

July 16, 2025

*Via Email and UPS Mail:*

Memphis and Shelby County Air Pollution Control Board  
Pollution Control Manager  
Shelby County Health Department  
814 Jefferson Avenue, 4<sup>th</sup> Floor  
Memphis, Tennessee 38105  
[ShelbyTNHealth@shelbycountyttn.gov](mailto:ShelbyTNHealth@shelbycountyttn.gov)

**RE: Appeal of Air Permit No. 01156-01PC for CTC Property LLC and the  
Accompanying Decision Regarding “Temporary” Combustion Turbines**

To the Members of the Memphis and Shelby County Air Pollution Control Board:

Pursuant to City of Memphis Code section 16-71(d)–(e) and Shelby County Air Code section 3-35(d)–(e), the National Association for the Advancement of Colored People (“NAACP”) and Young, Gifted & Green (together, “Appellants”) hereby appeal the Shelby County Health Department’s (“SCHD” or “Health Department”) issuance of Air Permit No. 01156-01PC (the “CTC Permit”) to CTC Property LLC (“CTC”) (“Permit Decision”). Appellants also hereby appeal the Health Department’s decision that all temporary gas turbines are exempt from air permitting requirements, as announced in the Health Department’s Response to Public Comments on Draft Construction Air Permit No. 01156-01PC (“Nonroad Engine Decision”). Pursuant to City of Memphis Code section 16-71(e) and Shelby County Air Code section 3-35(e), this Appeal acts as a stay of the Permit Decision and the Nonroad Engine Decision until the Board takes final action on the Appeal.

Beginning in early June 2024, CTC began installing and, thereafter, operating numerous gas turbines at its facility in Southwest Memphis without obtaining any air permit or other written approval from the Health Department. At peak operations, CTC had 35 turbines with a total generating capacity in excess of 420 MW—larger than some TVA power plants—with the potential to emit between 1,000 and 2,100 tons of smog-forming nitrogen oxides (“NOx”) and substantial quantities of other pollutants, ranking the facility as the largest or amongst the largest emitter of smog-forming air pollution in Memphis—an area that has failed to meet EPA’s air quality standard for ozone for years, a problem which is worsening.<sup>1</sup>

Although the Health Department has now issued a permit for some of the turbines at CTC, the CTC Permit is deficient because in the Permit Decision the Health Department improperly ignored the existing unpermitted turbines at the facility (at least some of which

---

<sup>1</sup> See **Attachment (“Att.”) 1**, S. Env’t L. Ctr. et al., Petition to Redesignate the Memphis Metropolitan Statistical Area as in Nonattainment (June 5, 2025), (“Ozone Petition”) (The Ozone Petition and attachments are available at <https://southernenvironment.sharefile.com/d-sfe469b0bc2954171aa20bd0dc448a6a1>).

remain today) and thus classified the permit as approving construction of a new, greenfield facility (i.e., a new project with no existing emission sources) rather than a modification to an existing major source of pollution. More fundamentally, the Department's Nonroad Engine Decision that these unpermitted turbines were exempt from Clean Air Act requirements because they are "nonroad engines" is contrary to law. The Health Department therefore lacks a lawful basis for exempting all temporary gas turbines from the obligation to obtain a construction permit and for issuing this deficient permit.

### **GROUND FOR APPEAL**

Appellants raise two grounds for Appeal:

1. The Health Department's Nonroad Engine Decision, which determines that large gas turbines can qualify as nonroad engines that are exempt from the Clean Air Act and Shelby County's permitting requirements, and was announced for the first time in the Department's response to comments, is unlawful. This improper decision not only resulted in a defective CTC Permit (addressed under the second ground for appeal), but, more fundamentally, will allow CTC or others to install and operate any number of new polluting turbines at any time without any written approval from the Health Department, without any public notice or public participation, and without pollution controls. Because this decision is contrary to law and will allow CTC or others to install harmful new sources of pollution in the future without any recourse with the Department, NAACP and Young, Gifted & Green appeal the Nonroad Engine Decision independent from the Appeal of the Permit Decision and CTC's defective air permit.
2. Appellants also appeal the Department's Permit Decision because it fails to include requisite major source requirements. In particular, when the Health Department issued the CTC Permit on July 2, 2025, the company was already operating at least 22 unpermitted gas turbines, including at least 11 that are not encompassed by the CTC Permit. In fact, CTC has been installing and operating unpermitted turbines since at least June 12, 2024. These turbines rendered CTC an existing, major stationary source of air pollution when the Department issued the permit. The Health Department, however, improperly classified the CTC Permit as authorizing a new, greenfield facility rather than a modification to the existing facility because of its erroneous Nonroad Engine Decision discussed above. As a result, the Department has wrongly allowed CTC to escape requisite major source permitting and emission control requirements that would have been triggered had the Department properly accounted for CTC's existing turbines.

#### **I. The Health Department's Nonroad Engine Decision Is Unlawful.**

The primary issue in this Appeal is whether CTC's existing turbines qualify as "stationary sources" under the federal Clean Air Act and Local Implementation Plan, or whether, as the Department contends, they are instead "nonroad engines" as that term is defined under the federal Clean Air Act. Nonroad engines are narrowly defined by the Act, and if the turbines do not qualify as nonroad engines, then they are stationary sources and subject to the permitting

requirements that the Department claims are inapplicable. As set out below, the Department erred as a matter of law in finding that all turbines, regardless of size or federal regulations, can qualify as nonroad engines.

### **A. Gas Turbines That Are Large Enough to Be Subject to New Source Performance Standards (NSPS) Cannot Be Nonroad Engines.**

The Health Department’s Nonroad Engine Decision sets out in writing—for the first time—its determination that any gas turbine, regardless of the size of the turbine, may qualify as a nonroad engine that is exempt from air permitting requirements.<sup>2</sup> Appellants do not dispute that nonroad engines, as they are defined under the Clean Air Act, are exempt from permitting because they are not stationary sources (so long as they are intended to operate at a given site for less than a year). Rather, the Department has erred by ignoring the plain language of the statute, which defines “nonroad engine” as excluding any engine or turbine that is large enough to be subject to a standard adopted under the Clean Air Act’s New Source Performance Standards (“NSPS”).

Specifically, the Clean Air Act defines “nonroad engine” as “an internal combustion engine (including the fuel system) that is not used in a motor vehicle or a vehicle used solely for competition, or that **is not subject to standards promulgated under section 7411** of this title [aka Section 111, or NSPS] or section 7521 of this title.” 42 U.S.C. § 7550(10) (emphasis added). This same requirement is reiterated in the Act’s implementing regulations at 40 C.F.R. § 1068.30 (2024): “[a]n internal combustion engine is **not** a nonroad engine if it meets **any** of the following criteria . . . (2)(ii) The engine is regulated under 40 CFR part 60 (or otherwise regulated by a federal New Source Performance Standard promulgated under Section 111 of the Clean Air Act (42 U.S.C. § 7411)).” (emphasis added).<sup>3</sup>

The Department itself cited to this same definition at 40 C.F.R. § 1068.30 to support its decision that turbines can be nonroad engines, but, tellingly, omitted the key provisions that relate to NSPS.<sup>4</sup> The following is a screenshot from the Department’s Nonroad Engine Decision which plainly omits the “(2)(ii)” provision barring engines subject to NSPS from the definition of a nonroad engine:

---

<sup>2</sup> See Letter from Wasim Khokhar, Tech. Manager, SCHD, to Patrick Anderson, Senior Att’y, S. Env’t L. Ctr. at 2, 3–4, 6 (received July 2, 2025) (“Nonroad Engine Decision”) (responding to public comments on SCHD’s Draft Construction Air Permit No. 01156-01PC for CTC Property LLC, jointly submitted by S. Env’t L. Ctr., Memphis Community Against Pollution, Young, Gifted & Green, and the Chickasaw Group of the Tennessee Chapter of the Sierra Club). The Nonroad Engine Decision is dated June 2, 2025, but was transmitted on July 2, 2025; the June date appears to be erroneous.

<sup>3</sup> This portion of the nonroad engine definition also explains that engines which are subject to NSPS but that are “voluntarily certified under 40 CFR part 60” may still qualify as nonroad engines. This is not relevant, however, because there are no voluntary certifications for gas turbines under part 60; the voluntary certification language refers instead to internal combustion engines (as opposed to turbines) that may be voluntarily certified under Subpart JJJJ, see 40 C.F.R. § 60.4241 (2024). No similar provision exists under Subpart KKKK for turbines, nor has CTC or the Department claimed as such.

<sup>4</sup> Nonroad Engine Decision at 2 n.1.

