SANTA BARBARA COUNTY
AIR POLLUTION CONTROL DISTRICT
POLICIES AND PROCEDURES

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1.0 APPLICABILITY

This policy and procedure applies to all Best Available Control Technology ("BACT") determinations required by APCD Rules and Regulations, CEQA or permits issued by other agencies in which APCD-approved BACT is a stated requirement.

2.0 INTRODUCTION

This policy and procedure ("P&P) provides guidance on the meaning, application and tracking of Best Available Control Technology ("BACT"). It was compiled based on past APCD practices, the current APCD New Source Review ("NSR") rule, USEPA regulations and policies and CARB documents. Any questions regarding this P&P should be directed to the Supervisor of the Permitting Section.

3.0 DEFINITIONS

3.1 NAR Best Available Control Technology: For nonattainment review ("NAR"), the APCD's definition of BACT in Rule 802.D.2 is used. This definition is typically referred to as California BACT and is similar to the USEPA's definition of Lowest Achievable Emission Rate ("LAER").

For any stationary source, the more stringent of:

a) The most effective emission control device, emission limit, or technique which has been achieved in practice for the type of equipment comprising such stationary source; or

b) The most stringent limitation contained in any State Implementation Plan; or

c) Any other emission control device or technique determined after public hearing to be technologically feasible and cost-effective by the Control Officer.

3.2 PSD Best Available Control Technology: For attainment review under our local Prevention of Significant Deterioration ("PSD") rules, BACT must be consistent with the Federal definition of BACT as found in Section 21 of 40 CFR 52 (see also Rule 810 for projects that trigger Federal PSD requirements). For the purposes of PSD BACT determinations, the following definition from Rule 802.D.3 shall be used:

BACT shall be an emission limitation based on the maximum degree of reduction achievable for each pollutant. Best Available Control Technology shall be determined on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs. Best Available Control Technology may consist of any of the following: application of production processes, fuel cleaning or treatment innovative fuel combustion techniques, or any other technique *for control of each pollutant. In no event shall application of Best Available Control Technology result in emissions which would exceed the emissions allowed under the applicable New Source Performance Standards.*

Rule 802 also requires the application of BACT under Section D.4:

An applicant shall apply attainment pollutant Best Available Control Technology to a new source or modification of an existing major stationary source, for any emissions increase which would construct within 10 kilometers of a Class I area and which would have an impact on such area equal to or greater than 1 microgram per cubic meter (24-hour average).

4.0 BACT THRESHOLDS

BACT is not required for every permit application. Each application must be reviewed to determine whether the applicable BACT thresholds are exceeded. This process can range from being easy and straightforward to complex and time-consuming. To utilize the New Source Review ("NSR") rule one must understand the concept of Potential to Emit ("PTE"). For Federal PSD projects, there is also EPA's Net Emissions Increase ("NEI") calculation to address. If the applicable NAR or PSD BACT threshold is exceeded, the applicant is required to propose and commit to implementation of BACT as part of their project.

The criteria pollutant thresholds for BACT are:

NAR BACT: 25 pounds per day project PTE [1] (150 lb/day for CO)

PSD BACT: 120 pounds per day project PTE [1] (500 lb/day for CO; 80 lb/day for PM_{10}; 55 lb/day for $PM_{2.5}$; and lower thresholds for specified toxic compounds.)

[1] Emissions are based on reasonable worst case operating scenario and must reflect the permitted emission levels requested in the permit application. See Table 1 for NAR and Table 2 for PSD BACT thresholds in Section D of Rule 802.

5.0 DISTINCTIONS BETWEEN NAR BACT AND PSD BACT

There are several notable differences between NAR BACT and PSD BACT. Most importantly, PSD BACT is evaluated on a case-by-case basis, where NAR BACT is essentially uniform for the class or category of source. The PSD case-by-case evaluation has a large scope of concerns, including energy, environmental, and economic impacts. The NAR BACT definition is narrower. It allows little discretion in the decision other than what is "achieved-in-practice" as well as the class or category of source (i.e., the type of equipment comprising such stationary source). As a result, similar sources may have different PSD BACT requirements, but should not have different NAR BACT requirements.

