

**WASHINGTON STATE DEPARTMENT OF ECOLOGY
P.O. BOX 47600
OLYMPIA, WASHINGTON 98504**

IN THE MATTER OF:

**Guardian Fiberglass, Inc.
3659 Road N. NE
Moses Lake, WA 98837**

|
| **NO. PSD-06-03**
|
| **FINAL APPROVAL OF**
| **PREVENTION OF SIGNIFICANT**
| **DETERIORATION**

Pursuant to the federal Prevention of Significant Deterioration (PSD) regulations, 40 Code of Federal Regulations (CFR) 52.21, and the Washington State Department of Ecology (Ecology) general regulations for air pollution sources, Chapter 173-400 Washington Administrative Code (WAC), Ecology now finds the following:

FINDINGS

1. Guardian Fiberglass, Inc. (Guardian) has applied to construct and operate a new wool fiberglass manufacturing facility in Moses Lake, Washington.
2. A PSD application was submitted on October 12, 2006. Supplemental information was received on October 30, 2006, January 5, 2007, January 22, 2007, and March 23, 2007. Ecology determined the application to be complete on January 26, 2007.
3. Guardian's Moses Lake facility is located in the City of Moses Lake in Grant County, Washington. The legal location of the facility is the NW ¼ of Section 16, Township 19 North, Range 29 East of the Willamette Meridian.
4. The facility is located in a Class II Area that is designated as "attainment or unclassified" for the purpose of PSD permitting for all pollutants. The distances to the nearest Class I Areas are shown in the following table:

| Class I Area | Distance in Kilometers |
|------------------------------|------------------------|
| Spokane Indian Reservation | 116 |
| Alpine Lakes Wilderness Area | 120 |
| Glacier Peak Wilderness Area | 146 |
| Goat Rocks Wilderness Area | 175 |
| Mount Rainier National Park | 180 |
| North Cascades National Park | 184 |
| Mount Adams Wilderness Area | 200 |

5. The proposed project, referred to as the Wool Fiberglass Insulation Project, is a new facility (Greenfield), and will have the capability of producing resinated and non-resinated wool fiberglass products. The proposed facility will consist of two manufacturing lines. Line 1 will produce either resinated or non-resinated product depending on market conditions. Line 2 will produce only non-resinated product. There are six process areas. They are raw material handling, melting and refining, forming and collection, curing and cooling, facing, sizing & packaging, and support facilities.
6. The Guardian facility qualifies as a major stationary source because emissions of carbon monoxide (CO), particulate matter (PM), PM smaller than 10 microns in diameter (PM₁₀), and volatile organic compounds (VOC) are expected to be greater than 100 tons per year.
7. Emissions of particulate matter (PM), PM smaller than 10 microns in diameter (PM₁₀), nitrogen oxides (NO_x), CO, sulfur oxides (SO_x), and volatile organic compounds (VOC) are compared to the PSD significant emission rates (SER in the following table:

| | PM/PM ₁₀ | NO _x | CO | SO _x | VOC |
|--|---------------------|-----------------|--------|-----------------|--------|
| Potential Emissions in Tons Per Year (tpy) | 159.36 | 92.47 | 272.73 | 0.22 | 197.58 |
| PSD SER | 25/15 | 40 | 100 | 40 | 40 |
| Subject to PSD Review Y or N | Yes | Yes | Yes | No | Yes |

8. Emission increases of regulated pollutants that are not subject to PSD permitting are considered by Ecology's Eastern Regional Office under their new source review rules.
9. Best Available Control Technology (BACT) for controlling emissions of PM/PM₁₀ from the raw materials handling operation has been determined to be a baghouse.
10. BACT for controlling emissions of PM/PM₁₀ from the melting and refining operation has been determined to be a baghouse.
11. BACT for controlling emissions of PM/PM₁₀ from the forming and collection operation has been determined to be a wet gas scrubber.
12. BACT for controlling emissions of PM/PM₁₀ from the curing and cooling operation has been determined to be a wet gas scrubber/Regenerative Thermal Oxidizer (RTO).

