



Pinewood Site Custodial Trust

Draft Air Construction Permit

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Bureau of Air Quality – S.C. DHEC



Leachate Treatment System

- Jan 10, 2012: Air Permit Application Submitted
- Construction Permit Drafted
 - 2140-0017-CJ
- April 10, 2012: Public Notice Published

Permit to Construct

- Permit is to construct and allow the start of operations of “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.”

Evaporation is not Incineration

■ Evaporation

- Liquid is removed by evaporation to leave solids
- Propane flame does not directly contact the waste
- Operating Temperature 212F-250F
- Emissions include: Volatile organic compounds and minimal other pollutants
- The majority of the inorganic material (metals, sediment, etc.) will remain in the slurry

■ Incineration

- Combusts waste to reduce
- Waste is the fuel
- Operating Temperature approx 1600F
- Emissions include: particulate matter, acid gases, dioxin and furans, heavy metals, etc.
- Material not combusted becomes ash or leaves as particulate matter in the flue gas

Leachate Treatment System Equipment

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



Safety Factors in Emission Calculations

- Leachate flow to tank farm
 - 136% of maximum since 2007
- Leachate flow to sumps
 - Highest flow rate in 5 years
- Leachate composition
 - Maximum concentration of chemicals detected
 - Minimum detection level for chemicals not detected



Air Dispersion Modeling

- Computer models determined pollutant concentrations at the fence line
 - Used stack and facility information and worst case emission rates
- Compared modeled concentrations to Standards listed in SC Regulations
 - Standard 2 – Criteria Pollutants
 - Standard 8 – Toxic Air Pollutants
- All pollutants were less than Standards



Testing Required by Air Permit

- Quarterly composition testing for approximately 150 pollutants
 - Leachate in the tank farm
 - Leachate into Evaporator
 - Slurry leaving slurry dryer

Next Steps

- May 11, 2012: End of public comment period
- BAQ will review all public comments and any comments from U.S. EPA
- BAQ will make final permit decision
 - Notification will be sent to those on the mailing list.
- DHEC website will be updated
 - www.scdhec.gov/Pinewood
- Oversight: EPA will be assisting with air inspections

Comments on Air Permit

- Submit any comments to:
S.C. DHEC – BAQ
Attn: Karen Lee
2600 Bull Street
Columbia, SC 29201
leeka@dhec.sc.gov
- For more information:
www.scdhec.gov/Pinewood