Company Name:	Pinewood Custodial Site Trust	**Permit Writer:**	Diana Zakrzwski, PE
Permit Number:	2140-0017-CJ	**Date:**	May 23, 2012

DATE APPLICATION RECEIVED: January 10, 2012

FACILITY DESCRIPTION The Pinewood Site is a closed Resource Conservation and Recovery Act (RCRA) permitted hazardous waste Treatment, Storage and Disposal Facility (TSDF), primarily a landfill. The site consists of three landfill sections (Sections I, II and III) which are divided in to cells, as well as, leachate collection, treatment and storage facilities, storm water collection and aeration basins, an area where solid residues from leachate are stabilized and containerized, an emergency power generator and miscellaneous maintenance shops, etc. The Pinewood Site Custodial Trust is a private trust that owns the Pinewood Site. The facility is currently exempt from air permitting due to the level of emissions at the site. With this proposed construction, the emissions at the site will require air permitting.

PROJECT DESCRIPTION The operator is proposing to construct a new on-site system to treat the leachate produced by the landfill cells on site. Each section of the landfill is comprised of several cells. The cell bottoms were designed and sloped such that the leachate generated in a given cell would flow through a drainage system to primary sumps within the cell for collection. The sumps are set to activate and pump leachate out of the sump when the leachate reaches a predetermined level. Secondary sumps are also found on Sections II and III of the landfill. The purpose of these sumps is to remove liquid collected on top of the secondary liners which is primarily rain water. The leachate that is collected is taken to the Central Leachate Tank Farm (Central LTF) either by a piping system (from the primary sumps) or a mobile tank trailer (from the secondary sumps). The Central LTF contains ten identical 40,000 gallon vertical above ground storage tanks for primary leachate and a 1500 gallon tank for secondary leachate which is used to rinse out the other tanks. The site also has a separate Auxiliary Leachate Tank Farm (Auxilary LTF) with two 40,000 gallon above ground storage tanks which can be used as a back-up.

The facility is currently sending the leachate offsite to be treated; however the current location will no longer process this waste for the Trust after March, 2012. The Trust has decided to minimize the amount of waste to transfer offsite by installing an on-site treatment system for the leachate.

The proposed leachate treatment system (LTS1) will be comprised of several components for removing solids and metals from the leachate, evaporating approximately 94% of the leachate and containerizing the treatment residuals for transportation offsite. All of the emissions from the leachate treatment system are vented out of a single stack. The leachate from the leachate tank farm will be pumped into a new holding tank and then into an agitated mixing tank where sulfuric acid and/or caustic soda will be added to adjust the pH as necessary. Perlite will then be added to facilitate removal of precipitate (solids) in the filter press. A significant amount of the metals in the leachate is expected to precipitate (separate) immediately. The treated leachate will then be pumped into a plate and frame filter press. The filter cake (solids/sludge) will be dried in an electrically heated sludge dryer and the filtrate(liquid) will be pumped to another holding tank. From this holding tank the leachate will be pumped into an evaporator in which the leachate will be indirectly heated to the boiling point by a propane fired burner. The evaporator is an open tank with a large surface area. As some of the organic compounds and the water evaporate, an induced draft exhaust system will capture steam and vapors liberated from the surface of the liquid in the tank, as well as, the combustion gas from the burner and discharge the emissions through a hood and then the stack. The residual liquid will be pumped into a slurry holding tank and then sent through an electrically heated slurry dryer. The final slurry will be then containerized and sent off site with the sludge from the sludge dryer.

SOURCE TEST REQUIREMENTS Sampling of the leachate prior to the evaporator (E-800) and the final solid residue from the slurry dryer (D-901) will be required on a quarterly basis. The facility will use this information to calculate actual emissions for the facility. No stack test required for the evaporator.

SPECIAL CONDITIONS, MONITORING, LIMITS

For Actual Emission Calculations

The owner/operator shall calculate facility wide emissions in tons per year of all volatile organic compounds (VOC) and hazardous air pollutants (HAP). Reports of total facility VOC and single and total HAP emissions in tons per year shall be submitted on an annual basis.

For the Central Leachate Tank Farm (Central LTF) and Auxiliary Leachate Tank Farm (Auxiliary LTF) emissions shall be calculated using the actual leachate throughput (Condition 6.B.2) and the actual non-qualified detected concentrations from the quarterly leachate analytical reports for the target analytes listed in Attachment C. Testing of the leachate for the analytes shall be conducted on at least a quarterly basis. The emission estimate shall be prepared using the information from the last four quarters to calculate emissions and a twelve month rolling sum shall be calculated for total VOC and both single and total HAP emissions.