Figure 1: SCHD's Response Enclosing the Nonroad Engine Decision (Received July 2, 2025)

1 See 42 USC § 7602(z) ("The term 'stationary source' means generally any source of an air pollutant *except* those emissions resulting directly from an internal combustion engine for transportation purposes or from a *nonroad engine*;" 40 CFR § 1068.30 ("A nonroad engine is an internal combustion engine that meets any of the following criteria: (1)(iii) "By itself or in or on a piece of equipment, it is *portable or transportable*, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform." (2) "An internal combustion engine is not a nonroad engine if it meets any of the following criteria:" ... (2)(iii) "The engine ... remains or will remain at a location for more than 12 consecutive months."))

Nonroad Engine Decision at 2 n.1. Had the Department included the "(2)(ii)" subsection rather than only the "(2)(iii)" subsection, its position would have been transparently and completely undermined. In short, the Department cannot cherry pick which parts of the federal Clean Air Act it believes are relevant, and the full nonroad engine definition clearly excludes engines or turbines that are subject to NSPS.

As set out in public comments and prior letters, CTC's turbines are indisputably subject to NSPS even if they are portable or temporary.<sup>5</sup> The relevant NSPS, Subpart KKKK, applies to any turbine with a heat input greater than 10 MMBtu/hr,<sup>6</sup> and even the smallest turbines operated by CTC easily exceed this.<sup>7</sup>

Numerous communications received by the Department thoroughly set out the foregoing legal provisions, including the key fact that turbines subject to NSPS cannot be considered nonroad engines.<sup>8</sup> Despite this fact, the Department utterly failed to address or respond to this

<sup>5</sup> 40 C.F.R. § 60.4420 (2024) (defining stationary turbine in part as such: "[s]tationary means that the combustion turbine is not self propelled or intended to be propelled while performing its function. It may, however, be mounted on a vehicle for portability.").

<sup>6</sup> Att. 2, 40 C.F.R. § 60.4305(a) (2024).

<sup>7</sup> The smallest turbines at xAI, the 5.2 MW XQ5200 turbines, have a heat input of about 60 MMBtu/hr, well in excess of the 10 MMBtu/hr applicability threshold. See Att. 3, *Model XQ5200 Mobile Turbine Technical Specifications*, CATERPILLAR (2003), <https://www.macallisterpowersystems.com/wp-content/uploads/sites/4/2022/11/XQ5200.pdf>. The Taurus 60 turbines are listed as having a heat input capacity of 61.4 MMBtu/hr, see Att. 4, *Power Generation Product Selection Guide*, SOLAR TURBINES (2016), <https://s7d2.scene7.com/is/content/Caterpillar/C10550166>. Each of the larger turbines at CTC have higher heat inputs and are likewise large enough to be subject to Subpart KKKK.

<sup>8</sup> See Att. 5, Letter from SELC, Memphis Community Against Pollution, Young, Gifted & Green, Sierra Club Chickasaw Group, and Sierra Club Tennessee Chapter to Dr. Michelle Taylor, Dir. & Health Officer, SCHD (Aug. 26, 2024), ("Community Groups' Aug. 26, 2024 Letter") (The letter and attachments are available at <https://southernenvironment.sharefile.com/d-sf9d1c31d581b4f9f980dfb1dac79a5a2>); Att. 6, Letter from SELC, Memphis Community Against Pollution, Young, Gifted & Green, Sierra Club Chickasaw Group, and Sierra Club Tennessee Chapter to Dr. Michelle Taylor, Dir. & Health Officer, SCHD (Sept. 10, 2024), ("Community Groups' Sept. 10, 2024 Letter") (The letter is available at <https://southernenvironment.sharefile.com/d-sf9b6ce4bed49469288f0865ed6559467>); Att. 7, Letter from SELC, Memphis Community Against Pollution and Young, Gifted & Green to Wasim Khokhar, Tech. Manager, SCHD (Mar. 26, 2025), ("Community Groups' Mar. 26, 2025 Letter") (The letter and attachments are available at <https://southernenvironment.sharefile.com/d-s0f1b987b58444ab0b1cb98689610e5f9>); Att. 8, Letter from SELC, Memphis Community Against Pollution, Young, Gifted & Green, Sierra Club Chickasaw Group to Dr. Michelle Taylor, Dir. & Health Officer, SCHD (Apr. 9, 2025), ("Community Groups' Apr. 9, 2025 Letter") (The letter is available at <https://southernenvironment.sharefile.com/d-sdb93f63c69a141b282dff1cd3048cf58>); Att. 9, Letter from SELC, Memphis Community Against Pollution, Young, Gifted & Green, Sierra Club Chickasaw Group to Wasim Khokhar, Tech. Manager, SCHD (Apr. 30, 2025), ("Community Groups' Apr. 30, 2025 Letter") (The letter and attachments are available at <https://southernenvironment.sharefile.com/d-s7f5b83caf86e46238bbd885a735c66f4>); Att. 10, Letter

issue in the Nonroad Engine Decision, saying without any legal support that the Department’s “position” is that it “is not appropriate or suitable” to subject temporary turbines to the provisions of NSPS.<sup>9</sup> This is both unfounded and not relevant; the Department does not have discretion to decide which federal standards apply to turbines (and as expanded on below, even temporary turbines are subject to NSPS). An agency’s policy disagreement is not a lawful basis for disregarding existing legal requirements. Further, the Department’s argument misses the point: applicability of NSPS is primarily relevant to whether the turbines qualify as permit-exempt nonroad engines, not whether the Department should have actually implemented or enforced NSPS requirements.

To underscore the Department’s blatant misrepresentation and misapplication of the relevant federal standard, the Nonroad Engine Decision cites a proposed federal rule that actually supports Petitioner’s position. Nonroad Engine Decision at 3 n. 3. In the proposed rule, EPA seeks comments on whether to create a subcategory of NSPS Subpart KKKK for temporary combustion turbines. Review of New Source Performance Standards for Stationary Combustion Turbines and Stationary Gas Turbines, 89 Fed. Reg. 101306, 101345-46 (Dec. 13, 2024). Contrary to the Department’s Nonroad Engine Decision, EPA expressly acknowledges in the preamble to the proposed rule that temporary portable combustion turbines are subject to the existing Subpart KKKK. *See id.* at 101345 (“Both subpart KKKK and proposed subpart KKKKa apply to ‘portable’ turbines and so these [temporary] units would generally be covered by these subparts of the NSPS regulations if they meet other applicability criteria.”). EPA has not yet issued a final rule.<sup>10</sup> Thus, EPA’s statement regarding the applicability of Subpart KKKK to portable temporary combustion turbines directly contradicts the Department’s Nonroad Engine Decision.

## **B. NSPS Subpart KKKK Itself Defines Portable and Temporary Turbines as Stationary Sources.**

If there were any doubt remaining that the Department misconstrues the Clean Air Act’s statutory text and implementing regulations in deciding that portable and temporary turbines are not stationary sources, the question is further answered by the language of the applicable NSPS itself, which states that even portable turbines are defined as stationary sources. In particular, the term “stationary combustion turbine” is defined, in relevant part, as such: “[s]tationary means that the combustion turbine is not self propelled or intended to be propelled while performing its

---

from NAACP to Dr. Michelle Taylor, Dir. & Health Officer, et al. (May 29, 2025), (“NAACP’s May 29, 2025 Letter”) (The letter is available at <https://southernenvironment.sharefile.com/d-s1783acade6e9a4227b4e79f88ae9f06b3>); **Att. 11**, Letter from SELC, on behalf of NAACP, to Elon Musk, x.AI Corp. d/b/a xAI, et al. (June 17, 2025), (“NAACP’s June 17, 2025 Notice Letter”) (The letter and attachments are available at <https://southernenvironment.sharefile.com/d-s1f6b3101aed34f909d5a250bf2e5fd14>).

<sup>9</sup> Nonroad Engine Decision at 3.

<sup>10</sup> Commenters provided input that if EPA does pursue this proposal, it should only do so if it also enacts guardrails (such as the requirement for emission controls and a limit to the number of turbines at any one site) to prevent the kind of problems implicated by CTC’s use of 35 turbines without add-on pollution controls. *See Att. 12*, Comments on EPA’s New Source Performance Standards Review: Stationary Combustion Turbines and Stationary Gas Turbines, S. Env’t Law Ctr. at 2 (Apr. 15, 2025), (The letter and attachments are available at <https://southernenvironment.sharefile.com/d-s6f4c4b42d6784882a3a22541a92ea149>).

function. It may, however, be mounted on a vehicle for portability.”<sup>11</sup> In short, then, unless a combustion turbine is meant to operate while in motion (for instance, a combustion turbine on a jet), it is a stationary source, even if it is portable.

