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May 23, 2012

Mr. William A. Stephens Pinewood Site Custodial Trust Kestrel Horizons, LLC (Trustee) 84 Villa Road, Suite 300 Greenville, SC 29615

Re: Construction Permit No. 2140-0017-CJ

Dear Mr. Stephens:

Enclosed is Construction Permit No. 2140-0017-CJ. This construction permit is being issued in accordance with the plans, specifications and other information submitted in the construction permit application, as amended.

In addition to this permit to construct, a permit to operate is required in accordance with *South Carolina Regulation 61-62, Air Pollution Control Regulations and Standards*. The regulations require a written request for a new or revised operating permit to cover any new or altered source, postmarked no later than fifteen (15) days after the actual date of initial startup of each new or altered source unless a more stringent time frame is required.

Please note the emissions limitations and operational requirements contained within this permit. It is important for you and/or an authorized representative responsible for the overall operation of this facility to read this issued permit carefully and to understand all requirements. If any errors or omissions are discovered, please notify Hetal Patel of my staff, via e-mail at patelhy@dhec.sc.gov, or call (803) 898-3850 immediately.

Pursuant to the South Carolina Administrative Procedures Act, any Department decision involving the issuance, denial, suspension, or revocation of a permit or certification may be appealed by the applicant, permittee, licensee, or affected person. Please see the enclosed "Notice of Appeal Procedure" for guidelines on filing an appeal.

Sincerely,

Elychen j Baal

Elizabeth J. Basil Director, Engineering Services Division Bureau of Air Quality

EJB:dlz:kal Enclosure

cc: Regie Watts, Region 4, Sumter EQC Office Permit File: 2140-0017
ec: John Wilcox, Trinity Consultants



Office of Environmental Quality Control Bureau of Air Quality State Construction Permit

Pinewood Site Custodial Trust 8430 Camp Mac Boykin Road Pinewood, SC 29125

Pursuant to the provisions of the Pollution Control Act, Sections 48-1-50(5) and 48-1-110(a), the 1976 Code of Laws of South Carolina, as amended, and South Carolina Regulation 61-62, Air Pollution Control Regulations and Standards, the Bureau of Air Quality authorizes the construction of this facility and the equipment specified herein in accordance with the plans, specifications, and other information submitted in the construction permit application received on January 10, 2012, as amended.

The construction and subsequent operation of this facility is subject to and conditioned upon the terms, limitations, standards, and schedules contained herein or as specified by this permit and its accompanying attachments.

> **Permit Number: Issue Date:**

2140-0017-CJ May 23, 2012

<u><u>Unch J</u> <u>Cas</u> Director, Engineering Services Division</u>

Bureau of Air Quality

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PART 1 - APPLICABILITY (S.C. Regulation 61-62.1, Section II)

Condition Number	Condition			
1.1	Except as allowed under S.C. Regulation 61-62.1, Section II(A)(1) paragraphs (c) and (d), any person who plans to construct, alter or add to a source of air contaminants, including installation of any device for the control of air contaminant discharges, shall first obtain a construction permit from the Department prior to commencement of construction.			
1.2	The owner/operator shall obtain Bureau authorization, as required under S.C. Regulation 61-62.1, Section II(A), prior to making modifications not covered under this construction permit.			
1.3	No construction permits shall be required for the sources listed as exempt from the requirement to obtain a construction permit in S.C. Regulations 61-62.1, Section II(B); however, modifications at these facilities may trigger the requirement to obtain a construction permit.			
1.4	All official correspondence, plans, permit applications, and written statements are an integral part of the permit. A information or misrepresentation in the application for a construction permit may be grounds for permit revoc			

PART 2 - GENERAL REQUIREMENTS

This part describes conditions and provisions applicable to all sources. Specific source category conditions and requirements are contained in Part 5 of this permit.

PART 2.A - PERMIT EXPIRATION AND EXTENSION (S.C. Regulation 61-62.1, Section II(A)(4))

Condition Number	Condition			
	Approval to construct shall become invalid if construction;			
2.A.1	a. is not commenced within 18 months after receipt of such approval,			
2.A.1	b. if discontinued for a period of 18 months or more, or			
	c. if construction is not completed within a reasonable time as considered by the Department.			
2.A.2	The Department may extend the construction permit for an additional 18-month period upon a satisfactory showing that			
2.A.2	an extension is justified. This request must be made prior to the permit expiration.			
2.A.3	This provision does not apply to the time period between construction of the approved phases of a phased construction			
	project; each phase must commence construction within 18 months of the projected and approved commencement date.			

