

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
SOUTHCENTRAL REGION - FIELD OPERATIONS
AIR QUALITY CONTROL PROGRAM

COPY

NSPS

PLAN APPROVAL

SEP - 6 1995

Approval No: 67-2006 Source & Air
Cleaning Device: Three Westinghouse/O'Connor
Operator: York Resource Energy Systems, Inc. Rotary Water Wall Combustors
Address: 2651 Blackbridge Road Each Controlled by a Spray Dryer
York, PA 17402-9702 Scrubber in series with a Fabric Filter
Attention: Mr. M. A. Clawson Location: _____
Plant Manager Manchester Township
York County
Owner: York County Solid Waste & Refuse Authority

In accordance with provisions of the Air Pollution Control Act, the Act of January 8, 1960, P.L. 2119, as amended, and with Chapter 127 of the Rules and Regulations of the Department of Environmental Resources, the Department on AUG 25 1995 approved plans for implementation of the oxides of nitrogen (NO_x) Reasonably Available Control Technology (RACT) and modifications for the above indicated facility.

This PLAN APPROVAL expires September 20, 1995.

The plan approved is subject to the following conditions:

1. The NO_x RACT plan and Best Available Technology (BAT)/Standards of Performance for REGION III Stationary Sources (NSPS) modifications for the above facility are to be implemented in accordance with the plans submitted with the application (as herein approved).
2. See attached.

Notify the person noted below when the installation is completed so that the source can be inspected for issuance of an OPERATING PERMIT.

NOTE: Ms. Michelle Rudisill
Air Pollution Control Engineer
One Ararat Boulevard
Harrisburg, PA 17110
(717) 657-4587


Program Manager

Southcentral Region 67-2006
York District
Permitsy

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OWNER - YORK COUNTY SOLID WASTE & REFUSE AUTHORITYOPERATOR - YORK RESOURCE ENERGY SYSTEM, INC.Conditions, Continued:

2. This Plan Approval authorizes temporary operation of the source(s) covered by this Plan Approval provided the following conditions are met:
 - a. The Department must receive written notice from York County Solid Waste & Refuse Authority and York Resource Energy System, Inc. of the completion of construction and York County Solid Waste & Refuse Authority and York Resource Energy System, Inc.'s intent to commence operation at least five (5) working days prior to the completion of construction. The notice must state when construction will be completed and when York County Solid Waste & Refuse Authority and York Resource Energy System, Inc. expects to commence operation.
 - b. Operation is authorized only to facilitate the start-up and shake-down of sources and air cleaning devices, to permit operations pending the issuance of an Operating Permit or to permit the evaluation of the source(s) for compliance with all applicable regulations and requirements.
 - c. This condition authorizes temporary operation of the source(s) for a period of 180 days from the date of commencement of operation, provided the Department receives notice from York County Solid Waste & Refuse Authority and York Resource Energy System, Inc. pursuant to subpart a., above.
 - d. York County Solid Waste & Refuse Authority and York Resource Energy System, Inc. may request an extension if compliance with all applicable regulations and Plan Approval requirements has not been established. The extension request shall be submitted in writing at least 15 days prior to the end of this period of temporary operation and shall provide a description of the compliance status of the source, a detailed schedule for establishing compliance, and the reasons compliance has not been established.
 - e. The notice submitted by York County Solid Waste & Refuse Authority and York Resource Energy System, Inc. pursuant to subpart a., above, prior to the expiration of this Plan Approval, shall modify the plan approval expiration date. The new plan approval expiration date shall be 180 days from the date of the written notice.
3. This plan approval constitutes a RACT determination as per 25 Pa. Code, Sections 129.91 and 129.92 for the above sources.
 - I. Emissions Limits
4. The allowable emissions rates and test methods for specific pollutants are established as follows and apply on a per combustor basis except f. which applies on a total combustor basis:
 - a. Particulate matter emissions - .010 gr/dscf corrected to 7% O₂, dry basis as determined by EPA Method 5.

