



Southeastern Pennsylvania Transportation Authority

1234 Market Street • Philadelphia, PA 19107-3780

November 22, 2016

Mr. Edward Wiener
City of Philadelphia
Air Management Services
321 University Avenue, 2nd floor
Philadelphia, PA 19104-4543

SOURCE REGISTRATION
AIR MANAGEMENT SERVICES

~~NOV 18 2016~~

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Subject: SEPTA – Roberts Complex (Plant ID 01573) Plan Approval Application

Dear Mr. Wiener,

Southeastern Pennsylvania Transportation Authority (SEPTA) hereby submits for Philadelphia Air Management Services (AMS) consideration a Plan Approval application for the installation of a combined heat and power plant (CHP) at SEPTA's Roberts Complex (PLID: 01573). Specifically, the proposed sources will be installed at the Midvale Bus Facility located at 4301 Wissamickon Avenue. The CHP will consist of two (2) natural gas-fired generators used to provide heat and electricity to the facility.

As demonstrated in Attachment D, Emissions Estimates, the Facility has the potential to exceed the Title V permitting threshold for NOx when all emission sources operate at maximum capacity. The Facility limits NOx, VOC, and total HAP emissions each to less than 25 tpy, as well as individual HAP emissions to less than 10 tpy, in order to be classified as a synthetic minor facility. Rolling 12-month emission calculations will be performed to ensure these thresholds are not exceeded.

Enclosed are the following items that constitute this plan approval application:

- Technical Support Document;
- Plan Approval Application Form (Attachment A);
- Compliance Review Form (Attachment B);
- Process Flow Diagrams (Attachment C);
- Emissions Estimates (Attachment D);
- Vendor Data (Attachment E); and
- Plan Approval Application Fee.

Please contact the undersigned at (215) 580-8144 or RHarris@septa.org if you have any questions on this plan approval application. Thank you for your expeditious review of the application.

Sincerely,

Richard M. Harris, PG
Environmental Officer

Enclosure

112216601

NOV 30 2016

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Air Management Services
321 University Avenue
Philadelphia PA 19104-4543
Phone: (215) 685-7572
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CITY OF PHILADELPHIA

DEPARTMENT OF PUBLIC HEALTH
PUBLIC HEALTH SERVICES
AIR MANAGEMENT SERVICES

APPLICATION FOR PLAN APPROVAL TO CONSTRUCT, MODIFY OR REACTIVATE AN AIR CONTAMINATION SOURCE AND/OR AIR CLEANING DEVICE

(Prepare all information completely in print or type in triplicate)

SECTION A - APPLICATION INFORMATION

Location of source (Street Address) 4301 Wissahickon Avenue, Philadelphia, PA 19140		Facility Name Roberts Complex	
Owner Southeastern Pennsylvania Transportation Authority		Tax ID No 23-1642972	
Mailing Address 1234 Market Street, 6th Floor, Philadelphia, PA 19107		Telephone No (215) 580-8144	Fax No. ()
Contact Person Richard Harris		Title Environmental Officer	
Mailing Address 1234 Market Street, 6th Floor, Philadelphia, PA 19107		Telephone No (215) 580-8144	Fax No ()
E-mail Address RHarris@septa.org			

SECTION B - DESCRIPTION OF ACTIVITY

Application type	SIC Code	Completion Date
<input checked="" type="checkbox"/> New source <input type="checkbox"/> Modification <input type="checkbox"/> Replacement <input type="checkbox"/> Reactivation <input type="checkbox"/> Air cleaning device <input type="checkbox"/> Other		
Applicable requirement <input checked="" type="checkbox"/> NSPS <input checked="" type="checkbox"/> NESHAP <input type="checkbox"/> Case by Case MACT <input type="checkbox"/> NSR <input type="checkbox"/> PSD	Does Facility submit Compliance Review Form biannually? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If No attach Air Pollution Control Act Compliance Review Form with this application.	

Source Description
Installation of two (2) natural gas-fired GE generator engines rated at 6,113 horsepower each and equipped with Steuler SCR/oxidation catalyst systems.

SECTION C - PERMIT COORDINATION (ONLY REQUIRED FOR LAND DEVELOPMENT)

Question	YES	NO
1. Will the project involve construction activity that disturbs five or more acres of land?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Will the project involve discharge of industrial wastewater or stormwater to a dry swale, surface water, ground water or an existing sanitary sewer system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Will the project involve the construction and operation of industrial waste treatment facility?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Is onsite sewage disposal proposed for your project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Will the project involve construction of sewage treatment facilities, sanitary sewer, or sewage pumping station?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. Is a stormwater collection and discharge system proposed for this project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7. Will any work associated with this project take place in or near a stream, waterway, or wetland?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8. Does the project involve dredging or construction of any dam, pier, bridge or outfall pipe?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9. Will any solid waste or liquid wastes be generated as a result of the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10. Is a State Park located within two miles from your project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SECTION D - CERTIFICATION

I certify that I have the authority to submit this Permit Application on behalf of the applicant named herein and that the information provided in this application is true and correct to the best of my knowledge and information.

Signature [Signature] Date 11/22/16 Address 1234 Market St., Philadelphia, PA 19107
 Name & Title Scott Sauer - Assistant General Manager, System Safety Phone 215-580-3754 Fax 215-580-3695

SECTION E - OFFICIAL USE ONLY

Application No. 1P17000009	Plant ID 01573	Health District 9	Census Tract	Fee 1700	Date Received 11-30-16
Approved by	Date	Conformance by	Date		

SECTION F I - GENERAL SOURCE INFORMATION

1. SOURCE		2. NORMAL PROCESS OPERATING SCHEDULE											
A. Type Source (Describe)	B. Manufacturer of Source	C. Model No.	D. Rated Capacity (Specify units)	E. Type of Materials Processed	A. Amount Processed/yr. (Specify units)	B. Average hr/day	C. Total hr/yr	D. % Throughput/Quarter					
								1 st	2 nd	3 rd	4 th		
1	Generator - G-01	GE Jenbacher	JMS624H01	6,113 hp	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	Generator - G02	GE Jenbacher	JMS624H01	6,113 hp	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3													
4													
5													

3. ESTIMATED FUEL USAGE (Specify Units)		4. ANNUAL FUEL USAGE											
A. Used in Unit	B. Type Fuel	C. Average Hourly Rate	D. Maximum Hourly Rate	E. Percent Sulfur	F. Percent Ash	G. Heating Value	A. Annual Amounts	B. Average hr/day	C. Total hr/yr	D. % Throughput/Quarter			
										1 st	2 nd	3 rd	4 th
G-01	Natural Gas	35.5 Mscf	35.5 Mscf	0%	0%	1,020 Btu/scf	310.9 MMscf	24	8,760	25	25	25	25
G-02	Natural Gas	35.5 Mscf	35.5 Mscf	0%	0%	1,020 Btu/scf	310.9 MMscf	24	8,760	25	25	25	25

5. IMPORTANT: Attach on a separate sheet a flow diagram of process giving all (gaseous, liquid, and solid) flow rates. Also list raw materials charged to process equipment and the amounts charged (tons/hour, etc.) at rated capacity (give maximum, minimum and average charges describing fully expected variations in production rates). Indicate (on diagram) all points where contaminants are controlled (location of water sprays, hoods or other pickup points, etc.).

SECTION F 1 - GENERAL SOURCE INFORMATION, CONTINUED

6. Describe process equipments in detail.

New combined heat and power plant consisting of (2) natural gas-fired generators rated at 6,113 horsepower each used to provide heat and electricity to the facility.

7. Describe fully the methods used to monitor and record all operating conditions that may affect the emission of air contaminants. Provide detailed information to show that these methods provided are adequate.

Records of natural gas usage and maintenance conducted will be kept for each engine.

8. Describe modifications to process equipments in detail.

N/A

9. Attach any and all additional information necessary to adequately describe the process equipment and to perform a thorough evaluation of the extent and nature of its emissions.

- Provide equipment information on this page if sources do not belong to special categories in F2 to F8, otherwise remove this page from this application.
- If there are more equipment, copy this page and fill in the information as indicated

SECTION G - FLUE AND AIR CONTAMINANT EMISSION INFORMATION

1. STACK AND EXHAUSTER

GSTAC-01 - G-01

A. Outlet volume of exhaust gases 25,704 CFM @ 675 °F _____ % Moisture		B. Exhauster (attach fan curves) _____ in w.g. _____ HP @ _____ RPM	
C. Stack height above grade (ft) 50	D Stack diameter (ft) or Outlet duct area sq. ft.) 2.46 ft	E Weather Cap <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
Grade elevation (ft) 140			
Distance from discharge to nearest property line(ft) 102			

F. Indicate on an attached sheet the location of sampling ports with respect to exhaust fan, breeching, etc. Give all necessary dimensions.

