IN THE MATTER OF:  City of Spokane Waste-to-Energy Facility  Spokane, Washington 99224

FINAL APPROVAL OF
PREVENTION OF
SIGNIFICANT
DETERIORATION

NO. PSD 88-1B, AMENDMENT 1

Pursuant to the United States Environmental Protection Agency’s (EPA) regulations for the Prevention of Significant Deterioration (PSD) set forth in Title 40, Code of Federal Regulations (CFR) Part 52 and based upon the complete application submitted by the Spokane Waste-to-Energy Facility (Spokane WTE) and the technical analysis performed by the Washington State Department of Ecology (Ecology), dated February 18, 1988, and subsequent review, Ecology now finds the following.

FINDINGS

1. Spokane WTE proposes to construct and operate an 800 ton per day solid waste incinerator in the Spokane International Airport Business Park west of Spokane, Washington. A PSD permit application was submitted in August 1987 and was determined to be complete December 16, 1987.

2. Spokane WTE qualifies as a major stationary source because it would be able to burn more than 250 tons of solid waste per day and would have the potential to emit more than 100 tons per year (tpy) of several pollutants. It would be located in an area which has been designated Class II for the purpose of PSD evaluation, under 40 CFR 51.24.

3. The proposed site is within an area which is in attainment with regards to the National Ambient Air Quality Standards (NAAQS).

4. The emissions from the facility are subject to PSD review.

5. Spokane WTE will have no significant impact on ambient air quality.

6. Spokane WTE is anticipated to have no noticeable effect on industrial, commercial, or residential growth in the Spokane area.

7. Visibility will not be impaired in any of the Class I areas due to the proposed emissions.

8. Ambient pollutant concentrations in the Class I areas are not predicted to change due to Spokane WTE. There should be no negative impact to soils, vegetation, or wildlife.
9. Ecology reviewed the Environmental Impact Statement and Spokane’s Comprehensive Solid Waste Management Plan and found that the proposed project was consistent with the two documents.

10. Ecology made a first Preliminary Determination of Approval of PSD Application in December 18, 1987, which was published in the local newspapers and received public comments until February 5, 1988. A public hearing was also held in Spokane on January 5, 1988. As part of the public comments, EPA commented that the approval was not in compliance with recent amendments to federal regulations, 40 CFR 52.21, and the permit lacked a PM\(_{10}\) emission limitation. The approval conditions were revised in February 1988. The public comment period was reopened from March 1, 1988, to March 31, 1988.

11. The final approval issued by Ecology on April 20, 1988, complied with state regulations. However, EPA did not consider the final approval valid because that approval did not comply with federal regulations, 40 CFR Part 124. Ecology therefore issued a new draft PSD permit pursuant to 40 CFR Part 124.6 and complied with all relevant parts of 40 CFR Part 124. The approval issued by Ecology on April 20, 1988, was appealed to the Pollution Control Hearings Board. All parties to that appeal agreed to a voluntary dismissal of the appeal. (The voluntary dismissal did not address the related appeal of the Notice of Construction issued by Spokane Regional Clean Air Agency (SRCAA).)

12. After Ecology reapproved the approval on December 13, 1988, two groups petitioned the EPA Administrator for administrative review of the approval. The Administrator reviewed the administrative record and by his decision dated June 9, 1989, denied review and remanded the approval to Ecology for establishing lower nitrogen oxide (NO\(_X\)) limits.


14. Ecology finds that all requirements for PSD have been satisfied. Approval of the PSD application is granted subject to the following conditions.

**APPROVAL CONDITIONS**

1. Particulate emissions from each incinerator stack shall not exceed 0.020 grains per dry standard cubic foot (gr/dscf) corrected to seven percent oxygen (O\(_2\)) or 34 tpy as measured by EPA Method 5 modified to include material collected in the impinge section as specified by Ecology.

2. Particulate matter less than 10 microns in diameter (PM\(_{10}\)) emissions from each incinerator stack shall not exceed 0.015 gr/dscf corrected to seven percent O\(_2\) or 23 tpy as measured by a method approved by Ecology.