Moreover, and in critical contrast to other NSPS provisions, Subpart KKKK (the subpart applicable to combustion turbines) does not include any provisions exempting temporary units from NSPS applicability. Compare, for example, Subpart JJJJ (applicable to spark-ignition internal combustion engines), which does have an explicit provision authorizing temporary engines to operate for up to a year without being subject to the NSPS under Subpart JJJJ. *See* 40 C.F.R. § 60.4230(f) (2024). As such, these spark-ignition engines (which tend to be much smaller than CTC’s combustion turbines) can be exempt from NSPS (and permitting) if they are temporary and otherwise qualify as nonroad engines; the same is flatly not true, however, for larger turbines like those at CTC that are subject to Subpart KKKK, again undercutting the Department’s positions that these turbines are nonroad engines and are also not subject to NSPS.

### **C. The Shelby County Local Implementation Plan Does Not Include Any Nonroad Engine Exemption.**

In the Nonroad Engine Decision, the Department attempts to side-step the plain language of its own federally-approved Local Implementation Plan by claiming that the Department’s “position” is that “no exemption is needed because stationary permitting requirements do not apply to nonroad engines or to temporary activities that do not constitute ‘beginning actual construction.’” Nonroad Engine Decision at 3. The Department’s “position” is contrary to law on both counts.

First, the Department fails to mention that in contrast to the federal Clean Air Act, the Memphis-Shelby County Local Implementation Plan (“LIP”) does not include *any* nonroad engine permitting exemption at all. Under the LIP, a stationary source is “any building, structure, facility, or installation which emits or may emit” any air contaminant.<sup>12</sup> Further, the New Source Review provisions of the LIP include a definition of a “portable stationary source:”

Any source that is mounted on any chassis or skids and may be moved by the application of a lifting or pulling force.<sup>13</sup>

---

<sup>11</sup> 40 C.F.R. § 60.4420 (2024).

<sup>12</sup> City of Memphis Code § 16-77 and Shelby County Code § 3-5 (adopting Tenn. Comp. R. & Regs. 1200-03-09-.01(4)(b)(6) (“‘Stationary source’ means any building, structure, facility, or installation which emits or may emit a regulated NSR pollutant—except the activities of any vessel.”)). Applicable sections of the Memphis-Shelby County LIP have adopted by reference the State of Tennessee’s federally approved Clean Air Act implementing regulations, found primarily in Chapter 1200-03-09 of the Rules of the Tennessee Department of Environment and Conservation, Division of Air Pollution Control. *See* Shelby Cnty. Air Pollution Control Code § 3-5; City of Memphis Code § 16-77. As such, citations to specific language in, and provisions of, the Tennessee Rules herein refer to provisions in the LIP. *See* 40 C.F.R. § 52.2220(c) tbl.2 (2024).

<sup>13</sup> Tenn. Comp. R. & Regs. 1200-03-09-.01(5)(b)(1)(xxxv); *see also id.* at 1200-03-09-.01(4)(d)(7), (8)(b)(4)(iii).

Like other stationary sources, a “portable stationary source” is required by the Local Implementation Plan to obtain a construction permit before being constructed or installed.<sup>14</sup> Under the Local Implementation Plan, “construction” is “any physical change or change in the method of operation . . . which would result in a change in actual emissions” and “include[es] fabrication, erection, installation, demolition or modification.”<sup>15</sup> At a minimum, temporary portable stationary sources require “installation.”

The obligation to obtain a construction permit prior to installing a new stationary source is a fundamental feature of the Local Implementation Plan.<sup>16</sup> There is no so-called “temporary” or “364-day” rule, exemption, or waiver in the Local Implementation Plan. None of the exemptions from construction permitting requirements identified in Rule 1200-03-09-.04 apply to large temporary portable combustion turbines. Nor do those exemptions excuse any large temporary portable combustion turbines from obtaining a construction permit.<sup>17</sup> In fact, as set forth above, the Local Implementation Plan expressly contemplates that such “portable” stationary sources will obtain a permit before construction.<sup>18</sup>

Second, the Local Implementation Plan requires that, absent exemptions not relevant here, no person shall “begin the construction” of any new air contaminant source or modification, including temporary portable combustion turbines, before getting a construction permit.<sup>19</sup> The definition of “beginning actual construction” contained in the New Source Review provisions of the Local Implementation Plan does not excuse an air contaminant source from the general obligation to get a permit before beginning construction as described above. Instead, the New Source Review provisions make clear that *additional* requirements must be met before “beginning actual construction” of a major stationary source.<sup>20</sup> The Nonroad Engine Decision, however, exempts all temporary combustion turbines—whether minor or major sources—from *any* permitting requirements, in contravention of the Local Implementation Plan’s clear legal

---

<sup>14</sup> *Id.* at 1200-03-09-.01(1)(a) (air contaminant source required to obtain construction permit); *see also id.* at 1200-03-09-.01(4)(d)(7) (once a portable stationary source *obtains a construction permit*, it may relocate if certain circumstances are met).

<sup>15</sup> *Id.* at 1200-03-09-.01(4)(b)(9).

<sup>16</sup> *Id.* at 1200-03-09-.01(1)(a) (“Except as specifically exempted in Rule 1200-03-09-.04, no person shall begin the construction of a new air contaminant source or the modification of an air contaminant source which may result in the discharge of air contaminants without first having applied for and received from the Technical Secretary a construction permit . . . .”); *see* City of Memphis Code § 16-48C. (substituting “health officer” for “technical secretary” for the purposes of enforcing Chapter 1200-03-09 of Tennessee’s state regulations).

<sup>17</sup> *See* Tenn. Comp. R. & Regs. 1200-03-09-.04(4)(d)(13) (limiting exemption for “mobile sources” to “automobiles, trucks, buses, locomotives, planes, boats, and ships”); *see id.* (clarifying that “[t]his exemption only applies to the emissions from the internal combustion engines *used exclusively to propel* such vehicles.”) (emphasis added).

<sup>18</sup> *See* Tenn. Comp. R. & Regs. 1200-03-09-.01(1)(a) (air contaminant source required to obtain construction permit); *see also id.* at 1200-03-09-.01(4)(d)(7) (once a portable stationary source *obtains a construction permit*, it may relocate if certain circumstances are met).

<sup>19</sup> *Id.* at 1200-03-09-.01(1)(a).

<sup>20</sup> *See* Tenn. Comp. R. & Regs. 1200-03-09-.01(c)(3) (“No new major stationary source or major modification to which the requirements of subparagraphs (j), (k), (l), and (n); parts (e)1., 2., and 7.; and parts (a)5., 6., 8., 9., and 10. of this rule apply shall begin actual construction without a permit that states that the major stationary source or major modification will meet those requirements”); *see also id.* at 1200-03-09-.01(4)(b)(12) (“‘Begin actual construction’ means, in general, initiation of physical on-site construction activities on an emissions unit which are of a permanent nature”).



requirements. The Nonroad Engine Decision is therefore contrary to the Local Implementation Plan.

## **II. The Department's Unlawful Nonroad Engine Decision Resulted in a Deficient Permit.**

The Department's erroneous determination that all but 15 of CTC's turbines are permit-exempt nonroad engines rather than stationary sources resulted in several key defects in the permit issued by the Department. In particular, the Department failed to implement major source Prevention of Significant Deterioration requirements, including failing to establish enforceable emission limits that reflect use of the Best Available Control Technology (BACT) and failing to require a robust PSD ambient air quality impacts analysis as part of the permitting process. Additionally, the Department failed to require CTC to comply with major source nonattainment requirements, including securing enforceable emissions offsets as needed to demonstrate that the facility's emissions of NO<sub>x</sub> and VOC will not exacerbate the area's ongoing violation of the ozone NAAQS or interfere with the attainment or maintenance of the NAAQS in neighboring states.