For the leachate treatment system (LTS1), an emission factor shall be calculated using the concentration of the target analytes listed in Attachment C in the leachate prior to processing in evaporator (E-800) and in the solid residues removed from the slurry dryer (D-901). A new emission factor shall be calculated on at least a quarterly basis. This emission factor shall be used with the volume of leachate processed in the evaporator (Condition 6.B.2) to calculate the emissions and a twelve month rolling sum shall be calculated for total VOC and both single and total HAP emissions. The initial sampling of the leachate entering the evaporator and the solid residues exiting the slurry dryer shall commence within 30 days of the LTS1 achieving operational status, and the calculation of the emission factors shall be completed within 90 days of commencing the sampling.

For other sources at the facility, potential emissions can be used if desired in the facility wide calculation of VOC and HAP emissions.

For the primary sumps located in Section I, II and III, emissions may either be calculated using actual leachate throughput and the actual non-qualified detected concentrations of target analytes or the calculated potential emissions may be used. The owner/operator shall submit a Primary Sump Monitoring Plan to be followed only in the event that the owner/operator chooses to calculate emissions from the primary sumps using actual leachate volume produced by the sumps. This plan shall include the testing frequency (at least annually) and protocols, the list of target analytes, process to update air dispersion modeling or potential emission estimates if necessary based on test data. This plan and subsequent updates or revisions shall be submitted to the Bureau of Air Quality, Engineering Services Division for approval within 30 days of the LTS1 achieving operational status.

Facility wide emissions shall be calculated on a semiannual basis with a rolling 12 month rolling sum for total VOC and both single and total HAP emissions. All chemical analysis of leachate and residue required by this permit shall be conducted per EPA SW846 analytical methods or other Bureau approved methods. Any changes to the above monitoring must be approved by the Bureau of Air Quality. Changes or additions may be administratively incorporated into Attachment C of this permit as necessary. During each operating permit renewal, the owner/operator shall review the target analytes list and advise the Bureau of Air if it determines that there are any HAPs or TAPs that are not already on the list for which it has identified appropriate analytical methods that would make it feasible to add one or more of those HAPs or TAPs to the target analytes list. This information shall be submitted as part of the operating permit renewal request to the Bureau of Air Quality. If any analyte that has not previously been reported with a valid, non-qualified concentration in the leachate is reported in one of the analyses with a valid, non-qualified concentration, then the Standard 8 de minimis analysis, appropriate facility wide emission calculations, and air dispersion modeling (if required) shall be updated accordingly and the updated information shall be submitted to the Bureau of Air Quality within 60 days of finding an analyte that has previously been determined non-detect.

<u>Flow Monitoring</u>
The owner/operator shall operate and maintain devices and undertake work practices as appropriate to monitor the volume of leachate entering the Central LTF, the Auxiliary LTF, the volume of leachate that is processed by evaporator E-800 in LTS1, and the quantity of residue generated by the slurry dryer in LTS1

The owner/operator will measure and record the volume of leachate entering the Central LTF and the Auxiliary LTF from all sources. Volumes may be measured using flow meters, weigh scales, tank capacities and liquid levels, and stroke count from positive displacement pumps, as allowed under the Site's Resource Conservation and Recovery Act (RCRA) Part B permit. The total volumes entering the Central LTF and Auxiliary LTF during each calendar month and each quarter shall be calculated and recorded. Owner/operator shall keep records of all such measurements, including source and destination of the leachate being transferred, the method used to measure the quantity transferred, and the date of the transfer.

The owner/operator will monitor the volume of the leachate processed by evaporator E-800. The facility shall install, calibrate, operate, and maintain an appropriate monitoring device to determine this volume on a continuous basis. The facility shall submit to the Bureau of Air Quality information on the monitoring equipment prior to the start up of the LTS.

The owner/operator shall determine the amount of solid wastes that are generated by the slurry dryer D-901 by weighing the solids prior to the waste being shipped off site. This information shall be kept in a log on site.

Any changes to the above monitoring must be approved by the Bureau of Air Quality. Changes or additions may be administratively incorporated into this permit as necessary.