PART 2.B - PERMIT TO OPERATE (S.C. Regulation 61-62.1 Section II (A) & (F))

Condition Number	Condition				
2.B.1	Any source that is required to obtain an air quality construction permit issued by the Department must obtain an operating permit when the new or altered source is placed into operation and shall comply with the requirements of S.C. Regulation 61-62.1 Section II(F).				
2.B.2	construction is certified as provided in S.C. Regulation 61-62.1 Section II(F)(2), the permittee may operate the source compliance with the terms and conditions of the construction permit until the operating permit is issued by the epartment.				
2.B.3	The owner/operator or professional engineer in charge of the project shall certify that, to the best of his/her knowled and belief and as a result of periodic observation during construction, the construction under application has be completed in accordance with the specifications agreed upon in the construction permit issued by the Department.				
2.B.4	If construction is not built as specified in the permit application and associated construction permit(s), the owner/operator must submit to the Department a complete description of modifications that are at variance with the documentation of the construction permitting determination prior to commencing operation.				

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PART 2.B - PERMIT TO OPERATE (S.C. Regulation 61-62.1 Section II (A) & (F))

Condition Number	Condition			
2.B.5	Construction variances that would trigger additional requirements that have not been addressed prior to start of operation			
2.0.3	shall be considered construction without a permit.			
2.B.6	The owner/operator shall submit written notification to the Director of Engineering Services and the Regional Air Section			
2. D .0	Manager of the date construction is commenced, postmarked no later than 30 days after such date.			
2.B.7	The owner/operator shall submit written notification to the Director of Engineering Services and the Regional Air Section			
	Manager of the actual date of initial startup of each new or altered source, postmarked within 15 days after such date.			

PART 2.C - FEE ASSESSMENT AND PAYMENT (S.C. Regulation 61-30)

Condition Number	Condition	
2.C.1	The permittee shall pay permit fees to the Department in accordance with the requirements of S.C. Regulation 61-30, Environmental Protection Fees.	

PART 2.D - DUTY TO COMPLY (S.C. Regulation 61-62.1, Section II)

Condition Number	Condition			
2.D.1	S.C. Regulation 61-62.1, Section II will not supersede any State or Federal requirements nor special permit conditions, unless this regulation would impose a more restrictive emission limit. The owner or operator shall comply with all terms, conditions, and limitations of any Department-issued permit for sources or activities at its facility. A source's permit status may change upon promulgation of new regulatory requirements.			

PART 2.E - INSPECTION AND ENTRY (S.C. Regulation 61-62.1, Section II(O))

Condition Number	Condition				
2.E.1	 Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Department or an authorized representative to perform the following: Enter the facility where emissions-related activity is conducted, or where records must be kept under the conditions of the permit. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. Inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit. As authorized by the Federal Clean Air Act and/or the S.C. Pollution Control Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements. 				

Pinewood Site Custodial Trust 2140-0017-CJ Page 5 of 11

PART 3 - FACILITY WIDE GENERAL REQUIREMENTS

This part describes conditions and provisions applicable facility wide. Specific source category conditions and requirements are contained in Part 5 of this permit.

Condition Number	Condition					
	In accordance with SC Regulation 61-62.1, Section II(J), for sources not required to have continuous emissions monitors, any malfunction of air pollution control equipment or system, process upset or other equipment failure which results in discharges of air contaminants lasting for one hour or more and which are greater than those discharges described for normal operation in the permit application shall be reported to the Department's local Environmental Quality Control (EQC) Regional office within twenty-four (24) hours after the beginning of the occurrence. The contact information for the local EQC Regional office can be found at http://www.scdhec.gov/environment/envserv/regions.htm.					
3.1	 The owner or operator shall also submit a written report within thirty (30) days of the occurrence. This report shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality (BAQ) and shall include as a minimum, the following: 1. The identity of the stack and/or emission point where the excess emissions occurred; 2. The magnitude of excess emissions expressed in the units of the applicable emission limitation and the 					
	 operating data and calculations used in determining the excess emissions; 3. The time and duration of excess emissions; 4. The identity of the equipment causing the excess emissions; 					
	 5. The nature and cause of such excess emissions; 6. The steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunction; 					
	 The steps taken to limit the excess emissions; and, Documentation that the air pollution control equipment, process equipment, or processes were at all times maintained and operated, to the maximum extent practicable, in a manner consistent with good practice for minimizing emissions. 					
3.2	Air dispersion modeling (or other method) has demonstrated that this facility's operation will not interfere with the attainment and maintenance of any state or federal ambient air standard. Any changes in the parameters used in the air dispersion modeling may require a review by the facility to determine continuing compliance with these standards. These potential changes include any decrease in stack height, decrease in stack velocity, increase in stack diameter, decrease in stack exit temperature, increase in building height or building additions, increase in emission rates, decrease in distance between stack and property line, changes in vertical stack orientation, and installation of a rain cap that impedes vertical flow. Parameters that are not required in the determination will not invalidate the demonstration if they are modified. The emission rates used in the determination are listed in Attachment A of this permit. Higher emission rates may be administratively incorporated into Attachment A of this permit provided a demonstration using these higher emission rates shows the attainment and maintenance of any state or federal ambient air quality standard or with any other applicable requirement. Variations from the input parameters in the demonstration shall not constitute a violation unless the maximum allowable ambient concentrations identified in the standard are exceeded. This is a State Only enforceable requirement.					
3.3	The owner/operator shall maintain this facility at or below the emission rates as listed in Attachment A, not to exceed the pollutant limitations of this construction permit. Should the facility wish to increase the emission rates listed in Attachment A, not to exceed the pollutant limitations in the body of this permit, it may do so by the administrative process specified in condition 3.2.					
3.4	In accordance with S.C. Regulation 61-62.1, Section II(F)(3), the owner/operator shall submit a written request to th Director of the Engineering Services Division for a new or revised operating permit to cover any new or altered source postmarked no later than fifteen (15) days after the actual date of initial startup of each new or altered source. The writte request for a new or revised operating permit must include, as a minimum, the following information: i. A list of sources that were placed into operation. ii. The actual date of initial startup of each new or altered source.					