2. POTENTIAL PROCESS EMISSIONS (OUTLET FROM PROCESS, BEFORE ANY CONTROL EQUIPMENT)

A. Particulate loading (lbs/hr or gr/DSCF) PM10: 0.011, PM2.5: 0.007 lb/hr	B. Specific gravity of particulate (not bulk density) N/A	C. Attached particle size distribution information N/A
D. Specify gaseous contaminants and concentration		
Contaminant	Concentration	VOC Contaminants Concentration
(1) SO _x	_____ ppm (Vol.) 0.02 lbs/hr	(4) VOC _____ ppm (Vol.) 5.39 lbs/hr
(2) NO _x	_____ ppm (Vol.) 14.82 lbs/hr	(5) _____ ppm (Vol.) _____ lbs/hr
(3) CO	_____ ppm (Vol.) 33.69 lbs/hr	(6) _____ ppm (Vol.) _____ lbs/hr

E. Does process vent through the control device? YES NO

- If YES continue and fill out the appropriate SECTION H - CONTROL EQUIPMENT
- If NO skip to SECTION I - MISCELLANEOUS INFORMATION

F. Can the control equipment be bypassed: (If Yes, explain) YES NO

3. ATMOSPHERIC EMISSIONS

A. Particulate matter emissions (lbs/hr or gr/DSCF)

PM10: 0.011, PM2.5: 0.007 lb/hr

B. Gaseous contaminant emissions

Contaminants	Concentration	VOC Contaminants	Concentration
(1) SO _x	_____ ppm (Vol.) 0.02 lbs/hr	(4) VOC	_____ ppm (Vol.) 0.02 lbs/hr
(2) NO _x	_____ ppm (Vol.) 2.70 lbs/h	(5)	_____ ppm (Vol.) _____ lbs/hr
(3) CO	_____ ppm (Vol.) 3.37 lbs/h	(6)	_____ ppm (Vol.) _____ lbs/hr

SECTION G - FLUE AND AIR CONTAMINANT EMISSION INFORMATION

1. STACK AND EXHAUSTER

GSTAC-02 - G-02

A. Outlet volume of exhaust gases

25,704 CFM @ 675 °F _____ % Moisture

B. Exhauster (attach fan curves)

_____ in w.g. _____ HP @ _____ RPM

C. Stack height above grade (ft)

50

Grade elevation (ft)

140

Distance from discharge to nearest property line(ft)

87

D Stack diameter (ft) or Outlet duct area (sq. ft.)

2.46 ft

E Weather Cap

 YES NO

F. Indicate on an attached sheet the location of sampling ports with respect to exhaust fan, breeching, etc. Give all necessary dimensions.

2. POTENTIAL PROCESS EMISSIONS (OUTLET FROM PROCESS, BEFORE ANY CONTROL EQUIPMENT)

A. Particulate loading (lbs/hr or gr/DSCF)

PM10: 0.011, PM2.5: 0.007 lb/hr

B. Specific gravity of particulate (not bulk density)

N/A

C Attached particle size distribution information

N/A

D. Specify gaseous contaminants and concentration

Contaminant	Concentration	VOC Contaminants	Concentration
(1) SO _x	_____ ppm (Vol.) 0.02 lbs/hr	(4) VOC	_____ ppm (Vol.) 5.39 lbs/hr
(2) NO _x	_____ ppm (Vol.) 14.82 lbs/hr	(5) _____	_____ ppm (Vol.) _____ lbs/hr
(3) CO	_____ ppm (Vol.) 33.69 lbs/hr	(6) _____	_____ ppm (Vol.) _____ lbs/hr

E. Does process vent through the control device? YES NO

- If YES continue and fill out the appropriate SECTION H - CONTROL EQUIPMENT

- If NO skip to SECTION I - MISCELLANEOUS INFORMATION

F. Can the control equipment be bypassed: (If Yes, explain) YES NO

3. ATMOSPHERIC EMISSIONS

A. Particulate matter emissions (lbs/hr or gr/DSCF)

PM10: 0.011, PM2.5: 0.007 lb/hr

B. Gaseous contaminant emissions

Contaminants	Concentration	VOC Contaminants	Concentration
(1) SO _x	_____ ppm (Vol.) 0.02 lbs/hr	(4) VOC	_____ ppm (Vol.) 0.02 lbs/hr
(2) NO _x	_____ ppm (Vol.) 2.70 lbs/h	(5) _____	_____ ppm (Vol.) _____ lbs/hr
(3) CO	_____ ppm (Vol.) 3.37 lbs/h	(6) _____	_____ ppm (Vol.) _____ lbs/hr

SECTION H - CONTROL EQUIPMENT, CONTINUED**10. ABSORPTION EQUIPMENT (IF APPLICABLE)**

A. Manufacturer		B. Type		C. Model No.	
D. Volume of gases handled (ACFM)	E. Design inlet volume (ACFM)	F. Inlet temperature (°F)	G. Configuration <input type="checkbox"/> Counter-current <input type="checkbox"/> Cross flow <input type="checkbox"/> Cocurrent flow		
H. Pressure drop (water gage)		I. Absorbent type and concentration		J. Retention time (sec)	
K. Inlet concentration		L. Outlet concentration		M. Overall efficiency (%)	
N. Describe pH and/or other monitoring and controls					
O. Type packing and size (if applicable)		P. Height of packing (ft)	Q. Number of trays	R. Diameter of tower (ft)	
S. Attach equilibrium data for absorber (If applicable)					

11. OTHER CONTROL EQUIPMENT (IF APPLICABLE)

A. Manufacturer Steuler		B. Type SCR/oxidation catalyst system		C. Model No. DeNOx-J624H01/6113	
D. Volume of gases handled (ACFM)		E. Design inlet temperature (ACFM)		F. Inlet temperature (°F)	
G. Inlet concentration (lbs/hr or gr/DSCF)		H. Outlet concentration (lbs/hr or gr/DSCF)		I. Overall efficiency (%) 81.8% NOx; 90% CO; 62.5% VOC; 87.5% CH2O	
J. Attach particle size efficiency curve or other efficiency information.					
K. Describe fully, giving important parameters and method of operation.					

- Provide control equipment information on this page if it pertains to this application, otherwise remove this page from the application.
- If there are more of the same type of control equipment, copy that page and fill in the information as indicated.
- Control equipment can be found from a manufacturer catalogue or vendors.

SECTION H - CONTROL EQUIPMENT, CONTINUED**12. COSTS****A. List costs associated with control equipment. (List individual controls separately)**

Control Equipment Cost:

Direct Cost:

Indirect Cost:

B. Estimated annual operating costs of control equipment only.**13. Describe modifications to control equipment in detail.**

N/A

14. Describe in detail the method of dust removal from the air cleaning and methods of controlling fugitive emissions from dust removal, handling and disposal.

N/A

15. Does air cleaning device employ hopper heaters, hopper vibrators or hopper level detectors? If so, describe.

N/A

16. Attach manufacturer's performance guarantees and/or warranties for each of the major components of the control system (or complete system).**17. Attach the maintenance schedule for the control equipment and any part of the process equipment that if in disrepair would increase the air contaminant emissions. Periodic maintenance reports are to be submitted to the Department.****18. Attach any and all additional information necessary to thoroughly evaluate the control equipment.**

- Provide control equipment information on this page if it pertains to this application, otherwise remove this page from the application.
- If there are more of the same type of control equipment, copy that page and fill in the information as indicated
- Control equipment can be found from a manufacturer catalogue or vendors.

SECTION I - MISCELLANEOUS INFORMATION

1. Specify monitoring and recording devices will be used for monitoring and recording of the emission of air contaminants. Provide detailed information to show that the facilities provided are adequate. Include cost and maintenance information.

- | | | |
|--|--|---|
| <input type="checkbox"/> Opacity monitoring system | <input type="checkbox"/> SO _x monitoring system | <input type="checkbox"/> NO _x monitoring system |
| <input type="checkbox"/> CO monitoring system | <input type="checkbox"/> CO ₂ monitoring system | <input type="checkbox"/> Oxygen monitoring system |
| <input type="checkbox"/> HCL monitoring system | <input type="checkbox"/> TRS monitoring system | <input type="checkbox"/> H ₂ S monitoring system |
| <input type="checkbox"/> Temperature monitoring system | <input type="checkbox"/> Stack flow monitoring system | <input type="checkbox"/> Other _____ |

If checked, provide manufacturer's name, model no. and pertinent technical specifications.

N/A

2. Attach Air Pollution Episode Strategy (if applicable)

N/A

3. If the source is subject to 25 Pa. Code Subchapter E, New Source Review requirements,

a. Demonstrate the availability of emission offset (if applicable)

N/A

b. Provide an analysis of alternate sites, sizes, production processes and environmental control techniques demonstrating that the benefits of the proposed source outweigh the environmental and social costs.

N/A

4. Attach calculations and any additional information necessary to thoroughly evaluate compliance with all the applicable requirements of Article III of the rules and regulations of Philadelphia Air Management, Pennsylvania Department of Environmental Protection and those requirements promulgated by the Administrator of the United States Environmental Protection Agency pursuant to the provisions of the Clean Air Act.