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PUBLIC NOTICE:
A public notice was not required for this permit; however, because of community interest in this site, the construction permit will undergo a 30-day public notice. This permit was placed in *The State* newspaper and *The Item* newspaper on April 10, 2012. The comment period was open from April 10, 2012 to May 11, 2012 and was placed on the BAQ website during that time period.

ADDITIONAL PUBLIC PARTICIPATION:
An informational meeting was held on 9/8/2011 with the local community. The Department also created a website that can be found at www.scdhec.gov/pinewood.

The following are the comments received and the responses:

A commenter stated there was a need to have a DHEC on-site inspector when the Leachate Treatment System was in operation. South Carolina law (Hazardous Waste Management Act) allows for on-site inspectors at commercial facilities accepting waste. Based on the volume of waste entering the Pinewood Site when it was open, DHEC determined on-site inspectors were necessary. The inspectors' primary duties were to check the waste receipts against the waste being brought onto the facility. Because the site has been closed and is no longer operating as a commercial facility, waste receipt inspections are no longer needed. The proposed leachate treatment system will be operated and manned by the Pinewood Site Custodial Trustee and its contractor.

The leachate treatment system can not be operated without personnel being present. The Pinewood Site Custodial Trust has stated that the treatment system building design includes a spill prevention and collection system in the event of an accidental spill. Even though the Pinewood Site no longer accepts waste, DHEC closely monitors all operations at the facility. The entire site operations are now, and the proposed treatment system will be, tied into an electronic monitoring system that allows staff from DHEC's Bureau of Land and Waste Management to see live data from all operations at the Pinewood Site and respond to situations that deviate from normal operations. Additionally, the air permit requires leachate testing, monitoring and reporting to ensure the emission limits are met and continue to be met. The permit requires notification within 24 hours to DHEC when process upsets, exceedances or malfunctions occur.

DHEC will have staff present during the startup of the treatment system and we will be conducting periodic inspections at the facility through the Bureau of Land and Waste Management, the Bureau of Air Quality and the Sumter Regional Office. The Environmental Protection Agency (EPA) has also committed to assisting with inspections. The Bureau of Air Quality's responsibilities also include review of emission reports and the review of testing protocols and testing results.

The Trustee (Kestral Horizons) has requested that the name on their permit be changed to coincide with the name on other Department permits. This name change has been completed in all applicable places on the permit and Statement of Basis.

EMISSIONS

POTENTIAL EMISSIONS FROM PROJECT					
ID	**Pollutant**		**lb/hr**	**TPY**	**Method for Estimating Emissions**
LTS	$PM/PM_{10}/PM_{2.5}$		0.03	0.15	AP-42 emission factors for combustion of propane
	SO_2		0.00089	0.0039	AP-42 emission factors for combustion of propane
	NO_x		0.65	2.83	AP-42 emission factors for combustion of propane
	CO		0.37	1.63	AP-42 emission factors for combustion of propane
	VOC		9.85	18.59	See below discussion of VOC/HAP calculations
	CO_2/CO_2e		614	2690	40 CFR 98 Subpart C Tables C-1 and C-2
	Arsenic	7440-38-2	0.120	0.226	See below discussion of VOC/HAP calculations
	Bis(2-Ethylhexyl)phthalate	117-81-7	0.0547	0.103	See below discussion of VOC/HAP calculations
	Carbon Disulfide	75-15-0	0.0638	0.12	See below discussion of VOC/HAP calculations
	Chloroform	67-66-3	0.1459	0.274	See below discussion of VOC/HAP calculations
	m,p-Cresol	65794-96-9	0.0587	0.11	See below discussion of VOC/HAP calculations
	1,4-Dioxane	123-91-1	0.183	0.343	See below discussion of VOC/HAP calculations
	Ethylene Dichloride	107-06-2	0.0123	0.166	See below discussion of VOC/HAP calculations
	Ethylidene Dichloride	75-34-3	0.135	0.254	See below discussion of VOC/HAP calculations
	Ethylene Glycol	107-21-1	2.21	4.14	See below discussion of VOC/HAP calculations
	Glycol Ethers	112-27-6	0.313	0.586	See below discussion of VOC/HAP calculations
	Hexane	110-54-3	1.001	1.88	See below discussion of VOC/HAP calculations

