

**White Paper for EPA Climate Change Workgroup:  
Scope of the PSD Problem to Be Addressed<sup>1</sup>: Why There Is  
No Automatic PSD Trigger or “NAPT”  
Simply Because GHGs Become Regulated Under the Clean Air Act  
January 8, 2010 (rev. 2/8/2010)**

Once GHGs become “subject to regulation” under any Clean Air Act authority, it has been argued that any new or modified major source of greenhouse gases automatically becomes subject to “New Source Review” and must apply best available control technology (BACT) under a statutory program referred to as “PSD.” The thresholds in the Clean Air Act for a major source are 100 or 250 tons per year and for a major modification are typically in the range of 40 to 100 tons per year, a significant amount of emissions for conventional air pollutants, but an exceedingly low level if applied to GHGs. In its Proposed Tailoring Rule, EPA attempted to fix this problem by raising the threshold levels, which may make sense in terms of policy, but it not only creates disagreements about the “right level,” it is also subject to legal challenge. This paper proposes an alternative, more legally defensible approach to limiting the applicability of PSD to GHGs. Simply put, we argue that GHG emissions by themselves do not trigger PSD review. Rather, PSD review is triggered only by a major new source or modification for a criteria pollutant. Once such a review is triggered, if GHGs become subject to regulation, the source subject to PSD review for the criteria pollutant(s) must also apply BACT for significant GHG emission increases. *This approach would mean that subjecting GHGs to regulation under one part of the Clean Air Act would not trigger any additional sources to get PSD permits; rather, it would only affect those sources who have to get permits anyway for criteria pollutants to also apply BACT for GHGs.* Thus, only a few hundred permits a year would require BACT for GHGs, and these requirements would only affect truly large sources.

The BACT Work Group formed by the Clean Air Act Advisory Committee (CAAAC) has undertaken extensive discussions to develop recommendations to streamline the determination of BACT for GHGs. If successful, this effort would help EPA develop uniform guidelines for states if GHGs become subject to regulation under the Clean Air Act. As a result, CAAAC has focused on the definition of BACT in the Act. An issue that the Work Group is taking up in Phase II of its work is the scope of PSD applicability because the scope of the program dictates how many BACT determinations are likely to be required and the degree of streamlining that is needed to the existing BACT process. In completing its charge to identify the major issues related to implementing the PSD Program under the Clean Air Act for GHGs, the Work Group should address whether GHGs are meant to be a sole basis for triggering the PSD permitting requirement in the first instance under the statutory and regulatory language or whether GHG BACT is only required by statute/regulation when a source is already required to obtain a PSD permit based emissions of a criteria pollutant.

This White Paper addresses this important question and contends that there is *no automatic PSD triggering* or *NAPT* based solely on emissions of GHGs but rather that BACT may apply to significant GHG increases only when PSD is being triggered for a criteria pollutant. For shorthand purposes, we refer to this as the *NAPT* (no automatic PSD trigger) *approach*. It does not address the question of which

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<sup>1</sup> This white paper has been prepared by Chuck Knauss (Clean Air Act Advisory Committee and EPA Climate Change Workgroup Member) as a draft document to support discussion among members of the EPA Climate Change Workgroup. While the NAPT approach would not solve the PSD problem completely, it should be a key element of addressing the stationary source implications of subjecting GHGs to regulation, which would also need to address the Title V issue, significance levels, definition of “subject to regulation”, and the comments raised by state agencies regarding their need for a delay in the triggering of PSD and Title V to adopt regulations.

or when pollutants are “subject to regulation” within the meaning of Section 165(a)(4) of the Act that is raised in EPA’s Reconsideration of the Johnson Memorandum, or other applicability issues such as the appropriate significance levels and measurement methods that have been raised in recent Federal Register notices. *This paper is accompanied by two attachments. One explains why EPA should adopt the NAPT approach and the second provides a series of examples showing how NAPT works as compared with the “non-NAPT” interpretation.*

As explained in detail below, the statutory and regulatory provisions governing the PSD program state that PSD only applies in those areas designated attainment or unclassifiable for a particular pollutant. Specifically, PSD is triggered by: (1) a new major source of a pollutant for which the area where the source is located is classified as attainment or unclassifiable; or (2) a major modification of an existing source for a pollutant for which the area where the source is located is classified as attainment or unclassifiable.

