	31.5	42.8
750	16.3	27.4	39.3	53.4
1000	21.6	36.4	52.1	71.1
1250	26.9	45.3	65.0	88.8
1500	32.2	54.3	77.8	106.5
1750	37.5	63.2	90.7	124.2
2000	42.8	72.2	103.5	141.9
2250	48.1	81.1	116.4	159.6

APPENDIX B1

EDMS Inputs for Stationary Sources

Source CTG1

This spreadsheet summarizes the EDMS inputs, including the applicable AP-42 emission factors for stationary gas turbines for source CTG1.

	Input	Notes
Source ID:	CTG1	Combustion Turbine (CT) and Duct Burner (DB)
Location:	Cogen Facility	
Fuel Consumption (ft^3):	1,057,153,601	Natural gas, STP assumed.

EDMS Field	EDMS Input	Notes
Category:	Other	EDMS does not contain emission factors for stationary gas turbines.
Type:	n/a	
Units:	1,000s of m^3 used	
Fuel Consumption:	29917.45	1,000s of m^3 used per year
PM-10 Pollution Control Factor (%):	0	
SOx Pollution Control Factor (%):	0	
NOx Pollution Control Factor (%):	0	
HC Pollution Control Factor (%):	0	
CO Pollution Control Factor (%):	0	
PM-10 EI (kg/1000 m^3)	0.108	US EPA, AP-42 Section 3.1: 6.6 E-3 lb/MMBTU
SOx EI (kg/1000 m^3):	0.0557	US EPA, AP-42 Section 3.1: 3.4 E-3 lb/MMBTU
NOx EI (kg/1000 m^3):	0.69	Back calculated from CEM results included in the Pinchin Environmental Report (table: Facility Year CEMS Report 2007), March 2008.
THC EI (kg/1000 m^3):	0.180	US EPA, AP-42 Section 3.1: 1.1 E-2 lb/MMBTU for TOCs
CO EI (kg/1000 m^3):	3.63	Back calculated from CEM results included in the Pinchin Environmental Report (table: Facility Year CEMS Report 2007), March 2008.

Source CTG2

This spreadsheet summarizes the EDMS inputs, including the applicable AP-42 emission factors for stationary gas turbines for source CTG2.

	Input	Notes
Source ID:	CTG2	Combustion Turbine (CT) and Duct Burner (DB)
Location:	Cogen Facility	
Fuel Consumption (ft^3):	1,029,454,141	Natural gas, STP assumed.

EDMS Field	EDMS Input	Notes
Category:	Other	EDMS does not contain emission factors for stationary gas turbines.
Type:	n/a	
Units:	1,000s of m^3 used	
Fuel Consumption:	29133.55	1,000s of m^3 used per year
PM-10 Pollution Control Factor (%):	0	
SOx Pollution Control Factor (%):	0	
NOx Pollution Control Factor (%):	0	
HC Pollution Control Factor (%):	0	
CO Pollution Control Factor (%):	0	
PM-10 EI (kg/1000 m^3)	0.108	US EPA, AP-42 Section 3.1: 6.6 E-3 lb/MMBTU
SOx EI (kg/1000 m^3):	0.0557	US EPA, AP-42 Section 3.1: 3.4 E-3 lb/MMBTU
NOx EI (kg/1000 m^3):	0.77	Back calculated from CEM results included in the Pinchin Environmental Report (table: Facility Year CEMS Report 2007), March 2008.
THC EI (kg/1000 m^3):	0.180	US EPA, AP-42 Section 3.1: 1.1 E-2 lb/MMBTU for TOCs
CO EI (kg/1000 m^3):	1.16	Back calculated from CEM results included in the Pinchin Environmental Report (table: Facility Year CEMS Report 2007), March 2008.

Boiler B1-NG

This spreadsheet summarizes the EDMS inputs and the resulting EDMS default emission factors for boiler B1-NG.

	Input	Notes
Boiler ID:	B1-NG	
Location:	Central Utility Plant (CUP)	This boiler uses No. 2 fuel oil as backup (see B1-No2)
Fuel Consumption (x 100 m^3):	16596.63	Natural gas, STP assumed.

EDMS Field	EDMS Input	Notes
Category:	Boiler/Space Heater	
Type:	Natural Gas: Wall Fired Boiler, < 100 million BTU/hr, uncontrolled	Wall fired, uncontrolled design assumed
Units:	1,000s of m^3 used	
Fuel Consumption:	1659.66	1,000s of m^3 used per year
PM-10 Pollution Control Factor (%):	0	
SOx Pollution Control Factor (%):	0	
NOx Pollution Control Factor (%):	0	
HC Pollution Control Factor (%):	0	
CO Pollution Control Factor (%):	0	
PM-10 EI (kg/1000 m^3)	0.120	EDMS default
SOx EI (kg/1000 m^3):	0.0100	EDMS default
NOx EI (kg/1000 m^3):	1.60	EDMS default
THC EI (kg/1000 m^3):	0.180	EDMS default
CO EI (kg/1000 m^3):	1.30	EDMS default

Boiler B1-No2

This spreadsheet summarizes the EDMS inputs and the resulting EDMS default emission factors for boiler B1-No2.

	Input	Notes
Boiler ID:	B1-No2	
Location:	Central Utility Plant (CUP)	Boiler B1's combution of No.2 fuel oil (backup fuel to natural gas)
Fuel Consumption (kL):	34.7	No. 2 fuel oil

EDMS Field	EDMS Input	Notes
Category:	Boiler/Space Heater	
Type:	Fuel Oil: Industrial Boiler, < 100 million BTU/hr, Distillate Oil	
Units:	kiloliters used	
Fuel Consumption:	34.7	kilolitres used per year
PM-10 Pollution Control Factor (%):	0	
SOx Pollution Control Factor (%):	0	
NOx Pollution Control Factor (%):	0	
HC Pollution Control Factor (%):	0	
CO Pollution Control Factor (%):	0	
Fuel Sulphur Content (%):	0.02	From Pinchin Environmental Report (Combustion Sources Input Sheet), March 2008.
PM-10 EI (kg/kL):	0.120	EDMS default
SOx EI (kg/kL - % S):	17.3	% S = % Sulphur by weight in fuel. EDMS default
NOx EI (kg/kL):	2.40	EDMS default
THC EI (kg/kL):	0.0300	EDMS default
CO EI (kg/kL):	0.60	EDMS default

Boiler B2-NG

This spreadsheet summarizes the EDMS inputs and the resulting EDMS default emission factors for boiler B2-NG.

	Input	Notes
Boiler ID:	B2-NG	
Location:	Central Utility Plant (CUP)	This boiler uses No. 2 fuel oil as backup (see B2-No2)
Fuel Consumption (x 100 m^3):	16596.63	Natural gas, STP assumed.

EDMS Field	EDMS Input	Notes
Category:	Boiler/Space Heater	
Type:	Natural Gas: Wall Fired Boiler, < 100 million BTU/hr, uncontrolled	Wall fired, uncontrolled design assumed
Units:	1,000s of m^3 used	
Fuel Consumption:	1659.66	1,000s of m^3 used per year
PM-10 Pollution Control Factor (%):	0	
SOx Pollution Control Factor (%):	0	
NOx Pollution Control Factor (%):	0	
HC Pollution Control Factor (%):	0	
CO Pollution Control Factor (%):	0	
PM-10 EI (kg/1000 m^3)	0.120	EDMS default
SOx EI (kg/1000 m^3):	0.0100	EDMS default
NOx EI (kg/1000 m^3):	1.60	EDMS default
THC EI (kg/1000 m^3):	0.180	EDMS default
CO EI (kg/1000 m^3):	1.30	EDMS default

Boiler B2-No2

This spreadsheet summarizes the EDMS inputs and the resulting EDMS default emission factors for boiler B2-No2.

	Input	Notes
Boiler ID:	B2-No2	
Location:	Central Utility Plant (CUP)	Boiler B2's combution of No.2 fuel oil (backup fuel to natural gas)
Fuel Consumption (kL):	34.7	No. 2 fuel oil

EDMS Field	EDMS Input	Notes
Category:	Boiler/Space Heater	
Type:	Fuel Oil: Industrial Boiler, < 100 million BTU/hr, Distillate Oil	
Units:	kiloliters used	
Fuel Consumption:	34.7	kilolitres used per year
PM-10 Pollution Control Factor (%):	0	
SOx Pollution Control Factor (%):	0	
NOx Pollution Control Factor (%):	0	
HC Pollution Control Factor (%):	0	
CO Pollution Control Factor (%):	0	
Fuel Sulphur Content (%):	0.02	From Pinchin Environmental Report (Combustion Sources Input Sheet), March 2008.
PM-10 EI (kg/kL):	0.120	EDMS default
SOx EI (kg/kL - % S):	17.3	% S = % Sulphur by weight in fuel. EDMS default
NOx EI (kg/kL):	2.40	EDMS default
THC EI (kg/kL):	0.0300	EDMS default
CO EI (kg/kL):	0.60	EDMS default

Boiler B3-NG

This spreadsheet summarizes the EDMS inputs and the resulting EDMS default emission factors for boiler B3-NG.

	Input	Notes
Boiler ID:	B3-NG	
Location:	Central Utility Plant (CUP)	This boiler uses No. 2 fuel oil as backup (see B3-No2)
Fuel Consumption (x 100 m^3):	16596.63	Natural gas, STP assumed.

EDMS Field	EDMS Input	Notes
Category:	Boiler/Space Heater	
Type:	Natural Gas: Wall Fired Boiler, < 100 million BTU/hr, uncontrolled	Wall fired, uncontrolled design assumed
Units:	1,000s of m^3 used	
Fuel Consumption:	1659.66	1,000s of m^3 used per year
PM-10 Pollution Control Factor (%):	0	
SOx Pollution Control Factor (%):	0	
NOx Pollution Control Factor (%):	0	
HC Pollution Control Factor (%):	0	
CO Pollution Control Factor (%):	0	
PM-10 EI (kg/1000 m^3)	0.120	EDMS default
SOx EI (kg/1000 m^3):	0.0100	EDMS default
NOx EI (kg/1000 m^3):	1.60	EDMS default
THC EI (kg/1000 m^3):	0.180	EDMS default
CO EI (kg/1000 m^3):	1.30	EDMS default

Boiler B3-No2

This spreadsheet summarizes the EDMS inputs and the resulting EDMS default emission factors for boiler B3-No2.

	Input	Notes
Boiler ID:	B3-No2	
Location:	Central Utility Plant (CUP)	Boiler B3's combution of No.2 fuel oil (backup fuel to natural gas)
Fuel Consumption (kL):	34.7	No. 2 fuel oil

EDMS Field	EDMS Input	Notes
Category:	Boiler/Space Heater	
Type:	Fuel Oil: Industrial Boiler, < 100 million BTU/hr, Distillate Oil	
Units:	kiloliters used	
Fuel Consumption:	34.7	kilolitres used per year
PM-10 Pollution Control Factor (%):	0	
SOx Pollution Control Factor (%):	0	
NOx Pollution Control Factor (%):	0	
HC Pollution Control Factor (%):	0	
CO Pollution Control Factor (%):	0	
Fuel Sulphur Content (%):	0.02	From Pinchin Environmental Report (Combustion Sources Input Sheet), March 2008.
PM-10 EI (kg/kL):	0.120	EDMS default
SOx EI (kg/kL - % S):	17.3	% S = % Sulphur by weight in fuel. EDMS default
NOx EI (kg/kL):	2.40	EDMS default
THC EI (kg/kL):	0.0300	EDMS default
CO EI (kg/kL):	0.60	EDMS default

Boiler B4-NG

This spreadsheet summarizes the EDMS inputs and the resulting EDMS default emission factors for boiler B4-NG.

	Input	Notes
Boiler ID:	B4-NG	
Location:	Central Utility Plant (CUP)	This boiler uses No. 2 fuel oil as backup (see B4-No2)
Fuel Consumption (x 100 m^3):	16596.63	Natural gas, STP assumed.

EDMS Field	EDMS Input	Notes
Category:	Boiler/Space Heater	
Type:	Natural Gas: Wall Fired Boiler, < 100 million BTU/hr, uncontrolled	Wall fired, uncontrolled design assumed
Units:	1,000s of m^3 used	
Fuel Consumption:	1659.66	1,000s of m^3 used per year
PM-10 Pollution Control Factor (%):	0	
SOx Pollution Control Factor (%):	0	
NOx Pollution Control Factor (%):	0	
HC Pollution Control Factor (%):	0	
CO Pollution Control Factor (%):	0	
PM-10 EI (kg/1000 m^3)	0.120	EDMS default
SOx EI (kg/1000 m^3):	0.0100	EDMS default
NOx EI (kg/1000 m^3):	1.60	EDMS default
THC EI (kg/1000 m^3):	0.180	EDMS default
CO EI (kg/1000 m^3):	1.30	EDMS default

Boiler B4-No2

This spreadsheet summarizes the EDMS inputs and the resulting EDMS default emission factors for boiler B4-No2.

	Input	Notes
Boiler ID:	B4-No2	
Location:	Central Utility Plant (CUP)	Boiler B4's combution of No.2 fuel oil (backup fuel to natural gas)
Fuel Consumption (kL):	34.7	No. 2 fuel oil

EDMS Field	EDMS Input	Notes
Category:	Boiler/Space Heater	
Type:	Fuel Oil: Industrial Boiler, < 100 million BTU/hr, Distillate Oil	
Units:	kiloliters used	
Fuel Consumption:	34.7	kilolitres used per year
PM-10 Pollution Control Factor (%):	0	
SOx Pollution Control Factor (%):	0	
NOx Pollution Control Factor (%):	0	
HC Pollution Control Factor (%):	0	
CO Pollution Control Factor (%):	0	
Fuel Sulphur Content (%):	0.02	From Pinchin Environmental Report (Combustion Sources Input Sheet), March 2008.
PM-10 EI (kg/kL):	0.120	EDMS default
SOx EI (kg/kL - % S):	17.3	% S = % Sulphur by weight in fuel. EDMS default
NOx EI (kg/kL):	2.40	EDMS default
THC EI (kg/kL):	0.0300	EDMS default
CO EI (kg/kL):	0.60	EDMS default

Boiler B5-NG

This spreadsheet summarizes the EDMS inputs and the resulting EDMS default emission factors for boiler B5-NG.

	Input	Notes
Boiler ID:	B5-NG	
Location:	Cogen Facility	Heating for the Cogen Facility
Fuel Consumption (ft^3):	2118216	Natural gas, STP assumed.

EDMS Field	EDMS Input	Notes
Category:	Boiler/Space Heater	
Type:	Natural Gas: Wall Fired Boiler, < 100 million BTU/hr, uncontrolled	Wall fired, uncontrolled design assumed
Units:	1,000s of m^3 used	
Fuel Consumption:	59.95	1,000s of m^3 used per year
PM-10 Pollution Control Factor (%):	0	
SOx Pollution Control Factor (%):	0	
NOx Pollution Control Factor (%):	0	
HC Pollution Control Factor (%):	0	
CO Pollution Control Factor (%):	0	
PM-10 EI (kg/1000 m^3):	0.120	EDMS default
SOx EI (kg/1000 m^3):	0.0100	EDMS default
NOx EI (kg/1000 m^3):	1.60	EDMS default
THC EI (kg/1000 m^3):	0.180	EDMS default
CO EI (kg/1000 m^3):	1.30	EDMS default

Generator 78-0165

EDMS does not contain emission factors for generators rated > 600 hp. This spreadsheet summarizes the EDMS inputs (including emission factors derived from AP-42 Section 3.4) for generator 78-0165, which is rated at 1176 hp.

	Input	Notes
Generator ID:	78-0165	From TPIA "Annual Standby Generator Run Time Report"
Location:	FEC 1	From TPIA "Annual Standby Generator Run Time Report"
Engine Make:	Cummins	From TPIA "Annual Standby Generator Run Time Report"
Rated Size (kW):	750	Electrical output power from TPIA "Annual Standby Generator Run Time Report"
Rated Size (hp):	1176	Mechanical input power (Assuming 10% fan power, 95% alternator efficiency) http://www.perkins.com/cda/components/fullArticle?m=97355&x=7&id=284106
2007 Run Time (hrs):	39.5	From TPIA "Annual Standby Generator Run Time Report"
Fuel Usage (gal/hr):	53.4	Estimate from http://www.dieselserviceandsupply.com/Diesel_Fuel_Consumption.aspx
Fuel Usage (kL/hr):	0.20	

EDMS Field	EDMS Input	Notes	AP-42 Section 3.4 Emission Factor	Units
Category:	Other	Did not use the emergency generator category, because that category is limited to generators rated below 600 hp.	-	-
Type:	n/a		-	-
Units:	hours		-	-
Hours Operated:	39.5	per year	-	-
Power Rating (kW):	750		-	-
Power Rating (hp):	1176		-	-
PM-10 Pollution Control Factor (%):	0		-	-
SOx Pollution Control Factor (%):	0		-	-
NOx Pollution Control Factor (%):	0		-	-
HC Pollution Control Factor (%):	0		-	-
CO Pollution Control Factor (%):	0		-	-
PM-10 EI (kg/hr):	0.191	See sample calculation [a]. AP-42 Section 3.4 emission factor (lb/MMBtu of fuel input), multiplied by the fuel heating value of diesel (137,000 Btu/gallon), amount of diesel used during the year and appropriate unit conversion factors to obtain units of kg/kilolitre of fuel.	0.0573	lb/MMBtu (Fuel Input)
SOx EI (kg/hr):	2.16	See sample calculation [b]. AP-42 Section 3.4 emission factor (lb/hp-hr), multiplied by the diesel sulphur content (0.50%), the generator's power rating and appropriate unit conversion factors to obtain units of kg/hr.	4.05E-03	lb/hp-hr
NOx EI (kg/hr):	12.83	See sample calculation [b], excluding sulphur content.	0.024	lb/hp-hr
THC EI (kg/hr):	0.377	See sample calculation [b], excluding sulphur content. Made use of TOC emission factor.	7.05E-04	lb/hp-hr
CO EI (kg/hr):	2.94	See sample calculation [b], excluding sulphur content.	5.50E-03	lb/hp-hr

[a] $\frac{0.0573\ \text{lb}}{1\ \text{MMBtu}} \times \frac{137{,}000\ \text{Btu}}{1\ \text{Gallon}} \times \frac{1\ \text{MMBtu}}{1.00\text{E+}06\ \text{Btu}} \times \frac{1\ \text{kg}}{2.2\ \text{lb}} \times \frac{264.17\ \text{Gallon}}{1\ \text{Kilolitre}} \times \frac{0.20\ \text{Kilolitres}}{1\ \text{hr}} = 1.91\text{E-}01\ \text{kg/hr}$

[b] $\frac{8.09\text{E-}03\ \text{lb}}{\text{hp-hr}} \times 0.5\ \%\ \text{Sulphur} \times 1176\ \text{hp} \times \frac{1\ \text{kg}}{2.2\ \text{lb}} = 2.16\ \text{kg/hr}$

Generator 76-0103

This spreadsheet summarizes the EDMS inputs and the resulting EDMS default emission factors for generator 76-0103, which is rated at 62.7 hp.

	Input	Notes
Generator ID:	76-0103	From TPIA "Annual Standby Generator Run Time Report"
Location:	North Fire Hall	From TPIA "Annual Standby Generator Run Time Report"
Engine Make:	Perkins	From TPIA "Annual Standby Generator Run Time Report"
Rated Size (kW):	40	Electrical output power from TPIA "Annual Standby Generator Run Time Report"
Rated Size (hp):	62.7	Mechanical input power (Assumed 10% fan power, 95% alternator efficiency) http://www.perkins.com/cda/components/fullArticle?m=97355&x=7&id=284106
2007 Run Time (hrs):	10	From TPIA "Annual Standby Generator Run Time Report"
Fuel Usage (gal/hr):	-	Not required for emission factor for generators rated < 600 hp
Fuel Usage (kL/hr):	-	

EDMS Field	EDMS Input	Notes
Category:	Emergency Generator	
Type:	Diesel Fuel (EPA Methodology)	
Units:	hours	
Hours Operated:	10	per year
Power Rating (kW):	40	
Power Rating (hp):	62.7	
PM-10 Pollution Control Factor (%):	0	
SOx Pollution Control Factor (%):	0	
NOx Pollution Control Factor (%):	0	
HC Pollution Control Factor (%):	0	
CO Pollution Control Factor (%):	0	
PM-10 EI (g/hp-hr):	0.998	EDMS default
SOx EI (g/hp-hr):	0.930	EDMS default
NOx EI (g/hp-hr):	14.0	EDMS default
THC EI (g/hp-hr):	1.14	EDMS default
CO EI (g/hp-hr):	3.03	EDMS default

Generator 77-0016

This spreadsheet summarizes the EDMS inputs and the resulting EDMS default emission factors for generator 77-0016, which is rated at 188.2 hp.

	Input	Notes
Generator ID:	77-0016	From TPIA "Annual Standby Generator Run Time Report"
Location:	AESC and South Fire Hall	From TPIA "Annual Standby Generator Run Time Report"
Engine Make:	Perkins	From TPIA "Annual Standby Generator Run Time Report"
Rated Size (kW):	120	Electrical output power from TPIA "Annual Standby Generator Run Time Report"
Rated Size (hp):	188.2	Mechanical input power (Assumed 10% fan power, 95% alternator efficiency) http://www.perkins.com/cda/components/fullArticle?m=97355&x=7&id=284106
2007 Run Time (hrs):	6.3	From TPIA "Annual Standby Generator Run Time Report"
Fuel Usage (gal/hr):	-	Not required for emission factor for generators rated < 600 hp
Fuel Usage (kL/hr):	-	

EDMS Field	EDMS Input	Notes
Category:	Emergency Generator	
Type:	Diesel Fuel (EPA Methodology)	
Units:	hours	
Hours Operated:	6.3	per year
Power Rating (kW):	120	
Power Rating (hp):	188.2	
PM-10 Pollution Control Factor (%):	0	
SOx Pollution Control Factor (%):	0	
NOx Pollution Control Factor (%):	0	
HC Pollution Control Factor (%):	0	
CO Pollution Control Factor (%):	0	
PM-10 EI (g/hp-hr):	0.998	EDMS default
SOx EI (g/hp-hr):	0.930	EDMS default
NOx EI (g/hp-hr):	14.0	EDMS default
THC EI (g/hp-hr):	1.14	EDMS default
CO EI (g/hp-hr):	3.03	EDMS default

Generator 76-0004

This spreadsheet summarizes the EDMS inputs and the resulting EDMS default emission factors for generator 76-0004, which is rated at 47.1 hp.

	Input	Notes
Generator ID:	76-0004	From TPIA "Annual Standby Generator Run Time Report"
Location:	Sewage Pump Station Area 2B	From TPIA "Annual Standby Generator Run Time Report"
Engine Make:	Cummins	From TPIA "Annual Standby Generator Run Time Report"
Rated Size (kW):	30	Electrical output power from TPIA "Annual Standby Generator Run Time Report"
Rated Size (hp):	47.1	Mechanical input power (Assumed 10% fan power, 95% alternator efficiency) http://www.perkins.com/cda/components/fullArticle?m=97355&x=7&id=284106
2007 Run Time (hrs):	7.6	From TPIA "Annual Standby Generator Run Time Report"
Fuel Usage (gal/hr):	-	Not required for emission factor for generators rated < 600 hp
Fuel Usage (kL/hr):	-	

EDMS Field	EDMS Input	Notes
Category:	Emergency Generator	
Type:	Diesel Fuel (EPA Methodology)	
Units:	hours	
Hours Operated:	7.6	per year
Power Rating (kW):	30	
Power Rating (hp):	47.1	
PM-10 Pollution Control Factor (%):	0	
SOx Pollution Control Factor (%):	0	
NOx Pollution Control Factor (%):	0	
HC Pollution Control Factor (%):	0	
CO Pollution Control Factor (%):	0	
PM-10 EI (g/hp-hr):	0.998	EDMS default
SOx EI (g/hp-hr):	0.930	EDMS default
NOx EI (g/hp-hr):	14.0	EDMS default
THC EI (g/hp-hr):	1.14	EDMS default
CO EI (g/hp-hr):	3.03	EDMS default

Generator 78-0069

This spreadsheet summarizes the EDMS inputs and the resulting EDMS default emission factors for generator 78-0069, which is rated at 470.5 hp.

	Input	Notes
Generator ID:	78-0069	From TPIA "Annual Standby Generator Run Time Report"
Location:	Airport Maintenance Facility	From TPIA "Annual Standby Generator Run Time Report"
Engine Make:	Cummins	From TPIA "Annual Standby Generator Run Time Report"
Rated Size (kW):	300	Electrical output power from TPIA "Annual Standby Generator Run Time Report"
Rated Size (hp):	470.5	Mechanical input power (Assumed 10% fan power, 95% alternator efficiency) http://www.perkins.com/cda/components/fullArticle?m=97355&x=7&id=284106
2007 Run Time (hrs):	10.8	From TPIA "Annual Standby Generator Run Time Report"
Fuel Usage (gal/hr):	-	Not required for emission factor for generators rated < 600 hp
Fuel Usage (kL/hr):	-	

EDMS Field	EDMS Input	Notes
Category:	Emergency Generator	
Type:	Diesel Fuel (EPA Methodology)	
Units:	hours	
Hours Operated:	10.8	per year
Power Rating (kW):	300	
Power Rating (hp):	470.5	
PM-10 Pollution Control Factor (%):	0	
SOx Pollution Control Factor (%):	0	
NOx Pollution Control Factor (%):	0	
HC Pollution Control Factor (%):	0	
CO Pollution Control Factor (%):	0	
PM-10 EI (g/hp-hr):	0.998	EDMS default
SOx EI (g/hp-hr):	0.930	EDMS default
NOx EI (g/hp-hr):	14.0	EDMS default
THC EI (g/hp-hr):	1.14	EDMS default
CO EI (g/hp-hr):	3.03	EDMS default

Generator 78-0100

EDMS does not contain emission factors for generators rated > 600 hp. This spreadsheet summarizes the EDMS inputs (including emission factors derived from AP-42 Section 3.4) for generator 78-0100, which is rated at 784 hp.

	Input	Notes
Generator ID:	78-0100	From TPIA "Annual Standby Generator Run Time Report"
Location:	Infield Terminal (IFT)	From TPIA "Annual Standby Generator Run Time Report"
Engine Make:	Mitsubishi	From TPIA "Annual Standby Generator Run Time Report"
Rated Size (kW):	500	Electrical output power from TPIA "Annual Standby Generator Run Time Report"
Rated Size (hp):	784	Mechanical input power (Assuming 10% fan power, 95% alternator efficiency) http://www.perkins.com/cda/components/fullArticle?m=97355&x=7&id=284106
2007 Run Time (hrs):	14.7	From TPIA "Annual Standby Generator Run Time Report"
Fuel Usage (gal/hr):	35.7	Estimate from http://www.dieselserviceandsupply.com/Diesel_Fuel_Consumption.aspx
Fuel Usage (kL/hr):	0.14	

EDMS Field	EDMS Input	Notes	AP-42 Section 3.4 Emission Factor	Units
Category:	Other	Did not use the emergency generator category, because that category is limited to generators rated below 600 hp.	-	-
Type:	n/a		-	-
Units:	hours		-	-
Hours Operated:	14.7	per year	-	-
Power Rating (kW):	500		-	-
Power Rating (hp):	784		-	-
PM-10 Pollution Control Factor (%):	0		-	-
SOx Pollution Control Factor (%):	0		-	-
NOx Pollution Control Factor (%):	0		-	-
HC Pollution Control Factor (%):	0		-	-
CO Pollution Control Factor (%):	0		-	-
PM-10 EI (kg/hr):	0.127	See sample calculation [a]. AP-42 Section 3.4 emission factor (lb/MMBtu of fuel input), multiplied by the fuel heating value of diesel (137,000 Btu/gallon), amount of diesel used during the year and appropriate unit conversion factors to obtain units of kg/kilolitre of fuel.	0.0573	lb/MMBtu (Fuel Input)
SOx EI (kg/hr):	1.44	See sample calculation [b]. AP-42 Section 3.4 emission factor (lb/hp-hr), multiplied by the diesel sulphur content (0.50%), the generator's power rating and appropriate unit conversion factors to obtain units of kg/hr.	4.05E-03	lb/hp-hr
NOx EI (kg/hr):	8.55	See sample calculation [b], excluding sulphur content.	0.024	lb/hp-hr
THC EI (kg/hr):	0.251	See sample calculation [b], excluding sulphur content. Made use of TOC emission factor.	7.05E-04	lb/hp-hr
CO EI (kg/hr):	1.96	See sample calculation [b], excluding sulphur content.	5.50E-03	lb/hp-hr

[a] $\frac{0.0573\ \text{lb}}{1\ \text{MMBtu}} \times \frac{137{,}000\ \text{Btu}}{1\ \text{Gallon}} \times \frac{1\ \text{MMBtu}}{1.00\text{E+}06\ \text{Btu}} \times \frac{1\ \text{kg}}{2.2\ \text{lb}} \times \frac{264.17\ \text{Gallon}}{1\ \text{Kilolitre}} \times \frac{0.14\ \text{Kilolitres}}{1\ \text{hr}} = 1.27\text{E-}01\ \text{kg/hr}$

[b] $\frac{8.09\text{E-}03\ \text{lb}}{\text{hp-hr}} \times 0.5\ \%\ \text{Sulphur} \times 784\ \text{hp} \times \frac{1\ \text{kg}}{2.2\ \text{lb}} = 1.44\ \text{kg/hr}$

Generator 78-0015

EDMS does not contain emission factors for generators rated > 600 hp. This spreadsheet summarizes the EDMS inputs (including emission factors derived from AP-42 Section 3.4) for generator 78-0015, which is rated at 1019 hp.

	Input	Notes
Generator ID:	78-0015	From TPIA "Annual Standby Generator Run Time Report"
Location:	Administration Building	From TPIA "Annual Standby Generator Run Time Report"
Engine Make:	Detroit	From TPIA "Annual Standby Generator Run Time Report"
Rated Size (kW):	650	Electrical output power from TPIA "Annual Standby Generator Run Time Report"
Rated Size (hp):	1019	Mechanical input power (Assuming 10% fan power, 95% alternator efficiency) http://www.perkins.com/cda/components/fullArticle?m=97355&x=7&id=284106
2007 Run Time (hrs):	46	From TPIA "Annual Standby Generator Run Time Report"
Fuel Usage (gal/hr):	46.3	Estimate from http://www.dieselserviceandsupply.com/Diesel_Fuel_Consumption.aspx
Fuel Usage (kL/hr):	0.18	

EDMS Field	EDMS Input	Notes	AP-42 Section 3.4 Emission Factor	Units
Category:	Other	Did not use the emergency generator category, because that category is limited to generators rated below 600 hp.	-	-
Type:	n/a		-	-
Units:	hours		-	-
Hours Operated:	46	per year	-	-
Power Rating (kW):	650		-	-
Power Rating (hp):	1019		-	-
PM-10 Pollution Control Factor (%):	0		-	-
SOx Pollution Control Factor (%):	0		-	-
NOx Pollution Control Factor (%):	0		-	-
HC Pollution Control Factor (%):	0		-	-
CO Pollution Control Factor (%):	0		-	-
PM-10 EI (kg/hr):	0.165	See sample calculation [a]. AP-42 Section 3.4 emission factor (lb/MMBtu of fuel input), multiplied by the fuel heating value of diesel (137,000 Btu/gallon), amount of diesel used during the year and appropriate unit conversion factors to obtain units of kg/kilolitre of fuel.	0.0573	lb/MMBtu (Fuel Input)
SOx EI (kg/hr):	1.87	See sample calculation [b]. AP-42 Section 3.4 emission factor (lb/hp-hr), multiplied by the diesel sulphur content (0.50%), the generator's power rating and appropriate unit conversion factors to obtain units of kg/hr.	4.05E-03	lb/hp-hr
NOx EI (kg/hr):	11.12	See sample calculation [b], excluding sulphur content.	0.024	lb/hp-hr
THC EI (kg/hr):	0.327	See sample calculation [b], excluding sulphur content. Made use of TOC emission factor.	7.05E-04	lb/hp-hr
CO EI (kg/hr):	2.55	See sample calculation [b], excluding sulphur content.	5.50E-03	lb/hp-hr

[a] $\frac{0.0573\ \text{lb}}{1\ \text{MMBtu}} \times \frac{137{,}000\ \text{Btu}}{1\ \text{Gallon}} \times \frac{1\ \text{MMBtu}}{1.00\text{E+}06\ \text{Btu}} \times \frac{1\ \text{kg}}{2.2\ \text{lb}} \times \frac{264.17\ \text{Gallon}}{1\ \text{Kilolitre}} \times \frac{0.18\ \text{Kilolitres}}{1\ \text{hr}} = 1.65\text{E-}01\ \text{kg/hr}$

[b] $\frac{8.09\text{E-}03\ \text{lb}}{\text{hp-hr}} \times 0.5\ \%\ \text{Sulphur} \times 1019\ \text{hp} \times \frac{1\ \text{kg}}{2.2\ \text{lb}} = 1.87\ \text{kg/hr}$

Generator 78-0220

EDMS does not contain emission factors for generators rated > 600 hp. This spreadsheet summarizes the EDMS inputs (including emission factors derived from AP-42 Section 3.4) for generator 78-0220, which is rated at 3137 hp.

	Input	Notes
Generator ID:	78-0220	From TPIA "Annual Standby Generator Run Time Report"
Location:	Central Utilities Plant (CUP)	From TPIA "Annual Standby Generator Run Time Report"
Engine Make:	Caterpillar	From TPIA "Annual Standby Generator Run Time Report"
Rated Size (kW):	2000	Electrical output power from TPIA "Annual Standby Generator Run Time Report"
Rated Size (hp):	3137	Mechanical input power (Assuming 10% fan power, 95% alternator efficiency) http://www.perkins.com/cda/components/fullArticle?m=97355&x=7&id=284106
2007 Run Time (hrs):	23.25	From TPIA "Annual Standby Generator Run Time Report"
Fuel Usage (gal/hr):	152	From Pinchin Environmental report (Equipment Summary Table), March 27th, 2008.
Fuel Usage (kL/hr):	0.58	

EDMS Field	EDMS Input	Notes	AP-42 Section 3.4 Emission Factor	Units
Category:	Other	Did not use the emergency generator category, because that category is limited to generators rated below 600 hp.	-	-
Type:	n/a		-	-
Units:	hours		-	-
Hours Operated:	23.25	per year	-	-
Power Rating (kW):	2000		-	-
Power Rating (hp):	3137		-	-
PM-10 Pollution Control Factor (%):	0		-	-
SOx Pollution Control Factor (%):	0		-	-
NOx Pollution Control Factor (%):	0		-	-
HC Pollution Control Factor (%):	0		-	-
CO Pollution Control Factor (%):	0		-	-
PM-10 EI (kg/hr):	0.543	See sample calculation [a]. AP-42 Section 3.4 emission factor (lb/MMBtu of fuel input), multiplied by the fuel heating value of diesel (137,000 Btu/gallon), amount of diesel used during the year and appropriate unit conversion factors to obtain units of kg/kilolitre of fuel.	0.0573	lb/MMBtu (Fuel Input)
SOx EI (kg/hr):	5.77	See sample calculation [b]. AP-42 Section 3.4 emission factor (lb/hp-hr), multiplied by the diesel sulphur content (0.50%), the generator's power rating and appropriate unit conversion factors to obtain units of kg/hr.	4.05E-03	lb/hp-hr
NOx EI (kg/hr):	34.2	See sample calculation [b], excluding sulphur content.	0.024	lb/hp-hr
THC EI (kg/hr):	1.005	See sample calculation [b], excluding sulphur content. Made use of TOC emission factor.	7.05E-04	lb/hp-hr
CO EI (kg/hr):	7.84	See sample calculation [b], excluding sulphur content.	5.50E-03	lb/hp-hr

[a] $\frac{0.0573\ \text{lb}}{1\ \text{MMBtu}} \times \frac{137{,}000\ \text{Btu}}{1\ \text{Gallon}} \times \frac{1\ \text{MMBtu}}{1.00\text{E+}06\ \text{Btu}} \times \frac{1\ \text{kg}}{2.2\ \text{lb}} \times \frac{264.17\ \text{Gallon}}{1\ \text{Kilolitre}} \times \frac{0.6\ \text{Kilolitres}}{1\ \text{hr}} = 5.43\text{E-}01\ \text{kg/hr}$

[b] $\frac{8.09\text{E-}03\ \text{lb}}{\text{hp-hr}} \times 0.5\ \%\ \text{Sulphur} \times 3137\ \text{hp} \times \frac{1\ \text{kg}}{2.2\ \text{lb}} = 5.77\ \text{kg/hr}$

Generator 78-0425

EDMS does not contain emission factors for generators rated > 600 hp. This spreadsheet summarizes the EDMS inputs (including emission factors derived from AP-42 Section 3.4) for generator 78-0425, which is rated at 2353 hp.

	Input	Notes
Generator ID:	78-0425	From TPIA "Annual Standby Generator Run Time Report"
Location:	Terminal 1 Generator 1	From TPIA "Annual Standby Generator Run Time Report"
Engine Make:	Caterpillar	From TPIA "Annual Standby Generator Run Time Report"
Rated Size (kW):	1500	From GTAA "Diesel_fuel_consumption_2008.xls"
Rated Size (hp):	2353	Mechanical input power (Assuming 10% fan power, 95% alternator efficiency) http://www.perkins.com/cda/components/fullArticle?m=97355&x=7&id=284106
2007 Run Time (hrs):	24.2	From TPIA "Annual Standby Generator Run Time Report" column "Run Time 2007"
Fuel Usage (gal/hr):	124.2	Estimate from http://www.dieselserviceandsupply.com/Diesel_Fuel_Consumption.aspx
Fuel Usage (kL/hr):	0.47	

EDMS Field	EDMS Input	Notes	AP-42 Section 3.4 Emission Factor	Units
Category:	Other	Did not use the emergency generator category, because that category is limited to generators rated below 600 hp.	-	-
Type:	n/a		-	-
Units:	hours		-	-
Hours Operated:	24.2	per year	-	-
Power Rating (kW):	1500		-	-
Power Rating (hp):	2353		-	-
PM-10 Pollution Control Factor (%):	0		-	-
SOx Pollution Control Factor (%):	0		-	-
NOx Pollution Control Factor (%):	0		-	-
HC Pollution Control Factor (%):	0		-	-
CO Pollution Control Factor (%):	0		-	-
PM-10 EI (kg/hr):	0.443	See sample calculation [a]. AP-42 Section 3.4 emission factor (lb/MMBtu of fuel input), multiplied by the fuel heating value of diesel (137,000 Btu/gallon), amount of diesel used during the year and appropriate unit conversion factors to obtain units of kg/kilolitre of fuel.	0.0573	lb/MMBtu (Fuel Input)
SOx EI (kg/hr):	4.33	See sample calculation [b]. AP-42 Section 3.4 emission factor (lb/hp-hr), multiplied by the diesel sulphur content (0.50%), the generator's power rating and appropriate unit conversion factors to obtain units of kg/hr.	4.05E-03	lb/hp-hr
NOx EI (kg/hr):	25.7	See sample calculation [b], excluding sulphur content.	0.024	lb/hp-hr
THC EI (kg/hr):	0.754	See sample calculation [b], excluding sulphur content. Made use of TOC emission factor.	7.05E-04	lb/hp-hr
CO EI (kg/hr):	5.88	See sample calculation [b], excluding sulphur content.	5.50E-03	lb/hp-hr

[a] $\frac{0.0573\ \text{lb}}{1\ \text{MMBtu}} \times \frac{137{,}000\ \text{Btu}}{1\ \text{Gallon}} \times \frac{1\ \text{MMBtu}}{1.00\text{E+}06\ \text{Btu}} \times \frac{1\ \text{kg}}{2.2\ \text{lb}} \times \frac{264.17\ \text{Gallon}}{1\ \text{Kilolitre}} \times \frac{0.47\ \text{Kilolitres}}{1\ \text{hr}} = 4.43\text{E-}01\ \text{kg/hr}$

[b] $\frac{8.09\text{E-}03\ \text{lb}}{\text{hp-hr}} \times 0.5\ \%\ \text{Sulphur} \times 2353\ \text{hp} \times \frac{1\ \text{kg}}{2.2\ \text{lb}} = 4.33\ \text{kg/hr}$

Generator 78-0426

EDMS does not contain emission factors for generators rated > 600 hp. This spreadsheet summarizes the EDMS inputs (including emission factors derived from AP-42 Section 3.4) for generator 78-0426, which is rated at 3137 hp.

	Input	Notes
Generator ID:	78-0426	From TPIA "Annual Standby Generator Run Time Report"
Location:	Terminal 1 Generator 2	From TPIA "Annual Standby Generator Run Time Report"
Engine Make:	Caterpillar	From TPIA "Annual Standby Generator Run Time Report"
Rated Size (kW):	2000	From GTAA "Diesel_fuel_consumption_2008.xls"
Rated Size (hp):	3137	Mechanical input power (Assuming 10% fan power, 95% alternator efficiency) http://www.perkins.com/cda/components/fullArticle?m=97355&x=7&id=284106
2007 Run Time (hrs):	10	From TPIA "Annual Standby Generator Run Time Report"
Fuel Usage (gal/hr):	124.2	Estimate from http://www.dieselserviceandsupply.com/Diesel_Fuel_Consumption.aspx
Fuel Usage (kL/hr):	0.47	

EDMS Field	EDMS Input	Notes	AP-42 Section 3.4 Emission Factor	Units
Category:	Other	Did not use the emergency generator category, because that category is limited to generators rated below 600 hp.	-	-
Type:	n/a		-	-
Units:	hours		-	-
Hours Operated:	10	per year	-	-
Power Rating (kW):	2000		-	-
Power Rating (hp):	3137		-	-
PM-10 Pollution Control Factor (%):	0		-	-
SOx Pollution Control Factor (%):	0		-	-
NOx Pollution Control Factor (%):	0		-	-
HC Pollution Control Factor (%):	0		-	-
CO Pollution Control Factor (%):	0		-	-
PM-10 EI (kg/hr):	0.443	See sample calculation [a]. AP-42 Section 3.4 emission factor (lb/MMBtu of fuel input), multiplied by the fuel heating value of diesel (137,000 Btu/gallon), amount of diesel used during the year and appropriate unit conversion factors to obtain units of kg/kilolitre of fuel.	0.0573	lb/MMBtu (Fuel Input)
SOx EI (kg/hr):	5.77	See sample calculation [b]. AP-42 Section 3.4 emission factor (lb/hp-hr), multiplied by the diesel sulphur content (0.50%), the generator's power rating and appropriate unit conversion factors to obtain units of kg/hr.	4.05E-03	lb/hp-hr
NOx EI (kg/hr):	34.2	See sample calculation [b], excluding sulphur content.	0.024	lb/hp-hr
THC EI (kg/hr):	1.005	See sample calculation [b], excluding sulphur content. Made use of TOC emission factor.	7.05E-04	lb/hp-hr
CO EI (kg/hr):	7.84	See sample calculation [b], excluding sulphur content.	5.50E-03	lb/hp-hr

[a] $\frac{0.0573\ \text{lb}}{1\ \text{MMBtu}} \times \frac{137{,}000\ \text{Btu}}{1\ \text{Gallon}} \times \frac{1\ \text{MMBtu}}{1.00\text{E+}06\ \text{Btu}} \times \frac{1\ \text{kg}}{2.2\ \text{lb}} \times \frac{264.17\ \text{Gallon}}{1\ \text{Kilolitre}} \times \frac{0.47\ \text{Kilolitres}}{1\ \text{hr}} = 4.43\text{E-}01\ \text{kg/hr}$

[b] $\frac{8.09\text{E-}03\ \text{lb}}{\text{hp-hr}} \times 0.5\ \%\ \text{Sulphur} \times 3137\ \text{hp} \times \frac{1\ \text{kg}}{2.2\ \text{lb}} = 5.77\ \text{kg/hr}$

Generator 78-0427

EDMS does not contain emission factors for generators rated > 600 hp. This spreadsheet summarizes the EDMS inputs (including emission factors derived from AP-42 Section 3.4) for generator 78-0427, which is rated at 3137 hp.

	Input	Notes
Generator ID:	78-0427	From TPIA "Annual Standby Generator Run Time Report"
Location:	Terminal 1 Generator 3	From TPIA "Annual Standby Generator Run Time Report"
Engine Make:	Caterpillar	From TPIA "Annual Standby Generator Run Time Report"
Rated Size (kW):	2000	Electrical output power from TPIA "Annual Standby Generator Run Time Report"
Rated Size (hp):	3137	Mechanical input power (Assuming 10% fan power, 95% alternator efficiency) http://www.perkins.com/cda/components/fullArticle?m=97355&x=7&id=284106
2007 Run Time (hrs):	17.3	From TPIA "Annual Standby Generator Run Time Report"
Fuel Usage (gal/hr):	141.9	Estimate from http://www.dieselserviceandsupply.com/Diesel_Fuel_Consumption.aspx
Fuel Usage (kL/hr):	0.54	

EDMS Field	EDMS Input	Notes	AP-42 Section 3.4 Emission Factor	Units
Category:	Other	Did not use the emergency generator category, because that category is limited to generators rated below 600 hp.	-	-
Type:	n/a		-	-
Units:	hours		-	-
Hours Operated:	17.3	per year	-	-
Power Rating (kW):	2000		-	-
Power Rating (hp):	3137		-	-
PM-10 Pollution Control Factor (%):	0		-	-
SOx Pollution Control Factor (%):	0		-	-
NOx Pollution Control Factor (%):	0		-	-
HC Pollution Control Factor (%):	0		-	-
CO Pollution Control Factor (%):	0		-	-
PM-10 EI (kg/hr):	0.506	See sample calculation [a]. AP-42 Section 3.4 emission factor (lb/MMBtu of fuel input), multiplied by the fuel heating value of diesel (137,000 Btu/gallon), amount of diesel used during the year and appropriate unit conversion factors to obtain units of kg/kilolitre of fuel.	0.0573	lb/MMBtu (Fuel Input)
SOx EI (kg/hr):	5.77	See sample calculation [b]. AP-42 Section 3.4 emission factor (lb/hp-hr), multiplied by the diesel sulphur content (0.50%), the generator's power rating and appropriate unit conversion factors to obtain units of kg/hr.	4.05E-03	lb/hp-hr
NOx EI (kg/hr):	34.2	See sample calculation [b], excluding sulphur content.	0.024	lb/hp-hr
THC EI (kg/hr):	1.005	See sample calculation [b], excluding sulphur content. Made use of TOC emission factor.	7.05E-04	lb/hp-hr
CO EI (kg/hr):	7.84	See sample calculation [b], excluding sulphur content.	5.50E-03	lb/hp-hr

[a] $\frac{0.0573\ \text{lb}}{1\ \text{MMBtu}} \times \frac{137{,}000\ \text{Btu}}{1\ \text{Gallon}} \times \frac{1\ \text{MMBtu}}{1.00\text{E+}06\ \text{Btu}} \times \frac{1\ \text{kg}}{2.2\ \text{lb}} \times \frac{264.17\ \text{Gallon}}{1\ \text{Kilolitre}} \times \frac{0.54\ \text{Kilolitres}}{1\ \text{hr}} = 5.06\text{E-}01\ \text{kg/hr}$

[b] $\frac{8.09\text{E-}03\ \text{lb}}{\text{hp-hr}} \times 0.5\ \%\ \text{Sulphur} \times 3137\ \text{hp} \times \frac{1\ \text{kg}}{2.2\ \text{lb}} = 5.77\ \text{kg/hr}$

Generator 78-0428

EDMS does not contain emission factors for generators rated > 600 hp. This spreadsheet summarizes the EDMS inputs (including emission factors derived from AP-42 Section 3.4) for generator 78-0428, which is rated at 2353 hp.

