

Supplemental: Comprehensive PSD Permit Applications– What Information Is Needed?

Introduction and Overview

The submittal of comprehensive Prevention of Significant Deterioration (PSD) permit applications that address all the PSD requirements is a first step towards timely processing of permit applications. The Butte County Air Quality Management District (District) strongly encourage applicants to engage the District early-on in the application development process and to contact District review staff for pre-application discussions and meetings as needed, especially regarding modeling air impacts, meeting pre-construction monitoring requirements, using “top-down” methodology for evaluating Best Available Control Technology (BACT), and contacting other federal agencies, and State, local, or tribal governments or agencies that may be involved. Applicants should submit a written modeling protocol to the District for review prior to conducting modeling and to discuss the possible and appropriate use of existing ambient air monitoring data. The information below is intended to assist both applicants in preparing applications and the District in determining if information and analyses addressing all required components of the application have been submitted. As part of the review process, the District will request from the applicant any missing components and any needed clarifying or additional information. Only when the applicant has submitted all information needed for the District to propose a permit decision will the District deem the application to be complete. *A determination of completeness by the District is very important because this initiates the 1-year statutory period for the District to make a decision to issue or deny the requested permit.*

Applications

Each proposed PSD project has unique source characteristics, such as site location, process configuration, topography, and ambient impacts. However, there are some common PSD requirements and related issues that each application should address. For example, applications must include a detailed description of the project, location, processes, emissions units, and associated air pollutant emissions. Applications should address PSD applicability for each regulated New Source Review (NSR) air pollutant, emissions controls, ambient impacts, and demonstrate that all PSD program requirements are met for each pollutant that will be emitted in major or significant amounts. As discussed below in more detail, PSD permit applications submitted to the District for review and permit action should address all PSD requirements and include:

1. A Project Overview and Description
2. A PSD Applicability Section
3. A “Top-down” BACT analysis for each pollutant subject to major PSD review
4. An Air Quality Analysis for the National Ambient Air Quality Standards (NAAQS) and PSD increments, as applicable for each pollutant subject to major PSD review
5. An Analysis of Class I Areas Impacts
6. An Analysis of the New Source or Project’s Impacts on Visibility, Soils, Vegetation, and the Impact on Associated Growth for the Project or New Source
7. Compliance with other local, State and federal Air Regulations [such as New Source Performance Standards (NSPS)],
8. Compliance with Non-Clean Air Act (CAA) Requirements such as the Endangered Species Act (ESA), and
9. Clear Identification of Confidential Business Information Claims, if needed.

1. Project Overview and Description

A. Applicant Information - The application should list the name, mailing address (street, city, state, zip code), email address, and telephone number of the applicant, the owner/operator (if different from the applicant), any consultants, and the designated contact for the project. The application must be signed by a responsible official.

B. Project Location - Describe the project location by address (street, city, state) and map location (UTM or Lat/Long coordinates), and the current use of the project site. Provide local and regional maps showing the location of the project. Discuss location of the source in relation to Class I areas.

Note that if the proposed project may affect a Class I area, within 30 days of receipt of the permit application the District will send a copy of the application to EPA Region 9 to forward to the Federal Land Manager(s) (FLM) and other Federal official(s) directly responsible for any lands within such area.

C. Project Description - Provide the purpose of the project and include the Standard Industrial Classification (SIC) code(s). Provide a detailed description of all processes, process equipment, storage units, raw materials used, fuels to be burned, emission control systems, all emission sampling ports and continuous monitoring systems, and any other information necessary to completely describe the proposed project and its air pollutant emission points. Include a schematic drawing and plot plan of the project showing the design and plant layout that identifies each air pollution emission point, property and fence line, buildings, etc.

For each emission unit, provide its design capacity, date of emission unit construction or modification, anticipated operating capacity (*i.e.*, projected average and maximum) and operational schedule including daily or seasonal variations. For each emission control system, provide the make and model of the device, the control efficiency of the system, and required operating parameters. Describe any work practices used to prevent or reduce air emissions.

