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Puget Sound Clean Air Agency

Puget Sound Clean Air Agency

Notice of Construction No. **11665**

HEREBY ISSUES AN ORDER OF APPROVAL TO CONSTRUCT, INSTALL, OR ESTABLISH

Registration No. **30196**

Date

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One thermal desorption unit (60 TPH) consisting of a rotary dryer (60 TPH) heated by a Honeywell (Hauck) KD-LE 10 burner (22 MMBtu/hr), controlled by a baghouse rated at 42,000 cfm and a Honeywell (Hauck) KD-LE 10 afterburner (22 MMBtu/hr).

APPLICANT

Cadman Materials
7554 185th Ave NE, Suite 100
Redmond, WA 98052

OWNER

Cadman Materials
7554 185th Ave NE, Suite 100
Redmond, WA 98052

INSTALLATION ADDRESS

Cadman Materials, 17 E Marine View Drive, Everett, WA 98201

THIS ORDER IS ISSUED SUBJECT TO THE FOLLOWING RESTRICTIONS AND CONDITIONS

1. Approval is hereby granted as provided in Article 6 of Regulation I of the Puget Sound Clean Air Agency to the applicant to install or establish the equipment, device or process described hereon at the INSTALLATION ADDRESS in accordance with the plans and specifications on file in the Engineering Division of the Puget Sound Clean Air Agency.
2. This approval does not relieve the applicant or owner of any requirement of any other governmental agency.

EMISSION LIMITATIONS

3. Opacity from the thermal oxidizer exhaust stack shall not exceed 5% opacity for a period or periods aggregating more than 3 minutes during any one hour as measured by WDOE Method 9A.
4. Total particulate matter emissions from the thermal oxidizer exhaust stack shall not exceed 0.027 gr/dscf (corrected to 7% O_2) as measured by U.S. EPA Method 5 as modified by Puget Sound Clean Air Agency Board Resolution 540 dated August 11, 1983.
5. Filterable particulate matter emissions from the thermal oxidizer exhaust stack shall not exceed 0.014 gr/dscf (corrected to 7% O_2) as measured by U.S. EPA Method 5 as modified by Puget Sound Clean Air Agency Board Resolution 540 dated August 11, 1983.
6. The non-methane volatile organic compound emissions from the thermal oxidizer exhaust stack shall not exceed of 0.020 lb VOC (expressed as propane) per ton of soil processed as determined in accordance with Section 3.07 of PSCAA Regulation I using USEPA reference methods 1, 3A, 4, and 25A from Appendix A of 40 CFR Part 60 by the average of three 60-minute test runs.
7. Carbon monoxide emissions from the thermal oxidizer exhaust stack shall not exceed 100 ppmvd (corrected to 7% O_2) as determined in accordance with Section 3.07 of PSCAA Regulation I using USEPA reference methods 1, 3A, 4, and 10 from Appendix A of 40 CFR Part 60 by the average of three

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60-minute test runs.

8. Nitrogen oxides emissions from the thermal oxidizer exhaust stack shall not exceed 86.6 ppmvd (corrected to 7% O_2) as determined in accordance with Section 3.07 of PSCAA Regulation I using USEPA reference methods 1, 3A, 4, and 7E from Appendix A of 40 CFR Part 60 by the average of three 60-minute test runs.

9. Nitrogen oxides emissions from the combustion of natural gas in the dryer and thermal oxidizer shall not exceed 32.0 ppmvd (corrected to 7% O_2) as determined in accordance with Section 3.07 of PSCAA Regulation I using USEPA reference methods 1, 3A, 4, and 7E from Appendix A of 40 CFR Part 60 by the average of three 60-minute test runs.

10. For any period or periods aggregating no more than 3 minutes in any one hour, each storage pile, screening operation, material hopper, storage bin, transfer point on belt conveyors, or any other stationary equipment used to process, load, blend, transfer, or stack material treated by the TDU shall exhibit opacity no greater than 5 percent as measured by Department of Ecology Method 9A.