13. BACT for controlling emissions of NO_x from the melting and refining operation has been determined to be good operation practices.
14. BACT for controlling emissions of NO_x from the forming and collection operation has been determined to be good combustion practices.
15. BACT for controlling emissions of NO_x from the curing and cooling operation has been determined to be a Low-NO_x burner.
16. BACT for controlling emissions of CO from the melting and refining operation has been determined to be good operation practices.
17. BACT for controlling emissions of CO from the forming and collection operation has been determined to be good combustion practices.
18. BACT for controlling emissions of CO from the curing and cooling operation has been determined to be a thermal oxidizer.
19. BACT for controlling emissions of VOC from the melting and refining operation has been determined to be good operation practices.
20. BACT for controlling emissions of VOC from the forming and collection operation has been determined to be good operation practices.
21. BACT for controlling emissions of VOC from the curing and cooling operation has been determined to be a Regenerative Thermal Oxidizer (RTO).
22. Guardian is subject to the following New Source Performance Standards (NSPS):
 - New Source Performance Standard 40 CFR 60, Subpart A
 - New Source Performance Standard 40 CFR 60, Subpart PPP
 - New Source Performance Standard 40 CFR 60, Subpart IIII
23. Guardian is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP):
 - National Emission Standards for Hazardous Air Pollutants 40 CFR 63, Subpart NNN
24. The modeling showed that emissions from the proposed project are below the Class 1 modeling significance levels and Class 1 PSD increment has not been over consumed as shown in the following table:

| Pollutant | Averaging Period | Total Concentration (µg/m ³) | PSD Increment Class II (µg/m ³) | Below Increment? |
|------------------|------------------|--|---|------------------|
| PM ₁₀ | 24-hour | 27.09 | 30 | Yes |
| PM ₁₀ | Annual | 4.01 | 17 | Yes |

25. Visibility and deposition are not expected to negatively impact any Class I Area.

26. The project will not have a noticeable effect on industrial, commercial, or residential growth in the Moses Lake area.
27. Based upon the Technical Support Document prepared on May 24, 2007 and the application, Ecology finds that all requirements for PSD have been satisfied and will comply with all applicable federal NSPS. Approval of the PSD application is granted subject to the following conditions:

APPROVAL CONDITIONS

Operational Limitations

1. Operation of the diesel firewater pump shall be limited to 500 hours per year, averaged on a 12-month rolling average.
2. Operation of the diesel emergency generators (2) shall be limited to 500 hours per year each, averaged on a 12-month rolling average.
3. PM/PM₁₀ emissions from each line in the Raw Materials Handling Operation are limited to 0.04 tons per year averaged on a 12-month rolling average.
4. CO emissions from the Curing and Cooling Operation shall not exceed 31.17 tons/yr averaged over a 12-month rolling average.
5. VOC emissions from the Curing and Cooling Operations shall not exceed 5.06 tons/yr averaged over 12-month rolling average.
6. Total Glass wool manufacturing shall be limited to 39,420 tons of glass pulled per year from each line averaged over 12-month rolling average.
7. The RTO (for Curing and Cooling operations) shall not be out of operation for more than 250 hours per year averaged over 12-rolling months.

Fuel Usage

8. The firewater pump and emergency generator shall be fueled by on-road specification diesel fuel only.

Emission Limits

9. PM/PM₁₀ emissions from the Melting and Refining Operations (each line) from EP's-12 & 22:
 - a. Emissions shall not exceed 0.92 lb/hr (1-hour average).
 - b. Emissions shall not exceed 4.02 tons/yr (12-month rolling average).
 - c. Emissions shall not exceed 0.204 lb/ton of glass pulled (12-month rolling average).
10. NO_x emissions from the Melting and Refining Operations (each line) from EP's 12&22:

- a. Emissions shall not exceed 0.091 lb/hr (1-hour average).
- b. Emissions shall not exceed 0.40 tons/yr (12-month rolling average).
- c. Emissions shall not exceed 0.021 lb/ton of glass pulled (12-month rolling average).

11. CO emissions from the Melting and Refining Operations (each line) from EP's 12&22:

- a. Emissions shall not exceed 2.57 lb/hr (1-hour average).
- b. Emissions shall not exceed 11.26 tons/yr (12-month rolling average).
- c. Emissions shall not exceed 0.57 lb/ton of glass pulled (12-month rolling average).