### **A. CTC Was an Existing Major Stationary Source, and the Department Erred in Issuing a Greenfield Minor Source Permit Rather Than a Major Source Permit.**

As discussed above, the Department improperly ignored the law and the facts on the ground when it issued a minor-source, greenfield air permit to CTC. First, the existing turbines at the facility—for which installation began by June 12, 2024 at the latest—were not and are not permit-exempt nonroad engines, but rather are stationary sources, as set out above.<sup>21</sup> At the time of permit issuance, these turbines had the potential to emit, at minimum, 900 tons of NO<sub>x</sub> per year.<sup>22</sup> The relevant major source threshold for PSD permitting is 250 tons per year: in particular, the Clean Air Act defines a major source as one that “emits, or has the potential to emit,” at least 250 tons of NO<sub>x</sub> per year. *See* 40 C.F.R. 51.166(b)(1)(i)(B) (2024). As such, CTC was an existing major source when the Department issued the final permit. This is true even if the SMT-

---

<sup>21</sup> In its response to comments, the Department incorrectly implies that only “permanent” sources can be subject to New Source Review and Prevention of Significant Deterioration by pointing to the definition of “begin actual construction” under 40 C.F.R. § 52.21(b)(11) (2024), which includes the following: “‘Begin actual construction’ means, in general, initiation of physical on-site construction activities on an emissions unit which are of a permanent nature.” This provision applies not to permitting applicability, but rather to determining when a source begins construction. More critically, contrary to the Department’s position, EPA has addressed this exact question and found that “There are no provisions in Title I [New Source Review and PSD] or Title V of the Act, or in regulations developed pursuant to them, for excluding contracted or temporary operation in defining major sources. Accordingly, it has been EPA’s policy that temporary and contractor-operated units be included as part of the source with which they operate or support.” **Att. 13**, EPA, *Temporary Use of Electric Generators*, at 2 (June 1, 2004), <https://www.epa.gov/nsr/temporary-use-electric-generators>. *See also* *Ctr. for Biological Diversity v. Env’t Prot. Agency*, 82 F.4th 959, 965–967 (10th Cir. 2023) (finding that State Implementation Plan provision excluding temporary emissions from permitting was unlawful because no part of the federal Act or rules contemplated exempting temporary emissions).

<sup>22</sup> Appendix A: Timeline and Emissions Calculation, tbl.4 (showing minimum NO<sub>x</sub> emission rates at permit issuance).



130 turbines authorized under the permit are excluded from consideration (meaning CTC was and is an existing major source based on the remaining unpermitted turbines alone); the other 11 turbines present at the time of permit issuance have the potential to emit at least 560 tons of NO<sub>x</sub> per year.<sup>23</sup>

The Department's permit, meanwhile, authorizes the construction and permanent operation of 15 SMT-130 turbines with the potential to emit more than 80 tons of NO<sub>x</sub>, which the Department classifies as a new construction project rather than a modification to the existing facility.<sup>24</sup> This is improper because, again, the facility is not a greenfield source, but rather an existing major source of pollution.

This distinction is critical: under the Clean Air Act, when an existing source of pollution seeks to add new emission sources, it must comply with the Act's modification provisions rather than those that apply to new sources. In particular, an existing major source undertaking a modification must determine whether the change qualifies as a major modification. 40 C.F.R. § 51.166(b)(2) (2024). Major modifications, meanwhile, are subject to New Source Review requirements under the Prevention of Significant Deterioration and Nonattainment New Source Review programs, such as emission limits that reflect the use of pollution controls and robust ambient air quality impacts assessments.<sup>25</sup>

As relevant here, a major modification to an existing major source is one that increases actual or potential NO<sub>x</sub> emissions by at least 40 tons per year. 40 C.F.R. § 51.166(b)(23) (2024). The 15 SMT-130 turbines, meanwhile, have the potential to emit more than 80 tons of NO<sub>x</sub> per year according to the Department's analysis, far in excess of the major modification threshold.

Had the Department properly permitted the new SMT-130 turbines as a major modification to the existing CTC facility rather than as an independent new source, the Department would have had to require, at minimum, emission limits reflecting use of the Best Available Control Technology, as well as a robust assessment of ambient air quality impacts to determine whether the increased emissions will cause or contribute to an exceedance of the NAAQS—a requirement that is especially critical given that the past four years of ambient monitoring data show the Memphis area is already violating the ozone NAAQS.

---

<sup>23</sup> Appendix A, tbl.4 (showing that the four GE Vernova 2500 turbines alone have the potential to emit 428 tons of NO<sub>x</sub>, along with 64 tons from the SMT-60 turbines and 66 tons from the Solaris GE LM2500+G4 turbine).

<sup>24</sup> SCHD, *Construction Permit Application Evaluation and Review* (Permit No. 01156-01PC) at 7 (July 2, 2025), (listing the potential NO<sub>x</sub> emissions at 87.14 tons per year); *id.* at 4 (categorizing the “[t]ype of permit” as “new construction” rather than a “modification.”).

<sup>25</sup> See generally 40 C.F.R. § 51.166(2024). A summation of requirements can be found in EPA's Draft New Source Review Workshop Manual. See EPA, *(Draft) New Source Review Workshop Manual* at 3–5 (Oct. 1990), <https://www.epa.gov/sites/default/files/2015-07/documents/1990wman.pdf>.

## **B. CTC's Voluntary Emission Limits and After-the-Fact Modeling Do Not Satisfy PSD Requirements.**

Although CTC claimed it would voluntarily comply with BACT and later conducted some air dispersion modeling, the permitting process and resulting permit are materially less stringent than a true PSD permit in several key aspects.

First, while CTC and the Department characterize certain emission limits in the CTC Permit as 'BACT' limits, they are not true BACT limits. Not only were these limits established in the absence of a top-down BACT analysis, they also fall far short of BACT limits and related provisions that the Department has included in other permits. For example, the Department's draft permit for TVA Allen, which is currently undergoing permitting for a major modification to add new combustion turbines, includes explicit control technology requirements and, more critically, requires short-term averaging periods as required for BACT limits, amongst other key BACT requirements. The final CTC Permit, meanwhile, simply directs CTC to utilize BACT to meet generic emission limits. Below are screenshots of the BACT tables from the two permits—both permits authorizing (or proposing to authorize) construction of comparable gas turbines and released by the Department within months of each other:

*Figure 2: CTC's Permit Simple Cycle Emission Limits*

<b>Table 4</b> (Simple Cycle Emission Limits)	
<b>Pollutant</b>	<b>Emission Limits</b>
SO <sub>2</sub>	1 grain of sulfur / 100 scf natural gas
PM/PM <sub>10</sub>	0.0066 lbs./MMBtu
Ammonia (NH <sub>3</sub> )	5 ppm (0.00692 lbs./MMBtu)
VOC	2.0 ppm at 15% O <sub>2</sub>
CO	2.5 ppm at 15% O <sub>2</sub>
NO <sub>x</sub>	2.0 ppm at 15% O <sub>2</sub>
Formaldehyde	91 ppb at 15% O <sub>2</sub>

Figure 3: CTC's Permit "BACT" Limits

Table 4-2: BACT Limits			
Pollutant	BACT Limit <sup>[1]</sup>	Control Technology	Compliance Method
PM, PM <sub>10</sub> , and PM <sub>2.5</sub> <sup>[2]</sup>	3.4 lb/hour	Good combustion design and operating practices and the use of low sulfur fuel	Comply with <b>Conditions G18, S1-1, and S1-6</b>
NO <sub>x</sub> , as NO <sub>2</sub> , normal operation	2.5 ppmvd corrected to 15% O <sub>2</sub> (3-hour rolling average), excluding startup, shutdown, and combustion tuning	Good combustion design and operating practices, dry low-NO <sub>x</sub> combustion technology, selective catalytic reduction (SCR)	Comply with <b>Conditions G18, S1-1, S1-6, S1-7, S1-8, S1-9, and F1-1</b>
NO <sub>x</sub> , as NO <sub>2</sub> , startup and shutdown <sup>[3]</sup>	Startup/Shutdown: 11.3 lb/startup event 3.1 lb/shutdown event	Good combustion design and operating practices, dry low-NO <sub>x</sub> combustion technology, selective catalytic reduction (SCR)	
CO <sub>2</sub> e	120 lb CO <sub>2</sub> /MMBtu	Efficient turbine operation, good combustion and maintenance practices, and use of natural gas fuel	Comply with <b>Conditions S1-1, S1-2, and S1-6</b>
<b>Notes:</b> 1. All heat input-based emission limits are based on the high heating value (HHV). 2. PM emissions include filterable PM only, PM <sub>10</sub> and PM <sub>2.5</sub> emissions include both filterable and condensable PM. (All PM emitted from natural gas-fired CT units are expected to be <10 micrometers in aerodynamic particle size diameter) 3. Startup will be defined as the period beginning with initial ignition of fuel in the unit and ending 15 minutes after ammonia starts to flow in the SCR system, not to exceed 30 minutes per event. Shutdown will be defined as the period beginning when normal stop is initiated, for the purpose of shutting down the unit, and ending with its flame being extinguished, not to exceed 9 minutes per event.			