POTENTIAL EMISSIONS FROM PROJECT					
ID	**Pollutant**		**lb/hr**	**TPY**	**Method for Estimating Emissions**
	Methanol	67-56-1	2.717	5.09	See below discussion of VOC/HAP calculations
	Methyl Ethyl Ketone	78-93-3	0.917	1.71	See below discussion of VOC/HAP calculations
	Methyl Isobutyl Ketone	108-10-1	0.111	0.208	See below discussion of VOC/HAP calculations
	Methylene Chloride	75-09-2	2.25	4.22	See below discussion of VOC/HAP calculations
	Phenol	108-95-2	0.192	0.223	See below discussion of VOC/HAP calculations
	Tetrachloroethylene	127-18-4	0.0725	0.136	See below discussion of VOC/HAP calculations
	Toluene	108-88-3	0.105	0.198	See below discussion of VOC/HAP calculations
	1,1,1-Trichloroethane	71-55-6	0.2875	0.54	See below discussion of VOC/HAP calculations
	Trichloroethylene	79-01-6	0.245	0.46	See below discussion of VOC/HAP calculations
	Total HAP		10.70	20.07	See below discussion of VOC/HAP calculations

Only the twenty highest emitting HAPs are listed here and only for the largest emitting units. A complete listing of potential HAP emission rates is at the end of this greensheet.

VOC/HAP EMISSION CALCULATIONS

The VOC/HAP potential emission calculations incorporate many worst case variables in order to ensure the potential to emit was calculated conservatively. Some of these assumptions are as follows:

1. The leachate flow rate to the tank farm was assumed to be 1.5 million gallons/12 month period. This flow rate is approximately 136% of the maximum production rate calculated for the period since February 2007. Prior to this date, the effects of the open cell in section III can still be seen in the leachate flow due to residual water. The flow has been generally consistent since February 2007 with a rate of approximately 1.1 million gallons per year.

2. The leachate flow rate to the sumps is calculated based on the highest flow rate seen in a month between January 2006 to May 2011.

3. The leachate is sampled from the sumps on an annual basis and the leachate that goes to the tank farm is analyzed on a quarterly basis. The chemical composition for the leachate for use in potential calculations was based on the following:
   - For chemicals that have been detected, the maximum detected concentration was used.
   - For chemicals which have never been detected, the smallest minimum detection limit was used. (One exception is discussed in detail in the application for the sumps.)
   - The timeframe reviewed for the leachate which goes to the tank farm and to the leachate system was from January 2004 through July 2011. The majority of the HAPs/TAPs were tested as discussed in the application and listed in Attachment C of the permit.
   - The timeframe reviewed for the sumps was 2005 through 2011. The list of analytes is shorter for the sumps as discussed in the application.

Emissions from the sumps were calculated based on the above assumptions using the EPA emission estimation program WATER9, version 3.0.0. The WATER9 program is used to estimate emissions of organic compounds dissolved in water at low concentrations.

Emissions from the tank farms were calculated based on the above assumptions using the EPA emission estimation program WATER9, version 3.0.0. Emissions from the tank farm are conservative because the assumption is made that all of the tanks are full when that is not normally the case.

Emissions from the leachate treatments system were calculated based on the above assumptions and that all of the emissions from the components and operations in the LTS were assumed to come from the evaporator and slurry dryer. All emissions from this process will be exhausted through one stack. The metals precipitation process was assumed to remove 50% of the metals (including arsenic) as shown through bench scale testing. Additional removal by the mist eliminators built into the evaporator and slurry dryer is not included in the calculations. Also all target analytes are assumed to be evaporated in the system regardless of boiling points or vapor pressure.

FACILITY WIDE TOTAL EMISSIONS	
Pollutant	**Uncontrolled Emissions**
	TPY
$PM/PM_{10}/PM_{2.5}$	0.30
SO_2	0.14
NO_x	4.90
CO	2.08
VOC	20.04
CO_2/CO_2e	2767
Greatest Single HAP (Methanol)	5.10
Total HAP	23.01

In calculating total facility emissions, emissions from the tank farms are not included since the calculations used for the LTS includes any emissions from the tank farm due to the maximum concentration being used in the emission calculations.