3. Sulfur dioxide (SO\(_2\)) emissions from each incinerator stack shall not exceed 50 parts per million (ppm) on a dry basis corrected to seven percent O\(_2\) or 146 tpy as measured by EPA
Methods 1, 2, 3, 4, 6, and their applicable related methods, or by a Continuous Emission Monitoring System (CEMS) which meets the requirements of Approval Condition 12 unless the owner or operator demonstrates that the uncontrolled emissions of SO₂ are reduced by at least 80 percent and a procedure acceptable to Ecology for monitoring is developed.

4. Hydrogen chloride (HCl) emissions from each incinerator stack shall not exceed 50 ppm on a dry basis corrected to seven percent O₂ as measured by a method approved by Ecology, unless the owner or operator demonstrates that the uncontrolled emissions of HCl are reduced by at least 80 percent and a procedure acceptable to Ecology for monitoring is developed.

5. For the first 15 months of operation, NOₓ emissions from each incinerator stack shall not exceed 225 ppm on a dry basis corrected to seven percent O₂ for a three-hour average as measured by EPA Methods 1, 2, 3, 4, 7, and their applicable related methods or a continuous monitoring system that meets the requirements of Approval Condition 12. In addition, the NOₓ emissions shall not exceed 251 tpy from each stack. During the first 12 months of operation, Spokane shall conduct a test program to determine the optimum operation of the NOₓ control system. The study shall include minimizing emissions of ammonia, NOₓ opacity, and the emissions of other pollutants, as well as the effects on ash quality, and cost. The test program protocol shall be submitted to Ecology for approval prior to commencement of the program. After the first 15 months of operation, NOₓ emissions from each incinerator stack shall not exceed 165 ppm on a dry basis corrected to seven percent O₂ for an eight-hour block average as measured by EPA Methods 1, 2, 3, 4, 7, and their applicable related methods or a continuous monitoring system that meets the requirements of Approval Condition 12. In addition, the NOₓ emissions shall not exceed 184 tpy from each stack. However, after the conclusion of the test program, Ecology may set an alternate NOₓ emissions limit after considering environmental, energy, and economic impacts, but in no case will the limitation be less stringent than the 225 ppm limit.

6. Carbon monoxide (CO) emissions from each incinerator stack shall not exceed 100 ppm on a dry basis corrected to seven percent O₂ for an eight-hour block average for more than five percent of the operating time in a month, or 100 ppm for a twenty-four hour block average or 86 tpy. CO shall be measured by a continuous monitoring system which meets the requirements of Approval Condition 12.

7. Gaseous non-methane hydrocarbon emissions from each incinerator stack shall not exceed 17.9 ppm on a dry basis corrected to seven percent O₂ as measured by EPA Methods 1, 2, and 25A.

8. Opacity from each incinerator stack shall not exceed 10 percent for more than a six-minute block per hour as measured by a continuous monitoring system which meets the requirements of Approval Condition 12.

9. Opacity from each incinerator stack shall not exceed five percent as measured by EPA Method 9.
10. Particulate emissions from the lime storage silo shall not exceed 0.01 grains per actual cubic foot as measured by EPA Method 5.

11. With the exception of particulate, PM$_{10}$, SO$_2$, CO, lead, gaseous non-methane hydrocarbons, NO$_X$, beryllium, mercury, fluoride, and sulfuric acid mist, emissions of any pollutant regulated under the Clean Air Act shall be less than the significant levels in 40 CFR 52.21(b)(23)(i).

12. A continuous emission monitoring system which conforms to EPA Performance Specification 1, 2, 3, and 4 shall be installed on each incinerator baghouse outlet to measure the following:
   a. Opacity
   b. SO$_2$
   c. O$_2$
   d. CO
   e. NO$_X$

   In addition, before initial start-up, a continuous emissions monitoring quality assurance plan acceptable to Ecology must be submitted and Ecology may require the plan to be periodically updated. Initial certification of the monitoring system within 60 days of achieving maximum operation but not more than 180 days after initial start-up of the incinerator.