5. List all attachments included in this Application.

Attachment A - Plan Approval Application Form
 Attachment B - Compliance Review Form
 Attachment C - Process Flow Diagrams
 Attachment D - Emissions Estimates
 Attachment E - Vendor Data

Attachment B – Compliance Review Form



Prepared for SEPTA
November 2016



Plan Approval Application for Combined Heat and Power Plant at SEPTA's Roberts Complex



Prepared for SEPTA
November 2016



Plan Approval Application for Combined Heat and Power Plant at SEPTA's Roberts Complex

Prepared By
Jennifer Ehrhardt

Reviewed By
Kevin W. Voit

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Acronyms and Abbreviations

%	Percent
AQCR	Air quality control region
CAM	Compliance Assurance Monitoring
CH ₂ O	Formaldehyde
CHP	Combined Heat and Power Plant
CO	Carbon monoxide
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
g/hp-hr	Grams per horsepower-hour
GHG	Greenhouse gas
HAPs	Hazardous air pollutants
hp	Horsepower
MMBtu/hr	Million British thermal units per hour
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NNSR	Nonattainment New Source Review
NO _x	Nitrogen oxides
NOTR	Northeast Ozone Transport Region
NSPS	New Source Performance Standards
O ₂	Oxygen
O ₃	Ozone
PAMS	Philadelphia Air Management Services
Pb	Lead
PM _{2.5}	Particulate matter with an aerodynamic diameter of less than or equal to 2.5 microns
PM ₁₀	Particulate matter with an aerodynamic diameter of less than or equal to 10 microns
ppm	Parts per million
ppmvd	Parts per million by volume, dry basis
PSD	Prevention of Significant Deterioration
PTE	Potential to emit
RACT	Reasonably Available Control Technology

RICE	Reciprocating internal combustion engine
SCR	Selective catalytic reduction
SEPTA	Southeastern Pennsylvania Transportation Authority
SIP	State Implementation Plan
SMOP	Synthetic Minor Operating Permit
SO ₂	Sulfur dioxide
tpy	Tons per year
USEPA	United States Environmental Protection Agency
VOC	Volatile organic compound

List of Attachments

Attachment A – Plan Approval Application Form

Attachment B – Compliance Review Form

Attachment C – Process Flow Diagrams

Attachment D – Emissions Estimates

Attachment E – Vendor Data

1.0 Introduction

1.1 Background

Southeastern Pennsylvania Transportation Authority (SEPTA) owns and operates the Roberts Complex (the Facility), Plant ID: 01573, under synthetic minor operating permit (SMOP) number S12-019. The Roberts Complex consists of the Roberts Train Yard, Midvale Bus Facility, and Liberty Yard.

These facilities comprise the following equipment:

- Midvale Bus Facility
 - Six (6) boilers;
 - Six (6) space heaters;
 - One (1) pressure washer;
 - One (1) emergency generator;
 - Spray booth with spray booth heater;
 - Windshield washer fluid tank; and
 - Gasoline tank with Stage 2 vapor recovery
- Roberts Train Yard
 - Four (4) boilers
- Liberty Yard
 - One (1) engine-driven welder; and
 - Sandblasting activities.

There are also five (5) parts washers facility-wide.

1.2 Description of Modifications

SEPTA is submitting this plan approval application for the installation of a Combined Heat and Power Plant (CHP) at its Midvale Bus Facility, located at 4301 Wissahickon Avenue in Philadelphia, Pennsylvania. It will be owned by SEPTA and operated by NORESKO. The CHP will consist of two (2) natural gas-fired generators rated at 6,113 horsepower (hp) each.

1.3 The Applicant

The applicant for this air permit application is SEPTA. The primary contact with overall responsibility for this application is:

Responsible Official:

Scott Sauer
Assistant General Manager, System Safety
Southeastern Pennsylvania Transportation Authority
1234 Market Street, 6th Floor
Philadelphia, PA 19107
Phone: (215) 580-3754

The primary contact for SEPTA for this application is:

Richard Harris
Environmental Officer
Southeastern Pennsylvania Transportation Authority
1234 Market Street, 6th Floor
Philadelphia, PA 19107
Phone: (215) 580-8144

The primary contact for NORESKO for this application is:

Scott B. Hutchins, PE
Director, Engineering
NORESCO
One Research Drive
Westborough, MA 01581
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This application was prepared by:

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Attachments

Attachment A – Plan Approval Application Form

Attachment B – Compliance Review Form

Attachment C – Process Flow Diagrams

Attachment D – Emissions Estimates

Attachment E – Vendor Data

2.0 Process Description – Combined Heat and Power Plant

SEPTA will install two (2) natural gas-fired generators rated at 6,113-horsepower (hp) each to produce steam and electricity for use within the Midvale Bus Facility. A portion of the electricity generated by the CHP will also be used as supplemental electricity for regional railcars. As mentioned above, SEPTA will own the equipment and NORESCO will operate the CHP. Each engine will be equipped with a selective catalytic reduction (SCR) system to reduce emissions of nitrogen oxides (NO_x) and an oxidation catalyst to reduce carbon monoxide (CO), formaldehyde (CH_2O), and volatile organic compound (VOC) emissions. These control devices provide a manufacturer-guaranteed reduction of the following:

- 81.8% NO_x reduction;
- 90% CO reduction;
- 62.5% VOC reduction; and
- 87.5% CH_2O reduction.

SEPTA requests the retention of its synthetic minor status by restricting NO_x , VOC, and total hazardous air pollutant (HAP) emissions each to less than 25 tons per year (tpy), as well as individual HAP emissions to less than 10 tpy. Rolling 12-month emission calculations will be performed to ensure these thresholds are not exceeded.

3.0 Regulatory Review

Federal, state, and county air pollution control and permitting requirements were reviewed to ascertain applicability and confirm compliance with the applicable regulations. Since the Facility is located in Philadelphia County, which promulgated its own air regulations in addition to the Pennsylvania Code, SEPTA must comply with both county and state regulations. This section includes a discussion of federal, Pennsylvania, and Philadelphia County ambient air quality standards followed by discussions of other federal, Pennsylvania, and Philadelphia County regulations.

3.1 National Ambient Air Quality Standards (NAAQS)

As mandated by the Clean Air Act of 1970, the United States Environmental Protection Agency (USEPA) established ambient air quality standards to protect public health (primary standards) and public welfare (secondary standards). Primary standards are based on observable human health responses, and are set at levels that provide an adequate margin of safety for sensitive segments of the population. Secondary standards are intended to protect non-health-based public interests, such as structures, vegetation, and livestock. The more stringent of the primary or secondary standards are applicable to any required modeling evaluation.

Pennsylvania adopts the NAAQS per 25 Pa. Code § 131.2 and has promulgated additional AAQS for beryllium, fluorides, and hydrogen sulfide. Philadelphia County adopts the NAAQS as well.

Also pursuant to the 1970 Clean Air Act, states were required to delineate air quality control regions (AQCRs) and to adopt State Implementation Plans (SIPs) to provide for attainment of the NAAQS as expeditiously as practical within certain time limits. The 1977 Clean Air Act Amendments, in Section 107, required USEPA and states to identify by category those AQCRs (or portions thereof) meeting and not meeting the NAAQS. Areas meeting the NAAQS are termed attainment areas, and areas not meeting the NAAQS are termed nonattainment areas. Areas that have insufficient data to make a determination of attainment/nonattainment are unclassified or are not designated, but are treated as being attainment areas for permitting purposes. The designation of an area is made on a pollutant-by-pollutant basis.

SEPTA's Roberts Complex is located in Philadelphia County, Pennsylvania. Attainment status designations are found in 40 CFR Part 81. As shown in Table 3-1, Philadelphia County is considered attainment (better than national standards or unclassifiable/attainment) for all criteria pollutants except ozone (O₃).

Table 3-1 Attainment Status Designations

Pollutant	Philadelphia County, PA
SO ₂	Better than National Standards (Attainment)
PM-10	Unclassifiable/Attainment
1997 PM-2.5 (Annual NAAQS)	Attainment (4/21/2015)
2012 PM-2.5 (Annual NAAQS)	Unclassifiable/Attainment
PM-2.5 (24-hour NAAQS)	Attainment (4/21/2015)
NO ₂	Unclassifiable/Attainment
CO	Unclassifiable/Attainment
1997 8-hour O ₃	Moderate Nonattainment
2008 8-hour O ₃	Marginal Nonattainment
Pb	Unclassifiable/Attainment

3.2 Federal Regulations

Potentially applicable Federal regulations are:

- Prevention of Significant Deterioration (PSD),
- Nonattainment New Source Review (NNSR),
- New Source Performance Standards (NSPS),
- National Emission Standards for Hazardous Air Pollutants (NESHAPs),
- Greenhouse Gas Monitoring and Reporting Requirements, and
- Compliance Assurance Monitoring (CAM).

3.2.1 Prevention of Significant Deterioration

The 1977 Clean Air Act Amendments establish the PSD permitting program to limit the degradation of air quality in areas that are currently in attainment of the NAAQS. PSD review (per 40 CFR 52.21) is a federally-mandated program which applies to new major sources of regulated pollutants and major modifications to existing major sources. PSD review is a pollutant specific review. It applies only to those pollutants for which a project is considered major by comparison to major source thresholds or major modification thresholds (PSD significant emission rates) and the project area is designated as attainment or unclassified. For a new facility to be subject to PSD review, the project's potential to emit (PTE) must exceed the PSD major source thresholds which are:

- 100 tpy if the source type is one of 28 named source categories, or
- 250 tpy for all other sources.

SEPTA's Roberts Complex is not an existing major source for PSD purposes, nor does the CHP Project belong to any of the 28 named source categories. More specifically, the total heat input for the CHP is less than the threshold of 250 million British thermal units per hour (MMBtu/hr) for source category "fossil fuel-fired steam electric plant." As such, the applicable PSD major source threshold is 250 tpy.

Based on calculations of the Project's PTE, each pollutant has a PTE that is less than 250 tpy; therefore, the Project is not subject to PSD permitting requirements.

3.2.2 Nonattainment New Source Review

NNSR applies to new major sources and major modifications located in nonattainment areas. The Project is located in an area that has been designated moderate and marginal nonattainment for the 1997 and 2008 8-hour ozone standards, respectively, and is currently a maintenance area relative to the particulate matter with an aerodynamic diameter of less than or equal to 2.5 microns (PM_{2.5}) standard. Pennsylvania is also located within the Northeast Ozone Transport Region (NOTR). NO_x and VOC emissions are potentially subject to NNSR due to their role as precursors to the photochemical formation of O₃.