	Input	Notes
Generator ID:	78-0428	From TPIA "Annual Standby Generator Run Time Report"
Location:	Terminal 1 Generator 4	From TPIA "Annual Standby Generator Run Time Report"
Engine Make:	Caterpillar	From TPIA "Annual Standby Generator Run Time Report"
Rated Size (kW):	1500	From GTAA "Diesel_fuel_consumption_2008.xls"
Rated Size (hp):	2353	Mechanical input power (Assuming 10% fan power, 95% alternator efficiency) http://www.perkins.com/cda/components/fullArticle?m=97355&x=7&id=284106
2007 Run Time (hrs):	15.8	From TPIA "Annual Standby Generator Run Time Report"
Fuel Usage (gal/hr):	124.2	Estimate from http://www.dieselserviceandsupply.com/Diesel_Fuel_Consumption.aspx
Fuel Usage (kL/hr):	0.47	

EDMS Field	EDMS Input	Notes	AP-42 Section 3.4 Emission Factor	Units
Category:	Other	Did not use the emergency generator category, because that category is limited to generators rated below 600 hp.	-	-
Type:	n/a		-	-
Units:	hours		-	-
Hours Operated:	15.8	per year	-	-
Power Rating (kW):	1500		-	-
Power Rating (hp):	2353		-	-
PM-10 Pollution Control Factor (%):	0		-	-
SOx Pollution Control Factor (%):	0		-	-
NOx Pollution Control Factor (%):	0		-	-
HC Pollution Control Factor (%):	0		-	-
CO Pollution Control Factor (%):	0		-	-
PM-10 EI (kg/hr):	0.443	See sample calculation [a]. AP-42 Section 3.4 emission factor (lb/MMBtu of fuel input), multiplied by the fuel heating value of diesel (137,000 Btu/gallon), amount of diesel used during the year and appropriate unit conversion factors to obtain units of kg/kilolitre of fuel.	0.0573	lb/MMBtu (Fuel Input)
SOx EI (kg/hr):	4.33	See sample calculation [b]. AP-42 Section 3.4 emission factor (lb/hp-hr), multiplied by the diesel sulphur content (0.50%), the generator's power rating and appropriate unit conversion factors to obtain units of kg/hr.	4.05E-03	lb/hp-hr
NOx EI (kg/hr):	25.7	See sample calculation [b], excluding sulphur content.	0.024	lb/hp-hr
THC EI (kg/hr):	0.754	See sample calculation [b], excluding sulphur content. Made use of TOC emission factor.	7.05E-04	lb/hp-hr
CO EI (kg/hr):	5.88	See sample calculation [b], excluding sulphur content.	5.50E-03	lb/hp-hr

[a] $\frac{0.0573\ \text{lb}}{1\ \text{MMBtu}} \times \frac{137{,}000\ \text{Btu}}{1\ \text{Gallon}} \times \frac{1\ \text{MMBtu}}{1.00\text{E+}06\ \text{Btu}} \times \frac{1\ \text{kg}}{2.2\ \text{lb}} \times \frac{264.17\ \text{Gallon}}{1\ \text{Kilolitre}} \times \frac{0.47\ \text{Kilolitres}}{1\ \text{hr}} = 4.43\text{E-}01\ \text{kg/hr}$

[b] $\frac{8.09\text{E-}03\ \text{lb}}{\text{hp-hr}} \times 0.5\ \%\ \text{Sulphur} \times 2353\ \text{hp} \times \frac{1\ \text{kg}}{2.2\ \text{lb}} = 4.33\ \text{kg/hr}$

Generator RWDI-001

EDMS does not contain emission factors for generators rated > 600 hp. This spreadsheet summarizes the EDMS inputs (including emission factors derived from AP-42 Section 3.4) for generator RWDI-001, which is rated at 2745 hp.

	Input	Notes
Generator ID:	RWDI-001	No ID assigned by TPIA.
Location:	Terminal 1 Parking Garage	From TPIA "Annual Standby Generator Run Time Report"
Engine Make:	Caterpillar	From TPIA "Annual Standby Generator Run Time Report"
Rated Size (kW):	1750	Electrical output power from TPIA "Annual Standby Generator Run Time Report"
Rated Size (hp):	2745	Mechanical input power (Assuming 10% fan power, 95% alternator efficiency) http://www.perkins.com/cda/components/fullArticle?m=97355&x=7&id=284106
2007 Run Time (hrs):	20.4	From TPIA "Annual Standby Generator Run Time Report"
Fuel Usage (gal/hr):	124.2	Estimate from http://www.dieselserviceandsupply.com/Diesel_Fuel_Consumption.aspx
Fuel Usage (kL/hr):	0.47	

EDMS Field	EDMS Input	Notes	AP-42 Section 3.4 Emission Factor	Units
Category:	Other	Did not use the emergency generator category, because that category is limited to generators rated below 600 hp.	-	-
Type:	n/a		-	-
Units:	hours		-	-
Hours Operated:	20.4	per year	-	-
Power Rating (kW):	1750		-	-
Power Rating (hp):	2745		-	-
PM-10 Pollution Control Factor (%):	0		-	-
SOx Pollution Control Factor (%):	0		-	-
NOx Pollution Control Factor (%):	0		-	-
HC Pollution Control Factor (%):	0		-	-
CO Pollution Control Factor (%):	0		-	-
PM-10 EI (kg/hr):	0.443	See sample calculation [a]. AP-42 Section 3.4 emission factor (lb/MMBtu of fuel input), multiplied by the fuel heating value of diesel (137,000 Btu/gallon), amount of diesel used during the year and appropriate unit conversion factors to obtain units of kg/kilolitre of fuel.	0.0573	lb/MMBtu (Fuel Input)
SOx EI (kg/hr):	5.05	See sample calculation [b]. AP-42 Section 3.4 emission factor (lb/hp-hr), multiplied by the diesel sulphur content (0.50%), the generator's power rating and appropriate unit conversion factors to obtain units of kg/hr.	4.05E-03	lb/hp-hr
NOx EI (kg/hr):	29.9	See sample calculation [b], excluding sulphur content.	0.024	lb/hp-hr
THC EI (kg/hr):	0.880	See sample calculation [b], excluding sulphur content. Made use of TOC emission factor.	7.05E-04	lb/hp-hr
CO EI (kg/hr):	6.86	See sample calculation [b], excluding sulphur content.	5.50E-03	lb/hp-hr

[a] $\frac{0.0573\ \text{lb}}{1\ \text{MMBtu}} \times \frac{137{,}000\ \text{Btu}}{1\ \text{Gallon}} \times \frac{1\ \text{MMBtu}}{1.00\text{E+}06\ \text{Btu}} \times \frac{1\ \text{kg}}{2.2\ \text{lb}} \times \frac{264.17\ \text{Gallon}}{1\ \text{Kilolitre}} \times \frac{0.47\ \text{Kilolitres}}{1\ \text{hr}} = 4.43\text{E-}01\ \text{kg/hr}$

[b] $\frac{8.09\text{E-}03\ \text{lb}}{\text{hp-hr}} \times 0.5\ \%\ \text{Sulphur} \times 2745\ \text{hp} \times \frac{1\ \text{kg}}{2.2\ \text{lb}} = 5.05\ \text{kg/hr}$

Generator RWDI-002

EDMS does not contain emission factors for generators rated > 600 hp. This spreadsheet summarizes the EDMS inputs (including emission factors derived from AP-42 Section 3.4) for generator RWDI-002, which is rated at 784 hp.

	Input	Notes
Generator ID:	RWDI-002	No ID assigned by TPIA.
Location:	3 Bay Hangar	From TPIA "Annual Standby Generator Run Time Report"
Engine Make:	Caterpillar	From TPIA "Annual Standby Generator Run Time Report"
Rated Size (kW):	500	Electrical output power from TPIA "Annual Standby Generator Run Time Report"
Rated Size (hp):	784	Mechanical input power (Assuming 10% fan power, 95% alternator efficiency) http://www.perkins.com/cda/components/fullArticle?m=97355&x=7&id=284106
2007 Run Time (hrs):	16	From TPIA "Annual Standby Generator Run Time Report"
Fuel Usage (gal/hr):	35.7	Estimate from http://www.dieselserviceandsupply.com/Diesel_Fuel_Consumption.aspx
Fuel Usage (kL/hr):	0.14	

EDMS Field	EDMS Input	Notes	AP-42 Section 3.4 Emission Factor	Units
Category:	Other	Did not use the emergency generator category, because that category is limited to generators rated below 600 hp.	-	-
Type:	n/a		-	-
Units:	hours		-	-
Hours Operated:	16	per year	-	-
Power Rating (kW):	500		-	-
Power Rating (hp):	784		-	-
PM-10 Pollution Control Factor (%):	0		-	-
SOx Pollution Control Factor (%):	0		-	-
NOx Pollution Control Factor (%):	0		-	-
HC Pollution Control Factor (%):	0		-	-
CO Pollution Control Factor (%):	0		-	-
PM-10 EI (kg/hr):	0.127	See sample calculation [a]. AP-42 Section 3.4 emission factor (lb/MMBtu of fuel input), multiplied by the fuel heating value of diesel (137,000 Btu/gallon), amount of diesel used during the year and appropriate unit conversion factors to obtain units of kg/kilolitre of fuel.	0.0573	lb/MMBtu (Fuel Input)
SOx EI (kg/hr):	1.44	See sample calculation [b]. AP-42 Section 3.4 emission factor (lb/hp-hr), multiplied by the diesel sulphur content (0.50%), the generator's power rating and appropriate unit conversion factors to obtain units of kg/hr.	4.05E-03	lb/hp-hr
NOx EI (kg/hr):	8.55	See sample calculation [b], excluding sulphur content.	0.024	lb/hp-hr
THC EI (kg/hr):	0.251	See sample calculation [b], excluding sulphur content. Made use of TOC emission factor.	7.05E-04	lb/hp-hr
CO EI (kg/hr):	1.96	See sample calculation [b], excluding sulphur content.	5.50E-03	lb/hp-hr

[a] $\frac{0.0573\ \text{lb}}{1\ \text{MMBtu}} \times \frac{137{,}000\ \text{Btu}}{1\ \text{Gallon}} \times \frac{1\ \text{MMBtu}}{1.00\text{E+}06\ \text{Btu}} \times \frac{1\ \text{kg}}{2.2\ \text{lb}} \times \frac{264.17\ \text{Gallon}}{1\ \text{Kilolitre}} \times \frac{0.14\ \text{Kilolitres}}{1\ \text{hr}} = 1.27\text{E-}01\ \text{kg/hr}$

[b] $\frac{8.09\text{E-}03\ \text{lb}}{\text{hp-hr}} \times 0.5\ \%\ \text{Sulphur} \times 784\ \text{hp} \times \frac{1\ \text{kg}}{2.2\ \text{lb}} = 1.44\ \text{kg/hr}$

Generator 77-0223

This spreadsheet summarizes the EDMS inputs and the resulting EDMS default emission factors for generator 77-0223, which is rated at 352.9 hp.

	Input	Notes
Generator ID:	77-0223	From TPIA "Annual Standby Generator Run Time Report"
Location:	Peel Police	From TPIA "Annual Standby Generator Run Time Report"
Engine Make:	Generac	From TPIA "Annual Standby Generator Run Time Report"
Rated Size (kW):	225	Electrical output power from TPIA "Annual Standby Generator Run Time Report"
Rated Size (hp):	352.9	Mechanical input power (Assumed 10% fan power, 95% alternator efficiency) http://www.perkins.com/cda/components/fullArticle?m=97355&x=7&id=284106
2007 Run Time (hrs):	18	From TPIA "Annual Standby Generator Run Time Report"
Fuel Usage (gal/hr):	-	Not required for emission factor for generators rated < 600 hp
Fuel Usage (kL/hr):	-	

EDMS Field	EDMS Input	Notes
Category:	Emergency Generator	
Type:	Diesel Fuel (EPA Methodology)	
Units:	hours	
Hours Operated:	18	per year
Power Rating (kW):	225	
Power Rating (hp):	352.9	
PM-10 Pollution Control Factor (%):	0	
SOx Pollution Control Factor (%):	0	
NOx Pollution Control Factor (%):	0	
HC Pollution Control Factor (%):	0	
CO Pollution Control Factor (%):	0	
PM-10 EI (g/hp-hr):	0.998	EDMS default
SOx EI (g/hp-hr):	0.930	EDMS default
NOx EI (g/hp-hr):	14.0	EDMS default
THC EI (g/hp-hr):	1.14	EDMS default
CO EI (g/hp-hr):	3.03	EDMS default

Generator 78-0553

EDMS does not contain emission factors for generators rated > 600 hp. This spreadsheet summarizes the EDMS inputs (including emission factors derived from AP-42 Section 3.4) for generator 78-0553, which is rated at 2353 hp.

	Input	Notes
Generator ID:	78-0553	From TPIA "Annual Standby Generator Run Time Report"
Location:	Terminal 1 Generator 5	From TPIA "Annual Standby Generator Run Time Report"
Engine Make:	Caterpillar	From TPIA "Annual Standby Generator Run Time Report"
Rated Size (kW):	1500	Electrical output power from TPIA "Annual Standby Generator Run Time Report"
Rated Size (hp):	2353	Mechanical input power (Assuming 10% fan power, 95% alternator efficiency) http://www.perkins.com/cda/components/fullArticle?m=97355&x=7&id=284106
2007 Run Time (hrs):	7	From TPIA "Annual Standby Generator Run Time Report"
Fuel Usage (gal/hr):	106.5	Estimate from http://www.dieselserviceandsupply.com/Diesel_Fuel_Consumption.aspx
Fuel Usage (kL/hr):	0.40	

EDMS Field	EDMS Input	Notes	AP-42 Section 3.4 Emission Factor	Units
Category:	Other	Did not use the emergency generator category, because that category is limited to generators rated below 600 hp.	-	-
Type:	n/a		-	-
Units:	hours		-	-
Hours Operated:	7	per year	-	-
Power Rating (kW):	1500		-	-
Power Rating (hp):	2353		-	-
PM-10 Pollution Control Factor (%):	0		-	-
SOx Pollution Control Factor (%):	0		-	-
NOx Pollution Control Factor (%):	0		-	-
HC Pollution Control Factor (%):	0		-	-
CO Pollution Control Factor (%):	0		-	-
PM-10 EI (kg/hr):	0.380	See sample calculation [a]. AP-42 Section 3.4 emission factor (lb/MMBtu of fuel input), multiplied by the fuel heating value of diesel (137,000 Btu/gallon), amount of diesel used during the year and appropriate unit conversion factors to obtain units of kg/kilolitre of fuel.	0.0573	lb/MMBtu (Fuel Input)
SOx EI (kg/hr):	4.33	See sample calculation [b]. AP-42 Section 3.4 emission factor (lb/hp-hr), multiplied by the diesel sulphur content (0.50%), the generator's power rating and appropriate unit conversion factors to obtain units of kg/hr.	4.05E-03	lb/hp-hr
NOx EI (kg/hr):	25.7	See sample calculation [b], excluding sulphur content.	0.024	lb/hp-hr
THC EI (kg/hr):	0.754	See sample calculation [b], excluding sulphur content. Made use of TOC emission factor.	7.05E-04	lb/hp-hr
CO EI (kg/hr):	5.88	See sample calculation [b], excluding sulphur content.	5.50E-03	lb/hp-hr

[a] $\frac{0.0573\ \text{lb}}{1\ \text{MMBtu}} \times \frac{137{,}000\ \text{Btu}}{1\ \text{Gallon}} \times \frac{1\ \text{MMBtu}}{1.00\text{E+}06\ \text{Btu}} \times \frac{1\ \text{kg}}{2.2\ \text{lb}} \times \frac{264.17\ \text{Gallon}}{1\ \text{Kilolitre}} \times \frac{0.40\ \text{Kilolitres}}{1\ \text{hr}} = 3.80\text{E-}01\ \text{kg/hr}$

[b] $\frac{8.09\text{E-}03\ \text{lb}}{\text{hp-hr}} \times 0.5\ \%\ \text{Sulphur} \times 2353\ \text{hp} \times \frac{1\ \text{kg}}{2.2\ \text{lb}} = 4.33\ \text{kg/hr}$

Generator 78-0218

EDMS does not contain emission factors for generators rated > 600 hp. This spreadsheet summarizes the EDMS inputs (including emission factors derived from AP-42 Section 3.4) for generator 78-0218, which is rated at 706 hp.

	Input	Notes
Generator ID:	78-0218	From TPIA "Annual Standby Generator Run Time Report"
Location:	Terminal 1 East Satellite	From TPIA "Annual Standby Generator Run Time Report"
Engine Make:	Mitsubishi	From TPIA "Annual Standby Generator Run Time Report"
Rated Size (kW):	450	Electrical output power from TPIA "Annual Standby Generator Run Time Report"
Rated Size (hp):	706	Mechanical input power (Assuming 10% fan power, 95% alternator efficiency) http://www.perkins.com/cda/components/fullArticle?m=97355&x=7&id=284106
2007 Run Time (hrs):	53	From TPIA "Annual Standby Generator Run Time Report"
Fuel Usage (gal/hr):	32.2	Estimate from http://www.dieselserviceandsupply.com/Diesel_Fuel_Consumption.aspx
Fuel Usage (kL/hr):	0.12	

EDMS Field	EDMS Input	Notes	AP-42 Section 3.4 Emission Factor	Units
Category:	Other	Did not use the emergency generator category, because that category is limited to generators rated below 600 hp.	-	-
Type:	n/a		-	-
Units:	hours		-	-
Hours Operated:	53	per year	-	-
Power Rating (kW):	450		-	-
Power Rating (hp):	706		-	-
PM-10 Pollution Control Factor (%):	0		-	-
SOx Pollution Control Factor (%):	0		-	-
NOx Pollution Control Factor (%):	0		-	-
HC Pollution Control Factor (%):	0		-	-
CO Pollution Control Factor (%):	0		-	-
PM-10 EI (kg/hr):	0.115	See sample calculation [a]. AP-42 Section 3.4 emission factor (lb/MMBtu of fuel input), multiplied by the fuel heating value of diesel (137,000 Btu/gallon), amount of diesel used during the year and appropriate unit conversion factors to obtain units of kg/kilolitre of fuel.	0.0573	lb/MMBtu (Fuel Input)
SOx EI (kg/hr):	1.30	See sample calculation [b]. AP-42 Section 3.4 emission factor (lb/hp-hr), multiplied by the diesel sulphur content (0.50%), the generator's power rating and appropriate unit conversion factors to obtain units of kg/hr.	4.05E-03	lb/hp-hr
NOx EI (kg/hr):	7.70	See sample calculation [b], excluding sulphur content.	0.024	lb/hp-hr
THC EI (kg/hr):	0.226	See sample calculation [b], excluding sulphur content. Made use of TOC emission factor.	7.05E-04	lb/hp-hr
CO EI (kg/hr):	1.77	See sample calculation [b], excluding sulphur content.	5.50E-03	lb/hp-hr

[a] $\frac{0.0573\ \text{lb}}{1\ \text{MMBtu}} \times \frac{137{,}000\ \text{Btu}}{1\ \text{Gallon}} \times \frac{1\ \text{MMBtu}}{1.00\text{E+}06\ \text{Btu}} \times \frac{1\ \text{kg}}{2.2\ \text{lb}} \times \frac{264.17\ \text{Gallon}}{1\ \text{Kilolitre}} \times \frac{0.12\ \text{Kilolitres}}{1\ \text{hr}} = 1.15\text{E-}01\ \text{kg/hr}$

[b] $\frac{8.09\text{E-}03\ \text{lb}}{\text{hp-hr}} \times 0.5\ \%\ \text{Sulphur} \times 706\ \text{hp} \times \frac{1\ \text{kg}}{2.2\ \text{lb}} = 1.30\ \text{kg/hr}$

Generator RWDI-003

EDMS does not contain emission factors for generators rated > 600 hp. This spreadsheet summarizes the EDMS inputs (including emission factors derived from AP-42 Section 3.4) for generator RWDI-003, which is rated at 855 hp.

	Input	Notes
Generator ID:	RWDI-003	No ID assigned by TPIA.
Location:	Terminal 3 Satellite	From GTAA "Diesel_fuel_consumption_2008.xls"
Engine Make:	Cummins	From GTAA "Diesel_fuel_consumption_2008.xls"
Rated Size (kW):	545	Electrical output power from TPIA "Annual Standby Generator Run Time Report"
Rated Size (hp):	855	Mechanical input power (Assuming 10% fan power, 95% alternator efficiency) http://www.perkins.com/cda/components/fullArticle?m=97355&x=7&id=284106
2007 Run Time (hrs):	30	From TPIA "Annual Standby Generator Run Time Report"
Fuel Usage (gal/hr):	39.3	Estimate from http://www.dieselserviceandsupply.com/Diesel_Fuel_Consumption.aspx
Fuel Usage (kL/hr):	0.15	

EDMS Field	EDMS Input	Notes	AP-42 Section 3.4 Emission Factor	Units
Category:	Other	Did not use the emergency generator category, because that category is limited to generators rated below 600 hp.	-	-
Type:	n/a		-	-
Units:	hours		-	-
Hours Operated:	30	per year	-	-
Power Rating (kW):	545		-	-
Power Rating (hp):	855		-	-
PM-10 Pollution Control Factor (%):	0		-	-
SOx Pollution Control Factor (%):	0		-	-
NOx Pollution Control Factor (%):	0		-	-
HC Pollution Control Factor (%):	0		-	-
CO Pollution Control Factor (%):	0		-	-
PM-10 EI (kg/hr):	0.140	See sample calculation [a]. AP-42 Section 3.4 emission factor (lb/MMBtu of fuel input), multiplied by the fuel heating value of diesel (137,000 Btu/gallon), amount of diesel used during the year and appropriate unit conversion factors to obtain units of kg/kilolitre of fuel.	0.0573	lb/MMBtu (Fuel Input)
SOx EI (kg/hr):	1.57	See sample calculation [b]. AP-42 Section 3.4 emission factor (lb/hp-hr), multiplied by the diesel sulphur content (0.50%), the generator's power rating and appropriate unit conversion factors to obtain units of kg/hr.	4.05E-03	lb/hp-hr
NOx EI (kg/hr):	9.33	See sample calculation [b], excluding sulphur content.	0.024	lb/hp-hr
THC EI (kg/hr):	0.274	See sample calculation [b], excluding sulphur content. Made use of TOC emission factor.	7.05E-04	lb/hp-hr
CO EI (kg/hr):	2.14	See sample calculation [b], excluding sulphur content.	5.50E-03	lb/hp-hr

[a] $\frac{0.0573\ \text{lb}}{1\ \text{MMBtu}} \times \frac{137{,}000\ \text{Btu}}{1\ \text{Gallon}} \times \frac{1\ \text{MMBtu}}{1.00\text{E+}06\ \text{Btu}} \times \frac{1\ \text{kg}}{2.2\ \text{lb}} \times \frac{264.17\ \text{Gallon}}{1\ \text{Kilolitre}} \times \frac{0.15\ \text{Kilolitres}}{1\ \text{hr}} = 1.40\text{E-}01\ \text{kg/hr}$

[b] $\frac{8.09\text{E-}03\ \text{lb}}{\text{hp-hr}} \times 0.5\ \%\ \text{Sulphur} \times 855\ \text{hp} \times \frac{1\ \text{kg}}{2.2\ \text{lb}} = 1.57\ \text{kg/hr}$

Generator RWDI-004

EDMS does not contain emission factors for generators rated > 600 hp. This spreadsheet summarizes the EDMS inputs (including emission factors derived from AP-42 Section 3.4) for generator RWDI-004, which is rated at 2353 hp.

	Input	Notes
Generator ID:	RWDI-004	No ID assigned by TPIA.
Location:	T3 SubStn A Generator 1	From GTAA "Diesel_fuel_consumption_2008.xls"
Engine Make:	Caterpillar	From GTAA "Diesel_fuel_consumption_2008.xls"
Rated Size (kW):	1500	Electrical output power from TPIA "Annual Standby Generator Run Time Report"
Rated Size (hp):	2353	Mechanical input power (Assuming 10% fan power, 95% alternator efficiency) http://www.perkins.com/cda/components/fullArticle?m=97355&x=7&id=284106
2007 Run Time (hrs):	30	From TPIA "Annual Standby Generator Run Time Report"
Fuel Usage (gal/hr):	106.5	Estimate from http://www.dieselserviceandsupply.com/Diesel_Fuel_Consumption.aspx
Fuel Usage (kL/hr):	0.40	

EDMS Field	EDMS Input	Notes	AP-42 Section 3.4 Emission Factor	Units
Category:	Other	Did not use the emergency generator category, because that category is limited to generators rated below 600 hp.	-	-
Type:	n/a		-	-
Units:	hours		-	-
Hours Operated:	30	per year	-	-
Power Rating (kW):	1500		-	-
Power Rating (hp):	2353		-	-
PM-10 Pollution Control Factor (%):	0		-	-
SOx Pollution Control Factor (%):	0		-	-
NOx Pollution Control Factor (%):	0		-	-
HC Pollution Control Factor (%):	0		-	-
CO Pollution Control Factor (%):	0		-	-
PM-10 EI (kg/hr):	0.380	See sample calculation [a]. AP-42 Section 3.4 emission factor (lb/MMBtu of fuel input), multiplied by the fuel heating value of diesel (137,000 Btu/gallon), amount of diesel used during the year and appropriate unit conversion factors to obtain units of kg/kilolitre of fuel.	0.0573	lb/MMBtu (Fuel Input)
SOx EI (kg/hr):	4.33	See sample calculation [b]. AP-42 Section 3.4 emission factor (lb/hp-hr), multiplied by the diesel sulphur content (0.50%), the generator's power rating and appropriate unit conversion factors to obtain units of kg/hr.	4.05E-03	lb/hp-hr
NOx EI (kg/hr):	25.7	See sample calculation [b], excluding sulphur content.	0.024	lb/hp-hr
THC EI (kg/hr):	0.754	See sample calculation [b], excluding sulphur content. Made use of TOC emission factor.	7.05E-04	lb/hp-hr
CO EI (kg/hr):	5.88	See sample calculation [b], excluding sulphur content.	5.50E-03	lb/hp-hr

[a] $\frac{0.0573\ \text{lb}}{1\ \text{MMBtu}} \times \frac{137{,}000\ \text{Btu}}{1\ \text{Gallon}} \times \frac{1\ \text{MMBtu}}{1.00\text{E+}06\ \text{Btu}} \times \frac{1\ \text{kg}}{2.2\ \text{lb}} \times \frac{264.17\ \text{Gallon}}{1\ \text{Kilolitre}} \times \frac{0.40\ \text{Kilolitres}}{1\ \text{hr}} = 3.80\text{E-}01\ \text{kg/hr}$

[b] $\frac{8.09\text{E-}03\ \text{lb}}{\text{hp-hr}} \times 0.5\ \%\ \text{Sulphur} \times 2353\ \text{hp} \times \frac{1\ \text{kg}}{2.2\ \text{lb}} = 4.33\ \text{kg/hr}$

Generator RWDI-005

EDMS does not contain emission factors for generators rated > 600 hp. This spreadsheet summarizes the EDMS inputs (including emission factors derived from AP-42 Section 3.4) for generator RWDI-005, which is rated at 784 hp.

	Input	Notes
Generator ID:	RWDI-005	No ID assigned by TPIA.
Location:	APM Station 6100 Viscount	From TPIA "Annual Standby Generator Run Time Report"
Engine Make:	Cummins	From TPIA "Annual Standby Generator Run Time Report"
Rated Size (kW):	500	Electrical output power from TPIA "Annual Standby Generator Run Time Report"
Rated Size (hp):	784	Mechanical input power (Assuming 10% fan power, 95% alternator efficiency) http://www.perkins.com/cda/components/fullArticle?m=97355&x=7&id=284106
2007 Run Time (hrs):	6	From TPIA "Annual Standby Generator Run Time Report"
Fuel Usage (gal/hr):	35.7	Estimate from http://www.dieselserviceandsupply.com/Diesel_Fuel_Consumption.aspx
Fuel Usage (kL/hr):	0.14	

EDMS Field	EDMS Input	Notes	AP-42 Section 3.4 Emission Factor	Units
Category:	Other	Did not use the emergency generator category, because that category is limited to generators rated below 600 hp.	-	-
Type:	n/a		-	-
Units:	hours		-	-
Hours Operated:	6	per year	-	-
Power Rating (kW):	500		-	-
Power Rating (hp):	784		-	-
PM-10 Pollution Control Factor (%):	0		-	-
SOx Pollution Control Factor (%):	0		-	-
NOx Pollution Control Factor (%):	0		-	-
HC Pollution Control Factor (%):	0		-	-
CO Pollution Control Factor (%):	0		-	-
PM-10 EI (kg/hr):	0.127	See sample calculation [a]. AP-42 Section 3.4 emission factor (lb/MMBtu of fuel input), multiplied by the fuel heating value of diesel (137,000 Btu/gallon), amount of diesel used during the year and appropriate unit conversion factors to obtain units of kg/kilolitre of fuel.	0.0573	lb/MMBtu (Fuel Input)
SOx EI (kg/hr):	1.44	See sample calculation [b]. AP-42 Section 3.4 emission factor (lb/hp-hr), multiplied by the diesel sulphur content (0.50%), the generator's power rating and appropriate unit conversion factors to obtain units of kg/hr.	4.05E-03	lb/hp-hr
NOx EI (kg/hr):	8.55	See sample calculation [b], excluding sulphur content.	0.024	lb/hp-hr
THC EI (kg/hr):	0.251	See sample calculation [b], excluding sulphur content. Made use of TOC emission factor.	7.05E-04	lb/hp-hr
CO EI (kg/hr):	1.96	See sample calculation [b], excluding sulphur content.	5.50E-03	lb/hp-hr

[a] $\frac{0.0573 \text{ lb}}{1 \text{ MMBtu}} \times \frac{137{,}000 \text{ Btu}}{1 \text{ Gallon}} \times \frac{1 \text{ MMBtu}}{1.00\text{E+}06 \text{ Btu}} \times \frac{1 \text{ kg}}{2.2 \text{ lb}} \times \frac{264.17 \text{ Gallon}}{1 \text{ Kilolitre}} \times \frac{0.14 \text{ Kilolitres}}{1 \text{ hr}} = 1.27\text{E-}01 \text{ kg/hr}$

[b] $\frac{8.09\text{E-}03 \text{ lb}}{\text{hp-hr}} \times 0.5\ \%\ \text{Sulphur} \times 784 \text{ hp} \times \frac{1 \text{ kg}}{2.2 \text{ lb}} = 1.44 \text{ kg/hr}$

Generator RWDI-015

EDMS does not contain emission factors for generators rated > 600 hp. This spreadsheet summarizes the EDMS inputs (including emission factors derived from AP-42 Section 3.4) for generator RWDI-015, which is rated at 2353 hp.

	Input	Notes
Generator ID:	RWDI-015	No ID assigned by TPIA.
Location:	T3 SubStn B Generator 2	From GTAA "Diesel_fuel_consumption_2008.xls"
Engine Make:	Caterpillar	From GTAA "Diesel_fuel_consumption_2008.xls"
Rated Size (kW):	1500	From GTAA "Diesel_fuel_consumption_2008.xls"
Rated Size (hp):	2353	Mechanical input power (Assuming 10% fan power, 95% alternator efficiency) http://www.perkins.com/cda/components/fullArticle?m=97355&x=7&id=284106
2007 Run Time (hrs):	20.3	Average from "Average Op Hours from v4.xls"
Fuel Usage (gal/hr):	106.5	Estimate from http://www.dieselserviceandsupply.com/Diesel_Fuel_Consumption.aspx
Fuel Usage (kL/hr):	0.40	

EDMS Field	EDMS Input	Notes	AP-42 Section 3.4 Emission Factor	Units
Category:	Other	Did not use the emergency generator category, because that category is limited to generators rated below 600 hp.	-	-
Type:	n/a		-	-
Units:	hours		-	-
Hours Operated:	20.3	per year	-	-
Power Rating (kW):	1500		-	-
Power Rating (hp):	2353		-	-
PM-10 Pollution Control Factor (%):	0		-	-
SOx Pollution Control Factor (%):	0		-	-
NOx Pollution Control Factor (%):	0		-	-
HC Pollution Control Factor (%):	0		-	-
CO Pollution Control Factor (%):	0		-	-
PM-10 EI (kg/hr):	0.380	See sample calculation [a]. AP-42 Section 3.4 emission factor (lb/MMBtu of fuel input), multiplied by the fuel heating value of diesel (137,000 Btu/gallon), amount of diesel used during the year and appropriate unit conversion factors to obtain units of	0.0573	lb/MMBtu (Fuel Input)
SOx EI (kg/hr):	4.33	See sample calculation [b]. AP-42 Section 3.4 emission factor (lb/hp-hr), multiplied by the diesel sulphur content (0.50%), the generator's power rating and appropriate unit conversion factors to obtain units of kg/hr.	4.05E-03	lb/hp-hr
NOx EI (kg/hr):	25.7	See sample calculation [b], excluding sulphur content.	0.024	lb/hp-hr
THC EI (kg/hr):	0.754	See sample calculation [b], excluding sulphur content. Made use of TOC emission factor.	7.05E-04	lb/hp-hr
CO EI (kg/hr):	5.88	See sample calculation [b], excluding sulphur content.	5.50E-03	lb/hp-hr

[a] $\frac{0.0573\ \text{lb}}{1\ \text{MMBtu}} \times \frac{137{,}000\ \text{Btu}}{1\ \text{Gallon}} \times \frac{1\ \text{MMBtu}}{1.00\text{E+}06\ \text{Btu}} \times \frac{1\ \text{kg}}{2.2\ \text{lb}} \times \frac{264.17\ \text{Gallon}}{1\ \text{Kilolitre}} \times \frac{0.40\ \text{Kilolitres}}{1\ \text{hr}} = 3.80\text{E-}01\ \text{kg/hr}$

[b] $\frac{8.09\text{E-}03\ \text{lb}}{\text{hp-hr}} \times 0.5\ \%\ \text{Sulphur} \times 2353\ \text{hp} \times \frac{1\ \text{kg}}{2.2\ \text{lb}} = 4.33\ \text{kg/hr}$

Generator RWDI-016

This spreadsheet summarizes the EDMS inputs and the resulting EDMS default emission factors for generator RWDI-016 which is rated at 313.7 hp.

	Input	Notes
Generator ID:	RWDI-016	No ID assigned by TPIA.
Location:	T3 Sewage Pumping Area 6A	From GTAA "Diesel_fuel_consumption_2008.xls"
Engine Make:	Caterpillar	From GTAA "Diesel_fuel_consumption_2008.xls"
Rated Size (kW):	200	From GTAA "Diesel_fuel_consumption_2008.xls"
Rated Size (hp):	313.7	Mechanical input power (Assumed 10% fan power, 95% alternator efficiency) http://www.perkins.com/cda/components/fullArticle?m=97355&x=7&id=284106
2007 Run Time (hrs):	20.3	Average from "Average Op Hours from v4.xls"
Fuel Usage (gal/hr):	-	Not required for emission factor for generators rated < 600 hp
Fuel Usage (kL/hr):	-	

EDMS Field	EDMS Input	Notes
Category:	Emergency Generator	
Type:	Diesel Fuel (EPA Methodology)	
Units:	hours	
Hours Operated:	20.3	per year
Power Rating (kW):	200	
Power Rating (hp):	313.7	
PM-10 Pollution Control Factor (%):	0	
SOx Pollution Control Factor (%):	0	
NOx Pollution Control Factor (%):	0	
HC Pollution Control Factor (%):	0	
CO Pollution Control Factor (%):	0	
PM-10 EI (g/hp-hr):	0.998	EDMS default
SOx EI (g/hp-hr):	0.930	EDMS default
NOx EI (g/hp-hr):	14.0	EDMS default
THC EI (g/hp-hr):	1.14	EDMS default
CO EI (g/hp-hr):	3.03	EDMS default

Generator RWDI-017

This spreadsheet summarizes the EDMS inputs and the resulting EDMS default emission factors for generator RWDI-017 which is rated at 54.9 hp.

	Input	Notes
Generator ID:	RWDI-017	No ID assigned by TPIA.
Location:	T3 Taxi Limo Cmpd - Pre Arrang	From GTAA "Diesel_fuel_consumption_2008.xls"
Engine Make:	Cummins	From GTAA "Diesel_fuel_consumption_2008.xls"
Rated Size (kW):	35	From GTAA "Diesel_fuel_consumption_2008.xls"
Rated Size (hp):	54.9	Mechanical input power (Assumed 10% fan power, 95% alternator efficiency) http://www.perkins.com/cda/components/fullArticle?m=97355&x=7&id=284106
2007 Run Time (hrs):	20.3	Average from "Average Op Hours from v4.xls"
Fuel Usage (gal/hr):	-	Not required for emission factor for generators rated < 600 hp
Fuel Usage (kL/hr):	-	

EDMS Field	EDMS Input	Notes
Category:	Emergency Generator	
Type:	Diesel Fuel (EPA Methodology)	
Units:	hours	
Hours Operated:	20.3	per year
Power Rating (kW):	35	
Power Rating (hp):	54.9	
PM-10 Pollution Control Factor (%):	0	
SOx Pollution Control Factor (%):	0	
NOx Pollution Control Factor (%):	0	
HC Pollution Control Factor (%):	0	
CO Pollution Control Factor (%):	0	
PM-10 EI (g/hp-hr):	0.998	EDMS default
SOx EI (g/hp-hr):	0.930	EDMS default
NOx EI (g/hp-hr):	14.0	EDMS default
THC EI (g/hp-hr):	1.14	EDMS default
CO EI (g/hp-hr):	3.03	EDMS default

Generator RWDI-017

This spreadsheet summarizes the EDMS inputs and the resulting EDMS default emission factors for generator RWDI-017 which is rated at 94.1 hp.

	Input	Notes
Generator ID:	RWDI-017	No ID assigned by TPIA.
Location:	T3 Taxi Limo Cmpd - CVHA Bld	From GTAA "Diesel_fuel_consumption_2008.xls"
Engine Make:	Cummins	From GTAA "Diesel_fuel_consumption_2008.xls"
Rated Size (kW):	60	From GTAA "Diesel_fuel_consumption_2008.xls"
Rated Size (hp):	94.1	Mechanical input power (Assumed 10% fan power, 95% alternator efficiency) http://www.perkins.com/cda/components/fullArticle?m=97355&x=7&id=284106
2007 Run Time (hrs):	20.3	Average from "Average Op Hours from v4.xls"
Fuel Usage (gal/hr):	-	Not required for emission factor for generators rated < 600 hp
Fuel Usage (kL/hr):	-	

EDMS Field	EDMS Input	Notes
Category:	Emergency Generator	
Type:	Diesel Fuel (EPA Methodology)	
Units:	hours	
Hours Operated:	20.3	per year
Power Rating (kW):	60	
Power Rating (hp):	94.1	
PM-10 Pollution Control Factor (%):	0	
SOx Pollution Control Factor (%):	0	
NOx Pollution Control Factor (%):	0	
HC Pollution Control Factor (%):	0	
CO Pollution Control Factor (%):	0	
PM-10 EI (g/hp-hr):	0.998	EDMS default
SOx EI (g/hp-hr):	0.930	EDMS default
NOx EI (g/hp-hr):	14.0	EDMS default
THC EI (g/hp-hr):	1.14	EDMS default
CO EI (g/hp-hr):	3.03	EDMS default

EDMS 5.1 Model Inputs for Stationary Study

Study Created:	Mon Dec 01 17:17:25 2008
Report Date:	Mon May 04 18:49:45 2009
Study Pathname:	I:\0925039\0925039A\Analysis\01 EDMS\02 Stationary\Stationary v5\Stationary.edm

Study Setup

Unit System:	Metric
Dispersion Modeling:	Dispersion is not enabled for this study
Speciated Hydrocarbon Modeling:	Speciated Hydrocarbon Modeling is not enabled for this study
Analysis Years:	2007

Scenarios

Scenario Name:	Description:	Add a description.
Baseline	Aircraft Times in Mode Basis:	Performance-Based
	Taxi Time Modeling:	User-specified Taxi Times
	FOA3 Sulfur-to-Sulfate Conversion Rate:	2.400000 %

Airports

Airport Name:	Lester B Pearson Intl
IATA Code:	YYZ
ICAO Code:	CYYZ
FAA Code:	
Country:	CA
State:	
City:	Toronto
Airport Description:	Lester B Pearson Intl
Latitude:	43.677°
Longitude:	-79.631°
Northing:	4836934.85
Easting:	610387.93
UTM Zone:	17
Elevation:	569.00 feet
PM Modeling Methodology:	FOA3

Scenario-Airport: Baseline, Lester B Pearson Intl

Weather

Baseline, Lester B Pearson Intl

Mixing Height:	914.40 meters
Temperature:	8.64 °C
Daily High Temperature:	14.39 °C
Daily Low Temperature:	2.89 °C
Pressure:	99525.95 Pa
Sea Level Pressure:	101625.51 Pa
Relative Humidity:	69.65
Wind Speed:	15.33 kph
Wind Direction:	0.00 °
Ceiling:	30480.00 m
Visibility:	80.47 km
The user has used annual averages.	
Base Elevation:	173.43 meters
Date Range:	Thursday, January 01, 2004 to Friday, December 31, 2004
Source Data File Location:	
Upper Air Data File Location:	

Quarter-Hourly Operational Profiles

Baseline, Lester B Pearson Intl

Name: DEFAULT

Quarter-Hour	Weight	Quarter-Hour	Weight	Quarter-Hour	Weight	Quarter-Hour	Weight
12:00am to 12:14 am	1.000000	6:00am to 6:14am	1.000000	12:00pm to 12:14 pm	1.000000	6:00pm to 6:14pm	1.000000
12:15am to 12:29 am	1.000000	6:15am to 6:29am	1.000000	12:15pm to 12:29 pm	1.000000	6:15pm to 6:29pm	1.000000
12:30am to 12:44 am	1.000000	6:30am to 6:44am	1.000000	12:30pm to 12:44 pm	1.000000	6:30pm to 6:44pm	1.000000
12:45am to 12:59 am	1.000000	6:45am to 6:59am	1.000000	12:45pm to 12:59 pm	1.000000	6:45pm to 6:59pm	1.000000
1:00am to 1:14am	1.000000	7:00am to 7:14am	1.000000	1:00pm to 1:14pm	1.000000	7:00pm to 7:14pm	1.000000
1:15am to 1:29am	1.000000	7:15am to 7:29am	1.000000	1:15pm to 1:29pm	1.000000	7:15pm to 7:29pm	1.000000
1:30am to 1:44am	1.000000	7:30am to 7:44am	1.000000	1:30pm to 1:44pm	1.000000	7:30pm to 7:44pm	1.000000
1:45am to 1:59am	1.000000	7:45am to 7:59am	1.000000	1:45pm to 1:59pm	1.000000	7:45pm to 7:59pm	1.000000
2:00am to 2:14am	1.000000	8:00am to 8:14am	1.000000	2:00pm to 2:14pm	1.000000	8:00pm to 8:14pm	1.000000
2:15am to 2:29am	1.000000	8:15am to 8:29am	1.000000	2:15pm to 2:29pm	1.000000	8:15pm to 8:29pm	1.000000
2:30am to 2:44am	1.000000	8:30am to 8:44am	1.000000	2:30pm to 2:44pm	1.000000	8:30pm to 8:44pm	1.000000
2:45am to 2:59am	1.000000	8:45am to 8:59am	1.000000	2:45pm to 2:59pm	1.000000	8:45pm to 8:59pm	1.000000
3:00am to 3:14am	1.000000	9:00am to 9:14am	1.000000	3:00pm to 3:14pm	1.000000	9:00pm to 9:14pm	1.000000
3:15am to 3:29am	1.000000	9:15am to 9:29am	1.000000	3:15pm to 3:29pm	1.000000	9:15pm to 9:29pm	1.000000
3:30am to 3:44am	1.000000	9:30am to 9:44am	1.000000	3:30pm to 3:44pm	1.000000	9:30pm to 9:44pm	1.000000
3:45am to 3:59am	1.000000	9:45am to 9:59am	1.000000	3:45pm to 3:59pm	1.000000	9:45pm to 9:59pm	1.000000
4:00am to 4:14am	1.000000	10:00am to 10:14am	1.000000	4:00pm to 4:14pm	1.000000	10:00pm to 10:14pm	1.000000
4:15am to 4:29am	1.000000	10:15am to 10:29am	1.000000	4:15pm to 4:29pm	1.000000	10:15pm to 10:29pm	1.000000
4:30am to 4:44am	1.000000	10:30am to 10:44am	1.000000	4:30pm to 4:44pm	1.000000	10:30pm to 10:44pm	1.000000
4:45am to 4:59am	1.000000	10:45am to 10:59am	1.000000	4:45pm to 4:59pm	1.000000	10:45pm to 10:59pm	1.000000
5:00am to 5:14am	1.000000	11:00am to 11:14am	1.000000	5:00pm to 5:14pm	1.000000	11:00pm to 11:14pm	1.000000
5:15am to 5:29am	1.000000	11:15am to 11:29am	1.000000	5:15pm to 5:29pm	1.000000	11:15pm to 11:29pm	1.000000
5:30am to 5:44am	1.000000	11:30am to 11:44am	1.000000	5:30pm to 5:44pm	1.000000	11:30pm to 11:44pm	1.000000
5:45am to 5:59am	1.000000	11:45am to 11:59am	1.000000	5:45pm to 5:59pm	1.000000	11:45pm to 11:59pm	1.000000

Daily Operational Profiles

Baseline, Lester B Pearson Intl

Name: DEFAULT

Day	Weight	Day	Weight
Monday	1.000000	Friday	1.000000
Tuesday	1.000000	Saturday	1.000000
Wednesday	1.000000	Sunday	1.000000
Thursday	1.000000		

Monthly Operational Profiles

Baseline, Lester B Pearson Intl

Name: DEFAULT

Month	Weight	Month	Weight
January	1.000000	July	1.000000
February	1.000000	August	1.000000
March	1.000000	September	1.000000
April	1.000000	October	1.000000
May	1.000000	November	1.000000
June	1.000000	December	1.000000

Aircraft

Baseline, Lester B Pearson Intl

Default Taxi Out Time: 19.000000 min

Default Taxi In Time:	7.000000 min	
Year:	Uses Schedule?	Schedule Filename:
2007	No	(None)

GSE Population

Baseline, Lester B Pearson Intl

None.

Parking Facilities

Baseline, Lester B Pearson Intl

None.

Roadways

Baseline, Lester B Pearson Intl

None.

Stationary Sources

Baseline, Lester B Pearson Intl

Stationary Source Name:
76-0004

Stationary Category:	Emergency Generator
Stationary Type:	Diesel Fuel (EPA Methodology)

This stationary source is modeled as a point

Elevation:	173.43 meters
Release Height:	20.00 meters
Gas Velocity:	15.00 m/s
Temperature:	400.00 °F
CO EF :	3.0300grams/hp-hr
TOC EF :	1.1400grams/hp-hr
NOx EF :	14.0000grams/hp-hr
SOx EF :	0.9300grams/hp-hr
PM-10 EF :	0.9980grams/hp-hr
CO Pollution Control Factor :	0.00 %
TOC Pollution Control Factor :	0.00 %
NOx Pollution Control Factor :	0.00 %
SOx Pollution Control Factor :	0.00 %
PM-10 Pollution Control Factor:	0.00 %
Power Rating :	47horsepower

Point:	X (meters)	Y (meters)
1	0.00	0.00

Year:
2007

Hours	7.6
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has NOT edited the emission factors.

Stationary Source Name:
76-0103

Stationary Category:	Emergency Generator
Stationary Type:	Diesel Fuel (EPA Methodology)

This stationary source is modeled as a point

Elevation:	173.43 meters
Release Height:	20.00 meters
Gas Velocity:	15.00 m/s
Temperature:	400.00 °F
CO EF :	3.0300grams/hp-hr
TOC EF :	1.1400grams/hp-hr
NOx EF :	14.0000grams/hp-hr
SOx EF :	0.9300grams/hp-hr
PM-10 EF :	0.9980grams/hp-hr
CO Pollution Control Factor :	0.00 %
TOC Pollution Control Factor :	0.00 %

NOx Pollution Control Factor :	0.00 %	
SOx Pollution Control Factor :	0.00 %	
PM-10 Pollution Control Factor:	0.00 %	
Power Rating :	63horsepower	
Point:	X (meters)	Y (meters)
1	0.00	0.00

Year: 2007

Hours	10
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has NOT edited the emission factors.

Stationary Source Name: 77-0016

Stationary Category:	Emergency Generator
Stationary Type:	Diesel Fuel (EPA Methodology)

This stationary source is modeled as a point

Elevation:	173.43 meters	
Release Height:	20.00 meters	
Gas Velocity:	15.00 m/s	
Temperature:	400.00 °F	
CO EF :	3.0300grams/hp-hr	
TOC EF :	1.1400grams/hp-hr	
NOx EF :	14.0000grams/hp-hr	
SOx EF :	0.9300grams/hp-hr	
PM-10 EF :	0.9980grams/hp-hr	
CO Pollution Control Factor :	0.00 %	
TOC Pollution Control Factor :	0.00 %	
NOx Pollution Control Factor :	0.00 %	
SOx Pollution Control Factor :	0.00 %	
PM-10 Pollution Control Factor:	0.00 %	
Power Rating :	188horsepower	
Point:	X (meters)	Y (meters)
1	0.00	0.00

Year: 2007

Hours	6.3
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has NOT edited the emission factors.