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PART 4 - PROJECT DESCRIPTION

Permission is hereby granted to construct an on-site system for treatment of leachate produced by the landfill cells at the Site. The leachate treatment system (LTS1) will include metals precipitation, a filter press, an evaporator, sludge and slurry dryers and associated equipment.

PART 5 - CONSTRUCTION PERMIT REQUIREMENTS

PART 5.A - GENERIC CONDITIONS

Condition Number	Equipment/ Control Device ID	Condition	
5.A.1	All	In accordance with S.C. Regulation 61-62.1, Section II(J), a copy of the Department issued construction and/or operating permit must be kept readily available at the facility at all times. A permittee shall maintain such operational records; make reports; install, use, and maintain monitoring equipment or methods; sample and analyze emissions or discharges in accordance with prescribed methods, at locations, intervals, and procedures as the Department shall prescribe; and provide such other information as the Department reasonably may require. All records required to demonstrate compliance with the limits established under this permit shall be maintained on site for a period of at least five (5) years and shall be made available to a Department representative upon request.	

PART 5.B - LIMITATIONS, MONITORING AND REPORTING

PART 5.B.1 - EQUIPMENT FOR CONSTRUCTION PERMIT CJ

Equipment ID	Equipment Description	Control Device ID	Emission Point ID
E-800	4.54 Million Btu/hr propane fired evaporator used to reduce the volume of leachate by evaporation	N/A	LTS
T-200	LTS1 8700 gallon mix tank (used to adjust pH of the leachate)	N/A	LTS
T-600	LTS1 2100 gallon Filtrate Tank	N/A	LTS
T-700	LTS1 16,000 gallon Holding Tank	N/A	LTS
T-900	LTS1 2200 gallon Slurry Holding Tank	N/A	LTS
FLT-600	Plate and Frame filter press	N/A	LTS
D-601	Electrically heated sludge dryer	N/A	LTS
D-901	Electrically heated slurry dryer	N/A	LTS

PART 5.B.2 - CONTROL DEVICES FOR CONSTRUCTION PERMIT CJ

Control Device ID	Control Device Description Pollutant(
N/A	N/A	N/A		

Pinewood Site Custodial Trust 2140-0017-CJ Page 7 of 11

PART 5.B.3 - CONDITIONS FOR CONSTRUCTION PERMIT CJ

Condition Number	Equipment /Control Device ID	Regulated Pollutant/ Standard	Conditions	
5.B.1	E-800	PM, SO ₂ , Opacity	 Limits/Standards: In accordance with S.C. Regulation 61-62.5, Standard No. 1 - Emissions from Fuel Burning Operations, Section II - Particulate Matter Emissions, the allowable discharge of particulate matter resulting from the fuel burning operations is 0.6 pounds per million BTU input. In accordance with S.C. Regulation 61-62.5, Standard No. 1 - Emissions from Fuel Burning Operations, Section III - Sulfur Dioxide Emissions, the maximum allowable discharge of sulfur dioxide (SO₂) resulting from the fuel burning operations is 3.5 pounds per million BTU input. In accordance with S.C. Regulation 61-62.5, Standard No. 1, Emissions from Fuel Burning Operations, the evaporator shall not discharge into the ambient air smoke which exceeds an opacity of 20%. The opacity standards set forth above apply at all times. The owner/operator shall, to the extent practicable, maintain and operate any source including associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions. State Only: No Testing: None Required Monitoring/Record Keeping/Reporting/Other: The evaporator is permitted to burn only propane as fuel. The use of any other substances as fuel is prohibited without prior written approval from the Bureau of Air Quality. 	
5.B.2	All	PM Opacity	 approval from the Bureau of Air Quality. Limits/Standards: In accordance with S.C. Regulation 61-62.5, Standard No. 4 - Emissions from Process Industries, Section IX - Visible Emissions (Where Not Specified Elsewhere), where construction or modification began after December 31, 1985, emissions (including fugitive emissions) shall not exhibit an opacity greater than 20%. In accordance with S.C. Regulation 61-62.5, Standard No. 4 - Emissions from Process Industries, Section VIII - Other Manufacturing, particulate matter emissions shall be limited to the rate specified by use of the following equation for process weight rates less than or equal to 30 tons per hour (E = 4.10P^{0.67}) where E = the allowable emission rate in pounds per hour and 	