The difference between the generic limits that the Department labels as "BACT" limits in the CTC Permit and the true BACT limits is especially critical given the ongoing and worsening smog problem in Memphis. BACT determinations are meant to include short-term limits in order to prevent NAAQS violations, and this is especially so when the pollutant at issue is subject to a short-term NAAQS limit. Here, ozone (or smog) is regulated by an 8-hour NAAQS standard, reflecting that ozone is harmful even with short duration exposures. BACT limits for NO<sub>x</sub> (a pollutant that causes ozone formation), therefore, should be of equal or shorter duration to ensure there are not violations of the 8-hour standard (hence the 3-hour rolling average BACT limits in the TVA Allen draft PSD permit). CTC's permit contains no such BACT limit or compliance period, nor any monitoring that would ensure short-term compliance with the emission limit, again in contrast to the draft TVA Allen permit, which not only includes a 3-hour compliance period, but also a requirement to utilize continuous emissions monitoring systems ("CEMS") for NO<sub>x</sub>.

Further, although CTC did conduct some air dispersion modeling, it only did so after the close of the public comment period and the process was nothing like the NAAQS modeling process required for a true PSD permit. For instance, PSD modeling protocols must be submitted in advance of a permit application, the protocols are subject to review by EPA, and the public

would have the ability to review and comment on the protocol and modeling results; none of that happened here because the Department failed to require PSD permitting based on its erroneous Nonroad Engine Decision. And again, this failure to conduct proper PSD air dispersion modeling is especially troubling given Memphis' ongoing violation of the NAAQS for ozone; a core purpose of the PSD modeling requirements is to ensure that sources will not cause or contribute to a violation of the NAAQS, and it is hard to fathom how a proper PSD modeling analysis would have shown anything other than CTC's 80+ tons of NO<sub>x</sub> contributing to the ongoing NAAQS violation.

**C. The Department Failed to Assess Whether More Stringent Pollution Control Requirements and Emissions Offsets Should Apply to CTC Based on the Memphis Area's Ongoing Violation of the Federal Standard for Ozone.**

The Memphis Metropolitan Statistical Area is comprised of nine counties in Tennessee, Mississippi, and Arkansas.<sup>26</sup> Certified ambient air quality monitoring data collected over the past four years show that this area is in violation of the 8-hour primary NAAQS for ozone.<sup>27</sup> And the problem is only getting worse with each passing year: ozone concentrations have been steadily increasing at all five monitoring stations located in the Memphis Metropolitan Statistical Area.<sup>28</sup> Three years ago, all five monitoring sites had design values below the federal standard, whereas four of these sites now have design values that clearly violate the NAAQS.<sup>29</sup>

The Local Implementation Plan prohibits the Department's issuance of a construction permit if the authorized emissions "would result in a violation of the ambient air quality standards" or "would interfere with attainment or maintenance of a national ambient air quality standard in a neighboring state."<sup>30</sup> The Local Implementation Plan also prohibits the Department's issuance of a construction permit for a new major source or, critically, a *major modification* in an area where there is a "predict[ed]" NAAQS violation, subject to limited exceptions.<sup>31</sup> In particular, such a permit may be issued only if it requires the permittee "to meet the Lowest Achievable Emission Rate (LAER)" for any pollutants that would otherwise be subject to BACT.<sup>32</sup> In addition, such a permit may be issued only if it requires the permittee to "obtain emission offsets, legally enforceable at or before the time of PSD permit issuance, sufficient to predict that the . . . air quality standard will no longer be violated."<sup>33</sup>

---

<sup>26</sup> Ozone Petition at 2.

<sup>27</sup> *Id.* at 15–21.

<sup>28</sup> *Id.* at 21–23.

<sup>29</sup> *Id.* at 21.

<sup>30</sup> Tenn. Comp. R. & Regs. 1200-03-09-.01(1)(e). Similarly, for a new major source or a major modification of an existing major source (such as the CTC facility), the federal Clean Air Act requires the permittee to demonstrate that emissions from construction and operation of the proposed project "will not cause, or contribute to, air pollution in excess of any . . . national ambient air quality standard in any air quality control region." 42 U.S.C. § 7475(a)(3).

<sup>31</sup> Tenn. Comp. R. & Regs. 1200-03-09-.01(4)(m).

<sup>32</sup> *Id.* at 1200-03-09-.01(4)(m)(2).

<sup>33</sup> *Id.* at 1200-03-09-.01(4)(m)(3).

Because CTC's gas turbines have the potential to emit (and have been emitting) significant amounts of ozone precursors in an area where ambient ozone concentrations already violate the applicable NAAQS, it is undeniable that CTC's emissions are contributing to the area's ongoing NAAQS violation. And because the Memphis Metropolitan Statistical Area includes counties in Mississippi and Arkansas, it is undeniable that CTC's emissions are interfering with the ability of neighboring states to attain and maintain compliance with the NAAQS. The Department clearly erred in determining otherwise.

As a result of the Department's incorrect determination regarding CTC's contribution to the Memphis area's ongoing violation of the ozone NAAQS, the CTC Permit suffers from two fatal flaws that are additional to those described above in Section II.B. First, the permit fails to impose emission limits that reflect LAER for the pollutants that would otherwise be subject to BACT (as discussed above, the permit's 'voluntary' BACT limits are not even stringent enough to qualify as BACT limits, let alone LAER limits).<sup>34</sup> Second, the permit failed to determine whether CTC, if properly classified as a major modification, would need to secure enforceable emissions offsets for NOx and VOC in amounts sufficient to enable a determination that the NAAQS "will no longer be violated."<sup>35</sup> As with the deficiencies described in Section II.B, these flaws render the Department's issuance of the CTC Permit unlawful.

### **III. The Board Has Jurisdiction Over This Appeal.**

The Local Implementation Plan authorizes this Board "to decide appeals from any decisions, rulings, or determinations of the health officer or his or her designated representative under this chapter."<sup>36</sup> The Permit Decision and the Nonroad Engine Decision are each a "decision, ruling, or determination" within the meaning of the applicable regulations.<sup>37</sup> Appellants NAACP, Young, Gifted & Green, and their members and supporters take exception to and are uniquely affected by both the Permit Decision and the Nonroad Engine Decision because of ongoing and threatened pollution impacts from the CTC facility that affect NAACP and Young, Gifted & Green members' and supporters' quality of life.<sup>38</sup> Finally, the Permit Decision and the Nonroad Engine Decision were each announced publicly for the first time on July 2, 2025. Accordingly, this Appeal is timely filed pursuant to Memphis City Code section 16-71(e) and Shelby County Air Code section 3-35(e), which require appeals to be filed within 15 days of receiving notice of a decision.<sup>39</sup>

---

<sup>34</sup> *Id.* at 1200-03-09-.01(4)(m)(2).

<sup>35</sup> *Id.* at 1200-03-09-.01(4)(m)(3).

<sup>36</sup> City of Memphis Code § 16-71(d)(3); Shelby Cnty. Air Pollution Code § 3-35(d)(3).

<sup>37</sup> City of Memphis Code § 16-71(e); Shelby Cnty. Air Pollution Control Code § 3-35(e).

<sup>38</sup> City of Memphis Code § 16-71(d)(2); Shelby Cnty. Air Pollution Control Code § 3-35(d)(2).

<sup>39</sup> City of Memphis Code § 16-71(e); Shelby Cnty. Air Pollution Control Code § 3-35(e).

**A. The Permit Decision and Nonroad Engine Decision are “[D]ecisions” Subject to Review by the Board in This Appeal.**

The Permit Decision is a “decision” that is subject to review by the Board.<sup>40</sup> The Nonroad Engine Decision is a distinct “decision” or “determination” by the Department that is also subject to review by the Board.<sup>41</sup> Appellant NAACP raised the Department’s misinterpretation and misapplication of the nonroad engine exemption in at least one letter to the Department in May 2025<sup>42</sup> and sent a copy of Appellant’s Notice of Intent to Sue xAI, detailing the inapplicability of the nonroad engine exemption, to the Department in June 2025.<sup>43</sup> Other organizations, including Young, Gifted & Green, similarly raised concerns about the Department’s apparent legal error, both during the formal comment period on the CTC Permit and at other times.<sup>44</sup> But the Department had not publicly articulated its decision to exempt all temporary combustion turbines from permitting requirements, nor had it publicly disclosed the purported legal basis for that decision, until it published the Nonroad Engine Decision on its website on July 2, 2025.

The Permit Decision and the Nonroad Engine Decision harm Appellants and their members and supporters in several ways and present an existing legal controversy that must be decided now. As of the date of this filing, at least some unpermitted temporary combustion turbines remain at the Paul R. Lowry facility. The Department expressly relied on the Nonroad Engine Decision to wrongfully claim that all of the “temporary” turbines were “beyond the scope” of the CTC Permit. Nonroad Engine Decision at 1, 2. Therefore, the unpermitted turbines remaining on the site lack emissions limits or pollution controls, posing an ongoing threat to the quality of life of Appellants’ members and supporters.