Stationary Source Name: 77-0223

Stationary Category:	Emergency Generator
Stationary Type:	Diesel Fuel (EPA Methodology)

This stationary source is modeled as a point

Elevation:	173.43 meters
Release Height:	20.00 meters
Gas Velocity:	15.00 m/s
Temperature:	400.00 °F
CO EF :	3.0300grams/hp-hr
TOC EF :	1.1400grams/hp-hr
NOx EF :	14.0000grams/hp-hr
SOx EF :	0.9300grams/hp-hr

PM-10 EF :	0.9980grams/hp-hr	
CO Pollution Control Factor :	0.00 %	
TOC Pollution Control Factor :	0.00 %	
NOx Pollution Control Factor :	0.00 %	
SOx Pollution Control Factor :	0.00 %	
PM-10 Pollution Control Factor:	0.00 %	
Power Rating :	353horsepower	
Point:	X (meters)	Y (meters)
1	0.00	0.00

Year:
2007

Hours	18
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has NOT edited the emission factors.

Stationary Source Name:
78-0015

Stationary Category:	Other
Stationary Type:	Other

This stationary source is modeled as a point

Elevation:	173.43 meters	
Release Height:	20.00 meters	
Gas Velocity:	15.00 m/s	
Temperature:	400.00 °F	
CO EI :	2.5500Kg/Unit	
THC EI :	0.3270Kg/Unit	
NOx EI :	11.1200Kg/Unit	
SOx EI :	1.8700Kg/Unit	
PM-10 EI :	0.1650Kg/Unit	
CO Pollution Control Factor :	0.00 %	
HC Pollution Control Factor :	0.00 %	
NOx Pollution Control Factor :	0.00 %	
SOx Pollution Control Factor :	0.00 %	
PM-10 Pollution Control Factor:	0.00 %	
Point:	X (meters)	Y (meters)
1	0.00	0.00

Year:
2007

Hours	46
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has edited the emission factors.

Stationary Source Name:
78-0069

Stationary Category:	Emergency Generator
Stationary Type:	Diesel Fuel (EPA Methodology)

This stationary source is modeled as a point

Elevation:	173.43 meters
Release Height:	20.00 meters
Gas Velocity:	15.00 m/s
Temperature:	400.00 °F
CO EF :	3.0300grams/hp-hr
TOC EF :	1.1400grams/hp-hr

NOx EF :	14.0000grams/hp-hr	
SOx EF :	0.9300grams/hp-hr	
PM-10 EF :	0.9980grams/hp-hr	
CO Pollution Control Factor :	0.00 %	
TOC Pollution Control Factor :	0.00 %	
NOx Pollution Control Factor :	0.00 %	
SOx Pollution Control Factor :	0.00 %	
PM-10 Pollution Control Factor:	0.00 %	
Power Rating :	471horsepower	
Point:	X (meters)	Y (meters)
1	0.00	0.00

Year:
2007

Hours	10.8
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has NOT edited the emission factors.

Stationary Source Name:
78-0100

Stationary Category:	Other
Stationary Type:	Other

This stationary source is modeled as a point

Elevation:	173.43 meters	
Release Height:	20.00 meters	
Gas Velocity:	15.00 m/s	
Temperature:	400.00 °F	
CO EI :	1.9600Kg/Unit	
THC EI :	0.2510Kg/Unit	
NOx EI :	8.5500Kg/Unit	
SOx EI :	1.4400Kg/Unit	
PM-10 EI :	0.1270Kg/Unit	
CO Pollution Control Factor :	0.00 %	
HC Pollution Control Factor :	0.00 %	
NOx Pollution Control Factor :	0.00 %	
SOx Pollution Control Factor :	0.00 %	
PM-10 Pollution Control Factor:	0.00 %	
Point:	X (meters)	Y (meters)
1	0.00	0.00

Year:
2007

Hours	14.7
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has edited the emission factors.

Stationary Source Name:
78-0165

Stationary Category:	Other
Stationary Type:	Other

This stationary source is modeled as a point

Elevation:	173.43 meters
Release Height:	20.00 meters
Gas Velocity:	15.00 m/s
Temperature:	400.00 °F

CO EI :	2.9400Kg/Unit	
THC EI :	0.3770Kg/Unit	
NOx EI :	12.8300Kg/Unit	
SOx EI :	2.1600Kg/Unit	
PM-10 EI :	0.1910Kg/Unit	
CO Pollution Control Factor :	0.00 %	
HC Pollution Control Factor :	0.00 %	
NOx Pollution Control Factor :	0.00 %	
SOx Pollution Control Factor :	0.00 %	
PM-10 Pollution Control Factor:	0.00 %	
Point:	X (meters)	Y (meters)
1	0.00	0.00

Year:
2007

Hours	39.5
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has edited the emission factors.

Stationary Source Name:
78-0218

Stationary Category:	Other
Stationary Type:	Other

This stationary source is modeled as a point

Elevation:	173.43 meters	
Release Height:	20.00 meters	
Gas Velocity:	15.00 m/s	
Temperature:	400.00 °F	
CO EI :	1.7700Kg/Unit	
THC EI :	0.2260Kg/Unit	
NOx EI :	7.7000Kg/Unit	
SOx EI :	1.3000Kg/Unit	
PM-10 EI :	0.1150Kg/Unit	
CO Pollution Control Factor :	0.00 %	
HC Pollution Control Factor :	0.00 %	
NOx Pollution Control Factor :	0.00 %	
SOx Pollution Control Factor :	0.00 %	
PM-10 Pollution Control Factor:	0.00 %	
Point:	X (meters)	Y (meters)
1	0.00	0.00

Year:
2007

Hours	53
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has edited the emission factors.

Stationary Source Name:
78-0220

Stationary Category:	Other
Stationary Type:	Other

This stationary source is modeled as a point

Elevation:	173.43 meters
Release Height:	20.00 meters
Gas Velocity:	15.00 m/s

Temperature:	400.00 °F	
CO EI :	7.8400Kg/Unit	
THC EI :	1.0050Kg/Unit	
NOx EI :	34.2000Kg/Unit	
SOx EI :	5.7700Kg/Unit	
PM-10 EI :	0.5430Kg/Unit	
CO Pollution Control Factor :	0.00 %	
HC Pollution Control Factor :	0.00 %	
NOx Pollution Control Factor :	0.00 %	
SOx Pollution Control Factor :	0.00 %	
PM-10 Pollution Control Factor:	0.00 %	
Point:	X (meters)	Y (meters)
1	0.00	0.00

Year:
2007

Hours	23.25
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has edited the emission factors.

Stationary Source Name:
78-0425

Stationary Category:	Other
Stationary Type:	Other

This stationary source is modeled as a point

Elevation:	173.43 meters	
Release Height:	20.00 meters	
Gas Velocity:	15.00 m/s	
Temperature:	400.00 °F	
CO EI :	5.8800Kg/Unit	
THC EI :	0.7540Kg/Unit	
NOx EI :	25.7000Kg/Unit	
SOx EI :	4.3300Kg/Unit	
PM-10 EI :	0.4430Kg/Unit	
CO Pollution Control Factor :	0.00 %	
HC Pollution Control Factor :	0.00 %	
NOx Pollution Control Factor :	0.00 %	
SOx Pollution Control Factor :	0.00 %	
PM-10 Pollution Control Factor:	0.00 %	
Point:	X (meters)	Y (meters)
1	0.00	0.00

Year:
2007

Hours	24.2
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has edited the emission factors.

Stationary Source Name:
78-0426

Stationary Category:	Other
Stationary Type:	Other

This stationary source is modeled as a point

Elevation:	173.43 meters
Release Height:	20.00 meters

Gas Velocity:	15.00 m/s
Temperature:	400.00 °F
CO EI :	7.8400Kg/Unit
THC EI :	1.0050Kg/Unit
NOx EI :	34.2000Kg/Unit
SOx EI :	5.7700Kg/Unit
PM-10 EI :	0.4430Kg/Unit
CO Pollution Control Factor :	0.00 %
HC Pollution Control Factor :	0.00 %
NOx Pollution Control Factor :	0.00 %
SOx Pollution Control Factor :	0.00 %
PM-10 Pollution Control Factor:	0.00 %

Point:	X (meters)	Y (meters)
1	0.00	0.00

Year:
2007

Hours	10
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has edited the emission factors.

Stationary Source Name:
78-0427

Stationary Category:	Other
Stationary Type:	Other

This stationary source is modeled as a point

Elevation:	173.43 meters
Release Height:	20.00 meters
Gas Velocity:	15.00 m/s
Temperature:	400.00 °F
CO EI :	7.8400Kg/Unit
THC EI :	1.0050Kg/Unit
NOx EI :	34.2000Kg/Unit
SOx EI :	5.7700Kg/Unit
PM-10 EI :	0.5060Kg/Unit
CO Pollution Control Factor :	0.00 %
HC Pollution Control Factor :	0.00 %
NOx Pollution Control Factor :	0.00 %
SOx Pollution Control Factor :	0.00 %
PM-10 Pollution Control Factor:	0.00 %

Point:	X (meters)	Y (meters)
1	0.00	0.00

Year:
2007

Hours	17.3
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has edited the emission factors.

Stationary Source Name:
78-0428

Stationary Category:	Other
Stationary Type:	Other

This stationary source is modeled as a point

Elevation:	173.43 meters

Release Height:	20.00 meters	
Gas Velocity:	15.00 m/s	
Temperature:	400.00 °F	
CO EI :	5.8800Kg/Unit	
THC EI :	0.7540Kg/Unit	
NOx EI :	25.7000Kg/Unit	
SOx EI :	4.3300Kg/Unit	
PM-10 EI :	0.4430Kg/Unit	
CO Pollution Control Factor :	0.00 %	
HC Pollution Control Factor :	0.00 %	
NOx Pollution Control Factor :	0.00 %	
SOx Pollution Control Factor :	0.00 %	
PM-10 Pollution Control Factor:	0.00 %	
Point:	X (meters)	Y (meters)
1	0.00	0.00

Year:
2007

Hours	15.8
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has edited the emission factors.

Stationary Source Name:
78-0553

Stationary Category:	Other
Stationary Type:	Other

This stationary source is modeled as a point

Elevation:	173.43 meters	
Release Height:	20.00 meters	
Gas Velocity:	15.00 m/s	
Temperature:	400.00 °F	
CO EI :	5.8800Kg/Unit	
THC EI :	0.7540Kg/Unit	
NOx EI :	25.7000Kg/Unit	
SOx EI :	4.3300Kg/Unit	
PM-10 EI :	0.3800Kg/Unit	
CO Pollution Control Factor :	0.00 %	
HC Pollution Control Factor :	0.00 %	
NOx Pollution Control Factor :	0.00 %	
SOx Pollution Control Factor :	0.00 %	
PM-10 Pollution Control Factor:	0.00 %	
Point:	X (meters)	Y (meters)
1	0.00	0.00

Year:
2007

Hours	7
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has edited the emission factors.

Stationary Source Name:
B1-NG

Stationary Category:	Boiler/Space Heater
Stationary Type:	Natural Gas: Wall Fired Boiler, <100 Million BTU/hr, Uncontrolled

This stationary source is modeled as a point

Elevation:	173.43 meters	
Release Height:	20.00 meters	
Gas Velocity:	15.00 m/s	
Temperature:	400.00 °F	
CO EI :	1.3000Kg/1000 m^3	
THC EI :	0.1800Kg/1000 m^3	
NOx EI :	1.6000Kg/1000 m^3	
SO2 EI :	0.0100Kg/1000 m^3	
PM-10 EI :	0.1200Kg/1000 m^3	
CO Pollution Control Factor :	0.00 %	
TOC Pollution Control Factor :	0.00 %	
NOx Pollution Control Factor :	0.00 %	
SO2 Pollution Control Factor :	0.00 %	
PM-10 Pollution Control Factor:	0.00 %	
Point:	X (meters)	Y (meters)
1	0.00	0.00

Year: 2007

1,000s of m³ Used	1659.66
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has NOT edited the emission factors.

Stationary Source Name: B1-No2

Stationary Category:	Boiler/Space Heater
Stationary Type:	Fuel Oil: Industrial Boiler <100 Million BTU/hr, Distillate Oil

This stationary source is modeled as a point

Elevation:	173.43 meters	
Release Height:	20.00 meters	
Gas Velocity:	15.00 m/s	
Temperature:	400.00 °F	
CO EI :	0.6000Kg/Kiloliter	
TOC EI :	0.0302Kg/Kiloliter	
NOx EI :	2.4000Kg/Kiloliter	
SOx EI :	17.3000Kg/Kiloliter - ulfur	
PM-10 EI :	0.1200Kg/Kiloliter	
Fuel Sulfur Content :	0.02 %	
CO Pollution Control Factor :	0.00 %	
TOC Pollution Control Factor :	0.00 %	
NOx Pollution Control Factor :	0.00 %	
SOx Pollution Control Factor :	0.00 %	
PM-10 Pollution Control Factor:	0.00 %	
Point:	X (meters)	Y (meters)
1	0.00	0.00

Year: 2007

Kiloliters Used	34.7
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has edited the emission factors.

Stationary Source Name: B2-NG

Stationary Category:	Boiler/Space Heater
Stationary Type:	Natural Gas: Wall Fired Boiler, <100 Million BTU/hr, Uncontrolled

This stationary source is modeled as a point

Elevation:	173.43 meters	
Release Height:	20.00 meters	
Gas Velocity:	15.00 m/s	
Temperature:	400.00 °F	
CO EI :	1.3000Kg/1000 m^3	
THC EI :	0.1800Kg/1000 m^3	
NOx EI :	1.6000Kg/1000 m^3	
SO2 EI :	0.0100Kg/1000 m^3	
PM-10 EI :	0.1200Kg/1000 m^3	
CO Pollution Control Factor :	0.00 %	
TOC Pollution Control Factor :	0.00 %	
NOx Pollution Control Factor :	0.00 %	
SO2 Pollution Control Factor :	0.00 %	
PM-10 Pollution Control Factor:	0.00 %	
Point:	X (meters)	Y (meters)
1	0.00	0.00

Year:
2007

1,000s of m³ Used	1659.66
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has NOT edited the emission factors.

Stationary Source Name:
B2-No2

Stationary Category: Boiler/Space Heater
Stationary Type: Fuel Oil: Industrial Boiler <100 Million BTU/hr, Distillate Oil

This stationary source is modeled as a point

Elevation:	173.43 meters	
Release Height:	20.00 meters	
Gas Velocity:	15.00 m/s	
Temperature:	400.00 °F	
CO EI :	0.6000Kg/Kiloliter	
TOC EI :	0.0302Kg/Kiloliter	
NOx EI :	2.4000Kg/Kiloliter	
SOx EI :	17.3000Kg/Kiloliter - ulfur	
PM-10 EI :	0.1200Kg/Kiloliter	
Fuel Sulfur Content :	0.02 %	
CO Pollution Control Factor :	0.00 %	
TOC Pollution Control Factor :	0.00 %	
NOx Pollution Control Factor :	0.00 %	
SOx Pollution Control Factor :	0.00 %	
PM-10 Pollution Control Factor:	0.00 %	
Point:	X (meters)	Y (meters)
1	0.00	0.00

Year:
2007

Kiloliters Used	34.7
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has edited the emission factors.

Stationary Source Name:
B3-NG

Stationary Category:	Boiler/Space Heater
Stationary Type:	Natural Gas: Wall Fired Boiler, <100 Million BTU/hr, Uncontrolled

This stationary source is modeled as a point

Elevation:	173.43 meters
Release Height:	20.00 meters
Gas Velocity:	15.00 m/s
Temperature:	400.00 °F
CO EI :	1.3000Kg/1000 m^3
THC EI :	0.1800Kg/1000 m^3
NOx EI :	1.6000Kg/1000 m^3
SO2 EI :	0.0100Kg/1000 m^3
PM-10 EI :	0.1200Kg/1000 m^3
CO Pollution Control Factor :	0.00 %
TOC Pollution Control Factor :	0.00 %
NOx Pollution Control Factor :	0.00 %
SO2 Pollution Control Factor :	0.00 %
PM-10 Pollution Control Factor:	0.00 %

Point:	X (meters)	Y (meters)
1	0.00	0.00

Year:
2007

1,000s of m³ Used	1659.66
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has NOT edited the emission factors.

Stationary Source Name:
B3-No2

Stationary Category:	Boiler/Space Heater
Stationary Type:	Fuel Oil: Industrial Boiler <100 Million BTU/hr, Distillate Oil

This stationary source is modeled as a point

Elevation:	173.43 meters
Release Height:	20.00 meters
Gas Velocity:	15.00 m/s
Temperature:	400.00 °F
CO EI :	0.6000Kg/Kiloliter
TOC EI :	0.0302Kg/Kiloliter
NOx EI :	2.4000Kg/Kiloliter
SOx EI :	17.3000Kg/Kiloliter - ulfur
PM-10 EI :	0.1200Kg/Kiloliter
Fuel Sulfur Content :	0.02 %
CO Pollution Control Factor :	0.00 %
TOC Pollution Control Factor :	0.00 %
NOx Pollution Control Factor :	0.00 %
SOx Pollution Control Factor :	0.00 %
PM-10 Pollution Control Factor:	0.00 %

Point:	X (meters)	Y (meters)
1	0.00	0.00

Year:
2007

Kiloliters Used	34.7
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has edited the emission factors.

Stationary Source Name: B4-NG

Stationary Category:	Boiler/Space Heater
Stationary Type:	Natural Gas: Wall Fired Boiler, <100 Million BTU/hr, Uncontrolled

This stationary source is modeled as a point

Elevation:	173.43 meters	
Release Height:	20.00 meters	
Gas Velocity:	15.00 m/s	
Temperature:	400.00 °F	
CO EI :	1.3000Kg/1000 m^3	
THC EI :	0.1800Kg/1000 m^3	
NOx EI :	1.6000Kg/1000 m^3	
SO2 EI :	0.0100Kg/1000 m^3	
PM-10 EI :	0.1200Kg/1000 m^3	
CO Pollution Control Factor :	0.00 %	
TOC Pollution Control Factor :	0.00 %	
NOx Pollution Control Factor :	0.00 %	
SO2 Pollution Control Factor :	0.00 %	
PM-10 Pollution Control Factor:	0.00 %	
Point:	X (meters)	Y (meters)
1	0.00	0.00

Year: 2007

1,000s of m³ Used	1659.66
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has NOT edited the emission factors.

Stationary Source Name: B4-No2

Stationary Category:	Boiler/Space Heater
Stationary Type:	Fuel Oil: Industrial Boiler <100 Million BTU/hr, Distillate Oil

This stationary source is modeled as a point

Elevation:	173.43 meters	
Release Height:	20.00 meters	
Gas Velocity:	15.00 m/s	
Temperature:	400.00 °F	
CO EI :	0.6000Kg/Kiloliter	
TOC EI :	0.0302Kg/Kiloliter	
NOx EI :	2.4000Kg/Kiloliter	
SOx EI :	17.3000Kg/Kiloliter - ulfur	
PM-10 EI :	0.1200Kg/Kiloliter	
Fuel Sulfur Content :	0.02 %	
CO Pollution Control Factor :	0.00 %	
TOC Pollution Control Factor :	0.00 %	
NOx Pollution Control Factor :	0.00 %	
SOx Pollution Control Factor :	0.00 %	
PM-10 Pollution Control Factor:	0.00 %	
Point:	X (meters)	Y (meters)
1	0.00	0.00

Year: 2007

Kiloliters Used	34.7
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational	DEFAULT

Profile:

The user has edited the emission factors.

Stationary Source Name: B5-NG

Stationary Category:	Boiler/Space Heater
Stationary Type:	Natural Gas: Wall Fired Boiler, <100 Million BTU/hr, Uncontrolled

This stationary source is modeled as a point

Elevation:	173.43 meters	
Release Height:	20.00 meters	
Gas Velocity:	15.00 m/s	
Temperature:	400.00 °F	
CO EI :	1.3000Kg/1000 m^3	
THC EI :	0.1800Kg/1000 m^3	
NOx EI :	1.6000Kg/1000 m^3	
SO2 EI :	0.0100Kg/1000 m^3	
PM-10 EI :	0.1200Kg/1000 m^3	
CO Pollution Control Factor :	0.00 %	
TOC Pollution Control Factor :	0.00 %	
NOx Pollution Control Factor :	0.00 %	
SO2 Pollution Control Factor :	0.00 %	
PM-10 Pollution Control Factor:	0.00 %	
Point:	X (meters)	Y (meters)
1	0.00	0.00

Year: 2007

1,000s of m³ Used	59.95
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has NOT edited the emission factors.

Stationary Source Name: CTG1

Stationary Category:	Other
Stationary Type:	Other

This stationary source is modeled as a point

Elevation:	173.43 meters	
Release Height:	20.00 meters	
Gas Velocity:	15.00 m/s	
Temperature:	400.00 °F	
CO EI :	3.6300Kg/Unit	
THC EI :	0.1800Kg/Unit	
NOx EI :	0.6900Kg/Unit	
SOx EI :	0.0560Kg/Unit	
PM-10 EI :	0.1080Kg/Unit	
CO Pollution Control Factor :	0.00 %	
HC Pollution Control Factor :	0.00 %	
NOx Pollution Control Factor :	0.00 %	
SOx Pollution Control Factor :	0.00 %	
PM-10 Pollution Control Factor:	0.00 %	
Point:	X (meters)	Y (meters)
1	0.00	0.00

Year: 2007

1,000s of m³ Used	29917.5
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT

Monthly Operational Profile:	DEFAULT

The user has edited the emission factors.

Stationary Source Name: CTG2

Stationary Category:	Other
Stationary Type:	Other

This stationary source is modeled as a point

Elevation:	173.43 meters	
Release Height:	20.00 meters	
Gas Velocity:	15.00 m/s	
Temperature:	400.00 °F	
CO EI :	1.1600Kg/Unit	
THC EI :	0.1800Kg/Unit	
NOx EI :	0.7700Kg/Unit	
SOx EI :	0.0560Kg/Unit	
PM-10 EI :	0.1080Kg/Unit	
CO Pollution Control Factor :	0.00 %	
HC Pollution Control Factor :	0.00 %	
NOx Pollution Control Factor :	0.00 %	
SOx Pollution Control Factor :	0.00 %	
PM-10 Pollution Control Factor:	0.00 %	
Point:	X (meters)	Y (meters)
1	0.00	0.00

Year: 2007

1,000s of m³ Used	29133.5
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has edited the emission factors.

Stationary Source Name: RWDI-001

Stationary Category:	Other
Stationary Type:	Other

This stationary source is modeled as a point

Elevation:	173.43 meters	
Release Height:	20.00 meters	
Gas Velocity:	15.00 m/s	
Temperature:	400.00 °F	
CO EI :	6.8600Kg/Unit	
THC EI :	0.8800Kg/Unit	
NOx EI :	29.9000Kg/Unit	
SOx EI :	5.0500Kg/Unit	
PM-10 EI :	0.4430Kg/Unit	
CO Pollution Control Factor :	0.00 %	
HC Pollution Control Factor :	0.00 %	
NOx Pollution Control Factor :	0.00 %	
SOx Pollution Control Factor :	0.00 %	
PM-10 Pollution Control Factor:	0.00 %	
Point:	X (meters)	Y (meters)
1	0.00	0.00

Year: 2007

Hours	20.4
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational	

profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has edited the emission factors.

Stationary Source Name: RWDI-002

Stationary Category:	Other
Stationary Type:	Other

This stationary source is modeled as a point

Elevation:	173.43 meters	
Release Height:	20.00 meters	
Gas Velocity:	15.00 m/s	
Temperature:	400.00 °F	
CO EI :	1.9600Kg/Unit	
THC EI :	0.2510Kg/Unit	
NOx EI :	8.5500Kg/Unit	
SOx EI :	1.4400Kg/Unit	
PM-10 EI :	0.1270Kg/Unit	
CO Pollution Control Factor :	0.00 %	
HC Pollution Control Factor :	0.00 %	
NOx Pollution Control Factor :	0.00 %	
SOx Pollution Control Factor :	0.00 %	
PM-10 Pollution Control Factor:	0.00 %	
Point:	X (meters)	Y (meters)
1	0.00	0.00

Year: 2007

Hours	16
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has edited the emission factors.

Stationary Source Name: RWDI-003

Stationary Category:	Other
Stationary Type:	Other

This stationary source is modeled as a point

Elevation:	173.43 meters	
Release Height:	20.00 meters	
Gas Velocity:	15.00 m/s	
Temperature:	400.00 °F	
CO EI :	2.1400Kg/Unit	
THC EI :	0.2740Kg/Unit	
NOx EI :	9.3300Kg/Unit	
SOx EI :	1.5700Kg/Unit	
PM-10 EI :	0.1400Kg/Unit	
CO Pollution Control Factor :	0.00 %	
HC Pollution Control Factor :	0.00 %	
NOx Pollution Control Factor :	0.00 %	
SOx Pollution Control Factor :	0.00 %	
PM-10 Pollution Control Factor:	0.00 %	
Point:	X (meters)	Y (meters)
1	0.00	0.00

Year: 2007

Hours	30
Quarter-Hourly Operational profile:	DEFAULT

Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has edited the emission factors.

Stationary Source Name: RWDI-004

Stationary Category:	Other
Stationary Type:	Other

This stationary source is modeled as a point

Elevation:	173.43 meters	
Release Height:	20.00 meters	
Gas Velocity:	15.00 m/s	
Temperature:	400.00 °F	
CO EI :	5.8800Kg/Unit	
THC EI :	0.7540Kg/Unit	
NOx EI :	25.7000Kg/Unit	
SOx EI :	4.3300Kg/Unit	
PM-10 EI :	0.3800Kg/Unit	
CO Pollution Control Factor :	0.00 %	
HC Pollution Control Factor :	0.00 %	
NOx Pollution Control Factor :	0.00 %	
SOx Pollution Control Factor :	0.00 %	
PM-10 Pollution Control Factor:	0.00 %	
Point:	X (meters)	Y (meters)
1	0.00	0.00

Year: 2007

Hours	30
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has edited the emission factors.

Stationary Source Name: RWDI-005

Stationary Category:	Other
Stationary Type:	Other

This stationary source is modeled as a point

Elevation:	173.43 meters	
Release Height:	20.00 meters	
Gas Velocity:	15.00 m/s	
Temperature:	400.00 °F	
CO EI :	1.9600Kg/Unit	
THC EI :	0.2510Kg/Unit	
NOx EI :	8.5500Kg/Unit	
SOx EI :	1.4400Kg/Unit	
PM-10 EI :	0.1270Kg/Unit	
CO Pollution Control Factor :	0.00 %	
HC Pollution Control Factor :	0.00 %	
NOx Pollution Control Factor :	0.00 %	
SOx Pollution Control Factor :	0.00 %	
PM-10 Pollution Control Factor:	0.00 %	
Point:	X (meters)	Y (meters)
1	0.00	0.00

Year: 2007

Hours	6
Quarter-Hourly	

Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has edited the emission factors.

Stationary Source Name: RWDI-015

Stationary Category:	Other
Stationary Type:	Other

This stationary source is modeled as a point

Elevation:	173.43 meters	
Release Height:	20.00 meters	
Gas Velocity:	15.00 m/s	
Temperature:	400.00 °F	
CO EI :	5.8800Kg/Unit	
THC EI :	0.7540Kg/Unit	
NOx EI :	25.7000Kg/Unit	
SOx EI :	4.3300Kg/Unit	
PM-10 EI :	0.3800Kg/Unit	
CO Pollution Control Factor :	0.00 %	
HC Pollution Control Factor :	0.00 %	
NOx Pollution Control Factor :	0.00 %	
SOx Pollution Control Factor :	0.00 %	
PM-10 Pollution Control Factor:	0.00 %	
Point:	X (meters)	Y (meters)
1	0.00	0.00

Year: 2007

Hours	20.3
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has edited the emission factors.

Stationary Source Name: RWDI-016

Stationary Category:	Emergency Generator
Stationary Type:	Diesel Fuel (EPA Methodology)

This stationary source is modeled as a point

Elevation:	173.43 meters	
Release Height:	20.00 meters	
Gas Velocity:	15.00 m/s	
Temperature:	400.00 °F	
CO EF :	3.0300grams/hp-hr	
TOC EF :	1.1400grams/hp-hr	
NOx EF :	14.0000grams/hp-hr	
SOx EF :	0.9300grams/hp-hr	
PM-10 EF :	0.9980grams/hp-hr	
CO Pollution Control Factor :	0.00 %	
TOC Pollution Control Factor :	0.00 %	
NOx Pollution Control Factor :	0.00 %	
SOx Pollution Control Factor :	0.00 %	
PM-10 Pollution Control Factor:	0.00 %	
Power Rating :	314horsepower	
Point:	X (meters)	Y (meters)
1	0.00	0.00

Year:
2007

Hours	20.3
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has NOT edited the emission factors.

Stationary Source Name:
RWDI-017

Stationary Category:	Emergency Generator
Stationary Type:	Diesel Fuel (EPA Methodology)

This stationary source is modeled as a point

Elevation:	173.43 meters	
Release Height:	20.00 meters	
Gas Velocity:	15.00 m/s	
Temperature:	400.00 °F	
CO EF :	3.0300grams/hp-hr	
TOC EF :	1.1400grams/hp-hr	
NOx EF :	14.0000grams/hp-hr	
SOx EF :	0.9300grams/hp-hr	
PM-10 EF :	0.9980grams/hp-hr	
CO Pollution Control Factor :	0.00 %	
TOC Pollution Control Factor :	0.00 %	
NOx Pollution Control Factor :	0.00 %	
SOx Pollution Control Factor :	0.00 %	
PM-10 Pollution Control Factor:	0.00 %	
Power Rating :	55horsepower	
Point:	X (meters)	Y (meters)
1	0.00	0.00

Year:
2007

Hours	20.3
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has NOT edited the emission factors.

Stationary Source Name:
RWDI-018

Stationary Category:	Emergency Generator
Stationary Type:	Diesel Fuel (EPA Methodology)

This stationary source is modeled as a point

Elevation:	173.43 meters	
Release Height:	20.00 meters	
Gas Velocity:	15.00 m/s	
Temperature:	400.00 °F	
CO EF :	3.0300grams/hp-hr	
TOC EF :	1.1400grams/hp-hr	
NOx EF :	14.0000grams/hp-hr	
SOx EF :	0.9300grams/hp-hr	
PM-10 EF :	0.9980grams/hp-hr	
CO Pollution Control Factor :	0.00 %	
TOC Pollution Control Factor :	0.00 %	
NOx Pollution Control Factor :	0.00 %	
SOx Pollution Control Factor :	0.00 %	
PM-10 Pollution Control Factor:	0.00 %	
Power Rating :	94horsepower	
Point:	X (meters)	Y (meters)

1	0.00	0.00

Year: 2007

Hours	20.3
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has NOT edited the emission factors.

Training Fires

Baseline, Lester B Pearson Intl

Training Fire Name: Training Fire

Fuel:	Propane
Release Height:	0.00 meters
Diameter:	0.00 meters
Gas Velocity	0.00 m/s
Temperature:	0.00 °F
X:	0.00 meters
Y:	0.00 meters
Elevation:	173.43 meters

Year: 2007

Gallons of Fuel Used (gal/year):	46953.6
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has NOT edited the following emission factors:

CO (g/gallon):	15.78
HC (g/gallon):	14.42
NOX (g/gallon):	2.9
SOX (g/gallon):	0.009
PM-10 (g/gallon):	53.16

Gates

Baseline, Lester B Pearson Intl

None.

Taxiways

Baseline, Lester B Pearson Intl

None.

Runways

Baseline, Lester B Pearson Intl

None.

Taxipaths

Baseline, Lester B Pearson Intl

None.

Configurations

Baseline, Lester B Pearson Intl

None.

Buildings

Baseline, Lester B Pearson Intl

None.

Discrete Cartesian Receptors

Baseline, Lester B Pearson Intl

None.

Discrete Polar Receptors

Baseline, Lester B Pearson Intl

None.

Cartesian Receptor Networks	Baseline, Lester B Pearson Intl
None.	
Polar Receptor Networks	Baseline, Lester B Pearson Intl
None.	
User-Created Aircraft	Baseline, Lester B Pearson Intl
None.	
User-Created GSE	Baseline, Lester B Pearson Intl
None.	
User-Created APU	Baseline, Lester B Pearson Intl
None.	

APPENDIX B2

EDMS Inputs for Aircraft, APUs and GSE

EDMS 5.1 Model Inputs for Aircraft v5 Study

Study Created:	Tue Dec 09 13:28:23 2008
Report Date:	Mon May 04 19:03:44 2009
Study Pathname:	I:\0925039\0925039A\Analysis\01 EDMS\03 Aircraft\Aircraft v5\Aircraft v5.edm

Study Setup

Unit System:	Metric
Dispersion Modeling:	Dispersion is not enabled for this study
Speciated Hydrocarbon Modeling:	Speciated Hydrocarbon Modeling is not enabled for this study
Analysis Years:	2007

Scenarios

Scenario Name:	Description:	Using GTAA recorded 2007 taxi times and hourly met data
Baseline	Aircraft Times in Mode Basis:	Performance-Based
	Taxi Time Modeling:	User-specified Taxi Times
	FOA3 Sulfur-to-Sulfate Conversion Rate:	2.400000 %

Airports

Airport Name:	Lester B Pearson Intl
IATA Code:	YYZ
ICAO Code:	CYYZ
FAA Code:	
Country:	CA
State:	
City:	Toronto
Airport Description:	Lester B Pearson Intl
Latitude:	43.677°
Longitude:	-79.631°
Northing:	4836934.85
Easting:	610387.93
UTM Zone:	17
Elevation:	569.00 feet
PM Modeling Methodology:	FOA3

Scenario-Airport: Baseline, Lester B Pearson Intl

Weather

Baseline, Lester B Pearson Intl

Mixing Height:	914.40 meters
Temperature:	8.64 °C
Daily High Temperature:	14.39 °C
Daily Low Temperature:	2.89 °C
Pressure:	99525.95 Pa
Sea Level Pressure:	101625.51 Pa
Relative Humidity:	69.65
Wind Speed:	15.33 kph
Wind Direction:	0.00 °
Ceiling:	30480.00 m
Visibility:	80.47 km

The user has used hourly meteorological data.

Base Elevation:	173.43 meters
Date Range:	Thursday, January 01, 2004 to Friday, December 31, 2004
Source Data File Location:	
Upper Air Data File Location:	

Quarter-Hourly Operational Profiles

Baseline, Lester B Pearson Intl

Name: DEFAULT

Quarter-Hour	Weight	Quarter-Hour	Weight	Quarter-Hour	Weight	Quarter-Hour	Weight
12:00am to 12:14 am	1.000000	6:00am to 6:14am	1.000000	12:00pm to 12:14 pm	1.000000	6:00pm to 6:14pm	1.000000
12:15am to 12:29 am	1.000000	6:15am to 6:29am	1.000000	12:15pm to 12:29 pm	1.000000	6:15pm to 6:29pm	1.000000
12:30am to 12:44 am	1.000000	6:30am to 6:44am	1.000000	12:30pm to 12:44 pm	1.000000	6:30pm to 6:44pm	1.000000
12:45am to 12:59 am	1.000000	6:45am to 6:59am	1.000000	12:45pm to 12:59 pm	1.000000	6:45pm to 6:59pm	1.000000
1:00am to 1:14am	1.000000	7:00am to 7:14am	1.000000	1:00pm to 1:14pm	1.000000	7:00pm to 7:14pm	1.000000
1:15am to 1:29am	1.000000	7:15am to 7:29am	1.000000	1:15pm to 1:29pm	1.000000	7:15pm to 7:29pm	1.000000
1:30am to 1:44am	1.000000	7:30am to 7:44am	1.000000	1:30pm to 1:44pm	1.000000	7:30pm to 7:44pm	1.000000
1:45am to 1:59am	1.000000	7:45am to 7:59am	1.000000	1:45pm to 1:59pm	1.000000	7:45pm to 7:59pm	1.000000
2:00am to 2:14am	1.000000	8:00am to 8:14am	1.000000	2:00pm to 2:14pm	1.000000	8:00pm to 8:14pm	1.000000
2:15am to 2:29am	1.000000	8:15am to 8:29am	1.000000	2:15pm to 2:29pm	1.000000	8:15pm to 8:29pm	1.000000
2:30am to 2:44am	1.000000	8:30am to 8:44am	1.000000	2:30pm to 2:44pm	1.000000	8:30pm to 8:44pm	1.000000
2:45am to 2:59am	1.000000	8:45am to 8:59am	1.000000	2:45pm to 2:59pm	1.000000	8:45pm to 8:59pm	1.000000
3:00am to 3:14am	1.000000	9:00am to 9:14am	1.000000	3:00pm to 3:14pm	1.000000	9:00pm to 9:14pm	1.000000
3:15am to 3:29am	1.000000	9:15am to 9:29am	1.000000	3:15pm to 3:29pm	1.000000	9:15pm to 9:29pm	1.000000
3:30am to 3:44am	1.000000	9:30am to 9:44am	1.000000	3:30pm to 3:44pm	1.000000	9:30pm to 9:44pm	1.000000
3:45am to 3:59am	1.000000	9:45am to 9:59am	1.000000	3:45pm to 3:59pm	1.000000	9:45pm to 9:59pm	1.000000
4:00am to 4:14am	1.000000	10:00am to 10:14am	1.000000	4:00pm to 4:14pm	1.000000	10:00pm to 10:14pm	1.000000
4:15am to 4:29am	1.000000	10:15am to 10:29am	1.000000	4:15pm to 4:29pm	1.000000	10:15pm to 10:29pm	1.000000
4:30am to 4:44am	1.000000	10:30am to 10:44am	1.000000	4:30pm to 4:44pm	1.000000	10:30pm to 10:44pm	1.000000
4:45am to 4:59am	1.000000	10:45am to 10:59am	1.000000	4:45pm to 4:59pm	1.000000	10:45pm to 10:59pm	1.000000
5:00am to 5:14am	1.000000	11:00am to 11:14am	1.000000	5:00pm to 5:14pm	1.000000	11:00pm to 11:14pm	1.000000
5:15am to 5:29am	1.000000	11:15am to 11:29am	1.000000	5:15pm to 5:29pm	1.000000	11:15pm to 11:29pm	1.000000
5:30am to 5:44am	1.000000	11:30am to 11:44am	1.000000	5:30pm to 5:44pm	1.000000	11:30pm to 11:44pm	1.000000
5:45am to 5:59am	1.000000	11:45am to 11:59am	1.000000	5:45pm to 5:59pm	1.000000	11:45pm to 11:59pm	1.000000

Daily Operational Profiles

Baseline, Lester B Pearson Intl

Name: DEFAULT

Day	Weight	Day	Weight
Monday	1.000000	Friday	1.000000
Tuesday	1.000000	Saturday	1.000000
Wednesday	1.000000	Sunday	1.000000
Thursday	1.000000		

Monthly Operational Profiles

Baseline, Lester B Pearson Intl

Name: DEFAULT

Month	Weight	Month	Weight
January	1.000000	July	1.000000
February	1.000000	August	1.000000
March	1.000000	September	1.000000
April	1.000000	October	1.000000
May	1.000000	November	1.000000
June	1.000000	December	1.000000

Aircraft

Baseline, Lester B Pearson Intl

Default Taxi Out Time: 19.000000 min

Default Taxi In Time: 7.000000 min

Year:	Uses Schedule?	Schedule Filename:
2007	Yes	D:\My Documents\Projects\GTAA\Analysis\01 EDMS\Aircraft\Aircraft v5\Activity Info\081210 2007 Aircraft Schedule.txt

Aircraft Name:
Airbus A310-200 Series
Engine Type:
CF6-80A3
Identification:
Aircraft
Category:
HCJP

Take Off weight:	138074.00 Kgs
Approach Weight:	111584.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU GTCP331-200ER (143 HP)
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Air Conditioner (Generic)	Electric	7.00	23.00	0.00	75.00	
Air Start (ACE 180)	Diesel	0.00	7.00	425.00	90.00	
Aircraft Tractor (Stewart & Stevenson TUG GT-50H)	Diesel	0.00	8.00	190.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	120.00	120.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	17.00	18.00	107.00	50.00	
Cabin Service Truck (Hi-Way F650)	Diesel	17.00	18.00	210.00	53.00	
Cargo Loader (FMC Commander 15)	Diesel	80.00	80.00	80.00	50.00	
Catering Truck (Hi-Way F650)	Diesel	10.00	10.00	210.00	53.00	
Hydrant Truck (F250 / F350)	Diesel	0.00	20.00	235.00	70.00	
Lavatory Truck (Wollard TLS-770 / F350)	Gasoline	25.00	0.00	235.00	25.00	
Service Truck (F250 / F350)	Diesel	7.00	8.00	235.00	20.00	
Water Service (Gate Service)	Electric	0.00	12.00	0.00	20.00	

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	17.300000 min
Taxi In Time:	6.800000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Airbus A318-100 Series
Engine Type:
CFM56-5B8/P SAC
Identification:
Aircraft
Category:

Take Off weight:	66270.00 Kgs
Approach Weight:	62505.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU GTCP 36-300 (80HP)
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min

LCJP

Gate Assignment: None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Air Conditioner (Generic)	Electric	7.00	23.00	0.00	75.00	
Air Start (ACE 180)	Diesel	0.00	7.00	425.00	90.00	
Aircraft Tractor (Stewart & Stevenson TUG GT-50H)	Diesel	0.00	8.00	190.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	74.00	76.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	48.00	48.00	107.00	50.00	
Cabin Service Truck (Hi-Way F650)	Diesel	10.00	10.00	210.00	53.00	
Catering Truck (Hi-Way F650)	Diesel	7.00	8.00	210.00	53.00	
Hydrant Truck (F250 / F350)	Diesel	0.00	12.00	235.00	70.00	
Lavatory Truck (Wollard TLS-770 / F350)	Gasoline	15.00	0.00	235.00	25.00	
Service Truck (F250 / F350)	Diesel	7.00	8.00	235.00	20.00	
Water Service (Gate Service)	Electric	0.00	12.00	0.00	20.00	

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	20.100000 min
Taxi In Time:	9.900000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Airbus A319-100 Series
Engine Type:
CFM56-5B6/P
Identification:
Aircraft
Category:
LCJP

Take Off weight:	66270.00 Kgs
Approach Weight:	62505.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU GTCP 36-300 (80HP)
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Air Conditioner (Generic)	Electric	7.00	23.00	0.00	75.00	
Air Start (ACE 180)	Diesel	0.00	7.00	425.00	90.00	
Aircraft Tractor (Stewart & Stevenson TUG GT-50H)	Diesel	0.00	8.00	190.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	74.00	76.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	48.00	48.00	107.00	50.00	
Cabin Service Truck (Hi-Way F650)	Diesel	10.00	10.00	210.00	53.00	

Catering Truck (Hi-Way F650)	Diesel	7.00	8.00	210.00	53.00
Hydrant Truck (F250 / F350)	Diesel	0.00	12.00	235.00	70.00
Lavatory Truck (Wollard TLS-770 / F350)	Gasoline	15.00	0.00	235.00	25.00
Service Truck (F250 / F350)	Diesel	7.00	8.00	235.00	20.00
Water Service (Gate Service)	Electric	0.00	12.00	0.00	20.00

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	17.000000 min
Taxi In Time:	8.700000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Airbus A320-200 Series
Engine Type:
V2527-A5
Identification:
Aircraft Category:

LCJP

Take Off weight:	69989.00 Kgs
Approach Weight:	59421.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU GTCP 36-300 (80HP)
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Air Conditioner (Generic)	Electric	7.00	23.00	0.00	75.00	
Air Start (ACE 180)	Diesel	0.00	7.00	425.00	90.00	
Aircraft Tractor (Stewart & Stevenson TUG GT-50H)	Diesel	0.00	8.00	190.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	74.00	76.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	48.00	48.00	107.00	50.00	
Cabin Service Truck (Hi-Way F650)	Diesel	10.00	10.00	210.00	53.00	
Catering Truck (Hi-Way F650)	Diesel	7.00	8.00	210.00	53.00	
Hydrant Truck (F250 / F350)	Diesel	0.00	12.00	235.00	70.00	
Lavatory Truck (Wollard TLS-770 / F350)	Gasoline	15.00	0.00	235.00	25.00	
Service Truck (F250 / F350)	Diesel	7.00	8.00	235.00	20.00	
Water Service (Gate Service)	Electric	0.00	12.00	0.00	20.00	

Year:
2007

Annual Departures:	0
Annual Arrivals:	0

Annual TGOs:	0
Taxi Out Time:	16.700000 min
Taxi In Time:	9.200000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Airbus A321-100 Series
Engine Type:
V2530-A5
Identification:
Aircraft
Category:
LCJP

Take Off weight:	82599.00 Kgs
Approach Weight:	70035.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU GTCP 36-300 (80HP)
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Air Conditioner (Generic)	Electric	7.00	23.00	0.00	75.00	
Air Start (ACE 180)	Diesel	0.00	7.00	425.00	90.00	
Aircraft Tractor (Stewart & Stevenson TUG GT-50H)	Diesel	0.00	8.00	190.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	74.00	76.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	48.00	48.00	107.00	50.00	
Cabin Service Truck (Hi-Way F650)	Diesel	10.00	10.00	210.00	53.00	
Catering Truck (Hi-Way F650)	Diesel	7.00	8.00	210.00	53.00	
Hydrant Truck (F250 / F350)	Diesel	0.00	12.00	235.00	70.00	
Lavatory Truck (Wollard TLS-770 / F350)	Gasoline	15.00	0.00	235.00	25.00	
Service Truck (F250 / F350)	Diesel	7.00	8.00	235.00	20.00	
Water Service (Gate Service)	Electric	0.00	12.00	0.00	20.00	

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	16.700000 min
Taxi In Time:	9.200000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly	DEFAULT

Operational profile:	
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Airbus A330-200 Series
Engine Type:
CF6-80CB42
Identification:
Aircraft
Category:
HCJP

Take Off weight:	212780.00 Kgs
Approach Weight:	161116.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU GTCP 331-350
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Air Conditioner (Generic)	Electric	7.00	23.00	0.00	75.00	
Air Start (ACE 180)	Diesel	0.00	7.00	425.00	90.00	
Aircraft Tractor (Stewart & Stevenson TUG GT-50H)	Diesel	0.00	8.00	190.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	120.00	120.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	17.00	18.00	107.00	50.00	
Cabin Service Truck (Hi-Way F650)	Diesel	17.00	18.00	210.00	53.00	
Cargo Loader (FMC Commander 15)	Diesel	80.00	80.00	80.00	50.00	
Catering Truck (Hi-Way F650)	Diesel	10.00	10.00	210.00	53.00	
Hydrant Truck (F250 / F350)	Diesel	0.00	20.00	235.00	70.00	
Lavatory Truck (Wollard TLS-770 / F350)	Gasoline	25.00	0.00	235.00	25.00	
Service Truck (F250 / F350)	Diesel	7.00	8.00	235.00	20.00	
Water Service (Gate Service)	Electric	0.00	12.00	0.00	20.00	

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	17.400000 min
Taxi In Time:	8.400000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Airbus A330-300 Series
Engine Type:
CF6-80E1A2
Identification:
Aircraft

Take Off weight:	212780.00 Kgs
Approach Weight:	161116.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU GTCP 331-350

Category:
HCJP

APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Air Conditioner (Generic)	Electric	7.00	23.00	0.00	75.00	
Air Start (ACE 180)	Diesel	0.00	7.00	425.00	90.00	
Aircraft Tractor (Stewart & Stevenson TUG GT-50H)	Diesel	0.00	8.00	190.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	120.00	120.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	17.00	18.00	107.00	50.00	
Cabin Service Truck (Hi-Way F650)	Diesel	17.00	18.00	210.00	53.00	
Cargo Loader (FMC Commander 15)	Diesel	80.00	80.00	80.00	50.00	
Catering Truck (Hi-Way F650)	Diesel	10.00	10.00	210.00	53.00	
Hydrant Truck (F250 / F350)	Diesel	0.00	20.00	235.00	70.00	
Lavatory Truck (Wollard TLS-770 / F350)	Gasoline	25.00	0.00	235.00	25.00	
Service Truck (F250 / F350)	Diesel	7.00	8.00	235.00	20.00	
Water Service (Gate Service)	Electric	0.00	12.00	0.00	20.00	

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	18.000000 min
Taxi In Time:	8.000000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Airbus A340-200 Series
Engine Type:
CFM56-5C2
Identification:
Aircraft
Category:
HCJP