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PART 5.C. - CONDITIONS FOR FACILITY WIDE - LIMITATIONS, MONITORING AND REPORTING

Condition Number	Regulated Pollutant/ Standard	Conditions
N/A	N/A	N/A

PART 6 - ADDITIONAL CONDITIONS

PART 6.A - OPERATIONAL FLEXIBILITY

Condition Number	Conditions
N/A	N/A

N/A = Not Applicable

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PART 6.B – OTHER

Condition Number	Conditions
	The owner/operator shall calculate facility wide emissions in tons per year of all volatile organic compounds (VOC) and hazardous air pollutants (HAP).
	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.
6.B.1	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. An algorithm, including example calculations and emission factors, explaining the method used to determine emission rates shall be included in the initial report. Subsequent submittals of the algorithm and example calculations are unnecessary, unless the method of calculation is found to be unacceptable by the Bureau or if the facility changes the method of calculating emissions and/or changes emission factors. Reports of total facility VOC and single and total HAP emissions in tons per year shall be submitted on an annual basis.

Pinewood Site Custodial Trust 2140-0017-CJ Page 10 of 11

PART 6.B – OTHER

Condition Number	Conditions
	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
6.B.2	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.

PART 7 - RESERVED

PART 8 - REPORTING REQUIREMENTS

PART 8.A - PERIODIC REPORTING SCHEDULE

Compliance Monitoring Report Submittal Frequency	Reporting Period (Begins on the startup date of the source.)	Report Due Date				
	January-December	March 30				
Annual	April-March	June 30				
Annuar	July-June	September 30				
	October-September	December 30				
Note: This reporting schedule does n	Note: This reporting schedule does not supersede any federal reporting requirements including but not limited to 40 CFR Part 60, 40 CFR					
Part 61, and 40 CFR Part 63. All federal reports must meet the reporting time frames specified in the federal standard unless the						
Department or EPA approves a change.						

PART 8.B - REPORTING CONDITIONS

Condition Number	Condition
8.B.1	Reporting required in this permit, shall be submitted in a timely manner as directed in Part 8.A of this permit.

Pinewood Site Custodial Trust 2140-0017-CJ Page 11 of 11

PART 8.B - REPORTING CONDITIONS

Condition Number	Condition
	Unless elsewhere specified within this permit, all reports required under this permit shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality, at the address listed below.
8.B.2	S.C. DHEC - BAQ Technical Management Section
	2600 Bull Street
	Columbia, SC 29201

Modeled Emission Rates

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The emission rates listed herein are not considered enforceable limitations but are used to evaluate ambient air quality impact. Until the Department makes a determination that a facility is causing or contributing to an exceedance of a state or federal ambient air quality standard, increases to these emission rates are not in themselves considered violations of these ambient air quality standards (see conditions 3.2 and 3.3).

STANDARD NO. 2 [and 7] - EXEMPTED AAQS EMISSION RATES (LBS/HR)								
STACK ID	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	Lead	HF	
LTS (all components)	0.03	0.03	8.93E-04	0.65	0.37	2.02E-3		
EG01 200 kW - emergency generator	0.59	0.59	0.55	8.31	1.79			
FACILITY TOTAL	0.62	0.62	0.55	8.96	2.16	2.02E-3		

STANDARD NO. 8 - MODELED AIR TOXIC EMISSION RATES (LBS/HR)							
STACK ID	Arsenic	bis(2-Ethylhexyl) phthalate	Cadmium	Carbon disulfide			
	7440-38-2	117-81-7	7440-43-9	75-15-0			
AE1				7.754E-06			
AE2				7.754E-06			
CTF1		3.238E-06		2.460E-02			
LTSA	1.205E-01	5.474E-02	1.387E-02	6.376E-02			
LTSB	1.674E-02	7.603E-03	1.926E-03	8.855E-03			
LTSC	1.205E-01	5.474E-02	1.387E-02	6.376E-02			
LTSD	1.674E-02	7.603E-03	1.926E-03	8.855E-03			
S1				5.257E-03			
S2				8.800E-05			
S3				3.149E-04			
FACILITY TOTAL	1.21E-01	5.47E-02	1.39E-02	9.40E-02			
STACK ID	Chlordane	Chloroform	Chromium	Cobalt			
STACK ID	57-74-9	67-66-3	7440-47-3	7440-48-4			
AE1		1.611E-06					
AE2		1.611E-06					
CTF1	5.937E-05	3.476E-02					
LTSA	9.614E-03	1.459E-01	7.778E-03	1.167E-02			
LTSB	1.335E-03	2.026E-02	1.080E-03	1.620E-03			
LTSC	9.614E-03	1.459E-01	7.778E-03	1.167E-02			
LTSD	1.335E-03	2.026E-02	1.080E-03	1.620E-03			
S1	1.371E-06	1.128E-02					
S2	2.100E-06	8.283E-03					
S3	2.241E-07	1.314E-07					
FACILITY TOTAL	9.68E-03	2.00E-01	7.78E-03	1.17E-02			