The PSD BACT definition is very clear in its intent to consider requirements of each source on a case-by-case basis. The decision must include economic, energy, and environmental considerations. In contrast, the “achieved-in-practice” component of the NAR BACT definition is clearly more straight-forward by not allowing economic, energy, or environmental consideration, and only considering the most stringent control achieved in practice for the category of source being considered. Thus, no discussion of costs is necessary or appropriate for such class or category of sources that are already using a level of control considered achieved-in-practice. This is different from the PSD BACT definition, for which the economic feasibility of a control technology is a required consideration. The “technologically feasible” component (part b) of the NAR BACT definition, however, does consider economics in the analysis along with an analysis of whether the technology in question is feasible for the class or category of source subject to review. The fact that a particular control technology is “achieved-in-practice” implies its inherent economic and technological feasibility.

5.1 Specifics of the NAR BACT Definition

(a) Most Effective Control Achieved-in-Practice: There are three important elements to this part of the definition. The first element refers to the *most effective control device, technique, or emission limit.* This element is defined in a broad fashion to allow for the appropriate selection criteria for the specific equipment or process in question. Examples include:

- Concentration limits of 5 ppmv NOx from the stack of a small boiler using a low-NOx burner
- Mass destruction rate efficiency of 98.0 percent for a regenerative thermal oxidizer
- Selective catalytic reduction with a concentration limit of 2 ppmv NOx for a 10 MW combined-cycle/cogeneration combustion gas turbine.

The second element is achieved-in-practice. This element indicates that the technology has a proven "track-record" of reliability. For example, take a biogas fired spark ignited IC engine using SCR controls located at Facility X. This engine meets an emission standard of 9 ppmvd (at 15% O_2) and has done so for a reasonable time period. Next, if Facility Z (in our jurisdiction) triggers BACT for a similar proposed project, then it would need to meet this achieved-in-practice BACT standard. Facility X could be located anywhere in the USA.

The third element of the definition refers to the type of equipment comprising the stationary source (i.e., class or category of source). This could be as large as a group of basic equipment units that provide the same function (e.g., the combination of motors, turbines, or reciprocating engines to provide torsional drive). On the other hand, it could be a more specific size segment or subtype within an equipment type (e.g., boilers over 33 MMBtu/hr heat input, or lean-burn engines).

Provisions for consideration of alternative basic equipment or fuels are not evident in the definition. However, the language of the definition does not preclude the consideration of alternative basic equipment or fuels as a NAR BACT requirement.

(b) Other Emissions Control Devices or Techniques Deemed Technologically Feasible and Cost-Effective: This part of the definition allows the district to require unproven control technologies not yet considered as "achieved-in-practice" as BACT, and is known as "technology forcing" BACT or "TFBACT." This option makes the NAR BACT definition more stringent than the federal LAER definition. Because of it, California districts can participate in advancing the stringency of "California BACT" by requiring unproven control technologies. The process requires a public hearing. The hearing takes place at the APCD's offices under the direction of the Engineering Division. Cost effectiveness is a consideration with this option. Use of this option may not result in a BACT that is less effective than that achieved-in-practice or than that required by local, state or federal laws or regulations.

As discussed above, the NAR BACT definition has two alternative minimum requirements, with the most stringent for the particular circumstance being required. In any case, BACT (NAR or PSD) cannot be less stringent than federal new source performance standards (NSPS) or national emission standards for hazardous air pollutants (NESHAPS).

5.2 Specifics of the PSD BACT Definition

PSD BACT may be less stringent than NAR BACT, and allows for consideration of "energy, environmental, and economic impacts and other costs." It also requires evaluation of alternative production processes and available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques.

The complexity of so many considerations in the PSD BACT determination creates ambiguity regarding the implied procedure for determining BACT requirements. As a result, USEPA has provided guidance[2] on the matter. This guidance is referred to as "The Top-Down Approach", and is neither applicable to LAER nor to NAR BACT definitions patterned after LAER; it is only used for PSD BACT determinations. The guidance essentially dictates that the process of evaluation should include a ranking of candidate PSD BACT requirements, starting with evaluation of the most stringent candidate requirement with subsequent evaluations to cover sequentially less stringent requirements. One cannot proceed down the list to a less stringent PSD BACT candidate

[2] USEPA New Source Review Workshop Manual, Chapter B (BACT), October 1990 Draft

before justifying the rejection of a more stringent candidate that is feasible. The applicant is required to prepare and submit the “Top-Down” BACT analysis with their application.