Take Off weight:	216636.00 Kgs
Approach Weight:	162885.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU GTCP 331-350
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Air Conditioner (Generic)	Electric	7.00	23.00	0.00	75.00	
Air Start (ACE 180)	Diesel	0.00	7.00	425.00	90.00	
Aircraft Tractor (Stewart & Stevenson TUG GT-50H)	Diesel	0.00	8.00	190.00	80.00	
Baggage Tractor (Stewart	Gasoline	120.00	120.00	107.00	55.00	

& Stevenson TUG MA 50)					
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	17.00	18.00	107.00	50.00
Cabin Service Truck (Hi-Way F650)	Diesel	17.00	18.00	210.00	53.00
Cargo Loader (FMC Commander 15)	Diesel	80.00	80.00	80.00	50.00
Catering Truck (Hi-Way F650)	Diesel	10.00	10.00	210.00	53.00
Hydrant Truck (F250 / F350)	Diesel	0.00	20.00	235.00	70.00
Lavatory Truck (Wollard TLS-770 / F350)	Gasoline	25.00	0.00	235.00	25.00
Service Truck (F250 / F350)	Diesel	7.00	8.00	235.00	20.00
Water Service (Gate Service)	Electric	0.00	12.00	0.00	20.00

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	18.600000 min
Taxi In Time:	9.500000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Airbus A340-300 Series
Engine Type:
CFM56-5C3
Identification:
Aircraft
Category:
HCJP

Take Off weight:	216636.00 Kgs
Approach Weight:	162885.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU GTCP 331-350
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Air Conditioner (Generic)	Electric	7.00	23.00	0.00	75.00	
Air Start (ACE 180)	Diesel	0.00	7.00	425.00	90.00	
Aircraft Tractor (Stewart & Stevenson TUG GT-50H)	Diesel	0.00	8.00	190.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	120.00	120.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	17.00	18.00	107.00	50.00	
Cabin Service Truck (Hi-Way F650)	Diesel	17.00	18.00	210.00	53.00	
Cargo Loader (FMC Commander 15)	Diesel	80.00	80.00	80.00	50.00	
Catering Truck (Hi-Way F650)	Diesel	10.00	10.00	210.00	53.00	
Hydrant Truck (F250 / F350)	Diesel	0.00	20.00	235.00	70.00	
Lavatory Truck (Wollard	Gasoline	25.00	0.00	235.00	25.00	

TLS-770 / F350)					
Service Truck (F250 / F350)	Diesel	7.00	8.00	235.00	20.00
Water Service (Gate Service)	Electric	0.00	12.00	0.00	20.00

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	14.300000 min
Taxi In Time:	8.800000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Boeing 727-200 Series
Engine Type:
JT8D-17A
Identification:
Aircraft
Category:
LCJP

Take Off weight:	81647.00 Kgs
Approach Weight:	68991.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU GTCP85-98 (200 HP)
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Air Conditioner (Generic)	Electric	7.00	23.00	0.00	75.00	
Air Start (ACE 180)	Diesel	0.00	7.00	425.00	90.00	
Aircraft Tractor (Stewart & Stevenson TUG GT-50H)	Diesel	0.00	8.00	190.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	74.00	76.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	48.00	48.00	107.00	50.00	
Cabin Service Truck (Hi-Way F650)	Diesel	10.00	10.00	210.00	53.00	
Catering Truck (Hi-Way F650)	Diesel	7.00	8.00	210.00	53.00	
Hydrant Truck (F250 / F350)	Diesel	0.00	12.00	235.00	70.00	
Lavatory Truck (Wollard TLS-770 / F350)	Gasoline	15.00	0.00	235.00	25.00	
Service Truck (F250 / F350)	Diesel	7.00	8.00	235.00	20.00	
Water Service (Gate Service)	Electric	0.00	12.00	0.00	20.00	

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	25.700000 min
Taxi In Time:	13.700000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Boeing 737-700 Series
Engine Type:
CFM56-7B22
Identification:
Aircraft
Category:

LCJP

Take Off weight:	70035.00 Kgs
Approach Weight:	52254.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU 131-9
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Air Conditioner (Generic)	Electric	7.00	23.00	0.00	75.00	
Air Start (ACE 180)	Diesel	0.00	7.00	425.00	90.00	
Aircraft Tractor (Stewart & Stevenson TUG GT-50H)	Diesel	0.00	8.00	190.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	74.00	76.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	48.00	48.00	107.00	50.00	
Cabin Service Truck (Hi-Way F650)	Diesel	10.00	10.00	210.00	53.00	
Catering Truck (Hi-Way F650)	Diesel	7.00	8.00	210.00	53.00	
Hydrant Truck (F250 / F350)	Diesel	0.00	12.00	235.00	70.00	
Lavatory Truck (Wollard TLS-770 / F350)	Gasoline	15.00	0.00	235.00	25.00	
Service Truck (F250 / F350)	Diesel	7.00	8.00	235.00	20.00	
Water Service (Gate Service)	Electric	0.00	12.00	0.00	20.00	

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	15.600000 min
Taxi In Time:	6.700000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Boeing 747-300 Series
Engine Type:
CF6-50E2
Identification:
Aircraft
Category:
HCJP

Take Off weight:	328854.00 Kgs
Approach Weight:	230243.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU GTCP 660 (300 HP)
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Air Conditioner (Generic)	Electric	7.00	23.00	0.00	75.00	
Air Start (ACE 180)	Diesel	0.00	7.00	425.00	90.00	
Aircraft Tractor (Stewart & Stevenson TUG GT-50H)	Diesel	0.00	8.00	190.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	120.00	120.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	17.00	18.00	107.00	50.00	
Cabin Service Truck (Hi-Way F650)	Diesel	17.00	18.00	210.00	53.00	
Cargo Loader (FMC Commander 15)	Diesel	80.00	80.00	80.00	50.00	
Catering Truck (Hi-Way F650)	Diesel	10.00	10.00	210.00	53.00	
Hydrant Truck (F250 / F350)	Diesel	0.00	20.00	235.00	70.00	
Lavatory Truck (Wollard TLS-770 / F350)	Gasoline	25.00	0.00	235.00	25.00	
Service Truck (F250 / F350)	Diesel	7.00	8.00	235.00	20.00	
Water Service (Gate Service)	Electric	0.00	12.00	0.00	20.00	

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	17.300000 min
Taxi In Time:	8.300000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Boeing 757-200 Series
Engine Type:
PW2040
Identification:
Aircraft
Category:
LCJP

Take Off weight:	110314.00 Kgs
Approach Weight:	80830.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU GTCP331-200ER (143 HP)
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Air Conditioner (Generic)	Electric	7.00	23.00	0.00	75.00	

Air Start (ACE 180)	Diesel	0.00	7.00	425.00	90.00
Aircraft Tractor (Stewart & Stevenson TUG GT-50H)	Diesel	0.00	8.00	190.00	80.00
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	74.00	76.00	107.00	55.00
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	48.00	48.00	107.00	50.00
Cabin Service Truck (Hi-Way F650)	Diesel	10.00	10.00	210.00	53.00
Catering Truck (Hi-Way F650)	Diesel	7.00	8.00	210.00	53.00
Hydrant Truck (F250 / F350)	Diesel	0.00	12.00	235.00	70.00
Lavatory Truck (Wollard TLS-770 / F350)	Gasoline	15.00	0.00	235.00	25.00
Service Truck (F250 / F350)	Diesel	7.00	8.00	235.00	20.00
Water Service (Gate Service)	Electric	0.00	12.00	0.00	20.00

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	16.100000 min
Taxi In Time:	7.800000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Boeing 767-200 Series
Engine Type:
CF6-80A
Identification:
Aircraft Category:

HCJP

Take Off weight:	137575.00 Kgs
Approach Weight:	110223.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU GTCP331-200ER (143 HP)
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Air Conditioner (Generic)	Electric	7.00	23.00	0.00	75.00	
Air Start (ACE 300/400)	Diesel	0.00	7.00	850.00	90.00	
Aircraft Tractor (Stewart & Stevenson TUG GT-50H)	Diesel	0.00	8.00	190.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	120.00	120.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	17.00	18.00	107.00	50.00	
Cabin Service Truck (Hi-Way F650)	Diesel	17.00	18.00	210.00	53.00	
Cargo Loader (FMC Commander 15)	Diesel	80.00	80.00	80.00	50.00	
Catering Truck (Hi-Way F650)	Diesel	10.00	10.00	210.00	53.00	
Hydrant Truck (F250 /	Diesel	0.00	20.00	235.00	70.00	

F350)					
Lavatory Truck (Wollard TLS-770 / F350)	Gasoline	25.00	0.00	235.00	25.00
Service Truck (F250 / F350)	Diesel	7.00	8.00	235.00	20.00
Water Service (Gate Service)	Electric	0.00	12.00	0.00	20.00

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	13.200000 min
Taxi In Time:	6.700000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Boeing 767-300 Series
Engine Type:
CF6-80C2B7F 1862M39
Identification:
Aircraft
Category:
HCJP

Take Off weight:	161434.00 Kgs
Approach Weight:	130635.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU GTCP331-200ER (143 HP)
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Air Conditioner (Generic)	Electric	7.00	23.00	0.00	75.00	
Air Start (ACE 300/400)	Diesel	0.00	7.00	850.00	90.00	
Aircraft Tractor (Stewart & Stevenson TUG GT-50H)	Diesel	0.00	8.00	190.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	120.00	120.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	17.00	18.00	107.00	50.00	
Cabin Service Truck (Hi-Way F650)	Diesel	17.00	18.00	210.00	53.00	
Cargo Loader (FMC Commander 15)	Diesel	80.00	80.00	80.00	50.00	
Catering Truck (Hi-Way F650)	Diesel	10.00	10.00	210.00	53.00	
Hydrant Truck (F250 / F350)	Diesel	0.00	20.00	235.00	70.00	
Lavatory Truck (Wollard TLS-770 / F350)	Gasoline	25.00	0.00	235.00	25.00	
Service Truck (F250 / F350)	Diesel	7.00	8.00	235.00	20.00	
Water Service (Gate Service)	Electric	0.00	12.00	0.00	20.00	

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0

Taxi Out Time:	17.200000 min
Taxi In Time:	8.100000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Boeing 767-400
Engine Type:
CF6-80C2B8FA 1862M39
Identification:
Aircraft
Category:
HCJP

Take Off weight:	172776.00 Kgs
Approach Weight:	143154.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU GTCP331-200ER (143 HP)
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Air Conditioner (Generic)	Electric	0.00	23.00	0.00	75.00	
Air Start (ACE 180)	Diesel	0.00	7.00	425.00	90.00	
Aircraft Tractor (Stewart & Stevenson TUG GT-50H)	Diesel	0.00	8.00	190.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	120.00	120.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	17.00	18.00	107.00	50.00	
Cabin Service Truck (Hi-Way F650)	Diesel	17.00	18.00	210.00	53.00	
Cargo Loader (FMC Commander 15)	Diesel	80.00	80.00	80.00	50.00	
Catering Truck (Hi-Way F650)	Diesel	0.00	10.00	210.00	53.00	
Hydrant Truck (F250 / F350)	Diesel	0.00	20.00	235.00	70.00	
Lavatory Truck (Wollard TLS-770 / F350)	Gasoline	25.00	0.00	235.00	25.00	
Service Truck (F250 / F350)	Diesel	0.00	8.00	235.00	20.00	
Water Service (Gate Service)	Electric	0.00	12.00	0.00	20.00	

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	17.500000 min
Taxi In Time:	9.100000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT

Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Boeing 777-200 Series
Engine Type:
PW4077
Identification:
Aircraft Category:
HCJP

Take Off weight:	285536.00 Kgs
Approach Weight:	191870.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU GTCP331-500 (143 HP)
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Air Conditioner (Generic)	Electric	7.00	23.00	0.00	75.00	
Air Start (ACE 180)	Diesel	0.00	7.00	425.00	90.00	
Aircraft Tractor (Stewart & Stevenson TUG GT-50H)	Diesel	0.00	8.00	190.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	120.00	120.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	17.00	18.00	107.00	50.00	
Cabin Service Truck (Hi-Way F650)	Diesel	17.00	18.00	210.00	53.00	
Cargo Loader (FMC Commander 15)	Diesel	80.00	80.00	80.00	50.00	
Catering Truck (Hi-Way F650)	Diesel	10.00	10.00	210.00	53.00	
Hydrant Truck (F250 / F350)	Diesel	0.00	20.00	235.00	70.00	
Lavatory Truck (Wollard TLS-770 / F350)	Gasoline	25.00	0.00	235.00	25.00	
Service Truck (F250 / F350)	Diesel	7.00	8.00	235.00	20.00	
Water Service (Gate Service)	Electric	0.00	12.00	0.00	20.00	

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	15.500000 min
Taxi In Time:	9.500000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Boeing 777-300 ER
Engine Type:
GE90-115B DAC
Identification:

Take Off weight:	256053.00 Kgs
Approach Weight:	213914.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU GTCP331-500 (143 HP)

Aircraft Category:
HCJP

APU Departure OP Time: 13.00 min
APU Arrival OP Time: 13.00 min
Gate Assignment: None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Air Conditioner (Generic)	Electric	0.00	23.00	0.00	75.00	
Air Start (ACE 180)	Diesel	0.00	7.00	425.00	90.00	
Aircraft Tractor (Stewart & Stevenson TUG GT-50H)	Diesel	0.00	8.00	190.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	120.00	120.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	17.00	18.00	107.00	50.00	
Cabin Service Truck (Hi-Way F650)	Diesel	17.00	18.00	210.00	53.00	
Cargo Loader (FMC Commander 15)	Diesel	80.00	80.00	80.00	50.00	
Catering Truck (Hi-Way F650)	Diesel	0.00	10.00	210.00	53.00	
Hydrant Truck (F250 / F350)	Diesel	0.00	20.00	235.00	70.00	
Lavatory Truck (Wollard TLS-770 / F350)	Gasoline	25.00	0.00	235.00	25.00	
Service Truck (F250 / F350)	Diesel	0.00	8.00	235.00	20.00	
Water Service (Gate Service)	Electric	0.00	12.00	0.00	20.00	

Year:
2007

Annual Departures: 0
Annual Arrivals: 0
Annual TGOs: 0
Taxi Out Time: 21.300000 min
Taxi In Time: 7.700000 min

Departure Quarter-Hourly Operational profile: DEFAULT
Departure Daily Operational Profile: DEFAULT
Departure Monthly Operational Profile: DEFAULT
Arrival Quarter-Hourly Operational profile: DEFAULT
Arrival Daily Operational Profile: DEFAULT
Arrival Monthly Operational Profile: DEFAULT
Touch & Go Quarter-Hourly Operational profile: DEFAULT
Touch & Go Daily Operational Profile: DEFAULT
Touch & Go Monthly Operational Profile: DEFAULT

Aircraft Name:
Boeing 777-300 Series
Engine Type:
PW4084
Identification:
Aircraft Category:
HCJP

Take Off weight: 256053.00 Kgs
Approach Weight: 213914.00 Kgs
Glide Slope: 3.00°
APU Assignment: APU GTCP331-500 (143 HP)
APU Departure OP Time: 13.00 min
APU Arrival OP Time: 13.00 min
Gate Assignment: None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Air Conditioner (Generic)	Electric	7.00	23.00	0.00	75.00	
Air Start (ACE 180)	Diesel	0.00	7.00	425.00	90.00	
Aircraft Tractor (Stewart & Stevenson TUG GT-50H)	Diesel	0.00	8.00	190.00	80.00	
Baggage Tractor (Stewart	Gasoline	120.00	120.00	107.00	55.00	

& Stevenson TUG MA 50)					
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	17.00	18.00	107.00	50.00
Cabin Service Truck (Hi-Way F650)	Diesel	17.00	18.00	210.00	53.00
Cargo Loader (FMC Commander 15)	Diesel	80.00	80.00	80.00	50.00
Catering Truck (Hi-Way F650)	Diesel	10.00	10.00	210.00	53.00
Hydrant Truck (F250 / F350)	Diesel	0.00	20.00	235.00	70.00
Lavatory Truck (Wollard TLS-770 / F350)	Gasoline	25.00	0.00	235.00	25.00
Service Truck (F250 / F350)	Diesel	7.00	8.00	235.00	20.00
Water Service (Gate Service)	Electric	0.00	12.00	0.00	20.00

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	Determined by Sequencing model
Taxi In Time:	17.500000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Boeing DC-9-40 Series
Engine Type:
JT8D-11
Identification:
Aircraft
Category:
LCJP

Take Off weight:	46720.00 Kgs
Approach Weight:	41640.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU GTCP85-98 (200 HP)
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Air Conditioner (Generic)	Electric	7.00	23.00	0.00	75.00	
Air Start (ACE 180)	Diesel	0.00	7.00	425.00	90.00	
Aircraft Tractor (Stewart & Stevenson TUG GT-35, Douglas TBL-180)	Diesel	0.00	8.00	88.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	37.00	38.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	24.00	24.00	107.00	50.00	
Cabin Service Truck (Hi-Way F650)	Diesel	10.00	10.00	210.00	53.00	
Catering Truck (Hi-Way F650)	Diesel	7.00	8.00	210.00	53.00	
Hydrant Truck (F250 / F350)	Diesel	0.00	12.00	235.00	70.00	
Lavatory Truck (TLD 1410)	Diesel	15.00	0.00	56.00	25.00	

Service Truck (F250 / F350)	Diesel	7.00	8.00	235.00	20.00
Water Service (Gate Service)	Electric	0.00	12.00	0.00	20.00

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	17.200000 min
Taxi In Time:	6.800000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Boeing MD-11
Engine Type:
CF6-80C2D1F 1862M39
Identification:
Aircraft
Category:
HCJP

Take Off weight:	242672.00 Kgs
Approach Weight:	176901.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU TSCP700-4B (142 HP)
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Air Conditioner (Generic)	Electric	7.00	23.00	0.00	75.00	
Air Start (ACE 180)	Diesel	0.00	7.00	425.00	90.00	
Aircraft Tractor (Stewart & Stevenson TUG T-750)	Diesel	0.00	8.00	475.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	60.00	60.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	17.00	18.00	107.00	50.00	
Cabin Service Truck (Hi-Way F650)	Diesel	17.00	18.00	210.00	53.00	
Cargo Loader (FMC Commander 15)	Diesel	40.00	40.00	80.00	50.00	
Catering Truck (Hi-Way F650)	Diesel	10.00	10.00	210.00	53.00	
Hydrant Truck (F250 / F350)	Diesel	0.00	20.00	235.00	70.00	
Lavatory Truck (Wollard TLS-770 / F350)	Diesel	25.00	0.00	235.00	25.00	
Service Truck (F250 / F350)	Diesel	7.00	8.00	235.00	20.00	
Water Service (Gate Service)	Electric	0.00	12.00	0.00	20.00	

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	13.000000 min
Taxi In Time:	5.500000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Boeing MD-83
Engine Type:
JT8D-219 Environmental Kit (E_Kit)
Identification:
Aircraft
Category:

LCJP

Take Off weight:	66714.00 Kgs
Approach Weight:	56971.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU GTCP85-98 (200 HP)
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Air Conditioner (Generic)	Electric	7.00	23.00	0.00	75.00	
Air Start (ACE 180)	Diesel	0.00	7.00	425.00	90.00	
Aircraft Tractor (Stewart & Stevenson TUG GT-35, Douglas TBL-180)	Diesel	0.00	8.00	88.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	37.00	38.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Diesel	24.00	24.00	71.00	50.00	
Cabin Service Truck (Hi-Way F650)	Diesel	10.00	10.00	210.00	53.00	
Catering Truck (Hi-Way F650)	Diesel	7.00	8.00	210.00	53.00	
Hydrant Truck (F250 / F350)	Diesel	0.00	12.00	235.00	70.00	
Lavatory Truck (TLD 1410)	Diesel	15.00	0.00	56.00	25.00	
Service Truck (F250 / F350)	Diesel	7.00	8.00	235.00	20.00	
Water Service (Gate Service)	Electric	0.00	12.00	0.00	20.00	

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	18.600000 min
Taxi In Time:	6.300000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Boeing MD-90
Engine Type:
V2525-D5
Identification:
Aircraft
Category:
LCJP

Take Off weight:	68541.00 Kgs
Approach Weight:	57969.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU 131-9
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Air Conditioner (Generic)	Electric	7.00	23.00	0.00	75.00	
Air Start (ACE 180)	Diesel	0.00	7.00	425.00	90.00	
Aircraft Tractor (Stewart & Stevenson TUG GT-35, Douglas TBL-180)	Diesel	0.00	8.00	88.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	37.00	38.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Diesel	24.00	24.00	71.00	50.00	
Cabin Service Truck (Hi-Way F650)	Diesel	10.00	10.00	210.00	53.00	
Catering Truck (Hi-Way F650)	Diesel	7.00	8.00	210.00	53.00	
Hydrant Truck (F250 / F350)	Diesel	0.00	12.00	235.00	70.00	
Lavatory Truck (TLD 1410)	Diesel	15.00	0.00	56.00	25.00	
Service Truck (F250 / F350)	Diesel	7.00	8.00	235.00	20.00	
Water Service (Gate Service)	Electric	0.00	12.00	0.00	20.00	

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	23.000000 min
Taxi In Time:	5.000000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Bombardier CRJ-700
Engine Type:
CF34-8C1
Identification:
Aircraft
Category:
LCJP

Take Off weight:	19550.00 Kgs
Approach Weight:	14696.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU GTCP 85 (200 HP)
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year

Aircraft Tractor (Stewart & Stevenson TUG MC)	Diesel	0.00	5.00	86.00	80.00
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	17.00	18.00	107.00	55.00
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	15.00	15.00	107.00	50.00
Catering Truck (Hi-Way / TUG 660 chasis)	Diesel	5.00	5.00	71.00	53.00
Fuel Truck (F750, Dukes Transportation Services, DART 3000 to 6000 gallon)	Diesel	0.00	20.00	175.00	25.00
Lavatory Truck (TLD 1410)	Gasoline	15.00	0.00	97.00	25.00
Service Truck (F250 / F350)	Diesel	7.00	8.00	235.00	20.00

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	16.100000 min
Taxi In Time:	9.000000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Bombardier Challenger 600
Engine Type:
ALF 502L-2
Identification:
Aircraft
Category:
LGJB

Take Off weight:	16329.00 Kgs
Approach Weight:	13472.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU GTCP 36-100
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Aircraft Tractor (Stewart & Stevenson TUG MC)	Diesel	0.00	5.00	86.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	17.00	18.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	15.00	15.00	107.00	50.00	
Catering Truck (Hi-Way / TUG 660 chasis)	Diesel	5.00	5.00	71.00	53.00	
Fuel Truck (F750, Dukes Transportation Services, DART 3000 to 6000 gallon)	Diesel	0.00	20.00	175.00	25.00	
Ground Power Unit (TLD, 400 Hz AC)	Diesel	0.00	50.00	194.00	75.00	
Lavatory Truck (TLD 1410)	Gasoline	15.00	0.00	97.00	25.00	
Service Truck (F250 / F350)	Diesel	7.00	8.00	235.00	20.00	

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	16.600000 min
Taxi In Time:	6.100000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
DeHavilland DHC-8-300
Engine Type:
PW123
Identification:
Aircraft
Category:
SCTP

Take Off weight:	17554.00 Kgs
Approach Weight:	17146.00 Kgs
Glide Slope:	3.00°
APU Assignment:	None
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Aircraft Tractor (Stewart & Stevenson TUG MC)	Diesel	0.00	5.00	86.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	0.00	18.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	0.00	15.00	107.00	50.00	
Cabin Service Truck (Hi-Way / TUG 660 chasis)	Diesel	0.00	5.00	71.00	53.00	
Catering Truck (Hi-Way / TUG 660 chasis)	Diesel	0.00	5.00	71.00	53.00	
Fuel Truck (F750, Dukes Transportation Services, DART 3000 to 6000 gallon)	Diesel	0.00	20.00	175.00	25.00	
Ground Power Unit (TLD, 28 VDC)	Diesel	0.00	40.00	71.00	75.00	
Lavatory Truck (TLD 1410)	Diesel	0.00	0.00	56.00	25.00	
Service Truck (F250 / F350)	Diesel	0.00	8.00	235.00	20.00	

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	12.100000 min
Taxi In Time:	8.400000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT

Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Dornier 328 Jet
Engine Type:
PW306B Annular
Identification:
Aircraft
Category:
SCJP

Take Off weight:	16193.00 Kgs
Approach Weight:	12982.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU GTCP 36-150[]
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Aircraft Tractor (Stewart & Stevenson TUG MC)	Diesel	0.00	5.00	86.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	17.00	18.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	15.00	15.00	107.00	50.00	
Catering Truck (Hi-Way / TUG 660 chasis)	Diesel	5.00	5.00	71.00	53.00	
Fuel Truck (F750, Dukes Transportation Services, DART 3000 to 6000 gallon)	Diesel	0.00	20.00	175.00	25.00	
Lavatory Truck (TLD 1410)	Diesel	15.00	0.00	56.00	25.00	
Service Truck (F250 / F350)	Diesel	7.00	8.00	235.00	20.00	

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	13.600000 min
Taxi In Time:	6.500000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Embraer EMB120 Brasilia
Engine Type:
PW118
Identification:
Aircraft
Category:
SCTP

Take Off weight:	10194.00 Kgs
Approach Weight:	10535.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU GTCP 36-150[]
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op	Departure Op	Horsepower	Load	Manufactured

		Time (mins)	Time (mins)	(hp)	Factor (%)	Year
Aircraft Tractor (Stewart & Stevenson TUG MC)	Diesel	0.00	5.00	86.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	17.00	18.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	15.00	15.00	107.00	50.00	
Catering Truck (Hi-Way / TUG 660 chasis)	Diesel	5.00	5.00	71.00	53.00	
Fuel Truck (F750, Dukes Transportation Services, DART 3000 to 6000 gallon)	Diesel	0.00	20.00	175.00	25.00	
Ground Power Unit (TLD, 28 VDC)	Diesel	0.00	40.00	71.00	75.00	
Lavatory Truck (TLD 1410)	Diesel	15.00	0.00	56.00	25.00	
Service Truck (F250 / F350)	Diesel	7.00	8.00	235.00	20.00	

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	16.600000 min
Taxi In Time:	8.700000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Embraer ERJ135
Engine Type:
AE3007A1/3 Type 2
Identification:
Aircraft
Category:
LCJP

Take Off weight:	18960.00 Kgs
Approach Weight:	16831.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU GTCP 36-150[]
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Aircraft Tractor (Stewart & Stevenson TUG MC)	Diesel	0.00	5.00	86.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	0.00	18.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	0.00	15.00	107.00	50.00	
Catering Truck (Hi-Way / TUG 660 chasis)	Diesel	0.00	5.00	71.00	53.00	
Fuel Truck (F750, Dukes Transportation Services, DART 3000 to 6000 gallon)	Diesel	0.00	20.00	175.00	25.00	
Ground Power Unit (TLD, 28 VDC)	Diesel	0.00	40.00	71.00	75.00	
Lavatory Truck (TLD 1410)	Diesel	0.00	0.00	56.00	25.00	

Service Truck (F250 / F350)	Diesel	0.00	8.00	235.00	20.00

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	18.000000 min
Taxi In Time:	7.100000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Embraer ERJ145
Engine Type:
AE3007A
Identification:
Aircraft
Category:
LCJP

Take Off weight:	18960.00 Kgs
Approach Weight:	16831.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU GTCP 36-150[]
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Aircraft Tractor (Stewart & Stevenson TUG MC)	Diesel	0.00	5.00	86.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	17.00	18.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	15.00	15.00	107.00	50.00	
Catering Truck (Hi-Way / TUG 660 chasis)	Diesel	5.00	5.00	71.00	53.00	
Fuel Truck (F750, Dukes Transportation Services, DART 3000 to 6000 gallon)	Diesel	0.00	20.00	175.00	25.00	
Lavatory Truck (TLD 1410)	Diesel	15.00	0.00	56.00	25.00	
Service Truck (F250 / F350)	Diesel	7.00	8.00	235.00	20.00	

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	17.200000 min
Taxi In Time:	8.000000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT

Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Embraer ERJ170
Engine Type:
CF34-8E5 LEC
Identification:
Aircraft
Category:
LCJP

Take Off weight:	39009.00 Kgs
Approach Weight:	34927.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU GTCP 36-150[]
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Aircraft Tractor (Stewart & Stevenson TUG MC)	Diesel	0.00	5.00	86.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	17.00	18.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	15.00	15.00	107.00	50.00	
Catering Truck (Hi-Way / TUG 660 chasis)	Diesel	5.00	5.00	71.00	53.00	
Fuel Truck (F750, Dukes Transportation Services, DART 3000 to 6000 gallon)	Diesel	0.00	20.00	175.00	25.00	
Lavatory Truck (TLD 1410)	Diesel	15.00	0.00	56.00	25.00	
Service Truck (F250 / F350)	Diesel	7.00	8.00	235.00	20.00	

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	16.800000 min
Taxi In Time:	7.900000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Embraer ERJ175
Engine Type:
CF34-8E5 LEC
Identification:
Aircraft
Category:
LCJP

Take Off weight:	39009.00 Kgs
Approach Weight:	34927.00 Kgs
Glide Slope:	3.00°
APU Assignment:	None
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op	Departure Op	Horsepower	Load	Manufactured

		Time (mins)	Time (mins)	(hp)	Factor (%)	Year
Aircraft Tractor (Stewart & Stevenson TUG MC)	Diesel	0.00	5.00	86.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	0.00	18.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	0.00	15.00	107.00	50.00	
Catering Truck (Hi-Way / TUG 660 chasis)	Diesel	0.00	5.00	71.00	53.00	
Fuel Truck (F750, Dukes Transportation Services, DART 3000 to 6000 gallon)	Diesel	0.00	20.00	175.00	25.00	
Lavatory Truck (TLD 1410)	Diesel	0.00	0.00	56.00	25.00	
Service Truck (F250 / F350)	Diesel	0.00	8.00	235.00	20.00	

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	21.000000 min
Taxi In Time:	6.800000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Embraer ERJ190
Engine Type:
CF34-8E5 LEC
Identification:
Aircraft Category:

LCJP

Take Off weight:	51120.00 Kgs
Approach Weight:	44906.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU GTCP 36-150[]
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Aircraft Tractor (Stewart & Stevenson TUG MC)	Diesel	0.00	5.00	86.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	0.00	18.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	0.00	15.00	107.00	50.00	
Catering Truck (Hi-Way / TUG 660 chasis)	Diesel	0.00	5.00	71.00	53.00	
Fuel Truck (F750, Dukes Transportation Services, DART 3000 to 6000 gallon)	Diesel	0.00	20.00	175.00	25.00	
Lavatory Truck (TLD 1410)	Diesel	0.00	0.00	56.00	25.00	
Service Truck (F250 / F350)	Diesel	0.00	8.00	235.00	20.00	

Year:

2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	14.600000 min
Taxi In Time:	7.400000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Ilyushin 62 Classic
Engine Type:
D-30KU
Identification:
Aircraft
Category:
HCJP

Take Off weight:	141521.00 Kgs
Approach Weight:	100834.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU GTCP 660 (300 HP)
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Air Start (ACE 180)	Diesel	0.00	7.00	425.00	90.00	
Aircraft Tractor (Stewart & Stevenson TUG GT-50H)	Diesel	0.00	8.00	190.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	37.00	38.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	24.00	24.00	107.00	50.00	
Cart (Taylor Dunn)	Diesel	5.00	5.00	25.00	50.00	
Catering Truck (Hi-Way F650)	Diesel	7.00	8.00	210.00	53.00	
Hydrant Truck (F250 / F350)	Diesel	0.00	12.00	235.00	70.00	
Lavatory Truck (TLD 1410)	Diesel	15.00	0.00	56.00	25.00	
Service Truck (F250 / F350)	Diesel	7.00	8.00	235.00	20.00	
Water Service (Wollard TWS-402 F250 / F350)	Diesel	0.00	12.00	235.00	20.00	

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	25.000000 min
Taxi In Time:	8.300000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly	

Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Lockheed L-1011 Tristar
Engine Type:
RB211-524B series Phase 2
Identification:
Aircraft
Category:
HCJP

Take Off weight:	200034.00 Kgs
Approach Weight:	150230.00 Kgs
Glide Slope:	3.00°
APU Assignment:	APU GTCP 660 (300 HP)
APU Departure OP Time:	13.00 min
APU Arrival OP Time:	13.00 min
Gate Assignment:	None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Air Conditioner (Generic)	Electric	7.00	23.00	0.00	75.00	
Air Start (ACE 300/400)	Diesel	0.00	7.00	850.00	90.00	
Aircraft Tractor (Stewart & Stevenson TUG T-750)	Diesel	0.00	8.00	475.00	80.00	
Baggage Tractor (Stewart & Stevenson TUG MA 50)	Gasoline	60.00	60.00	107.00	55.00	
Belt Loader (Stewart & Stevenson TUG 660)	Gasoline	17.00	18.00	107.00	50.00	
Cabin Service Truck (Hi-Way F650)	Diesel	17.00	18.00	210.00	53.00	
Cargo Loader (FMC Commander 15)	Diesel	40.00	40.00	80.00	50.00	
Catering Truck (Hi-Way F650)	Diesel	10.00	10.00	210.00	53.00	
Hydrant Truck (F250 / F350)	Diesel	0.00	20.00	235.00	70.00	
Lavatory Truck (Wollard TLS-770 / F350)	Diesel	25.00	0.00	235.00	25.00	
Service Truck (F250 / F350)	Diesel	7.00	8.00	235.00	20.00	
Water Service (Gate Service)	Electric	0.00	12.00	0.00	20.00	

Year:
2007

Annual Departures:	0
Annual Arrivals:	0
Annual TGOs:	0
Taxi Out Time:	14.400000 min
Taxi In Time:	5.600000 min

Departure Quarter-Hourly Operational profile:	DEFAULT
Departure Daily Operational Profile:	DEFAULT
Departure Monthly Operational Profile:	DEFAULT
Arrival Quarter-Hourly Operational profile:	DEFAULT
Arrival Daily Operational Profile:	DEFAULT
Arrival Monthly Operational Profile:	DEFAULT
Touch & Go Quarter-Hourly Operational profile:	DEFAULT
Touch & Go Daily Operational Profile:	DEFAULT
Touch & Go Monthly Operational Profile:	DEFAULT

Aircraft Name:
Raytheon Beechjet 400
Engine Type:
JT15D-5, -5A, -5B
Identification:
Aircraft

Take Off weight:	6804.00 Kgs
Approach Weight:	5534.00 Kgs
Glide Slope:	3.00°
APU Assignment:	None

Category:
SGJB

APU Departure OP Time: 13.00 min
APU Arrival OP Time: 13.00 min
Gate Assignment: None

Assigned GSE/AGE:	FUEL	Arrival Op Time (mins)	Departure Op Time (mins)	Horsepower (hp)	Load Factor (%)	Manufactured Year
Aircraft Tractor (Stewart & Stevenson TUG MC)	Diesel	0.00	5.00	86.00	80.00	
Fuel Truck (F750, Dukes Transportation Services, DART 3000 to 6000 gallon)	Diesel	0.00	20.00	175.00	25.00	
Ground Power Unit (TLD)	Gasoline	0.00	40.00	107.00	75.00	

Year:
2007

Annual Departures: 0
Annual Arrivals: 0
Annual TGOs: 0
Taxi Out Time: 12.000000 min
Taxi In Time: 8.600000 min

Departure Quarter-Hourly Operational profile: DEFAULT
Departure Daily Operational Profile: DEFAULT
Departure Monthly Operational Profile: DEFAULT
Arrival Quarter-Hourly Operational profile: DEFAULT
Arrival Daily Operational Profile: DEFAULT
Arrival Monthly Operational Profile: DEFAULT
Touch & Go Quarter-Hourly Operational profile: DEFAULT
Touch & Go Daily Operational Profile: DEFAULT
Touch & Go Monthly Operational Profile: DEFAULT

GSE Population

Baseline, Lester B Pearson Intl

None.

Parking Facilities

Baseline, Lester B Pearson Intl

None.

Roadways

Baseline, Lester B Pearson Intl

None.

Stationary Sources

Baseline, Lester B Pearson Intl

None.

Training Fires

Baseline, Lester B Pearson Intl

None.

Gates

Baseline, Lester B Pearson Intl

Gate Name:
101

Elevation: 142.95 meters
Release Height: 1.50 meters
Initial Sigma-Z: 16.00 meters
Initial Sigma-Y: 3.00 meters

Point:	X (meters)	Y (meters)
1	611677.00	837548.00

Gate Name:
101A

Elevation: 142.95 meters
Release Height: 1.50 meters
Initial Sigma-Z: 16.00 meters
Initial Sigma-Y: 3.00 meters

Point:	X (meters)	Y (meters)
1	611677.00	837548.00

Gate Name:
102

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	611677.00	837548.00

Gate Name:
103

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	611579.00	837536.00

Gate Name:
103A

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	611579.00	837536.00

Gate Name:
105

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	611562.00	837557.00

Gate Name:
105A

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	611562.00	837557.00

Gate Name:
107

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	611542.00	837578.00

Gate Name:
107A

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	611542.00	837578.00

Gate Name:
109

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	611518.00	837602.00

Gate Name:
109A

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	

	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611518.00	837602.00

Gate Name: 110	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611482.00	837627.00

Gate Name: 111	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611495.00	837625.00

Gate Name: 112	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611488.00	837632.00

Gate Name: 120	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611608.00	837423.00

Gate Name: 120A	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611608.00	837423.00

Gate Name: 122	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611574.00	837480.00

Gate Name: 124	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611532.00	837525.00

Gate Name: 126	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611520.00	837572.00

Gate Name: 128	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611503.00	837591.00
Gate Name: 131	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611581.00	837359.00
Gate Name: 132	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611624.00	837260.00
Gate Name: 133	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611535.00	837319.00
Gate Name: 134	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611600.00	837250.00
Gate Name: 134A	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611600.00	837250.00
Gate Name: 135	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611498.00	837302.00
Gate Name: 136	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611577.00	837200.00
Gate Name: 137	Elevation:	142.95 meters	
	Release Height:	1.50 meters	

	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611464.00	837265.00

Gate Name: 138	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611551.00	837185.00

Gate Name: 138A	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611551.00	837185.00

Gate Name: 139	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611435.00	837229.00

Gate Name: 140	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611437.00	837194.00

Gate Name: 141	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611446.00	837180.00

Gate Name: 141A	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611446.00	837180.00

Gate Name: 142	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611474.00	837131.00

Gate Name: 143	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)

	1	611474.00	837131.00

Gate Name: 143A	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611474.00	837131.00

Gate Name: 144	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611503.00	837141.00

Gate Name: 145	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611503.00	837141.00

Gate Name: 145A	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611503.00	837141.00

Gate Name: 151	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611666.00	837316.00

Gate Name: 151A	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611666.00	837316.00

Gate Name: 153	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611719.00	837320.00

Gate Name: 155	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611762.00	837303.00

Gate Name: 155A

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	611762.00	837303.00

Gate Name: 157

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	611806.00	837280.00

Gate Name: 157A

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	611806.00	837280.00

Gate Name: 160

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	611946.00	837220.00

Gate Name: 161

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	611857.00	837220.00

Gate Name: 162

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	611946.00	837181.00

Gate Name: 163

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	611853.00	837163.00

Gate Name: 164A

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	611947.00	837147.00

Gate Name: 164B

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	

	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611947.00	837148.00

Gate Name: 165	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611854.00	837136.00

Gate Name: 166A	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611947.00	837065.00

Gate Name: 166B	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611947.00	837065.00

Gate Name: 167	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611856.00	837067.00

Gate Name: 168A	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611963.00	837003.00

Gate Name: 168B	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611946.00	837181.00

Gate Name: 169	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611821.00	836993.00

Gate Name: 170	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611775.00	836967.00

Gate Name: 171	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611741.00	836941.00
Gate Name: 172	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611755.00	836913.00
Gate Name: 173	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611765.00	836882.00
Gate Name: 174	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611820.00	836851.00
Gate Name: 175	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611878.00	836830.00
Gate Name: 176	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611933.00	836838.00
Gate Name: 177	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611983.00	836854.00
Gate Name: 178	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612025.00	836872.00
Gate Name: 179	Elevation:	142.95 meters	
	Release Height:	1.50 meters	

	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612055.00	836914.00

Gate Name: 180	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612045.00	836935.00

Gate Name: 181	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612018.00	836967.00

Gate Name: 191	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611994.00	837275.00

Gate Name: 223	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612680.00	837676.00

Gate Name: 225	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612680.00	837676.00

Gate Name: 227	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612680.00	837676.00

Gate Name: 229	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612680.00	837676.00

Gate Name: 231	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)

	1	612680.00	837676.00

Gate Name: 233	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612680.00	837676.00

Gate Name: 235	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612680.00	837676.00

Gate Name: 237	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612680.00	837676.00

Gate Name: 239	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612680.00	837676.00

Gate Name: 241	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612680.00	837676.00

Gate Name: 243	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612680.00	837676.00

Gate Name: 244	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612680.00	837676.00

Gate Name: 245	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612699.00	837698.00

Gate Name: 246

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	612699.00	837698.00

Gate Name: 247

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	612740.00	837707.00

Gate Name: 248

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	612740.00	837707.00

Gate Name: 249

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	612769.00	837694.00

Gate Name: 250

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	612769.00	837694.00

Gate Name: 251A

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	612803.00	837685.00

Gate Name: 251B

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	612803.00	837685.00

Gate Name: 251C

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	612803.00	837685.00

Gate Name: 252

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	

	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612803.00	837685.00

Gate Name: 253A	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612836.00	837666.00

Gate Name: 253B	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612836.00	837666.00

Gate Name: 253C	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612836.00	837666.00

Gate Name: 254	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612836.00	837666.00

Gate Name: 255A	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612851.00	837640.00

Gate Name: 255B	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612851.00	837640.00

Gate Name: 256	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612851.00	837640.00

Gate Name: 257	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612867.00	837620.00

Gate Name: 257A	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612867.00	837620.00
Gate Name: 258	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612867.00	837620.00
Gate Name: 259	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612882.00	837599.00
Gate Name: 260	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612882.00	837599.00
Gate Name: 262	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612894.00	837576.00
Gate Name: 264	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612911.00	837557.00
Gate Name: 266	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612934.00	837528.00
Gate Name: 268	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612915.00	837476.00
Gate Name: 270	Elevation:	142.95 meters	
	Release Height:	1.50 meters	

	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612890.00	837453.00

Gate Name: 272	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612868.00	837437.00

Gate Name: 274	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	612853.00	837424.00

Gate Name: 503	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611542.00	837578.00

Gate Name: 503A	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611542.00	837578.00

Gate Name: 503B	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611551.00	837185.00

Gate Name: 521	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611551.00	837185.00

Gate Name: 522	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611947.00	837065.00

Gate Name: 523	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)

	1	611947.00	837065.00

Gate Name: 524	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	610594.00	837943.00

Gate Name: 525	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	610594.00	837943.00

Gate Name: 525A	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	610868.00	837810.00

Gate Name: 526	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	610872.00	837796.00

Gate Name: 527	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611153.00	837517.00

Gate Name: 527A	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611192.00	837493.00

Gate Name: 528	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611047.00	838156.00

Gate Name: 529	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611128.00	837857.00

Gate Name:
530

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	611764.00	837303.00

Gate Name:
531

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	612836.00	837666.00

Gate Name:
A1A

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	610661.00	838042.00

Gate Name:
A1B

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	610654.00	837997.00

Gate Name:
A1C

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	610630.00	837978.00

Gate Name:
A1D

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	610616.00	837966.00

Gate Name:
A1E

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	610594.00	837942.00

Gate Name:
A1F

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	610593.00	837943.00

Gate Name:
A1G

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	

	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	610594.00	837942.00

Gate Name: A2	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	610623.00	837935.00

Gate Name: A3	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	610633.00	837938.00

Gate Name: A4	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	610689.00	837997.00

Gate Name: A5	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	610713.00	838016.00

Gate Name: A5A	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	610713.00	838016.00

Gate Name: A6	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	610758.00	838056.00

Gate Name: B10	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611022.00	837944.00

Gate Name: B11	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	610993.00	837906.00

Gate Name: B12	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	610959.00	837882.00
Gate Name: B13	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	610917.00	837851.00
Gate Name: B14	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	610883.00	837828.00
Gate Name: B14A	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	610883.00	837828.00
Gate Name: B15	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	610868.00	837810.00
Gate Name: B15A	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	610868.00	837810.00
Gate Name: B16	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	610872.00	837796.00
Gate Name: B17	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	610881.00	837784.00
Gate Name: B18	Elevation:	142.95 meters	
	Release Height:	1.50 meters	

	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	610894.00	837778.00

Gate Name: B19	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	610916.00	837789.00

Gate Name: B20	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	610943.00	837823.00

Gate Name: B22	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611018.00	837878.00

Gate Name: B7	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611047.00	838156.00

Gate Name: B7E	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611047.00	838156.00

Gate Name: B7F	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611047.00	838156.00

Gate Name: B8	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611030.00	838062.00

Gate Name: B9	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)

	1	611001.00	838030.00

Gate Name: C24	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611092.00	837887.00

Gate Name: C25	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611128.00	837857.00

Gate Name: C26	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611158.00	837834.00

Gate Name: C27	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611217.00	837756.00

Gate Name: C27A	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611217.00	837756.00

Gate Name: C28	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611201.00	837698.00

Gate Name: C29	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611193.00	837672.00

Gate Name: C29A	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611193.00	837672.00

Gate Name: C30

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	611163.00	837599.00

Gate Name: C30A

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	611163.00	837599.00

Gate Name: C31

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	611139.00	837576.00

Gate Name: C32

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	611153.00	837517.00

Gate Name: C33

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	611192.00	837493.00

Gate Name: C34

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	611220.00	837487.00

Gate Name: C35

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	611245.00	837489.00

Gate Name: C36

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	
Initial Sigma-Y:	3.00 meters	
Point:	X (meters)	Y (meters)
1	611237.00	837532.00

Gate Name: C37

Elevation:	142.95 meters	
Release Height:	1.50 meters	
Initial Sigma-Z:	16.00 meters	

	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611233.00	837614.00

Gate Name: C37A	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611233.00	837614.00

Gate Name: C38	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611244.00	837649.00

Gate Name: C39	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611248.00	837672.00

Gate Name: C39A	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611248.00	837672.00

Gate Name: C40	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611264.00	837727.00

Gate Name: C40A	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611264.00	837727.00

Gate Name: C41	Elevation:	142.95 meters	
	Release Height:	1.50 meters	
	Initial Sigma-Z:	16.00 meters	
	Initial Sigma-Y:	3.00 meters	
	Point:	X (meters)	Y (meters)
	1	611277.00	837762.00

Taxiways

Baseline, Lester B Pearson Intl

Taxiway Name: A	Width:	30.00 (meters)			
	Point:	X (meters)	Y (meters)	Elevation (meters)	Speed (mph)
	1	609953.00	838454.00	142.95	18.64

				ApronC-S-1 ApronC
Direction: Outbound	Gate: C41	Runway: 33L	Runway Exit:	Taxiways: ApronC ApronC-S-1 S B D M
Direction: Inbound	Gate: C41	Runway: 33L	Runway Exit: M	Taxiways: M D A S ApronC-S-1 ApronC
Direction: Outbound	Gate: C41	Runway: 33R	Runway Exit:	Taxiways: ApronC ApronC-S-1 S B D
Direction: Inbound	Gate: C41	Runway: 33R	Runway Exit: D	Taxiways: D A S ApronC-S-1 ApronC

Configurations

Baseline, Lester B Pearson Intl

Configuration Name:
Configuration
Time Used:
0 %

	From	To
Wind Direction:	no bound (°)	no bound (°)
Wind Speed:	no bound (knots)	no bound (knots)
Hour of Day:	no bound (hh:mm)	no bound (hh:mm)
Ceiling:	no bound (feet)	no bound (feet)
Visibility:	no bound (statute miles)	no bound (statute miles)
Temperature:	no bound (°F)	no bound (°F)

Point:	Arrivals Per Hour	Departures per Hour
1	100	200
2	200	100

Aicraft Size:	Runway	Arrivals (%)	Departures (%)	Touch & Gos (%)
Small	15L	0.72 %	0.32 %	100 %
Small	15R	0.36 %	0.02 %	0 %
Small	23	15.93 %	25.75 %	0 %
Small	24L	25.3 %	9.59 %	0 %
Small	24R	16.12 %	20.73 %	0 %
Small	33L	4.88 %	2.05 %	0 %
Small	33R	0.23 %	7.74 %	0 %
Small	5	17.04 %	7.47 %	0 %
Small	6L	5.7 %	17.58 %	0 %
Small	6R	13.72 %	8.75 %	0 %
Large	15L	1.96 %	0.45 %	100 %

Large	15R	0.4 %	0.01 %	0 %
Large	23	21.38 %	32.19 %	0 %
Large	24L	19.91 %	6.73 %	0 %
Large	24R	14.7 %	17.75 %	0 %
Large	33L	4.93 %	2.16 %	0 %
Large	33R	0.36 %	6.26 %	0 %
Large	5	19.97 %	11.5 %	0 %
Large	6L	5.34 %	16.13 %	0 %
Large	6R	11.05 %	6.82 %	0 %
Heavy	15L	1.37 %	0.76 %	100 %
Heavy	15R	0.34 %	0 %	0 %
Heavy	23	36.12 %	34.98 %	0 %
Heavy	24L	11.16 %	2.29 %	0 %
Heavy	24R	9.07 %	19.03 %	0 %
Heavy	33L	4.64 %	1.74 %	0 %
Heavy	33R	1.42 %	9.1 %	0 %
Heavy	5	20.13 %	9.29 %	0 %
Heavy	6L	4.94 %	15.36 %	0 %
Heavy	6R	10.81 %	7.45 %	0 %

Buildings

Baseline, Lester B Pearson Intl

None.

