



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

DEC - 7 2015

Honorable Basil Seggos
Acting Commissioner
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233-0001

RE: EPA Review of Proposed Title V Operating Permit for Greenidge Station
Permit ID: 8-5736-00004/00017

Dear Acting Commissioner Seggos:

By this letter, the U.S. Environmental Protection Agency Region 2 Office (EPA) objects to the issuance of the above-referenced proposed Title V operating permit for the Greenidge Station ("Greenidge") (permit ID: 8-5736-00004/00017), located in Dresden, Yates County, New York, and owned by Greenidge Generation LLC. EPA received the proposed permit and the New York State Department of Environmental Conservation's ("NYSDEC's") Responsiveness Summary to Public Comments ("Responsiveness Summary") via e-mail notification on October 27, 2015.

This objection is based on our review of the proposed Title V permit, statement of basis,¹ application, Responsiveness Summary, and other supporting information included in the permitting record and is issued under the authority of Title V of the Clean Air Act (Act), specifically Section 505(b) (1) of the Act, and 40 CFR 70.8 (c). Pursuant to 40 CFR 70.8 (c), EPA will object to the issuance of any proposed Title V permit in writing within 45 days of receipt of the proposed permit (and all necessary supporting information) if EPA determines that it is not in compliance with applicable requirements under the Act or the operating permit program requirements of 40 CFR Part 70. The 45-day period for EPA review expires on December 10, 2015.

The primary basis for EPA's objection is that, if reactivated, Greenidge will be subject to the Clean Air Act's Prevention of Significant Deterioration ("PSD") permit program as a new source. EPA provided comments to NYSDEC related to the applicability of PSD to the facility on July 31 and September 16, 2014. In the September 16 letter, Region 2 articulated concerns that the previous owners of Greenidge did not manifest a continuous intent and concrete plans to restart the facility. Having received no response to the July 31 and September 16, 2014 letters, EPA wrote to Commissioner Joseph Martens on May 15, 2015 to reiterate Region 2's concerns about the reactivation, stating that "it is very important that the EPA receive a response prior to the NYSDEC making a decision as to whether Greenidge, upon reactivation, would be subject to

¹ Part 70 requires permitting authorities to prepare a "statement of basis" for each Title V permit. 40 CFR 70.7(a)(5). The document prepared by NYSDEC is titled "permit review report". A permit review report prepared and issued by NYSDEC is the functional equivalent of a statement of basis.

the Prevention of Significant Deterioration requirements" and expressing the Region's commitment to work with NYSDEC to address the issues. Region 2 thereafter received no response from NYSDEC and, on August 12, 2015, was provided with the draft Title V permit decision, which did not appear to take into account Region 2's comments on the reactivation issue.

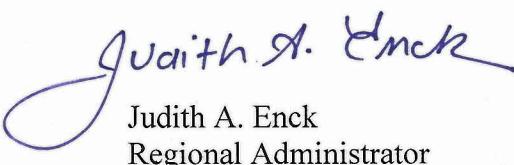
The facility has not operated for nearly five years and was permanently shut down, as demonstrated, among other things, by the prior owners' representations to two federal courts and government agencies and their relinquishment of Clean Air Act Title V and Title IV permits. By concluding that the facility will not be a new source upon reactivation, NYSDEC failed to incorporate into the proposed Title V permit applicable requirements under the Clean Air Act's PSD program and implementing regulations as approved into New York's State Implementation Plan ("SIP"). Thus, the proposed Title V permit fails to assure compliance with applicable PSD requirements. A detailed explanation of EPA's objection is provided in Enclosure1.

EPA has numerous concerns with the proposed permit, contained in Enclosures 2 and 3. While we are objecting on the basis that Greenidge will be subject to the Clean Air Act's PSD permit program as a new source, we remain concerned with NYSDEC's conclusion that the reactivation does not constitute a major modification. As such, Enclosure 2 addresses deficiencies in NYSDEC's analysis of the facility's reactivation as a major modification. While these deficiencies are not relevant to satisfying our objection that Greenidge's reactivation is subject to PSD as a new source, we believe they will help inform NYSDEC's development of the PSD permit. Enclosure 3 includes concerns related to permit conditions and other issues that we expect NYSDEC can best address as it moves forward with incorporating PSD conditions into the proposed permit.

The Title V regulations, including 40 CFR 70.8(c) (4), and Section 505 (c) of the Act outline the consequences if the State fails to satisfy the EPA's objections. To satisfy EPA's objections, NYSDEC should assure compliance with the PSD program, which is an applicable requirement, by incorporating PSD permit conditions for carbon monoxide and nitrogen oxides, at a minimum, into the proposed permit. This objection letter does not constitute a waiver of EPA's authority under 40 CFR 70.7(g) to reopen the permit for cause. Furthermore, under the Clean Air Act, our opportunity for review and comment on this permit does not prevent EPA from taking enforcement action for any non-compliance, including non-compliance related to issues that have not been specifically raised in those comments.

If you have questions or wish to discuss this further, please contact me at 212-637-5000 or Mr. Steven Riva, Chief, Permitting Section, at (212) 637-4074 or at riva.steven@epa.gov.

Sincerely,


Judith A. Enck
Regional Administrator

Enclosures

cc:

Jared Snyder, NYSDEC
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ENCLOSURE 1

NYSDEC Incorrectly Concluded, Under the Clean Air Act and Applicable Prevention of Significant Deterioration (“PSD”) Regulations, that Reactivation of the Greenidge Generating Station would not Result in a New Source

A. Background

The Greenidge Generating Station, which has been shut down since before March 19, 2011,¹ consisted of one 109-megawatt boiler, known as Unit #4, which was constructed in 1953 (“Greenidge” or “Facility”). AES EE2, LLC (AES) was the owner of Greenidge at the time of the shutdown. AES put the facility into protective lay-up following suspension of operations and relinquished its Title IV and Title V permits in late 2012. By December of 2012, AES had made representations to two federal courts that it was permanently retiring the facility. After filing for bankruptcy on December 30, 2011 under Chapter 11 of Title 11 of the U.S. Code, AES entered into an Asset Purchase Agreement with GMMM Holding, Inc. (“GMMM”) on October 10, 2012. The Asset Purchase Agreement was approved by the United States Bankruptcy Court for the District of Delaware on October 11, 2012 and the transfer to GMMM was effectuated on December 28, 2012. Atlas Holdings, LLC (“Atlas”) completed purchase of the facility from GMMM on February 28, 2014. The facility has not operated since March 19, 2011 when it was owned by AES. On May 16, 2014, Atlas submitted its initial application to the New York State Department of Environmental Conservation (“NYSDEC”) for a Title V permit for the facility, to be run on coal as a primary fuel with clean and waste wood, oil and natural gas as alternative fuels.²

There is no dispute that Greenidge is a major stationary source with the potential to emit 100 tons per year³ or more of a regulated New Source Review pollutant,⁴ and that it is located in an attainment area for all criteria pollutants except ozone. EPA Region 2 first considered the applicability of PSD to the facility when we reviewed permit-related documents, including those specific to the reactivation, in June and July 2014 and provided comments to NYSDEC on July 31, 2014 and September 16, 2014. The September 16, 2014 comments focused specifically on the question of whether reactivation of Greenidge would constitute a new source subject to PSD review. In the September 16 letter, Region 2 articulated concerns that

¹ The exact date prior to March 19, 2011 when the facility ceased operations is not clear from the record. However, AEE2, LLC’s Director in 2012 stated that the facility was “not operated since well before” the March 19, 2011 date. Letter from William B. Rady, Director, AEE2, LLC, to Hon. Jaclyn A. Brilling, Secretary, New York State Public Service Commission (Sept. 18, 2012).