Pursuant to the USEPA’s "Top-Down" PSD BACT policy guidelines, any PSD BACT determination analysis starts with assessing whether the applicant has proposed LAER (NAR BACT) equivalent limits/standards. If NAR BACT equivalent limits are proposed, then no further justification of the proposed limits (as PSD BACT) are necessary. All possible controls, including NAR BACT, are required in the Top-Down BACT Analysis if the applicant proposes a less stringent limit. The effectiveness of each alternate is evaluated to demonstrate the proposed control as the best feasible PSD BACT for the situation under study.

The determination of PSD BACT may be based on the extent of controls for other pollutants. A PSD BACT analysis should involve all pollutants, including affected pollutants influenced by the control technique selected. Under Federal policy decision (*PSD Appeal No. 85-2: North County Resource Recovery Associates Application Decision, Dated Sept. 4, 1986*), if two equivalent emission control technologies are analyzed in an ATC for a particular pollutant, then the one more effective for all other regulated pollutants should be preferred as BACT, even though it may be costlier. For example, of two proposed control technologies that result in identical NOx emissions, the technology that results in lesser ROC or CO emissions is to be preferred as PSD BACT.

Another notable characteristic of the PSD BACT definition is the direct authorization to consider alternative production processes and available methods, systems and techniques, including fuel cleaning. As a result, PSD BACT is not limited to add-on control technology. Even changes in basic equipment, fuels, and material substitutes can be considered.

6.0 BACT SELECTION PROCESS

It is the responsibility of the applicant to propose the BACT for their project. Many times, however, the applicant does not have knowledge of these aspects of air pollution control, and the APCD is frequently requested to provide detailed technical assistance in helping the applicant ascertain what the appropriate BACT should be. If the BACT threshold has been exceeded, the applicant is required to include a BACT analysis in their application. In the analysis, the applicant may be required to conduct a survey to determine what methods, measures, or control technologies are available for control of emissions. In some cases, alternative basic equipment, processes, and fuels must be considered in addition to emission control technologies and standards. The analysis must also include a justification of the applicant's proposed BACT.

As stated in section 5.2, the PSD applicants are required to prepare and submit the Top-Down analysis with their application. PSD applications that do not contain a Top-Down analysis shall be handled in such a manner that the “achieved-in-practice” part of the NAR BACT definition will be used by the APCD in processing the application.

To research what the appropriate BACT is for a specific project, a number of references are available. Please note that no one document or source of information is absolute. Further, there may be cases where either no existing BACT is found to match the project

at hand, or where APCD staff or the public feel the technology-forcing control is both feasible and cost-effective. The following BACT references are available: [3]

1. Santa Barbara County APCD BACT Determinations: The APCD has made prior BACT determinations for specific devices in ATC permits we issue. These are readily available for those sources we typically regulate (e.g., boilers, oil & gas industry). Check online at the APCD's webpage. We also submit all our BACT determinations to ARB's online BACT Clearinghouse. This acts as our de facto database for BACT (NAR and PSD) determinations in Santa Barbara County.

2. Sacramento Metropolitan AQMD TBACT/BACT Clearinghouse: This BACT Clearinghouse document is a listing of BACT standards for their region. The BACT documentation is thorough and well presented. Common nomenclature is used. See http://www.airquality.org/businesses/permits-registration-programs/best-available-control-technology-(bact).

3. Bay Area AQMD BACT/TBACT Workbook: This Workbook provides a listing of BACT determinations for commonly used equipment in the San Francisco Bay Area. The Workbook follows the CAPCOA naming and categorization system. See http://www.baaqmd.gov/permits/permitting-manuals/bact-tbact-workbook.

4. San Joaquin Valley Unified APCD BACT Clearinghouse: The SJVUAPCD BACT Clearinghouse document is a listing of BACT standards for their region. See http://www.valleyair.org/busind/pto/bact/bactidx.htm.

5. South Coast AQMD BACT Guidelines: The SCAQMD BACT Guidelines document is a listing of BACT standards for that region. The Guidelines follow the CAPCOA naming and categorization system. The Guidelines document are not frequently updated and a number of the BACT listings are out of date. See http://www.aqmd.gov/home/permits/bact .