PROJECT REGULATORY APPLICABILITY REVIEW			
Regulation	**Applicable**		**Comments**
	Yes	**No**	
Section II(E): Synthetic Minor		X	Potential emissions are less than applicable thresholds for PSD (250 TPY for regulated pollutants); so no limits needed.
Section II(G): Conditional Major		X	Potential emissions are less than applicable thresholds for Title V (100 TPY of criteria pollutants and 10/25 TPY of single/total HAPs) so no limits needed.
Standard 1: Fuel Burning Operations	X		Evaporator is subject to this regulation since indirect fired. Potential emissions are well below the permit limits and therefore combustion of propane will not require additional recordkeeping. Pollutant | Emission Limit | Potential Emissions PM | 0.6 lb/million Btu | 0.007 lb/million Btu SO_2 | 3.5 lb/million Btu | 0.000197 lb/million Btu
Standard 2: Ambient Air Quality Standards	X		Air dispersion modeling was approved on 2/3/12. Std 2 modeling was not required due to level of emissions from process. PM, PM_{10}, $PM_{2.5}$, SO_2 and NO_x emissions are less than 1 lb/hr. CO emissions are less than 10 lb/hr.
Standard 3: Waste Combustion/Reduction (state only)		X	No waste combustion/reduction.
Standard 3.1: HMI Waste Incinerators		X	No waste combustion/reduction.
Standard 4: Emissions from Process Industries	X		Permit includes PM and opacity requirements. PM emissions from this project are minimal and therefore no additional monitoring of the process is necessary. Pollutant | Emission Limit | Potential Emissions PM | 5.85 lb/hr | 0.03 lb/hr
Standard 5: Volatile Organic Compounds		X	Not in the specific categories listed and emissions of VOC are below applicability threshold.
Standard 5.1: BACT/LAER For VOC (state only)		X	Emissions of VOC are below applicability threshold of 100 TPY.
Standard 5.2: Control of Oxides of Nitrogen		X	Evaporator burner is less than 10 million Btu/hr and therefore exempt from this regulation.
Standard 7: Prevention of Significant Deterioration		X	Potential emissions are less than applicable thresholds (250 TPY for regulated pollutants).
Standard 7(c): Ambient Air Increments	X		Air dispersion modeling was approved on 2/3/12. Std 7(c) modeling was not required due to level of emissions from process.

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PROJECT REGULATORY APPLICABILITY REVIEW

Regulation	Applicable		Comments
	Yes	No	
Standard 7.1: Standards for Non Attainment Areas		X	Applies to non attainment areas only-area is in attainment with all national ambient air quality standards
Standard 8: Toxic Air Pollutants (state only)	X		Air dispersion modeling was approved on 2/3/12. The facility modeled four different scenarios to allow operational flexibility and to show compliance with all operating scenarios: LTSA – Leachate Treatment System Stack: Evaporator and Dryer, No Ventilation LTSB – Leachate Treatment System Stack: Dryer only, No Ventilation LTSC – Leachate Treatment System Stack: Evaporator and Dryer Emissions, With Ventilation LTSD – Leachate Treatment System Stack: Dryer Only, with Ventilation
Regulation 61-62.6: Control of Fugitive Particulate Matter	X		The facility must comply with this regulation as necessary. The process will have 0.03 lb/hr PM emissions, so fugitive emissions are not expected.
40 CFR 60 - NSPS and **Regulation 61-62.60:** SC Designated Facility Plan and NSPS		X	None of the processes under this construction permit are subject to these regulations. - The tanks added as part of this construction are less than 75 m3 and therefore not subject based on size to Subpart Kb. - The facility has not accepted municipal solid waste and therefore not subject to the MSW landfill requirements. - The Central LTF and Auxiliary LTF storage tanks at the facility have capacities over 75 m3; however since the vapor pressure is less than 15.0 kPa, the tanks are no subject to Subpart Kb. - The emergency generator is subject to Subpart IIII and shall comply as required.
40 CFR 61 - NESHAP and **Regulation 61-62.61:** NESHAP		X	None of the processes under this construction permit are subject to these regulations.
40 CFR 63 – MACT and Area Source Standards and **Regulation 61-62.63:** NESHAP For Source Categories		X	None of the processes under this construction permit are subject to these regulations. - The facility is a minor source for HAPs and therefore is not subject to the Offsite Waste MACT Subpart DD and Site Remediation Subpart GGGGG. - The emergency generator is subject to Subpart ZZZZ and shall comply as required. - The evaporator is not subject to the area source Boiler MACT because the unit is not defined as a boiler by this subpart.
Regulation 61-62.68: Chemical Accident Prevention		X	The facility does not store any chemicals at levels above the triggering threshold.
Regulation 61-62.70: Title V		X	Potential emissions are less than applicable thresholds
Regulation 61-62.72: Acid Rain		X	This facility does not have the processes required to be subject.
Regulation 61-62.96: Nitrogen Oxides (NO_X) and Sulfur Dioxide (SO_2) Budget Trading Program		X	This facility does not have the processes required to be subject.
Regulation 61-62.99: Nitrogen Oxides (NO_X) Budget Program Requirements for Stationary Sources Not In the Trading Program		X	This facility does not have the processes required to be subject.