² Atlas later, on July 28, 2015, submitted the application for the current proposal, which does not include coal combustion. See Enclosure 2 for more details.

³ Greenidge’s boiler is a fossil-fuel boiler (or combination thereof) totaling more than 250 MMBTU/hr heat input and, as such, is in a listed source category pursuant to 6 NYCRR 231.13.9(u).

⁴ Greenidge has a Potential to Emit (“PTE”) of 147.9 tons per year of CO and at least 124.5 tons per year of NO_x. See Section I.F, *infra*, for additional discussion of Greenidge’s PTE.

AES and GMMM did not manifest a continuous intent and concrete plans to restart the facility.

Having received no response to the July 31 and September 16, 2014 letters, Region 2's Regional Administrator, Judith A. Enck, wrote to Commissioner Joseph Martens on May 15, 2015 to reiterate Region 2's concerns about the reactivation, stating that "it is very important that the EPA receive a response prior to the NYSDEC making a decision as to whether Greenidge, upon reactivation, would be subject to the Prevention of Significant Deterioration requirements" and expressing the Region's commitment to work with NYSDEC to address the issues. Region 2 thereafter received no response from NYSDEC and, on August 12, 2015, was provided with the draft Title V permit decision, which did not appear to take into account Region 2's comments on the reactivation issue.

On October 26, 2015, NYSDEC submitted the proposed Title V permit to EPA, which included a Responsiveness Summary.⁵ In the Responsiveness Summary, NYSDEC responded to comments from Sierra Club on the reactivation issue and provided an explanation for its conclusion that "the owner did not intend to permanently shut down the facility under EPA's Reactivation Policy and, therefore, NSR requirements are not applicable to the restart of the Greenidge Station." We offer below our assessment of NYSDEC's explanation and conclude that, under EPA's interpretation of PSD requirements under the Clean Air Act, as articulated in EPA's reactivation policy described below, the facility should be treated as a new source and be required to obtain a PSD permit.

B. EPA's reactivation policy

In 1999, the EPA Administrator issued a Title V Order articulating how to apply the Clean Air Act's PSD requirements to reactivations of shutdown sources. *In the Matter of Monroe Electric Generating Plant Entergy Louisiana, Inc.*, Proposed Operating Permit, Petition No. 6-99-2 (June 11, 1999). In the *Monroe* Order, the Administrator indicated that "EPA has a well-established policy that reactivation of a permanently shut down facility will be treated as operation of a new source for purposes of PSD review" (citing to five prior Agency determinations on reactivation dating back to 1978). NYSDEC indicates in its Responsiveness Summary that it "does not have a formal reactivation policy, but applies EPA's reactivation policy" for purposes of implementing New York's EPA-approved NSR program, noting that its analysis is done on a case-by-case basis. NYSDEC also recognizes in its Responsiveness Summary that EPA's reactivation policy is a permissible and reasonable standard to apply in interpreting the Clean Air Act. Responsiveness Summary at 3 (citing to *Communities for a Better Environment v. Cenco Refining Company*, 179 F Supp. 2d 1128, 1144 (2001)). The Responsiveness Summary cites to a number of EPA administrative documents on reactivation and correctly relies primarily on *Monroe*. However, NYSDEC incorrectly applies *Monroe* to the facts surrounding the shutdown of the Greenidge facility, which leads NYSDEC to an incorrect conclusion.

⁵ Responsiveness Summary-Greenidge Generation, LLC, Greenidge Generating Station Reactivation, Draft Title IV and Title V Permits, DEC Application ID 8-00004/00016 & 00017.

C. Shutdowns over two years are presumed permanent

Our review of NYSDEC's decision on reactivation is guided by the explicit statement in *Monroe* that shutdowns of more than two years are presumed to be permanent. As EPA stated in *Monroe*, after two years of not operating, "it is up to the facility owner or operator to rebut the presumption" to avoid treatment as a new source by demonstrating a continuous intent to restart. In the case of Greenidge, the facility has been out of operation for nearly five years, since before March 19, 2011, when the facility was placed in protective lay-up. Therefore, NYSDEC's reactivation analysis should have been based on a presumption that the shutdown was permanent. However, while the Responsiveness Summary indicates that NYSDEC applies EPA's reactivation policy in implementing its SIP-approved PSD program, the Responsiveness Summary provides no explanation about whether and how NYSDEC applied the two-year presumption in *Monroe* when it concluded that PSD does not apply to Greenidge. As discussed below, the facts surrounding the shutdown of the facility suggest quite clearly that there is no basis to rebut the presumption.

D. Intent of owner or operator must be continuous

In determining whether a shutdown should be treated as permanent, the permit issuer must look at the intent of the owner or operator. Critical to the intent analysis is whether the owner or operator "demonstrated a continuous intent to reopen." *Monroe* at 9. While AEE2 indicated to the New York State Public Service Commission (NYSPSC) at the time of the shutdown that it intended to take steps within its control to avoid a permanent shutdown,⁶ the EPA's stated interpretation in *Monroe* is that "after two years, statements of original intent are not considered determinative." *Monroe* at 9. Rather, "facilities must continuously demonstrate concrete plans to restart the facility sometime in the reasonably foreseeable future." The owners of Greenidge did not continuously demonstrate their intent to reopen. To the contrary, AEE2 and GMMM manifested a clear intent to permanently shut down the facility, as demonstrated by their statements to two federal courts, and state environmental and utility regulators, as discussed below.

The record provides ample evidence of a clear intent to permanently shut down Greenidge. On September 18, 2012, AEE2 sent a letter to the NYSPSC stating that the Company "intends to permanently retire the Greenidge 4 facility on September 21, 2012."⁷ On September 19, 2012, after filing for bankruptcy on December 31, 2010 and spending approximately eight months soliciting potential purchasers, AES filed a Debtors' Motion stating that the selected purchaser, GMMM Holdings Corp., "intends to permanently retire" Greenidge and "salvage or scrap the equipment, and demolish the buildings" and that GMMM's proposal "represented the best and highest offer attainable in light of the need to execute the Sale promptly."⁸ On October 4, 2012, Peter Norgeot, President of AES Greenidge, LLC, signed a declaration in

⁶ Letter from Peter S. Norgeot, President, AES AEE2, LLC to Hon. Jaclyn A. Brilling, New York Public Service Commission (Sept. 17, 2010).

⁷ Letter from William B. Rady, Director, AEE2, LLC to Hon. Jaclyn A. Brilling, New York Public Service Commission (Sept. 18, 2012).

⁸ *Debtor's Motion Pursuant to Sections 105(a), 363(b), (b), and (m), and 365 of the Bankruptcy Code*, Chapter 11, U.S. Bankruptcy Court, District of Delaware, Case No. 11-14138 (KJC), p. 3-4, (Sept. 19, 2012).

support of the debtor's motion in the bankruptcy proceeding. The declaration indicated that "after an extended marketing process, both before and after the commencement of the Chapter 11 cases, the Debtors received no credible proposals for acquisition of the Greenidge or Westover Facilities as operating power plants."⁹ An October 10, 2012 Asset Purchase Agreement between AES and GMMM was conditioned on termination of both the Title V air permit for the facility and a January 11, 2005 Clean Air Act Consent Decree between AES and NYSDEC.¹⁰ Referencing the Asset Purchase Agreement, Honorable Judge Kevin J. Carey, U.S. Bankruptcy Court, District of Delaware, granted AES's September 19 Debtors' Motion and issued a final order on October 11, 2012 authorizing the sale of the assets to GMMM.¹¹ Ownership in the facility was then transferred to GMMM on December 28, 2011.¹²