Discrete Cartesian Receptors

Baseline, Lester B Pearson Intl

None.

Discrete Polar Receptors

Baseline, Lester B Pearson Intl

None.

Cartesian Receptor Networks

Baseline, Lester B Pearson Intl

None.

Polar Receptor Networks

Baseline, Lester B Pearson Intl

None.

User-Created Aircraft

Baseline, Lester B Pearson Intl

None.

User-Created GSE

Baseline, Lester B Pearson Intl

None.

User-Created APU

Baseline, Lester B Pearson Intl

None.

APPENDIX B3

EDMS Inputs for Parking Lots

EDMS 5.1 Model Inputs for Parking v1 Study

Study Created:	Thu Dec 11 20:36:23 2008
Report Date:	Mon May 04 19:12:37 2009
Study Pathname:	I:\0925039\0925039A\Analysis\01 EDMS\04 Parking v1\Parking v1.edm

Study Setup

Unit System:	Metric
Dispersion Modeling:	Dispersion is not enabled for this study
Speciated Hydrocarbon Modeling:	Speciated Hydrocarbon Modeling is not enabled for this study
Analysis Years:	2007

Scenarios

Scenario Name:	Description:	Add a description.
Baseline	Aircraft Times in Mode Basis:	Performance-Based
	Taxi Time Modeling:	User-specified Taxi Times
	FOA3 Sulfur-to-Sulfate Conversion Rate:	2.400000 %

Airports

Airport Name:	Lester B Pearson Intl
IATA Code:	YYZ
ICAO Code:	CYYZ
FAA Code:	
Country:	CA
State:	
City:	Toronto
Airport Description:	Lester B Pearson Intl
Latitude:	43.677°
Longitude:	-79.631°
Northing:	4836934.85
Easting:	610387.93
UTM Zone:	17
Elevation:	569.00 feet
PM Modeling Methodology:	FOA3

Scenario-Airport: Baseline, Lester B Pearson Intl

Weather

Baseline, Lester B Pearson Intl

Mixing Height:	914.40 meters
Temperature:	8.64 °C
Daily High Temperature:	14.39 °C
Daily Low Temperature:	2.89 °C
Pressure:	99525.95 Pa
Sea Level Pressure:	101625.51 Pa
Relative Humidity:	69.65
Wind Speed:	15.33 kph
Wind Direction:	0.00 °
Ceiling:	30480.00 m
Visibility:	80.47 km
The user has used annual averages.	
Base Elevation:	173.43 meters
Date Range:	Thursday, January 01, 2004 to Friday, December 31, 2004
Source Data File Location:	
Upper Air Data File Location:	

Quarter-Hourly Operational Profiles

Baseline, Lester B Pearson Intl

Name: DEFAULT

Quarter-Hour	Weight	Quarter-Hour	Weight	Quarter-Hour	Weight	Quarter-Hour	Weight
12:00am to 12:14 am	1.000000	6:00am to 6:14am	1.000000	12:00pm to 12:14 pm	1.000000	6:00pm to 6:14pm	1.000000
12:15am to 12:29 am	1.000000	6:15am to 6:29am	1.000000	12:15pm to 12:29 pm	1.000000	6:15pm to 6:29pm	1.000000
12:30am to 12:44 am	1.000000	6:30am to 6:44am	1.000000	12:30pm to 12:44 pm	1.000000	6:30pm to 6:44pm	1.000000
12:45am to 12:59 am	1.000000	6:45am to 6:59am	1.000000	12:45pm to 12:59 pm	1.000000	6:45pm to 6:59pm	1.000000
1:00am to 1:14am	1.000000	7:00am to 7:14am	1.000000	1:00pm to 1:14pm	1.000000	7:00pm to 7:14pm	1.000000
1:15am to 1:29am	1.000000	7:15am to 7:29am	1.000000	1:15pm to 1:29pm	1.000000	7:15pm to 7:29pm	1.000000
1:30am to 1:44am	1.000000	7:30am to 7:44am	1.000000	1:30pm to 1:44pm	1.000000	7:30pm to 7:44pm	1.000000
1:45am to 1:59am	1.000000	7:45am to 7:59am	1.000000	1:45pm to 1:59pm	1.000000	7:45pm to 7:59pm	1.000000
2:00am to 2:14am	1.000000	8:00am to 8:14am	1.000000	2:00pm to 2:14pm	1.000000	8:00pm to 8:14pm	1.000000
2:15am to 2:29am	1.000000	8:15am to 8:29am	1.000000	2:15pm to 2:29pm	1.000000	8:15pm to 8:29pm	1.000000
2:30am to 2:44am	1.000000	8:30am to 8:44am	1.000000	2:30pm to 2:44pm	1.000000	8:30pm to 8:44pm	1.000000
2:45am to 2:59am	1.000000	8:45am to 8:59am	1.000000	2:45pm to 2:59pm	1.000000	8:45pm to 8:59pm	1.000000
3:00am to 3:14am	1.000000	9:00am to 9:14am	1.000000	3:00pm to 3:14pm	1.000000	9:00pm to 9:14pm	1.000000
3:15am to 3:29am	1.000000	9:15am to 9:29am	1.000000	3:15pm to 3:29pm	1.000000	9:15pm to 9:29pm	1.000000
3:30am to 3:44am	1.000000	9:30am to 9:44am	1.000000	3:30pm to 3:44pm	1.000000	9:30pm to 9:44pm	1.000000
3:45am to 3:59am	1.000000	9:45am to 9:59am	1.000000	3:45pm to 3:59pm	1.000000	9:45pm to 9:59pm	1.000000
4:00am to 4:14am	1.000000	10:00am to 10:14am	1.000000	4:00pm to 4:14pm	1.000000	10:00pm to 10:14pm	1.000000
4:15am to 4:29am	1.000000	10:15am to 10:29am	1.000000	4:15pm to 4:29pm	1.000000	10:15pm to 10:29pm	1.000000
4:30am to 4:44am	1.000000	10:30am to 10:44am	1.000000	4:30pm to 4:44pm	1.000000	10:30pm to 10:44pm	1.000000
4:45am to 4:59am	1.000000	10:45am to 10:59am	1.000000	4:45pm to 4:59pm	1.000000	10:45pm to 10:59pm	1.000000
5:00am to 5:14am	1.000000	11:00am to 11:14am	1.000000	5:00pm to 5:14pm	1.000000	11:00pm to 11:14pm	1.000000
5:15am to 5:29am	1.000000	11:15am to 11:29am	1.000000	5:15pm to 5:29pm	1.000000	11:15pm to 11:29pm	1.000000
5:30am to 5:44am	1.000000	11:30am to 11:44am	1.000000	5:30pm to 5:44pm	1.000000	11:30pm to 11:44pm	1.000000
5:45am to 5:59am	1.000000	11:45am to 11:59am	1.000000	5:45pm to 5:59pm	1.000000	11:45pm to 11:59pm	1.000000

Daily Operational Profiles

Baseline, Lester B Pearson Intl

Name: DEFAULT

Day	Weight	Day	Weight
Monday	1.000000	Friday	1.000000
Tuesday	1.000000	Saturday	1.000000
Wednesday	1.000000	Sunday	1.000000
Thursday	1.000000		

Monthly Operational Profiles

Baseline, Lester B Pearson Intl

Name: DEFAULT

Month	Weight	Month	Weight
January	1.000000	July	1.000000
February	1.000000	August	1.000000
March	1.000000	September	1.000000
April	1.000000	October	1.000000
May	1.000000	November	1.000000
June	1.000000	December	1.000000

Aircraft

Baseline, Lester B Pearson Intl

Default Taxi Out Time: 19.000000 min

Default Taxi In Time:	7.000000 min

Year:	Uses Schedule?	Schedule Filename:
2007	No	(None)

GSE Population

Baseline, Lester B Pearson Intl

None.

Parking Facilities

Baseline, Lester B Pearson Intl

Parking Facility Name: 6a-Parking

Vehicle Type:	Default Fleet Mix (all types, fuels & ages)
Fuel:	Gasoline
Manufactured Year:	2007
Average Speed	10 mph
Average Distance Traveled:	305.00 meters
Average Idle Time:	1.50 mins

Number of Levels:	1	
Release Height:	1.50 meters	
Level Spacing	3.00 meters	
Elevation:	173.43 meters	
Point:	X (meters)	Y (meters)
1	0.00	0.00
2	330.00	0.00
3	330.00	500.00
4	0.00	500.00

Year: 2007

Number of Vehicles per Year:	114750
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has NOT edited the following emission factors:

CO (g/veh):	5.6611
THC (g/veh):	-1
NMHC (g/veh):	0.6408
VOC (g/veh):	0.6488
NOX (g/veh):	0.5955
SOX (g/veh):	0.003
PM-10 (g/veh):	0.0128
PM-25 (g/veh):	0.0086
TOG (g/veh):	
BENZENE (g/veh):	0.016726
MTBE (g/veh):	0
1,3-BUTA (g/veh):	0.002323
FORMALDEHYDE (g/veh):	0.006821
ACETALDEHYDE (g/veh):	0.00474
ACROLEIN (g/veh):	0.000316

Parking Facility Name: T1-Parking

Vehicle Type:	Default Fleet Mix (all types, fuels & ages)
Fuel:	Gasoline
Manufactured Year:	2007
Average Speed	10 mph
Average Distance Traveled:	2100.00 meters
Average Idle Time:	1.50 mins

Number of Levels:	1	
Release Height:	1.50 meters	
Level Spacing	3.00 meters	
Elevation:	173.43 meters	
Point:	X (meters)	Y (meters)
1	0.00	0.00
2	330.00	0.00
3	330.00	500.00
4	0.00	500.00

Year:
2007

Number of Vehicles per Year:	2.10096e+006
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT
Monthly Operational Profile:	DEFAULT

The user has NOT edited the following emission factors:

CO (g/veh):	25.1554
THC (g/veh):	-1
NMHC (g/veh):	2.2882
VOC (g/veh):	2.3241
NOX (g/veh):	3.0292
SOX (g/veh):	0.0161
PM-10 (g/veh):	0.0696
PM-25 (g/veh):	0.0466
TOG (g/veh):	
BENZENE (g/veh):	0.074482
MTBE (g/veh):	0
1,3-BUTA (g/veh):	0.010394
FORMALDEHYDE (g/veh):	0.031461
ACETALDEHYDE (g/veh):	0.021495
ACROLEIN (g/veh):	0.001452

Parking Facility Name:
T3-Parking

Vehicle Type:	Default Fleet Mix (all types, fuels & ages)
Fuel:	Gasoline
Manufactured Year:	2007
Average Speed	10 mph
Average Distance Traveled:	1035.00 meters
Average Idle Time:	1.50 mins

Number of Levels:	1	
Release Height:	1.50 meters	
Level Spacing	3.00 meters	
Elevation:	173.43 meters	
Point:	X (meters)	Y (meters)
1	0.00	0.00
2	330.00	0.00
3	330.00	500.00
4	0.00	500.00

Year:
2007

Number of Vehicles per Year:	1.87485e+006
Quarter-Hourly Operational profile:	DEFAULT
Daily Operational profile:	DEFAULT

Monthly Operational Profile:	DEFAULT

The user has NOT edited the following emission factors:

CO (g/veh):	13.5891
THC (g/veh):	-1
NMHC (g/veh):	1.3108
VOC (g/veh):	1.3302
NOX (g/veh):	1.5852
SOX (g/veh):	0.0083
PM-10 (g/veh):	0.0359
PM-25 (g/veh):	0.0241
TOG (g/veh):	
BENZENE (g/veh):	0.040214
MTBE (g/veh):	0
1,3-BUTA (g/veh):	0.005605
FORMALDEHYDE (g/veh):	0.016842
ACETALDEHYDE (g/veh):	0.011554
ACROLEIN (g/veh):	0.000778

Roadways — Baseline, Lester B Pearson Intl

None.

Stationary Sources — Baseline, Lester B Pearson Intl

None.

Training Fires — Baseline, Lester B Pearson Intl

None.

Gates — Baseline, Lester B Pearson Intl

None.

Taxiways — Baseline, Lester B Pearson Intl

None.

Runways — Baseline, Lester B Pearson Intl

None.

Taxipaths — Baseline, Lester B Pearson Intl

None.

Configurations — Baseline, Lester B Pearson Intl

None.

Buildings — Baseline, Lester B Pearson Intl

None.

Discrete Cartesian Receptors — Baseline, Lester B Pearson Intl

None.

Discrete Polar Receptors — Baseline, Lester B Pearson Intl

None.

Cartesian Receptor Networks — Baseline, Lester B Pearson Intl

None.

Polar Receptor Networks — Baseline, Lester B Pearson Intl

None.

User-Created Aircraft — Baseline, Lester B Pearson Intl

None.

User-Created GSE — Baseline, Lester B Pearson Intl

None.

User-Created APU | Baseline, Lester B Pearson Intl

None.

APPENDIX C

Summary of GHG Emissions

Source Type	2007 Annual Emissions (tonnes CO_2e)
Aircraft	410,668
GSE	63,377
Roadways	17,415
Parking Lots	2,497
Fuel Tanks*	n/a
Stationary	120,822
Training Fires	270
Airside Vehicles	5,594
Total:	**620,643**

*Fuel Tanks not included in 2007 assessment.

GHG Emissions from Aircraft

Summary of Results

2007 Annual GHG Emissions (tonnes CO_2e): 410,668

Useful Data

	Fuel Density[1] (kg/L)	Emission Factors (kg/L)[2]		
		CO_2	N_2O	CH_4
Aviation Turbo Fuel (J)	0.81	2.55	8.0E-05	2.3E-04
Aviation Gasoline (G)	0.72	2.33	2.2E-03	2.3E-04

[1] Source: Wikipedia (http://en.wikipedia.org/wiki/Jet_fuel and http://en.wikipedia.org/wiki/Avgas)

[2] Source: Environment Canada National Inventory Report 1990-2005

	CO_2	N_2O	CH_4
GWP	1	310	21

Detailed Results

Aircraft Name	Engine Name	Mode of Operation	Annual Fuel Consumption (kg)	Fuel Type [3]	2007 Annual Emissions (tonnes)			
					CO_2	N_2O	CH_4	CO_2e
Airbus A310-200 Series	CF6-80A3	Startup	0	J	0	0	0	**0**
Airbus A310-200 Series	CF6-80A3	Taxi Out	779624	J	2454.3719	0.0769999	0.2213747	**2482.8907**
Airbus A310-200 Series	CF6-80A3	Takeoff	822447	J	2589.184	0.0812293	0.2335342	**2619.2693**
Airbus A310-200 Series	CF6-80A3	Climb Out	390010	J	1227.8107	0.0385196	0.1107437	**1242.0774**
Airbus A310-200 Series	CF6-80A3	Approach	576582	J	1815.166	0.0569464	0.1637209	**1836.2575**
Airbus A310-200 Series	CF6-80A3	Taxi In	394523	J	1242.0161	0.0389652	0.112025	**1256.4478**
Airbus A310-200 Series	CF6-80A3	APU	0	J	0	0	0	**0**
Airbus A310-200 Series	CF6-80A3	GSE	0	J	0	0	0	**0**
Airbus A318-100 Series	CFM56-5B8/P SAC	Startup	0	J	0	0	0	**0**
Airbus A318-100 Series	CFM56-5B8/P SAC	Taxi Out	1867	J	5.8783215	0.0001844	0.0005302	**5.9466253**
Airbus A318-100 Series	CFM56-5B8/P SAC	Takeoff	1331	J	4.1897056	0.0001314	0.0003779	**4.2383884**
Airbus A318-100 Series	CFM56-5B8/P SAC	Climb Out	448	J	1.4113871	4.428E-05	0.0001273	**1.4277868**
Airbus A318-100 Series	CFM56-5B8/P SAC	Approach	625	J	1.9679138	6.174E-05	0.0001775	**1.9907801**
Airbus A318-100 Series	CFM56-5B8/P SAC	Taxi In	1024	J	3.2237261	0.0001011	0.0002908	**3.2611845**
Airbus A318-100 Series	CFM56-5B8/P SAC	APU	0	J	0	0	0	**0**
Airbus A318-100 Series	CFM56-5B8/P SAC	GSE	0	J	0	0	0	**0**
Airbus A319-100 Series	CFM56-5B6/P	Startup	0	J	0	0	0	**0**
Airbus A319-100 Series	CFM56-5B6/P	Taxi Out	3385020	J	10656.546	0.334323	0.9611786	**10780.37**
Airbus A319-100 Series	CFM56-5B6/P	Takeoff	2794610	J	8797.8463	0.2760109	0.7935312	**8900.0738**
Airbus A319-100 Series	CFM56-5B6/P	Climb Out	933091	J	2937.5101	0.0921572	0.2649519	**2971.6428**
Airbus A319-100 Series	CFM56-5B6/P	Approach	1300748	J	4094.9472	0.1284689	0.3693482	**4142.5288**
Airbus A319-100 Series	CFM56-5B6/P	Taxi In	1952516	J	6146.8093	0.1928411	0.5544181	**6218.2328**
Airbus A319-100 Series	CFM56-5B6/P	APU	0	J	0	0	0	**0**
Airbus A319-100 Series	CFM56-5B6/P	GSE	0	J	0	0	0	**0**
Airbus A320-200 Series	V2527-A5	Startup	0	J	0	0	0	**0**
Airbus A320-200 Series	V2527-A5	Taxi Out	5513977	J	17358.818	0.5445904	1.5656973	**17560.52**
Airbus A320-200 Series	V2527-A5	Takeoff	4548447	J	14319.185	0.4492293	1.2915343	**14485.568**
Airbus A320-200 Series	V2527-A5	Climb Out	1574525	J	4956.8378	0.1555086	0.4470873	**5014.4343**
Airbus A320-200 Series	V2527-A5	Approach	1932573	J	6084.0254	0.1908714	0.5487552	**6154.7194**
Airbus A320-200 Series	V2527-A5	Taxi In	3460342	J	10893.668	0.3417621	0.9825662	**11020.248**
Airbus A320-200 Series	V2527-A5	APU	0	J	0	0	0	**0**
Airbus A320-200 Series	V2527-A5	GSE	0	J	0	0	0	**0**
Airbus A321-100 Series	V2530-A5	Startup	0	J	0	0	0	**0**
Airbus A321-100 Series	V2530-A5	Taxi Out	1586483	J	4994.4842	0.1566897	0.4504829	**5052.5181**
Airbus A321-100 Series	V2530-A5	Takeoff	1367780	J	4305.9753	0.1350894	0.3883821	**4356.009**
Airbus A321-100 Series	V2530-A5	Climb Out	433116	J	1363.5126	0.0427769	0.1229835	**1379.356**
Airbus A321-100 Series	V2530-A5	Approach	517400	J	1628.8503	0.0511012	0.1469159	**1647.7769**
Airbus A321-100 Series	V2530-A5	Taxi In	999782	J	3147.4634	0.0987439	0.2838889	**3184.0357**
Airbus A321-100 Series	V2530-A5	APU	0	J	0	0	0	**0**
Airbus A321-100 Series	V2530-A5	GSE	0	J	0	0	0	**0**
Airbus A330-200 Series	CF6-80CB42	Startup	0	J	0	0	0	**0**
Airbus A330-200 Series	CF6-80CB42	Taxi Out	978195	J	3079.5042	0.0966119	0.2777592	**3115.2868**
Airbus A330-200 Series	CF6-80CB42	Takeoff	1286883	J	4051.2996	0.1270996	0.3654113	**4098.3741**
Airbus A330-200 Series	CF6-80CB42	Climb Out	496398	J	1562.7335	0.0490269	0.1409524	**1580.8918**
Airbus A330-200 Series	CF6-80CB42	Approach	500292	J	1574.9932	0.0494116	0.1420582	**1593.294**
Airbus A330-200 Series	CF6-80CB42	Taxi In	594545	J	1871.7168	0.0587205	0.1688215	**1893.4654**
Airbus A330-200 Series	CF6-80CB42	APU	0	J	0	0	0	**0**
Airbus A330-200 Series	CF6-80CB42	GSE	0	J	0	0	0	**0**
Airbus A330-300 Series	CF6-80E1A2	Startup	0	J	0	0	0	**0**
Airbus A330-300 Series	CF6-80E1A2	Taxi Out	1159	J	3.6481168	0.0001145	0.000329	**3.6905065**
Airbus A330-300 Series	CF6-80E1A2	Takeoff	1372	J	4.3183922	0.0001355	0.0003895	**4.3685702**
Airbus A330-300 Series	CF6-80E1A2	Climb Out	528	J	1.6637451	5.22E-05	0.0001501	**1.6830772**
Airbus A330-300 Series	CF6-80E1A2	Approach	816	J	2.5680819	8.057E-05	0.0002316	**2.597922**

Aircraft Name	Engine Name	Mode of Operation	Annual Fuel Consumption (kg)	Fuel Type [3]	2007 Annual Emissions (tonnes)			
					CO_2	N_2O	CH_4	CO_2e
Airbus A330-300 Series	CF6-80E1A2	Taxi In	974	J	3.0677775	9.624E-05	0.0002767	**3.1034239**
Airbus A330-300 Series	CF6-80E1A2	APU	0	J	0	0	0	**0**
Airbus A330-300 Series	CF6-80E1A2	GSE	0	J	0	0	0	**0**
Airbus A340-200 Series	CFM56-5C2	Startup	0	J	0	0	0	**0**
Airbus A340-200 Series	CFM56-5C2	Taxi Out	1498941	J	4718.8884	0.1480436	0.4256252	**4773.72**
Airbus A340-200 Series	CFM56-5C2	Takeoff	2086940	J	6569.9971	0.2061176	0.592588	**6646.3379**
Airbus A340-200 Series	CFM56-5C2	Climb Out	582500	J	1833.7963	0.0575309	0.1654012	**1855.1043**
Airbus A340-200 Series	CFM56-5C2	Approach	826771	J	2602.7979	0.0816564	0.2347622	**2633.0414**
Airbus A340-200 Series	CFM56-5C2	Taxi In	831814	J	2618.6724	0.0821544	0.236194	**2649.1004**
Airbus A340-200 Series	CFM56-5C2	APU	0	J	0	0	0	**0**
Airbus A340-200 Series	CFM56-5C2	GSE	0	J	0	0	0	**0**
Airbus A340-300 Series	CFM56-5C3	Startup	0	J	0	0	0	**0**
Airbus A340-300 Series	CFM56-5C3	Taxi Out	1943	J	6.1167825	0.0001919	0.0005517	**6.1878571**
Airbus A340-300 Series	CFM56-5C3	Takeoff	3402	J	10.711529	0.000336	0.0009661	**10.835993**
Airbus A340-300 Series	CFM56-5C3	Climb Out	959	J	3.0178488	9.468E-05	0.0002722	**3.0529151**
Airbus A340-300 Series	CFM56-5C3	Approach	1362	J	4.2879702	0.0001345	0.0003868	**4.3377948**
Airbus A340-300 Series	CFM56-5C3	Taxi In	1305	J	4.1092805	0.0001289	0.0003706	**4.1570288**
Airbus A340-300 Series	CFM56-5C3	APU	0	J	0	0	0	**0**
Airbus A340-300 Series	CFM56-5C3	GSE	0	J	0	0	0	**0**
Boeing 727-200 Series	JT8D-17A	Startup	0	J	0	0	0	**0**
Boeing 727-200 Series	JT8D-17A	Taxi Out	19062	J	60.011421	0.0018827	0.0054128	**60.70873**
Boeing 727-200 Series	JT8D-17A	Takeoff	6546	J	20.606237	0.0006465	0.0018586	**20.845673**
Boeing 727-200 Series	JT8D-17A	Climb Out	2795	J	8.799549	0.0002761	0.0007937	**8.9017963**
Boeing 727-200 Series	JT8D-17A	Approach	3921	J	12.345056	0.0003873	0.0011135	**12.488501**
Boeing 727-200 Series	JT8D-17A	Taxi In	11011	J	34.664427	0.0010875	0.0031266	**35.067214**
Boeing 727-200 Series	JT8D-17A	APU	0	J	0	0	0	**0**
Boeing 727-200 Series	JT8D-17A	GSE	0	J	0	0	0	**0**
Boeing 737-700 Series	CFM56-7B22	Startup	0	J	0	0	0	**0**
Boeing 737-700 Series	CFM56-7B22	Taxi Out	6122693	J	19275.145	0.6047104	1.7385425	**19499.115**
Boeing 737-700 Series	CFM56-7B22	Takeoff	5196491	J	16359.325	0.5132337	1.4755469	**16549.414**
Boeing 737-700 Series	CFM56-7B22	Climb Out	3851805	J	12126.052	0.3804252	1.0937223	**12266.952**
Boeing 737-700 Series	CFM56-7B22	Approach	3138552	J	9880.6273	0.3099805	0.8911938	**9995.4363**
Boeing 737-700 Series	CFM56-7B22	Taxi In	3157775	J	9941.1431	0.311879	0.8966521	**10056.655**
Boeing 737-700 Series	CFM56-7B22	APU	0	J	0	0	0	**0**
Boeing 737-700 Series	CFM56-7B22	GSE	0	J	0	0	0	**0**
Boeing 747-300 Series	CF6-50E2	Startup	0	J	0	0	0	**0**
Boeing 747-300 Series	CF6-50E2	Taxi Out	790835	J	2489.665	0.0781071	0.224558	**2518.594**
Boeing 747-300 Series	CF6-50E2	Takeoff	1317434	J	4147.478	0.130117	0.3740863	**4195.6701**
Boeing 747-300 Series	CF6-50E2	Climb Out	344604	J	1084.865	0.034035	0.0978506	**1097.4707**
Boeing 747-300 Series	CF6-50E2	Approach	415364	J	1307.6268	0.0410236	0.1179428	**1322.8209**
Boeing 747-300 Series	CF6-50E2	Taxi In	410799	J	1293.2564	0.0405728	0.1166467	**1308.2836**
Boeing 747-300 Series	CF6-50E2	APU	0	J	0	0	0	**0**
Boeing 747-300 Series	CF6-50E2	GSE	0	J	0	0	0	**0**
Boeing 757-200 Series	PW2040	Startup	0	J	0	0	0	**0**
Boeing 757-200 Series	PW2040	Taxi Out	718120	J	2260.7485	0.0709254	0.2039106	**2287.0175**
Boeing 757-200 Series	PW2040	Takeoff	358107	J	1127.375	0.0353686	0.1016848	**1140.4747**
Boeing 757-200 Series	PW2040	Climb Out	392099	J	1234.3872	0.0387259	0.1113369	**1248.7303**
Boeing 757-200 Series	PW2040	Approach	234493	J	738.21935	0.0231598	0.0665845	**746.79716**
Boeing 757-200 Series	PW2040	Taxi In	384183	J	1209.4658	0.037944	0.1090891	**1223.5193**
Boeing 757-200 Series	PW2040	APU	0	J	0	0	0	**0**
Boeing 757-200 Series	PW2040	GSE	0	J	0	0	0	**0**
Boeing 767-200 Series	CF6-80A	Startup	0	J	0	0	0	**0**
Boeing 767-200 Series	CF6-80A	Taxi Out	6150	J	19.36062	0.0006074	0.0017463	**19.585583**
Boeing 767-200 Series	CF6-80A	Takeoff	6118	J	19.260082	0.0006042	0.0017372	**19.483876**
Boeing 767-200 Series	CF6-80A	Climb Out	4179	J	13.156361	0.0004127	0.0011867	**13.309233**
Boeing 767-200 Series	CF6-80A	Approach	2550	J	8.0272857	0.0002518	0.000724	**8.1205596**
Boeing 767-200 Series	CF6-80A	Taxi In	3091	J	9.7306051	0.0003053	0.0008777	**9.8436709**
Boeing 767-200 Series	CF6-80A	APU	0	J	0	0	0	**0**
Boeing 767-200 Series	CF6-80A	GSE	0	J	0	0	0	**0**
Boeing 767-300 Series	CF6-80C2B7F 1862M39	Startup	0	J	0	0	0	**0**
Boeing 767-300 Series	CF6-80C2B7F 1862M39	Taxi Out	10352	J	32.58931	0.0010224	0.0029394	**32.967985**
Boeing 767-300 Series	CF6-80C2B7F 1862M39	Takeoff	9381	J	29.534214	0.0009266	0.0026639	**29.87739**
Boeing 767-300 Series	CF6-80C2B7F 1862M39	Climb Out	5762	J	18.139263	0.0005691	0.0016361	**18.350034**
Boeing 767-300 Series	CF6-80C2B7F 1862M39	Approach	5304	J	16.698713	0.0005239	0.0015062	**16.892746**
Boeing 767-300 Series	CF6-80C2B7F 1862M39	Taxi In	5496	J	17.30121	0.0005428	0.0015605	**17.502243**
Boeing 767-300 Series	CF6-80C2B7F 1862M39	APU	0	J	0	0	0	**0**
Boeing 767-300 Series	CF6-80C2B7F 1862M39	GSE	0	J	0	0	0	**0**
Boeing 767-400	CF6-80C2B8FA 1862M39	Startup	0	J	0	0	0	**0**
Boeing 767-400	CF6-80C2B8FA 1862M39	Taxi Out	6067205	J	19100.461	0.5992302	1.7227867	**19322.401**
Boeing 767-400	CF6-80C2B8FA 1862M39	Takeoff	3657353	J	11513.89	0.3612201	1.0385077	**11647.676**
Boeing 767-400	CF6-80C2B8FA 1862M39	Climb Out	4063513	J	12792.54	0.4013346	1.1538369	**12941.184**
Boeing 767-400	CF6-80C2B8FA 1862M39	Approach	2860171	J	9004.2412	0.282486	0.8121472	**9108.867**
Boeing 767-400	CF6-80C2B8FA 1862M39	Taxi In	3661128	J	11525.775	0.3615929	1.0395797	**11659.7**

Aircraft Name	Engine Name	Mode of Operation	Annual Fuel Consumption (kg)	Fuel Type [3]	2007 Annual Emissions (tonnes)			
					CO_2	N_2O	CH_4	CO_2e
Boeing 767-400	CF6-80C2B8FA 1862M39	APU	0	J	0	0	0	**0**
Boeing 767-400	CF6-80C2B8FA 1862M39	GSE	0	J	0	0	0	**0**
Boeing 777-200 Series	PW4077	Startup	0	J	0	0	0	**0**
Boeing 777-200 Series	PW4077	Taxi Out	920944	J	2899.2679	0.0909574	0.2615026	**2932.9563**
Boeing 777-200 Series	PW4077	Takeoff	1177440	J	3706.7542	0.1162903	0.3343347	**3749.8252**
Boeing 777-200 Series	PW4077	Climb Out	945536	J	2976.6888	0.0933863	0.2684857	**3011.2768**
Boeing 777-200 Series	PW4077	Approach	775034	J	2439.9234	0.0765466	0.2200715	**2468.2744**
Boeing 777-200 Series	PW4077	Taxi In	605886	J	1907.4181	0.0598406	0.1720416	**1929.5815**
Boeing 777-200 Series	PW4077	APU	0	J	0	0	0	**0**
Boeing 777-200 Series	PW4077	GSE	0	J	0	0	0	**0**
Boeing 777-300 ER	GE90-115B DAC	Startup	0	J	0	0	0	**0**
Boeing 777-300 ER	GE90-115B DAC	Taxi Out	9142	J	28.779588	0.0009029	0.0025958	**29.113995**
Boeing 777-300 ER	GE90-115B DAC	Takeoff	5313	J	16.726493	0.0005248	0.0015087	**16.920848**
Boeing 777-300 ER	GE90-115B DAC	Climb Out	4958	J	15.609766	0.0004897	0.0014079	**15.791145**
Boeing 777-300 ER	GE90-115B DAC	Approach	1523	J	4.7954956	0.0001504	0.0004325	**4.8512173**
Boeing 777-300 ER	GE90-115B DAC	Taxi In	1337	J	4.2087924	0.000132	0.0003796	**4.2576969**
Boeing 777-300 ER	GE90-115B DAC	APU	0	J	0	0	0	**0**
Boeing 777-300 ER	GE90-115B DAC	GSE	0	J	0	0	0	**0**
Boeing 777-300 Series	PW4084	Startup	0	J	0	0	0	**0**
Boeing 777-300 Series	PW4084	Taxi Out	0	J	0	0	0	**0**
Boeing 777-300 Series	PW4084	Takeoff	0	J	0	0	0	**0**
Boeing 777-300 Series	PW4084	Climb Out	0	J	0	0	0	**0**
Boeing 777-300 Series	PW4084	Approach	1016	J	3.196997	0.0001003	0.0002884	**3.2341449**
Boeing 777-300 Series	PW4084	Taxi In	1261	J	3.9694544	0.0001245	0.000358	**4.0155779**
Boeing 777-300 Series	PW4084	APU	0	J	0	0	0	**0**
Boeing 777-300 Series	PW4084	GSE	0	J	0	0	0	**0**
Boeing DC-9-40 Series	JT8D-11	Startup	0	J	0	0	0	**0**
Boeing DC-9-40 Series	JT8D-11	Taxi Out	536339	J	1688.4749	0.0529718	0.1522938	**1708.0943**
Boeing DC-9-40 Series	JT8D-11	Takeoff	343235	J	1080.5535	0.0338997	0.0974617	**1093.1091**
Boeing DC-9-40 Series	JT8D-11	Climb Out	203972	J	642.13253	0.0201453	0.0579178	**649.59385**
Boeing DC-9-40 Series	JT8D-11	Approach	189295	J	595.9293	0.0186958	0.0537505	**602.85377**
Boeing DC-9-40 Series	JT8D-11	Taxi In	237817	J	748.68394	0.0234881	0.0675284	**757.38335**
Boeing DC-9-40 Series	JT8D-11	APU	0	J	0	0	0	**0**
Boeing DC-9-40 Series	JT8D-11	GSE	0	J	0	0	0	**0**
Boeing MD-11	CF6-80C2D1F 1862M39	Startup	0	J	0	0	0	**0**
Boeing MD-11	CF6-80C2D1F 1862M39	Taxi Out	1129	J	3.5534471	0.0001115	0.0003205	**3.5947367**
Boeing MD-11	CF6-80C2D1F 1862M39	Takeoff	985	J	3.1008818	9.728E-05	0.0002797	**3.1369128**
Boeing MD-11	CF6-80C2D1F 1862M39	Climb Out	603	J	1.8988819	5.957E-05	0.0001713	**1.9209462**
Boeing MD-11	CF6-80C2D1F 1862M39	Approach	472	J	1.4847787	4.658E-05	0.0001339	**1.5020312**
Boeing MD-11	CF6-80C2D1F 1862M39	Taxi In	506	J	1.5919693	4.994E-05	0.0001436	**1.6104674**
Boeing MD-11	CF6-80C2D1F 1862M39	APU	0	J	0	0	0	**0**
Boeing MD-11	CF6-80C2D1F 1862M39	GSE	0	J	0	0	0	**0**
Boeing MD-83	JT8D-219 Environmental Kit (E	Startup	0	J	0	0	0	**0**
Boeing MD-83	JT8D-219 Environmental Kit (E	Taxi Out	891148	J	2805.4658	0.0880146	0.253042	**2838.0642**
Boeing MD-83	JT8D-219 Environmental Kit (E	Takeoff	427145	J	1344.7145	0.0421871	0.121288	**1360.3396**
Boeing MD-83	JT8D-219 Environmental Kit (E	Climb Out	461846	J	1453.9591	0.0456144	0.1311414	**1470.8536**
Boeing MD-83	JT8D-219 Environmental Kit (E	Approach	296245	J	932.62322	0.0292588	0.084119	**943.45994**
Boeing MD-83	JT8D-219 Environmental Kit (E	Taxi In	344824	J	1085.5557	0.0340566	0.0979129	**1098.1694**
Boeing MD-83	JT8D-219 Environmental Kit (E	APU	0	J	0	0	0	**0**
Boeing MD-83	JT8D-219 Environmental Kit (E	GSE	0	J	0	0	0	**0**
Boeing MD-90	V2525-D5	Startup	0	J	0	0	0	**0**
Boeing MD-90	V2525-D5	Taxi Out	416	J	1.3084863	4.105E-05	0.000118	**1.3236904**
Boeing MD-90	V2525-D5	Takeoff	211	J	0.6643798	2.084E-05	5.992E-05	**0.6720996**
Boeing MD-90	V2525-D5	Climb Out	88	J	0.2783	8.731E-06	2.51E-05	**0.2815338**
Boeing MD-90	V2525-D5	Approach	153	J	0.4813714	1.51E-05	4.342E-05	**0.4869648**
Boeing MD-90	V2525-D5	Taxi In	103	J	0.3257455	1.022E-05	2.938E-05	**0.3295305**
Boeing MD-90	V2525-D5	APU	0	J	0	0	0	**0**
Boeing MD-90	V2525-D5	GSE	0	J	0	0	0	**0**
Bombardier CRJ-700	CF34-8C1	Startup	0	J	0	0	0	**0**
Bombardier CRJ-700	CF34-8C1	Taxi Out	4452159	J	14016.057	0.4397194	1.2641934	**14178.918**
Bombardier CRJ-700	CF34-8C1	Takeoff	1595209	J	5021.9553	0.1575515	0.4529607	**5080.3085**
Bombardier CRJ-700	CF34-8C1	Climb Out	597302	J	1880.3947	0.0589928	0.1696042	**1902.2442**
Bombardier CRJ-700	CF34-8C1	Approach	905564	J	2850.8493	0.0894384	0.2571354	**2883.9751**
Bombardier CRJ-700	CF34-8C1	Taxi In	2592453	J	8161.4255	0.2560447	0.7361286	**8256.258**
Bombardier CRJ-700	CF34-8C1	APU	0	J	0	0	0	**0**
Bombardier CRJ-700	CF34-8C1	GSE	0	J	0	0	0	**0**
Bombardier Challenger 600	ALF 502L-2	Startup	0	J	0	0	0	**0**
Bombardier Challenger 600	ALF 502L-2	Taxi Out	544864	J	1715.313	0.0538137	0.1547145	**1735.2443**
Bombardier Challenger 600	ALF 502L-2	Takeoff	316350	J	995.91677	0.0312444	0.0898278	**1007.4889**
Bombardier Challenger 600	ALF 502L-2	Climb Out	95285	J	299.97034	0.0094108	0.0270561	**303.45588**
Bombardier Challenger 600	ALF 502L-2	Approach	211644	J	666.28557	0.0209031	0.0600963	**674.02755**
Bombardier Challenger 600	ALF 502L-2	Taxi In	219796	J	691.95036	0.0217082	0.0624112	**699.99055**
Bombardier Challenger 600	ALF 502L-2	APU	0	J	0	0	0	**0**

Aircraft Name	Engine Name	Mode of Operation	Annual Fuel Consumption (kg)	Fuel Type [3]	2007 Annual Emissions (tonnes)			
					CO_2	N_2O	CH_4	CO_2e
Bombardier Challenger 600	ALF 502L-2	GSE	0	J	0	0	0	**0**
DeHavilland DHC-8-300	PW123	Startup	0	J	0	0	0	**0**
DeHavilland DHC-8-300	PW123	Taxi Out	1110172	J	3494.986	0.1096466	0.315234	**3535.5963**
DeHavilland DHC-8-300	PW123	Takeoff	367861	J	1158.0821	0.036332	0.1044545	**1171.5385**
DeHavilland DHC-8-300	PW123	Climb Out	480679	J	1513.249	0.0474745	0.1364891	**1530.8323**
DeHavilland DHC-8-300	PW123	Approach	279701	J	880.53872	0.0276247	0.0794211	**890.77024**
DeHavilland DHC-8-300	PW123	Taxi In	783654	J	2467.0583	0.0773979	0.222519	**2495.7245**
DeHavilland DHC-8-300	PW123	APU	0	J	0	0	0	**0**
DeHavilland DHC-8-300	PW123	GSE	0	J	0	0	0	**0**
Dornier 328 Jet	PW306B Annular	Startup	0	J	0	0	0	**0**
Dornier 328 Jet	PW306B Annular	Taxi Out	47563	J	149.73414	0.0046975	0.0135054	**151.474**
Dornier 328 Jet	PW306B Annular	Takeoff	37793	J	118.97835	0.0037327	0.0107314	**120.36083**
Dornier 328 Jet	PW306B Annular	Climb Out	23757	J	74.790807	0.0023464	0.0067458	**75.659847**
Dornier 328 Jet	PW306B Annular	Approach	60213	J	189.55848	0.0059469	0.0170974	**191.76107**
Dornier 328 Jet	PW306B Annular	Taxi In	24580	J	77.3825	0.0024277	0.0069796	**78.281654**
Dornier 328 Jet	PW306B Annular	APU	0	J	0	0	0	**0**
Dornier 328 Jet	PW306B Annular	GSE	0	J	0	0	0	**0**
Embraer EMB120 Brasilia	PW118	Startup	0	J	0	0	0	**0**
Embraer EMB120 Brasilia	PW118	Taxi Out	519237	J	1634.6347	0.0512827	0.1474376	**1653.6285**
Embraer EMB120 Brasilia	PW118	Takeoff	65020	J	204.69142	0.0064217	0.0184624	**207.06986**
Embraer EMB120 Brasilia	PW118	Climb Out	96006	J	302.24066	0.0094821	0.0272609	**305.75257**
Embraer EMB120 Brasilia	PW118	Approach	83667	J	263.39633	0.0082634	0.0237573	**266.45689**
Embraer EMB120 Brasilia	PW118	Taxi In	275676	J	867.86799	0.0272272	0.0782783	**877.95227**
Embraer EMB120 Brasilia	PW118	APU	0	J	0	0	0	**0**
Embraer EMB120 Brasilia	PW118	GSE	0	J	0	0	0	**0**
Embraer ERJ135	AE3007A1/3 Type 2	Startup	0	J	0	0	0	**0**
Embraer ERJ135	AE3007A1/3 Type 2	Taxi Out	465082	J	1464.1461	0.045934	0.1320602	**1481.1589**
Embraer ERJ135	AE3007A1/3 Type 2	Takeoff	373885	J	1177.0446	0.0369269	0.1061648	**1190.7214**
Embraer ERJ135	AE3007A1/3 Type 2	Climb Out	452730	J	1425.2611	0.0447141	0.128553	**1441.8221**
Embraer ERJ135	AE3007A1/3 Type 2	Approach	587144	J	1848.4159	0.0579895	0.1667199	**1869.8938**
Embraer ERJ135	AE3007A1/3 Type 2	Taxi In	224962	J	708.21319	0.0222185	0.0638781	**716.44235**
Embraer ERJ135	AE3007A1/3 Type 2	APU	0	J	0	0	0	**0**
Embraer ERJ135	AE3007A1/3 Type 2	GSE	0	J	0	0	0	**0**
Embraer ERJ145	AE3007A	Startup	0	J	0	0	0	**0**
Embraer ERJ145	AE3007A	Taxi Out	457863	J	1441.4214	0.0452211	0.1300106	**1458.1702**
Embraer ERJ145	AE3007A	Takeoff	206560	J	650.281	0.020401	0.0586528	**657.83701**
Embraer ERJ145	AE3007A	Climb Out	254559	J	801.38793	0.0251416	0.072282	**810.69974**
Embraer ERJ145	AE3007A	Approach	327126	J	1029.8402	0.0323087	0.0928875	**1041.8066**
Embraer ERJ145	AE3007A	Taxi In	236025	J	743.04324	0.0233112	0.0670196	**751.67711**
Embraer ERJ145	AE3007A	APU	0	J	0	0	0	**0**
Embraer ERJ145	AE3007A	GSE	0	J	0	0	0	**0**
Embraer ERJ170	CF34-8E5 LEC	Startup	0	J	0	0	0	**0**
Embraer ERJ170	CF34-8E5 LEC	Taxi Out	2080255	J	6548.9512	0.2054573	0.5906897	**6625.0474**
Embraer ERJ170	CF34-8E5 LEC	Takeoff	1920857	J	6047.1426	0.1897143	0.5454285	**6117.408**
Embraer ERJ170	CF34-8E5 LEC	Climb Out	1023029	J	3220.6476	0.1010399	0.2904898	**3258.0702**
Embraer ERJ170	CF34-8E5 LEC	Approach	1532270	J	4823.814	0.1513353	0.4350891	**4879.8648**
Embraer ERJ170	CF34-8E5 LEC	Taxi In	1155461	J	3637.563	0.1141196	0.3280939	**3679.83**
Embraer ERJ170	CF34-8E5 LEC	APU	0	J	0	0	0	**0**
Embraer ERJ170	CF34-8E5 LEC	GSE	0	J	0	0	0	**0**
Embraer ERJ175	CF34-8E5 LEC	Startup	0	J	0	0	0	**0**
Embraer ERJ175	CF34-8E5 LEC	Taxi Out	8019	J	25.245608	0.000792	0.0022771	**25.538952**
Embraer ERJ175	CF34-8E5 LEC	Takeoff	2766	J	8.7075311	0.0002732	0.0007854	**8.8087092**
Embraer ERJ175	CF34-8E5 LEC	Climb Out	1969	J	6.1979577	0.0001944	0.000559	**6.2699755**
Embraer ERJ175	CF34-8E5 LEC	Approach	2517	J	7.9249128	0.0002486	0.0007148	**8.0169971**
Embraer ERJ175	CF34-8E5 LEC	Taxi In	2828	J	8.9034943	0.0002793	0.0008031	**9.0069494**
Embraer ERJ175	CF34-8E5 LEC	APU	0	J	0	0	0	**0**
Embraer ERJ175	CF34-8E5 LEC	GSE	0	J	0	0	0	**0**
Embraer ERJ190	CF34-8E5 LEC	Startup	0	J	0	0	0	**0**
Embraer ERJ190	CF34-8E5 LEC	Taxi Out	3584	J	11.283241	0.000354	0.0010177	**11.414348**
Embraer ERJ190	CF34-8E5 LEC	Takeoff	3413	J	10.745343	0.0003371	0.0009692	**10.8702**
Embraer ERJ190	CF34-8E5 LEC	Climb Out	2924	J	9.205917	0.0002888	0.0008303	**9.3128861**
Embraer ERJ190	CF34-8E5 LEC	Approach	3406	J	10.723332	0.0003364	0.0009672	**10.847933**
Embraer ERJ190	CF34-8E5 LEC	Taxi In	2584	J	8.134962	0.0002552	0.0007337	**8.2294871**
Embraer ERJ190	CF34-8E5 LEC	APU	0	J	0	0	0	**0**
Embraer ERJ190	CF34-8E5 LEC	GSE	0	J	0	0	0	**0**
Ilyushin 62 Classic	D-30KU	Startup	0	J	0	0	0	**0**
Ilyushin 62 Classic	D-30KU	Taxi Out	4553	J	14.333792	0.0004497	0.0012929	**14.500345**
Ilyushin 62 Classic	D-30KU	Takeoff	2578	J	8.1153499	0.0002546	0.000732	**8.2096471**
Ilyushin 62 Classic	D-30KU	Climb Out	700	J	2.2045614	6.916E-05	0.0001988	**2.2301775**
Ilyushin 62 Classic	D-30KU	Approach	967	J	3.0450213	9.553E-05	0.0002746	**3.0804032**
Ilyushin 62 Classic	D-30KU	Taxi In	1669	J	5.2539311	0.0001648	0.0004739	**5.3149797**
Ilyushin 62 Classic	D-30KU	APU	0	J	0	0	0	**0**
Ilyushin 62 Classic	D-30KU	GSE	0	J	0	0	0	**0**

Aircraft Name	Engine Name	Mode of Operation	Annual Fuel Consumption (kg)	Fuel Type [3]	2007 Annual Emissions (tonnes)			
					CO_2	N_2O	CH_4	CO_2e
Lockheed L-1011 Tristar	RB211-524B series Phase 2	Startup	0	J	0	0	0	**0**
Lockheed L-1011 Tristar	RB211-524B series Phase 2	Taxi Out	24152	J	76.034434	0.0023854	0.006858	**76.917924**
Lockheed L-1011 Tristar	RB211-524B series Phase 2	Takeoff	10594	J	33.351314	0.0010463	0.0030082	**33.738843**
Lockheed L-1011 Tristar	RB211-524B series Phase 2	Climb Out	5530	J	17.408844	0.0005462	0.0015702	**17.611128**
Lockheed L-1011 Tristar	RB211-524B series Phase 2	Approach	6271	J	19.742589	0.0006194	0.0017807	**19.97199**
Lockheed L-1011 Tristar	RB211-524B series Phase 2	Taxi In	9737	J	30.652565	0.0009616	0.0027647	**31.008736**
Lockheed L-1011 Tristar	RB211-524B series Phase 2	APU	0	J	0	0	0	**0**
Lockheed L-1011 Tristar	RB211-524B series Phase 2	GSE	0	J	0	0	0	**0**
Raytheon Beechjet 400	JT15D-5, -5A, -5B	Startup	0	J	0	0	0	**0**
Raytheon Beechjet 400	JT15D-5, -5A, -5B	Taxi Out	438891	J	1381.6933	0.0433472	0.1246233	**1397.748**
Raytheon Beechjet 400	JT15D-5, -5A, -5B	Takeoff	198708	J	625.56107	0.0196254	0.0564232	**632.82984**
Raytheon Beechjet 400	JT15D-5, -5A, -5B	Climb Out	61461	J	193.48867	0.0060702	0.0174519	**195.73693**
Raytheon Beechjet 400	JT15D-5, -5A, -5B	Approach	146987	J	462.7362	0.0145172	0.041737	**468.11301**
Raytheon Beechjet 400	JT15D-5, -5A, -5B	Taxi In	321955	J	1013.5629	0.0317981	0.0914194	**1025.3401**
Raytheon Beechjet 400	JT15D-5, -5A, -5B	APU	0	J	0	0	0	**0**
Raytheon Beechjet 400	JT15D-5, -5A, -5B	GSE	0	J	0	0	0	**0**
		TOTALS:	**128,949,133**	**-**	**405,951**	**12.7**	**36.6**	**410,668**

[3] Jet and turboprop engines assumed to use jet fuel (J), piston engines assumed to use aviation gasoline (G).