Modeled Emission Rates

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STACK ID	m,p-Cresols	1,2-Dibromo-3- chloropropane	1,2-Dichloroethane	Ethylene glycol
~~~~~~	108-39-4	96-12-8	107-06-2	107-21-1
AE1		3.008E-06	1.548E-06	
AE2		3.008E-06	1.548E-06	
CTF1	8.016E-05	1.262E-04	1.159E-02	1.325E-04
LTSA	5.875E-02	6.443E-04	8.846E-02	2.210
LTSB	8.160E-03	8.948E-05	1.229E-02	3.069E-01
LTSC	5.875E-02	6.443E-04	8.846E-02	2.210
LTSD	8.160E-03	8.948E-05	1.229E-02	3.069E-01
S1		5.206E-05	2.641E-03	
S2		3.933E-08	1.967E-03	
S3		3.905E-08	1.137E-06	5.397E-08
FACILITY TOTAL	5.88E-02	8.29E-04	1.05E-01	2.21
STACK ID	Heptachlor	Hexachlorocyclopenta diene	Hexane	Hydrazine
511101112	76-44-8	77-47-4	110-54-3	302-01-2
AE2				
CTF1	4.611E-04	1.238E-03	3.937E-01	
LTSA	3.128E-03	3.014E-03	1.001	4.406E-03
LTSB	4.344E-04	4.187E-04	1.391E-01	6.120E-04
LTSC	3.128E-03	3.014E-03	1.001	4.406E-03
LTSD	4.344E-04	4.187E-04	1.391E-01	6.120E-04
S1	1.638E-05			
S2	2.483E-05			
\$3	1.708E-07			
FACILITY TOTAL	3.63E-03	4.25E-03	1.39	4.41E-03
STACK ID	Methanol	4,4'-Methylenebis(2- chloroaniline)	a-Naphthylamine	Nickel
	67-56-1	101-14-4	134-32-7	7440-02-0
AE1				
AE2				
CTF1	3.468E-03	2.563E-04	2.97E-07	
LTSA	2.717	8.345E-04	1.06E-04	3.221E-02
LTSB	3.774E-01	1.159E-04	3.00E-05	4.474E-03
LTSC	2.717	8.345E-04	1.06E-04	3.221E-02
LTSD	3.774E-01	1.159E-04	3.00E-05	4.474E-03
S1	5.194E-04			
S2	6.133E-04			

# **Modeled Emission Rates**

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\$3	2.857E-05			
FACILITY TOTAL	2.72	1.09E-03	1.06E-04	3.22E-02
STACK ID	Pentachloro- phenol	Phenol	Phosphorus	Selenium
	87-86-5	108-95-2	7723-14-0	7782-49-2
AE1				
AE2				
CTF1	6.325E-08	1.103E-04		
LTSA	7.344E-03	1.192E-01	2.470E-02	2.654E-03
LTSB	1.020E-03	1.655E-02	3.431E-03	3.686E-04
LTSC	7.344E-03	1.192E-01	2.470E-02	2.654E-03
LTSD	1.020E-03	1.655E-02	3.431E-03	3.686E-04
S1				
S2				
S3				
FACILITY TOTAL	7.34E-03	1.19E-01	2.47E-02	2.65E-03
OT A CIL ID	Toxaphene			
STACK ID	8001-35-2			
AE1				
AE2				
CTF1	3.286E-05			
LTSA	1.302E-03			
LTSB	1.808E-04			
LTSC	1.302E-03			
LTSD	1.808E-04			
S1	9.981E-07			
S2	2.533E-08			
\$3	6.006E-08			
FACILITY TOTAL	1.34E-03			

STANDARD NO. 8 – TOXIC AIR POLLUTANTS LEVEL I DE MINIMIS ANALYSIS							
POLLUTANT	CAS NUMBER	EMISSION RATE (LBS/DAY)	DE MINIMIS (LBS/DAY)	PASS (Y or N)			
Acetaldehyde	75-07-0	0.036	21.600	Y			
Acetonitrile	75-05-8	0.694	21.000	Y			
Acetophenone	98-86-2	0.078	+	Y			
2-Acetylaminofluorene	53-96-3	0.000	+	Y			
Acrolein	107-02-8	0.005	0.015	Y			
Acrylonitrile	107-13-1	0.002	0.270	Y			

# **Modeled Emission Rates**

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STANDARD NO. 8 – TOXIC AIR POLLUTANTS LEVEL I DE MINIMIS ANALYSIS				
POLLUTANT	CAS NUMBER	EMISSION RATE (LBS/DAY)	DE MINIMIS (LBS/DAY)	PASS (Y or N)
Allyl chloride	107-05-1	0.011	0.360	Y
4-Aminobiphenyl	92-67-1	0.000	0.000	Y
Aniline	62-53-3	0.440	0.600	Y
Antimony Compounds	+	0.005	0.030	Y
Benzene	71-43-2	0.525	1.800	Y
Benzidine	92-87-5	0.000	0.000	Y
p-Benzoquinone	106-51-4	0.016	0.024	Y