On November 28, 2012, Peter Norgeot indicated in a letter to NYSDEC that the Asset Purchase Agreement is conditioned on termination of the facility's Title V and Title IV air permits and, as such, requested that NYSDEC terminate the permits and confirm that they are no longer in effect.¹³ On December 19, 2012, NYSDEC provided written verification to Mr. Norgeot of AES's relinquishment of the permits and indicated that the permits are no longer in effect.¹⁴ On December 18, 2012 Honorable Charles J. Suragusa, U.S. District Court Judge for the Western District of New York, signed a Stipulation between AES and NYSDEC that terminated a consent decree addressing allegations of Clean Air Act violations at Greenidge and other facilities owned by AES. The Stipulation preamble states that "the Plants are no longer operating and have been permanently retired" and "the APA [Asset Purchase Agreement] is conditioned on termination of the Consent Decree prior to closing of the sale."¹⁵ AES President, Pete Norgeot, signed the Stipulation that was ordered by Judge Suragusa. The Stipulation is binding not only on AES but on all "successors, parents, assigns, affiliates, subsidiaries..." such as GMMM and Atlas. GMMM's attorney sent a letter to NYSDEC dated January 24, 2013 indicating that GMMM had "no thought of reopening the facility for operation" when it purchased Greenidge.¹⁶

The above-referenced explicit statements and actions by AES and GMMM over a period of three to four months represent a clear intent to permanently shut down the facility. Thus, there was not a continuous intent to reopen Greenidge. Without specifically invoking the presumption in *Monroe*, NYSDEC's Responsiveness Summary presents additional facts that appear to be designed to rebut the presumption. However, these facts cannot overcome the explicit representations by owners of the facility that the unit was to be permanently shut down and the consequences that flowed from those representations. The facts relied upon by

⁹ Declaration of Peter Norgeot in Support of Debtors' Motion, at 4 (Oct. 4, 2012).

¹⁰ *Asset Purchase Agreement Between AES Eastern Energy, L.P. and The Selling Debtors Party Hereto and GMMM Holdings I, LLC*, p. 32 and 37 (Oct. 10, 2012).

¹¹ *In re: AES Eastern Energy, L.P. et al., Debtors, Findings of Fact, Conclusions of Law and Order*, Chapter 11, Case No. 11-14138 (KJC).

¹² Sworn Statement of Peter S. Norgeot, at 4 (March 13, 2013).

¹³ Letter from Peter Norgeot, President, AES Greenidge, LLC, to Scott Sheeley, NYSDEC (Nov. 28, 2012).

¹⁴ Letter from Scott E. Sheeley, Regional Permit Administrator, to Peter Norgeot, President, AES Greenidge LLC (Dec. 19, 2012).

¹⁵ *State of New York and Joe Martens, v. NYSEG Corp, AEE 2, LLC, AES Greenidge, LLC, et al., Stipulation and Order to Terminate Consent Decree*, No. CV 6014 CJS (P) (Dec. 18, 2012).

¹⁶ Letter from David R. Pierce, Lindabury, McCormick, Estabrook & Cooper, P.C. to Scott E. Sheeley, NYSDEC (Jan. 24, 2013).

NYSDEC in support of its decision that the shutdown was not permanent are considered below in the context of *Monroe*.

E. Other facts surrounding the shutdown of Greenidge cannot and do not overcome the explicit representations that the units were permanently retired

NYSDEC's Responsiveness Summary, which addresses some of the *Monroe* factors, notes that the facility was continuously maintained by employees of the respective owners throughout the period of shutdown and could become operational in a short period of time with minimal cost. NYSDEC places primacy on these facts over the bankruptcy and consent decree termination filings and the owners' specific expressions of intent by arguing in the Responsiveness Summary that statements are not as persuasive as actions. However, signing declarations, filing court documents, and submitting requests to government agencies are indeed actions and, in this case, these actions present such strong evidence of an intent to permanently retire the facility that the facts highlighted by NYSDEC cannot rebut the presumption.

NYSDEC also indicates that while the owners did not maintain the air permits, they did maintain other permits. Given that the matter at hand involves an air permit, the relinquishment of the facility's Title IV and V permits is the most persuasive evidence of the facility owner's intentions, particularly in light of the representations about permanent retirement made in the bankruptcy and consent decree termination proceedings. NYSDEC also refers to Acid Rain Program emissions reports that the facility continuously filed with EPA during the entire layup period. Any emissions reports filed during the three to four month period when the owners were making clear representations and taking concrete steps to permanently retire and scrap the facility do not represent persuasive evidence to rebut the presumption,¹⁷ particularly for a facility that has been shut down for nearly five years, initially ceased operations because the owner determined that it was not economical,¹⁸ and was later sold for scrap, which the owner described as the highest and best use after nine months of trying to find a buyer to operate the plant.

NYSDEC relies on an EPA memo from 1991, prior to the *Monroe* Order, concerning a plant in South Dakota in which EPA determined that the shutdown was not intended to be permanent because the facility was maintained during the 9 years that it didn't operate.¹⁹ However, unlike the Greenidge facility, there were no statements or any other kind of action suggestive of an intention to permanently shut down the South Dakota facility. In addition, the 1991 memo predates the *Monroe* Order in which EPA made clear that the intent to restart the facility must be continuous. *Monroe* at 9. See also *Communities for a Better Environment v. CENCO Refining Co.*, 179 F. Supp. 1128 (C.D. Cal. 2001) (finding that under the literal language of *Monroe*, the continuous intent to restart the facility was negated where there was at least one three-month period of an intent to permanently shut down during a 6 year shutdown period).

¹⁷ We also note that according to EPA's Air Markets Program Data, Greenidge Generation, LLC entered into private transactions with Evolution Markets, Inc to sell its allocated allowances for years 2012-2043.

¹⁸ Letter from Peter S. Norgeot, President, AES AEE2, LLC to Hon. Jaclyn A. Brilling, New York Public Service Commission (Sept. 17, 2010).

¹⁹ Memo from John B. Rasnic, Director, Stationary Source Compliance Div., OAQPS, to Douglas M. Skie, Director, Air Programs Branch (Nov. 9, 1991).

NYSDEC points to a March 13, 2013 sworn statement of the GMMM principal that it was always GMMM's intention to sell Greenidge to a buyer that would resume generation operations. Responsiveness Summary at 5. This statement was made to support Atlas' request to NYSDEC for a PSD nonapplicability determination and is in conflict with an earlier statement by GMMM's attorney, dated January 24, 2013, that "it was contemplated that the Greenidge facility was being purchased for scrap and salvage only; there was no thought of reopening that facility for operation....Subsequent to the acquisition of the Greenidge facility by GMMM Greenidge, LLC, we have discovered that there is substantial interest in reopening the facility...."²⁰ We note that in response to the January 23, 2013 letter, which requested that NYSDEC rescind the surrender/termination of the Title IV and V permits, NYSDEC denied the request because the surrendered permits were null and void.²¹ NYSDEC's Responsiveness Summary also points to a March 13, 2013 sworn statement of former AES President Peter Norgeot indicating that he was not aware of GMMM's plans for the facility after purchase. This sworn statement is in conflict with representations made to government agencies and federal courts reflecting AES's intention to permanently shut down the facility.

Both sworn declarations referenced by NYSDEC are post-hoc statements submitted in support of a PSD nonapplicability determination and they do not supplant the clear statements of intention made by AES and GMMM in their requests to government agencies and court filings between September and December 2011 or rebut the presumption that the facility was permanently shut down. In light of the clear actions and statements of the former owners of Greenidge over several months expressing their intention to permanently shut down the facility, the owners did not maintain a continuous intent to restart the facility. The information in the record and the Responsiveness Summary relied upon by NYSDEC is not sufficient to rebut the presumption that Greenidge was permanently shut down. As a result, NYSDEC should revise the Title V permit to ensure that it includes conditions derived from PSD permit requirements because the facility is subject to PSD as a new major source.