COMPLIANCE DEMONSTRATION

11. The owner or operator shall notify the Puget Sound Clean Air Agency in writing, within 15 days of initial startup of the thermal desorption unit.

12. The owner or operator shall have emissions tested for compliance with Conditions 3 through 8 of this Order within 90 days after achieving the maximum production rate, but no later than 180 days after initial startup of the thermal desorption unit. Source testing must occur while processing petroleum contaminated soils at the maximum hourly rate. The emission tests listed in this requirement shall be repeated at an interval no less than once every five calendar years. The owner or operator shall submit a compliance test plan with the test notification submitted under Regulation I, Section 3.07(b) at least 60 days prior to the compliance test. The test plan shall detail the test methods used for each pollutant, the operational data that will be collected during the test, the level of contamination in the soil that will be processed during the test, and any other relevant information about the test. The test plan must be approved before conducting the source test, and the owner or operator must follow the approved test plan. Changes to the approved test plan are acceptable as long as the Agency has approved the proposed changes.

13. Compliance with Condition 3 must at a minimum be demonstrated by inspecting the thermal oxidizer exhaust stack for visible emissions once every operating day when the thermal desorption unit is in use. If during the scheduled inspection or at any other time, visible emissions other than uncombined water are observed, the owner or operate must immediately take one of the following actions:

    a. Corrective action or mitigation measure to eliminate the visible emissions;

    b. Compliance verification by completing a certified opacity reading per Ecology Method 9A. Certified opacity readings must be performed by certified persons with current certification for plume evaluation in accordance with EPA Method 9; or

    c. Cease operation of the thermal desorption unit until the problem is corrected.

    Any operation with visible emission above the limit in Condition 3 is a violation of this Order.

14. The owner or operator shall keep a record showing the date, time, and results of each inspection, a description of all corrective actions or mitigation measures taken, and the date, time and results of all Ecology Method 9A tests performed as required by Condition 13.

OPERATING LIMITATIONS

15. The thermal desorption unit shall not operate for more than 7,509 hours per consecutive 12-month period. Within 30 days of the end of each month, a record of operating hours shall be kept showing the total

operating hours for the month and the total operating hours for the previous 12 consecutive months.

16. The thermal desorption unit shall not process contaminated soil at a rate greater than 60 tons per hour.

17. The thermal desorption unit burner and the thermal oxidizer burner shall be fired only on natural gas.

18. The soil processed in the thermal desorption unit shall not exceed the following contamination limits:
    a. 2.0% total petroleum hydrocarbons by weight.
    b. 1.0 ppm polychlorinated biphenyls (PCBs) by weight.
    c. 48 ppm total chromium by weight.

19. Prior to initial processing of contaminated soil in the thermal desorption unit, the owner or operator shall submit for Agency approval a Process Rate Monitoring Plan providing the details of how the facility will measure, monitor, and document, the thermal desorption unit soil process rate. The Agency-approved Process Rate Monitoring Plan shall be incorporated into the facility Operations and Maintenance Plan required by Regulation I, Section 5.05. Contaminated soils shall not be introduced into the thermal desorption unit without an Agency approved Process Rate Monitoring Plan in place. The Process Rate Monitoring Plan may be revised with Agency approval at any time and also may be revised by the Agency at any time.

20. No contaminated soil shall enter the thermal desorption unit unless the thermal oxidizer is operating and its monitored temperature is greater than 1,400 degrees Fahrenheit. The thermal oxidizer temperature shall be maintained at greater than 1,400 degrees Fahrenheit whenever soil is present in the thermal desorption unit.

MONITORING

21. To demonstrate compliance with the limits in Condition 18, incoming soil must be tested at the following minimum frequency: at least 3 soil samples must be tested for less than 100 cubic yards of soil; at least 5 soil samples must be tested for 101- 500 cubic yards of soil; at least 7 soil samples must be tested for 501 – 1000 cubic yards of soil; at least 10 soil samples must be tested for 1001 - 2000 cubic yards of soil; at least 10 soil samples must be tested for greater than 2,000 cubic yards of soil, plus 1 additional sample for every 500 cubic yards over 2000. The owner or operator must receive soil analysis results from the required testing prior to accepting the tested material onsite. The owner or operator shall maintain records of the soil analysis results.