12. VOC emissions from the Melting and Refining Operations (each line) from EP's 12&22:

- a. Emissions shall not exceed 2.07 lb/hr (1-hour average).
- b. Emissions shall not exceed 9.07 tons/yr (12-month rolling average).
- c. Emissions shall not exceed 0.46 lb/ton of glass pulled (12-month rolling average).

13. PM/PM₁₀ emissions from the Forming and Collection Operations (EP 13):

- a. Emissions shall not exceed 14.90 lb/hr (1-hour average).
- b. Emissions shall not exceed 64.7 tons/yr (12-month rolling average).
- c. Emissions shall not exceed 3.28 lb/ton of glass pulled (12-month rolling average).

14. PM/PM₁₀ emissions from the Forming and Collection Operations (EP 23):

- a. Emissions shall not exceed 14.75 lb/hr (1-hour average).
- b. Emissions shall not exceed 64.6 tons/yr (12-month rolling average).
- c. Emissions shall not exceed 3.28 lb/ton of glass pulled (12-month rolling average).

15. NO_x emissions from the Forming and Collection Operations (each line) from EP's 13 & 23:

- a. Emissions shall not exceed 1.07 lb/hr (1-hour average).
- b. Emissions shall not exceed 4.71 tons/yr (12-month rolling average).
- c. Emissions shall not exceed 0.24 lb/ton of glass pulled (12-month rolling average).

16. CO emissions from the Forming and Collection Operations (each line) from EP's 13&23:

- a. Emissions shall not exceed 24.95 lb/hr (1-hour average).
- b. Emissions shall not exceed 109.27 tons/yr (12-month rolling average).
- c. Emissions shall not exceed 5.54 lb/ton of glass pulled (12-month rolling average).

17. VOC emissions from the Forming and Collection Operations (each line) from EP's 13&23:

- a. Emissions from EP 13 shall not exceed 18.03 lb/hr (1-hour average).

- b. Emissions from EP 13 shall not exceed 78.96 tons/yr (12-month rolling average).
 - c. Emissions from EP 13 shall not exceed 4.01 lb/ton of glass pulled (12-month rolling average).
 - d. Emissions from EP 23 shall not exceed 11.34 lb/hr (1-hr average).
 - e. Emissions from EP 23 shall not exceed 49.66 tons/yr (12-month rolling average).
 - f. Emissions from EP 23 shall not exceed 2.52 lb/ton of glass pulled (12-month rolling average).
18. PM/PM₁₀ emissions from the Curing and Cooling Operations (Line 1) from EP-14:
- a. Emissions shall not exceed 3.67 lb/hr (1-hour average).
 - b. Emissions shall not exceed 16.07 tons/yr (12-month rolling average).
 - c. Emissions shall not exceed 0.82 lb/ton of glass pulled (12-month rolling average).
19. NO_x emissions from the Curing and Cooling Operations (Line 1) from EP-14:
- a. Emissions shall not exceed 17.34 lb/hr (1-hour average).
 - b. Emissions shall not exceed 3.85 lb/ton of glass pulled (12-month rolling average).
20. CO emissions from the Curing and Cooling Operations (Line 1) from EP-14:
- a. Emissions shall not exceed 5.66 lb/hr (1-hour average) when the RTO is in operation.
 - b. Emissions shall not exceed 56.6 lb/hr (1-hr average) when the RTO is not in operation.
 - c. Emissions shall not exceed 1.58 lb/ton of glass pulled (12-month rolling average).
21. VOC emissions from the Curing and Cooling Operations (Line 1) from EP-14:
- a. Emissions shall not exceed 0.69 lb/hr (1-hour average) when the RTO is in operation.
 - b. Emissions shall not exceed 17.15 lb/hr (1-hour average) when the RTO is not in operation.
 - c. Emissions shall not exceed 0.26 lb/ton of glass pulled (12-month rolling average).
22. VOC emissions from the Facing Sizing and Packaging Operations (combined emissions) from FP's 14, 15, 17, 18, & 19:
- a. Emissions shall not exceed 19.02 tpy per line (12-month rolling average).
23. NO_x emissions from the Support facilities:
- a. Emissions from each emergency generator shall not exceed 10.36 lb/hr (1-hour average).