13. Spokane WTE shall submit a plan to measure the combustion zone temperature for Ecology’s approval.

14. The amount of lime supplied to the spray dryer absorber must be measured and recorded.

15. The temperature of the gases entering the baghouses must not exceed an hourly average of 300 degrees Fahrenheit (°F). Ecology may waive or modify this requirement if it can be demonstrated to Ecology that it is not feasible to maintain 300°F.

16. All baghouses shall be equipped with pressure drop monitoring equipment and ports for manual measurement. The type of monitoring equipment, its location, and the placement of readouts from the equipment shall be submitted to and approved by Ecology prior to start-up.

17. The baghouse(s) shall have a maximum effective air to cloth ratio of 4:1 and maintain a spare bag inventory on the premises sufficient to properly operate and maintain the baghouse(s).

18. A program for keeping normally traveled roadways free of visible dust shall be developed.

19. Ash and residue transported from the ash and residue storage building shall be transported only in covered trucks or closed containers.
20. Spokane WTE shall inspect and clean, if necessary, all trucks prior to leaving the site to remove exterior accumulations of ash and dirt by water spray, or any other method submitted to and approved by Ecology, to prevent track-out of ash and dirt onto the public right-of-way. Spokane WTE shall further control spillage of excess water from the covered ash trucks prior to leaving to prevent spillage of excess water onto the public right-of-way by a method submitted and approved by Ecology.

21. Truck access doors to the facility must remain closed except during normal working shifts when refuse is being received or transferred or during short periods to allow vehicle passage.

22. The tipping area shall be designed and maintained to prevent outflow from the area to ambient air.

23. Within 60 days after achieving maximum production rate, but not later than 180 days after initial start-up, Spokane WTE shall conduct performance tests to be performed by an independent testing firm. A test plan shall be submitted for Ecology’s approval at least 30 days prior to the testing. The initial test shall include, but may not be limited to the following:

   a. Particulate
   b. SO2
   c. HCl
   d. CO
   e. Gaseous non-methane hydrocarbons
   f. Polynuclear aromatic hydrocarbons
   g. Chlorinated dioxins and furans
   h. NOx

24. Sampling ports and platforms must be provided for each incinerator after the final pollution control device. The ports must meet the requirements of 40 CFR Part 60, Appendix A, Method 1. Other arrangements may be acceptable if approved by Ecology prior to installation. Adequate permanent and safe access to the test ports must be provided.

25. Operating and maintenance manuals for all equipment that has the potential of affecting emissions to the atmosphere shall be developed and followed. Copies of the manual shall be available to Ecology and SRCAA. Emissions that result from a failure to follow the requirements of manuals may be considered proof that the equipment was not being operated and maintained properly.

26. (a) Operation of the equipment must be conducted in compliance with all data and specifications submitted as part of the PSD application, unless otherwise approved by Ecology. (b) Only natural gas shall be used in the auxiliary burners.

27. Spokane WTE shall report the result of the emission monitoring program to SRCAA.
28. Spokane WTE shall comply with all the requirements of WAC 173-434.

29. Within 180 days after initial start-up, Spokane WTE shall conduct an ambient monitoring program that has been approved by Ecology to evaluate the impact of the facility.

30. This approval shall become void if construction of the project is not commenced within eighteen (18) months after receipt of final approval, or if construction or operation of the facility is discontinued for a period of eighteen (18) months.

31. Any activity which is undertaken by Spokane WTE or others, in a manner which is inconsistent with the application and this determination, shall be subject to Ecology enforcement under applicable regulations. Nothing in this determination shall be construed so as to relieve the company of its obligations under any state, local, or federal laws or regulations.

32. Spokane WTE shall notify Ecology and SRCAA in writing within thirty (30) days of start-up.

33. Access to the source by EPA, state, or local regulatory personnel shall be permitted upon request for the purpose of compliance assurance inspections. Failure to allow such access is grounds for revocation of this determination of approval.

Prepared by:

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Approved by:

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Date