6. San Diego APCD BACT Guidance Document: The SDAPCD BACT Guidance Document is a listing of BACT standards for their region. The document is not frequently updated and a number of the BACT listings are out of date. See http://www.sdapcd.org/content/dam/sdc/apcd/PDF/Misc/APCD_bact.pdf

7. ARB BACT-LAER Clearinghouse: This is a database maintained by the ARB and is designed to track all BACT-LAER determinations made in the State. The Clearinghouse follows the CAPCOA naming and categorization system. The Clearinghouse should be used with caution, as many of the districts do not report their BACT/LAER determinations to the ARB. As a result, the Clearinghouse data is neither complete nor current. See http://www.arb.ca.gov/bact/bact.htm

[3] Caution should be exercised in reviewing any reference. In some cases, BACT may not have been implemented. In other cases, BACT may be very site specific. When in doubt, contact the reference directly for specific details.

8. USEPA RACT/BACT/LAER Clearinghouse (RBLC): This is a nationwide database maintained by the USEPA. The Clearinghouse does not utilize the CAPCOA naming conventions and may be somewhat difficult to use. All BACT determinations sent to the ARB are forwarded to the USEPA for inclusion in the RBL Clearinghouse. The quality the USEPA's RBL Clearinghouse is affected by the fact that many California districts do not forward their BACT/LAER determinations to the ARB. The user should remember at federal BACT is considered as PSD BACT and that LAER is NAR BACT. Access to the RLB Clearinghouse can be made via USEPA's Technology Transfer Network. See https://cfpub.epa.gov/rblc/

9. Manufacturer Information: Quite often manufacturers of air pollution control or emitting equipment are good sources of information on BACT. They can provide examples of where their equipment was used for projects that required BACT. Caution should be used, however, since a manufacturer may sometimes confuse an "emissions guarantee" with a BACT "performance specification." In addition, other outside factors may influence the manufacturer's statements that should be reviewed in the appropriate context. Emissions guarantees should be clear that they are "not to exceed" standards.

It is important that the agency/source of the BACT determination be contacted to ascertain specific details about the BACT determination in question. That agency/source should be questioned as to the type of facilities subject to the BACT, whether any special operating circumstances exist and if the permit(s) contain any specific operational limits that ensure continuous and constant compliance.

7.0 BACT COST EFFECTIVENESS

7.1 BACT Cost Effectiveness Calculation Procedure

For certain BACT determinations (e.g., PSD, TF NAR) a cost effectiveness calculations is required. This section provides the procedure the District uses to perform this calculation. We follow USEPA's Cost Control Manual [4] as a guiding document. Specifically, we use the Annualized Cash Flow method (aka the Levelized Cash Flow method) described in Section 2.4.4.4 of the Manual to derive an equivalent annual control equipment capital cost. The capital recovery factors (CRF) in Appendix A.2 are used. Control equipment life is 10 years by default; however, the District will evaluate any request for a different period if substantial backup documentation is provided to support the request.

For the interest rate, take as a benchmark the interest rate on United States Treasury Securities with a maturity that most closely approximates the project horizon (typically 10 years), add 2 percentage points for incremental risk, and then round the total up to the next higher integer.

The calculation applies to each pollutant that triggers the BACT requirement.

[4] See http://www3.epa.gov/ttn/catc/dir1/c_allchs.pdf

7.2 BACT Cost Effectiveness Thresholds

The equivalent annual control equipment capital cost calculated using the methodologies specified in section 7.1 above shall be compared to the following $/ton cost effectiveness thresholds:

$/ton				
NOx	ROC	SOx	PM10	CO
37,390	37,390	37,390	37,390	936

Any project with annualized capital costs below the thresholds above is considered cost effective.

These cost effectiveness thresholds may be modified or updated periodically and without advanced notice. This includes application of the California Consumer Price Index to account for inflation as well as other factors. The CPI adjustments shall be performed annually.

8.0 BACT AND THE PERMIT PROCESS

A number of issues must be addressed when evaluating BACT for specific permit applications. The District uses the following procedures to incorporate BACT measures into permits:

8.1 BACT Enforceability Over All Operating Ranges

The permitting process must ensure that the selected BACT is effective overall operating ranges. BACT that is selected based on full load operation should not neglect operations at loads that are likely to occur during the life of the equipment. This criterion is fulfilled through specification of a BACT "performance standard" and is not achieved solely through the specification of the BACT control technology being employed. This performance standard must be in units that take into consideration different operating loads and must be practicably enforceable. For example, a BACT performance standard for a boiler could be defined as an emission limit of 5 ppmvd NO_x at 3 percent O_2. Acceptable performance standard emission limits include but are not limited to:

- Concentration limits (ppmvd at 3 or 15 percent O_2)
- Pounds pollutant per MMBtu heat input
- Grains particulate per dscf at 12 percent CO_2
- Destruction rate efficiency (mass basis) using inlet and outlet values
- Mass removal efficiency (percentage) using inlet and outlet values
- Percent opacity

An equivalent emissions ceiling (or cap) in the units of "lb/hour" must also be proposed for each emission unit subject to BACT to protect air quality standards and increments. However, the use of mass emission rates (e.g., pounds per day) should not be used as a performance standard emission limit. These levels reflect only maximum reasonable worst case operating scenarios. Use of mass emission limits alone can defeat the purpose of BACT to be effective overall operating ranges. For example, a source with an assumed

BACT performance standard of 90 percent mass reduction efficiency is permitted at 7 pounds per hour (maximum load). Also, assume that the emissions unit operates on average at a 40 percent load. Setting BACT at a mass emission rate of 7 pounds per hour in lieu of the emission limitation of 90 percent efficiency would always allow the source to emit at 7 pounds per hour. Thus, the effect, in this example, would be to reduce the allowed effectiveness of the control device from 90 percent down to 75 percent.

8.2 BACT During Non-Standard Operations

Some non-standard operating situations will not lend themselves to adherence to the BACT performance standards identified for normal operating loads. Typical examples of these operations include transient operations such as equipment startup and shutdown; minimum equipment/processing loads such as sulfur recovery plants. When submitting a permit application, the applicant must provide an analysis of any operation that may not comply with the BACT performance standard(s), and must propose an alternative BACT performance standard for these non-standard periods for inclusion in the permit.

8.3 CEMS and BACT

Continuous Emissions Monitoring Systems ("CEMS") may be required pursuant to the NSR process, or by New Source Performance Standards or APCD Rule 328 (*Continuous Emission Monitoring*). Typical sources that require CEMS are:

- Gas Turbines
- IC Engines rated over 1,000 bhp
- Boiler/Steam Generators/Process heaters with a rated heat input greater than 100 MMBtu/hr
- Sulfur Recovery Plants
- Other large and/or complex sources where continuous documentation of the source's compliance status with emission standards is necessary

All determinations to require CEMS must be reviewed by the Supervisor of the Permitting program. Compliance averaging times should be detailed in the CEMS and/or BACT permit conditions.

8.4 Source Testing and BACT

Source Testing is required to ensure that the BACT performance standards and hourly mass emission rates are in compliance. Source testing may not be applicable in some BACT determinations and other means of compliance may be used. Examples of BACT that do not require source testing include:

(a) Gas stations with Phase I and Phase II enhanced vapor recovery that only require control-specific performance tests observed by inspectors during the SCDP.

(b) Sources with an approved fugitive hydrocarbon Inspection and Maintenance ("I&M") program.

(c) Low VOC coatings. Laboratory analysis for VOC content may be required.

Unless otherwise approved by the Supervisor of the Permitting Section, all permits that require BACT should also require source testing. Source testing for BACT during non-standard operations (see Section 8.2) shall be determined on a case-by-case basis. The permit engineer should refer to P&P 6100.039 (*Permit Requirements for Source Tests*) for a more complete description of the source test and permitting relationship.

8.5 BACT Operating Constraints

For sources that use a control device with associated operating constraints, compliance must be verified over a range of operating conditions during SCDP. At a minimum, the operating extremes of the design window should be tested, and any alternative BACT performance standard for non-standard operations shall be demonstrated via testing. For example, if a facility uses SCR and water injection for NO_x control, compliance with emission limits should be verified over the proposed operating range of $NH_3/NO_{x,in}$ injection ratios and water/fuel injection ratios. Emissions in the non-standard operating range shall meet the alternative performance standard requirements. If compliance is not verified over the BACT design operating range, the source shall be limited to operations most protective of air quality. This limitation shall be reflected in the BACT permit condition of the PTO. For example, if a manufacturer specifies a water/fuel ratio range of 0.8 to 1.0, but the source test only verifies compliance at ratios of 0.9 and 1.0, then subsequent operation must occur at a water/fuel injection ratio no less than 0.9 and no greater than 1.0.

Once a compliant operating range is defined during the SCDP, post-SCDP tests may be streamlined by testing only at the most stringent BACT operating condition. If streamlined test requirements are considered for post-SCDP testing, the full effect of BACT process parameters on emissions must be understood and reflected in the test requirements. These determinations will be made on a case-by-case basis.