- b. Emissions from each firewater pump shall not exceed 3.77 lb/hr (1-hour average).

Compliance Determination Methods

24. Compliance with Approval Condition 1 shall be determined by installing and operating a non-resettable totalizer.
25. Compliance with Approval Condition 2 shall be determined by installing and operating a non-resettable totalizer.
26. Compliance with Approval Condition 3 shall be determined by calculation.
27. Compliance with Approval Condition 4 shall be determined by source testing in accordance with 40 CFR 60 Appendix A, Method 10 or an equivalent method approved in advance by Ecology.
28. Compliance with Approval Condition 5 shall be determined by source testing in accordance with 40 CFR 60 Appendix A, Method 25A, or an equivalent method approved in advance by Ecology. A factor of 1.59 shall be applied to the VOC concentration obtained from the source test to account for oxygenated hydrocarbons.
29. Compliance with Approval Condition 6 shall be determined by recordkeeping.
30. Compliance with Approval Condition 7 shall be determined by recordkeeping.
31. Compliance with Approval Condition 8 shall be determined by fuel purchase records.
32. Compliance with Approval Condition 9 shall be determined by source testing in accordance with 40 CFR 60 Appendix A, Method 5, or 40 CFR 51 Appendix M Method 201 or 201A for the front half analysis and 40 CFR 51 Appendix M Method 202 for the back half or an equivalent method approved in advance by Ecology.
33. Compliance with Approval Condition 10 shall be determined by source testing in accordance with 40 CFR 60 Appendix A, Method 7E or an equivalent method approved in advance by Ecology.
34. Compliance with Approval Condition 11 shall be determined by source testing in accordance with 40 CFR 60 Appendix A, Method 10 or an equivalent method approved in advance by Ecology.
35. Compliance with Approval Condition 12 shall be determined by source testing in accordance with 40 CFR 60 Appendix A, Method 18, 25A, or 25B or an equivalent method approved in advance by Ecology.
36. Compliance with Approval Condition 13 shall be determined by source testing in accordance with 40 CFR 60 Appendix A, Method 5, Method 5E, 40 CFR 51 Appendix M Method 201 or 201A for the front half analysis and 40 CFR 51 Appendix M Method 202 for the back half or an equivalent method approved in advance by Ecology.
37. Compliance with Approval Condition 14 shall be determined by source testing in accordance with 40 CFR 60 Appendix A, Method 5, Method 5E, 40 CFR 51 Appendix

- M Method 201 or 201A for the front half analysis and 40 CFR 51 Appendix M Method 202 for the back half or an equivalent method approved in advance by Ecology.
38. Compliance with Approval Condition 15 shall be determined by source testing in accordance with 40 CFR 60 Appendix A, Method 7E or an equivalent method approved in advance by Ecology.
 39. Compliance with Approval Condition 16 shall be determined by source testing in accordance with 40 CFR 60 Appendix A, Method 10 or an equivalent method approved in advance by Ecology.
 40. Compliance with Approval Condition 17 shall be determined by source testing in accordance with 40 CFR 60 Appendix A, Method 25A, or an equivalent method approved in advance by Ecology. For EP 13 only, a factor of 1.59 shall be applied to the VOC concentration obtained from the source test to account for oxygenated hydrocarbons.
 41. Compliance with Approval Condition 18 shall be determined by source testing in accordance with 40 CFR 60 Appendix A, Method 5, Method 5 E, and 40 CFR 51 Appendix M Method 201 or 201A for the front half analysis and 40 CFR 51 Appendix M Method 202 for the back half or an equivalent method approved in advance by Ecology.
 42. Compliance with Approval Condition 19 shall be determined by source testing in accordance with 40 CFR 60 Appendix A, Method 7E or an equivalent method approved in advance by Ecology.
 43. Compliance with Approval Condition 20 shall be determined by source testing in accordance with 40 CFR 60 Appendix A, Method 10 or an equivalent method approved in advance by Ecology.
 44. Compliance with Approval Condition 21 shall be determined by source testing during operation of the RTO in accordance with 40 CFR 60 Appendix A, Method 25A or an equivalent method approved in advance by Ecology. A factor of 1.59 shall be applied to the VOC concentration obtained from the source test to account for oxygenated hydrocarbons. Source testing shall be conducted at the inlet and outlet of the RTO.
 45. Compliance with Approval Condition 22 shall be determined by calculation utilizing product usage/throughput data and VOC content (i.e., MSDS information).
 46. Compliance with Approval Condition 23 shall be determined by source testing in accordance with 40 CFR 60 Appendix A, Method 7E or an equivalent method approved in advance by Ecology.