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PROJECT REGULATORY APPLICABILITY REVIEW			
Regulation	**Applicable**		**Comments**
	Yes	**No**	
40 CFR 64 - Compliance Assurance Monitoring (CAM)		X	The facility is not a Title V facility.

SUMMARY AND CONCLUSIONS

It has been determined that this source, if operated in accordance with the submitted application, will meet all applicable requirements and emission standards.

HAP emissions listed directly from permit application Table D-2

Pollutant	**CAS No.**	**LTS1**	
		lb/day	**tpy**
1,1,1-Trichloroethane	71-55-6	6.90E+00	5.39E-01
1,1,2,2-Tetrachloroethane	79-34-5	1.42E-01	1.11E-02
1,1,2-Trichloroethane	79-00-5	6.59E-01	5.15E-02
1,1-Dichloroethane	75-34-3	3.25E+00	2.54E-01
1,1-Dichloroethylene	75-35-4	1.87E-01	1.46E-02
1,2,4-Trichlorobenzene	120-82-1	3.30E-01	2.58E-02
1,2-Dibromo-3-chloropropane	96-12-8	1.55E-02	1.21E-03
1,2-Dibromoethane	106-93-4	1.84E-02	1.44E-03
1,2-Dichloroethane	107-06-2	2.12E+00	1.66E-01
1,2-Dichloropropane	78-87-5	4.46E-03	3.49E-04
1,2-Diphenylhydrazine	122-66-7	7.51E-03	5.86E-04
1,3-Dichloropropylene(total)	542-75-6	5.01E-02	3.91E-03
1,4-Dichlorobenzene	106-46-7	5.66E-01	4.42E-02
1,4-Dioxane	123-91-1	4.39E+00	3.43E-01
1-Methylnaphthalene	90-12-0	1.99E-02	1.55E-03
1-Naphthylamine	134-32-7	2.54E-03	1.98E-04
2,4,5-Trichlorophenol	95-95-4	8.65E-04	6.76E-05
2,4,6-Trichlorophenol	88-06-2	1.73E-04	1.35E-05
2,4-D	94-75-7	6.77E-03	5.29E-04
2,4-Dinitrophenol	51-28-5	3.49E-01	2.73E-02
2,4-Dinitrotoluene	121-14-2	1.73E-04	1.35E-05
2-Acetylaminofluorene	53-96-3	1.73E-04	1.35E-05
2-Butanone	78-93-3	2.20E+01	1.71E+00
2-Chloro-1,3-butadiene	126-99-8	1.20E-02	9.39E-04
2-Chloronaphthalene	91-58-7	3.36E-03	2.62E-04
2-Methyl-4,6-dinitrophenol	534-52-1	2.60E-04	2.03E-05
2-Methylnaphthalene	91-57-6	4.05E-02	3.17E-03
2-Naphthylamine	91-59-8	1.73E-04	1.35E-05
2-Nitropropane	79-46-9	4.01E-02	3.13E-03
3,3'-Dichlorobenzidine	91-94-1	8.65E-05	6.76E-06
3,3'-Dimethylbenzidine	119-93-7	1.73E-04	1.35E-05
3-Methylcholanthrene	56-49-5	1.73E-04	1.35E-05
4,4'-DDE	72-55-9	2.58E-03	2.02E-04
4,4'-Methylenebis(2-chloroaniline)	101-14-4	2.00E-02	1.56E-03
4-Aminobiphenyl	92-67-1	2.60E-04	2.03E-05
4-Methyl-2-pentanone	108-10-1	2.67E+00	2.08E-01
4-Nitrophenol	100-02-7	1.73E-04	1.35E-05
Acenaphthene	83-32-9	4.40E-02	3.44E-03
Acenaphthylene	208-96-8	1.73E-05	1.35E-06
Acenaphthylene	208-96-8	1.73E-05	1.35E-06
Acetaldehyde	75-07-0	--	--
Acetonitrile	75-05-8	6.86E-01	5.36E-02
Acetophenone	98-86-2	7.66E-02	5.98E-03
Acrolein	107-02-8	2.40E-04	1.88E-05
Acrolein	107-02-8	2.40E-04	1.88E-05
Acrylonitrile	107-13-1	1.29E-03	1.01E-04
Allyl chloride	107-05-1	2.96E-04	2.32E-05
Aniline	62-53-3	4.39E-01	3.43E-02