8.6 Modifications to Emission Units or Processes Previously Subject to BACT

Once an emissions unit or process is subject to BACT, any subsequent modifications to that emissions unit or process is subject to BACT. This also applies to *de minimis* changes and equivalent routine replacements (in whole or part) that may not require a permit. A few examples best clarify the intent of this section.

Example 1: A source using solvents in their process has previously installed a thermal oxidizer to control emissions due to flashing of the solvent. BACT was triggered previously and a performance standard of 98.0 percent control was established. If the source wishes to expand production that results in an increase of emissions of the controlled process, then those new emissions are subject to this existing BACT performance standard.

Example 2: An oil and gas processing line previously triggered BACT for fugitive hydrocarbon ("FHC") emissions and implemented an APCD-approved Inspection and Maintenance Program along with low-emissions technology valves and connectors. If the source wishes to modify this processing line by adding new FHC components, then the new FHC components that are added are subject to BACT standards. If the addition was *de minimis* pursuant to Rule 202, the BACT standards in the existing permit shall be

implemented by the source. If the new FHC components are subject to the permit process and the applicable NSR BACT threshold is not exceeded, then the BACT standards listed in the existing permit shall be implemented by the source. If the applicable NSR BACT threshold is exceeded, then a new BACT analysis is required.

Example 3: A source has an existing Rule 342 boiler that is permitted at 20 ppmv NOx. This was a prior BACT determination made 15 years ago. They have proposed to replace the burners in the unit with new burners also rated at 20 ppmv. The first step in the analysis is to calculate the PTE for the new burners based on the applicable Rule 342 limit of 30 ppmv NOx. If this calculated PTE exceeds the BACT threshold in Rule 802, then the new burners must meet current BACT standards (e.g., 9, 7 or 5 ppmv NOx, depending on the size of the unit). If the BACT threshold is not exceeded, then the new burners must continue to meet the existing BACT standard for the existing unit.

8.7 Engineering Evaluation and BACT

It is very important to document how the BACT determination was made. The Engineering Evaluation is the place for this documentation. The permit engineer is required to complete (as an Attachment to the Evaluation) the *Engineering Evaluation BACT Discussion List*. This checklist contains the items that should be discussed. The amount of detail will vary based on the complexity of the source and the type of equipment and operation being permitted. Where appropriate, BACT Table(s) shall be used in the permit to summarize the BACT determinations for the permit.

These tables must list both the technology and the performance standard. Standardized and boilerplate responses for small sources shall be used without deviation, unless such deviations are approved by the Supervisor of the Permitting program. The BACT documentation should appear in the ATC engineering evaluation.

8.8 Permit Conditions and BACT

If BACT is required, then the permit must have a BACT permit condition. Standard BACT permit condition language should be used as the basis for this condition. At a minimum, the condition should state what the required BACT technology and performance standards are for each BACT determination (if tables are used, the technology and the performance standard should be included in them). In addition, the condition should both refer to the section of the permit that discusses the BACT in detail and incorporate that section as a part of the condition. The condition should also state that the specified BACT must be in place at all times of operation during the life of the project/permit.

Prescribed BACT limits must also be supplemented by permit conditions that require compliance monitoring, recordkeeping and reporting such that the source demonstrates continuous compliance with BACT. Surrogate emission monitoring (e.g., fuel use monitoring, ammonia injection ratios into a gas turbine) may be considered as an alternate or supplemental compliance verification method in lieu of, or in combination with, Continuous Emissions Monitoring ("CEMS"). Specific monitoring, recordkeeping and reporting requirements are determined on a case-by-case basis.

8.9 Multi-Year or Phase Projects

For each phase of a multi-year, multi-phase project with significant time intervals between the phases, a reassessment of BACT may be necessary. The proposed ATC permit conditions should reflect this reassessment requirement. For example, the proposed ATC permit should a BACT Re-Opener permit condition. This permit condition should indicate the specific time prior to the beginning of construction for each phase that this re-analysis must be completed. It is the permit holder's responsibility for initiating the BACT re-analysis for each phase.

9.0 BACT and RULE 331

APCD Rule 331 (*Fugitive Hydrocarbon Inspection and Maintenance*) contains a provision that requires the installation of BACT for specific individual components that fail to meet certain requirements of that rule. BACT required by Rule 331 is treated the same as if it were for a NSR application.