Benzyl chloride	100-44-7	0.047	0.300	Y
Beryllium	7440-41-7	0.000	0.000	Y
Biphenyl	92-52-4	0.029	0.072	Y
Bromoform	75-25-2	0.004	0.310	Y
Caprolactam	105-60-2	0.070	6.000	Y
Carbon Tetrachloride	56-23-5	0.099	1.800	Y
Chloroprene (2-Chloro-1,3-butadiene)	126-99-8	0.017	2.100	Y
Chloroacetic Acid	79-11-8	0.008	10.800	Y
Chlorobenzene	108-90-7	0.208	20.700	Y
Chlorobenzilate	510-15-6	0.000	+	Y
o-Cresol	95-48-7	0.515	1.326	Y
Cumene (Isopropylbenzene)	98-82-8	0.016	0.108	Y
Cyanide, Total	57-12-5	0.028	1.500	Y
2,4-D, salts and esters	94-75-7	0.007	0.600	Y
4,4'-DDE	72-55-9	0.003	+	Y
Dibenzofuran	132-64-9	0.014	+	Y
Dibutylphthalate	84-74-2	0.006	0.300	Y
1,4-Dichlorobenzene	106-46-7	0.805	54.000	Y
3,3'-Dichlorobenzidine	91-94-1	0.000	0.002	Y
1,3-Dichloropropylene(total)	542-75-6	0.052	0.240	Y
Diethylphthalate	84-66-2	0.077	0.300	Y
p-Dimethylaminoazobenzene	60-11-7	0.000	1.500	Y
3,3'-Dimethylbenzidine	119-93-7	0.000	+	Y
Dimethylphthalate	131-11-3	0.144	0.300	Y
4,6-Dinitro-o-cresol and salts (Methyl-4,6- dinitrophenol)	534-52-1	0.000	0.024	Y
m-Dinitrobenzene	99-65-0	0.000	0.120	Y
2,4-Dinitrophenol	51-28-5	0.349	+	Y

# **Modeled Emission Rates**

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STANDARD NO. 8 – TOXIC AIR POLLUTANTS LEVEL I DE MINIMIS ANALYSIS				
POLLUTANT	CAS NUMBER	EMISSION RATE (LBS/DAY)	DE MINIMIS (LBS/DAY)	PASS (Y or N)
2,4-Dinitrotoluene	121-14-2	0.000	0.018	Y
Dioctyl Phthalate	117-84-0	0.029	0.600	Y
1,4-Dioxane	123-91-1	4.420	5.400	Y
1,2-Diphenylhydrazine	122-66-7	0.008	+	Y
Ethyl Benzene	100-41-4	0.539	52.200	Y
Ethyl Chloride (Chloroethane)	75-00-3	0.081	316.800	Y
Ethylene Dibromide (1,2-Dibromoethane)	106-93-4	0.024	9.240	Y
Ethylidene Dichloride (1,1-Dichloroethane)	75-34-3	4.796	24.300	Y
Formaldehyde	50-00-0	0.055	0.180	Y
Glycol Ethers (triethylene glycol)	112-27-6	7.507	+	Y
Hexachlorobenzene	118-74-1	0.032	+	Y
Hexachlorobutadiene	87-68-3	0.003	0.014	Y
Hexachloroethane	67-72-1	0.000	0.582	Y
Isophorone	78-59-1	0.099	3.000	Y
Kepone (Chlordecone)	143-50-0	0.000	0.000	Y
Lindane (gamma-BHC)	58-89-9	0.000	0.030	Y
Mercury	7439-97-6	0.000	0.003	Y
Methoxychlor	72-43-5	0.000	0.600	Y
Methyl Bromide (Bromomethane)	74-83-9	0.001	1.200	Y
Methyl Chloride (Chloromethane)	74-87-3	0.003	6.180	Y
Methyl Ethyl Ketone (2-Butanone)	78-93-3	22.173	177.000	Y
Methyl Iodide (Iodomethane)	74-88-4	0.000	0.696	Y
Methyl Methacrylate	80-62-6	0.001	123.000	Y
Methyl Isobutyl Ketone (4-Methyl-2- pentanone)	108-10-1	2.965	24.600	Y
Methyl-t-butyl Ether (tert-Butyl methyl ether)	1634-04-4	0.013	+	Y
Methylene Chloride	75-09-2	64.550	105.000	Y
Mirex	2385-85-5	0.000	54.000	Y
Naphthalene	91-20-3	0.167	15.000	Y
b-Naphthylamine	91-59-8	0.000	0.000	Y
p-Nitroaniline	100-01-6	0.000	0.180	Y
Nitrobenzene	98-95-3	0.000	0.300	Y
Nitroglycerin	55-63-0	0.003	0.060	Y
p-Nitrophenol	100-02-7	0.000	0.000	Y
2-Nitropropane	79-46-9	0.044	2.184	Y

# **Modeled Emission Rates**

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STANDARD NO. 8 – TOXIC AIR POLLUTANTS LEVEL I DE MINIMIS ANALYSIS				
POLLUTANT	CAS NUMBER	EMISSION RATE (LBS/DAY)	DE MINIMIS (LBS/DAY)	PASS (Y or N)