Anthracene	120-12-7	6.47E-03	5.06E-04
Antimony	7440-36-0	5.25E-03	4.10E-04
Aroclor-1016	12674-11-2	2.81E-06	2.20E-07
Aroclor-1221	11104-28-2	1.51E-03	1.18E-04
Aroclor-1232	11141-16-5	2.81E-06	2.20E-07
Aroclor-1242	53469-21-9	2.81E-06	2.20E-07
Aroclor-1248	12672-29-6	2.81E-06	2.20E-07
Aroclor-1254	11097-69-1	2.81E-06	2.20E-07
Aroclor-1260	11096-82-5	2.81E-06	2.20E-07
Aroclor-Total		5.34E-04	4.17E-05
Arsenic	7440-38-2	2.89E+00	2.26E-01
Benzene	71-43-2	3.00E-01	2.35E-02
Benzidine	92-87-5	1.73E-04	1.35E-05
Benzo(a)anthracene	56-55-3	7.58E-03	5.92E-04
Benzo(a)pyrene	50-32-8	5.83E-04	4.56E-05
Benzo(b)fluoranthene	205-99-2	1.46E-03	1.14E-04
Benzo(ghi)perylene	191-24-2	2.60E-04	2.03E-05
Benzo(k)fluoranthene	207-08-9	5.21E-04	4.07E-05
Benzyl chloride	100-44-7	4.01E-02	3.13E-03
Beryllium	7440-41-7	4.01E-05	3.13E-06
Biphenyl	92-52-4	2.40E-02	1.88E-03
bis(2-Chloroethyl) ether	111-44-4	1.11E-01	8.70E-03
bis(2-Ethylhexyl)phthalate	117-81-7	1.31E+00	1.03E-01
Bromoform	75-25-2	2.20E-03	1.71E-04
Bromomethane	74-83-9	4.01E-05	3.13E-06
Cadmium	7440-43-9	3.33E-01	2.60E-02
Caprolactam	105-60-2	7.03E-02	5.49E-03
Carbon disulfide	75-15-0	1.53E+00	1.20E-01
Carbon tetrachloride	56-23-5	2.06E-02	1.61E-03
Chlordane (tech.)	57-74-9	2.31E-01	1.80E-02
Chloroacetic acid	79-11-8	8.01E-03	6.26E-04
Chlorobenzene	108-90-7	8.65E-02	6.76E-03
Chlorobenzilate	510-15-6	1.73E-04	1.35E-05
Chloroethane	75-00-3	4.29E-02	3.35E-03
Chloroform	67-66-3	3.50E+00	2.74E-01
Chloromethane	74-87-3	5.08E-04	3.97E-05
Chromium	7440-47-3	1.87E-01	1.46E-02
Chrysene	218-01-9	5.93E-03	4.63E-04
Cobalt	7440-48-4	2.80E-01	2.19E-02
Cyanide, Total	57-12-5	2.80E-02	2.18E-03
Dibenzo(a,e)pyrene	192-65-4	2.40E-02	1.88E-03
Dibenzo(a,h)anthracene	53-70-3	1.73E-05	1.35E-06
Dibenzofuran	132-64-9	1.15E-02	8.95E-04
Diethylphthalate	84-66-2	7.65E-02	5.98E-03
Dimethylphthalate	131-11-3	1.43E-01	1.12E-02
Di-n-butylphthalate	84-74-2	6.39E-03	4.99E-04
Di-n-octylphthalate	117-84-0	2.92E-02	2.28E-03
Ethylbenzene	100-41-4	8.65E-02	6.76E-03
Ethylene glycol	107-21-1	5.30E+01	4.14E+00
Fluoranthene	206-44-0	3.52E-02	2.75E-03
Fluorene	86-73-7	2.84E-02	2.22E-03
Formaldehyde	50-00-0	0.00E+00	0.00E+00
Formaldehyde	50-00-0	0.00E+00	0.00E+00
gamma-BHC (Lindane)	58-89-9	2.00E-05	1.56E-06
Heptachlor	76-44-8	7.51E-02	5.86E-03
Hexachlorobenzene	118-74-1	3.06E-02	2.39E-03
Hexachlorobutadiene	87-68-3	2.08E-03	1.63E-04
Hexachlorocyclopentadiene	77-47-4	7.23E-02	5.65E-03
Hexachloroethane	67-72-1	1.73E-04	1.35E-05
Hexane	110-54-3	2.40E+01	1.88E+00
Hydrazine	302-01-2	1.06E-01	8.26E-03
Indeno(1,2,3-cd)pyrene	193-39-5	2.60E-04	2.03E-05
Iodomethane	74-88-4	1.00E-04	7.82E-06
Isophorone	78-59-1	9.77E-02	7.64E-03
Isopropylbenzene	98-82-8	1.00E-02	7.82E-04
Kepone	143-50-0	1.73E-04	1.35E-05