GHG Emissions from GSE

Summary of Results

2007 Annual GHG Emissions (tonnes CO_2e): 63,377

Useful data

	Diesel	Gasoline	Reference
Density (lb/gal)	7.30	6.17	Diesel: ASHRAE Fundamentals (2001), Chapter 18.6; Gasoline: AP-42- Appendix A
Brake Specific Fuel Consumption (BTU/hp-hr)	7000	7000	AP-42 - Table 3.3-1 Emission Factors for Uncontrolled Gasoline
Heating Value (BTU/lb)	19,300	20,300	and Diesel Industrial Engines
CO_2 Emission Factor (g/L)	2730	2360	Environment Canada National Inventory Report 1990-2005
N_2O Emission Factor (g/L)	0.15	2.7	
CH_4 Emission Factor (g/L)	1.1	0.05	

	CO_2	N_2O	CH_4
GWP	1	310	21

Detailed Results

Aircraft	GSE Type	Description	Fuel	Operation Time Departure (mins)	Operation Time Arrival (mins)	Total Operation Time (mins/LTO)	Horsepower	Load Factor	2007 LTO Count	2007 Fuel Consumption (L)	2007 Annual Emissions (tonnes)			
											CO_2	N_2O	CH_4	CO_2e
Airbus A310-200 Series	Air Conditioner	None.	E	23	7	30	0	0.75	4260	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Airbus A310-200 Series	Air Start	ACE 180	D	7	0	7	425	0.9	4260	35,773	9.77E+01	5.37E-03	3.94E-02	1.00E+02
Airbus A310-200 Series	Aircraft Tractor	Stewart & Stevenson TUG GT-50H	D	8	0	8	190	0.8	4260	16,247	4.44E+01	2.44E-03	1.79E-02	4.55E+01
Airbus A310-200 Series	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	120	120	240	107	0.55	4260	212,151	5.01E+02	5.73E-01	1.06E-02	6.78E+02
Airbus A310-200 Series	Belt Loader	Stewart & Stevenson TUG 660	G	18	17	35	107	0.5	4260	28,126	6.64E+01	7.59E-02	1.41E-03	8.99E+01
Airbus A310-200 Series	Cabin Service Truck	Hi-Way F650	D	18	17	35	210	0.53	4260	52,046	1.42E+02	7.81E-03	5.73E-02	1.46E+02
Airbus A310-200 Series	Cargo Loader	FMC Commander 15	D	80	80	160	80	0.5	4260	85,508	2.33E+02	1.28E-02	9.41E-02	2.39E+02
Airbus A310-200 Series	Catering Truck	Hi-Way F650	D	10	10	20	210	0.53	4260	29,741	8.12E+01	4.46E-03	3.27E-02	8.33E+01
Airbus A310-200 Series	Hydrant Truck	F250 / F350	D	20	0	20	235	0.7	4260	43,956	1.20E+02	6.59E-03	4.84E-02	1.23E+02
Airbus A310-200 Series	Lavatory Truck	Wollard TLS-770 / F350	G	0	25	25	235	0.25	4260	22,062	5.21E+01	5.96E-02	1.10E-03	7.06E+01
Airbus A310-200 Series	Service Truck	F250 / F350	D	8	7	15	235	0.2	4260	9,419	2.57E+01	1.41E-03	1.04E-02	2.64E+01
Airbus A310-200 Series	Water Service	Gate Service	E	12	0	12	0	0.2	4260	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Airbus A318-100 Series	Air Conditioner	None.	E	23	7	30	0	0.75	14	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Airbus A318-100 Series	Air Start	ACE 180	D	7	0	7	425	0.9	14	118	3.21E-01	1.76E-05	1.29E-04	3.29E-01
Airbus A318-100 Series	Aircraft Tractor	Stewart & Stevenson TUG GT-50H	D	8	0	8	190	0.8	14	53	1.46E-01	8.01E-06	5.87E-05	1.49E-01
Airbus A318-100 Series	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	76	74	150	107	0.55	14	436	1.03E+00	1.18E-03	2.18E-05	1.39E+00
Airbus A318-100 Series	Belt Loader	Stewart & Stevenson TUG 660	G	48	48	96	107	0.5	14	254	5.98E-01	6.85E-04	1.27E-05	8.11E-01
Airbus A318-100 Series	Cabin Service Truck	Hi-Way F650	D	10	10	20	210	0.53	14	98	2.67E-01	1.47E-05	1.08E-04	2.74E-01
Airbus A318-100 Series	Catering Truck	Hi-Way F650	D	8	7	15	210	0.53	14	73	2.00E-01	1.10E-05	8.06E-05	2.05E-01
Airbus A318-100 Series	Hydrant Truck	F250 / F350	D	12	0	12	235	0.7	14	87	2.37E-01	1.30E-05	9.53E-05	2.43E-01
Airbus A318-100 Series	Lavatory Truck	Wollard TLS-770 / F350	G	0	15	15	235	0.25	14	44	1.03E-01	1.17E-04	2.18E-06	1.39E-01
Airbus A318-100 Series	Service Truck	F250 / F350	D	8	7	15	235	0.2	14	31	8.45E-02	4.64E-06	3.41E-05	8.67E-02
Airbus A318-100 Series	Water Service	Gate Service	E	12	0	12	0	0.2	14	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Airbus A319-100 Series	Air Conditioner	None.	E	23	7	30	0	0.75	29119	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Airbus A319-100 Series	Air Start	ACE 180	D	7	0	7	425	0.9	29119	244,525	6.68E+02	3.67E-02	2.69E-01	6.85E+02
Airbus A319-100 Series	Aircraft Tractor	Stewart & Stevenson TUG GT-50H	D	8	0	8	190	0.8	29119	111,052	3.03E+02	1.67E-02	1.22E-01	3.11E+02
Airbus A319-100 Series	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	76	74	150	107	0.55	29119	906,343	2.14E+03	2.45E+00	4.53E-02	2.90E+03
Airbus A319-100 Series	Belt Loader	Stewart & Stevenson TUG 660	G	48	48	96	107	0.5	29119	527,327	1.24E+03	1.42E+00	2.64E-02	1.69E+03
Airbus A319-100 Series	Cabin Service Truck	Hi-Way F650	D	10	10	20	210	0.53	29119	203,291	5.55E+02	3.05E-02	2.24E-01	5.69E+02
Airbus A319-100 Series	Catering Truck	Hi-Way F650	D	8	7	15	210	0.53	29119	152,469	4.16E+02	2.29E-02	1.68E-01	4.27E+02
Airbus A319-100 Series	Hydrant Truck	F250 / F350	D	12	0	12	235	0.7	29119	180,277	4.92E+02	2.70E-02	1.98E-01	5.05E+02
Airbus A319-100 Series	Lavatory Truck	Wollard TLS-770 / F350	G	0	15	15	235	0.25	29119	90,480	2.14E+02	2.44E-01	4.52E-03	2.89E+02
Airbus A319-100 Series	Service Truck	F250 / F350	D	8	7	15	235	0.2	29119	64,385	1.76E+02	9.66E-03	7.08E-02	1.80E+02
Airbus A319-100 Series	Water Service	Gate Service	E	12	0	12	0	0.2	29119	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Airbus A320-200 Series	Air Conditioner	None.	E	23	7	30	0	0.75	36558	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Airbus A320-200 Series	Air Start	ACE 180	D	7	0	7	425	0.9	36558	306,994	8.38E+02	4.60E-02	3.38E-01	8.59E+02
Airbus A320-200 Series	Aircraft Tractor	Stewart & Stevenson TUG GT-50H	D	8	0	8	190	0.8	36558	139,423	3.81E+02	2.09E-02	1.53E-01	3.90E+02
Airbus A320-200 Series	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	76	74	150	107	0.55	36558	1,137,886	2.69E+03	3.07E+00	5.69E-02	3.64E+03
Airbus A320-200 Series	Belt Loader	Stewart & Stevenson TUG 660	G	48	48	96	107	0.5	36558	662,043	1.56E+03	1.79E+00	3.31E-02	2.12E+03
Airbus A320-200 Series	Cabin Service Truck	Hi-Way F650	D	10	10	20	210	0.53	36558	255,226	6.97E+02	3.83E-02	2.81E-01	7.15E+02
Airbus A320-200 Series	Catering Truck	Hi-Way F650	D	8	7	15	210	0.53	36558	191,420	5.23E+02	2.87E-02	2.11E-01	5.36E+02
Airbus A320-200 Series	Hydrant Truck	F250 / F350	D	12	0	12	235	0.7	36558	226,333	6.18E+02	3.39E-02	2.49E-01	6.34E+02
Airbus A320-200 Series	Lavatory Truck	Wollard TLS-770 / F350	G	0	15	15	235	0.25	36558	113,595	2.68E+02	3.07E-01	5.68E-03	3.63E+02
Airbus A320-200 Series	Service Truck	F250 / F350	D	8	7	15	235	0.2	36558	80,833	2.21E+02	1.21E-02	8.89E-02	2.26E+02
Airbus A320-200 Series	Water Service	Gate Service	E	12	0	12	0	0.2	36558	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Airbus A321-100 Series	Air Conditioner	None.	E	23	7	30	0	0.75	9754	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Airbus A321-100 Series	Air Start	ACE 180	D	7	0	7	425	0.9	9754	81,909	2.24E+02	1.23E-02	9.01E-02	2.29E+02
Airbus A321-100 Series	Aircraft Tractor	Stewart & Stevenson TUG GT-50H	D	8	0	8	190	0.8	9754	37,199	1.02E+02	5.58E-03	4.09E-02	1.04E+02
Airbus A321-100 Series	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	76	74	150	107	0.55	9754	303,598	7.16E+02	8.20E-01	1.52E-02	9.71E+02
Airbus A321-100 Series	Belt Loader	Stewart & Stevenson TUG 660	G	48	48	96	107	0.5	9754	176,639	4.17E+02	4.77E-01	8.83E-03	5.65E+02
Airbus A321-100 Series	Cabin Service Truck	Hi-Way F650	D	10	10	20	210	0.53	9754	68,097	1.86E+02	1.02E-02	7.49E-02	1.91E+02
Airbus A321-100 Series	Catering Truck	Hi-Way F650	D	8	7	15	210	0.53	9754	51,072	1.39E+02	7.66E-03	5.62E-02	1.43E+02
Airbus A321-100 Series	Hydrant Truck	F250 / F350	D	12	0	12	235	0.7	9754	60,388	1.65E+02	9.06E-03	6.64E-02	1.69E+02
Airbus A321-100 Series	Lavatory Truck	Wollard TLS-770 / F350	G	0	15	15	235	0.25	9754	30,308	7.15E+01	8.18E-02	1.52E-03	9.69E+01
Airbus A321-100 Series	Service Truck	F250 / F350	D	8	7	15	235	0.2	9754	21,567	5.89E+01	3.24E-03	2.37E-02	6.04E+01
Airbus A321-100 Series	Water Service	Gate Service	E	12	0	12	0	0.2	9754	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Aircraft	GSE Type	Description	Fuel	Operation Time Departure (mins)	Operation Time Arrival (mins)	Total Operation Time (mins/LTO)	Horsepower	Load Factor	2007 LTO Count	2007 Fuel Consumption (L)	2007 Annual Emissions (tonnes)			
											CO_2	N_2O	CH_4	CO_2e
Airbus A330-200 Series	Air Conditioner	None.	E	23	7	30	0	0.75	4002	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Airbus A330-200 Series	Air Start	ACE 180	D	7	0	7	425	0.9	4002	33,607	9.17E+01	5.04E-03	3.70E-02	9.41E+01
Airbus A330-200 Series	Aircraft Tractor	Stewart & Stevenson TUG GT-50H	D	8	0	8	190	0.8	4002	15,263	4.17E+01	2.29E-03	1.68E-02	4.27E+01
Airbus A330-200 Series	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	120	120	240	107	0.55	4002	199,303	4.70E+02	5.38E-01	9.97E-03	6.37E+02
Airbus A330-200 Series	Belt Loader	Stewart & Stevenson TUG 660	G	18	17	35	107	0.5	4002	26,423	6.24E+01	7.13E-02	1.32E-03	8.45E+01
Airbus A330-200 Series	Cabin Service Truck	Hi-Way F650	D	18	17	35	210	0.53	4002	48,894	1.33E+02	7.33E-03	5.38E-02	1.37E+02
Airbus A330-200 Series	Cargo Loader	FMC Commander 15	D	80	80	160	80	0.5	4002	80,329	2.19E+02	1.20E-02	8.84E-02	2.25E+02
Airbus A330-200 Series	Catering Truck	Hi-Way F650	D	10	10	20	210	0.53	4002	27,940	7.63E+01	4.19E-03	3.07E-02	7.82E+01
Airbus A330-200 Series	Hydrant Truck	F250 / F350	D	20	0	20	235	0.7	4002	41,294	1.13E+02	6.19E-03	4.54E-02	1.16E+02
Airbus A330-200 Series	Lavatory Truck	Wollard TLS-770 / F350	G	0	25	25	235	0.25	4002	20,725	4.89E+01	5.60E-02	1.04E-03	6.63E+01
Airbus A330-200 Series	Service Truck	F250 / F350	D	8	7	15	235	0.2	4002	8,849	2.42E+01	1.33E-03	9.73E-03	2.48E+01
Airbus A330-200 Series	Water Service	Gate Service	E	12	0	12	0	0.2	4002	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Airbus A330-300 Series	Air Conditioner	None.	E	23	7	30	0	0.75	5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Airbus A330-300 Series	Air Start	ACE 180	D	7	0	7	425	0.9	5	42	1.15E-01	6.30E-06	4.62E-05	1.18E-01
Airbus A330-300 Series	Aircraft Tractor	Stewart & Stevenson TUG GT-50H	D	8	0	8	190	0.8	5	19	5.21E-02	2.86E-06	2.10E-05	5.34E-02
Airbus A330-300 Series	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	120	120	240	107	0.55	5	249	5.88E-01	6.72E-04	1.25E-05	7.96E-01
Airbus A330-300 Series	Belt Loader	Stewart & Stevenson TUG 660	G	18	17	35	107	0.5	5	33	7.79E-02	8.91E-05	1.65E-06	1.06E-01
Airbus A330-300 Series	Cabin Service Truck	Hi-Way F650	D	18	17	35	210	0.53	5	61	1.67E-01	9.16E-06	6.72E-05	1.71E-01
Airbus A330-300 Series	Cargo Loader	FMC Commander 15	D	80	80	160	80	0.5	5	100	2.74E-01	1.51E-05	1.10E-04	2.81E-01
Airbus A330-300 Series	Catering Truck	Hi-Way F650	D	10	10	20	210	0.53	5	35	9.53E-02	5.24E-06	3.84E-05	9.77E-02
Airbus A330-300 Series	Hydrant Truck	F250 / F350	D	20	0	20	235	0.7	5	52	1.41E-01	7.74E-06	5.68E-05	1.44E-01
Airbus A330-300 Series	Lavatory Truck	Wollard TLS-770 / F350	G	0	25	25	235	0.25	5	26	6.11E-02	6.99E-05	1.29E-06	8.28E-02
Airbus A330-300 Series	Service Truck	F250 / F350	D	8	7	15	235	0.2	5	11	3.02E-02	1.66E-06	1.22E-05	3.10E-02
Airbus A330-300 Series	Water Service	Gate Service	E	12	0	12	0	0.2	5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Airbus A340-200 Series	Air Conditioner	None.	E	23	7	30	0	0.75	4857	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Airbus A340-200 Series	Air Start	ACE 180	D	7	0	7	425	0.9	4857	40,786	1.11E+02	6.12E-03	4.49E-02	1.14E+02
Airbus A340-200 Series	Aircraft Tractor	Stewart & Stevenson TUG GT-50H	D	8	0	8	190	0.8	4857	18,523	5.06E+01	2.78E-03	2.04E-02	5.19E+01
Airbus A340-200 Series	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	120	120	240	107	0.55	4857	241,882	5.71E+02	6.53E-01	1.21E-02	7.74E+02
Airbus A340-200 Series	Belt Loader	Stewart & Stevenson TUG 660	G	18	17	35	107	0.5	4857	32,068	7.57E+01	8.66E-02	1.60E-03	1.03E+02
Airbus A340-200 Series	Cabin Service Truck	Hi-Way F650	D	18	17	35	210	0.53	4857	59,340	1.62E+02	8.90E-03	6.53E-02	1.66E+02
Airbus A340-200 Series	Cargo Loader	FMC Commander 15	D	80	80	160	80	0.5	4857	97,491	2.66E+02	1.46E-02	1.07E-01	2.73E+02
Airbus A340-200 Series	Catering Truck	Hi-Way F650	D	10	10	20	210	0.53	4857	33,909	9.26E+01	5.09E-03	3.73E-02	9.49E+01
Airbus A340-200 Series	Hydrant Truck	F250 / F350	D	20	0	20	235	0.7	4857	50,117	1.37E+02	7.52E-03	5.51E-02	1.40E+02
Airbus A340-200 Series	Lavatory Truck	Wollard TLS-770 / F350	G	0	25	25	235	0.25	4857	25,153	5.94E+01	6.79E-02	1.26E-03	8.04E+01
Airbus A340-200 Series	Service Truck	F250 / F350	D	8	7	15	235	0.2	4857	10,739	2.93E+01	1.61E-03	1.18E-02	3.01E+01
Airbus A340-200 Series	Water Service	Gate Service	E	12	0	12	0	0.2	4857	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Airbus A340-300 Series	Air Conditioner	None.	E	23	7	30	0	0.75	8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Airbus A340-300 Series	Air Start	ACE 180	D	7	0	7	425	0.9	8	67	1.83E-01	1.01E-05	7.39E-05	1.88E-01
Airbus A340-300 Series	Aircraft Tractor	Stewart & Stevenson TUG GT-50H	D	8	0	8	190	0.8	8	31	8.33E-02	4.58E-06	3.36E-05	8.54E-02
Airbus A340-300 Series	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	120	120	240	107	0.55	8	398	9.40E-01	1.08E-03	1.99E-05	1.27E+00
Airbus A340-300 Series	Belt Loader	Stewart & Stevenson TUG 660	G	18	17	35	107	0.5	8	53	1.25E-01	1.43E-04	2.64E-06	1.69E-01
Airbus A340-300 Series	Cabin Service Truck	Hi-Way F650	D	18	17	35	210	0.53	8	98	2.67E-01	1.47E-05	1.08E-04	2.74E-01
Airbus A340-300 Series	Cargo Loader	FMC Commander 15	D	80	80	160	80	0.5	8	161	4.38E-01	2.41E-05	1.77E-04	4.50E-01
Airbus A340-300 Series	Catering Truck	Hi-Way F650	D	10	10	20	210	0.53	8	56	1.52E-01	8.38E-06	6.14E-05	1.56E-01
Airbus A340-300 Series	Hydrant Truck	F250 / F350	D	20	0	20	235	0.7	8	83	2.25E-01	1.24E-05	9.08E-05	2.31E-01
Airbus A340-300 Series	Lavatory Truck	Wollard TLS-770 / F350	G	0	25	25	235	0.25	8	41	9.78E-02	1.12E-04	2.07E-06	1.32E-01
Airbus A340-300 Series	Service Truck	F250 / F350	D	8	7	15	235	0.2	8	18	4.83E-02	2.65E-06	1.95E-05	4.95E-02
Airbus A340-300 Series	Water Service	Gate Service	E	12	0	12	0	0.2	8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boeing 727-200 Series	Air Conditioner	None.	E	23	7	30	0	0.75	52	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boeing 727-200 Series	Air Start	ACE 180	D	7	0	7	425	0.9	52	437	1.19E+00	6.55E-05	4.80E-04	1.22E+00
Boeing 727-200 Series	Aircraft Tractor	Stewart & Stevenson TUG GT-50H	D	8	0	8	190	0.8	52	198	5.41E-01	2.97E-05	2.18E-04	5.55E-01
Boeing 727-200 Series	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	76	74	150	107	0.55	52	1,619	3.82E+00	4.37E-03	8.09E-05	5.18E+00
Boeing 727-200 Series	Belt Loader	Stewart & Stevenson TUG 660	G	48	48	96	107	0.5	52	942	2.22E+00	2.54E-03	4.71E-05	3.01E+00
Boeing 727-200 Series	Cabin Service Truck	Hi-Way F650	D	10	10	20	210	0.53	52	363	9.91E-01	5.45E-05	3.99E-04	1.02E+00
Boeing 727-200 Series	Catering Truck	Hi-Way F650	D	8	7	15	210	0.53	52	272	7.43E-01	4.08E-05	3.00E-04	7.62E-01
Boeing 727-200 Series	Hydrant Truck	F250 / F350	D	12	0	12	235	0.7	52	322	8.79E-01	4.83E-05	3.54E-04	9.01E-01
Boeing 727-200 Series	Lavatory Truck	Wollard TLS-770 / F350	G	0	15	15	235	0.25	52	162	3.81E-01	4.36E-04	8.08E-06	5.17E-01
Boeing 727-200 Series	Service Truck	F250 / F350	D	8	7	15	235	0.2	52	115	3.14E-01	1.72E-05	1.26E-04	3.22E-01
Boeing 727-200 Series	Water Service	Gate Service	E	12	0	12	0	0.2	52	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boeing 737-700 Series	Air Conditioner	None.	E	23	7	30	0	0.75	52992	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boeing 737-700 Series	Air Start	ACE 180	D	7	0	7	425	0.9	52992	444,997	1.21E+03	6.67E-02	4.89E-01	1.25E+03
Boeing 737-700 Series	Aircraft Tractor	Stewart & Stevenson TUG GT-50H	D	8	0	8	190	0.8	52992	202,098	5.52E+02	3.03E-02	2.22E-01	5.66E+02
Boeing 737-700 Series	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	76	74	150	107	0.55	52992	1,649,402	3.89E+03	4.45E+00	8.25E-02	5.27E+03
Boeing 737-700 Series	Belt Loader	Stewart & Stevenson TUG 660	G	48	48	96	107	0.5	52992	959,652	2.26E+03	2.59E+00	4.80E-02	3.07E+03
Boeing 737-700 Series	Cabin Service Truck	Hi-Way F650	D	10	10	20	210	0.53	52992	369,959	1.01E+03	5.55E-02	4.07E-01	1.04E+03
Boeing 737-700 Series	Catering Truck	Hi-Way F650	D	8	7	15	210	0.53	52992	277,469	7.57E+02	4.16E-02	3.05E-01	7.77E+02
Boeing 737-700 Series	Hydrant Truck	F250 / F350	D	12	0	12	235	0.7	52992	328,076	8.96E+02	4.92E-02	3.61E-01	9.18E+02
Boeing 737-700 Series	Lavatory Truck	Wollard TLS-770 / F350	G	0	15	15	235	0.25	52992	164,660	3.89E+02	4.45E-01	8.23E-03	5.27E+02
Boeing 737-700 Series	Service Truck	F250 / F350	D	8	7	15	235	0.2	52992	117,170	3.20E+02	1.76E-02	1.29E-01	3.28E+02
Boeing 737-700 Series	Water Service	Gate Service	E	12	0	12	0	0.2	52992	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boeing 747-300 Series	Air Conditioner	None.	E	23	7	30	0	0.75	1506	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boeing 747-300 Series	Air Start	ACE 180	D	7	0	7	425	0.9	1506	12,647	3.45E+01	1.90E-03	1.39E-02	3.54E+01
Boeing 747-300 Series	Aircraft Tractor	Stewart & Stevenson TUG GT-50H	D	8	0	8	190	0.8	1506	5,743	1.57E+01	8.62E-04	6.32E-03	1.61E+01
Boeing 747-300 Series	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	120	120	240	107	0.55	1506	75,000	1.77E+02	2.02E-01	3.75E-03	2.40E+02
Boeing 747-300 Series	Belt Loader	Stewart & Stevenson TUG 660	G	18	17	35	107	0.5	1506	9,943	2.35E+01	2.68E-02	4.97E-04	3.18E+01
Boeing 747-300 Series	Cabin Service Truck	Hi-Way F650	D	18	17	35	210	0.53	1506	18,399	5.02E+01	2.76E-03	2.02E-02	5.15E+01
Boeing 747-300 Series	Cargo Loader	FMC Commander 15	D	80	80	160	80	0.5	1506	30,229	8.25E+01	4.53E-03	3.33E-02	8.46E+01

Aircraft	GSE Type	Description	Fuel	Operation Time Departure (mins)	Operation Time Arrival (mins)	Total Operation Time (mins/LTO)	Horsepower	Load Factor	2007 LTO Count	2007 Fuel Consumption (L)	2007 Annual Emissions (tonnes)			
											CO_2	N_2O	CH_4	CO_2e
Boeing 747-300 Series	Catering Truck	Hi-Way F650	D	10	10	20	210	0.53	1506	10,514	2.87E+01	1.58E-03	1.16E-02	2.94E+01
Boeing 747-300 Series	Hydrant Truck	F250 / F350	D	20	0	20	235	0.7	1506	15,540	4.24E+01	2.33E-03	1.71E-02	4.35E+01
Boeing 747-300 Series	Lavatory Truck	Wollard TLS-770 / F350	G	0	25	25	235	0.25	1506	7,799	1.84E+01	2.11E-02	3.90E-04	2.49E+01
Boeing 747-300 Series	Service Truck	F250 / F350	D	8	7	15	235	0.2	1506	3,330	9.09E+00	4.99E-04	3.66E-03	9.32E+00
Boeing 747-300 Series	Water Service	Gate Service	E	12	0	12	0	0.2	1506	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boeing 757-200 Series	Air Conditioner	None.	E	23	7	30	0	0.75	3980	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boeing 757-200 Series	Air Start	ACE 180	D	7	0	7	425	0.9	3980	33,422	9.12E+01	5.01E-03	3.68E-02	9.36E+01
Boeing 757-200 Series	Aircraft Tractor	Stewart & Stevenson TUG GT-50H	D	8	0	8	190	0.8	3980	15,179	4.14E+01	2.28E-03	1.67E-02	4.25E+01
Boeing 757-200 Series	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	76	74	150	107	0.55	3980	123,879	2.92E+02	3.34E-01	6.19E-03	3.96E+02
Boeing 757-200 Series	Belt Loader	Stewart & Stevenson TUG 660	G	48	48	96	107	0.5	3980	72,075	1.70E+02	1.95E-01	3.60E-03	2.31E+02
Boeing 757-200 Series	Cabin Service Truck	Hi-Way F650	D	10	10	20	210	0.53	3980	27,786	7.59E+01	4.17E-03	3.06E-02	7.78E+01
Boeing 757-200 Series	Catering Truck	Hi-Way F650	D	8	7	15	210	0.53	3980	20,839	5.69E+01	3.13E-03	2.29E-02	5.83E+01
Boeing 757-200 Series	Hydrant Truck	F250 / F350	D	12	0	12	235	0.7	3980	24,640	6.73E+01	3.70E-03	2.71E-02	6.90E+01
Boeing 757-200 Series	Lavatory Truck	Wollard TLS-770 / F350	G	0	15	15	235	0.25	3980	12,367	2.92E+01	3.34E-02	6.18E-04	3.95E+01
Boeing 757-200 Series	Service Truck	F250 / F350	D	8	7	15	235	0.2	3980	8,800	2.40E+01	1.32E-03	9.68E-03	2.46E+01
Boeing 757-200 Series	Water Service	Gate Service	E	12	0	12	0	0.2	3980	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boeing 767-200 Series	Air Conditioner	None.	E	23	7	30	0	0.75	41	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boeing 767-200 Series	Air Start	ACE 300/400	D	7	0	7	850	0.9	41	689	1.88E+00	1.03E-04	7.57E-04	1.93E+00
Boeing 767-200 Series	Aircraft Tractor	Stewart & Stevenson TUG GT-50H	D	8	0	8	190	0.8	41	156	4.27E-01	2.35E-05	1.72E-04	4.38E-01
Boeing 767-200 Series	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	120	120	240	107	0.55	41	2,042	4.82E+00	5.51E-03	1.02E-04	6.53E+00
Boeing 767-200 Series	Belt Loader	Stewart & Stevenson TUG 660	G	18	17	35	107	0.5	41	271	6.39E-01	7.31E-04	1.35E-05	8.66E-01
Boeing 767-200 Series	Cabin Service Truck	Hi-Way F650	D	18	17	35	210	0.53	41	501	1.37E+00	7.51E-05	5.51E-04	1.40E+00
Boeing 767-200 Series	Cargo Loader	FMC Commander 15	D	80	80	160	80	0.5	41	823	2.25E+00	1.23E-04	9.05E-04	2.30E+00
Boeing 767-200 Series	Catering Truck	Hi-Way F650	D	10	10	20	210	0.53	41	286	7.81E-01	4.29E-05	3.15E-04	8.01E-01
Boeing 767-200 Series	Hydrant Truck	F250 / F350	D	20	0	20	235	0.7	41	423	1.15E+00	6.35E-05	4.65E-04	1.18E+00
Boeing 767-200 Series	Lavatory Truck	Wollard TLS-770 / F350	G	0	25	25	235	0.25	41	212	5.01E-01	5.73E-04	1.06E-05	6.79E-01
Boeing 767-200 Series	Service Truck	F250 / F350	D	8	7	15	235	0.2	41	91	2.47E-01	1.36E-05	9.97E-05	2.54E-01
Boeing 767-200 Series	Water Service	Gate Service	E	12	0	12	0	0.2	41	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boeing 767-300 Series	Air Conditioner	None.	E	23	7	30	0	0.75	41	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boeing 767-300 Series	Air Start	ACE 300/400	D	7	0	7	850	0.9	41	689	1.88E+00	1.03E-04	7.57E-04	1.93E+00
Boeing 767-300 Series	Aircraft Tractor	Stewart & Stevenson TUG GT-50H	D	8	0	8	190	0.8	41	156	4.27E-01	2.35E-05	1.72E-04	4.38E-01
Boeing 767-300 Series	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	120	120	240	107	0.55	41	2,042	4.82E+00	5.51E-03	1.02E-04	6.53E+00
Boeing 767-300 Series	Belt Loader	Stewart & Stevenson TUG 660	G	18	17	35	107	0.5	41	271	6.39E-01	7.31E-04	1.35E-05	8.66E-01
Boeing 767-300 Series	Cabin Service Truck	Hi-Way F650	D	18	17	35	210	0.53	41	501	1.37E+00	7.51E-05	5.51E-04	1.40E+00
Boeing 767-300 Series	Cargo Loader	FMC Commander 15	D	80	80	160	80	0.5	41	823	2.25E+00	1.23E-04	9.05E-04	2.30E+00
Boeing 767-300 Series	Catering Truck	Hi-Way F650	D	10	10	20	210	0.53	41	286	7.81E-01	4.29E-05	3.15E-04	8.01E-01
Boeing 767-300 Series	Hydrant Truck	F250 / F350	D	20	0	20	235	0.7	41	423	1.15E+00	6.35E-05	4.65E-04	1.18E+00
Boeing 767-300 Series	Lavatory Truck	Wollard TLS-770 / F350	G	0	25	25	235	0.25	41	212	5.01E-01	5.73E-04	1.06E-05	6.79E-01
Boeing 767-300 Series	Service Truck	F250 / F350	D	8	7	15	235	0.2	41	91	2.47E-01	1.36E-05	9.97E-05	2.54E-01
Boeing 767-300 Series	Water Service	Gate Service	E	12	0	12	0	0.2	41	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boeing 767-400	Air Conditioner	None.	E	23	0	23	0	0.75	23964	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boeing 767-400	Air Start	ACE 180	D	7	0	7	425	0.9	23964	201,236	5.49E+02	3.02E-02	2.21E-01	5.63E+02
Boeing 767-400	Aircraft Tractor	Stewart & Stevenson TUG GT-50H	D	8	0	8	190	0.8	23964	91,392	2.50E+02	1.37E-02	1.01E-01	2.56E+02
Boeing 767-400	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	120	120	240	107	0.55	23964	1,193,426	2.82E+03	3.22E+00	5.97E-02	3.82E+03
Boeing 767-400	Belt Loader	Stewart & Stevenson TUG 660	G	18	17	35	107	0.5	23964	158,219	3.73E+02	4.27E-01	7.91E-03	5.06E+02
Boeing 767-400	Cabin Service Truck	Hi-Way F650	D	18	17	35	210	0.53	23964	292,779	7.99E+02	4.39E-02	3.22E-01	8.20E+02
Boeing 767-400	Cargo Loader	FMC Commander 15	D	80	80	160	80	0.5	23964	481,013	1.31E+03	7.22E-02	5.29E-01	1.35E+03
Boeing 767-400	Catering Truck	Hi-Way F650	D	10	0	10	210	0.53	23964	83,651	2.28E+02	1.25E-02	9.20E-02	2.34E+02
Boeing 767-400	Hydrant Truck	F250 / F350	D	20	0	20	235	0.7	23964	247,271	6.75E+02	3.71E-02	2.72E-01	6.92E+02
Boeing 767-400	Lavatory Truck	Wollard TLS-770 / F350	G	0	25	25	235	0.25	23964	124,104	2.93E+02	3.35E-01	6.21E-03	3.97E+02
Boeing 767-400	Service Truck	F250 / F350	D	8	0	8	235	0.2	23964	28,260	7.71E+01	4.24E-03	3.11E-02	7.91E+01
Boeing 767-400	Water Service	Gate Service	E	12	0	12	0	0.2	23964	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boeing 777-200 Series	Air Conditioner	None.	E	23	7	30	0	0.75	3636	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boeing 777-200 Series	Air Start	ACE 180	D	7	0	7	425	0.9	3636	30,533	8.34E+01	4.58E-03	3.36E-02	8.55E+01
Boeing 777-200 Series	Aircraft Tractor	Stewart & Stevenson TUG GT-50H	D	8	0	8	190	0.8	3636	13,867	3.79E+01	2.08E-03	1.53E-02	3.88E+01
Boeing 777-200 Series	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	120	120	240	107	0.55	3636	181,076	4.27E+02	4.89E-01	9.05E-03	5.79E+02
Boeing 777-200 Series	Belt Loader	Stewart & Stevenson TUG 660	G	18	17	35	107	0.5	3636	24,006	5.67E+01	6.48E-02	1.20E-03	7.68E+01
Boeing 777-200 Series	Cabin Service Truck	Hi-Way F650	D	18	17	35	210	0.53	3636	44,423	1.21E+02	6.66E-03	4.89E-02	1.24E+02
Boeing 777-200 Series	Cargo Loader	FMC Commander 15	D	80	80	160	80	0.5	3636	72,983	1.99E+02	1.09E-02	8.03E-02	2.04E+02
Boeing 777-200 Series	Catering Truck	Hi-Way F650	D	10	10	20	210	0.53	3636	25,384	6.93E+01	3.81E-03	2.79E-02	7.11E+01
Boeing 777-200 Series	Hydrant Truck	F250 / F350	D	20	0	20	235	0.7	3636	37,518	1.02E+02	5.63E-03	4.13E-02	1.05E+02
Boeing 777-200 Series	Lavatory Truck	Wollard TLS-770 / F350	G	0	25	25	235	0.25	3636	18,830	4.44E+01	5.08E-02	9.41E-04	6.02E+01
Boeing 777-200 Series	Service Truck	F250 / F350	D	8	7	15	235	0.2	3636	8,040	2.19E+01	1.21E-03	8.84E-03	2.25E+01
Boeing 777-200 Series	Water Service	Gate Service	E	12	0	12	0	0.2	3636	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boeing 777-300 ER	Air Conditioner	None.	E	23	0	23	0	0.75	11	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boeing 777-300 ER	Air Start	ACE 180	D	7	0	7	425	0.9	11	92	2.52E-01	1.39E-05	1.02E-04	2.59E-01
Boeing 777-300 ER	Aircraft Tractor	Stewart & Stevenson TUG GT-50H	D	8	0	8	190	0.8	11	42	1.15E-01	6.29E-06	4.61E-05	1.17E-01
Boeing 777-300 ER	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	120	120	240	107	0.55	11	548	1.29E+00	1.48E-03	2.74E-05	1.75E+00
Boeing 777-300 ER	Belt Loader	Stewart & Stevenson TUG 660	G	18	17	35	107	0.5	11	73	1.71E-01	1.96E-04	3.63E-06	2.32E-01
Boeing 777-300 ER	Cabin Service Truck	Hi-Way F650	D	18	17	35	210	0.53	11	134	3.67E-01	2.02E-05	1.48E-04	3.76E-01
Boeing 777-300 ER	Cargo Loader	FMC Commander 15	D	80	80	160	80	0.5	11	221	6.03E-01	3.31E-05	2.43E-04	6.18E-01
Boeing 777-300 ER	Catering Truck	Hi-Way F650	D	10	0	10	210	0.53	11	38	1.05E-01	5.76E-06	4.22E-05	1.07E-01
Boeing 777-300 ER	Hydrant Truck	F250 / F350	D	20	0	20	235	0.7	11	114	3.10E-01	1.70E-05	1.25E-04	3.18E-01
Boeing 777-300 ER	Lavatory Truck	Wollard TLS-770 / F350	G	0	25	25	235	0.25	11	57	1.34E-01	1.54E-04	2.85E-06	1.82E-01
Boeing 777-300 ER	Service Truck	F250 / F350	D	8	0	8	235	0.2	11	13	3.54E-02	1.95E-06	1.43E-05	3.63E-02
Boeing 777-300 ER	Water Service	Gate Service	E	12	0	12	0	0.2	11	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boeing 777-300 Series	Air Conditioner	None.	E	23	7	30	0	0.75	2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Aircraft	GSE Type	Description	Fuel	Operation Time Departure (mins)	Operation Time Arrival (mins)	Total Operation Time (mins/LTO)	Horsepower	Load Factor	2007 LTO Count	2007 Fuel Consumption (L)	2007 Annual Emissions (tonnes)			
											CO_2	N_2O	CH_4	CO_2e
Boeing 777-300 Series	Air Start	ACE 180	D	7	0	7	425	0.9	2	17	4.59E-02	2.52E-06	1.85E-05	4.70E-02
Boeing 777-300 Series	Aircraft Tractor	Stewart & Stevenson TUG GT-50H	D	8	0	8	190	0.8	2	8	2.08E-02	1.14E-06	8.39E-06	2.14E-02
Boeing 777-300 Series	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	120	120	240	107	0.55	2	100	2.35E-01	2.69E-04	4.98E-06	3.19E-01
Boeing 777-300 Series	Belt Loader	Stewart & Stevenson TUG 660	G	18	17	35	107	0.5	2	13	3.12E-02	3.57E-05	6.60E-07	4.22E-02
Boeing 777-300 Series	Cabin Service Truck	Hi-Way F650	D	18	17	35	210	0.53	2	24	6.67E-02	3.67E-06	2.69E-05	6.84E-02
Boeing 777-300 Series	Cargo Loader	FMC Commander 15	D	80	80	160	80	0.5	2	40	1.10E-01	6.02E-06	4.42E-05	1.12E-01
Boeing 777-300 Series	Catering Truck	Hi-Way F650	D	10	10	20	210	0.53	2	14	3.81E-02	2.09E-06	1.54E-05	3.91E-02
Boeing 777-300 Series	Hydrant Truck	F250 / F350	D	20	0	20	235	0.7	2	21	5.63E-02	3.10E-06	2.27E-05	5.78E-02
Boeing 777-300 Series	Lavatory Truck	Wollard TLS-770 / F350	G	0	25	25	235	0.25	2	10	2.44E-02	2.80E-05	5.18E-07	3.31E-02
Boeing 777-300 Series	Service Truck	F250 / F350	D	8	7	15	235	0.2	2	4	1.21E-02	6.63E-07	4.86E-06	1.24E-02
Boeing 777-300 Series	Water Service	Gate Service	E	12	0	12	0	0.2	2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boeing DC-9-40 Series	Air Conditioner	None.	E	23	7	30	0	0.75	3038	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boeing DC-9-40 Series	Air Start	ACE 180	D	7	0	7	425	0.9	3038	25,511	6.96E+01	3.83E-03	2.81E-02	7.14E+01
Boeing DC-9-40 Series	Aircraft Tractor	Stewart & Stevenson TUG GT-35, Douglas TBL-180	D	8	0	8	88	0.8	3038	5,366	1.46E+01	8.05E-04	5.90E-03	1.50E+01
Boeing DC-9-40 Series	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	38	37	75	107	0.55	3038	47,280	1.12E+02	1.28E-01	2.36E-03	1.51E+02
Boeing DC-9-40 Series	Belt Loader	Stewart & Stevenson TUG 660	G	24	24	48	107	0.5	3038	27,508	6.49E+01	7.43E-02	1.38E-03	8.80E+01
Boeing DC-9-40 Series	Cabin Service Truck	Hi-Way F650	D	10	10	20	210	0.53	3038	21,210	5.79E+01	3.18E-03	2.33E-02	5.94E+01
Boeing DC-9-40 Series	Catering Truck	Hi-Way F650	D	8	7	15	210	0.53	3038	15,907	4.34E+01	2.39E-03	1.75E-02	4.45E+01
Boeing DC-9-40 Series	Hydrant Truck	F250 / F350	D	12	0	12	235	0.7	3038	18,808	5.13E+01	2.82E-03	2.07E-02	5.27E+01
Boeing DC-9-40 Series	Lavatory Truck	TLD 1410	D	0	15	15	56	0.25	3038	2,001	5.46E+00	3.00E-04	2.20E-03	5.60E+00
Boeing DC-9-40 Series	Service Truck	F250 / F350	D	8	7	15	235	0.2	3038	6,717	1.83E+01	1.01E-03	7.39E-03	1.88E+01
Boeing DC-9-40 Series	Water Service	Gate Service	E	12	0	12	0	0.2	3038	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boeing MD-11	Air Conditioner	None.	E	23	7	30	0	0.75	4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boeing MD-11	Air Start	ACE 180	D	7	0	7	425	0.9	4	34	9.17E-02	5.04E-06	3.69E-05	9.40E-02
Boeing MD-11	Aircraft Tractor	Stewart & Stevenson TUG T-750	D	8	0	8	475	0.8	4	38	1.04E-01	5.72E-06	4.20E-05	1.07E-01
Boeing MD-11	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	60	60	120	107	0.55	4	100	2.35E-01	2.69E-04	4.98E-06	3.19E-01
Boeing MD-11	Belt Loader	Stewart & Stevenson TUG 660	G	18	17	35	107	0.5	4	26	6.23E-02	7.13E-05	1.32E-06	8.45E-02
Boeing MD-11	Cabin Service Truck	Hi-Way F650	D	18	17	35	210	0.53	4	49	1.33E-01	7.33E-06	5.38E-05	1.37E-01
Boeing MD-11	Cargo Loader	FMC Commander 15	D	40	40	80	80	0.5	4	40	1.10E-01	6.02E-06	4.42E-05	1.12E-01
Boeing MD-11	Catering Truck	Hi-Way F650	D	10	10	20	210	0.53	4	28	7.62E-02	4.19E-06	3.07E-05	7.82E-02
Boeing MD-11	Hydrant Truck	F250 / F350	D	20	0	20	235	0.7	4	41	1.13E-01	6.19E-06	4.54E-05	1.16E-01
Boeing MD-11	Lavatory Truck	Wollard TLS-770 / F350	D	0	25	25	235	0.25	4	18	5.03E-02	2.76E-06	2.03E-05	5.16E-02
Boeing MD-11	Service Truck	F250 / F350	D	8	7	15	235	0.2	4	9	2.41E-02	1.33E-06	9.73E-06	2.48E-02
Boeing MD-11	Water Service	Gate Service	E	12	0	12	0	0.2	4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boeing MD-83	Air Conditioner	None.	E	23	7	30	0	0.75	5052	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boeing MD-83	Air Start	ACE 180	D	7	0	7	425	0.9	5052	42,424	1.16E+02	6.36E-03	4.67E-02	1.19E+02
Boeing MD-83	Aircraft Tractor	Stewart & Stevenson TUG GT-35, Douglas TBL-180	D	8	0	8	88	0.8	5052	8,924	2.44E+01	1.34E-03	9.82E-03	2.50E+01
Boeing MD-83	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	38	37	75	107	0.55	5052	78,623	1.86E+02	2.12E-01	3.93E-03	2.51E+02
Boeing MD-83	Belt Loader	Stewart & Stevenson TUG 660	D	24	24	48	71	0.5	5052	26,999	7.37E+01	4.05E-03	2.97E-02	7.56E+01
Boeing MD-83	Cabin Service Truck	Hi-Way F650	D	10	10	20	210	0.53	5052	35,270	9.63E+01	5.29E-03	3.88E-02	9.87E+01
Boeing MD-83	Catering Truck	Hi-Way F650	D	8	7	15	210	0.53	5052	26,453	7.22E+01	3.97E-03	2.91E-02	7.41E+01
Boeing MD-83	Hydrant Truck	F250 / F350	D	12	0	12	235	0.7	5052	31,277	8.54E+01	4.69E-03	3.44E-02	8.76E+01
Boeing MD-83	Lavatory Truck	TLD 1410	D	0	15	15	56	0.25	5052	3,327	9.08E+00	4.99E-04	3.66E-03	9.32E+00
Boeing MD-83	Service Truck	F250 / F350	D	8	7	15	235	0.2	5052	11,170	3.05E+01	1.68E-03	1.23E-02	3.13E+01
Boeing MD-83	Water Service	Gate Service	E	12	0	12	0	0.2	5052	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boeing MD-90	Air Conditioner	None.	E	23	7	30	0	0.75	2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boeing MD-90	Air Start	ACE 180	D	7	0	7	425	0.9	2	17	4.59E-02	2.52E-06	1.85E-05	4.70E-02
Boeing MD-90	Aircraft Tractor	Stewart & Stevenson TUG GT-35, Douglas TBL-180	D	8	0	8	88	0.8	2	4	9.64E-03	5.30E-07	3.89E-06	9.89E-03
Boeing MD-90	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	38	37	75	107	0.55	2	31	7.35E-02	8.40E-05	1.56E-06	9.95E-02
Boeing MD-90	Belt Loader	Stewart & Stevenson TUG 660	D	24	24	48	71	0.5	2	11	2.92E-02	1.60E-06	1.18E-05	2.99E-02
Boeing MD-90	Cabin Service Truck	Hi-Way F650	D	10	10	20	210	0.53	2	14	3.81E-02	2.09E-06	1.54E-05	3.91E-02
Boeing MD-90	Catering Truck	Hi-Way F650	D	8	7	15	210	0.53	2	10	2.86E-02	1.57E-06	1.15E-05	2.93E-02
Boeing MD-90	Hydrant Truck	F250 / F350	D	12	0	12	235	0.7	2	12	3.38E-02	1.86E-06	1.36E-05	3.47E-02
Boeing MD-90	Lavatory Truck	TLD 1410	D	0	15	15	56	0.25	2	1	3.60E-03	1.98E-07	1.45E-06	3.69E-03
Boeing MD-90	Service Truck	F250 / F350	D	8	7	15	235	0.2	2	4	1.21E-02	6.63E-07	4.86E-06	1.24E-02
Boeing MD-90	Water Service	Gate Service	E	12	0	12	0	0.2	2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bombardier CRJ-700	Aircraft Tractor	Stewart & Stevenson TUG MC	D	5	0	5	86	0.8	56808	61,289	1.67E+02	9.19E-03	6.74E-02	1.72E+02
Bombardier CRJ-700	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	18	17	35	107	0.55	56808	412,575	9.74E+02	1.11E+00	2.06E-02	1.32E+03
Bombardier CRJ-700	Belt Loader	Stewart & Stevenson TUG 660	G	15	15	30	107	0.5	56808	321,487	7.59E+02	8.68E-01	1.61E-02	1.03E+03
Bombardier CRJ-700	Catering Truck	Hi-Way / TUG 660 chasis	D	5	5	10	71	0.53	56808	67,044	1.83E+02	1.01E-02	7.37E-02	1.88E+02
Bombardier CRJ-700	Fuel Truck	F750, Dukes Transportation Services, DART 3000 to 6000 gallon	D	20	0	20	175	0.25	56808	155,896	4.26E+02	2.34E-02	1.71E-01	4.36E+02
Bombardier CRJ-700	Lavatory Truck	TLD 1410	G	0	15	15	97	0.25	56808	72,860	1.72E+02	1.97E-01	3.64E-03	2.33E+02
Bombardier CRJ-700	Service Truck	F250 / F350	D	8	7	15	235	0.2	56808	125,608	3.43E+02	1.88E-02	1.38E-01	3.52E+02
Bombardier Challenger 600	Aircraft Tractor	Stewart & Stevenson TUG MC	D	5	0	5	86	0.8	9756	10,526	2.87E+01	1.58E-03	1.16E-02	2.95E+01
Bombardier Challenger 600	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	18	17	35	107	0.55	9756	70,854	1.67E+02	1.91E-01	3.54E-03	2.27E+02
Bombardier Challenger 600	Belt Loader	Stewart & Stevenson TUG 660	G	15	15	30	107	0.5	9756	55,211	1.30E+02	1.49E-01	2.76E-03	1.77E+02
Bombardier Challenger 600	Catering Truck	Hi-Way / TUG 660 chasis	D	5	5	10	71	0.53	9756	11,514	3.14E+01	1.73E-03	1.27E-02	3.22E+01
Bombardier Challenger 600	Fuel Truck	F750, Dukes Transportation Services, DART 3000 to 6000 gallon	D	20	0	20	175	0.25	9756	26,773	7.31E+01	4.02E-03	2.95E-02	7.50E+01
Bombardier Challenger 600	Ground Power Unit	TLD, 400 Hz AC	D	50	0	50	194	0.75	9756	222,599	6.08E+02	3.34E-02	2.45E-01	6.23E+02
Bombardier Challenger 600	Lavatory Truck	TLD 1410	G	0	15	15	97	0.25	9756	12,513	2.95E+01	3.38E-02	6.26E-04	4.00E+01
Bombardier Challenger 600	Service Truck	F250 / F350	D	8	7	15	235	0.2	9756	21,571	5.89E+01	3.24E-03	2.37E-02	6.04E+01
DeHavilland DHC-8-300	Aircraft Tractor	Stewart & Stevenson TUG MC	D	5	0	5	86	0.8	39014	42,092	1.15E+02	6.31E-03	4.63E-02	1.18E+02