F. Upon reactivation as a new source, Greenidge's potential to emit carbon monoxide (CO) and nitrogen oxides (NO_x) will exceed the major facility thresholds and significant project thresholds in New York's SIP

On November 17, 2010, EPA approved New York's PSD regulations contained in 6 NYCRR, Part 231 into the State's SIP. 75 Fed. Reg. 70140 (Nov. 17, 2010). The applicability provision for new PSD sources, such as Greenidge, is found in 6 NYCRR Part 231-7.1 and requires that any proposed facility with the potential to emit a regulated NSR pollutant in excess of a major facility threshold is subject to PSD. Best Available Control Technology ("BACT") is required for any pollutant that exceeds the significant project threshold for that pollutant. 6 NYCRR 231-7.6. Upon reactivation as a new source, Greenidge will have the potential to emit 147.9 tpy of CO and 124.5 tpy of NO_x, based on the current owner's calculations.²² These emissions

²⁰ Letter from David R. Pierce, Lindabury, McCormick, Estabrook & Cooper, P.C. to Scott E. Sheeley, NYSDEC (Jan. 24, 2013).

²¹ Letter from Scott E. Sheeley, Regional Permit Administrator, NYSDEC, Reg. 8, to David R. Pierce, Esq., Lindabury, McCormick, Estabrook & Cooper, P.C. (Jan.30, 2013).

²² Letter from Frank V. Bifera, Barclay Damon, to Thomas Marriott, NYSDEC, Attachment 1, Table-Coal vs.

exceed both the major facility threshold and the significant project threshold for NO_x and CO. 6 NYCRR 231-13.5 and 13.6. Therefore, at a minimum, Greenidge is subject to PSD permitting for CO and NO_x. As a result, the proposed Title V permit is inadequate because it does not assure compliance with PSD, which is an applicable requirement. To satisfy this objection, NYSDEC should incorporate the applicable PSD permit requirements into the facility's permit.

Natural Gas, Biomass & Fuel Oil Start Up Project Emissions Comparison (July 28, 2015).

ENCLOSURE 2

As noted in Enclosure I, EPA has concluded that the reactivation of Greenidge should be treated as a new source under the Clean Air Act and applicable PSD regulations in New York. However, we remain concerned with NYSDEC's decision in the Responsiveness Summary that the reactivation is not a major modification. EPA's specific concerns are addressed below.

In issuing the proposed permit, NYSDEC did not adequately explain why Greenidge's reactivation would not constitute a major modification. NYSDEC relied on Greenidge's conclusion that the reactivation is not a major modification subject to the PSD requirements. In its Responsiveness Summary, NYSDEC recognized that "an argument could be made that the reactivation constitutes a change in the method of operation" due to the shift from primarily coal to only biomass (wood) and/or natural gas. Responsiveness Summary at 6. However, without providing any discussion about whether there was indeed a physical change or change in the method of operation, NYSDEC concludes, based on Greenidge's calculations, that the significant project threshold in 6 NYCRR 231-13 is not triggered. As discussed below, NYSDEC's conclusion that the significant project threshold was not triggered is incorrect. As a result of this error, the proposed permit is inadequate. Additionally, NYSDEC did not provide an explanation of why there wasn't a physical change or change in the method of operation.

Monroe addresses reactivation of a source as a major modification and states that "the mere fact that the plant is changing from a lengthy 'non-operational' and 'unmanned' condition, to one in which the plant is fully operational, fits the common sense meaning of a change in the method of operation." *Monroe* at 20. See also Letter from David P. Howekamp, Director, Air Management Division, to Robert T. Connery, Holland & Hart, *Supplemental PSD Applicability Determination Cyprus Casa Grande Corporation Copper Mining and Processing Facilities*, at 7 (concluding that a change in the method of operation existed, among other factors, because the plant had been shut down and had zero emissions for 10 years).

NYSDEC should have examined the total circumstances surrounding the restart of Greenidge. In particular, the facility's plans raise significant concerns that it will phase the modification by shifting now from a largely coal-powered facility to one powered primarily on wood at 21% of the facility's design capacity, and then within the span of a few years, undertake changes so that the facility will burn largely natural gas. NYSDEC's Responsiveness Summary acknowledges that construction of a natural gas "pipeline is expected to be completed within the term of the Title IV/V air permit," and that biomass will be used only "for a limited period of time until a natural gas pipeline is brought into service, which is expected to occur within two years after reactivation of the plant." Responsiveness Summary at 2 and 7. In light of *Monroe* and the planned changes at the facility, NYSDEC did not adequately explain why PSD will not apply to Greenidge's reactivation as a major modification. We also note that there is no discussion in the statement of basis related to the applicability of PSD to Greenidge's reactivation.

As discussed below, due to incorrect assumptions in Greenidge's calculations and its misapplication of the PSD applicability rules, NYSDEC did not have sufficient support in the permit application and record to conclude that PSD will not apply to Greenidge's reactivation as

a major modification.

1. Applicability Test for Determining the Emissions Increases Associated with the Boiler Reactivation

Pursuant to New York's SIP-approved PSD regulations, when a major stationary source has undergone a physical change or change in the method of operation, it is necessary to analyze whether the project will result in an exceedance of the significant project threshold and constitutes a significant net emissions increase in order to determine whether the source is undergoing a major modification. 6 NYCRR 231-4.1(b)(31).

In determining the emissions increases associated with the facility's reactivation, Greenidge elected to use the actual-to-projected-actual applicability test as allowed under Part 231-4.1 (b)(40). In the actual-to-projected-actual test, the facility must determine the baseline actual emissions (BAE) and the projected actual emissions (PAE) and then determine whether the change equals or exceeds the significant project threshold for that pollutant as defined in 6 NYCRR 231-13. The BAE are the emissions in tons per year (tpy), determined in accordance with the regulatory provisions, before the change at an emission unit (i.e., Greenidge's boiler) takes place. As relevant here, the PAE in this context is the maximum annual emission rate, in tpy that an existing emission unit is expected to emit in any one of the 5 years (12-month period) following the date the unit resumes regular operation after the project. 6 NYCRR 231-4.1(b)(40). Once determined, the BAE are subtracted from the PAE, and the emissions increases are compared to the PSD significant project threshold for each regulated NSR pollutant. A higher BAE means a lower emissions increase. A lower PAE means a lower emissions increase. Thus, either a higher BAE or a lower PAE will increase the likelihood that a facility will avoid triggering PSD requirements. Greenidge determined that the emissions increases resulting from its boiler upon reactivation, would be less than the significant project threshold(s) and thus concluded that the reactivation would not be subject to the PSD requirements¹. 6 NYCRR 231-8.1.

2. Baseline Actual Emissions-Incorrect Baseline Period

The BAE is defined in Part 231-4.1 as the average rate of emissions, in tons per year, of an NSR-regulated pollutant that the emission unit (i.e., Greenidge's boiler) actually emitted during its baseline period. In Part 231-4.1(b)(7) the baseline period is defined as "*any 24 consecutive months within the five years immediately preceding...the date of receipt by the department of a permit application for the modification.*" The earliest possible five year period immediately preceding NYSDEC's receipt of the application is July 28, 2015 to July 28, 2010. As discussed in more detail below, Greenidge relied upon an incorrect application date, which resulted in their selection of a 24-month baseline that largely falls outside of the allowable five year period. Based on the application, Greenidge presumed that the five (5) year period prior to the Department's receipt of the application ran from May 16, 2014 to May 16, 2009. According to

¹ The net emissions increase was not determined for Greenidge's reactivation. Part 231-8.1 does not require the determination of the net emissions increases for projects with emissions increases less than the significant project threshold.