10.0 DOCUMENTING BACT

All BACT determinations made at the APCD must be properly documented. This ensures a level of consistency among similar sources within the County. In addition, good documentation allows our database of knowledge to be accessible to industry, the public and to other agencies, both in and outside Santa Barbara County.

10.1 APCD BACT Database/ARB BACT Clearinghouse

All BACT determinations are to be tracked in a database. Our agency uses the ARB's BACT Clearinghouse as our primary database repository. The permit engineer is responsible for submitting to the Supervisor of the Permitting Section a completed ARB *BACT Determination Reporting Form* when the ATC permit is issued and a *BACT Implementation Reporting Form* when the initial PTO is issued. The Supervisor will ensure that the BACT determination is uploaded to the Clearinghouse.

10.2 USEPA RACT/BACT/LAER Clearinghouse

No additional reporting to EPA is required as long as our BACT determinations are uploaded to the ARB BACT Clearinghouse. ARB automatically transfers our determinations to the EPA Clearinghouse for us.

10.3 Internet Webpage

The Engineering section of the APCD's Webpage contains a listing of BACT information for common source types (e.g., oil & gas industry, boilers).

11.0 RESPONSIBILITIES OF THE PERMIT ENGINEER

The permit engineer is responsible for the following:

11.1 Pre-application meetings for their project. As needed, meet with the applicant up front to address what BACT might be for the proposed project. For larger and/or complex project, have the Supervisor of the Permitting Section attend.

11.2 Initial Application Review. The permit engineer reviews the BACT aspects of the application for completeness performing the following:

- Assess the PTE for the project and the source to determine the pollutants subject to review (seek guidance from the Supervisor of the Permitting Section for Federal PSD projects).

- Assess whether the application is for equipment that has a current BACT determination.

- Review all the BACT Analysis Summary Forms (APCD-02) for each process subject to BACT to ensure all information is provided.

- Review the application against the items listed in the Engineering Evaluation BACT Discussion Checklist to ensure adequate information is provided.

- Brief the Supervisor of the Permitting Section and obtain initial feedback on whether the application should be deemed complete or if the BACT information is inadequate. Initial feedback on whether TF BACT should be considered can also be made at this point.

- For TF BACT and PSD BACT, detailed review and internal deliberations must occur prior to making a completeness determination.

11.3 Permit Processing.

- If NAR BACT review is triggered, the permit engineer compares the applicant-proposed BACT with that identified for the appropriate class or category of source for prior District BACT determinations. The permit engineer must also review other available BACT databases and guidelines (see Section 6.0 above). The permit engineer may make a recommendation based on this supplemental review. The permit engineer shall prepare a summary of the applicant's BACT proposal and attach copies of the applicant-completed BACT Analysis Summary Form(s), proposed BACT related permit conditions and table(s), permit engineering evaluation and any other relevant information.

- If the permit application is for a source category found in the ARB BACT Clearinghouse or for a BACT determination previously made by the District, and the appropriate BACT is proposed, the permit engineer should document these findings. No further review is required.

- For PSD BACT applications, the permit engineer should prepare a summary of the applicant's BACT proposal and include with it a copy of the applicant's PSD BACT Top-Down Analysis for Supervisor review - if included with the application. Applications for PSD BACT should be treated as AIP NAR BACT if no Top-Down Analysis was submitted.

- The permit engineer must keep the Supervisor informed of any applicant proposed changes in the proposed BACT or any applicant concerns. Copies of written correspondence regarding BACT shall be directed to the Supervisor of the Permitting Section for their review.

- Once the ATC permit is issued, the permit engineer shall submit a completed ARB BACT Determination Reporting Form to the Supervisor of the Permitting Section.

- Once the PTO permit is issued, the permit engineer shall submit a completed ARB BACT Implementation Reporting Form to the Supervisor of the Permitting Section.

11.4 Scheduling

The permit engineer is responsible for arranging meetings and/or telephone conferences that are specific to the project. Due to workloads of other staff that may be needed to assist in the BACT review process; the permit engineer should plan sufficient time into the completeness review period.

12.0 ABBREVIATIONS

AIP	-	Achieved-in-Practice
NAR	-	Nonattainment Review
PSD	-	Prevention of Significant Deterioration
PTE	-	Potential to Emit
TF	-	Technology Forcing
NEI	-	Net Emissions Increase
RLBC	-	RACT, LAER, BACT Clearinghouse
LAER	-	Lowest Achievable Emission Rate