Lead	7439-92-1	4.85E-02	3.79E-03
m,p-Cresols	108-39-4	1.41E+00	1.10E-01
m,p-Xylenes	108-38-3	2.97E-01	2.32E-02
m-Dinitrobenzene	99-65-0	1.73E-04	1.35E-05
Mercury	7439-97-6	4.05E-05	3.16E-06
Methanol	67-56-1	6.52E+01	5.09E+00
Methoxychlor	72-43-5	8.01E-05	6.26E-06
Methyl methacrylate	80-62-6	1.73E-04	1.35E-05
Methylene chloride	75-09-2	5.40E+01	4.22E+00
Mirex	2385-85-5	5.33E-05	4.16E-06
Naphthalene	91-20-3	1.11E-01	8.70E-03
Nickel	7440-02-0	7.73E-01	6.04E-02
Nitrobenzene	98-95-3	2.60E-04	2.03E-05
Nitroglycerin	55-63-0	2.60E-03	2.03E-04
N-Methyl-N-nitrosomethylamine	62-75-9	1.73E-04	1.35E-05
N-Nitrosomorpholine	59-89-2	1.73E-04	1.35E-05
o-Cresol	95-48-7	5.14E-01	4.01E-02
o-Toluidine	95-53-4	1.73E-02	1.35E-03
o-Xylene	95-47-6	1.11E-01	8.64E-03
p-(Dimethylamino)azobenzene	60-11-7	1.73E-04	1.35E-05
Parathion	56-38-2	2.60E-04	2.03E-05
p-Benzoquinone	106-51-4	1.60E-02	1.25E-03
Pentachloronitrobenzene	82-68-8	1.73E-04	1.35E-05
Pentachlorophenol	87-86-5	1.76E-01	1.38E-02
Phenanthrene	85-01-8	8.49E-02	6.63E-03
Phenol	108-95-2	2.86E+00	2.23E-01
Phosphorus	7723-14-0	5.93E-01	4.63E-02
p-Nitroaniline	100-01-6	2.60E-04	2.03E-05
p-Nitrotoluene	99-99-0	6.51E-04	5.08E-05
p-Phenylenediamine	106-50-3	1.73E-04	1.35E-05
Pyrene	129-00-0	2.99E-02	2.33E-03
Selenium	7782-49-2	6.37E-02	4.98E-03
Styrene	100-42-5	5.54E-01	4.33E-02
tert-Butyl methyl ether	1634-04-4	1.00E-02	7.82E-04
Tetrachloroethylene	127-18-4	1.74E+00	1.36E-01
Toluene	108-88-3	2.53E+00	1.98E-01
Total polycyclic aromatic hydrocarbon (PAH)	--	--	--
Toxaphene	8001-35-2	3.12E-02	2.44E-03
Trichloroethylene	79-01-6	5.89E+00	4.60E-01
Triethylene glycol	112-27-6	7.51E+00	5.86E-01
Vinyl acetate	108-05-4	2.22E-03	1.73E-04
Vinyl chloride	75-01-4	2.68E-02	2.10E-03
Xylenes (total)	1330-20-7	3.81E-01	2.97E-02

	Lb/day	Tons per year
Total HAP Emissions	256.81	20.06
Total TAP Emissions	278.78	21.78