Greenidge, NYSDEC received the Title V permit application on May 16, 2014.² However, the permitting record indicates that Greenidge's May 16, 2014 application requested a permit for the reactivation of the facility that would operate exactly the same way as it did before shutting down in 2011. Specifically, the application sought a permit to burn coal as the primary fuel, while using clean and waste wood, oil, and natural gas only as alternative fuels. Greenidge later decided to change its fuel mixture such that the facility would run without burning any coal. Based on the permitting record provided to us by NYSDEC, July 28, 2015³ is the date when Greenidge mentioned for the first time its intent to request a permit that would prohibit burning coal and authorize the combustion of only clean and waste wood, oil, and natural gas. As a result, July 28, 2015 is the earliest possible date that NYSDEC received the application that formed the basis of the proposed permit. It was the first time that Greenidge provided a PSD applicability analysis and emissions information for restarting the facility without coal combustion. Based on the baseline period definition in Part 231-4.1 (7) (iv), the earliest possible five years for selecting the 24 month baseline period is July 28, 2015 to July 28, 2010 and not May 16, 2014 to May 16, 2009, as stated by Greenidge.

The baseline actual emissions calculated by Greenidge using the 5 year period from May 16, 2014 to May 16, 2009 did not trigger PSD requirements for the proposed change (switching from coal to clean and waste wood, oil, and natural gas) because the BAE was higher during the twenty-four month period selected by the applicant. However, when using the earliest possible 5 year baseline period, from July 28, 2015 to July 28, 2010, which includes only approximately eight months in which the unit was operating,⁴ the CO emissions increases from the reactivation of Greenidge would exceed the PSD significant project threshold of 100 tpy and Greenidge's reactivation would be subject to the PSD requirements for CO.

3. Carbon Monoxide Emissions – Projected Actual Emissions

The CO emissions factor used in determining the PAE resulting from the boiler while firing on clean and waste wood was too low compared with other wood-fired permitted boilers. Greenidge's PAE of 136.3 tpy⁵ for CO, while firing clean and waste wood, was calculated based on an emissions factor of 0.25 lb/MMBTU. This emissions factor is too low to be acceptable without detailed justification, which was not provided in the statement of basis, or elsewhere in the record. The change in emissions from the BAE to the PAE is 99 tpy,⁶ falling just one ton below the 100 TPY CO significant project threshold.

² However, on page 6 of its response to comments, NYSDEC states that the baseline period would be "May 13, 2009 to May 13, 2014", and explains that May 13, 2014 "*is the day prior to the Department's receipt of the application.*" It is unclear to us what would be the regulatory basis for selecting May 13, 2014 as the date of the receipt of an application.

³ This is Item #14 of the Permitting Record Index provided to us by NYSDEC Region 8.

⁴ NYSDEC regulations provide that "if less than 24 consecutive months of operation exist, this period of operation must be used as the baseline period." 6 NYCRR 231-4.1(b) (7).

⁵ 147.9 tpy = 136.3 tpy CO from firing clean and waste wood + 11.6 tpy of CO from firing natural gas.

⁶ The 99 tons represent the changes in emissions between the BAE and PAE, which result from the combustion of clean wood, waste wood and natural gas, combined. PAE for the proposed project is 147.9 tpy (147.9 tpy = 136.3 tpy CO from firing clean and waste wood + 11.6 tpy of CO from firing natural gas) and baseline actual emissions of 48.9 tpy. So that, 99 tpy = 147.9 tpy - 48.9 tpy.

A review of EPA's RACT/BACT/LAER Clearinghouse (RBLC) reveals that the emissions factors, which represent CO BACT for uncontrolled boilers burning clean and waste wood,⁷ range from a low of 0.30 lb/MMBTU to 0.45 lb/MMBTU. Even using the lowest value in this range would result in change in emissions from BAE to PAE of 126 tpy⁸, which exceeds the significant project threshold for CO of 100 tpy. In fact, if we used an emissions factor of 0.254 lb/MMBTU, which is only 1.6 % higher than the 0.25 lb/MMBTU value selected by Greenidge and much lower than the lowest value for similar sources in the RBLC, the change in emissions from BAE to PAE would be 101.16 tpy,⁹ which is greater than the PSD significant project threshold of 100 tpy. Thus far, EPA does not see how it is possible for Greenidge to have a lower CO emissions factor than the lowest CO BACT limit. The AP-42 emission factor for a boiler¹⁰ that is combusting clean and waste wood is 0.60 lb/MMBTU for units, like Greenidge, that have no controls. Note that the rating for this AP-42 emission factor is "A."¹¹ Therefore, Greenidge and NYSDEC in its statement of basis should have provided a detailed justification for using an emission factor that is 2.4 times lower than the AP-42 factor of 0.60 lb/MMBTU. The only explanation included in the record regarding the origin of the 0.25 lb/MMBTU emissions factor is limited to a footnote to a table, which states "*Emission factors based on professional research and AP-42 factors.*"¹² A mere statement about "professional research" is insufficient.

The record does not provide an adequate justification to support the use of 0.25 lb/MMBTU as the CO emissions factor resulting from the combustion of clean and waste wood in the Greenidge's boiler.

4. Nitrogen Oxides Emissions – Baseline Actual Emissions

The nitrogen oxides (NO_x) emissions used by Greenidge as the baseline actual emissions were based on the following emissions factors: 0.153 pounds per million British Thermal Units (lb/MMBTU) (for 2009), 0.192 lb/MMBTU (for 2010), and 0.242 lb/MMBTU (for 2011). Before shutting down in March 2011, the facility had to comply with the NO_x emission levels expressed as lb/MMBTU that were established by the March 29, 2005 Consent Decree with NYSDEC. Based on our review, there is no information in the statement of basis or application indicating whether the above-mentioned NO_x emission factors were in compliance with the Consent Decree's emission levels.

In accordance with Part 231-4.1 (4) (1) (b), the baseline actual emissions "*must be adjusted downward to exclude any non-compliant emissions that occurred while the emission source was operating above any applicable limitation.*" The record does not demonstrate that the NO_x

⁷ The RBLC data we refer to is for wood boilers that are not using a Bubbling Fluidized Bed (BFB) firing system. Greenidge boiler does not use a BFB firing system.

⁸ The 126 tons represent the changes in emissions between the BAE and PAE, which result from the combustion of clean wood, waste wood and natural gas, combined.

⁹ The 101.16 tons represent the changes in emissions between the BAE and PAE, which result from the combustion of clean wood, waste wood and natural gas, combined.

¹⁰ This value is for boilers which are not fluidized bed combustors boilers. Greenidge's boiler is not a fluidized bed combustor unit.

¹¹In AP-42 emission factors, an "A" rating is described as "Excellent." More information about AP-42 Emission factors quality ratings can be found at <http://www3.epa.gov/ttn/chief/ap42/c00s00.pdf>.

¹² This is Item #14 of the permitting record index provided to us by NYSDEC Region 8

emission factors used for the calculation of the baseline actual emissions do not exceed the emission levels allowed by the 2005 Consent Decree.

5. Particulate Emissions – Projected Actual Emissions

The particulates (PM)¹³ emission factor used in determining the PAE resulting from the boiler while firing clean and waste wood is 0.0049 lb/MMBTU. Based on our review, there is no justification provided in the statement of basis or elsewhere in the record for using 0.0049 lb/MMBTU. The explanation included in the record¹⁴ regarding the origin of the PM emission factor of 0.0049 lb/MMBTU is limited to a footnote to a table, which states "*Emission factors based on professional research and AP-42 factors*". This is an inadequate justification for using the 0.0049 lb/MMBTU value.