The NNSR applicability thresholds are 25 tpy each for NO_x and VOC. As presented in Attachment D, potential emissions of all criteria pollutants, including NO_x, VOC, sulfur dioxide (SO₂), and PM_{2.5} for the Project are below the NNSR applicability thresholds. Therefore, NNSR is not applicable.

3.2.3 New Source Performance Standards

USEPA promulgated NSPS for new, reconstructed, or modified sources of air pollution; these standards are codified at 40 CFR Part 60. Pollutant-specific standards are set for various categories of sources. Subpart JJJJ is applicable to the new generators.

Subpart JJJJ (Standards of Performance for Stationary Spark Ignition Internal Combustion Engines) applies to stationary spark ignition engine manufacturers and owners/operators for those engines that commence construction after June 12, 2006 and are manufactured on or after July 7, 2007 for engines with a maximum engine power greater than or equal to 500 hp (except lean burn engines with a maximum engine power greater than or equal to 500 hp and less than 1,350 hp). The new generators will be rated at 6,113 hp.

Per 40 CFR 60.4233(e), the engines must comply with the emission standards in Table 1 to Subpart JJJJ. For natural gas-fired engines manufactured after July 1, 2010, the applicable emission limits for engines greater than 500-hp rated capacity are specified as follows:

- For NO_x, the limit is 1.0 grams per horsepower-hour (g/hp-hr) or 82 parts per million by volume, dry basis (ppmvd) at 15 percent oxygen (O₂);
- For CO, the limit is 2.0 g/hp-hr or 270 ppmvd at 15 percent O₂; and
- For VOC, the limit is 0.7 g/hp-hr or 60 ppmvd at 15 percent O₂.

Each generator is equipped with a SCR/oxidation catalyst system. Based on manufacturer data, the engines will comply with these emission limits.

In accordance with 40 CFR 60.4243(b)(1), SEPTA will purchase engines certified to procedures specified in 40 CFR 60 Subpart JJJJ for the same model year. They will operate and maintain the engines in accordance with the manufacturer's emission-related written instructions and will keep records of conducted maintenance.

An initial notification with the information outlined in 40 CFR 60.4245(c) will be submitted no later than 30 days after the start of construction.

3.2.4 National Emission Standards for Hazardous Air Pollutants

NESHAPs are promulgated under 40 CFR Part 61 and Part 63 for HAP emissions from specific processes. The Facility is a minor (area) source of HAP emissions and is not subject to NESHAPs for major sources. 40 CFR 63 Subpart ZZZZ is applicable to the new generators.

Subpart ZZZZ applies to major and area sources of HAPs with a stationary reciprocating internal combustion engine (RICE). Per 40 CFR 63.6590(c)(1), because the natural gas-fired engine is new and located at an area source, the engines comply with the requirements of Subpart ZZZZ by meeting the requirements of 40 CFR Part 60, Subpart JJJJ. As described in Section 3.2.3, the engines will comply with Subpart JJJJ.

3.2.5 Greenhouse Gas Monitoring and Reporting

Federal greenhouse gas (GHG) monitoring and reporting regulations (40 CFR Part 98) require specific facilities to monitor and report GHG emissions such as carbon dioxide (CO₂), methane and nitrous oxide if certain thresholds are exceeded. Furthermore, the rule requires facilities that emit 25,000 metric tons or more of GHG measured in CO₂ equivalents (CO₂e) from combustion sources such as boilers or process heaters to report GHG emissions from these sources.

40 CFR 98, Subpart C reporting requirements are applicable if 25,000 metric tons or more are emitted from all sources at the Facility. Combustion units associated with this project include the two generators, which alone have the potential to exceed the 25,000 metric ton CO₂e threshold. Therefore the Facility must perform annual calculations to determine the actual CO₂e emissions from applicable sources. SEPTA is subject to the reporting requirements of 40 CFR Part 98 if actual emissions exceed the 25,000-metric ton threshold. SEPTA implements a fuel monitoring program to tabulate annual greenhouse gas emissions, and will submit the report, if required, by March 31 of each year as specified in 40 CFR Part 98.

3.2.6 Compliance Assurance Monitoring Plan

The requirements for development of a CAM plan are contained in 40 CFR Part 64. According to USEPA, the objective of a CAM plan is to "provide a reasonable assurance of compliance" [Federal Register, Volume 62, Number 204, Wednesday, October 22, 1997, p.54900] with enforceable emission limits.

The CAM requirements in 40 CFR Part 64 apply to an emission unit that:

- Is located at a major source subject to a (Clean Air Act Amendments) Title V permit and is subject to an emission limitation or standard for an applicable regulated air pollutant,
- Uses a control device to achieve compliance with the emission limit, and
- Has potential precontrolled emissions that are equal to or greater than 100 percent of the major source classification threshold.

SEPTA's Roberts Complex limits emissions to remain below Title V permitting thresholds. As such, it is not a major source subject to a Title V permit. Therefore, a CAM plan is not required for the Project.

3.3 State Regulations

Pennsylvania air regulations are promulgated in 25 Pa. Code Article III (Air Resources). Applicable sections are discussed below.

3.3.1 Chapter 121 General Provisions

In accordance with the definition outlined in this chapter, a major facility is one which has the potential to emit 25 tpy or more of NO_x or VOC and is located in Bucks, Chester, Delaware, Montgomery, or Philadelphia County. The Facility is not considered a major facility since potential NO_x and VOC emissions will be limited to less than 25 tpy.

3.3.2 Chapter 122 National Standards of Performance for New Stationary Sources

NSPS are described above in Section 3.2.3. Chapter 122 adopts Federal NSPS requirements (40 CFR 60) by reference.

3.3.3 Chapter 123 Standards for Contaminants

3.3.3.1 Sections 123.1 & 123.2 Fugitive Emissions

SEPTA is prohibited from emitting fugitive particulate into the atmosphere if the emissions are visible at the point the emissions pass outside the facility property line. There are no potential fugitive particulate emissions from the Project.

3.3.3.2 Section 123.13 Particulate Matter Emissions

PM emissions from each generator will not exceed 0.04 grain per dry standard cubic foot when the effluent gas volume is less than 150,000 dscfm in accordance with §123.13(c)(1)(i). The proposed generators will be natural gas-fired and are inherently compliant with this requirement.

3.3.3.3 Section 123.21 Sulfur Compound Emissions

SEPTA may not permit the emission into the outdoor atmosphere from a source if the concentration of SO₂ in the effluent gas exceeds 500 ppmvd. The proposed generators will be natural gas-fired and are inherently compliant with this requirement.

3.3.3.4 Section 123.31 Odor Emissions

Emissions of malodorous contaminant from any source such that they are detectable outside SEPTA's property line are prohibited. There is no potential for odorous emissions from the Project.

3.3.3.5 Section 123.41 Visible Emissions

In accordance with this section, the opacity of visible air contaminants must not be either equal to or greater than 20% for a period or periods aggregating more than 3 minutes in any one hour or equal to or greater than 60% at any time. The proposed generators will be natural gas-fired and are inherently compliant with this requirement.

3.3.4 Chapter 124 National Emission Standards for Hazardous Air Pollutants

NESHAP are described above in Section 3.2.4. Chapter 124 adopts Federal NESHAP requirements (40 CFR 61) by reference.

3.3.5 Chapter 127 Construction, Modification, Reactivation and Operation of Sources

3.3.5.1 Subchapter B. Plan Approval Requirements

SEPTA is submitting this plan approval application to Philadelphia Air Management Services (PAMS) for a new CHP facility consisting of two natural gas-fired generators. All required forms and information are included.

3.3.5.2 Subchapter D. Prevention of Significant Deterioration of Air Quality

Subchapter D adopts the PSD requirements promulgated by the EPA under the Clean Air Act, as described above in Section 3.2.1.

3.3.5.3 Subchapter E. New Source Review

As described above in Section 3.3.1, SEPTA's Roberts Complex is considered a minor facility. Therefore, this section does not apply.

3.3.5.4 Subchapter F. Operating Permit Requirements

An administrative amendment will be submitted to revise the Facility's SMOP No. S12-019 in accordance with §127.450 once the equipment has been installed.

3.3.5.5 Subchapter I. Plan Approval and Operating Permit Fees

The plan approval application fee of \$1,700 is provided with this application in accordance with §127.702(d)(3).

3.3.6 Chapter 129 Standards for Sources

3.3.6.1 Sections 129.91 through 129.95 Stationary Sources of NO_x and VOCs

As discussed above in Section 3.3.1, SEPTA's Roberts Complex is a minor NO_x emitting facility. Therefore, this section does not apply.

3.3.6.2 Section 129.203 Additional NO_x Requirements

This section describes NO_x standards for stationary internal combustion engines rated at greater than 1,000 hp and located in Bucks, Chester, Delaware, Montgomery, or Philadelphia County. The proposed generators are each rated at 6,113 hp and located in Philadelphia County; therefore, they must comply with 25 Pa. Code §129.203 and 25 Pa. Code §129.204. Since the proposed NO_x emissions after control are 0.20 g/bhp-hr, emissions from the generators will be below the NO_x limit for a spark ignition stationary internal combustion engine of 3.0 grams of NO_x per bhp-hr. The required calculations will be performed annually to demonstrate that no NO_x allowances will need to be surrendered.

3.3.7 Chapter 131 Ambient Air Quality Standards

Section 131.2 adopts the NAAQS promulgated by the EPA under the Clean Air Act, as described above in Section 3.1.