Aircraft	GSE Type	Description	Fuel	Operation Time Departure (mins)	Operation Time Arrival (mins)	Total Operation Time (mins/LTO)	Horsepower	Load Factor	2007 LTO Count	2007 Fuel Consumption (L)	2007 Annual Emissions (tonnes)			
											CO_2	N_2O	CH_4	CO_2e
DeHavilland DHC-8-300	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	18	0	18	107	0.55	39014	145,720	3.44E+02	3.93E-01	7.29E-03	4.66E+02
DeHavilland DHC-8-300	Belt Loader	Stewart & Stevenson TUG 660	G	15	0	15	107	0.5	39014	110,394	2.61E+02	2.98E-01	5.52E-03	3.53E+02
DeHavilland DHC-8-300	Cabin Service Truck	Hi-Way / TUG 660 chasis	D	5	0	5	71	0.53	39014	23,022	6.28E+01	3.45E-03	2.53E-02	6.45E+01
DeHavilland DHC-8-300	Catering Truck	Hi-Way / TUG 660 chasis	D	5	0	5	71	0.53	39014	23,022	6.28E+01	3.45E-03	2.53E-02	6.45E+01
DeHavilland DHC-8-300	Fuel Truck	F750, Dukes Transportation Services, DART 3000 to 6000 gallon	D	20	0	20	175	0.25	39014	107,065	2.92E+02	1.61E-02	1.18E-01	3.00E+02
DeHavilland DHC-8-300	Ground Power Unit	TLD, 28 VDC	D	40	0	40	71	0.75	39014	260,626	7.12E+02	3.91E-02	2.87E-01	7.30E+02
DeHavilland DHC-8-300	Lavatory Truck	TLD 1410	D	0	0	0	56	0.25	39014	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
DeHavilland DHC-8-300	Service Truck	F250 / F350	D	8	0	8	235	0.2	39014	46,007	1.26E+02	6.90E-03	5.06E-02	1.29E+02
Dornier 328 Jet	Aircraft Tractor	Stewart & Stevenson TUG MC	D	5	0	5	86	0.8	1174	1,267	3.46E+00	1.90E-04	1.39E-03	3.55E+00
Dornier 328 Jet	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	18	17	35	107	0.55	1174	8,526	2.01E+01	2.30E-02	4.26E-04	2.73E+01
Dornier 328 Jet	Belt Loader	Stewart & Stevenson TUG 660	G	15	15	30	107	0.5	1174	6,644	1.57E+01	1.79E-02	3.32E-04	2.12E+01
Dornier 328 Jet	Catering Truck	Hi-Way / TUG 660 chasis	D	5	5	10	71	0.53	1174	1,386	3.78E+00	2.08E-04	1.52E-03	3.88E+00
Dornier 328 Jet	Fuel Truck	F750, Dukes Transportation Services, DART 3000 to 6000 gallon	D	20	0	20	175	0.25	1174	3,222	8.80E+00	4.83E-04	3.54E-03	9.02E+00
Dornier 328 Jet	Lavatory Truck	TLD 1410	D	0	15	15	56	0.25	1174	773	2.11E+00	1.16E-04	8.51E-04	2.16E+00
Dornier 328 Jet	Service Truck	F250 / F350	D	8	7	15	235	0.2	1174	2,596	7.09E+00	3.89E-04	2.86E-03	7.27E+00
Embraer EMB120 Brasilia	Aircraft Tractor	Stewart & Stevenson TUG MC	D	5	0	5	86	0.8	16099	17,369	4.74E+01	2.61E-03	1.91E-02	4.86E+01
Embraer EMB120 Brasilia	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	18	17	35	107	0.55	16099	116,921	2.76E+02	3.16E-01	5.85E-03	3.74E+02
Embraer EMB120 Brasilia	Belt Loader	Stewart & Stevenson TUG 660	G	15	15	30	107	0.5	16099	91,107	2.15E+02	2.46E-01	4.56E-03	2.91E+02
Embraer EMB120 Brasilia	Catering Truck	Hi-Way / TUG 660 chasis	D	5	5	10	71	0.53	16099	19,000	5.19E+01	2.85E-03	2.09E-02	5.32E+01
Embraer EMB120 Brasilia	Fuel Truck	F750, Dukes Transportation Services, DART 3000 to 6000 gallon	D	20	0	20	175	0.25	16099	44,180	1.21E+02	6.63E-03	4.86E-02	1.24E+02
Embraer EMB120 Brasilia	Ground Power Unit	TLD, 28 VDC	D	40	0	40	71	0.75	16099	107,546	2.94E+02	1.61E-02	1.18E-01	3.01E+02
Embraer EMB120 Brasilia	Lavatory Truck	TLD 1410	D	0	15	15	56	0.25	16099	10,603	2.89E+01	1.59E-03	1.17E-02	2.97E+01
Embraer EMB120 Brasilia	Service Truck	F250 / F350	D	8	7	15	235	0.2	16099	35,596	9.72E+01	5.34E-03	3.92E-02	9.97E+01
Embraer ERJ135	Aircraft Tractor	Stewart & Stevenson TUG MC	D	5	0	5	86	0.8	8154	8,797	2.40E+01	1.32E-03	9.68E-03	2.46E+01
Embraer ERJ135	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	18	0	18	107	0.55	8154	30,456	7.19E+01	8.22E-02	1.52E-03	9.74E+01
Embraer ERJ135	Belt Loader	Stewart & Stevenson TUG 660	G	15	0	15	107	0.5	8154	23,072	5.45E+01	6.23E-02	1.15E-03	7.38E+01
Embraer ERJ135	Catering Truck	Hi-Way / TUG 660 chasis	D	5	0	5	71	0.53	8154	4,812	1.31E+01	7.22E-04	5.29E-03	1.35E+01
Embraer ERJ135	Fuel Truck	F750, Dukes Transportation Services, DART 3000 to 6000 gallon	D	20	0	20	175	0.25	8154	22,377	6.11E+01	3.36E-03	2.46E-02	6.26E+01
Embraer ERJ135	Ground Power Unit	TLD, 28 VDC	D	40	0	40	71	0.75	8154	54,471	1.49E+02	8.17E-03	5.99E-02	1.52E+02
Embraer ERJ135	Lavatory Truck	TLD 1410	D	0	0	0	56	0.25	8154	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Embraer ERJ135	Service Truck	F250 / F350	D	8	0	8	235	0.2	8154	9,616	2.63E+01	1.44E-03	1.06E-02	2.69E+01
Embraer ERJ145	Aircraft Tractor	Stewart & Stevenson TUG MC	D	5	0	5	86	0.8	7702	8,310	2.27E+01	1.25E-03	9.14E-03	2.33E+01
Embraer ERJ145	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	18	17	35	107	0.55	7702	55,937	1.32E+02	1.51E-01	2.80E-03	1.79E+02
Embraer ERJ145	Belt Loader	Stewart & Stevenson TUG 660	G	15	15	30	107	0.5	7702	43,587	1.03E+02	1.18E-01	2.18E-03	1.39E+02
Embraer ERJ145	Catering Truck	Hi-Way / TUG 660 chasis	D	5	5	10	71	0.53	7702	9,090	2.48E+01	1.36E-03	1.00E-02	2.54E+01
Embraer ERJ145	Fuel Truck	F750, Dukes Transportation Services, DART 3000 to 6000 gallon	D	20	0	20	175	0.25	7702	21,136	5.77E+01	3.17E-03	2.32E-02	5.92E+01
Embraer ERJ145	Lavatory Truck	TLD 1410	D	0	15	15	56	0.25	7702	5,073	1.38E+01	7.61E-04	5.58E-03	1.42E+01
Embraer ERJ145	Service Truck	F250 / F350	D	8	7	15	235	0.2	7702	17,030	4.65E+01	2.55E-03	1.87E-02	4.77E+01
Embraer ERJ170	Aircraft Tractor	Stewart & Stevenson TUG MC	D	5	0	5	86	0.8	27257	29,407	8.03E+01	4.41E-03	3.23E-02	8.23E+01
Embraer ERJ170	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	18	17	35	107	0.55	27257	197,957	4.67E+02	5.34E-01	9.90E-03	6.33E+02
Embraer ERJ170	Belt Loader	Stewart & Stevenson TUG 660	G	15	15	30	107	0.5	27257	154,252	3.64E+02	4.16E-01	7.71E-03	4.93E+02
Embraer ERJ170	Catering Truck	Hi-Way / TUG 660 chasis	D	5	5	10	71	0.53	27257	32,168	8.78E+01	4.83E-03	3.54E-02	9.01E+01
Embraer ERJ170	Fuel Truck	F750, Dukes Transportation Services, DART 3000 to 6000 gallon	D	20	0	20	175	0.25	27257	74,800	2.04E+02	1.12E-02	8.23E-02	2.09E+02
Embraer ERJ170	Lavatory Truck	TLD 1410	D	0	15	15	56	0.25	27257	17,952	4.90E+01	2.69E-03	1.97E-02	5.03E+01
Embraer ERJ170	Service Truck	F250 / F350	D	8	7	15	235	0.2	27257	60,268	1.65E+02	9.04E-03	6.63E-02	1.69E+02
Embraer ERJ175	Aircraft Tractor	Stewart & Stevenson TUG MC	D	5	0	5	86	0.8	84	91	2.47E-01	1.36E-05	9.97E-05	2.54E-01
Embraer ERJ175	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	18	0	18	107	0.55	84	314	7.40E-01	8.47E-04	1.57E-05	1.00E+00
Embraer ERJ175	Belt Loader	Stewart & Stevenson TUG 660	G	15	0	15	107	0.5	84	238	5.61E-01	6.42E-04	1.19E-05	7.60E-01
Embraer ERJ175	Catering Truck	Hi-Way / TUG 660 chasis	D	5	0	5	71	0.53	84	50	1.35E-01	7.44E-06	5.45E-05	1.39E-01
Embraer ERJ175	Fuel Truck	F750, Dukes Transportation Services, DART 3000 to 6000 gallon	D	20	0	20	175	0.25	84	231	6.29E-01	3.46E-05	2.54E-04	6.45E-01
Embraer ERJ175	Lavatory Truck	TLD 1410	D	0	0	0	56	0.25	84	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Embraer ERJ175	Service Truck	F250 / F350	D	8	0	8	235	0.2	84	99	2.70E-01	1.49E-05	1.09E-04	2.77E-01
Embraer ERJ190	Aircraft Tractor	Stewart & Stevenson TUG MC	D	5	0	5	86	0.8	59	64	1.74E-01	9.55E-06	7.00E-05	1.78E-01
Embraer ERJ190	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	18	0	18	107	0.55	59	220	5.20E-01	5.95E-04	1.10E-05	7.05E-01
Embraer ERJ190	Belt Loader	Stewart & Stevenson TUG 660	G	15	0	15	107	0.5	59	167	3.94E-01	4.51E-04	8.35E-06	5.34E-01
Embraer ERJ190	Catering Truck	Hi-Way / TUG 660 chasis	D	5	0	5	71	0.53	59	35	9.50E-02	5.22E-06	3.83E-05	9.75E-02
Embraer ERJ190	Fuel Truck	F750, Dukes Transportation Services, DART 3000 to 6000 gallon	D	20	0	20	175	0.25	59	162	4.42E-01	2.43E-05	1.78E-04	4.53E-01
Embraer ERJ190	Lavatory Truck	TLD 1410	D	0	0	0	56	0.25	59	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Embraer ERJ190	Service Truck	F250 / F350	D	8	0	8	235	0.2	59	70	1.90E-01	1.04E-05	7.65E-05	1.95E-01
Ilyushin 62 Classic	Air Start	ACE 180	D	7	0	7	425	0.9	6	50	1.38E-01	7.56E-06	5.54E-05	1.41E-01
Ilyushin 62 Classic	Aircraft Tractor	Stewart & Stevenson TUG GT-50H	D	8	0	8	190	0.8	6	23	6.25E-02	3.43E-06	2.52E-05	6.41E-02
Ilyushin 62 Classic	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	38	37	75	107	0.55	6	93	2.20E-01	2.52E-04	4.67E-06	2.99E-01
Ilyushin 62 Classic	Belt Loader	Stewart & Stevenson TUG 660	G	24	24	48	107	0.5	6	54	1.28E-01	1.47E-04	2.72E-06	1.74E-01
Ilyushin 62 Classic	Cart	Taylor Dunn	D	5	5	10	25	0.5	6	2	6.42E-03	3.53E-07	2.59E-06	6.59E-03
Ilyushin 62 Classic	Catering Truck	Hi-Way F650	D	8	7	15	210	0.53	6	31	8.58E-02	4.71E-06	3.46E-05	8.80E-02
Ilyushin 62 Classic	Hydrant Truck	F250 / F350	D	12	0	12	235	0.7	6	37	1.01E-01	5.57E-06	4.09E-05	1.04E-01
Ilyushin 62 Classic	Lavatory Truck	TLD 1410	D	0	15	15	56	0.25	6	4	1.08E-02	5.93E-07	4.35E-06	1.11E-02
Ilyushin 62 Classic	Service Truck	F250 / F350	D	8	7	15	235	0.2	6	13	3.62E-02	1.99E-06	1.46E-05	3.71E-02
Ilyushin 62 Classic	Water Service	Wollard TWS-402 F250 / F350	D	12	0	12	235	0.2	6	11	2.90E-02	1.59E-06	1.17E-05	2.97E-02

Aircraft	GSE Type	Description	Fuel	Operation Time Departure (mins)	Operation Time Arrival (mins)	Total Operation Time (mins/LTO)	Horsepower	Load Factor	2007 LTO Count	2007 Fuel Consumption (L)	2007 Annual Emissions (tonnes)			
											CO_2	N_2O	CH_4	CO_2e
Lockheed L-1011 Tristar	Air Conditioner	None.	E	23	7	30	0	0.75	66	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lockheed L-1011 Tristar	Air Start	ACE 300/400	D	7	0	7	850	0.9	66	1,108	3.03E+00	1.66E-04	1.22E-03	3.10E+00
Lockheed L-1011 Tristar	Aircraft Tractor	Stewart & Stevenson TUG T-750	D	8	0	8	475	0.8	66	629	1.72E+00	9.44E-05	6.92E-04	1.76E+00
Lockheed L-1011 Tristar	Baggage Tractor	Stewart & Stevenson TUG MA 50	G	60	60	120	107	0.55	66	1,643	3.88E+00	4.44E-03	8.22E-05	5.26E+00
Lockheed L-1011 Tristar	Belt Loader	Stewart & Stevenson TUG 660	G	18	17	35	107	0.5	66	436	1.03E+00	1.18E-03	2.18E-05	1.39E+00
Lockheed L-1011 Tristar	Cabin Service Truck	Hi-Way F650	D	18	17	35	210	0.53	66	806	2.20E+00	1.21E-04	8.87E-04	2.26E+00
Lockheed L-1011 Tristar	Cargo Loader	FMC Commander 15	D	40	40	80	80	0.5	66	662	1.81E+00	9.94E-05	7.29E-04	1.85E+00
Lockheed L-1011 Tristar	Catering Truck	Hi-Way F650	D	10	10	20	210	0.53	66	461	1.26E+00	6.91E-05	5.07E-04	1.29E+00
Lockheed L-1011 Tristar	Hydrant Truck	F250 / F350	D	20	0	20	235	0.7	66	681	1.86E+00	1.02E-04	7.49E-04	1.91E+00
Lockheed L-1011 Tristar	Lavatory Truck	Wollard TLS-770 / F350	D	0	25	25	235	0.25	66	304	8.30E-01	4.56E-05	3.34E-04	8.51E-01
Lockheed L-1011 Tristar	Service Truck	F250 / F350	D	8	7	15	235	0.2	66	146	3.98E-01	2.19E-05	1.61E-04	4.09E-01
Lockheed L-1011 Tristar	Water Service	Gate Service	E	12	0	12	0	0.2	66	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Raytheon Beechjet 400	Aircraft Tractor	Stewart & Stevenson TUG MC	D	5	0	5	86	0.8	17509	18,890	5.16E+01	2.83E-03	2.08E-02	5.29E+01
Raytheon Beechjet 400	Fuel Truck	F750, Dukes Transportation Services, DART 3000 to 6000 gallon	D	20	0	20	175	0.25	17509	48,049	1.31E+02	7.21E-03	5.29E-02	1.35E+02
Raytheon Beechjet 400	Ground Power Unit	TLD	G	40	0	40	107	0.75	17509	198,173	4.68E+02	5.35E-01	9.91E-03	6.34E+02
			TOTALS:	**7,342.00**	**5,660.00**	**13,002.00**	-	-	**3,382,380**	**20,954,677**	**52,831**	**33**	**10.6**	**63,377**

GHG Emissions from Boilers

Useful Data

Conversion Factors		Global Warming Potential		
tonnes/lb	scf/m^3	CO_2	N_2O	CH_4
4.55E-04	35.3	1	310	21

Natural Gas Combustion

Emission factors obtained from Table 1.4-2 of Section 1.4 of AP-42. Fuel consumption data obtained from the table entitled "GTAA CUP & COGEN Facilities Equipment Summary" from the Pinchin Report [3].

AP-42 Emission Factors ($lb/10^6$ scf)		
CO_2	N_2O	CH_4
120,000	2.2	2.3

Source ID	Description	2007 Annual Fuel Consumption (m^3)	2007 Total Emissions (tonnes)			2007 CO_2e Emissions (tonnes)
			CO_2	N_2O	CH_4	
B1-NG	CUP boiler (natural gas)	1,659,663	3,197	0.059	0.061	3,216
B2-NG	CUP boiler (natural gas)	1,659,663	3,197	0.059	0.061	3,216
B3-NG	CUP boiler (natural gas)	1,659,663	3,197	0.059	0.061	3,216
B4-NG	CUP boiler (natural gas)	1,659,663	3,197	0.059	0.061	3,216
B5-NG	COGEN Facility heating	59,950	115	0.0021	0.0022	116
	TOTAL:	6,698,602	12,903	0.237	0.247	12,982

No. 2 Fuel Oil Combustion

The CUP boilers use No. 2 fuel oil as a back-up fuel. Emission factors were obtained from various tables of Section 1.3 of AP-42. Fuel consumption data obtained from the table entitled "GTAA CUP & COGEN Facilities Equipment Summary" from the Pinchin Report [3].

AP-42 Emission Factors ($lb/10^6$ scf)		
CO_2	N_2O	CH_4
22,300	2.2	0.11

Source ID	Description	2007 Annual Fuel Consumption (m^3)	2007 Total Emissions (tonnes)			2007 CO_2e Emissions (tonnes)
			CO_2	N_2O	CH_4	
B1-No2	CUP boiler (No. 2 oil)	34.7	0.012	1.23E-06	6.13E-08	0.013
B2-No2	CUP boiler (No. 2 oil)	34.7	0.012	1.23E-06	6.13E-08	0.013
B3-No2	CUP boiler (No. 2 oil)	34.7	0.012	1.23E-06	6.13E-08	0.013
B4-No2	CUP boiler (No. 2 oil)	34.7	0.012	1.23E-06	6.13E-08	0.013
	TOTAL:	139	0.050	4.90E-06	2.45E-07	0.051

Total from Natural Gas and No. 2 Fuel Oil Combustion

Source ID	Description	2007 Annual Fuel Consumption (m^3)	2007 Total Emissions (tonnes)			2007 CO_2e Emissions (tonnes)
			CO_2	N_2O	CH_4	
B1	CUP boiler	1,659,698	3,197	0	0	3,216
B2	CUP boiler	1,659,698	3,197	0	0	3,216
B3	CUP boiler	1,659,698	3,197	0	0	3,216
B4	CUP boiler	1,659,698	3,197	0	0	3,216
B5	COGEN Facility heating	59,950	115	0	0	116
	TOTAL:	**6,698,741**	**12,903**	**0**	**0**	**12,982**

GHG Emissions from COGEN Turbines

Useful Data

Conversion Factors	Global Warming Potential			Natural Gas Heat of
tonnes/lb	CO_2	N_2O	CH_4	Combustion (BTU/scf)
4.55E-04	1	310	21	1020

Total GHG Emissions

Emission factors obtained from Table 3.1-2a of Section 3.1 of AP-42. Fuel consumption data obtained from the table entitled "Facility Year CEMS Report 2007" of the Pinchin Report [1].

AP-42 Emission Factors (lb/MMBTU)		
CO_2	N_2O	CH_4
110	3.00E-03	8.60E-03

Source ID	Description	2007 Annual Fuel Consumption (scf)	2007 Total Emissions (tonnes)			2007 CO_2e Emissions (tonnes)
			CO_2	N_2O	CH_4	
CTG1	COGEN turbine 1	1,057,153,601	53,914.8	1.5	4.2	54,459.2
CTG2	COGEN turbine 2	1,029,454,141	52,502.2	1.4	4.1	53,032.2
	TOTAL:	2,086,607,742	106,417.0	2.90	8.32	107,491.4

GHG Emissions from Backup Generators

Useful Data

Conversion Factors		Alternator	% of Power
tonnes/lb	hp/kW	Efficiency (%) [1]	Consumed by Fan [1]
4.55E-04	1.34	95%	10%

[1] http://www.perkins.com/cda/components/fullArticle?m=97355&x=7&id=284106

Total GHG Emissions

For generators < 600 hp, emission factors were obtained from Table 3.3-1 of Section 3.3 of AP-42. For generators > 600 hp, emission factors were obtained from Table 3.4-1 of Section 3.4 of AP-42. Power ratings and annual run times for each generator were obtained from the TPIA document, Annual Standby Generator Run Time Report.

AP-42 Emission Factor (lb/hp-hr) [2]	
CO_2 (< 600 hp)	CO_2 (> 600 hp)
1.08	1.16

[2] Emission factors for N2O and CH4 are either not listed in AP-42 or result in negligible emissions.

Source ID	Description	Power Rating (kWe)	Power Rating (hp) [3]	2007 Annual Run Time (hrs)	2007 CO_2 Emissions (tonnes)
78-0165	FEC 1	750	1,176	39.5	24.5
76-0103	AESC and South Fire Hall	40	63	10	0.308
77-0016	North Fire Hall	120	188	6.3	0.582
76-0004	Sewage Pump Station Area 2B	30	47	7.6	0.176
78-0069	Airfield Maintenance Facility	300	471	10.8	2.49
78-0100	Infield Terminal	500	784	14.7	6.08
78-0015	Administration Building	650	1,019	46	24.7
78-0220	Central Utilities Plant (CUP)	2000	3,137	23.25	38.5
78-0425	Terminal 1 Generator 1	1750	2,745	24.2	35.0
78-0436	Terminal 1 Generator 2	1750	2,745	10	14.5
78-0427	Terminal 1 Generator 3	2000	3,137	17.3	28.6
78-0428	Terminal 1 Generator 4	1750	2,745	15.8	22.9
RWDI-001	Terminal 1 Parking Garage	1750	2,745	20.4	29.5
RWDI-002	3 Bay Hangar	500	784	16	6.62
77-0223	Peel Police	225	353	18	3.12
78-0553	Terminal 1 Generator 5	1500	2,353	7	8.68
78-0218	Terminal 1 East Satellite	450	706	53	19.7
RWDI-003	Terminal 3	545	855	30	13.5
RWDI-004	Terminal 3	1,500	2,353	30	37.2
RWDI-005	APM Station 6100 Viscount	500	784	6	2.48
RWDI-015	Terminal 3 Sub Station B (Caterpillar 1500 kW, 2353 hp)	1,500	2,353	20	25.18
RWDI-016	Terminal 3 Sewage Pumping Area 6A	200	314	20	3.126
RWDI-017	Terminal 3 Taxi Limo Compound, outside Pre-Arranged Building	35	55	20	0.547
RWDI-018	Terminal 3 Taxi Limo Compound, outside CVHA Building	60	94	20	0.938
				TOTAL:	**349**

[3] Electrical output power (kWe) as provided by TPIA was first converted to mechanical input power (kWm) as shown in Section 2.7.3 of the report, and then converted to horsepower.

GHG Emissions from Training Fires

Summary of Results

2007 Annual GHG Emissions (tonnes CO_2e): 270

Useful Data

Density of Propane: 500 g/L

Emission Factors for Natural Gas and NGLs (g/L) [1]

	CO_2	N_2O	CH_4
Propane - All Other Uses	1510	0.024	0.108

[1] source: http://www.ec.gc.ca/pdb/ghg/inventory_report/2006_report/2006_report_e.pdf (Table A12-1)

	CO_2	N_2O	CH_4
GWP	1	310	21

Calculations

2007 Annual Propane Usage (L)	2007 Annual Emissions (tonnes)			
	CO_2	N_2O	CH_4	CO_2e
177600	268	0.00426	0.0192	270

GHG Emissions from Airside Vehicles

Summary of Results

2007 Annual GHG Emissions (tonnes CO_2e): 5,594

Useful Data

Fuel Type	2007 Annual Fuel Usage (L)	Emission Factors (g/L)		
		CO_2	N_2O	CH_4
Diesel	1,136,506	2730	0.15	1.1
Gasoline	754,360	2360	2.7	0.05
Reference:	GTAA data	MOBILE 6.2 - 2007, Arterial at 9.9 mph		

GWP		
CO_2	N_2O	CH_4
1	310	21

Calculations

2007 Annual Emissions (kg)			
CO_2	N_2O	CH_4	CO_2e
4,882,951	2,207	1,288	5,594,243

GHG Emissions from Parking Lots

Summary of Results

2007 Annual GHG Emissions (tonnes CO_2e): 2,497

Useful Data

	Fuel Efficiency	Units
Cruising [1]	0.14	L/km
Idling [2]	1.38	L/hr

[1] source: MOBILE

[2] source: Idle-Free Facts (http://idle-freevt.com/idle-free_stats_oeenrc.pdf)

	Emission Factors (g/L) [3]		
	CO_2	CH_4	N_2O
LD Gasoline Vehicles (T1)	2360	0.12	0.16

[3] source: Environment Canada National Inventory Report 1990-2005

	CO_2	N_2O	CH_4
GWP	1	310	21

Calculations

Parking Lot Name	Vehicles Serviced	Speed (mph)	Distance Travelled (m/vehicle)	Idle Time (mins/vehicle)	Fuel	2007 Annual Fuel Consumption	
						Cruising (L)	Idling (L)
6a-Parking	114,750	10	305	1.5	G	4,900	3,959
T1-Parking	2,100,958	10	2,100	1.5	G	617,682	72,483
T3-Parking	1,874,851	10	1,035	1.5	G	271,666	64,682
TOTALS:	**4,090,559**	-	-	-	-	**894,247**	**141,124**

2007 Annual GHG Emissions (tonnes)

Parking Lot Name	Cruising				Idling				Total			
	CO_2	N_2O	CH_4	CO_2e	CO_2	N_2O	CH_4	CO_2e	CO_2	N_2O	CH_4	CO_2e
6a-Parking	12	0.000784	0.000588	12	9.34	0.000633	0.000475	9.55	21	0.00142	0.00106	21
T1-Parking	1,458	0.0988	0.0741	1,490	171	0.0116	0.00870	175	1,629	0.110	0.0828	1,665
T3-Parking	641	0.0435	0.0326	655	153	0.0103	0.00776	156	794	0.0538	0.0404	811
TOTALS:	**2,110**	**0.143**	**0.107**	**2,157**	**333**	**0.0226**	**0.0169**	**340**	**2,443**	**0.166**	**0.124**	**2,497**

GHG Emissions From Roadways

Summary of Results

2007 Annual GHG Emissions (tonnes CO_2e): 17,415

Useful Data

	Emission Factor	Units
Composite CO_2 emission rate	545.79	g/VMT

Source: MOBILE 6.2 - 2007, Arterial at 35.8 mph

Calculations

Section Name	Distance (miles)	Vehicle Count (# Vehicles)	CO_2 Emissions (kg)
A1	0.023	1,654,545	20,926
A2	0.022	1,654,545	19,507
A3	0.020	1,654,545	18,185
A4	0.021	1,654,545	18,801
A5	0.018	1,654,545	16,185
A6	0.028	1,654,545	25,255
AA1	0.018	1,966,803	19,611
AA2	0.024	1,966,803	25,919
AA3	0.030	1,966,803	32,204
AA4	0.018	1,966,803	18,942
AA5	0.014	1,966,803	15,416
AAA1	0.107	913,960	53,569
B1	0.023	5,539,240	68,722
B2	0.035	5,539,240	106,129
B3	0.043	5,539,240	131,185
BB1	0.082	1,966,803	88,538
BBB1	0.045	8,395	205
BBB2	0.033	8,395	151
BBB3	0.036	8,395	164
BR1IB	0.312	843,150	143,535
BR1OB	0.305	627,070	104,385
BRIB-1	0.366	1,488,470	297,460
BRIB-2	0.296	1,488,470	240,642
BRIB-3	0.679	1,488,470	551,858
BROB-1	0.371	1,460,730	295,411
BROB-2	0.296	1,460,730	236,157
BROB-3	0.675	1,460,730	537,931
C1	0.227	8,481,870	1,051,425
CC1	0.086	1,756,198	82,150
CC2	0.047	1,756,198	44,938
CC3	0.044	1,756,198	42,112
CC4	0.045	1,756,198	42,871

Section Name	Distance (miles)	Vehicle Count (# Vehicles)	CO_2 Emissions (kg)
CC5	0.045	1,756,198	43,393
CC6	0.030	1,756,198	28,758
CC7	0.035	1,756,198	33,398
CCC1	0.012	905,565	5,816
CCC2	0.013	905,565	6,504
CCC3	0.023	905,565	11,515
CCC4	0.139	905,565	68,754
CONIB	0.624	808,840	275,627
CONOB	0.626	934,765	319,611
D1	0.074	2,920,365	117,506
D2	0.037	2,920,365	59,300
D3	0.030	2,920,365	48,077
D4	0.060	2,920,365	94,896
D5	0.057	2,920,365	90,795
D6	0.058	2,920,365	92,360
D7	0.062	2,920,365	99,312
D8	0.067	2,920,365	107,032
D9	0.069	2,920,365	109,238
DD1	0.035	2,496,965	48,057
DD2	0.163	2,496,965	222,396
DD3	0.056	2,496,965	76,735
DD4	0.038	2,496,965	52,211
DD5	0.022	2,496,965	30,508
DDD1	0.019	905,565	9,628
DDD2	0.024	905,565	11,705
DDD3	0.028	905,565	13,688
DDD4	0.031	905,565	15,222
DDD5	0.047	905,565	23,378
E1	0.092	2,077,580	104,222
E10	0.033	2,077,580	37,737
E11	0.033	2,077,580	37,002
E2	0.026	2,077,580	29,980
E3	0.023	2,077,580	25,777
E4	0.029	2,077,580	33,011
E5	0.046	2,077,580	51,912
E6	0.055	2,077,580	62,297
E7	0.047	2,077,580	53,788
E8	0.045	2,077,580	51,131
E9	0.071	2,077,580	80,761
EE1	0.035	1,269,105	24,452
EE2	0.022	1,269,105	15,506
EE3	0.034	1,269,105	23,806
EEE1	0.034	1,492,485	27,447
EEE2	0.024	1,492,485	19,170
EEE3	0.036	1,492,485	29,731

Section Name	Distance (miles)	Vehicle Count (# Vehicles)	CO_2 Emissions (kg)
F1	0.090	7,663,175	376,767
FF1	0.033	1,116,900	19,944
FF2	0.020	1,116,900	12,192
FF3	0.026	1,116,900	16,041
FFF1	0.135	1,065,800	78,719
FFF2	0.027	1,065,800	15,803
FFF3	0.024	1,065,800	14,043
FFF4	0.022	1,065,800	13,021
FFF5	0.048	1,065,800	28,072
FFF6	0.057	1,065,800	33,371
FFF7	0.056	1,065,800	32,540
FFF8	0.048	1,065,800	28,196
G1	0.021	1,489,200	16,704
G2	0.152	1,489,200	123,672
G3	0.044	1,489,200	36,011
GG1	0.090	2,386,005	117,522
GG2	0.055	2,386,005	71,296
GG3	0.057	2,386,005	74,570
GGG1	0.132	2,068,090	148,844
GGG2	0.043	2,068,090	48,340
GGG3	0.087	2,068,090	98,185
GGG4	0.032	2,068,090	36,466
GGG5	0.021	2,068,090	24,061
GGG6	0.231	2,068,090	260,395
H1	0.021	6,173,975	72,351
H2	0.025	6,173,975	83,646
H3	0.025	6,173,975	84,017
H4	0.020	6,173,975	67,515
H5	0.013	6,173,975	42,724
HH1	0.025	210,605	2,920
HH10	0.032	210,605	3,655
HH11	0.029	210,605	3,293
HH2	0.045	210,605	5,168
HH3	0.050	210,605	5,778
HH4	0.045	210,605	5,168
HH5	0.045	210,605	5,220
HH6	0.048	210,605	5,473
HH7	0.041	210,605	4,663
HH8	0.061	210,605	7,066
HH9	0.058	210,605	6,695
HHH1	0.219	1,998,375	238,335
HHH2	0.053	1,998,375	57,882
HHH3	0.036	1,998,375	39,371
HHH4	0.074	1,998,375	80,550
HHH5	0.026	1,998,375	28,410

Section Name	Distance (miles)	Vehicle Count (# Vehicles)	CO_2 Emissions (kg)
HHH6	0.184	1,998,375	200,205
I1	0.039	0	0
I2	0.032	0	0
II1	0.097	884,760	46,940
II2	0.020	884,760	9,710
II3	0.085	884,760	40,974
III1	0.135	1,250,490	92,363
III2	0.037	1,250,490	25,217
J1	0.071	0	0
J2	0.019	0	0
J3	0.050	0	0
J4	0.017	0	0
J5	0.037	0	0
J6	0.107	0	0
JJ1	0.017	884,760	8,135
JJ2	0.039	884,760	18,614
JJ3	0.062	884,760	29,745
JJJ1	0.167	1,250,490	114,156
JJJ2	0.043	1,250,490	29,200
JJJ3	0.042	1,250,490	28,955
JJJ4	0.029	1,250,490	20,125
JJJ5	0.031	1,250,490	20,943
JJJ6	0.031	1,250,490	21,429
JJJ7	0.032	1,250,490	21,847
JJJ8	0.027	1,250,490	18,313
K1	0.070	0	0
K2	0.025	0	0
K3	0.028	0	0
K4	0.023	0	0
K5	0.018	0	0
KKK1	0.080	555,895	24,255
KKK2	0.066	555,895	20,099
KKK3	0.077	555,895	23,480
KKK4	0.122	555,895	37,080
KKK5	0.117	555,895	35,602
L1	0.043	6,173,975	145,416
L2	0.062	6,173,975	209,710
LLL1	0.100	210,605	11,476
LLL2	0.023	210,605	2,613
LLL3	0.080	210,605	9,198
M1	0.062	1,489,200	50,684
M2	0.099	1,489,200	80,501
N1	0.075	1,489,200	61,236
N2	0.077	1,489,200	62,349
N3	0.060	1,489,200	48,922

Section Name	Distance (miles)	Vehicle Count (# Vehicles)	CO_2 Emissions (kg)
N4	0.048	1,489,200	39,012
N5	0.052	1,489,200	41,915
N6	0.038	1,489,200	30,498
O1	0.061	1,497,595	49,886
O2	0.050	1,497,595	40,860
P1	0.100	1,653,450	89,935
P2	0.038	1,653,450	34,571
P3	0.032	1,653,450	28,983
P4	0.028	1,653,450	25,684
P5	0.066	1,653,450	59,932
P6	0.021	1,653,450	18,571
P7	0.024	1,653,450	21,344
P8	0.039	1,653,450	34,832
Q1	0.091	2,486,380	123,268
Q2	0.057	2,486,380	76,807
Q3	0.020	2,486,380	27,196
Q4	0.023	2,486,380	31,002
Q5	0.028	2,486,380	38,589
Q6	0.061	2,486,380	83,036
Q7	0.035	2,486,380	47,393
Q8	0.034	2,486,380	46,423
R1	0.204	4,139,830	460,590
R2	0.039	4,139,830	88,016
R3	0.047	4,139,830	105,335
R4	0.042	4,139,830	94,663
R5	0.039	4,139,830	88,038
R6	0.037	4,139,830	82,801
R7	0.044	4,139,830	99,338
S1	0.200	2,998,840	326,721
S2	0.060	2,998,840	98,613
S3	0.036	2,998,840	58,914
T1	0.100	3,325,515	182,231
U1	0.100	6,268,145	342,191
U2	0.112	6,268,145	383,754
V1	0.176	6,268,145	603,388
W1	0.068	2,942,630	109,366
W2	0.086	2,942,630	138,269
W3	0.057	2,942,630	90,813
W4	0.059	2,942,630	94,443
W5	0.074	2,942,630	119,197
X1	0.064	2,351,330	82,717
X2	0.111	2,351,330	142,455
X3	0.035	2,351,330	45,300
X4	0.033	2,351,330	42,526
X5	0.039	2,351,330	49,848

Section Name	Distance (miles)	Vehicle Count (# Vehicles)	CO_2 Emissions (kg)
Y1	0.037	1,582,275	31,912
Y2	0.057	1,582,275	48,797
Y3	0.038	1,582,275	33,052
Y4	0.029	1,582,275	25,097
YY1	0.111	3,679,200	222,689
YY2	0.047	3,679,200	94,783
Z1	0.028	3,933,605	59,893
Z2	0.037	3,933,605	78,438
Z3	0.041	3,933,605	89,003
Z4	0.048	3,933,605	102,286
Z5	0.066	3,933,605	141,134
ZZ1	0.101	2,959,785	163,519
ZZ2	0.054	2,959,785	87,230

APPENDIX D

Summary of CAC Emissions

Source Type	2007 Annual Emissions (tonnes)				
	NO_x	CO	VOCs	SO_x	PM_{10}
Aircraft Total	1,687	1,518	337	151	12.0
APU	52.1	52.5	3.95	7.05	6.36
GSE	296	3,221	108	13.50	8.11
Roadways	51	420	27	0.38	1.62
Parking Lots	9.40	79.0	7.45	0.0499	0.215
Stationary	61.3	153	11.526	4.60	7.33
Training Fires	0.136	0.741	0.677	0	2.50
Airside Vehicles	31.6	77.4	6.484	0.0639	0.769
Total:	**2,188**	**5,522**	**502**	**177**	**39**

*Fuel Tanks not included in 2007 assessment.