**A. Sections 161 and 165(a) Limit Triggering of PSD to Criteria Pollutants, While Section 165(a)(4) Applies BACT to Pollutants “Subject to Regulation” if a PSD Permit Is Required for a Criteria Pollutant.**

The statutory language indicates that the initial applicability of the PSD program is determined based only on criteria pollutants for which an area is designated attainment or unclassifiable and is not triggered based on emissions of non-criteria pollutants. In particular, Section 161 states with regard to the PSD program that:

In accordance with the policy of section 101(b)(1), each applicable implementation plan shall contain emission limitations and such other measures as may be necessary, as determined under regulations promulgated under this part, to prevent significant deterioration of air quality in each region (or portion thereof) *designated pursuant to section 107 as attainment or unclassifiable.*<sup>2</sup>

Similarly, Section 165(a) limits PSD applicability:

No major emitting facility on which construction is commenced after the date of the enactment of this part, may be constructed *in any area to which this part applies* unless — (1) a [PSD] permit has been issued...; (2) [notice, comment, and hearing opportunity given]; (3) [air quality requirements demonstrated to be met]; (4) the proposed facility is subject to [BACT] for each pollutant subject to regulation under this chapter...; (5) [class I area requirements are met as applicable]; (6) [air quality impacts of growth analyzed]; (7) [certain area monitoring requirements met]; and (8) [certain applicable class II and III area requirements met].<sup>3</sup>

The above text plainly limits application of PSD to certain areas — those designated as attainment or unclassifiable *pursuant to Section 107 of the Act*. Section 107 applies *only* to criteria pollutants. Thus, Sections 161 and 165(a) serve to limit applicability by location and this “location-limiting language” must be given meaning in the Agency’s application of the statute. EPA’s discussion of BACT to date,

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<sup>2</sup> 42 U.S.C. § 7471 (emphasis added).

<sup>3</sup> 42 U.S.C. § 7475(a) (emphasis added). Section 52.21(a)(2) of EPA’s regulations, captioned “applicability procedures,” also reflects the limitation of PSD applicability to situations where the pollutant triggering review is one for which the area has been designated attainment or unclassifiable. Section 52.21(a)(2) states that PSD applies to new major stationary sources or projects at existing major stationary sources “*in an area designated as attainment or unclassifiable under sections 107(d)(1)(A)(ii) or (iii) of the Act.*” 40 C.F.R. § 52.21(a)(2) (emphasis added).

however, skips directly to subparagraph (4) of Section 165(a), which defines the pollutants that are subject to BACT *once PSD permitting is already required*. The scope of the BACT determination is important, but it is not the initial question.

Giving meaning to the language in these statutory provisions is important for several reasons. First, it assures that all provisions of the statute are given meaning. If Section 165(a)(4) alone governs the scope of PSD program applicability, then the location-limiting language of Sections 161 and 165(a) would be rendered mere surplusage. According to basic canons of statutory construction, all provisions of the Act must be given meaning.<sup>4</sup>

Second, this interpretation comports with the holding in *Alabama Power Co. v. Costle*,<sup>5</sup> where the court found that *location* is the key determinant for PSD applicability and rejected EPA's contention at that time that PSD should apply in all areas of the country, regardless of attainment status. EPA had argued that PSD permitting requirements should apply not only to attainment areas for a given pollutant, but to anywhere that a new emitting facility would "adversely affect the air quality of an area to which" PSD requirements apply.<sup>6</sup> The court held that EPA's regulations violated the CAA's plain language.<sup>7</sup> The court stated: "The plain meaning of the inclusion in [42 U.S.C. § 7475] of the words 'any area to which this part applies' is that Congress intended *location* to be the key determinant of the applicability of the PSD review requirements."<sup>8</sup> In its regulatory response to the *Alabama Power* decision, EPA acknowledged the Court's holding by specifically providing an exemption from PSD for nonattainment pollutants in Section 52.21(i)(2).<sup>9</sup> But, in the preamble to those regulations, EPA otherwise maintained the concept that other pollutants (such as NSPS-only pollutants) could trigger PSD.<sup>10</sup> EPA's approach remained contrary to the Act, but it had little effect because there were very few non-criteria pollutants at the time.