3.3.8 Chapter 135 Reporting of Sources

In accordance with §135.3, SEPTA submits a source report by March 1st of each year for the previous calendar year. Since the facility is located in an area that is designated marginal and moderate ozone nonattainment, the actual emissions of NO_x and VOCs from each source and the description of the method used to calculate these emissions must be submitted to the Department in order to show compliance with §135.21. This information is included with SEPTA's yearly emission statement for the Facility.

3.3.9 Chapter 139 Sampling and Testing

SEPTA will comply with the applicable testing and sampling requirements of this chapter.

3.4 Philadelphia County Regulations

Philadelphia County air regulations are promulgated in the Air Management Regulations of the Air Pollution Control Board. Applicable sections are discussed below.

3.4.1 Regulation I General Provisions

SEPTA submits an annual emission statement by March 1st of each year for the previous calendar year, which includes actual emissions of NO_x and VOC from each source. SEPTA will continue to comply with all applicable testing requirements in accordance with Section III. of this regulation.

3.4.2 Regulation II Air Contaminant and Particulate Matter Emissions

In accordance with Section I.A, no open burning will be performed. SEPTA complies with the visible and fugitive dust emissions regulations under Sections IV and VIII.

3.4.3 Regulation III Control of Sulfur Compound Emissions

Section I applies to fuel oil; the generators will be natural gas-fired. Section II requires that no person permit a source to emit SO₂ in excess of an average 0.4 ppm by volume for any 5 minute period when measured at ground level, or in excess of 0.05 by volume. The proposed generators will be natural gas-fired and are inherently compliant with this requirement.

3.4.4 Regulation VII Control of Emissions of Nitrogen Oxides from Stationary Sources

This regulation only applies to fuel burning equipment equal to or greater than 250 MMBtu/hr heat input; therefore, it is not applicable to the proposed generators.

3.4.5 Regulation VIII Control of Emissions of Carbon Monoxide from Stationary Sources

CO emissions from each generator will comply with the limit of one (1) percent by volume in the exhaust.

3.4.6 Regulation XIII Pertaining to the Construction, Modification, Reactivation and Operation of Sources

Regulation XIII adopts Chapter 127 of the Pennsylvania Code, as described above in Section 3.3.5.

**Attachment A -- Plan Approval
Application Form**



CITY OF PHILADELPHIA
 DEPARTMENT OF PUBLIC HEALTH
 PUBLIC HEALTH SERVICES
 AIR MANAGEMENT SERVICES

Air Management Services
 321 University Avenue
 Philadelphia PA 19104-4543
 Phone: (215) 685-7572
 FAX: (215) 685-7593

AIR POLLUTION CONTROL ACT COMPLIANCE REVIEW FORM

Filing Date:	<input checked="" type="checkbox"/> New Filing	<input type="checkbox"/> Amended Filing of __/__/__	<input type="checkbox"/> New Operating Permit
			<input type="checkbox"/> Periodic

Application No:	<input checked="" type="checkbox"/> New Plan Approval	<input type="checkbox"/> Renew Plan Approval	<input type="checkbox"/> Operating Permit
			<input type="checkbox"/> Change Owner

Applicant: (non-corporations attach documentation of legal name) Southeastern Pennsylvania Transportation Authority	Address: 1234 Market St. 6th Fl, Philadelphia PA 19107	Tax ID No.: 23-1642972
		Telephone No.: 215-580-8144

Form of Management:
 Individual Fictitious name Partnership Corporation Government Other:

If applicant is a corporation attach list of names, business addresses, states of incorporation, taxpayer IDs , and relationships to applicant.

Describe Business Activities:
 Local and Suburban Transit - Bus maintenance facility

Does the applicant have any other related parties operating in the Commonwealth of Pennsylvania? Yes No

If Yes attach a list of :

- Name, Mailing Address, Telephone, and Relationship to the applicant of all related parties, and
- Name and Business Address of the plant manager and general partners of the applicant.

List all plan approvals or operating permits issued by the Department or an approved local air pollution control agency under the APCA to the applicant or related parties that are currently in effect or have been in effect at any time 5 years prior to the date on which this form is notarized. Attach additional sheets as necessary.

<u>Air Contamination Source</u>	<u>Plan Approval/ Operating Permit Number</u>	<u>Location</u>	<u>Issuance Date</u>	<u>Expiration Date</u>
Please see attached page.				

112216602

**SEPTA Roberts Complex
Compliance Review Form - List of Plan Approvals or Operating Permits**

Air Contamination Source	Plan Approval / Operating Permit Number	Location	Issuance Date	Expiration Date
PLID: 10341	111051 (Air Pollution License)	1234 Market Street	6/30/2011	N/A
PLID: 04174	N10-24	Allegheny	3/22/2011	3/22/2016
PLID: 04172	S10-003	Berridge and Courtland	1/20/2012	1/19/2017
PLID: 04172	12167 (Install. Permit)	Berridge and Courtland	1/23/2013	7/24/2014
PLID: 10328	511069 (Air Pollution License)	Broad and Lehigh	3/12/2012	N/A
PLID: 10328	510278 (Air Pollution License)	Broad and Lehigh	3/12/2012	N/A
PLID: 10328	510279 (Air Pollution License)	Broad and Lehigh	3/12/2012	N/A
PLID: 04178	N11-033	Callowhill	1/24/2012	1/23/2017
PLID: 04178	12141-12142 (Install. Permit)	Callowhill	7/11/2012	7/11/2013
PLID: 04175	N12-011	Comly	8/27/2012	8/27/2017
PLID: 10338	711042 (Air Pollution License)	Elevator/Escalator HQ	7/23/2012	N/A
PLID: 10337	N12-010	Elmwood	1/23/2013	1/23/2018
PLID: 10332	N12-012	Fernrock	4/30/2013	4/30/2018
PLID: 10259	N11-027	Frankford Trans. Complex	5/4/2012	5/4/2017
PLID: 04177	N11-026	Germantown Brake Shop	5/4/2012	5/4/2017
PLID: 10336	N11-032	Overbrook	1/24/2012	1/23/2017
PLID: 10178	108072 (Air Pollution License)	Pine Street Sub-Station	6/17/2011	N/A
PLID: 01573	S12-019	Roberts Complex	11/19/2012	11/19/2017
PLID: 01573	13302-13303 (Install. Permit)	Roberts Complex	1/29/2014	1/29/2015
PLID: 04176	N12-023	Southern	1/8/2013	1/8/2018
PLID: 04015	N12-024	Wayne	1/23/2013	1/23/2018
PLID: 04015	13082 (Install. Permit)	Wayne	7/9/2013	7/9/2014
PLID: 04014	12158 (Install. Permit)	Woodland	8/8/2012	8/8/2013
PLID: 04014	N12-015	Woodland	8/27/2012	8/27/2017
PLID: 10429	13126 (Install. Permit)	Market East Station - 12th & Filbert	7/9/2013	7/9/2014
PLID: 10421	13033 (Install. Permit)	Butler Substation	7/9/2013	7/9/2014
PLID: 10422	13034 (Install. Permit)	46th & Market Substation	7/9/2013	7/9/2014
PLID: 10423	13035 (Install. Permit)	30th St. Station - SEPTA Wing	7/9/2013	7/9/2014
PLID: 10420	13032 (Install. Permit)	Broad St. Substation	7/9/2013	7/9/2014
PLID: 10428	13125 (Install. Permit)	Suburban Station - 16th & JFK	7/9/2013	7/9/2014
PLID: 10427	13124 (Install. Permit)	Suburban Station - 18th & Cuthbert	7/9/2013	7/9/2014
PLID: 04015	13082 (Install. Permit)	Wayne Junction Station	7/9/2013	7/9/2014
PLID: 10430	13127 (Install. Permit)	Market East Station - 10th & Filbert	7/9/2013	7/9/2014

List all incidents of deviations of the APCA, regulations, terms and conditions of an operating permit or plan approval or order by applicant or any related party, using the following format grouped by source and location in reverse chronological order. This list must include items both currently known and unknown to the Department. Attach additional sheets as necessary. See the definition of "deviations" for further clarification.

<u>Date</u>	<u>Location</u>	<u>Plan Approval/ Operating Permit #</u>	<u>Nature of Deviation</u>	<u>Incident Status: Litigation Existing/Continuing; or Corrected/Date</u>
07/19/2010	Berridge and Courtland	S04-004	Installation Without Permit	Corrected
12/16/2011	Berridge and Courtland	S04-004	Failure to Pay Annual Fee	Corrected
03/02/2011	Berridge and Courtland	S04-004	Failure to Submit Annual Mon. f pt.	Corrected
05/05/2015	Roberts Complex	S12-019	Multiple Violations of 40 CFR 61.101 Subpart JJJJJJ	Corrected

CONTINUING OBLIGATION: Applicant is under a continuing obligation to update this form if any additional documented conduct occurs between the date of submission and Department action on the application

I, Scott Sauer, being duly sworn according to law, depose and state under penalty of law as provided in 18 Pa. C.S. §4944 and Section 9(b)(2) of the Air Pollution Control Act, 35 P.S. §4009(b)(2), that I am the representative of the Applicant/Permittee, identified above, authorized to make this affidavit. I further state that the information provided with this form, after reasonable inquiry, is true and complete to the best of my belief and that there are reasonable procedures in place to insure that documented conduct and deviations are identified and made part of the compliance review information contained in the Compliance Review Form.