A review of the RBLC reveals that the emission factors, which represent PM BACT for uncontrolled boilers burning clean and waste wood,¹⁵ range from a low of 0.019 lb/MMBTU to 0.03 lb/MMBTU. Thus far, EPA does not see how it is possible for Greenidge to have a lower PM emission factor than the lowest limit established as filterable PM BACT for boilers similar to Greenidge that employ fabric filters. The corresponding AP- 42 Emission factor for wood-fired boilers using fabric filters is 0.10 lb/MMBTU (with an emission factor rating of "C"¹⁶). Given the quality rating assigned to the AP-42 emission factor, EPA does not suggest using this emissions factor. However, NYSDEC should have provided an adequate justification to support the use of 0.0049 lb/MMBTU as the PM emission factor resulting from the combustion of clean and waste wood in the Greenidge's boiler.

6. Projected Actual Emissions-Fugitive Emissions, Startup and Shutdown Emissions and Emissions Associated with Malfunctions

Part 231-4.1 (b) (41) requires that in determining the projected actual emissions, the facility "shall include fugitive emissions to the extent quantifiable, and emissions associated with startups, shutdowns, and malfunctions."¹⁷ Based on the description of the processes at the facility, Greenidge's application should have included, at a minimum, the following information about fugitive emissions: (1) emissions from clean and waste wood handling (trucks unloading, screening, storage, conveyors, transfer points); (2) emissions from ash handling system (conveyors, storage, loading, disposal, etc.,); (3) emissions from lime handling system (unloading, storage, transfer); and (4) emissions from fugitive road dust generated from truck

¹³ PM in this context should include only filterable PM. Unlike PM 10 and PM 2.5, PM does not include condensable.

¹⁴ This is Item #14 of the permitting record index provided to us by NYSDEC Region 8.

¹⁵ The RBLC data is for wood boilers that are not using a Bubbling Fluidized Bed (BFB) firing system. Greenidge boiler does not use a BFB firing system.

¹⁶ In AP-42, emission factors with a "C" rating are based on tests that "are based on an unproven or new methodology, or are lacking a significant amount of background information". More information about AP-42 Emission factors quality ratings can be found at <http://www3.epa.gov/ttn/chief/ap42/c00s00.pdf>.

¹⁷ The fugitive emissions, emissions from startups, shutdowns, and malfunctions, refer to emissions of regulated NSR pollutants. Greenidge's boiler is a fossil-fuel boiler (or combination thereof) totaling more than 250 MMBTU/hr heat input and therefore belongs to one of the source categories that are required to include fugitive emissions for the purposes of the PSD applicability determination. Part 231-4.1 (b) (41).

traffic within the facility's property. However, no such information was provided in the application or the statement of basis. We also note that the failure to provide fugitive emissions information is inconsistent with 6 NYCRR Part 201.6.2(d) (3) (ii), which requires that fugitive emissions must be included in the Title V permit application.

In addition, the startup and shutdown emissions should have been calculated by Greenidge based on the estimated number of startup/shutdown events per year, duration of each event, amount of fuel combusted during each event, and the pollutant emission rate(s) per event. There is no information in the application or statement of basis indicating that the fugitive emissions, shutdowns, and malfunction emissions were estimated and accounted for in the determination of the projected actual emissions (of CO, NO_x, SO₂ and PM). As indicated in the application,¹⁸ Greenidge has assumed that the emissions resulting from combustion of fuel during periods of startup and flame stabilization are negligible and, as a result, the facility did not include them in the projected actual emissions calculations.¹⁹ Thus, Greenidge's PSD applicability analysis for the proposed change in the method of operation relies on projected actual emissions that were not determined in accordance with 6 NYCRR Part 231, and therefore, the proposed permit was issued without adequate support in the record.

7. Projected Actual Emissions – All Relevant Information Must Be Included

Part 231-4.1(b)(40) defines projected actual emissions as the maximum annual emissions rate, in tons per year, that an existing emission unit is expected to emit in any one of the 5 years (12-month period) following the date the unit resumes regular operation after the project. Moreover, Part 231-4.1(b)(40)(i) states that in determining the projected actual emissions the owner or operator (before beginning actual construction) "*must consider all relevant information, including but not limited to, historical operational data, the facility's own representations, the facility's expected business activity and the facility's highest projections of business activity, the facility's filings with the State or Federal regulatory authorities, and compliance plans under the approved State Implementation Plan.*"

Based on our review, there is no information in the statement of basis or record demonstrating that Greenidge has determined its projected activity level of 2,075,701 MMBTU/yr²⁰ by considering all the relevant information required by Part 231-4.1(b)(40)(i) . NYSDEC has not provided a clear demonstration that 2,075,701 MMBTU/yr, which was used by the facility in determining the projected actual emissions, represents the "facility's highest projections of business activity" in any one of the 5 years following the restart. Therefore, the NYSDEC's conclusion that the restart is not subject to PSD as a major modification is not supported by the record.

¹⁸ See Item # 14 of the Permitting Record, letter dated July 28, 2015, Greenidge Emission Calculations, Note 1 "*The amount of fuel oil that Greenidge is capable of combusting is limited to a series of 12 oil nozzles that are used for boiler start up and flame stabilization. Therefore, to minimize the complexity of the calculations, fuel oil emissions are considered negligible.*"

¹⁹ Note that Greenidge could also potentially include the fugitive emissions and the emissions from startup, shutdown and malfunction in the BAE provided that there is adequate justification in the record to support all assumptions in the calculations.

²⁰ See Item # 14 of the Permitting Record, letter dated July 28, 2015 [1,090,400 MMBTU/yr from biomass (clean and waste wood) + 985,301 MMBTU/yr from natural gas = 2,075,701 MMBTU/yr].

It is particularly important for an application to include all relevant information required by Part 231-4.1(b)(40)(i) when, as in this case, the projected capacity is low. By projecting a low capacity, a facility will have a lower PAE and, therefore, be more likely to not be subject to PSD permitting. The 2,075,701 MMBTU/yr capacity projected by Greenidge represents approximately only 21% of the boiler design heat input capacity, and about 42 % of the actual average annual heat input of 4,926,507 MMBTU/yr recorded by the facility before shutting down in 2011, based on the period from May 2009 to May 2011. NYSDEC did not provide sufficient information to justify the projected capacity.

8. PSD Applicability Analysis-Each NSR regulated pollutant must be evaluated

New York's PSD regulations provide that an NSR major modification occurs where a modification exceeds the significant project threshold for a particular pollutant, and the increase in that pollutant would result in a significant net emissions increase. 6 NYCRR 231-4.1(b)(31). To determine if the modification exceeds the significant project threshold, the applicant must examine the difference between the baseline actual emissions and the projected actual emissions of the source. 6 NYCRR 231-4.1(b)(39). If there is an increase in a particular pollutant from the project itself, above the significant project threshold, the applicant can then determine whether there is a significant net emissions increase in that pollutant.

Based on our review of the application, Greenidge did not evaluate whether there was a significant project threshold or a significant net emissions increase from the combustion of clean and waste wood, oil (waste oil, fuel oil # 2, diesel fuel, and kerosene) and natural gas by Greenidge's boiler with respect to the following NSR regulated pollutants: PM₁₀, PM_{2.5}, Lead, Fluorides, Sulfuric Acid Mist, and Greenhouse Gases emissions. Thus, the facility's application was not complete because it didn't evaluate the emissions increases of all regulated NSR pollutants. Moreover, NYSDEC should not have issued its July 30, 2015 completeness determination because, pursuant to 6 NYCRR 201-6.2(b) and (d), the application did not include information on all emissions of regulated air pollutants and persistent, bio accumulative and toxic compounds that could be generated by Greenidge while combusting clean and waste wood, oil, and natural gas.