CAC Emissions from Aircraft, APUs and GSE

Summary of Results

Mode of Operation	2007 Annual Emissions (tonnes):				
	NO_x	CO	VOCs	SO_x	PM_{10}
Startup	0	0	47	0	0
Taxi Out	184	904	167	47	4
Takeoff	798	19	4	36	3
Climb Out	413	10	2	21	2
Approach	166	117	23	21	2
Taxi In	125	468	95	27	2
Aircraft Total	**1,687**	**1,518**	**337**	**151**	**12**
APU	52	53	4	7	6
GSE	296	3221	108	13	8
Totals	**2034**	**4792**	**449**	**172**	**27**

Detailed Results

Aircraft Name	Engine Name	Mode of Operation	2007 Annual Emissions (kg)				
			NOx	CO	VOCs	SO_x	PM_{10}
Airbus A310-200 Series	CF6-80A3	Startup	0	0	925	0	0
Airbus A310-200 Series	CF6-80A3	Taxi Out	2801	20794	5326	913	74
Airbus A310-200 Series	CF6-80A3	Takeoff	25742	820	301	963	108
Airbus A310-200 Series	CF6-80A3	Climb Out	11494	400	147	457	47
Airbus A310-200 Series	CF6-80A3	Approach	5630	2456	501	675	46
Airbus A310-200 Series	CF6-80A3	Taxi In	2354	8400	2144	462	38
Airbus A310-200 Series	CF6-80A3	APU	1066	463	55	112	102
Airbus A310-200 Series	CF6-80A3	GSE	7619	76590	2680	379	288
Airbus A318-100 Series	CFM56-5B8/P SAC	Startup	0	0	2	0	0
Airbus A318-100 Series	CFM56-5B8/P SAC	Taxi Out	7	58	13	2	0
Airbus A318-100 Series	CFM56-5B8/P SAC	Takeoff	28	1	0	2	0
Airbus A318-100 Series	CFM56-5B8/P SAC	Climb Out	9	0	0	1	0
Airbus A318-100 Series	CFM56-5B8/P SAC	Approach	5	4	1	1	0
Airbus A318-100 Series	CFM56-5B8/P SAC	Taxi In	4	29	7	1	0
Airbus A318-100 Series	CFM56-5B8/P SAC	APU	3	1	0	0	0
Airbus A318-100 Series	CFM56-5B8/P SAC	GSE	17	196	6	1	0
Airbus A319-100 Series	CFM56-5B6/P	Startup	0	0	4424	0	0
Airbus A319-100 Series	CFM56-5B6/P	Taxi Out	14309	88683	20253	3965	297
Airbus A319-100 Series	CFM56-5B6/P	Takeoff	68322	2529	612	3273	241
Airbus A319-100 Series	CFM56-5B6/P	Climb Out	20144	867	210	1093	73
Airbus A319-100 Series	CFM56-5B6/P	Approach	10685	6393	1502	1523	111
Airbus A319-100 Series	CFM56-5B6/P	Taxi In	9544	46244	10584	2287	171
Airbus A319-100 Series	CFM56-5B6/P	APU	6385	1296	109	632	391
Airbus A319-100 Series	CFM56-5B6/P	GSE	34989	407896	13346	1504	811
Airbus A320-200 Series	V2527-A5	Startup	0	0	5699	0	0
Airbus A320-200 Series	V2527-A5	Taxi Out	27388	64824	630	6458	839
Airbus A320-200 Series	V2527-A5	Takeoff	127497	2490	204	5327	711
Airbus A320-200 Series	V2527-A5	Climb Out	40773	886	73	1844	362
Airbus A320-200 Series	V2527-A5	Approach	16771	6078	141	2263	386
Airbus A320-200 Series	V2527-A5	Taxi In	20713	36434	372	4053	526
Airbus A320-200 Series	V2527-A5	APU	8017	1627	137	794	491
Airbus A320-200 Series	V2527-A5	GSE	43939	512166	16758	1889	1018
Airbus A321-100 Series	V2530-A5	Startup	0	0	1646	0	0
Airbus A321-100 Series	V2530-A5	Taxi Out	8383	16430	173	1858	218
Airbus A321-100 Series	V2530-A5	Takeoff	48902	632	64	1602	197
Airbus A321-100 Series	V2530-A5	Climb Out	12259	212	21	507	85
Airbus A321-100 Series	V2530-A5	Approach	4695	1429	37	606	108
Airbus A321-100 Series	V2530-A5	Taxi In	6323	9261	103	1171	137
Airbus A321-100 Series	V2530-A5	APU	2140	434	37	212	131
Airbus A321-100 Series	V2530-A5	GSE	11726	136681	4472	504	272
Airbus A330-200 Series	CF6-80CB42	Startup	0	0	0	0	0
Airbus A330-200 Series	CF6-80CB42	Taxi Out	3794	40624	10365	1146	0
Airbus A330-200 Series	CF6-80CB42	Takeoff	39744	673	120	1507	0
Airbus A330-200 Series	CF6-80CB42	Climb Out	14812	267	47	581	0
Airbus A330-200 Series	CF6-80CB42	Approach	3818	3042	519	586	0
Airbus A330-200 Series	CF6-80CB42	Taxi In	3483	19797	5026	696	0
Airbus A330-200 Series	CF6-80CB42	APU	1763	331	47	178	96

Aircraft Name	Engine Name	Mode of Operation	2007 Annual Emissions (kg)				
			NOx	CO	VOCs	SO_x	PM_{10}
Airbus A330-200 Series	CF6-80CB42	GSE	7160	71967	2519	356	270
Airbus A330-300 Series	CF6-80E1A2	Startup	0	0	1	0	0
Airbus A330-300 Series	CF6-80E1A2	Taxi Out	6	47	12	1	0
Airbus A330-300 Series	CF6-80E1A2	Takeoff	57	0	0	2	0
Airbus A330-300 Series	CF6-80E1A2	Climb Out	19	0	0	1	0
Airbus A330-300 Series	CF6-80E1A2	Approach	7	4	1	1	0
Airbus A330-300 Series	CF6-80E1A2	Taxi In	7	31	8	1	0
Airbus A330-300 Series	CF6-80E1A2	APU	2	0	0	0	0
Airbus A330-300 Series	CF6-80E1A2	GSE	9	90	3	0	0
Airbus A340-200 Series	CFM56-5C2	Startup	0	0	1669	0	0
Airbus A340-200 Series	CFM56-5C2	Taxi Out	6637	48202	9262	1756	127
Airbus A340-200 Series	CFM56-5C2	Takeoff	71971	1720	18	2444	193
Airbus A340-200 Series	CFM56-5C2	Climb Out	19530	493	5	682	48
Airbus A340-200 Series	CFM56-5C2	Approach	7514	5132	775	968	43
Airbus A340-200 Series	CFM56-5C2	Taxi In	3814	25232	4800	974	71
Airbus A340-200 Series	CFM56-5C2	APU	2141	402	57	216	117
Airbus A340-200 Series	CFM56-5C2	GSE	8691	87364	3058	432	328
Airbus A340-300 Series	CFM56-5C3	Startup	0	0	3	0	0
Airbus A340-300 Series	CFM56-5C3	Taxi Out	9	60	11	2	0
Airbus A340-300 Series	CFM56-5C3	Takeoff	125	3	0	4	0
Airbus A340-300 Series	CFM56-5C3	Climb Out	32	1	0	1	0
Airbus A340-300 Series	CFM56-5C3	Approach	12	8	1	2	0
Airbus A340-300 Series	CFM56-5C3	Taxi In	6	38	7	2	0
Airbus A340-300 Series	CFM56-5C3	APU	4	1	0	0	0
Airbus A340-300 Series	CFM56-5C3	GSE	14	144	5	1	1
Boeing 727-200 Series	JT8D-17A	Startup	0	0	10	0	0
Boeing 727-200 Series	JT8D-17A	Taxi Out	64	225	137	22	3
Boeing 727-200 Series	JT8D-17A	Takeoff	87	7	2	8	2
Boeing 727-200 Series	JT8D-17A	Climb Out	37	3	1	3	1
Boeing 727-200 Series	JT8D-17A	Approach	18	30	15	5	1
Boeing 727-200 Series	JT8D-17A	Taxi In	38	127	77	13	2
Boeing 727-200 Series	JT8D-17A	APU	6	21	1	1	2
Boeing 727-200 Series	JT8D-17A	GSE	61	715	23	3	1
Boeing 737-700 Series	CFM56-7B22	Startup	0	0	7947	0	0
Boeing 737-700 Series	CFM56-7B22	Taxi Out	29118	132031	16652	7171	531
Boeing 737-700 Series	CFM56-7B22	Takeoff	126898	2709	566	6086	561
Boeing 737-700 Series	CFM56-7B22	Climb Out	94307	2060	431	4511	399
Boeing 737-700 Series	CFM56-7B22	Approach	29437	18978	1857	3676	222
Boeing 737-700 Series	CFM56-7B22	Taxi In	19370	57585	7231	3698	274
Boeing 737-700 Series	CFM56-7B22	APU	8815	6478	565	1327	1067
Boeing 737-700 Series	CFM56-7B22	GSE	63685	742362	24290	2738	1475
Boeing 747-300 Series	CF6-50E2	Startup	0	0	676	0	0
Boeing 747-300 Series	CF6-50E2	Taxi Out	3009	46224	18755	926	170
Boeing 747-300 Series	CF6-50E2	Takeoff	46315	630	942	1543	166
Boeing 747-300 Series	CF6-50E2	Climb Out	9225	231	269	404	37
Boeing 747-300 Series	CF6-50E2	Approach	3723	3906	1295	486	48
Boeing 747-300 Series	CF6-50E2	Taxi In	1601	23127	9348	481	88
Boeing 747-300 Series	CF6-50E2	APU	605	982	37	114	76
Boeing 747-300 Series	CF6-50E2	GSE	2695	27089	948	134	102
Boeing 757-200 Series	PW2040	Startup	0	0	782	0	0
Boeing 757-200 Series	PW2040	Taxi Out	3316	13550	1289	841	42
Boeing 757-200 Series	PW2040	Takeoff	8485	161	9	419	22
Boeing 757-200 Series	PW2040	Climb Out	8746	196	11	459	35
Boeing 757-200 Series	PW2040	Approach	1483	2132	196	275	17
Boeing 757-200 Series	PW2040	Taxi In	1939	6728	639	450	23
Boeing 757-200 Series	PW2040	APU	996	432	52	105	95
Boeing 757-200 Series	PW2040	GSE	4781	55734	1824	206	111
Boeing 767-200 Series	CF6-80A	Startup	0	0	9	0	0
Boeing 767-200 Series	CF6-80A	Taxi Out	22	164	42	7	1
Boeing 767-200 Series	CF6-80A	Takeoff	138	8	2	7	1
Boeing 767-200 Series	CF6-80A	Climb Out	95	5	1	5	0
Boeing 767-200 Series	CF6-80A	Approach	15	32	7	3	0
Boeing 767-200 Series	CF6-80A	Taxi In	13	74	19	4	0
Boeing 767-200 Series	CF6-80A	APU	10	4	1	1	1
Boeing 767-200 Series	CF6-80A	GSE	80	739	26	4	3
Boeing 767-300 Series	CF6-80C2B7F 1862M39	Startup	0	0	10	0	0

Aircraft Name	Engine Name	Mode of Operation	2007 Annual Emissions (kg)				
			NOx	CO	VOCs	SO_x	PM_{10}
Boeing 767-300 Series	CF6-80C2B7F 1862M39	Taxi Out	53	180	16	12	1
Boeing 767-300 Series	CF6-80C2B7F 1862M39	Takeoff	272	0	1	11	1
Boeing 767-300 Series	CF6-80C2B7F 1862M39	Climb Out	129	0	0	7	0
Boeing 767-300 Series	CF6-80C2B7F 1862M39	Approach	59	22	2	6	0
Boeing 767-300 Series	CF6-80C2B7F 1862M39	Taxi In	36	82	7	6	0
Boeing 767-300 Series	CF6-80C2B7F 1862M39	APU	10	4	1	1	1
Boeing 767-300 Series	CF6-80C2B7F 1862M39	GSE	79	739	26	4	3
Boeing 767-400	CF6-80C2B8FA 1862M39	Startup	0	0	5884	0	0
Boeing 767-400	CF6-80C2B8FA 1862M39	Taxi Out	30970	104840	9306	7106	315
Boeing 767-400	CF6-80C2B8FA 1862M39	Takeoff	93137	156	199	4283	283
Boeing 767-400	CF6-80C2B8FA 1862M39	Climb Out	86291	243	242	4759	278
Boeing 767-400	CF6-80C2B8FA 1862M39	Approach	29687	11693	872	3350	141
Boeing 767-400	CF6-80C2B8FA 1862M39	Taxi In	22611	55760	4943	4288	190
Boeing 767-400	CF6-80C2B8FA 1862M39	APU	6000	2606	312	631	575
Boeing 767-400	CF6-80C2B8FA 1862M39	GSE	42056	430760	14995	2030	1578
Boeing 777-200 Series	PW4077	Startup	0	0	1049	0	0
Boeing 777-200 Series	PW4077	Taxi Out	4088	17595	3006	1079	57
Boeing 777-200 Series	PW4077	Takeoff	49541	112	128	1379	99
Boeing 777-200 Series	PW4077	Climb Out	35961	92	106	1107	58
Boeing 777-200 Series	PW4077	Approach	9740	1296	332	908	44
Boeing 777-200 Series	PW4077	Taxi In	2789	10950	1887	710	37
Boeing 777-200 Series	PW4077	APU	2184	362	44	191	87
Boeing 777-200 Series	PW4077	GSE	6499	65348	2287	323	245
Boeing 777-300 ER	GE90-115B DAC	Startup	0	0	6	0	0
Boeing 777-300 ER	GE90-115B DAC	Taxi Out	50	338	42	11	1
Boeing 777-300 ER	GE90-115B DAC	Takeoff	273	0	0	6	0
Boeing 777-300 ER	GE90-115B DAC	Climb Out	171	1	0	6	0
Boeing 777-300 ER	GE90-115B DAC	Approach	26	5	0	2	0
Boeing 777-300 ER	GE90-115B DAC	Taxi In	7	48	6	2	0
Boeing 777-300 ER	GE90-115B DAC	APU	7	1	0	1	0
Boeing 777-300 ER	GE90-115B DAC	GSE	21	198	7	1	1
Boeing 777-300 Series	PW4084	Startup	0	0	0	0	0
Boeing 777-300 Series	PW4084	Taxi Out	0	0	0	0	0
Boeing 777-300 Series	PW4084	Takeoff	0	0	0	0	0
Boeing 777-300 Series	PW4084	Climb Out	0	0	0	0	0
Boeing 777-300 Series	PW4084	Approach	16	1	0	1	0
Boeing 777-300 Series	PW4084	Taxi In	6	21	4	1	0
Boeing 777-300 Series	PW4084	APU	1	0	0	0	0
Boeing 777-300 Series	PW4084	GSE	3	36	1	0	0
Boeing DC-9-40 Series	JT8D-11	Startup	0	0	396	0	0
Boeing DC-9-40 Series	JT8D-11	Taxi Out	1559	17754	5835	628	123
Boeing DC-9-40 Series	JT8D-11	Takeoff	6862	506	160	402	111
Boeing DC-9-40 Series	JT8D-11	Climb Out	3523	309	97	239	63
Boeing DC-9-40 Series	JT8D-11	Approach	960	3294	910	222	42
Boeing DC-9-40 Series	JT8D-11	Taxi In	795	7256	2361	279	55
Boeing DC-9-40 Series	JT8D-11	APU	334	1263	83	70	102
Boeing DC-9-40 Series	JT8D-11	GSE	2269	21338	725	120	66
Boeing MD-11	CF6-80C2D1F 1862M39	Startup	0	0	1	0	0
Boeing MD-11	CF6-80C2D1F 1862M39	Taxi Out	6	19	2	1	0
Boeing MD-11	CF6-80C2D1F 1862M39	Takeoff	20	0	0	1	0
Boeing MD-11	CF6-80C2D1F 1862M39	Climb Out	11	0	0	1	0
Boeing MD-11	CF6-80C2D1F 1862M39	Approach	3	4	0	1	0
Boeing MD-11	CF6-80C2D1F 1862M39	Taxi In	3	9	1	1	0
Boeing MD-11	CF6-80C2D1F 1862M39	APU	1	1	0	0	0
Boeing MD-11	CF6-80C2D1F 1862M39	GSE	5	39	1	0	0
Boeing MD-83	JT8D-219 Environmental Kit (E	Startup	0	0	745	0	0
Boeing MD-83	JT8D-219 Environmental Kit (E	Taxi Out	3918	14489	97	1044	39
Boeing MD-83	JT8D-219 Environmental Kit (E	Takeoff	6474	182	0	500	49
Boeing MD-83	JT8D-219 Environmental Kit (E	Climb Out	6685	203	0	541	41
Boeing MD-83	JT8D-219 Environmental Kit (E	Approach	1782	2241	2	347	19
Boeing MD-83	JT8D-219 Environmental Kit (E	Taxi In	1656	5118	33	404	15
Boeing MD-83	JT8D-219 Environmental Kit (E	APU	555	2101	138	117	170
Boeing MD-83	JT8D-219 Environmental Kit (E	GSE	3473	26334	943	212	137
Boeing MD-90	V2525-D5	Startup	0	0	0	0	0
Boeing MD-90	V2525-D5	Taxi Out	2	5	0	0	0
Boeing MD-90	V2525-D5	Takeoff	6	0	0	0	0

Aircraft Name	Engine Name	Mode of Operation	2007 Annual Emissions (kg)				
			NOx	CO	VOCs	SO_x	PM_{10}
Boeing MD-90	V2525-D5	Climb Out	2	0	0	0	0
Boeing MD-90	V2525-D5	Approach	1	0	0	0	0
Boeing MD-90	V2525-D5	Taxi In	1	1	0	0	0
Boeing MD-90	V2525-D5	APU	0	0	0	0	0
Boeing MD-90	V2525-D5	GSE	1	10	0	0	0
Bombardier CRJ-700	CF34-8C1	Startup	0	0	7064	0	0
Bombardier CRJ-700	CF34-8C1	Taxi Out	20279	104934	387	5214	195
Bombardier CRJ-700	CF34-8C1	Takeoff	20320	909	56	1868	104
Bombardier CRJ-700	CF34-8C1	Climb Out	7583	389	23	700	29
Bombardier CRJ-700	CF34-8C1	Approach	4679	17122	77	1061	42
Bombardier CRJ-700	CF34-8C1	Taxi In	12186	59648	224	3036	113
Bombardier CRJ-700	CF34-8C1	APU	6238	23626	1556	1313	1907
Bombardier CRJ-700	CF34-8C1	GSE	16536	202561	6662	701	316
Bombardier Challenger 600	ALF 502L-2	Startup	0	0	1084	0	0
Bombardier Challenger 600	ALF 502L-2	Taxi Out	1946	23515	3942	638	58
Bombardier Challenger 600	ALF 502L-2	Takeoff	4259	106	7	371	25
Bombardier Challenger 600	ALF 502L-2	Climb Out	1179	33	3	112	10
Bombardier Challenger 600	ALF 502L-2	Approach	1191	3522	507	248	25
Bombardier Challenger 600	ALF 502L-2	Taxi In	860	8743	1459	257	23
Bombardier Challenger 600	ALF 502L-2	APU	746	4352	92	140	131
Bombardier Challenger 600	ALF 502L-2	GSE	5944	35408	1373	339	219
DeHavilland DHC-8-300	PW123	Startup	0	0	0	0	0
DeHavilland DHC-8-300	PW123	Taxi Out	5761	20746	121	1300	0
DeHavilland DHC-8-300	PW123	Takeoff	5874	806	1	431	0
DeHavilland DHC-8-300	PW123	Climb Out	7456	892	0	563	0
DeHavilland DHC-8-300	PW123	Approach	1455	5333	31	328	0
DeHavilland DHC-8-300	PW123	Taxi In	4066	14645	85	918	0
DeHavilland DHC-8-300	PW123	APU	0	0	0	0	0
DeHavilland DHC-8-300	PW123	GSE	10176	71500	2622	586	346
Dornier 328 Jet	PW306B Annular	Startup	0	0	126	0	0
Dornier 328 Jet	PW306B Annular	Taxi Out	214	1635	226	56	4
Dornier 328 Jet	PW306B Annular	Takeoff	803	86	0	44	3
Dornier 328 Jet	PW306B Annular	Climb Out	505	55	0	28	1
Dornier 328 Jet	PW306B Annular	Approach	971	182	0	71	3
Dornier 328 Jet	PW306B Annular	Taxi In	127	793	108	29	2
Dornier 328 Jet	PW306B Annular	APU	79	111	12	17	16
Dornier 328 Jet	PW306B Annular	GSE	338	4165	135	15	7
Embraer EMB120 Brasilia	PW118	Startup	0	0	0	0	0
Embraer EMB120 Brasilia	PW118	Taxi Out	2155	18144	56	608	0
Embraer EMB120 Brasilia	PW118	Takeoff	688	289	0	76	0
Embraer EMB120 Brasilia	PW118	Climb Out	1071	249	0	112	0
Embraer EMB120 Brasilia	PW118	Approach	348	2984	9	98	0
Embraer EMB120 Brasilia	PW118	Taxi In	1148	9593	30	323	0
Embraer EMB120 Brasilia	PW118	APU	1081	1520	165	236	216
Embraer EMB120 Brasilia	PW118	GSE	6132	57375	1954	307	171
Embraer ERJ135	AE3007A1/3 Type 2	Startup	0	0	905	0	0
Embraer ERJ135	AE3007A1/3 Type 2	Taxi Out	1617	14252	2646	545	35
Embraer ERJ135	AE3007A1/3 Type 2	Takeoff	8404	0	0	438	16
Embraer ERJ135	AE3007A1/3 Type 2	Climb Out	10202	0	0	530	20
Embraer ERJ135	AE3007A1/3 Type 2	Approach	10087	2	1	688	32
Embraer ERJ135	AE3007A1/3 Type 2	Taxi In	1336	5627	1045	263	17
Embraer ERJ135	AE3007A1/3 Type 2	APU	548	770	84	119	110
Embraer ERJ135	AE3007A1/3 Type 2	GSE	2093	14932	544	118	71
Embraer ERJ145	AE3007A	Startup	0	0	857	0	0
Embraer ERJ145	AE3007A	Taxi Out	1853	7513	1250	536	27
Embraer ERJ145	AE3007A	Takeoff	4486	164	61	242	18
Embraer ERJ145	AE3007A	Climb Out	4664	207	77	298	17
Embraer ERJ145	AE3007A	Approach	3353	651	157	383	26
Embraer ERJ145	AE3007A	Taxi In	1093	3560	596	276	14
Embraer ERJ145	AE3007A	APU	517	727	79	113	103
Embraer ERJ145	AE3007A	GSE	2217	27313	882	97	44
Embraer ERJ170	CF34-8E5 LEC	Startup	0	0	3441	0	0
Embraer ERJ170	CF34-8E5 LEC	Taxi Out	10135	35730	294	2436	92
Embraer ERJ170	CF34-8E5 LEC	Takeoff	30007	1106	42	2250	156
Embraer ERJ170	CF34-8E5 LEC	Climb Out	15803	605	23	1198	55
Embraer ERJ170	CF34-8E5 LEC	Approach	16907	5408	88	1795	71

Aircraft Name	Engine Name	Mode of Operation	2007 Annual Emissions (kg)				
			NOx	CO	VOCs	SO_x	PM_{10}
Embraer ERJ170	CF34-8E5 LEC	Taxi In	6872	17212	146	1353	51
Embraer ERJ170	CF34-8E5 LEC	APU	1830	2573	280	399	366
Embraer ERJ170	CF34-8E5 LEC	GSE	7847	96661	3122	342	156
Embraer ERJ175	CF34-8E5 LEC	Startup	0	0	11	0	0
Embraer ERJ175	CF34-8E5 LEC	Taxi Out	39	138	1	9	0
Embraer ERJ175	CF34-8E5 LEC	Takeoff	36	3	0	3	0
Embraer ERJ175	CF34-8E5 LEC	Climb Out	25	2	0	2	0
Embraer ERJ175	CF34-8E5 LEC	Approach	20	24	0	3	0
Embraer ERJ175	CF34-8E5 LEC	Taxi In	15	46	0	3	0
Embraer ERJ175	CF34-8E5 LEC	APU	0	0	0	0	0
Embraer ERJ175	CF34-8E5 LEC	GSE	14	152	5	1	0
Embraer ERJ190	CF34-8E5 LEC	Startup	0	0	7	0	0
Embraer ERJ190	CF34-8E5 LEC	Taxi Out	17	62	1	4	0
Embraer ERJ190	CF34-8E5 LEC	Takeoff	53	2	0	4	0
Embraer ERJ190	CF34-8E5 LEC	Climb Out	46	2	0	3	0
Embraer ERJ190	CF34-8E5 LEC	Approach	39	11	0	4	0
Embraer ERJ190	CF34-8E5 LEC	Taxi In	16	38	0	3	0
Embraer ERJ190	CF34-8E5 LEC	APU	4	6	1	1	1
Embraer ERJ190	CF34-8E5 LEC	GSE	9	98	3	0	0
Ilyushin 62 Classic	D-30KU	Startup	0	0	2	0	0
Ilyushin 62 Classic	D-30KU	Taxi Out	13	233	52	5	1
Ilyushin 62 Classic	D-30KU	Takeoff	38	8	1	3	1
Ilyushin 62 Classic	D-30KU	Climb Out	9	2	0	1	0
Ilyushin 62 Classic	D-30KU	Approach	4	31	6	1	1
Ilyushin 62 Classic	D-30KU	Taxi In	5	80	18	2	1
Ilyushin 62 Classic	D-30KU	APU	2	4	0	0	0
Ilyushin 62 Classic	D-30KU	GSE	4	42	1	0	0
Lockheed L-1011 Tristar	RB211-524B series Phase 2	Startup	0	0	22	0	0
Lockheed L-1011 Tristar	RB211-524B series Phase 2	Taxi Out	107	283	51	28	1
Lockheed L-1011 Tristar	RB211-524B series Phase 2	Takeoff	216	13	6	12	2
Lockheed L-1011 Tristar	RB211-524B series Phase 2	Climb Out	126	4	3	6	1
Lockheed L-1011 Tristar	RB211-524B series Phase 2	Approach	30	62	12	7	1
Lockheed L-1011 Tristar	RB211-524B series Phase 2	Taxi In	43	114	21	11	1
Lockheed L-1011 Tristar	RB211-524B series Phase 2	APU	27	43	2	5	3
Lockheed L-1011 Tristar	RB211-524B series Phase 2	GSE	94	645	24	6	4
Raytheon Beechjet 400	JT15D-5, -5A, -5B	Startup	0	0	1741	0	0
Raytheon Beechjet 400	JT15D-5, -5A, -5B	Taxi Out	770	49480	56865	514	363
Raytheon Beechjet 400	JT15D-5, -5A, -5B	Takeoff	1817	2283	233	233	27
Raytheon Beechjet 400	JT15D-5, -5A, -5B	Climb Out	510	894	114	72	14
Raytheon Beechjet 400	JT15D-5, -5A, -5B	Approach	336	13447	12732	172	109
Raytheon Beechjet 400	JT15D-5, -5A, -5B	Taxi In	575	35984	41178	377	266
Raytheon Beechjet 400	JT15D-5, -5A, -5B	APU	0	0	0	0	0
Raytheon Beechjet 400	JT15D-5, -5A, -5B	GSE	4257	46011	1583	143	67
		TOTALS:	**2,034,356**	**4,792,054**	**448,809**	**171,568**	**26,510**

CAC Emissions from Stationary Sources

Stationary sources include backup generators, CUP boilers and COGEN turbines.

Summary of Results

Source Type	2007 Annual Emissions (tonnes):				
	NO_x	CO	VOCs	SO_x	PM_{10}
Training Fires	0.136	0.741	0.677	0.000423	2.50
Generators	7.18	1.64	0.312	1.18	0.127
Boilers	11.1	8.79	0.585	0.115	0.820
Turbines	43.1	142	11	3.31	6.38
Totals	**61.4**	**154**	**12.20**	**4.60**	**9.82**

Detailed Results

Source ID	2007 Annual Emissions (kg)				
	NOx	CO	VOCs	SO_x	PM_{10}
Training Fire	1.36E+02	7.41E+02	6.77E+02	4.23E-01	2.50E+03
76-0004	5.00E+00	1.08E+00	7.42E+00	3.32E-01	3.56E-01
76-0103	8.82E+00	1.91E+00	9.76E+00	5.86E-01	6.29E-01
77-0016	1.66E+01	3.59E+00	6.15E+00	1.10E+00	1.18E+00
77-0223	8.90E+01	1.93E+01	1.76E+01	5.91E+00	6.34E+00
78-0015	5.12E+02	1.17E+02	1.50E+01	8.60E+01	7.59E+00
78-0069	7.12E+01	1.54E+01	1.05E+01	4.73E+00	5.08E+00
78-0100	1.26E+02	2.88E+01	3.69E+00	2.12E+01	1.87E+00
78-0165	5.07E+02	1.16E+02	1.49E+01	8.53E+01	7.54E+00
78-0218	4.08E+02	9.38E+01	1.20E+01	6.89E+01	6.10E+00
78-0220	7.95E+02	1.82E+02	2.34E+01	1.34E+02	1.26E+01
78-0425	6.22E+02	1.42E+02	1.82E+01	1.05E+02	1.07E+01
78-0426	3.42E+02	7.84E+01	1.01E+01	5.77E+01	4.43E+00
78-0427	5.92E+02	1.36E+02	1.74E+01	9.98E+01	8.75E+00
78-0428	4.06E+02	9.29E+01	1.19E+01	6.84E+01	7.00E+00
78-0553	1.80E+02	4.12E+01	5.28E+00	3.03E+01	2.66E+00
B1-NG	2.66E+03	2.16E+03	1.43E+02	1.66E+01	1.99E+02
B1-No2	8.33E+01	2.08E+01	2.04E+00	1.20E+01	4.16E+00
B2-NG	2.66E+03	2.16E+03	1.43E+02	1.66E+01	1.99E+02
B2-No2	8.33E+01	2.08E+01	2.04E+00	1.20E+01	4.16E+00
B3-NG	2.66E+03	2.16E+03	1.43E+02	1.66E+01	1.99E+02
B3-No2	8.33E+01	2.08E+01	2.04E+00	1.20E+01	4.16E+00
B4-NG	2.66E+03	2.16E+03	1.43E+02	1.66E+01	1.99E+02
B4-No2	8.33E+01	2.08E+01	2.04E+00	1.20E+01	4.16E+00
B5-NG	9.59E+01	7.79E+01	5.16E+00	6.00E-01	7.19E+00
CTG1	2.06E+04	1.09E+05	5.39E+03	1.68E+03	3.23E+03
CTG2	2.24E+04	3.38E+04	5.24E+03	1.63E+03	3.15E+03
RWDI-001	6.10E+02	1.40E+02	1.80E+01	1.03E+02	9.04E+00
RWDI-002	1.37E+02	3.14E+01	4.02E+00	2.30E+01	2.03E+00
RWDI-003	2.80E+02	6.42E+01	8.22E+00	4.71E+01	4.20E+00
RWDI-004	7.71E+02	1.76E+02	2.26E+01	1.30E+02	1.14E+01
RWDI-005	5.13E+01	1.18E+01	1.51E+00	8.64E+00	7.62E-01
RWDI-015	5.22E+02	1.19E+02	1.53E+01	8.79E+01	7.71E+00
RWDI-016	8.92E+01	1.93E+01	1.98E+01	5.93E+00	6.36E+00
RWDI-017	1.56E+01	3.38E+00	1.98E+01	1.04E+00	1.11E+00
RWDI-018	2.67E+01	5.78E+00	1.98E+01	1.77E+00	1.90E+00
TOTALS:	**6.14E+04**	**1.54E+05**	**1.22E+04**	**4.60E+03**	**9.82E+03**

CAC Emissions from Parking Lots

Summary of Results

Source ID	2007 Annual Emissions (tonnes)				
	NOx	CO	VOCs	SO_x	PM_{10}
6a-Parking	0.0683	0.650	0.0745	0.000341	0.00147
T1-Parking	6.36	52.9	4.88	0.0339	0.146
T3-Parking	2.97	25.5	2.49	0.0156	0.0673
Totals:	**9.40**	**79.0**	**7.45**	**0.0499**	**0.215**

CAC Emissions from Roadways Updated with 2007 Traffic Data

Summary of Results

	2007 Annual Emissions (tonnes):				
	NO_x	CO	VOCs	SO_x	PM_{10}
Totals	**50.9**	**420.1**	**27.4**	**0.4**	**1.6**

Detailed Results

Section Name	2007 Annual Emissions (tonnes)				
	NOx	CO	VOCs	SO_x	PM_{10}
A1	6.12E-02	5.05E-01	3.29E-02	4.56E-04	1.95E-03
A2	5.70E-02	4.71E-01	3.07E-02	4.25E-04	1.82E-03
A3	5.31E-02	4.39E-01	2.86E-02	3.96E-04	1.69E-03
A4	5.49E-02	4.54E-01	2.96E-02	4.10E-04	1.75E-03
A5	4.73E-02	3.90E-01	2.54E-02	3.53E-04	1.51E-03
A6	7.38E-02	6.09E-01	3.97E-02	5.51E-04	2.35E-03
AA1	5.73E-02	4.73E-01	3.08E-02	4.28E-04	1.83E-03
AA2	7.57E-02	6.25E-01	4.07E-02	5.65E-04	2.41E-03
AA3	9.41E-02	7.77E-01	5.06E-02	7.02E-04	3.00E-03
AA4	5.54E-02	4.57E-01	2.98E-02	4.13E-04	1.76E-03
AA5	4.51E-02	3.72E-01	2.42E-02	3.36E-04	1.43E-03
AAA1	1.57E-01	1.29E+00	8.42E-02	1.17E-03	4.99E-03
B1	2.01E-01	1.66E+00	1.08E-01	1.50E-03	6.40E-03
B2	3.10E-01	2.56E+00	1.67E-01	2.31E-03	9.88E-03
B3	3.83E-01	3.16E+00	2.06E-01	2.86E-03	1.22E-02
BB1	2.59E-01	2.14E+00	1.39E-01	1.93E-03	8.24E-03
BBB1	6.00E-04	4.95E-03	3.23E-04	4.48E-06	1.91E-05
BBB2	4.41E-04	3.64E-03	2.37E-04	3.29E-06	1.41E-05
BBB3	4.78E-04	3.95E-03	2.57E-04	3.57E-06	1.52E-05
BR1IB	4.19E-01	3.46E+00	2.26E-01	3.13E-03	1.34E-02
BR1OB	3.05E-01	2.52E+00	1.64E-01	2.28E-03	9.72E-03
BRIB-1	8.69E-01	7.18E+00	4.68E-01	6.49E-03	2.77E-02
BRIB-2	7.03E-01	5.81E+00	3.78E-01	5.25E-03	2.24E-02
BRIB-3	1.61E+00	1.33E+01	8.68E-01	1.20E-02	5.14E-02
BROB-1	8.63E-01	7.13E+00	4.64E-01	6.44E-03	2.75E-02
BROB-2	6.90E-01	5.70E+00	3.71E-01	5.15E-03	2.20E-02
BROB-3	1.57E+00	1.30E+01	8.46E-01	1.17E-02	5.01E-02
C1	3.07E+00	2.54E+01	1.65E+00	2.29E-02	9.79E-02
CC1	2.40E-01	1.98E+00	1.29E-01	1.79E-03	7.65E-03
CC2	1.31E-01	1.08E+00	7.06E-02	9.80E-04	4.18E-03
CC3	1.23E-01	1.02E+00	6.62E-02	9.18E-04	3.92E-03
CC4	1.25E-01	1.03E+00	6.74E-02	9.35E-04	3.99E-03
CC5	1.27E-01	1.05E+00	6.82E-02	9.46E-04	4.04E-03
CC6	8.40E-02	6.94E-01	4.52E-02	6.27E-04	2.68E-03
CC7	9.76E-02	8.06E-01	5.25E-02	7.28E-04	3.11E-03
CCC1	1.70E-02	1.40E-01	9.14E-03	1.27E-04	5.41E-04
CCC2	1.90E-02	1.57E-01	1.02E-02	1.42E-04	6.05E-04
CCC3	3.36E-02	2.78E-01	1.81E-02	2.51E-04	1.07E-03
CCC4	2.01E-01	1.66E+00	1.08E-01	1.50E-03	6.40E-03
CONIB	8.05E-01	6.65E+00	4.33E-01	6.01E-03	2.57E-02
CONOB	9.34E-01	7.71E+00	5.02E-01	6.97E-03	2.97E-02
D1	3.43E-01	2.83E+00	1.85E-01	2.56E-03	1.09E-02
D2	1.73E-01	1.43E+00	9.32E-02	1.29E-03	5.52E-03
D3	1.40E-01	1.16E+00	7.56E-02	1.05E-03	4.47E-03

Section Name	2007 Annual Emissions (tonnes)				
	NOx	CO	VOCs	SO_x	PM_{10}
D4	2.77E-01	2.29E+00	1.49E-01	2.07E-03	8.83E-03
D5	2.65E-01	2.19E+00	1.43E-01	1.98E-03	8.45E-03
D6	2.70E-01	2.23E+00	1.45E-01	2.01E-03	8.60E-03
D7	2.90E-01	2.40E+00	1.56E-01	2.17E-03	9.24E-03
D8	3.13E-01	2.58E+00	1.68E-01	2.33E-03	9.96E-03
D9	3.19E-01	2.64E+00	1.72E-01	2.38E-03	1.02E-02
DD1	1.40E-01	1.16E+00	7.55E-02	1.05E-03	4.47E-03
DD2	6.50E-01	5.37E+00	3.50E-01	4.85E-03	2.07E-02
DD3	2.24E-01	1.85E+00	1.21E-01	1.67E-03	7.14E-03
DD4	1.53E-01	1.26E+00	8.21E-02	1.14E-03	4.86E-03
DD5	8.92E-02	7.36E-01	4.80E-02	6.65E-04	2.84E-03
DDD1	2.81E-02	2.32E-01	1.51E-02	2.10E-04	8.96E-04
DDD2	3.42E-02	2.82E-01	1.84E-02	2.55E-04	1.09E-03
DDD3	4.00E-02	3.30E-01	2.15E-02	2.98E-04	1.27E-03
DDD4	4.45E-02	3.67E-01	2.39E-02	3.32E-04	1.42E-03
DDD5	6.83E-02	5.64E-01	3.68E-02	5.10E-04	2.18E-03
E1	3.05E-01	2.51E+00	1.64E-01	2.27E-03	9.70E-03
E10	1.10E-01	9.10E-01	5.93E-02	8.23E-04	3.51E-03
E11	1.08E-01	8.93E-01	5.82E-02	8.07E-04	3.44E-03
E2	8.76E-02	7.23E-01	4.71E-02	6.54E-04	2.79E-03
E3	7.53E-02	6.22E-01	4.05E-02	5.62E-04	2.40E-03
E4	9.65E-02	7.96E-01	5.19E-02	7.20E-04	3.07E-03
E5	1.52E-01	1.25E+00	8.16E-02	1.13E-03	4.83E-03
E6	1.82E-01	1.50E+00	9.79E-02	1.36E-03	5.80E-03
E7	1.57E-01	1.30E+00	8.46E-02	1.17E-03	5.01E-03
E8	1.49E-01	1.23E+00	8.04E-02	1.11E-03	4.76E-03
E9	2.36E-01	1.95E+00	1.27E-01	1.76E-03	7.52E-03
EE1	7.15E-02	5.90E-01	3.84E-02	5.33E-04	2.28E-03
EE2	4.53E-02	3.74E-01	2.44E-02	3.38E-04	1.44E-03
EE3	6.96E-02	5.74E-01	3.74E-02	5.19E-04	2.22E-03
EEE1	8.02E-02	6.62E-01	4.31E-02	5.98E-04	2.55E-03
EEE2	5.60E-02	4.62E-01	3.01E-02	4.18E-04	1.78E-03
EEE3	8.69E-02	7.17E-01	4.67E-02	6.48E-04	2.77E-03
F1	1.10E+00	9.09E+00	5.92E-01	8.21E-03	3.51E-02
FF1	5.83E-02	4.81E-01	3.14E-02	4.35E-04	1.86E-03
FF2	3.56E-02	2.94E-01	1.92E-02	2.66E-04	1.13E-03
FF3	4.69E-02	3.87E-01	2.52E-02	3.50E-04	1.49E-03
FFF1	2.30E-01	1.90E+00	1.24E-01	1.72E-03	7.33E-03
FFF2	4.62E-02	3.81E-01	2.48E-02	3.45E-04	1.47E-03
FFF3	4.10E-02	3.39E-01	2.21E-02	3.06E-04	1.31E-03
FFF4	3.81E-02	3.14E-01	2.05E-02	2.84E-04	1.21E-03
FFF5	8.20E-02	6.77E-01	4.41E-02	6.12E-04	2.61E-03
FFF6	9.75E-02	8.05E-01	5.25E-02	7.28E-04	3.11E-03
FFF7	9.51E-02	7.85E-01	5.12E-02	7.09E-04	3.03E-03
FFF8	8.24E-02	6.80E-01	4.43E-02	6.15E-04	2.62E-03
G1	4.88E-02	4.03E-01	2.63E-02	3.64E-04	1.55E-03
G2	3.61E-01	2.98E+00	1.94E-01	2.70E-03	1.15E-02
G3	1.05E-01	8.69E-01	5.66E-02	7.85E-04	3.35E-03
GG1	3.43E-01	2.84E+00	1.85E-01	2.56E-03	1.09E-02
GG2	2.08E-01	1.72E+00	1.12E-01	1.55E-03	6.64E-03
GG3	2.18E-01	1.80E+00	1.17E-01	1.63E-03	6.94E-03
GGG1	4.35E-01	3.59E+00	2.34E-01	3.25E-03	1.39E-02
GGG2	1.41E-01	1.17E+00	7.60E-02	1.05E-03	4.50E-03
GGG3	2.87E-01	2.37E+00	1.54E-01	2.14E-03	9.14E-03
GGG4	1.07E-01	8.80E-01	5.73E-02	7.95E-04	3.39E-03

Section Name	2007 Annual Emissions (tonnes)				
	NOx	CO	VOCs	SO_x	PM_{10}
GGG5	7.03E-02	5.80E-01	3.78E-02	5.25E-04	2.24E-03
GGG6	7.61E-01	6.28E+00	4.09E-01	5.68E-03	2.42E-02
H1	2.11E-01	1.75E+00	1.14E-01	1.58E-03	6.73E-03
H2	2.44E-01	2.02E+00	1.31E-01	1.82E-03	7.79E-03
H3	2.46E-01	2.03E+00	1.32E-01	1.83E-03	7.82E-03
H4	1.97E-01	1.63E+00	1.06E-01	1.47E-03	6.28E-03
H5	1.25E-01	1.03E+00	6.72E-02	9.32E-04	3.98E-03
HH1	8.53E-03	7.04E-02	4.59E-03	6.37E-05	2.72E-04
HH10	1.07E-02	8.82E-02	5.75E-03	7.97E-05	3.40E-04
HH11	9.62E-03	7.94E-02	5.18E-03	7.18E-05	3.07E-04
HH2	1.51E-02	1.25E-01	8.12E-03	1.13E-04	4.81E-04
HH3	1.69E-02	1.39E-01	9.08E-03	1.26E-04	5.38E-04
HH4	1.51E-02	1.25E-01	8.12E-03	1.13E-04	4.81E-04
HH5	1.53E-02	1.26E-01	8.21E-03	1.14E-04	4.86E-04
HH6	1.60E-02	1.32E-01	8.60E-03	1.19E-04	5.09E-04
HH7	1.36E-02	1.12E-01	7.33E-03	1.02E-04	4.34E-04
HH8	2.06E-02	1.70E-01	1.11E-02	1.54E-04	6.58E-04
HH9	1.96E-02	1.62E-01	1.05E-02	1.46E-04	6.23E-04
HHH1	6.97E-01	5.75E+00	3.75E-01	5.20E-03	2.22E-02
HHH2	1.69E-01	1.40E+00	9.10E-02	1.26E-03	5.39E-03
HHH3	1.15E-01	9.50E-01	6.19E-02	8.58E-04	3.66E-03
HHH4	2.35E-01	1.94E+00	1.27E-01	1.76E-03	7.50E-03
HHH5	8.30E-02	6.85E-01	4.47E-02	6.19E-04	2.64E-03
HHH6	5.85E-01	4.83E+00	3.15E-01	4.37E-03	1.86E-02
I1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
I2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
II1	1.37E-01	1.13E+00	7.38E-02	1.02E-03	4.37E-03
II2	2.84E-02	2.34E-01	1.53E-02	2.12E-04	9.04E-04
II3	1.20E-01	9.88E-01	6.44E-02	8.93E-04	3.81E-03
III1	2.70E-01	2.23E+00	1.45E-01	2.01E-03	8.60E-03
III2	7.37E-02	6.08E-01	3.96E-02	5.50E-04	2.35E-03
J1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
J2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
J3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
J4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
J5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
J6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
JJ1	2.38E-02	1.96E-01	1.28E-02	1.77E-04	7.57E-04
JJ2	5.44E-02	4.49E-01	2.93E-02	4.06E-04	1.73E-03
JJ3	8.69E-02	7.18E-01	4.68E-02	6.49E-04	2.77E-03
JJJ1	3.34E-01	2.75E+00	1.79E-01	2.49E-03	1.06E-02
JJJ2	8.53E-02	7.04E-01	4.59E-02	6.37E-04	2.72E-03
JJJ3	8.46E-02	6.99E-01	4.55E-02	6.31E-04	2.69E-03
JJJ4	5.88E-02	4.86E-01	3.16E-02	4.39E-04	1.87E-03
JJJ5	6.12E-02	5.05E-01	3.29E-02	4.57E-04	1.95E-03
JJJ6	6.26E-02	5.17E-01	3.37E-02	4.67E-04	1.99E-03
JJJ7	6.38E-02	5.27E-01	3.43E-02	4.76E-04	2.03E-03
JJJ8	5.35E-02	4.42E-01	2.88E-02	3.99E-04	1.70E-03
K1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
K2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
K3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
K4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
K5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
KKK1	7.09E-02	5.85E-01	3.81E-02	5.29E-04	2.26E-03
KKK2	5.87E-02	4.85E-01	3.16E-02	4.38E-04	1.87E-03

Section Name	2007 Annual Emissions (tonnes)				
	NOx	CO	VOCs	SO_x	PM_{10}
KKK3	6.86E-02	5.66E-01	3.69E-02	5.12E-04	2.19E-03
KKK4	1.08E-01	8.95E-01	5.83E-02	8.08E-04	3.45E-03
KKK5	1.04E-01	8.59E-01	5.60E-02	7.76E-04	3.31E-03
L1	4.25E-01	3.51E+00	2.29E-01	3.17E-03	1.35E-02
L2	6.13E-01	5.06E+00	3.30E-01	4.57E-03	1.95E-02
LLL1	3.35E-02	2.77E-01	1.80E-02	2.50E-04	1.07E-03
LLL2	7.64E-03	6.30E-02	4.11E-03	5.70E-05	2.43E-04
LLL3	2.69E-02	2.22E-01	1.45E-02	2.01E-04	8.56E-04
M1	1.48E-01	1.22E+00	7.97E-02	1.11E-03	4.72E-03
M2	2.35E-01	1.94E+00	1.27E-01	1.76E-03	7.49E-03
N1	1.79E-01	1.48E+00	9.63E-02	1.34E-03	5.70E-03
N2	1.82E-01	1.50E+00	9.80E-02	1.36E-03	5.80E-03
N3	1.43E-01	1.18E+00	7.69E-02	1.07E-03	4.55E-03
N4	1.14E-01	9.41E-01	6.13E-02	8.51E-04	3.63E-03
N5	1.22E-01	1.01E+00	6.59E-02	9.14E-04	3.90E-03
N6	8.91E-02	7.36E-01	4.79E-02	6.65E-04	2.84E-03
O1	1.46E-01	1.20E+00	7.84E-02	1.09E-03	4.64E-03
O2	1.19E-01	9.86E-01	6.42E-02	8.91E-04	3.80E-03
P1	2.63E-01	2.17E+00	1.41E-01	1.96E-03	8.37E-03
P2	1.01E-01	8.34E-01	5.43E-02	7.54E-04	3.22E-03
P3	8.47E-02	6.99E-01	4.56E-02	6.32E-04	2.70E-03
P4	7.51E-02	6.20E-01	4.04E-02	5.60E-04	2.39E-03
P5	1.75E-01	1.45E+00	9.42E-02	1.31E-03	5.58E-03
P6	5.43E-02	4.48E-01	2.92E-02	4.05E-04	1.73E-03
P7	6.24E-02	5.15E-01	3.36E-02	4.65E-04	1.99E-03
P8	1.02E-01	8.40E-01	5.48E-02	7.59E-04	3.24E-03
Q1	3.60E-01	2.97E+00	1.94E-01	2.69E-03	1.15E-02
Q2	2.24E-01	1.85E+00	1.21E-01	1.67E-03	7.15E-03
Q3	7.95E-02	6.56E-01	4.28E-02	5.93E-04	2.53E-03
Q4	9.06E-02	7.48E-01	4.87E-02	6.76E-04	2.89E-03
Q5	1.13E-01	9.31E-01	6.07E-02	8.41E-04	3.59E-03
Q6	2.43E-01	2.00E+00	1.31E-01	1.81E-03	7.73E-03
Q7	1.39E-01	1.14E+00	7.45E-02	1.03E-03	4.41E-03
Q8	1.36E-01	1.12E+00	7.30E-02	1.01E-03	4.32E-03
R1	1.35E+00	1.11E+01	7.24E-01	1.00E-02	4.29E-02
R2	2.57E-01	2.12E+00	1.38E-01	1.92E-03	8.19E-03
R3	3.08E-01	2.54E+00	1.66E-01	2.30E-03	9.80E-03
R4	2.77E-01	2.28E+00	1.49E-01	2.06E-03	8.81E-03
R5	2.57E-01	2.12E+00	1.38E-01	1.92E-03	8.19E-03
R6	2.42E-01	2.00E+00	1.30E-01	1.81E-03	7.71E-03
R7	2.90E-01	2.40E+00	1.56E-01	2.17E-03	9.25E-03
S1	9.55E-01	7.88E+00	5.14E-01	7.12E-03	3.04E-02
S2	2.88E-01	2.38E+00	1.55E-01	2.15E-03	9.18E-03
S3	1.72E-01	1.42E+00	9.26E-02	1.28E-03	5.48E-03
T1	5.33E-01	4.40E+00	2.86E-01	3.97E-03	1.70E-02
U1	1.00E+00	8.26E+00	5.38E-01	7.46E-03	3.18E-02
U2	1.12E+00	9.26E+00	6.03E-01	8.37E-03	3.57E-02
V1	1.76E+00	1.46E+01	9.49E-01	1.32E-02	5.62E-02
W1	3.20E-01	2.64E+00	1.72E-01	2.38E-03	1.02E-02
W2	4.04E-01	3.34E+00	2.17E-01	3.01E-03	1.29E-02
W3	2.65E-01	2.19E+00	1.43E-01	1.98E-03	8.45E-03
W4	2.76E-01	2.28E+00	1.48E-01	2.06E-03	8.79E-03
W5	3.48E-01	2.88E+00	1.87E-01	2.60E-03	1.11E-02
X1	2.42E-01	2.00E+00	1.30E-01	1.80E-03	7.70E-03
X2	4.16E-01	3.44E+00	2.24E-01	3.11E-03	1.33E-02

Section Name	2007 Annual Emissions (tonnes)				
	NOx	CO	VOCs	SO_x	PM_{10}
X3	1.32E-01	1.09E+00	7.12E-02	9.88E-04	4.22E-03
X4	1.24E-01	1.03E+00	6.69E-02	9.27E-04	3.96E-03
X5	1.46E-01	1.20E+00	7.84E-02	1.09E-03	4.64E-03
Y1	9.33E-02	7.70E-01	5.02E-02	6.96E-04	2.97E-03
Y2	1.43E-01	1.18E+00	7.67E-02	1.06E-03	4.54E-03
Y3	9.66E-02	7.97E-01	5.20E-02	7.21E-04	3.08E-03
Y4	7.33E-02	6.05E-01	3.95E-02	5.47E-04	2.34E-03
YY1	6.51E-01	5.37E+00	3.50E-01	4.86E-03	2.07E-02
YY2	2.77E-01	2.29E+00	1.49E-01	2.07E-03	8.82E-03
Z1	1.75E-01	1.44E+00	9.42E-02	1.31E-03	5.57E-03
Z2	2.29E-01	1.89E+00	1.23E-01	1.71E-03	7.30E-03
Z3	2.60E-01	2.15E+00	1.40E-01	1.94E-03	8.28E-03
Z4	2.99E-01	2.47E+00	1.61E-01	2.23E-03	9.52E-03
Z5	4.12E-01	3.40E+00	2.22E-01	3.08E-03	1.31E-02
ZZ1	4.78E-01	3.94E+00	2.57E-01	3.57E-03	1.52E-02
ZZ2	2.55E-01	2.10E+00	1.37E-01	1.90E-03	8.12E-03

CAC Emissions from Airside Vehicles

Summary of Results

	2007 Annual Emissions (tonnes):				
	NO_x	CO	VOCs	SO_x	PM_{10}
Totals	**31.605**	**77.377**	**6.484**	**0.064**	**0.769**

Useful Data

Fuel Type	2007 Annual Fuel Usage (L)	Assumed Vehicle Type	Fuel Economy (mpg)	Emission Factors (g/VMT)				
				NO_X	CO	VOCs	SO_2	PM_{10}
Diesel	1,136,506	HDDV	7.1	12.0	7.1	1.1	0.0133	0.3162
Gasoline	754,360	LDGT12	18.6	1.6	16.8	1.1	0.0096	0.0255
Reference:	GTAA data	MOBILE 6.2 - 2007, Arterial at 9.9 mph						

Assumptions

- The majority of diesel consumption is from heavy duty vehicles (de-icers, snow plows, garbage trucks, etc.)
- The majority of gasoline consumption is from light duty gasoline trucks less than 6000 lbs.

Calculations

Fuel Type	Vehicle Miles Travelled (VMT)	Assumed Vehicle Type	2007 Annual Emissions (kg)				
			NO_X	CO	VOCs	SO_2	PM_{10}
Diesel	2,131,888	HDDV	25,514.4	15,172.6	2,242.7	28.4	674.1
Gasoline	3,707,025	LDGT12	6,090.6	62,203.9	4,240.8	35.6	94.5