COMMONWEALTH OF PENNSYLVANIA
 NOTARIAL SEAL
 CRISTAL SWIFT, Notary Public
 City of Philadelphia, Phila. County
 My Commission Expires February 7, 2018


 (Signature)

Scott Sauer

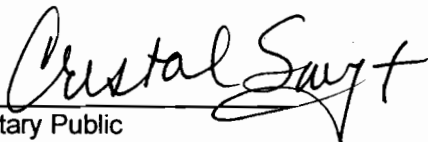
(Print or Type Name)

Assistant General Manager System Safety

(Print or Type Title)

Sworn to and subscribed before me this 22nd day of NOVEMBER 2016.

Sworn to and subscribed before me this 22nd day of November 2016

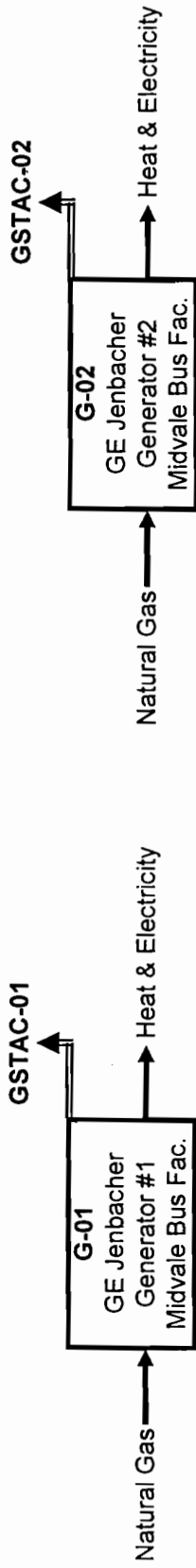

 Notary Public

Affix Corporate Seal and attach copy of Articles of Incorporation

(Regarding corporate seal and signatures, please refer to Item 4 in instructions)

Attachment C – Process Flow Diagrams

**SEPTA Roberts Complex
Process Flow Diagrams**



Attachment D -- Emissions Estimates

**NORESKO / SEPTA
Midvale Bus Facility**

Table 1 - GE Engine

Horsepower
Total Heat Input
Operating Hours
Natural Gas Heat Content
Fuel Consumption
Quantity

Pollutant	Reference
NO _x	antee
CO	antee
CO ₂ e	bpart C
PM ₁₀	√ from NG Combustion"
PM _{2.5}	√ from NG Combustion"
VOC	antee
SO ₂	7/00) - 4SLB
Formaldehyde	antee
Total HAPs (Not including Formaldehyde)	7/00) - 4SLB
Total HAPs (Including Formaldehyde)	Table 3.2-2 (7/00) - 4SLB

Note: Particulate matter emission documentation

**NORESCO / SEPTA
Midvale Bus Facility**

Table 2 - Facility Total PTE

So
New Sources PTE
G-01 & G-02 - Two (2) GE Gen
Current PTE
COMB-01 - Boiler No. 1
COMB-02 - Boiler No. 2
COMB-03 - Boiler No. 3
COMB-04 - Boiler No. 4
COMB-05 - Boiler No. 5
COMB-06 - Boiler No. 6
COMB-07 - Boiler No. 7 w/ FGF
COMB-08 - Boiler No. 8 w/ FGF
COMB-09 - Boiler No. 9
COMB-10 - Boiler No. 10
COMB-11 - Pressure Washer
COMB-12 - Space Heater No. 1
COMB-13 - Space Heater No. 2
COMB-14 - Space Heater No. 3
COMB-15 - Space Heater No. 4
COMB-16 - Space Heater No. 5
COMB-17 - Space Heater No. 6
EG-01 - Emergency Generator
WE-01 - Welder Engine
AC-01 & BLAST-01 - Sand Blas
Stage 2-01 - Stage 2 Vapor Rec
PW-01 - Five (5) Parts Washers
SB-01 - Spray Booth
CU-SB - Spray Booth Burner
TANK-01 - Windshield Washer
Unrestricted PTE
Restricted PTE - GE Engines

Attachment E -- Vendor Data

**Northeast Energy Systems
Mr Fred Farrand
SEPTA CHP Project
Two Jenbacher N/G JMS624H01 at 4440EKW.**

3. März 2016

Your reference	Our reference	Person in charge	Telefon	Fax	e-mail
SEPTA	B60301-1	Hans-Joachim Wagner	+49 26 24 / 13 338	+49 26 24 / 13-596	h.j.wagner@steuler.de

Fred:

This letter is to certify that the Steuler SCR/Oxidation catalyst system being proposed for this project will achieve reductions in the concentrations in the engine exhaust emissions as detailed below with the engine operating between 50% and 100% of rated engine output. These guarantees are based on the published engine manufacturers maximum exhaust flow and temperature and the engine raw (pre-catalyst) emissions levels as detailed below.

Oxides of Nitrogen - GE/Jenbacher Guaranteed Maximum: 1.10 Grams/BHP/Hour / 14.8 Lbs/Hour.
Steuler Guaranteed Reduction: 81.8%.
Steuler Guaranteed Post Catalyst NOx Emissions: 0.20 Grams/BHP/Hour / 2.70 Lbs/Hour.

Carbon Monoxide - GE/Jenbacher Guaranteed Maximum: 2.50 Grams/BHP/Hour / 40.4 Lbs/Hour.
Steuler Guaranteed Reduction: 90.0%.
Steuler Guaranteed Post Catalyst CO Emissions: 0.25 Grams/BHP/Hour / 3.37 Lbs/Hour.

Volatile Organic Compounds - GE/Jenbacher Guaranteed Maximum: 0.40 G/BHP/Hour / 5.39 Lbs/Hour.
Steuler Guaranteed Reduction: 62.5%.
Steuler Guaranteed Post Catalyst VOC Emissions: 0.15 Grams/BHP/Hour / 2.02 Lbs/Hour

Formaldehyde - GE/Jenbacher Guaranteed Maximum: 0.40 Grams/BHP/Hour / 5.40 Lbs/Hour.
Steuler Guaranteed Reduction: 87.5%.
Steuler Guaranteed Post Catalyst HCHO Emissions: 0.05 Grams/BHP/Hour / 0.67 Lbs/Hour.

Ammonia Slip – Steuler Guaranteed Maximum: 5 PPMVD.

Steuler's Terms and Conditions of Sale state that Steuler will guarantee that system will meet these levels for a minimum of two years or 16,000 hours of service, whichever comes first. Should the catalyst system fail to meet the required emission guarantees, and the engine exhaust flow, temperature, and emissions levels confirmed to be within the agreed to operating ranges, Steuler will make all possible effort via additional catalyst material and on-site support to correct the system design at no cost to the customer. Should Steuler be unable to bring the system into compliance, Steuler would compensate the customer in the amount not to exceed the value of the original purchase order for the SCR system.

Best regards,



i.V. H.J. Wagner
Senior Manager Catalyst Systems
STEULER-Anlagenbau GmbH & Co. KG

STEULER

- Specification Sheet -

SCR/Oxidation Catalyst System - For NOx/CO/VOC Reduction

Customer: NES
 Attention: Fred Farrand
 Job Ref: Septa

Notes: _____
 Ref. No: B60301-1
 Date: 03/02/16

Engine Mfg: Jenbacher Model No: JM3624H01
 BHP [eKW]: 6113 BHP / 4440 EKW Cycle: 4 RPM: 1500
 Fuel Type: Pipeline Natural Gas Load: 100% Hours/Year: 8,300

SCR Model DeNOx-J624H01/6113 Nbr Units: 2 SCR Controls: Closed Loop

Item Description	English	Units	Metric	Units
Engine Output	6,113	BHP	4,560	BKW
Exhaust Gas Mass Flow	51,560	Lbs/Hour	23,387	Kg/Hour
Exhaust Gas Temperature	675.0	°F	357.2	°C
Exhaust Flow - Standard Units	669,033	SCFH	18,945	SCMH
Pre-Catalyst NOx Emissions [1]	1.100	G/BHP-Hr	1.48	G/BKW-Hr
Pre-Catalyst NOx Emissions	14.82	Lbs/Hr/Eng	6.72	Kg/Hr/Eng
Pre-Catalyst NOx Emissions	61.52	TPY/Engine	55.81	Met-Tons/Year
Post-Catalyst NOx Emissions	0.200	G/BHP-Hr	0.268	G/BKW-Hr
Post-Catalyst NOx Emissions	2.695	Lbs/Hr/Eng	1.223	Kg/Hr/Eng
Post-Catalyst NOx Emissions	11.186	TPY/Engine	10.148	Met-Tons/Year
		%	81.8	%
Pre-Catalyst CO Emissions [1]	2.500	G/BHP-Hr	3.35	G/BKW-Hr
Pre-Catalyst CO Emissions	33.69	Lbs/Hr/Eng	15.28	Kg/Hr/Eng
Pre-Catalyst CO Emissions	139.82	TPY/Engine	126.84	Met-Tons/Year
Post-Catalyst CO Emissions	0.250	G/BHP-Hr	0.335	G/BKW-Hr
Post-Catalyst CO Emissions	3.369	Lbs/Hr/Eng	1.528	Kg/Hr/Eng
Post-Catalyst CO Emissions	13.982	TPY/Engine	12.684	Met-Tons/Year
		%	90.0	%
Pre-Catalyst NMEHC Emissions [1]	0.400	G/BHP-Hr	0.54	G/BKW-Hr
Pre-Catalyst NMEHC Emissions	5.39	Lbs/Hr/Eng	2.45	Kg/Hr/Eng
Pre-Catalyst NMEHC Emissions	22.37	TPY/Engine	20.30	Met-Tons/Year
Post-Catalyst NMEHC Emissions	0.150	G/BHP-Hr	0.201	G/BKW-Hr
Post-Catalyst NMEHC Emissions	2.021	Lbs/Hr/Eng	0.917	Kg/Hr/Eng
Post-Catalyst NMEHC Emissions	8.389	TPY/Engine	7.611	Met-Tons/Year
		%	62.5	%
Pre-Catalyst HCHO Emissions [1]	0.400	G/BHP-Hr	0.54	G/BKW-Hr
Pre-Catalyst HCHO Emissions	5.39	Lbs/Hr/Eng	2.45	Kg/Hr/Eng
Pre-Catalyst HCHO Emissions	22.37	TPY/Engine	20.30	Met-Tons/Year
Post-Catalyst HCHO Emissions	0.050	G/BHP-Hr	0.0671	G/BKW-Hr
Post-Catalyst HCHO Emissions	0.6738	Lbs/Hr/Eng	0.3056	Kg/Hr/Eng
Post-Catalyst HCHO Emissions	2.7964	TPY/Engine	2.5369	Met-Tons/Year
		%	87.5	%
Pressure Drop Across Catalyst/Mixer	7.0	In. WC	17.5	mbar
Urea Consumption Rate (40% Conc.)	2.9	Gal/Hr	11.1	Liter/Hr
Urea Consumption Rate (32.5% Conc.)	3.6	Gal/Hr	13.6	Liter/Hr
SCR Catalyst Volume	60.00	Cu.Ft	1.699	Cu.Meter
SCR Catalyst Configuration	12x10x2x12		12x10x2x300	
SCR Catalyst Space Velocity	11,151	SCFH/FT ³	11,151	SCMH/M ³
Oxidation Catalyst Volume	20.00	Cu.Ft	0.566	Cu.Meter
Oxidation Catalyst Configuration	12x10x2x4		12x10x2x100	
Oxidation Catalyst Space Velocity	33,452	SCFH/FT ³	33,452	SCMH/M ³