9. Emissions Factors and Air Pollution Control Efficiency at 21% of the boiler design heat input capacity

As discussed above, the projected actual emissions were based on a projected activity level that represents about 21% of the boiler design heat input capacity. It therefore appears that Greenidge will be operating at low loads. Operating at low loads may cause increases of the emission factors and impact the efficiency of the control equipment. Thus, Greenidge should have provided supporting documentation from the manufacturer regarding the appropriate emission factors and expected efficiency of the air pollution controls (and combustion technologies) to use when projecting emissions at 21% of the boiler design heat input capacity.

ENCLOSURE 3

There are a number of deficiencies in the proposed permit and statement of basis that we believe can be resolved when NYSDEC incorporates PSD conditions into the Title V permit and prepares an updated statement of basis.

I. Permit Conditions

1. 40 CFR 63 Subpart ZZZZ "National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines" ("Subpart 4Z")

Conditions 40 and 41 of the permit state that "*Facilities that have reciprocating engines must comply with applicable portions of 40 CFR subpart ZZZZ,*" and add that NYSDEC has not accepted delegation of the standard so that "*any questions concerning compliance and/or enforcement of these regulations should be referred to US EPA.*"

However, the permit does not include any engines or conditions from Subpart 4Z. 40 CFR 70.4 (b) (3), "State program submittals and transition," requires that the state shall issue Title V permits, which "... assure compliance with each applicable requirement...", and which "incorporate all applicable requirements..." See also CAA Sections 502 (b) (5) (A), (B) and (E) and 502 (d) (1). Additionally, 40 CFR 70.6 (a), "Permit Content," requires that a Title V permit must include emissions limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of permit issuance. The proposed permit does not comply with the requirements specified in 40 CFR 70.6 (a). To address this concern, the applicable requirements of Subpart 4Z, as they apply to each engine at the facility, should be included in the permit.

2. The permit incorrectly identifies "state only enforceable" requirements as "federally enforceable" requirements
 - a) Permit Condition # 50 of the permit is identified as "Federally enforceable." This condition includes a case-by-case NO_x RACT limit of 0.12 lb/MMBTU for Greenidge's boiler. This limit has not yet been reviewed or approved by EPA into the SIP. Thus, currently, this permit condition is not federally enforceable and must be identified as a "state only enforceable" condition. The permit therefore fails to comply with 40 CFR 70.6 (b) (2). To address this concern the permit should be updated to correctly identify Condition #50 as "state only enforceable."
 - b) Item A-Emergency Defense, on page 4 of the proposed permit, which cites to 6 NYCRR 201-1.5 as its origin of authority, is identified as "Federally Enforceable". This condition is not federally enforceable because Part 201-1.5 is not part of the New York SIP approved by EPA. The permit therefore fails to comply with 40 CFR 70.6(b) (2). To address this concern the permit should be updated to correctly identify Item A as "state enforceable" only.

3. Lack of monitoring requirements for air pollution control devices

a) Boiler's air pollution control devices

The proposed permit indicates that the boiler's emissions would be controlled by Selective Catalytic Reduction (SCR), Selective Non-Catalytic Reduction (SNCR), Dry-Spray Absorption (DSA), and fabric filter. However, for the SCR, SNCR, and DSA, the proposed permit does not contain monitoring requirements to help the facility evaluate, on a continuous basis, the proper operation of these devices. Therefore, the permit does not fully satisfy the requirements at 40 CFR 70.6 (a) (3) (i) (A) and (B). To address this concern the permit should (1) specify the operating parameters of the SCR, SNCR, and DSA that should be continuously measured, in order to assess the proper operation of the control devices; and (2) include a regular maintenance and inspection schedule for the SCR, SNCR, DSA, and fabric filter.

b) Other fabric filters at Greenidge

According to the proposed permit, besides the boiler's fabric filter, the facility would operate three additional fabric filters: BAG08 for the control of emissions associated with the solid fuel storage and handling system, BAG09 for the control of emissions associated with the ash handling, storage, and disposal system, and BAG07 for the control of emissions associated with the lime storage, and handling system. As currently written, the proposed permit fails to comply with the requirements at 40 CFR 70.6(c) (1) and 40 CFR 70.6(a) (3) (i)(A) and (B) because it does not clearly require operation of the additional fabric filters or impose an adequate maintenance and inspection schedule. To address this concern, the permit (1) must make it clear that these fabric filters should be in operation at all times whenever the respective emission source is in operation; and (2) should include a regular maintenance and inspection schedule for each one of the three additional fabric filters.

4. Lack of requirements for the fugitive emissions

According to the proposed permit, the following emission units have the potential to generate fugitive emissions: EU: G-00005-solid fuel storage and handling system, and EU: G-00006-ash handling, storage, and disposal system. However, the proposed permit does not specify the type of fugitive air pollutants that could be generated and what the facility should do to prevent and minimize the amount of fugitive emissions. Also, EPA notes that the proposed permit does not mention truck traffic on the roads, within the facility property, as a category of source operation having the potential to generate fugitive emissions. Thus, the proposed permit does not comply with the requirements at 40 CFR 70.6(c) (1) and 40 CFR 70.6(a) (3) (i) (B). To address this concern, the permit should (1) specify the type of air pollutants that could be generated as fugitive emissions (e.g., PM, PM₁₀, PM_{2.5}) by each emission unit or source operation; and (2) include specific measures, for each emission unit or source operation, that the facility should take to prevent and minimize the amount of fugitive emissions generated.

5. Condition 24

Condition 24 of the proposed permit establishes a limit of 2.5 lb/MMBTU on the sulfur content of the wood fired at the facility. As currently written, it is unclear from this condition how compliance with the sulfur content limit will be demonstrated. Therefore, the permit does not fully comply with 40 CFR 70.6(c) (1) and 40 CFR 70.6 (a) (3) (i) A and (B). To address this concern, the permit must (1) make it clear whether the sulfur content should be measured by taking samples (and performing analysis) from the wood prior to being accepted by the facility or after the wood is accepted by the facility; (2) specify the acceptable methods of sampling and analysis; (3) clarify whether the sulfur content limit applies to a combination of clean and waste wood or each type of wood individually; and (4) indicate what should be done with the accepted wood if it is determined that the wood exceeds the permitted sulfur content limit.

6. Conditions 28, 32, 33, and 36

Conditions 28, 33, and 36 of the proposed permit establish limits on the sulfur, lead, Polychlorinated Biphenyls (PCBs), and total halogens content of the waste oil combusted by Greenidge. Also, condition 32 establishes a limit for the minimum heating value of the waste oil combusted by the facility. However, as currently written, it is unclear from these permit conditions how compliance with these limits will be demonstrated. Therefore, the permit does not fully comply with 40 CFR 70.6(c) (1) and 40 CFR 70.6 (a) (3) (i) A and (B). To address this concern the permit must: (1) clarify whether the sulfur, lead, PCBs, total halogens, and heating value of the waste fuel should be measured by taking samples (and performing analysis) from the waste oil prior to or after being accepted as fuel by the facility; (2) identify the acceptable methods for measuring these parameters; and (3) indicate what should be done with the accepted waste oil if it is determined that the content of the oil exceeds the limits specified by the above-listed conditions.

7. Condition 29

Condition 29 of the proposed permit states that “*Measurements must be made daily of the rate of each fuel fired. The gross heat content and ash content of each fuel fired must be determined at least once each week.*” However, as currently written, it is unclear from this permit condition how these measurements should be performed. Therefore, the permit does not fully comply with 40 CFR 70.6(c) (1) and 40 CFR 70.6 (a) (3) (i) (A) and (B). To address this concern, the permit must clearly specify the methods to be used for measuring the heat, ash content, and the daily rate of each fuel fired.