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- b. Hydrogen Chloride (HCl) - 25 ppmv (at 7% O₂, dry basis) or 95% control on a 24-hour daily arithmetic average according to test methods as approved by the Department or according to certified continuous emissions monitor results.
- c. Sulfur Dioxide (SO₂) - 30 ppmv (at 7% O₂, dry basis) on a 24-hour daily arithmetic mean or 80% control on a 24-hour daily geometric average according to the test method referenced in the Department's Source Testing Manual or according to certified continuous emissions monitor results.
- d. Carbon Monoxide (CO) - 100 ppmv (at 7% O₂, dry basis) on a 24-hour daily arithmetic average according to the test method referenced in the Department's Source Testing Manual or according to certified continuous emissions monitor results.
- e. Nitrogen Oxide (NO_x) - 180 ppmv (at 7% O₂, dry basis) interim limit on a 24-hour daily arithmetic average according to test methods as approved by the Department or according to certified continuous emissions monitor results. A final NO_x emission limit will be determined upon evaluation of one year's worth of emissions monitoring data after issuance of this plan approval. The final NO_x emission limit, not to exceed 180 ppmv (at 7% O₂ dry basis) on a 24-hour daily arithmetic average, will be incorporated into the operating permit upon its issuance.
- f. Nitrogen Oxide (NO_x) - 135 ppmv (at 7% O₂, dry basis) on an annual average according to test methods as approved by the Department or according to certified continuous emissions monitor results.
- g. PCDD and PCDF (expressed as total tetra through octa) shall be limited to 30 ng/dscm (7% O₂) according to test methods approved by the Department.
- h. The heavy metal concentrations in the stack gas exhaust shall not exceed the following limits:

<u>Contaminants</u>	<u>Concentration (ug/dscm) (at 7% O₂)</u>
Arsenic and Compounds	7.2
Beryllium and Compounds	0.0624
Cadmium and Compounds	15.8
Nickel and Compounds	25.0
Hexavalent Chromium and Compounds	2.3
Lead and Compounds	166.0
Mercury and Compounds	170.0

- i. Effective eighteen (18) months after issuance of this plan approval, the facility shall reduce its emissions of Mercury and Compounds by no less than 80% (by weight) or emit less than 114 ug/dscm (at 7% O₂) on an hourly basis, whichever is less stringent.

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- j. Using the actual stack emission rates and the exhaust parameters from each stack test specified in Part III of this plan approval and the dispersion modelling techniques used in the original application as approved by the Department, the calculated maximum annual ambient concentrations shall not exceed the following levels:

<u>Contaminants</u>	<u>Ambient Concentration (ug/m³)</u>
Arsenic and Compounds	0.23 x 10 ⁻³
Beryllium and Compounds	0.42 x 10 ⁻³
Cadmium and Compounds	0.56 x 10 ⁻³
Nickel and Compounds	0.33 x 10 ⁻²
Hexavalent Chromium and Compounds	0.83 x 10 ⁻⁴
Lead and Compounds	0.09
Mercury and Compounds	0.24 x 10 ⁻¹
Hydrogen Chloride	7.0
Dioxins and Furans (expressed as 2, 3, 7, 8 TCDD equivalents)	0.30 x 10 ⁻⁷
Benzo(α)pyrene	0.59 x 10 ⁻³

- k. Compliance with the ambient concentration limits shall be demonstrated at initial stack sampling, and unless all of the following conditions apply, each time stack sampling is conducted:
- (1) The measure pollutant levels are below those used in the original application.
 - (2) The volumetric flow rate has not significantly increased from the value used in the application.
 - (3) The stack gas temperature has not significantly decreased from the value used in the application.
- l. Visible air contaminants shall not exceed 10% opacity for more than 3 minutes in any one hour period and must never exceed 30% opacity as determined by a certified observer or as established by a continuous emission monitor.

II. Continuous Emission Monitoring Requirements

5. Continuous emission monitors (CEMs) shall be operated and maintained in accordance with the Department's Continuous Source Monitoring Manual for the following:
- a. Opacity
 - b. SO₂
 - c. NO_x
 - d. HCl
 - e. CO₂
 - f. CO
 - g. O₂
 - h. Temperature at locations as proposed in the "CEM Phase I submittal" and approved by the Department.

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6. The applicant/operator shall provide the Department with access to all continuous emission monitor read-outs via telephone dial-up (modem) from the Department's computer(s) and other means of transferring the monitoring data to the Department's computer. It will be the applicant's/operator's responsibility to provide all hardware, software, and funds required to provide this access. The Department shall specify the data acquisition configuration.
7. The continuous emission monitors shall be used to determine compliance with the applicable limits.