February 9, 2017

City of Philadelphia
Air Management Services
321 University Avenue, 2nd Floor
Philadelphia, PA 19104-4543
Attn: Ms. Rahel Gebrekidan

Subject: Roberts Complex Plan Approval Application GE Generator Engines #1, #2.

Dear Rahel,

In response to AMS' email of January 18th regarding the potential to emit (PTE) of the Roberts Complex and the fuel restrictions required to maintain a Synthetic Minor air permit, SEPTA has provided the attached spreadsheets that show historical emissions as reported in our annual emissions statements and the PTE including the two new GE generator Engines G-01 and G-02.

SEPTA and our Energy Savings Company (ESCO) partner, NORESCO, plan to operate the two GE engines at 92.1% (available operating hours). This equates to 8068 hrs/yr of full load operation (92.1% of 8,760 hrs). The combined heat and power plant will provide heat to the Midvale Maintenance building. As a result, this eliminates the need to fire boilers COMB-07 and COMB-08. Despite the plans not to fire these boilers, operating hours have been allocated in the event there is an operational CHP heat transfer issue after start up that could require boiler usage while the engines also operate. Also, hours have been added to allow for oil firing of these boilers for maintenance and testing purposes while the engines also operate. Finally, these boilers may operate when the engines do not operate. The engines' emissions are greater than the boilers' emissions. Every hour the boilers operate to provide heat to Midvale is less than an hour of operation of the engines. Therefore, when an engine is down and a boiler is turned on for heating, there will be fewer emissions per hour, even when the boilers fire fuel oil.

The attached SEPTA Roberts complex Potential Emissions table shows total NO_x at 24.41 tpy. These emissions are based on the following restrictions which SEPTA agrees to take in order to remain a Synthetic Minor source:

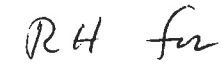
- 572.67 MMft³/year total natural gas usage for G-01 and G-02 combined;
- 20.12 MMft³/year total natural gas usage for all other natural gas sources at the Roberts Complex;
- 116.79 Mgal/year total number 2 fuel-oil usage for all fuel-oil fired sources at the Roberts Complex;
- Unrestricted operation of COMB-07 and COMB-08 on either fuel oil or natural gas when either G-01 or G-02 are not operational.
- 13 hours/year total operation of EG-01 emergency generator for maintenance and testing purposes (unlimited in the event of an emergency); and
- 200 hours/year total operation of AC-01 and BLAST-01 (sand blasting).

We would be glad to meet with you to further review these operating conditions. If you have any questions please email or call me.

With best regards,

Handwritten signature of Richard Harris in cursive script.

Richard Harris, PG
Environmental Officer

Handwritten initials 'RH' followed by a flourish, representing Catherine Wesley.

Catherine Wesley
CHP Project Manager

Enclosure: SEPTA Robert's Complex Potential to Emit and Past Actual Emissions tables

SEPTA Robert's Complex
Potential Emissions

	Facility	Operating Hours	Fuel Usage	Units	Potential Emissions (ton/year)									
					NOx	VOC	TSP	PM10	CO	SOx	Pb			
G-01 - GE Generator Engine #1	Midvale	8,068	286.33	MMscf/yr	10.87	8.15	0.04	0.04	13.59	0.09	0.00			
G-02 - GE Generator Engine #2	Midvale	8,068	286.33	MMscf/yr	10.87	8.15	0.04	0.04	13.59	0.09	0.00			
COMB-01 - Cleaver-Brooks CB500-100 Boiler	Roberts	700	21.38	Mgal/yr	0.21	0.00	0.02	0.03	0.05	0.30	1.35E-05			
COMB-02 - Cleaver-Brooks CB500-200 Boiler	Roberts	700	42.76	Mgal/yr	0.43	0.01	0.04	0.05	0.11	0.61	2.69E-05			
COMB-03 - Cleaver-Brooks CB500-200 Boiler	Roberts	700	42.76	Mgal/yr	0.43	0.01	0.04	0.05	0.11	0.61	2.69E-05			
COMB-04 - H.B. Smith Boiler	Roberts	700	2.67	Mgal/yr	0.03	0.00	0.00	0.00	0.01	0.04	1.68E-06			
COMB-05 - A.O. Smith BTP150-720 Boiler	Midvale	2,500	1.76	MMscf/yr	0.09	0.00	0.01	0.01	0.07	0.00	4.41E-07			
COMB-06 - A.O. Smith BTP140-720 Boiler	Midvale	2,500	1.76	MMscf/yr	0.09	0.00	0.01	0.01	0.07	0.00	4.41E-07			
COMB-07 - Kewanee Boiler #1: Natural Gas	Midvale	250	2.43	MMscf/yr	0.16	0.01	0.01	0.01	0.11	0.05	2.88E-06			
COMB-07 - Kewanee Boiler #1: Fuel Oil	Midvale	50	3.61	Mgal/yr										
COMB-08 - Kewanee Boiler #2: Natural Gas	Midvale	250	2.43	MMscf/yr	0.16	0.01	0.01	0.01	0.11	0.05	2.88E-06			
COMB-08 - Kewanee Boiler #2: Fuel Oil	Midvale	50	3.61	Mgal/yr										
COMB-09 - Smith 19 Series-4 Boiler	Midvale	2,500	0.88	MMscf/yr	0.04	0.00	0.00	0.00	0.04	0.00	2.20E-07			
COMB-10 - Smith 19 Series-4 Boiler	Midvale	2,500	0.88	MMscf/yr	0.04	0.00	0.00	0.00	0.04	0.00	2.20E-07			
COMB-11 - Hotsy S5735-3 Pressure Washer	Midvale	4,000	2.58	MMscf/yr	0.13	0.01	0.01	0.01	0.11	0.00	6.44E-07			
COMB-12 - Reznor Unit Heater	Midvale	1,300	0.51	MMscf/yr	0.03	0.00	0.00	0.00	0.02	0.00	1.27E-07			
COMB-13 - Reznor Unit Heater	Midvale	1,300	0.51	MMscf/yr	0.03	0.00	0.00	0.00	0.02	0.00	1.27E-07			
COMB-14 - Reznor Unit Heater	Midvale	1,300	0.51	MMscf/yr	0.03	0.00	0.00	0.00	0.02	0.00	1.27E-07			
COMB-15 - Reznor Unit Heater	Midvale	1,300	0.51	MMscf/yr	0.03	0.00	0.00	0.00	0.02	0.00	1.27E-07			
COMB-16 - Reznor Unit Heater	Midvale	1,300	0.51	MMscf/yr	0.03	0.00	0.00	0.00	0.02	0.00	1.27E-07			
COMB-17 - Reznor Unit Heater	Midvale	1,300	0.51	MMscf/yr	0.03	0.00	0.00	0.00	0.02	0.00	1.27E-07			
CU-SB - Paint Booth Heater	Midvale	2,500	4.34	MMscf/yr	0.22	0.01	0.02	0.02	0.18	0.00	1.09E-06			
EG-01 - CAT Emergency Generator	Midvale	13	0.96	Mgal/yr	0.21	0.01	0.00	0.00	0.06	0.01	0.00E+00			
WE-01 - Miller Engine-Driven Welder	Liberty	0	0.00	gal/yr	0.00	0.00	0.00	0.00	0.00	0.00	0.00E+00			
AC-01 & BLAST-01 - Sandblasting	Liberty	200	918	gal/yr	0.28	0.02	0.60	0.60	0.06	0.02	0.00E+00			
Stage 2-01 - Gasoline Tank	Midvale	-	-	-	-	0.01	-	-	-	-	-			
PW-01 - Facility Parts Washers	Facility-Wide	-	-	-	-	0.65	-	-	-	-	-			
SB-01 - Paint Booth	Midvale	-	-	-	-	1.86	0.00	0.00	-	-	-			
TANK-01 - Windshield Washer Fluid Tank	Midvale	-	-	-	-	0.01	-	-	-	-	-			
Total:	-	-	-	-	24.41	18.94	0.89	0.91	28.44	1.87	7.86E-05			