D. Construction Schedule – Provide a detailed schedule for construction of the source or modification.

2. PSD Applicability Section

The application should address the applicability of PSD to the project (a proposed new major stationary source or a proposed modification) for all air pollutants regulated under PSD based on the proposed emissions of each pollutant in tons per year. The applicant should provide the SIC code(s) for the project and address whether the source is major for PSD purposes at 100 tons per year (tpy) or 250 tpy. The applicant should list the attainment status of the area for each criteria pollutant. The applicant should also identify and address applicability and plans to comply with any other EPA air requirements such as applicable NSPS and Maximum Achievable Control Technology (MACT) standards.

- All emissions of regulated NSR pollutants, including emissions calculations. (A permit application shall describe all emissions of regulated NSR pollutants emitted from any emissions unit, except where such units are exempted.)
- Identification and description of all points of emissions.

- Emissions rate in tpy, short term rates (*e.g.*, lb/hr) for use in air quality impact assessments, and in any other such terms as are necessary to establish compliance consistent with the applicable standard reference test method. Include methods used to derive the emission rates, including assumptions used such as manufacturer’s warranties, stack test results, etc.
- Citation and description of applicable requirements and a description of or reference to, such as:
 - a. Air permitting requirements
 - b. Applicable NSPS
 - c. Non-applicable NSPS (which may seem relevant)
 - d. National Emissions Standards for Hazardous Air Pollutants (NESHAP)
- Other specific information that may be necessary to implement and enforce other applicable requirements of the Act, or of 40 CFR Part 71, or to determine the applicability of such requirements.
- An explanation of any proposed exemptions from otherwise applicable requirements.
- Any applicable test method(s) for determining compliance with each requirement;
- Certification of truthfulness by a “responsible official”;
- Monitoring used to show compliance with proposed emission limits
- Operational restrictions (existing or proposed) that limit equipment’s “potential to emit”. (Sometimes an existing permit limits the potential emissions of a particular emission unit or units, these should be identified and included in the permit application.)

3. A “top-down” Best Available Control Technology (BACT) analysis for each pollutant subject to major PSD review

The application requires a “top-down” BACT analysis, following the process as developed by EPA, to demonstrate that an applicant satisfies the BACT requirements. Thus, to demonstrate that the BACT requirement is satisfied, on a per pollutant basis, the application should include a “top-down” BACT analysis for each emission unit that emits air pollutants for which the source is subject to PSD. The analysis should be consistent with the EPA’s “top-down” BACT guidance. This includes the guidance contained in the draft 1990 NSR Workshop Manual as well as more recent discussions of the elements needed to successfully apply the top-down BACT process reflected in Environmental Appeals Board (EAB) decisions, orders on title V permits, and other relevant EPA guidance documents. <http://www.epa.gov/NSR/publications.html>. EAB decisions in PSD Permit Appeals may be found at the EAB website (www.epa.gov/eab), under Board Decisions, Published, PSD Permit Appeals.

4. An Air Quality Analysis for the National Ambient Air Quality Standards (NAAQS) and PSD Increments, as applicable for each pollutant subject to PSD review

The Districts incorporation of EPA’s regulations by reference require the permit applicant to submit for review an air quality analysis for each pollutant that will be emitted in significant amounts “in the area that the major stationary source or major modification would affect.” This pollutant-specific analysis typically entails a modeling component and an ambient air quality monitoring component. The information provided in meeting this requirement must demonstrate that the emissions from the new source or modification will not cause or contribute to a violation of any NAAQS or PSD increment.

Modeling Analysis – Any use of models to estimate the impacts from the proposed new source or modification, as well as any other nearby sources, must be conducted in accordance with the Guideline on Air Quality Models (Guideline). 40 CFR 52.21(l); 40 CFR Part 51, Appendix W. To ensure that any air quality analysis meets the applicable regulatory requirements and is consistent with the Guideline, EPA

strongly recommends that the applicant submit a modeling protocol to the Regional Office prior to performing the air quality analyses. It is both advantageous and advisable that the applicant prepare a modeling protocol to ensure that planned modeling analyses meet the needs of other federal agencies (*e.g.*, FLM). The District recommends that applicants consult with the District to determine the need (if any) for ambient air quality monitoring (*i.e.*, pre-construction or post-construction monitoring) and/or site-specific meteorological monitoring.