Monitoring Methods

47. Compliance with Approval Condition 1 shall be monitored by recordkeeping and reporting in accordance with Approval Condition 24.
48. Compliance with Approval Condition 2 shall be monitored by recordkeeping and reporting in accordance with Approval Condition 25.

49. Compliance with Approval Condition 3 shall be monitored by recordkeeping and reporting in accordance with Approval Condition 26.
50. Compliance with Approval Condition 4 shall be monitored by source testing in accordance with Approval Condition 27 once every five years. Emission factors developed from the most recent source test shall be multiplied by the monthly production rates.
51. Compliance with Approval Condition 5 shall be monitored by source testing in accordance with Approval Condition 28 once every five years. Emission factors developed from the most recent source test shall be multiplied by the monthly production rates.
52. Compliance with Approval Condition 6 shall be monitored by recordkeeping and reporting in accordance with Approval Condition 29.
53. Compliance with Approval Condition 7 shall be monitored by recordkeeping and reporting in accordance with Approval Condition 30.
54. Compliance with Approval Condition 8 shall be monitored by recordkeeping and reporting in accordance with Approval Condition 31.
55. Compliance with Approval Condition 9 shall be monitored by source testing in accordance with Approval Condition 32 once every five years. Emission factors developed from the most recent source test shall be multiplied by the monthly production rates.
56. Compliance with Approval Condition 10 shall be monitored by source testing in accordance with Approval Condition 33 once every five years. Emission factors developed from the most recent source test shall be multiplied by the monthly production rates.
57. Compliance with Approval Condition 11 shall be monitored by source testing in accordance with Approval Condition 34 once every five years. Emission factors developed from the most recent source test shall be multiplied by the monthly production rates.
58. Compliance with Approval Condition 12 shall be monitored by source testing in accordance with Approval Condition 35 once every five years. Emission factors developed from the most recent source test shall be multiplied by the monthly production rates.
59. Compliance with Approval Condition 13 shall be monitored by source testing in accordance with Approval Condition 36 once every five years. Emission factors developed from the most recent source test shall be multiplied by the monthly production rates.
60. Compliance with Approval Condition 14 shall be monitored by source testing in accordance with Approval Condition 37 once every five years. Emission factors developed from the most recent source test shall be multiplied by the monthly production rates.

61. Compliance with Approval Condition 15 shall be monitored by source testing in accordance with Approval Condition 38 once every five years. Emission factors developed from the most recent source test shall be multiplied by the monthly production rates.
62. Compliance with Approval Condition 16 shall be monitored by source testing in accordance with Approval Condition once per year for three consecutive years of operation. If the results of three consecutive source tests are within 20 percent of each other and below the limit established in Approval Condition 16, Guardian may request approval to reduce the source testing to once every five years.
63. Compliance with Approval Condition 17 shall be monitored by source testing in accordance with Approval Condition 40 once every five years. Emission factors developed from the most recent source test shall be multiplied by the monthly production rates.
64. Compliance with Approval Condition 18 shall be monitored by source testing in accordance with Approval Condition 41 once every five years. Emission factors developed from the most recent source test shall be multiplied by the monthly production rates.
65. Compliance with Approval Condition 19 shall be monitored by source testing in accordance with Approval Condition 42 once every five years. Emission factors developed from the most recent source test shall be multiplied by the monthly production rates.
66. Compliance with Approval Condition 20 shall be monitored by source testing in accordance with Approval Condition 43 once every five years. Emission factors developed from the most recent source test shall be multiplied by the monthly production rates.
67. Compliance with Approval Condition 21 shall be monitored by source testing in accordance with Approval Condition 44 once every five years. Emission factors developed from the most recent source test shall be multiplied by the monthly production rates.
68. Compliance with Approval Condition 22 shall be monitored by calculation.
69. Monitoring compliance with Approval Condition 23 is not required.