n-Nitrosomethylamine	62-75-9	0.000	0.000	Y
n-Nitrosomorpholine	59-89-2	0.000	60.000	Y
p-Nitrotoluene	99-99-0	0.001	0.066	Y
Parathion	56-38-2	0.000	0.006	Y
Pentachloronitrobenzene	82-68-8	0.000	+	Y
Phenanthrene	85-01-8	0.090	1.920	Y
p-Phenylenediamine	106-50-3	0.000	0.012	Y
Polychorinated Biphenyls (PCBs)	+	0.002	0.030	Y
Polycyclic Organic Matter (POM)	+	0.540	1.920	Y
Propylene Dichloride (1,2-Dichloropropane)	78-87-5	0.008	21.000	Y
Styrene	100-42-5	0.688	63.900	Y
1,1,2,2-Tetrachloroethane	79-34-5	0.220	0.420	Y
Tetrachloroethylene	127-18-4	3.905	40.200	Y
Toluene	108-88-3	4.295	24.000	Y
o-Toluidine	95-53-4	0.017	0.526	Y
1,2,4-Trichlorobenzene	120-82-1	0.438	4.800	Y
1,1,1-Trichloroethane	71-55-6	11.477	114.600	Y
1,1,2-Trichloroethane	79-00-5	0.793	3.276	Y
Trichloroethylene	79-01-6	9.050	81.000	Y
2,4,5-Trichlorophenol	95-95-4	0.001	+	Y
2,4,6-Trichlorophenol	88-06-2	0.000	+	Y
Vinyl Acetate	108-05-4	0.003	2.112	Y
Vinyl Chloride	75-01-4	0.072	0.600	Y
Vinylidene Chloride (1,1-Dichloroethylene)	75-35-4	0.607	1.188	Y
Xylene (total)	1330-20-7	1.0176	52.200	Y
o-Xylene	95-47-6	0.147	52.200	Y
m,p-Xylenes		0.397	52.200	Y

## **Exempt Sources**

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The following table contains a list of sources which are considered exempt from the requirements to obtain a construction permit pursuant to South Carolina Regulation 61-62.1, Section II(B). Sources listed below are not exempt from any otherwise applicable state or federal requirements including, but not limited to, opacity standards, ambient air quality standards, and air toxic standards.

EXEMPT SOURCES			
Equipment Source Description		Installation Date	Basis
EX-T-300	LTS1 2400 gallon caustic soda tank	TBD	Emissions are negligible
EX-T-400	LTS1 1500 gallon sulfuric acid tank	TBD	Emissions are negligible
EX-T-500	LTS1 530 gallon Perlite tank	TBD	Emissions are negligible

## **Target Analytes**

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The chemicals listed below are those referenced as Attachment C – Target Analytes in the Leachate. These chemicals are to be analyzed as required by condition and used in the emission calculations for both the Leachate Tank Farms and Leachate Treatment System.

Chemical Name	CAS No.	Chemical Name	CAS No.
Methanol	67-56-1	Chrysene	218-01-9
Methylene chloride	75-09-2	Antimony	7440-36-0
Ethylene glycol	107-21-1	1,2-Dichloropropane	78-87-5
2-Butanone	78-93-3	2-Chloronaphthalene	91-58-7
1,1,1-Trichloroethane	71-55-6	4,4'-DDE	72-55-9
Trichloroethylene	79-01-6	Vinyl acetate	108-05-4
1,4-Dioxane	123-91-1	Bromoform	75-25-2
Triethylene glycol	112-27-6	Aroclor-1221	11104-28-2
Chloroform	67-66-3	Benzo(b)fluoranthene	205-99-2
1,1-Dichloroethane	75-34-3	Acrylonitrile	107-13-1
Toluene	108-88-3	1-Naphthylamine	134-32-7
1,2-Dichloroethane	107-06-2	Hexachlorobutadiene	87-68-3
Carbon disulfide	75-15-0	2,4,5-Trichlorophenol	95-95-4
Arsenic	7440-38-2	Benzo(a)pyrene	50-32-8
Phenol	108-95-2	Benzo(k)fluoranthene	207-08-9