Air Quality Data – The required air quality analysis should also consider the existing ambient air quality at the proposed site for those pollutants emitted from the project in a significant amount. The air quality data used for the analysis may be obtained from monitoring carried out by the applicant; however, in many cases the analysis may be based on data from existing monitoring sites that provide data representative of the area affected by the proposed project's emissions. The record for the required analysis should include such items as the source of the data and the number and location of monitoring stations. The applicant should also include a brief description of the local meteorological conditions that would affect transport and dispersion of pollutants, describe the source of meteorological data to be used, the range of dates of the data, and the representativeness of the data for application at the proposed plant site. It is also recommended that the proposed air quality data and meteorological data be included in the modeling protocol submitted to the District. Recommendations concerning ambient air quality and meteorological data collection in support of PSD applications are presented in EPA publications EPA-450/4-80-012, Ambient Monitoring Guidelines for Prevention of Significant Deterioration, and EPA-454/R-99-005, Meteorological Monitoring Guidance for Regulatory Modeling Applications.

A description of any monitoring program that the applicant intends to initiate should be submitted to the District for approval prior to commencing the program.

5. An analysis of Class I Areas impacts

The applicant is required to provide an air quality analysis for any Class I area that may be affected by the emissions from the proposed new source or modification. There are two components for this analysis—the NAAQS and Class I increments analysis, and the air quality related values (AQRV) analysis. Such analysis is preceded by a notification process in which the appropriate Federal Land Manager for the Class I area(s) potentially affected by the proposed new source or modification is advised by the Regional Office of the PSD application and given an opportunity to determine whether such analysis is needed for any air quality related values that have been identified for the Class I area. It is important to recognize that the compliance determination for the NAAQS and Class I increments is the responsibility of the District and EPA Region 9 Office, while the FLM has an affirmative responsibility for protecting the AQRVs in the Class I area.

The District will determine the distance from the proposed source to the nearest Class I area(s). The EPA's policy is that the Federal Land Manager should be notified by the District about any project that is within 100 kilometers of a class I area. For sources having the capability to affect air quality at greater distances, notification should also be considered beyond 100 kilometers. Accordingly, the appropriate FLM should be contacted by the District to determine if an analysis of the impacts on the AQRV in the Class I area is needed. The applicant should contact the District to determine the need for and appropriate assessment procedures to address the NAAQS and Class I increments. If an AQRV impact analysis is needed, a copy of the PSD application should be provided to the FLM by the applicant at the request of the District. The project's modeling protocol should include PSD Class I assessments and be provided to the appropriate FLMs, to the District and EPA Region 9 Office for review, discussion, and approval.

6. An analysis of impacts on visibility, soils, vegetation, and associated growth for the proposed project or new source

Additional Impact Analysis - As required by 40 CFR 52.21(o) of the PSD regulations, the applicant must provide an analysis of the proposed facility's impact on soils, vegetation and visibility and the expected general commercial, residential, and industrial growth associated with the new or modified source.

If no impacts are anticipated, then the analysis can generally be qualitative in nature and designed to provide the basis for this determination and inform the general public of the relative impact of the project/source on the above cited values. The proposed analyses to address these items should be included in the modeling protocol provided to the District.

7. Compliance with other air regulations (such as NSPS)

List and describe all other air pollution rules and regulations applicable to the proposed project (*e.g.*, NSPS, NESHAPS, State Implementation Plan (SIP) requirements, local district rules). Summarize the status of all other air pollution permits required, applied for and/or received for the proposed project or new source.

8. Confidential Business Information claims

An applicant may assert a business confidentiality claim covering part or all of the information requested by the District by placing on (or attaching to) the information, at the time it is submitted to the District, a cover sheet, stamped or typed legend, or other suitable form of notice employing language such as "trade secret," "proprietary," or "company confidential." Allegedly confidential portions of otherwise non-confidential documents should be clearly identified by the business, and should be submitted separately to facilitate identification and handling by the District. If the applicant desires confidential treatment until a certain date or until the occurrence of a certain event, the notice should clarify this request. Information covered by such a claim will be disclosed by the District only to the extent and by means of the procedures set forth in State and federal law in accordance with District administrative procedures. If no such claim accompanies the information when received by the District, it may be made available to the public by the District without further notice to the applicant. If a claim covering the information is received after the information itself is received, the District will make such efforts as are administratively practicable to associate the late claim with copies of previously submitted information files. However, the District cannot assure that such efforts will be effective, in light of the possibility of prior disclosure or widespread prior dissemination of the information.