Third, other provisions in Title I provide further support for limiting PSD program applicability to new major sources of NAAQS pollutants for which an area is designated attainment or unclassifiable and to existing major sources of NAAQS pollutants undertaking a major modification for a NAAQS pollutant in such an area. Section 110(a)(2)(C) sets forth the requirements for SIPs, stating that the plans shall "include a program to provide for ... regulation of the modification and construction of any stationary source within the areas covered by the plan *as necessary to assure that [NAAQS] are achieved, including a permit program as required in parts C [PSD] and D [nonattainment New Source Review]*."<sup>11</sup> This language again explicitly indicates that the purpose of the PSD program is to assure the NAAQS continue

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<sup>4</sup> *United States v. Menasche*, 348 U.S. 528, 538-39 (1955); see also *Qi-Zhuo v. Meissner*, 70 F.3d 136, 139 (D.C. Cir. 1995); *Bennett v. Spear*, 520 U.S. 154, 173 (1997) ("'[C]ardinal principle of statutory construction' [instructs that a court has a duty] 'to give effect, if possible, to every clause and word of a statute....'" (internal citations omitted)).

<sup>5</sup> 636 F.2d 323 (D.C. Cir. 1980).

<sup>6</sup> *Id.* at 364.

<sup>7</sup> *Id.* at 364-68.

<sup>8</sup> *Id.* at 365 (emphasis added).

<sup>9</sup> EPA stated that PSD "shall not apply to a major stationary source or major modification *with respect to a particular pollutant* if ... the source or modification is located in an area designated as nonattainment under section 107." 40 C.F.R. § 52.21(i)(2) (emphasis added).

<sup>10</sup> 45 Fed. Reg. 52,675, 52,676 (Aug. 7, 1980). The 1980 Preamble stated that PSD requirements still apply to any area that is "designated ... as 'attainment' or 'unclassifiable' for *any* pollutant for which a national ambient air quality standard exists." *Id.* at 52,677. This interpretation is wrong because it renders Section 165(a)'s language a nullity since every area in the country is designated attainment for at least one pollutant, and that has always been the case. Moreover, the 1980 interpretation is inconsistent with EPA's approach for nonattainment NSR, in that EPA applies a pollutant-by-pollutant approach to trigger nonattainment NSR but does not do so for PSD.

<sup>11</sup> 42 U.S.C. § 7410(a)(2)(C) (emphasis added).

to be achieved. It is therefore inconsistent with this language to apply PSD in situations when there is no significant increase of a NAAQS pollutant for which an area is designated attainment or unclassifiable. Moreover, Section 107 provides insight into the meaning of the term “air quality” in Section 161 because it requires SIPs to “specify the manner in which national primary and secondary ambient air quality standards will be achieved and maintained within each air quality control region in such State.”<sup>12</sup> Finally, Section 163(b)(4) specifies that the maximum allowable concentration of “any air pollutant” in “any area” to which Part C applies shall not exceed the NAAQS, further indicating that the PSD program is focused on attaining the NAAQS.<sup>13</sup>

Fourth, the 28 source categories that Congress listed in Section 169(1) in 1977 are the very ones EPA regarded at the time as posing the greatest potential for air quality degradation due to conventional pollutants. The only way to explain the selection of those particular categories is to posit a concern only with criteria pollutants. Indeed, the only way to understand the 100/250 tpy cutoffs is also in terms of criteria pollutants. Similarly, the provisions of Sections 165(a) and (e) that require air quality monitoring and air quality impact analysis in connection with PSD permitting are oriented on their face to local or regional impacts. A prime example is Section 165(e)(1), which calls for an analysis of “the ambient air quality at the proposed site *and in areas which may be affected by emissions from [the proposed] facility for each pollutant subject to regulation under the [CAA] which will be emitted from such facility.*”<sup>14</sup>

Fifth, the entire system for area designations in Section 107(d) and the underlying system for establishing air quality control regions in Section 107(b) make sense only from the standpoint of managing emissions of criteria pollutants, not GHGs. Indeed, Section 161 is the provision in Part C that dictates that each SIP must contain a PSD program and that the program be designed to prevent significant deterioration of air quality in areas designated as attainment or unclassifiable under Section 107(d). That objective makes sense only from the standpoint of emissions having a local or regional impact, not emissions of GHGs.