The permit defects that flow from the unlawful Permit Decision and the Nonroad Engine Decision are discussed in Section II above. These defects result in even the permitted turbines emitting greater amounts of air pollution than would be allowable if the Department had issued a major source permit as required by law, again posing an ongoing threat to the quality of life of Appellants’ members and supporters.

The Department suggests that perhaps the temporary combustion turbines on xAI’s Paul R. Lowry site will be removed by the end of July 2025. Nonroad Engine Decision at 4. But the Department has taken no action to require xAI to remove the unpermitted turbines. And even if xAI does ultimately remove them, the Department has not ceased its unlawful conduct. Instead, in the Nonroad Engine Decision, the Department doubles down on its misrepresentation and misapplication of the law, expanding it beyond the CTC Permit to apply broadly to any so-called “temporary” combustion turbines at any time, anywhere within the Department’s jurisdiction. *Id.* at 3.

---

<sup>40</sup> City of Memphis Code § 16-71(d)(3); Shelby Cnty. Air Pollution Control Code § 3-35(d)(3).

<sup>41</sup> *Id.*

<sup>42</sup> NAACP’s May 29, 2025 Letter at 3.

<sup>43</sup> NAACP’s June 17, 2025 Notice Letter at 13–14, 21 (explaining why the nonroad engine exemption does not apply and sending a copy to Shelby County’s then-Health Director and Health Officer, Dr. Michelle Taylor).

<sup>44</sup> *See, e.g.*, Community Groups’ Aug. 26, 2024 Letter at 2–4; Community Groups’ Sept. 10, 2024 Letter at 2; Community Groups’ Apr. 9, 2025 Letter at 5–6 & n.22, 9 & n.39; Community Groups’ Apr. 30, 2025 Letter at 10.

If the Board does not review the Nonroad Engine Decision in this Appeal, the Department's unlawful conduct risks being repeated and evading review. Going forward, the Nonroad Engine Decision makes clear that the Department will continue its unlawful conduct in allowing so-called "temporary" combustion turbines to be installed without obtaining construction air permits. *Id.* Because no permits will be required by the Department, Appellants will have no notice of any turbines unlawfully installed in reliance on the Nonroad Engine Decision. And because the Department has eschewed any future "decisions" in the Nonroad Engine Decision regarding such turbines, Appellants will be unlikely to be able to seek this Board's review of the Department's ongoing unlawful conduct in the future. Thus, in order to prevent the Department's unlawful conduct from evading review, the Board must review the Nonroad Engine Decision in this Appeal.

For example, under the Department's Nonroad Engine Decision, nothing is stopping xAI from installing additional unpermitted turbines at any time to meet its widely-publicized demand for additional power. If CTC decides that the 15 turbines it intends to operate on a permanent basis are insufficient to meet its needs at the Paul R. Lowry site, the Nonroad Engine Decision allows CTC to simply truck in more turbines once again. And because in the nonroad engine exemption in which the Department has incorrectly determined that no permits would be necessary, CTC can do so without any public notification or public participation (or indeed, without even any notification to the Department itself). Even if Appellants somehow became aware of the unpermitted turbines, Appellants and their members and supporters may have no recourse with the Department if CTC once again installs unpermitted turbines, because the Department has already decided in the Nonroad Engine Decision that no temporary combustion turbines require permits.

In addition, xAI owns a second large property on Tulane Road and has stated that its energy needs for that site exceed 1,000 megawatts.<sup>45</sup> Multiple sources have reported significant land-clearing and construction at the Tulane Road site,<sup>46</sup> and xAI's consultants submitted an air modeling protocol to EPA for an installation of 40 to 90 combustion turbines at the Tulane Road site.<sup>47</sup> Although the Memphis Chamber claimed in May that xAI would not install turbines at the Tulane Road site,<sup>48</sup> it has also been reported that xAI is stockpiling dozens of combustion turbines roughly a mile away from the Tulane Road site.<sup>49</sup> Under the recently-issued Nonroad

---

<sup>45</sup> Att. 14, Samuel Hardiman, *What Elon Musk Said about xAI's Second Memphis Data Center*, DAILY MEMPHIAN (May 20, 2025), [https://dailyMemphian.com/article/52002/what-elon-musk-said-about-xais-second-center?utm\\_source=site\\_search&utm\\_medium=link&utm\\_campaign=site\\_search](https://dailyMemphian.com/article/52002/what-elon-musk-said-about-xais-second-center?utm_source=site_search&utm_medium=link&utm_campaign=site_search).

<sup>46</sup> Att. 15, e.g., Kayla Solomon, *FOX13 Investigates: Possible Site for Supercomputer Power Plant in Whitehaven*, FOX13 MEMPHIS (July 10, 2025), [https://www.fox13memphis.com/news/fox13-investigates-possible-site-for-supercomputer-power-plant-in-whitehaven/article\\_4095ceca-f0f4-4945-803b-501b8cdbc808.html](https://www.fox13memphis.com/news/fox13-investigates-possible-site-for-supercomputer-power-plant-in-whitehaven/article_4095ceca-f0f4-4945-803b-501b8cdbc808.html).

<sup>47</sup> Att. 16, SELC, *Musk's xAI Explores Another Massive Methane Gas Turbine Installation at Its Second Memphis Data Center* (May 8, 2025), <https://www.selc.org/press-release/musks-xai-explores-another-massive-methane-gas-turbine-installation-at-second-south-memphis-data-center/>.

<sup>48</sup> Att. 17, Samuel Hardiman, *Chamber: xAI Does Not Plan to Use Turbines at Whitehaven Site*, DAILY MEMPHIAN (May 08, 2025), [https://dailyMemphian.com/article/51779/xai-natural-gas-turbines-tulane-road-site-memphis?utm\\_source=site\\_search&utm\\_medium=link&utm\\_campaign=site\\_search](https://dailyMemphian.com/article/51779/xai-natural-gas-turbines-tulane-road-site-memphis?utm_source=site_search&utm_medium=link&utm_campaign=site_search).

<sup>49</sup> Att. 18, Samuel Hardiman, *xAI Stockpiling Massive Equipment at Vacant Southaven Lot*, DAILY MEMPHIAN (June 20, 2025), <https://dailyMemphian.com/subscriber/article/52562/xais-plans-for-southaven-come-into-brighter-focus>.



Engine Decision, the Department would not prevent xAI from installing more large portable combustion turbines at the Tulane Road site or elsewhere in Shelby County without a permit.

The harms to Appellants' members and supporters associated with the Nonroad Engine Decision's blanket exemption for the use of unpermitted combustion turbines on a temporary basis are considerable. The past four years of ambient monitoring data show the Memphis area is in violation of EPA's standard for ground-level ozone, also known as smog, and the problem is worsening.<sup>50</sup> Over the past year, CTC's 35 unpermitted turbines likely constituted the largest industrial source of smog-forming nitrogen oxides ("NOx") in all of Memphis, with the potential to emit between 1,000 to 2,000 tons of NOx per year.<sup>51</sup> If CTC or another source repeats these actions in the future, it would once again seriously worsen smog for the duration of the year of temporary operations. Ozone exposure is known to cause a variety of adverse health effects, including inflammation of the airways, increased risk of lung infection, aggravated respiratory diseases such as emphysema and chronic bronchitis, and increased frequency of asthma attacks.<sup>52</sup> These symptoms may be caused by exposure to ozone "even at relatively low levels and for brief periods of time."<sup>53</sup> Ozone exposure is particularly harmful for "people with asthma, children, older adults, and people who are active outdoors, especially outdoor workers."<sup>54</sup>

Finally, there is no guarantee that any future so-called "temporary" turbines at either the Paul R. Lowry or Tulane Road site, or at any other site in the Department's jurisdiction, would not become permanent turbines. For example, CTC installed and began operating numerous SMT-130 turbines without any permit and then applied for a permit after the fact. The Department is silent on this subterfuge. In fact, the Department apparently approves of CTC's ability to skip the permit line and install uncontrolled "temporary" turbines that CTC purportedly later decided should be permanent.

For all of the reasons stated above, the Board's review of the Nonroad Engine Decision in the Appeal is also of great importance to the public and to the administration of justice in Memphis and Shelby County. The public's right to clean air is reflected in the federal Clean Air Act and the federally-approved Local Implementation Plan.<sup>55</sup> The Department's Nonroad Engine Decision is contrary to law and has not been subject to review. The Department's unlawful conduct presents a substantial risk of recurrence while escaping review, and absent review in this

---

<sup>50</sup> Ozone Petition at 1.