Engine Natural Gas Limit: 572.67 MMR³/year
 All Other Natural Gas Limit: 20.12 MMR³/year
 All Other Fuel Oil Limit: 116.79 Mgal/year
 Emergency Generator Limit for Testing: 13 hours/year
 Sandblasting Limit: 200 hours/year

SEPTA Robert's Complex
Past Actuals

Emission Unit	Location	Actual Emissions - 2013						Actual Emissions - 2014						Actual Emissions - 2015						Actual Emissions - 2016									
		NOx	VOC	TSP	PM10	CO	SO2	Pb	NOx	VOC	TSP	PM10	CO	SO2	Pb	NOx	VOC	TSP	PM10	CO	SO2	Pb	NOx	VOC	TSP	PM10	CO	SO2	Pb
COMB-01 - Cleaver-Brooks CB500-100 Boiler	Roberts Yard	0.10	0.00	0.01	0.01	0.03	0.15	6.43E-06	0.11	0.00	0.01	0.01	0.03	0.15	6.67E-06	0.08	0.00	0.00	0.00	0.02	0.12	5.23E-06	0.10	0.00	0.01	0.01	0.03	0.15	6.42E-06
COMB-02 - Cleaver-Brooks CB500-200 Boiler	Roberts Yard	0.21	0.00	0.01	0.01	0.05	0.30	1.29E-05	0.22	0.00	0.01	0.01	0.05	0.31	1.33E-05	0.17	0.00	0.01	0.01	0.04	0.24	1.05E-05	0.21	0.00	0.01	0.01	0.05	0.30	1.29E-05
COMB-03 - Cleaver-Brooks CB500-200 Boiler	Roberts Yard	0.21	0.00	0.01	0.01	0.05	0.30	1.29E-05	0.22	0.00	0.01	0.01	0.05	0.31	1.33E-05	0.17	0.00	0.01	0.01	0.04	0.24	1.05E-05	0.21	0.00	0.01	0.01	0.05	0.30	1.29E-05
COMB-04 - H.B. Smith Boiler		0.01	0.00	0.00	0.00	0.00	0.02	8.03E-07	0.01	0.00	0.00	0.00	0.00	0.02	8.32E-07	0.01	0.00	0.00	0.00	0.00	0.02	6.52E-07	0.01	0.00	0.00	0.00	0.00	0.02	8.02E-07
COMB-05 - A.O. Smith BTP150-720 Boiler		0.04	0.00	0.00	0.00	0.03	0.00	1.82E-07	0.05	0.00	0.00	0.00	0.04	0.00	2.33E-07	0.05	0.00	0.00	0.00	0.04	0.00	2.34E-07	0.05	0.00	0.00	0.00	0.04	0.00	2.32E-07
COMB-06 - A.O. Smith BTP140-720 Boiler		0.04	0.00	0.00	0.00	0.03	0.00	1.82E-07	0.05	0.00	0.00	0.00	0.04	0.00	2.33E-07	0.05	0.00	0.00	0.00	0.04	0.00	2.34E-07	0.05	0.00	0.00	0.00	0.04	0.00	2.32E-07
COMB-07 - Kewanee Boiler #1	Midvale Bus Facility	0.28	0.03	0.05	0.05	0.52	0.14	8.79E-06	0.24	0.04	0.06	0.06	0.64	0.00	3.79E-06	0.21	0.04	0.05	0.05	0.54	0.00	3.22E-06	0.19	0.03	0.04	0.04	0.49	0.00	2.90E-06
COMB-08 - Kewanee Boiler #2	Midvale Bus Facility	0.19	0.03	0.05	0.05	0.50	0.00	3.01E-06	0.24	0.04	0.06	0.06	0.64	0.00	3.79E-06	0.21	0.04	0.05	0.05	0.54	0.00	3.22E-06	0.19	0.03	0.04	0.04	0.49	0.00	2.90E-06
Remaining Small Boilers	Various	0.28	0.01	0.02	0.02	0.22	0.02	2.12E-06	0.35	0.02	0.03	0.03	0.29	0.02	2.52E-06	0.35	0.02	0.03	0.03	0.29	0.02	2.35E-06	0.35	0.02	0.03	0.03	0.29	0.02	2.48E-06
COMB-09 - Smith 19 Series-4 Boiler		0.02	0.00	0.00	0.00	0.02	0.00	9.09E-08	0.02	0.00	0.00	0.00	0.02	0.00	1.16E-07	0.02	0.00	0.00	0.00	0.02	0.00	1.17E-07	0.02	0.00	0.00	0.00	0.02	0.00	1.16E-07
COMB-10 - Smith 19 Series-4 Boiler		0.02	0.00	0.00	0.00	0.02	0.00	9.09E-08	0.02	0.00	0.00	0.00	0.02	0.00	1.16E-07	0.02	0.00	0.00	0.00	0.02	0.00	1.17E-07	0.02	0.00	0.00	0.00	0.02	0.00	1.16E-07
COMB-11 - Hotsy S5735-3 Pressure Washer		0.03	0.00	0.00	0.00	0.03	0.00	1.66E-07	0.04	0.00	0.00	0.00	0.04	0.00	2.13E-07	0.04	0.00	0.00	0.00	0.04	0.00	2.14E-07	0.04	0.00	0.00	0.00	0.04	0.00	2.12E-07
COMB-12 - Reznor Unit Heater		0.02	0.00	0.00	0.00	0.02	0.00	1.01E-07	0.03	0.00	0.00	0.00	0.02	0.00	1.30E-07	0.03	0.00	0.00	0.00	0.02	0.00	1.30E-07	0.03	0.00	0.00	0.00	0.02	0.00	1.29E-07
COMB-13 - Reznor Unit Heater		0.02	0.00	0.00	0.00	0.02	0.00	1.01E-07	0.03	0.00	0.00	0.00	0.02	0.00	1.30E-07	0.03	0.00	0.00	0.00	0.02	0.00	1.30E-07	0.03	0.00	0.00	0.00	0.02	0.00	1.29E-07
COMB-14 - Reznor Unit Heater		0.02	0.00	0.00	0.00	0.02	0.00	1.01E-07	0.03	0.00	0.00	0.00	0.02	0.00	1.30E-07	0.03	0.00	0.00	0.00	0.02	0.00	1.30E-07	0.03	0.00	0.00	0.00	0.02	0.00	1.29E-07
COMB-15 - Reznor Unit Heater		0.02	0.00	0.00	0.00	0.02	0.00	1.01E-07	0.03	0.00	0.00	0.00	0.02	0.00	1.30E-07	0.03	0.00	0.00	0.00	0.02	0.00	1.30E-07	0.03	0.00	0.00	0.00	0.02	0.00	1.29E-07
COMB-16 - Reznor Unit Heater		0.02	0.00	0.00	0.00	0.02	0.00	1.01E-07	0.03	0.00	0.00	0.00	0.02	0.00	1.30E-07	0.03	0.00	0.00	0.00	0.02	0.00	1.30E-07	0.03	0.00	0.00	0.00	0.02	0.00	1.29E-07
COMB-17 - Reznor Unit Heater		0.02	0.00	0.00	0.00	0.02	0.00	1.01E-07	0.03	0.00	0.00	0.00	0.02	0.00	1.30E-07	0.03	0.00	0.00	0.00	0.02	0.00	1.30E-07	0.03	0.00	0.00	0.00	0.02	0.00	1.29E-07
EG-01 - CAT Emergency Generator	Midvale Bus Facility	0.04	0.00	0.00	0.00	0.01	0.00	0.00E+00	0.13	0.01	0.01	0.01	0.03	0.01	0.00E+00	0.18	0.01	0.01	0.01	0.04	0.01	0.00E+00	0.45	0.04	0.03	0.03	0.10	0.03	-
WE-01 - Miller Engine-Driven Welder	Liberty Yard	0.00	0.00	0.00	0.00	0.00	0.00	0.00E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00E+00	0.00	0.00	0.00	0.00	0.00	0.00	-
AC-01 & BLAST-01 - Sand Blasting Operations	Liberty Yard	0.01	0.00	1.46	1.46	0.00	0.00	0.00E+00	0.98	0.08	2.14	2.14	0.21	0.06	0.00E+00	0.22	0.02	0.48	0.48	0.05	0.01	0.00E+00	0.76	0.06	1.66	1.66	0.16	0.05	-
Stage2-01 - 10,000 gal Gasoline Tank (UST)	Midvale Bus Facility		0.02							0.02							0.03						0.03						
PW-01 - Five (5) Parts Washers / Degreasers	Various		0.26							0.36							0.08						0.42						
SB-01 - Spray Booth	Midvale Bus Facility		0.90	0.00	0.00					0.96	0.00	0.00					0.66	0.00	0.00				0.38	0.00	0.00				
CU-SB - Paint Booth Heater	Midvale Bus Facility	0.09	0.00	0.01	0.01	0.08	0.00	4.48E-07	0.11	0.01	0.01	0.01	0.10	0.00	5.74E-07	0.12	0.01	0.01	0.01	0.10	0.00	5.76E-07	0.11	0.01	0.01	0.01	0.10	0.00	5.70E-07
TANK-01 - 2,000 gal Windshield Washer Fluid Tank	Midvale Bus Facility		0.01							0.01							0.01						0.02						