4-Methyl-2-pentanone	108-10-1	Chloromethane	74-87-3
Tetrachloroethylene	127-18-4	Benzo(ghi)perylene	191-24-2
m,p-Cresols	65794-96-9	Indeno(1,2,3-cd)pyrene	193-39-5
Acetonitrile	75-05-8	Methoxychlor	72-43-5
1,1,2-Trichloroethane	79-00-5	Mercury	7439-97-6
bis(2-Ethylhexyl)phthalate	117-81-7	gamma-BHC (Lindane)	58-89-9
Nickel	7440-02-0	1,3-Dichloropropylene(total)	542-75-6
Benzene	71-43-2	2,4,6-Trichlorophenol	88-06-2
1,4-Dichlorobenzene	106-46-7	2,4-Dinitrotoluene	121-14-2
Styrene	100-42-5	2-Acetylaminofluorene	53-96-3
o-Cresol	95-48-7	2-Chloro-1,3-butadiene	126-99-8
Xylenes (total)	1330-20-7	2-Methyl-4,6-dinitrophenol	534-52-1
Aniline	62-53-3	2-Naphthylamine	91-59-8
1,1-Dichloroethylene	75-35-4	2-Nitropropane	79-46-9
2,4-Dinitrophenol	51-28-5	3,3'-Dichlorobenzidine	91-94-1
Cadmium	7440-43-9	3,3'-Dimethylbenzidine	119-93-7
1,2,4-Trichlorobenzene	120-82-1	3-Methylcholanthrene	56-49-5
m,p-Xylenes		4,4'-Methylenebis(2-chloroaniline)	101-14-4
Cobalt	7440-48-4	4-Aminobiphenyl	92-67-1
Chlordane (tech.)	57-74-9	4-Nitrophenol	100-02-7
o-Xylene	95-47-6	Acenaphthylene	208-96-8
Isophorone	78-59-1	Acrolein	107-02-8
Chromium	7440-47-3	Allyl chloride	107-05-1

# **Target Analytes**

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Chemical Name	CAS No.	Chemical Name	CAS No.
Pentachlorophenol	87-86-5	Aroclor-1016	12674-11-2
Chlorobenzene	108-90-7	Aroclor-1232	11141-16-5
Ethylbenzene	100-41-4	Aroclor-1242	53469-21-9
Phenanthrene	85-01-8	Aroclor-1248	12672-29-6
Acetophenone	98-86-2	Aroclor-1254	11097-69-1
Diethylphthalate	84-66-2	Aroclor-1260	11096-82-5
Dimethylphthalate	131-11-3	Aroclor-Total	
1,1,2,2-Tetrachloroethane	79-34-5	Benzidine	92-87-5
Caprolactam	105-60-2	Benzyl chloride	100-44-7
bis(2-Chloroethyl) ether	111-44-4	Beryllium	7440-41-7
Naphthalene	91-20-3	Biphenyl	92-52-4
Lead	7439-92-1	Bromomethane	74-83-9
Acenaphthene	83-32-9	Chloroacetic acid	79-11-8
Chloroethane	75-00-3	Chlorobenzilate	510-15-6
2-Methylnaphthalene	91-57-6	Dibenzo(a,e)pyrene	192-65-4
Heptachlor	76-44-8	Formaldehyde	50-00-0
Hexachlorocyclopentadiene	77-47-4	Hexachloroethane	67-72-1
Fluoranthene	206-44-0	Hexane	110-54-3
Selenium	7782-49-2	Hydrazine	302-01-2
Toxaphene	8001-35-2	Iodomethane	74-88-4
Hexachlorobenzene	118-74-1	Isopropylbenzene	98-82-8
Pyrene	129-00-0	Kepone	143-50-0
Di-n-octylphthalate	117-84-0	m-Dinitrobenzene	99-65-0
Fluorene	86-73-7	Methyl methacrylate	80-62-6
Cyanide, Total	57-12-5	Mirex	2385-85-5
Vinyl chloride	75-01-4	Nitrobenzene	98-95-3
Carbon tetrachloride	56-23-5	Nitroglycerin	55-63-0
1-Methylnaphthalene	90-12-0	N-Methyl-N-nitrosomethylamine	62-75-9
1,2-Dibromoethane	106-93-4	N-Nitrosomorpholine	59-89-2
o-Toluidine	95-53-4	p-(Dimethylamino)azobenzene	60-11-7
Dibenzofuran	132-64-9	Parathion	56-38-2
1,2-Dibromo-3-chloropropane	96-12-8	p-Benzoquinone	106-51-4
Benzo(a)anthracene	56-55-3	Pentachloronitrobenzene	82-68-8
1,2-Diphenylhydrazine	122-66-7	p-Nitroaniline	100-01-6
2,4-D	94-75-7	p-Nitrotoluene	99-99-0
Anthracene	120-12-7	p-Phenylenediamine	106-50-3
Di-n-butylphthalate	84-74-2	tert-Butyl methyl ether	1634-04-4