<sup>51</sup> Community Groups' Apr. 9, 2025 Letter at 1 & app. A.

<sup>52</sup> **Att. 19**, *Health Effects of Ozone Pollution*, ENV'T PROT. AGENCY, <https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution> [<https://perma.cc/LN7X-22DX>] (last updated Mar. 13, 2025); *see also* National Ambient Air Quality Standards for Ozone, 80 Fed. Reg. 65292, 65303–08 (Oct. 26, 2015).

<sup>53</sup> Designation of Areas for Air Quality Planning Purposes; State of California; Redesignation of the San Francisco Bay Area to Nonattainment for Ozone, 63 Fed. Reg. 37258, 37265 (July 10, 1998).

<sup>54</sup> *Health Effects of Ozone Pollution*, ENV'T PROT. AGENCY, <https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution> [<https://perma.cc/LN7X-22DX>] (last updated Mar. 13, 2025); *see also* National Ambient Air Quality Standards for Ozone, 80 Fed. Reg. 65292, 65310–11 (Oct. 26, 2015).

<sup>55</sup> *E.g.*, 42 U.S.C.A. § 7401(b)(1) (identifying one purpose of Clean Air Act "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population"); *see id.* § 7401(c) ("A primary goal of this chapter is to encourage or otherwise promote reasonable Federal, State, and local governmental actions, consistent with the provisions of this chapter, for pollution prevention").

Appeal, the public will continue to pay the price for the Department's unlawful conduct with its health and quality of life.

**B. Appellants and Their Members and Supporters Take Exception to and Are Uniquely Affected by the Department's Issuance of the CTC Permit and the Nonroad Engine Decision.**

The Local Implementation Plan authorizes an appeal to be brought before the Board by “any person taking exception to and who is uniquely affected by any decision, ruling, requirement, rule, regulation, or order of the health officer.”<sup>56</sup> Both Appellants, NAACP and Young, Gifted & Green, meet this standard. NAACP is a 501(C)(3) nonprofit membership organization whose mission includes the goal to “accelerate the well-being, education, and economic security of Black people and all persons of color.”<sup>57</sup> Young, Gifted & Green is a national 501(c)(3) nonprofit civil rights and environmental justice organization created to generate solutions to the nation's environmental and public health crises, with a particular focus on environmental justice issues in Memphis.<sup>58</sup> Appellants “take exception to and [are] uniquely affected by” the Department's Permit Decision and Nonroad Engine Decision on their own behalf and through their members and supporters.<sup>59</sup> Appellants' members and supporters include community members who reside in Boxtown and other Southwest Memphis communities in the vicinity of the CTC facility, as well as throughout Memphis. These members and supporters are deeply concerned about exposure to smog and other air pollution, both for themselves and their family members such as children, elderly family members, or other family members who are most susceptible to harms from air pollution.

As a result of CTC's ongoing emissions, coupled with their knowledge that ozone levels in Memphis are already exceeding EPA's air quality standards, Appellants' members and supporters have taken steps to reduce their exposure to air pollution, including avoiding spending as much time outdoors as they would ordinarily, wearing masks when outside, and closing windows when home. Appellants' members and supporters are especially cautious to avoid exposure to outdoor air when ozone levels are elevated on so-called “Code Orange” advisory days.<sup>60</sup> Appellants' members and supporters are therefore concerned that CTC's emissions will lead to more Code Orange alerts and otherwise increased ozone levels. Despite these precautions, Appellants' members and supporters cannot reasonably avoid all exposure to ozone and other air pollution. Further, Appellants' members' and supporters' quality of life is negatively affected by the precautions they feel compelled to take to reduce their exposure to air pollution.

---

<sup>56</sup> City of Memphis Code § 16-71(e); Shelby Cnty. Air Pollution Control Code § 3-35(e).

<sup>57</sup> *We're on a Mission: Civil Rights and Social Justice for All*, NAACP, <https://naacp.org/about/mission-vision> (last visited July 15, 2025).

<sup>58</sup> *Young, Gifted & Green*, <https://www.younggiftedgreen.org/> (last visited July 15, 2025).

<sup>59</sup> City of Memphis Code § 16-71(e); Shelby Cnty. Air Pollution Control Code § 3-35(e); *see also* *Am. C.L. Union of Tenn. v. Darnell*, 195 S.W.3d 612, 626 (Tenn. 2006).

<sup>60</sup> American Lung Association, *What is the Air Quality Index*, LUNG.ORG, <https://www.lung.org/clean-air/outdoors/air-quality-index> (last visited July 15, 2025).

Moreover, Appellants' members and supporters are deeply concerned that the Department's Nonroad Engine Decision will allow CTC or other facilities in the community to rapidly increase emissions without any notice, opportunity for comment, or recourse. Appellants' members and supporters understand that unpermitted and uncontrolled portable turbines emit substantial levels of smog-causing emissions and other air pollution which can include or cause the formation of harmful fine particulate matter. Appellants' members and supporters have already experienced and continue to experience adverse impacts from CTC's unpermitted turbines and therefore fear that any new unpermitted turbines authorized by the Department's issuance of the CTC Permit and the Nonroad Engine Decision will again cause increased emissions and additional harm to their well-being and quality of life.

Appellants and their members and supporters raised their concerns with the Department on multiple occasions. On April 25, 2025, members and supporters of Appellants attended and spoke at the hearing on the draft CTC Permit. Young, Gifted & Green, as well as members and supporters of Appellants also submitted written comments on the draft CTC Permit during the formal comment period. On May 29, 2025, NAACP sent a letter to the Department detailing its concerns regarding the Department's failure to administer the requirements of the LIP and the federal Clean Air Act.<sup>61</sup> Finally, on June 17, 2025, NAACP sent the Department a copy of its Notice of Intent to Sue xAI under the Clean Air Act, explaining in detail why xAI was required to obtain a major source permit and the inapplicability of the nonroad engine exemption.<sup>62</sup> Two weeks later, the Department issued the deficient CTC Permit and the Nonroad Engine Decision.

For these reasons, Appellants and their members and supporters take exception to and are uniquely affected by both the CTC Permit and the Nonroad Engine Decision. The Department's issuance of the CTC Permit and Nonroad Engine Decision cause or exacerbate the unique adverse effects identified above because the decisions allow CTC to continue emitting unlawful levels of air pollution, allow CTC to operate without the appropriate permit, and allow CTC and others to install and operate unpermitted "temporary" turbines anywhere within the Department's jurisdiction. A favorable decision by the Board would redress the adverse effects of the CTC Permit and the Nonroad Engine Decision by clarifying that so-called "temporary" turbines are not exempt from construction permitting and by requiring the Department to properly permit the CTC facility as a major source.

### **RELIEF REQUESTED**

Appellants request the Board grant the following relief:

1. Issue a Conclusion of Law or Declaration that turbines subject to NSPS cannot qualify as permit-exempt nonroad engines and instead are stationary sources, even if temporary or portable, consistent with the Clean Air Act, federal regulations, and Shelby County's Local Implementation Plan;
2. Vacate the Nonroad Engine Decision and order the Department to require construction permits for any and all gas turbines subject to NSPS in the future;

---

<sup>61</sup> NAACP's May 29, 2025 Letter.

<sup>62</sup> NAACP's June 17, 2025 Notice Letter at 13–14, 21.

3. Vacate or order the Department to revoke the CTC Permit and require the Department to either (a) deny the permit application or (b) permit the CTC facility pursuant to the major source requirements of the Clean Air Act and the LIP;
4. In the alternative, remand the Permit to the Department to reconsider its determinations that CTC's proposed project is not a major modification to an existing major source, consistent with the Board's Conclusion in Law finding that gas turbines subject to NSPS cannot qualify as nonroad engines.