Performance Testing

70. Within 180 days after startup, performance testing in accordance with 40 CFR 60.8 and Approval Conditions, 3, 4, 5, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21 a, 21.b, and 23 shall be conducted.

Reporting Requirements

71. Guardian shall report the following monitoring data to the Department of Ecology Eastern Regional Office:
- a. Submit copies of each source test performed on emission units regulated by this order.
 - b. Submit a report semiannually, or on another approved reporting schedule, and in the format approved by the department, that includes the following information:
 - i. Calendar date or monitoring period.
 - ii. Type of fuel fired as required by Approval Condition 8.
 - iii. Total operating hours from each unit required to do so in Approval Conditions 1, 2, and 7 above.
 - iv. Results of compliance calculations as required by Approval Conditions 47, 48, 49, 50, 51, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, and 68.

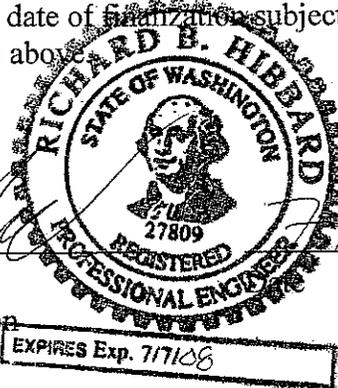
Other Conditions

72. Within 90 days of startup, Guardian shall identify operational parameters and practices that will constitute "proper operational practices" of the operation of the facility relative to compliance with the conditions of this permit. These operational parameters and practices shall be included in an O&M manual for the facility. The O&M manual shall be maintained and followed by Guardian and shall be available for review by Ecology or EPA. Emissions that result from a failure to follow the requirements of the O&M manual relative to compliance with the conditions of this permit may be considered credible evidence that emission violations have occurred.
73. Access to the source by Ecology or the EPA, shall be permitted upon request. Failure to allow such access is grounds for an enforcement action under the federal Clean Air Act or the Washington State Clean Air Act.
74. This approval shall become invalid if construction of the project is not commenced within eighteen (18) months after receipt of the final approval, or if construction of the facility is discontinued for a period of eighteen (18) months, unless Ecology extends the 18-month period, pursuant to 40 CFR 52.21(r)(2) and applicable EPA guidance.
75. The effective date of this permit shall not be earlier than the date upon which the US EPA notifies Ecology that the US EPA has satisfied its obligations, if any, under Section 7 of the Endangered Species Act (ESA) 16 U.S.C. § 1531 *et seq.*, 50 CFR Part 402, subpart B (Consultation Procedures) and Section 305(b)(2) of the Magnuson-Stevens Fishery and Conservation Act 16 U.S.C. § 1801 *et seq.*, 50 CFR Part 600, subpart K (EFH Coordination, Consultation, and Recommendations).
76. For federal regulatory purposes and in accordance with 40 CFR 124.15 and 124.19: If there was a public comment requesting a change in the preliminary determination or a proposed permit condition during the public review and comment period, the effective date of this permit shall not be earlier than 30 days after service of notice to the commenters and applicant on the preliminary determination.

- 77. If a review of the final determination is requested under 40 CFR 124.19 within the 30-day period following the date of the final determination, the effective date of the permit is suspended until such time as the review and any subsequent appeal against the permit are resolved.
- 78. If there was no public comment requesting a change in the preliminary determination or a proposed permit condition during the public review and comment period, this permit is effective upon the date of finalization, subject to consideration of Condition 75 (EPA's ESA requirement) above.

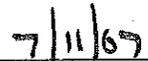
Reviewed by:


Richard B. Hibbard, P.E.
Technical Services Section
Air Quality Program



Approved by:


Stuart A. Clark, Program Manager
Air Quality Program
Washington State Department of Ecology


Date

Ecology was notified by the USEPA that the USEPA has satisfied its obligations under the Endangered Species and Magnuson-Stevens Acts relative to PSD Permit 06-03 issued to Guardian Fiberglass on:

March 13, 2007
Date of USEPA Notification


Stuart A. Clark, Program Manager
Air Quality Program
Washington State Department of Ecology