Sixth, the legislative history of the Clean Air Act Amendments of 1977, the origin of Sections 165(a) and 169(1), reveals without doubt that Congress, in creating those provisions, had in mind only criteria pollutants. Both the Senate and the House saw themselves as engaged primarily in continuing the work that a prior Congress had begun, through the 1970 Clean Air Act, to rid the Nation, especially urban areas, of unhealthy levels of smog, particulates, sulfur dioxide, and other criteria pollutants. The air quality problems of concern to the 95<sup>th</sup> Congress in 1977 did not remotely include global warming.<sup>15</sup> It is simply not possible, in light of this legislative history, to make a credible argument that the 95<sup>th</sup> Congress intended that GHG emissions could be a basis for applicability of the PSD permitting program as defined by Sections 165(a) and 169(1).

**B. While Limiting the Scope of the PSD Program Consistent with the Statute Will Limit the Number of PSD Permits for GHGs, a Significance Level Would Still Need to Be Established.**

EPA must still establish a significance level for GHGs because sources that are obtaining a PSD permit and increasing GHG emissions would need to determine the level of increase that triggers the BACT requirement under Section 165(a)(4). Unlike the major source threshold for PSD applicability of 100 or 250 tpy, the statute does not specify the significance levels for determining whether BACT is required for

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<sup>12</sup> *Id.* at § 7407(a).

<sup>13</sup> *Id.* at § 7473(b)(4).

<sup>14</sup> 42 U.S.C. § 7465(e)(1) (emphasis added).

<sup>15</sup> *See, e.g.*, 123 Cong. Rec. S9162-86 (daily ed., June 8, 1977) (stage-setting remarks of Senator Muskie, the lead floor manager); *id.* at H8662-65 (daily ed., Aug. 4, 1977) (stage-setting remarks of Congressman Rogers, the lead floor manager).

a pollutant. Thus, EPA can set a significance level without reference to the major source thresholds, as they are not relevant. The sources for which a GHG BACT analysis would be conducted would, by definition, be major emitting facilities by virtue of their emissions of a NAAQS pollutant for which an area is designated attainment or unclassifiable. The only question for EPA to answer at that point is what level of GHG emissions increase is significant enough to warrant imposition of BACT. This approach would leave EPA with significantly greater flexibility under the statute to set an appropriate significance level for GHGs to determine the level of emissions increase above which BACT analysis is appropriate. EPA would not be departing from a specified numerical value in the statute – *i.e.*, because the statute does not specify significance levels.

The result of this approach is illustrated by a couple of examples. First, consider an existing plant located in an attainment area for all criteria pollutants and subject to the 250 tpy major source threshold. If this plant’s potential emissions of all criteria pollutants are less than the major source threshold, the mere fact that its GHG emissions are above the major source threshold that Congress established for criteria pollutants would not make the source a “major emitting facility” under the PSD program. Similarly, consider an existing source that is major for particulate matter and located in a particulate matter attainment area. If that source undertakes a project that reduces particulate emissions but causes a significant GHG emissions increase, under the proper statutory interpretation, PSD would not be triggered for GHGs because GHGs are not a criteria pollutant. However, if that same plant increased particulate emissions by more than the significance level, under the NAPT approach, BACT would have to be applied for GHGs (if deemed “subject to regulation”). **Additional examples are provided in Attachment 2.**<sup>16</sup>

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To date, our discussions about the potential triggers of PSD have not directly addressed this initial applicability question and the Work Group should discuss it, not only because of its overall importance to the program, but also because a narrower scope to the potential GHG burden may allow for a more focused discussion of solutions for BACT itself.

***Attachment 1: Why EPA Should Adopt the NAPT Approach to Address the Immediate PSD Problem***  
***Attachment 2: Examples of Implementing the NAPT Approach for PSD Applicability***