Respectfully submitted,

/s/ Patrick J. Anderson

Patrick J. Anderson\*

Senior Attorney

Southern Environmental Law Center

Ten 10th Street, NW, Suite 1050

Atlanta, Georgia 30309

404-521-9900

[panderson@selc.org](mailto:panderson@selc.org)

/s/ Amanda Garcia

Amanda Garcia

Senior Attorney

Southern Environmental Law Center

1033 Demonbreun Street, Suite 205

Nashville, Tennessee 37203

615-921-9470

[agarcia@selc.org](mailto:agarcia@selc.org)

*\*Licensed in the State of Georgia*

*Attorneys for National Association for  
the Advancement of Colored People  
and Young, Gifted & Green*

*CC, by Electronic Mail:*

Dr. Bruce Randolph, Interim Director and Health Officer, Shelby County Health Department,  
[Bruce.Randolph@shelbycountyttn.gov](mailto:Bruce.Randolph@shelbycountyttn.gov)

Kasia Smith-Alexander, Bureau Director, Shelby County Health Department,  
[Kasia.Alexander@shelbycountyttn.gov](mailto:Kasia.Alexander@shelbycountyttn.gov)

Wasim Khokhar, Technical Manager, Shelby County Health Department,  
[Wasim.Khokhar@shelbycountyttn.gov](mailto:Wasim.Khokhar@shelbycountyttn.gov)

Lee Whitwell, Chief Litigation Attorney, Shelby County Health Department,  
[Lee.Whitwell@shelbycountyttn.gov](mailto:Lee.Whitwell@shelbycountyttn.gov)

Raven Chandler, Assistant County Attorney, Shelby County Health Department,  
[Raven.chandler@shelbycountyttn.gov](mailto:Raven.chandler@shelbycountyttn.gov)

Enclosures: Attachments 1–24; Appendix A: Timeline and Emissions Calculations; and  
Appendix B: Satellite Photographs. Attachments are available at  
<https://southernenvironment.sharefile.com/d-s9fb5afb566754287a3f12debe8fd75d0>.

## APPENDIX A: Timeline and Emissions Calculations

<b>Table 1:</b> Timeline of Turbine Installation and Potential Emissions							
Satellite Image Date <sup>1</sup>	XQ5200	SMT-130	SMT-60	Solaris GE LM2500+G4	GE Vernova 2500	Generating Capacity (MW)	NOx PTE (tons/year) <sup>2</sup>
6/12/24	14	2				105.8	445
6/25/24	14	3				122.2	476
7/16/24	14	4				138.7	507
10/7/24	14	4	4	1		196.5	616
11/12/24	14	4	6	1		207.9	637
11/24/24	14	4	6	1	2	275.9	852
12/21/24	14	6	8	1	2	320.3	935
2/20/25	14	7	8	1	3	370.8	1073
2/26/25	14	7	8	1	4	404.8	1181
3/13/25	14	8	8	1	4	421.4	1212
6/5/25	4	11	7	1	4	413.0	1021
6/15/25	4	11	6	1	4	407.3	1010
7/1/25		11	6	1	4	386.5	900

### NOTES

1. Each satellite image is available in Appendix B.
2. NOx emission rates based on minimum NOx emissions factors from manufacturer spec sheets. Emissions calculated using the emission factors and other data set forth below in Table 2.

## APPENDIX A: Timeline and Emissions Calculations

**Table 2:** Minimum NOx Emission Rates at 35 Turbines

Turbine	Count	Individual Capacity (MW/hr)	Total Capacity (MW/hr)	Lowest Manufacturer Emission Rate (ppm) <sup>1</sup>	Emission Factor (lb/MW) <sup>2</sup>	Individual Turbine Emissions (lb/hr)	Individual Turbine Emissions (tons/year)	Total Emissions (lb/hr)	Total Potential Emissions (tons/year)
Solar SMT-130	8	16.5	132	9	0.43	7.1	31.1	56.8	248.6
Solar SMT-60	8	5.7	45.6	9	0.43	2.5	10.7	19.6	85.9
GE Vernova 2500	4	34	136	15	0.72	24.5	107.2	97.9	428.9
Solaris GE LM2500+G4	1	35	35	9	0.43	15.1	65.9	15.1	65.9
Solar/Caterpillar XQ5200	14	5.2	72.8	25	1.2	6.2	27.3	87.4	382.6
Total								276.7	1211.9

**Table 3:** Maximum NOx Emission Rates at 35 turbines

Turbine	Count	Individual Capacity (MW/hr)	Total Capacity (MW/hr)	Highest Manufacturer Emission Rate (ppm) <sup>1</sup>	Emission Factor (lb/MW) <sup>2</sup>	Individual Turbine Emissions (lb/hr)	Individual Turbine Emissions (tons/year)	Total Emissions (lb/hr)	Total Potential Emissions (tons/year)
Solar SMT-130	8	16.5	132	25	1.2	19.8	86.7	158.4	693.8
Solar SMT-60	8	5.7	45.6	25	1.2	6.8	30.0	54.7	239.7
GE Vernova 2500	4	34	136	25	1.2	40.8	178.7	163.2	714.8
Solaris GE LM2500+G4	1	35	35	9	0.43	15.1	65.9	15.1	65.9
Solar/Caterpillar XQ5200	14	5.2	72.8	25	1.2	6.2	27.3	87.4	382.6
Total								478.7	2096.8

### NOTES

1. I.e., lowest or highest NOx emission rates listed in manufacturer data. Links to spec sheets are provided in Table 5 below.
2. Emission factors derived from 40 CFR Appendix Table 1 to Subpart KKKK of Part 60 (listing equivalent emission limits of “25 ppm or 1.2 lb/MWh” and “15 ppm or 0.72 lb/MWh”). Based on these equivalent emission limits, we calculate that 9 ppm equates to an emission factor of 0.43 lb/MWh.



## APPENDIX A: Timeline and Emissions Calculations

<b>Table 4: Minimum NOx Emission Rates at Permit Issuance (July 2, 2025)</b>									
Turbine	Count	Individual Capacity (MW/hr)	Total Capacity (MW/hr)	Lowest Manufacturer Emission Rate (ppm) <sup>1</sup>	Emission Factor (lb/MW) <sup>2</sup>	Individual Turbine Emissions (lb/hr)	Individual Turbine Emissions (tons/year)	Total Emissions (lb/hr)	Total Potential Emissions (tons/year)
Solar SMT-130	11	16.5	181	9	0.43	7.1	31.1	78.1	341.4
Solar SMT-60	6	5.7	45.6	9	0.43	2.5	10.7	15	64.2
GE Vernova 2500	4	34	136	15	0.72	24.5	107.2	97.9	428.9
Solaris GE LM2500+G4	1	35	35	9	0.43	15.1	65.9	15.1	65.9
Total								206.1	900.4

### NOTES

1. NOx emission rates listed in manufacturer data. Links to spec sheets are provided in Table 5 below.
2. Emission factors derived from 40 CFR Appendix Table 1 to Subpart KKKK of Part 60 (listing equivalent emission limits of “25 ppm or 1.2 lb/MWh” and “15 ppm or 0.72 lb/MWh”). Based on these equivalent emission limits, we calculate that 9 ppm equates to an emission factor of 0.43 lb/MWh.

<b>Table 5: Manufacturer Spec Sheets</b>		
Solar SMT-130	<a href="https://www.solarturbines.com/en_US/solutions/oil-and-gas/solar-mobile-turbomachinery.html">https://www.solarturbines.com/en_US/solutions/oil-and-gas/solar-mobile-turbomachinery.html</a>	Attachment 20
Solar SMT-60	<a href="https://www.solarturbines.com/en_US/solutions/oil-and-gas/solar-mobile-turbomachinery.html">https://www.solarturbines.com/en_US/solutions/oil-and-gas/solar-mobile-turbomachinery.html</a>	Attachment 21
GE Vernova LM2500	<a href="https://www.gevernova.com/content/dam/gepower-new/global/en_US/downloads/gas-new-site/products/gas-turbines/gev-aero-fact-sheets/GEA35744-GEV-LM2500-Product-Factsheet.pdf">https://www.gevernova.com/content/dam/gepower-new/global/en_US/downloads/gas-new-site/products/gas-turbines/gev-aero-fact-sheets/GEA35744-GEV-LM2500-Product-Factsheet.pdf</a>	Attachment 22
Solaris GE LM2500+G4	<a href="https://irp.cdn-website.com/f809ccf0/files/uploaded/Solaris_35MW_Turbine_Power_-_Tech_Specs-83f9c921.pdf">https://irp.cdn-website.com/f809ccf0/files/uploaded/Solaris_35MW_Turbine_Power_-_Tech_Specs-83f9c921.pdf</a>	Attachment 23
Solar/Caterpillar XQ5200	<a href="https://www.warrencat.com/content/uploads/2020/04/XQ5200_Specs.pdf">https://www.warrencat.com/content/uploads/2020/04/XQ5200_Specs.pdf</a>	Attachment 24

# xAI Satellite Image 6/12/2024



xAI Satellite Image  
6/25/2024



xAI Satellite Image  
7/16/2024





xAI Satellite Image  
10/7/2024



xAI Satellite Image  
11/12/2024





xAI Satellite Image  
11/24/2024





xAI Satellite Image  
12/21/2024





xAI Satellite Image  
2/20/2025





xAI Satellite Image  
*2/26/2025*





xAI Satellite Image  
3/13/2025





xAI Satellite Image  
6/5/2025





xAI Satellite Image  
6/15/2025





xAI Satellite Image  
7/1/2025



