

PUGET SOUND CLEAN AIR AGENCY

Additional Notice of Construction Application Requirements for

BAGHOUSES AND CARTRIDGE-TYPE DUST COLLECTORS

General

Equipment or Process Being Controlled [*Specify the source(s) of the particulate matter to be controlled. If the source(s) are also new, complete the applicable permit forms*]

Identify which of the following categories the project fits into:

1. New Construction (*New construction also includes existing, unpermitted equipment or processes*)
2. Reconstruction (*Reconstruction means the replacement of components of an existing facility to such an extent that the fixed capital cost of the new components exceeds 50% of the fixed capital cost that would be required to construct a comparable entirely new facility*)
3. Modification (*Modification means any physical change in, or change in the method of operation of, a source, except an increase in the Hours of Operation or production rates (not otherwise prohibited) or the use of an alternative fuel or raw material that the source is approved to use under an Order of Approval or operating permit, that increases the amount of any air contaminant emitted or that results in the emission of any air contaminant not previously emitted*)
4. Amendment to Existing Order of Approval Permit Conditions

Estimated Hours of Operation (hr/day, day/wk, wk/yr) [*Estimate the hours of operation for the new baghouse - not necessarily the entire facility*]

Estimated Installation Date [*Estimate the date when the new baghouse will be put into service*]

Inlet Gas Stream Characteristics [*Pretreatment (e.g., heating or dilution) is necessary if the temperature is not 50-100 °F above the dewpoint.*]

Particulate Concentration (lb/hr, gr/acf, or gr/dscf) [*Specify the amount of particulate matter being vented to the baghouse in pounds per hour, grains per actual cubic foot, or grains per dry standard cubic foot. (One pound contains 7000 grains.)*]

Flowrate (acfm) [*Specify the air flowrate in actual cubic feet per minute. This is usually determined from the fan performance 'curve' based upon the expected static pressure caused by the sum of the pressure losses from each component in the ductwork, including the baghouse*]

Average Temperature (°F) [*Specify the average expected temperature of the air going into the baghouse in degrees Fahrenheit.*]

Maximum Temperature (°F) [*Specify the maximum expected temperature of the air going into the baghouse in degrees Fahrenheit.*]

Moisture (% by volume) [*Specify the moisture (water vapor) concentration of the air going into the baghouse in percent.*]

Design [*Most design information is available from the manufacturer or vendor. Submittal of a brochure, scale drawing or process and instrumentation diagram will facilitate the review of the permit application*]

Make & Model [*Specify the manufacturer and model of the baghouse - not the serial number*]

Filter Fabric Material [*Specify the type of fabric material used. Common bag materials include modacrylic (e.g., Dynel), cotton, wool, polypropylene, nylon polyamide (e.g., Nylon 6 & 66), acrylic (e.g., Orlon), polyester (e.g., Dacron, Creslan), nylon aromatic (e.g., Nomex), fluorocarbon (e.g., Teflon, TFE), and fiberglass. Also specify whether it is woven or felted, and any type of treatments (e.g., heat setting) or finishes applied to the fabric (e.g., Teflon, Gore-tex, silicone).*]

Filter Cleaning Method [*Specify either mechanically shaken, reverse air, or pulse-jet.*]

Air to Cloth Ratio [*Specify the air to cloth ratio of the baghouse. This is the airflow (acfm) divided by the total surface area of fabric exposed to dust. The surface area of an individual bag is equal to $3.14159 \times \text{bag diameter} \times \text{bag length}$. The surface area of a pleated cartridge generally must be obtained from the manufacturer or distributor. The total surface area is just the individual bag or cartridge surface area times the number of bags or cartridges cleaning the exhaust.*] (acfm/ft²)

Baghouse Configuration [*Specify whether the baghouse equipped with an induced draft fan on the clean side (negative pressure) or with a forced draft fan on the dirty side (positive pressure)*]

Method Used to Design/Size the Baghouse [*Specify the method used to select this design and size of baghouse. If design calculations were performed, they should be submitted. If the design and sizing was based on similar (successful) applications, list the facilities and the city and state where they are located*]

Stack

Stack Height (ft) [*Specify the height of the top of the stack above ground level - not above the building or sea level*]

Stack Diameter or Rectangular Cross-Sectional Dimensions (inches) [*Specify the internal dimensions - not the external dimensions*]

Exhaust Flowrate (acfm) [*Specify the airflow in actual cubic feet per minute*]

Exhaust Temperature (°F) [*Specify the temperature of the exhaust leaving the stack*]

Distance to Nearest Property Line (ft) [*Specify the distance from the base of the stack to the nearest property line.*]

Height, Length and Width of Buildings (ft) [*Specify the approximate dimensions of any buildings that are >40% of the stack height and are located within 5 building heights from the stack*]

Operation and Maintenance

Method Used to Establish Cleaning Frequency [*Specify the method used to establish the duration between bag cleanings. If a timer is used, specify the timer setting and the criteria for selecting the time interval. If cleaning is actuated by the pressure differential, specify the criteria for selecting the pressure drop.*]

Describe Preventive Maintenance [*Specify the intended inspection frequencies for visible emissions, fallout and pressure drop across the filters, viewing of the interior 'clean side' for leaks, filter wear and strength, assuring that the gauge is not plugged. Also specify the records to be kept (e.g., records of all inspections and repairs, the age of each filter and its fabric type; amount of dust collected per month), and specify the spare parts to be kept on-site*]

Methods Used to Prevent Emissions From Handling and Disposal of Dust [*Specify the equipment, procedures, and methods used to prevent emissions from the handling and disposal of dust. Is the baghouse equipped with a rotary airlock? Is the receiving hopper completely enclosed? How is the dust hopper emptied without causing emissions?*]