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<sup>16</sup> Under this approach EPA’s “major for one major for all policy” would have to be modified. That policy results from EPA’s reading of Section 165(a) as applying PSD if a source is located in an area that is attainment for *any attainment pollutant*. As discussed in the text, that reading of the statute nullifies the language in Section 165(a) that limits applicability to areas designated as attainment under Section 107. Theoretically, there could be a slight reduction in the number of PSD permits triggered for criteria pollutants. For example, consider a source is major for NOx but minor for all other pollutants and has a significant increase of SO<sub>2</sub> but no significant increase in NOx. Assuming the area is designated attainment for both NO<sub>2</sub> and SO<sub>2</sub>, under the 1980 preamble reading of Section 165(a), the source would trigger PSD for SO<sub>2</sub> because it is “major for SO<sub>2</sub>” since it is “major for NOx” whereas under NAPT, the source would not trigger PSD for SO<sub>2</sub> since it is not a triggering PSD for SO<sub>2</sub> directly. In practice, however, it is unlikely that a source like an electric utility would not trigger PSD directly for an attainment criteria pollutant and once it does, BACT applies to all pollutants subject to regulation that increase significantly under the NAPT approach. Therefore, we believe that this theoretical difference is unlikely to result in an actual change in the number of plants triggering PSD and applying BACT for criteria pollutants. Even if it did result in a few less PSD permits, though, state minor new source review programs would at least require state BACT under their SIPs and thus control requirements would still apply, just not under the PSD program.

## **Attachment 1**

### **Why EPA Should Adopt the NAPT Approach to Address the PSD Problem**

***Background: NAPT (No Automatic PSD Trigger) is a consistent application of the Clean Air Act and existing PSD program regulations that requires a PSD permit only if a physical or operational change causes a significant increase in a criteria pollutant. Once that occurs, all pollutants subject to regulation must apply BACT. Under NAPT, GHGs could not be the sole reason a PSD permit is required but if a source requires a PSD permit due to criteria pollutant increases (e.g., NOx or VOC), then BACT would be required for significant increases of GHGs.***

#### ***Why Should EPA Adopt the NAPT Approach?***

1. It limits the requirement for GHG BACT to the existing number of PSD permits being triggered today, about 300 PSD permits each year. These permits would have to include GHG BACT if the projects cause a significant increase in GHG emissions.
2. It prevents EPA from having to create new major source thresholds for GHGs since the major source level would not be relevant for GHGs; only the significance level would be relevant.
3. EPA could issue a significance level at any appropriate level since (unlike the major source threshold), the Act does not specify a particular significance level.
4. It ensures that those sources that are otherwise minor and permits in the permitting queue are not prevented from bringing more efficient processes on line.
5. It is consistent with the language of the Clean Air Act and faithfully implements the decision in *Alabama Power v. Costle*.

#### ***What Would EPA Have to Do in Addition to NAPT?***

1. EPA would need to adopt a Title V major source threshold because the NAPT interpretation does not apply to Title V.
2. EPA would need to issue a GHG significance level to ensure that minor increases in GHGs do not trigger.
3. EPA would need to delay applicability of the “subject to regulation” provision for GHGs to allow states time to conform any conflicting state and federal rules.

#### ***Why Is Simply Adopting the Tailoring Rule or Using the Federal Implementation Plan Approach Insufficient?***

1. The Tailoring Rule does not alter state laws and sources still remain subject to these requirements. Simply changing federal law does not solve the problem.
2. Issuing a FIP does not address the state law issue nor does it undo state implementation plan approvals. Moreover, many believe it is not legally defensible and if vacated, would place numerous construction projects in jeopardy.

#### ***What Are Responses to Potential Arguments Against NAPT?***

1. While some might argue that it creates an uneven playing field because sources located in attainment areas for a criteria pollutant could be forced to apply GHG BACT whereas a source that triggers only nonattainment NSR would not be triggering PSD and therefore not trigger GHG BACT, this argument ignores that the current PSD system takes this approach. PSD does not apply to nonattainment pollutants under the *Alabama Power* case. Moreover, this situation is unlikely to arise very often and the benefits of limiting PSD for GHGs to the larger sources that are already undertaking a project significant enough to trigger PSD for criteria pollutants makes policy sense.
2. While some might argue that pollutants like formaldehyde have historically triggered PSD review, the fact is that these pollutants are generally hazardous air pollutants that have not been subject to PSD since 1990. Prior to 1990, PSD was the only way to control certain pollutants but with regulation under Section 112, these concerns have been addressed.
3. While some might argue that NAPT does not implement fully EPA’s historical “major for one, major for all” approach, NAPT merely modifies it slightly so that it is “major for one criteria pollutant and trigger PSD for it, apply BACT to the broader group of pollutants subject to regulation.”