III. Stack Testing Requirements

8. Source tests shall be conducted for the following:
 - a. Particulate matter
 - b. Arsenic and compounds (expressed as arsenic)
 - c. Cadmium and compounds (expressed as cadmium)
 - d. Hexavalent chromium and compounds (expressed as chromium)
 - e. Nickel and compounds (expressed as nickel)
 - f. Lead and compounds (expressed as lead)
 - g. Beryllium and compounds (expressed as beryllium)
 - h. Mercury and compounds (expressed as mercury)
 - i. PCDD and PCDF (expressed as total tetra through octa; and 2,3,7,8 TCDD equivalents calculated according to the Department's approved methods).
 - j. Volatile Organic Compounds (VOC)
 - k. Polycyclic Aromatic Hydrocarbons (PAH) including Benzo(a)pyrene
9. The owner or operator may be required to conduct source tests at any time or frequency as may be prescribed by the Department. At a minimum, source tests shall be conducted for the following:
 - a. All pollutants except dioxins/furans, VOC, and PAH - every six months.
 - b. Dioxins/furans, VOC, and PAH - every year
10. Particulate matter emission source test results are to be calculated in accordance with 40 CFR 60, Appendix A, Method 5. All other tests are to be conducted in accordance with the Department's source testing procedures described in the latest Source Testing Manual or source testing procedures approved by the Department prior to testing.

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11. Test procedures are to be submitted to the Regional Air Pollution Control Engineer 90 days prior to any test.

IV. Operating Requirements

12. Start-up/standby fuel shall be virgin #2 distillate fuel oil containing no more than 0.3% sulfur by weight or natural gas.
13. The auxiliary burners shall automatically fire if the combustion gas temperature drops below 1800°F, as indicated by the Department approved surrogate temperature value measured at the upper furnace roof location.
14. Excess oxygen (O_2) as measured between the convection section of the boiler and the economizer or any other suitable location approved by the Department shall be maintained at or above 3% (wet basis).
15. Municipal waste may not be introduced into the combustors until an operating temperature of 1800°F, as indicated by the Department approved surrogate temperature value measured at the upper furnace roof location, has been reached.
16. Whenever the combustors are in operation, the tipping area shall be maintained at a negative air pressure and the air shall be used as primary combustion air.

V. General Requirements

17. Municipal waste as defined in the Department's "BAT Criteria for Municipal Waste Incineration" and as further defined in 25 Pa. Code, Section 75.260(a) shall be accepted for processing, as well as other residual waste specifically approved by the Department.
18. A system of interlocks shall be installed, maintained and operated such that charging of municipal waste shall automatically cease in the event that any of the following conditions exist:
 - a. The operating temperature drops below 1600°F, as indicated by the Department approved surrogate temperature value measured at the upper furnace roof location, for a 15-minute period.
 - b. The flue gas oxygen level drops below 3% (wet basis) for a 15-minute period.
 - c. The opacity of the visible emissions is equal to or greater than 10% for a 15-minute period.
 - d. The CO emissions exceed 600 ppmv corrected to 7% O_2 on a dry basis for a 15 minute period, this requirement may be waived during start-up periods.

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19. The lime slurry feed system shall be automatically modulated by interfacing with the HCl and SO₂ continuous emission monitors such that the flue gas concentrations are maintained at 25 ppm_{dv} and 30 ppm_{dv}, respectively, corrected to 7% O₂ or at those concentrations established to reflect 95% control of HCl and 80% control of SO₂. The feed rate shall be recorded.
20. The carbon monoxide and nitrogen oxide emission limits apply at all times when the municipal waste/refuse derived fuel are combusted, except during periods of start-up and shut-down. The duration of start-up or shut-down shall not exceed three (3) hours per occurrence. Start-up commences with the introduction of the municipal waste to the empty combustor. Shut-down commences when the charging of municipal waste ceases, for the express purpose of shutting down the combustor.
21. After the plant ceases operation and until normal operations resume, all waste deliveries shall be diverted no later than 72 hours into any down-time. In the event of an unscheduled down-time, the Department shall be notified within 24 hours. No later than 120 hours after the plant ceases operation in any down-time, the company shall commence shipment of all on-site waste to an approved alternate disposal site until normal operations resume.
22. The tipping floor shall be cleared and cleaned at least once every seven days.
23. Open topped refuse trucks must be appropriately covered. Any such truck not so equipped shall be denied access by the scale house operator. Notice of this requirement shall be conspicuously posted. Similarly, all haulers of material off the site shall be required to tarp or otherwise cover their loads.
24. All provisions of the Department's "BAT Criteria for Municipal Waste Incineration" established up to the date of final plan approval issuance are incorporated by reference even if not specifically mentioned in these conditions.
25. This plan approval incorporates existing Plan Approval No. 67-340-001.
26. The three combustors are subject to Subpart Ca of the Standards of Performance for New Stationary Sources and shall comply with all applicable requirements of this Subpart. 40 CFR §60.4 requires submission of copies of all requests, reports, applications, submittals, and other communications to both EPA and the Department. The EPA copies shall be forwarded to:

Director
Air, Toxics and Radiation Division
U. S. EPA, Region III
841 Chestnut Street
Philadelphia, PA 19107