22. To demonstrate compliance with Condition 20, the thermal oxidizer shall be equipped with a thermocouple near the entry to its stack to measure temperature to +/- 14 degrees Fahrenheit. Temperature data must be measured and recorded continuously (or sampled at intervals no greater than 10 seconds and recorded as 1 minute averages).

23. The owner or operator shall annually test or replace the thermal oxidizer thermocouple. If performed, the test shall consist of either a physical or electronically simulated comparison and shall follow manufacturer specifications. The results of the test readings must be within +/- 14 degrees Fahrenheit. If the results of the test readings exceed +/- 14 degrees Fahrenheit of the reference value, the thermocouple must be replaced or adjusted to read within +/- 14 degrees Fahrenheit of the reference value. The owner or operator shall keep records of thermocouple calibration test reports, including the date and results of each test, the test method used, and a record of who performed the test. If the thermocouple is replaced, the owner or operator shall keep a record of the date it was replaced and who replaced it.

24. In the event of a thermal oxidizer thermocouple failure or in the event of any other failure such that the owner or operator cannot demonstrate that it meets Condition 20, the thermal desorption unit shall be shut down until the problem is fixed. The date of the failure, a description of the failure, and actions taken to

resolve it shall be logged contemporaneously with their occurrence.

25. The baghouse shall be equipped with a gauge measuring the pressure drop across the baghouse. The pressure gauge shall be in operation whenever the baghouse is in operation. The pressure gauge shall be marked with the acceptable pressure drop range. The maximum acceptable pressure drop shall be determined from manufacturer specifications for the bags used in the baghouse. The minimum acceptable pressure drop shall be determined from manufacturer specifications for the bags used in the baghouse. The pressure drop observed during the most recent compliance source test shall fall within the defined acceptable range of pressure drop. The acceptable range and the basis for the range shall be included in the facility Operations and Maintenance plan required by Agency Regulation I, Section 5.05(c).

26. The owner or operator shall monitor and record the following information:
    a) One daily pressure drop across the baghouse during each day of operation.
    b) Hourly, monthly, and annual (12 consecutive month rolling total) soil throughput.
    c) The date and time of each thermal oxidizer startup and shutdown.
    d) The date and time of each time contaminated soil is introduced into the TDU and each time the TDU is emptied of soil.

COMPLAINTS

27. The owner or operator shall establish a complaint response program as part of the O&M Plan. The program shall include a complaint phone line, criteria and methods for establishing whether the owner or operator may be the source of emissions related to the complaint, and a format for communicating results of investigation and advising complainants of corrective actions.

    a) The owner or operator shall record and investigate complaints received regarding air quality as soon as possible, but no later than one working day after receipt.
    b) The owner or operator shall correct any problems identified by these complaint investigations within 24 hours of identification or cease operation of the equipment until the problem is resolved;
    c) Records of all complaints received regarding air quality issues shall include information regarding date and time of complaint; name and address of complainant (if known); nature of the complaint; investigation efforts completed and basis for conclusion reached; and date, time, and nature of any corrective action taken.

RECORDKEEPING

28. The owner or operator shall maintain records required by this Order of Approval, as well as the records identified in the Operation and Maintenance Plan required by Regulation I, Section 5.05, for two years and make them available to Puget Sound Clean Air Agency personnel upon request.

Order of Approval for NC No. 11665

APPEAL RIGHTS

Pursuant to Puget Sound Clean Air Agency's Regulation I, Section 3.17 and RCW 43.21B.310, this Order may be appealed to the Pollution Control Hearings Board (PCHB). To appeal to the PCHB, a written notice of appeal must be filed with the PCHB and a copy served upon Puget Sound Clean Air Agency within 30 days of the date the applicant receives this Order.

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Courtney O'Gorman	Carole Cenci
Reviewing Engineer	Compliance Manager