**Attachment 2**  
**Examples of Implementing the NAPT Approach for PSD Applicability**

The following examples illustrate how the statute and regulations can be applied to implement the NAPT approach (assuming GHGs are subject to regulation within the meaning of CAA Section 165(a)(4)) and the significant streamlining that would result:

Facts	NAPT Result	Non-NAPT Result <sup>1</sup>
<p><b>Example 1: New Minor Criteria Pollutant Source with Major Levels of GHG Emissions:</b> A new plant is being built in an attainment area for all criteria pollutants with potential emissions of criteria pollutants less than major source thresholds but with VOC emissions at 50 tons per year. GHG emissions will be greater than the major source threshold.</p>	<p>PSD does not apply because the source is not major for any criteria pollutant for which the area is designated attainment.</p>	<p>PSD would apply because the source is “major” for GHGs and the significance level would apply for all criteria pollutant emissions. This means that both GHGs and VOC would be subject to BACT whereas today, neither is subject to BACT.</p>
<p><b>Example 2: New Major Criteria Pollutant Source:</b> A new plant is being built in an ozone attainment area with potential emissions of VOC greater than 250 tons per year. GHG emissions are greater than the GHG significance level.</p>	<p>PSD applies because the source is major for a criteria pollutant for which the area is designated attainment and BACT is required for VOCs and GHGs. The source is a new major emitting facility of an attainment pollutant (VOC) and there is a significant increase in GHGs emissions.</p>	<p>Same result as NAPT.</p>
<p><b>Example 3: Existing minor criteria pollutant source with GHG emissions greater than major source threshold.</b> An existing plant is located in an attainment area for all criteria pollutants. PTE of all criteria pollutants is less than the major source threshold. PTE of GHGs exceeds the GHG major source threshold. The facility undertakes a project that increases GHG emissions above the GHG significance levels but otherwise remains a minor source for criteria pollutants. Emissions of VOC will increase by more than 40 tpy to 85 tons.</p>	<p>PSD does not apply because the source is not a major source for a criteria pollutant for which the area is designated attainment or unclassifiable. GHGs would not be subject to BACT.</p>	<p>PSD would apply because the source is “major” for GHGs and the significance level would apply for all criteria pollutant emissions. This means that both GHGs and VOC would be subject to BACT due to the 45 tpy increase even though the source remains minor for VOC. Today, neither VOC nor GHGs would be subject to BACT.</p>

<sup>1</sup> This is the result that would apply under EPA’s 1980 NSR Rule preamble assumption that PSD can be triggered by non-criteria pollutants.

Facts	NAPT Result	Non-NAPT Result <sup>1</sup>
<p><b>Example 4: Existing major criteria pollutant source with project only increasing GHGs above significance levels.</b> Existing source major for SO<sub>2</sub> in an SO<sub>2</sub> attainment area. Minor for all other criteria pollutants. Source undertakes a project that increases GHG emissions by more than the significance level but all criteria pollutant emissions either decrease or increase by less than significance levels.</p>	<p>PSD does not apply and does not require BACT for GHGs because, although the facility is a major emitting facility, it has not increased emissions above significance levels for any NAAQS pollutant for which the area is designated attainment or unclassifiable. Therefore, it is not triggering PSD permitting requirements for a criteria pollutant. Since PSD is not applicable, the question of GHG BACT would not be reached, even if GHG emissions would increase above the GHG significance level.</p>	<p>PSD would be triggered based solely on the increase in GHG emissions and would require BACT.</p>
<p><b>Example 5: Existing major criteria pollutant source with project increasing attainment criteria pollutant and GHG emissions above significance levels.</b> Existing plant located in an attainment area for all criteria pollutants. The plant has potential NO<sub>x</sub> emissions above 250 tpy. It undertakes a project increasing NO<sub>x</sub> and SO<sub>2</sub> emissions above 40 tpy and GHG emissions above significance level. Other criteria pollutants, like PM<sub>2.5</sub> and PM<sub>10</sub>, will not increase above applicable significance levels.</p>	<p>PSD is triggered by NO<sub>x</sub> and SO<sub>2</sub>. BACT is required for NO<sub>x</sub> and SO<sub>2</sub> and GHGs.</p>	<p>Same result as NAPT.</p>