8. Condition 31

Condition 31 of the proposed permit requires that each piece of equipment that fires waste Fuel A shall demonstrate a minimum combustion efficiency of 99 %. However, the proposed permit does not define waste Fuel A, and it does not say how the facility should demonstrate compliance with the 99 % combustion efficiency. To address this concern, the permit should (1) include a definition of waste Fuel A; and (2) identify the method that the facility should use to measure the 99 % combustion efficiency and the frequency of the measurement necessary to

assure compliance with the required combustion efficiency of 99 %.

9. Condition 37

Condition 37 of the proposed permit states that the facility is required to sample, analyze, and measure all quantities of waste fuel received and /or fired at the facility. Additionally, condition 37 requires the facility “*to maintain records of quantities of waste Fuel B received and the names and addresses of waste Fuel B suppliers for three calendar years.*” The permit does not define waste Fuel B, and does not specifically state whether or not the facility is allowed to combust waste Fuel B. Based on EPA’s review of other permit conditions, it is our understanding that the facility is permitted to combust waste Fuel A and not waste Fuel B. Due to this lack of clarity, the permit fails to comply with the requirements at 40 CFR 70.6 (c) (1) and 40 CFR 70.6(a) (3) (i) (A) and (B). To address this concern, the permit should: (1) list the waste fuel(s) that Greenidge should sample, analyze, and measure; (2) list the parameters that should be sampled and analyzed; and (3) make it clear that the facility is not allowed to combust waste Fuel B.

10. The permitting analysis did not evaluate potential impacts on the public health and the environment of the hazardous air pollutants emissions resulting from firing clean wood and particle board (waste wood)

Conditions 44.3 and 44.4 of the proposed permit authorize Greenidge to combust clean (unadulterated) wood and waste wood that consists of particle board from furniture manufacturing processes. The proposed permit does not include any conditions indicating the specifications (e.g., composition, characteristics) that the clean and waste wood shall meet in order to be acceptable for combustion at the facility. The specifications of what constitutes clean (unadulterated) wood and particle board (waste wood) are included in the NYSDEC’s Policy DAR-3: Alternative Fuels,¹ and are as follows:

- “*Unadulterated wood means wood that is not painted or treated with chemicals such as glues, preservatives or adhesives. Any painted wood or chemically treated wood (e.g., pressure treated wood, treated railroad ties) or wood containing glues or adhesives (e.g., plywood, particle board) is considered adulterated wood.*”
- “*Particle board shall be considered to consist of particle board from all different sources, except if the particle board has been coated with chemical adulterants other than the glues used to manufacture it (e.g., paints or other treatments). Particle board laminated with unadulterated wood or paper shall also be included in this category.*”

Despite the above-referenced NYSDEC policy, there are no such specifications contained in the permit.

Also, wood may contain high percentages of chlorine, which may result in large amounts of hydrogen chloride (HCL) emissions. Besides HCL, the combustion of clean and waste wood generates several other hazardous air pollutants, including but not limited to, formaldehyde,

¹ NYSDEC’s Policy DAR-3: Alternative Fuels provides guidance for permitting existing stationary combustion installations requesting to fire non-hazardous solid waste materials.

acrolein, benzene, fluorides, and lead. However, there is no information in the statement of basis or application indicating that the facility has estimated the HAPs emissions resulting from firing clean and waste wood, nor has the NYSDEC evaluated the potential impact of the HAPs emissions from the combustion of these fuels on the public health and the environment. The specifications and content of the wood combusted can affect the types and amount of the air pollutants resulting from combustion, including the hazardous air pollutants (HAPs) emissions.

Furthermore, Condition 1. Item 1.1 of the proposed permit that cites to 6 NYCRR 200.6 as its origin of authority states "*Notwithstanding the provision of 6 NYCRR Chapter III, Subchapter A, no person shall allow or permit any air contamination source to emit air contaminants in quantities which alone or in combination with emissions from other air contamination sources would contravene any applicable ambient air quality standard and/or cause air pollution. In such cases where contravention occurs or may occur, the Commissioner shall specify the degree and/or method of emission control required.*" However, despite including this condition, the proposed permit does not contain any requirements that would ensure compliance with Condition 1 of the permit in regard to the HAPs emissions resulting from firing clean and waste wood.

Therefore, the proposed permit fails to fully comply with the requirements at 40 CFR 70.6 (a)(1), and 40 CFR 70.6 (a) (3) (i) (A) and (B), and 40 CFR 70.6(c) (1). In addition, the statement of basis fails to meet the requirements at 40 CFR 70.7 (a) (5). To address this concern, Greenidge must provide information on the estimated HAPs emissions resulting from combustion of clean and waste wood, and NYSDEC should provide documentation of its evaluation of the potential impacts of the HAPs emissions, and of the methods employed for controlling and minimizing the HAPs emissions. Moreover, the permit must be updated to include conditions addressing the following:

- The specifications that the clean and waste wood shall meet in order to be acceptable as fuels at the facility;
- The materials that are not acceptable and are expressly prohibited;
- The inspection and testing procedures that should be followed by the facility to ensure that only the appropriate clean and waste wood is used as fuel;
- The methods the facility should use for disposal of any prohibited materials, that are identified via the inspection and testing procedures; and
- The clean and waste wood should be sampled and analyzed once per calendar quarter in accordance with a sampling protocol approved by NYSDEC to determine the ultimate analysis,² and the chlorine content of the fuel.

11. The permit fails to adequately establish practically enforceable CO emissions limitation

Condition 46 of the proposed permit that cites to 6 NYCRR 201-7.1 as its origin of authority establishes a limit on the potential to emit of CO emissions resulting from the Greenidge's boiler. Further the condition states that the purpose of the limit is to avoid the facility being subject to 6 NYCRR 231-8: Modifications to Existing Major facilities in Attainment Areas (Prevention of Significant Deterioration). Also, this permit condition requires the use of CO CEMS. However,

² Ultimate analysis is the determination, by given prescribed methods, of the elemental composition of a fuel.

this condition does not specify that the emissions during startup, flame stabilization, shutdown, and malfunction must be included in determining compliance with the CO limit and does not specifically require the use of CEMS at all times, including periods of startup, flame stabilization, shutdown, and malfunction emissions.

As currently written the proposed permit fails to ensure that the CO emission limit is enforceable as a practical matter and thus does not comply with 70.6 (a) (1) and 70.6(c) (1). To address this concern the permit must (1) require that the emissions during startup, flame stabilization, shutdown, and malfunction must be included in determining compliance with the CO limit; (2) make it clear that the CO emissions shall be measured by CEMS at all times; (3) require the installation of a flowmeter to measure the stack gas airflow; and (4) include a specific methodology for converting CEMS measurements into tons of emissions per rolling 12-month period.

II. Deficient Statement of Basis

The regulatory language at 40 CFR 70.7 (a) (5) and the May 10, 1991 preamble (56 FR 21750, May 10, 1991) are clear that a statement of basis must include a discussion of decision-making that went into the development of the Title V permit and provide the permitting authority, the public and the EPA with a record of the applicability and technical issues surrounding the issuance of the permit. A statement of basis should specifically reference all supporting materials relied upon, including the applicable statutory or regulatory provisions [56 FR 21750 (Preamble), May 10, 1991]. 40 CFR 70.7 (a) (5) states that the permitting authority "shall provide a statement that sets forth the legal and factual basis for the draft permit conditions (including references to the applicable statutory or regulatory provisions)." The statement of basis should also include, among other things, a discussion of any complex applicability determinations and non-applicability determinations.³ The statement of basis in Greenidge's proposed permit is deficient in a number of ways, as discussed below.

1. Inconsistent information regarding the air pollutants that make Greenidge subject to Title V permitting requirements and lack of a summary of the pollutant specific potential to emit

The statement of basis and the permit need to identify the basis as to why a facility is subject to Title V permitting requirements. As currently written, neither the statement of basis nor the proposed permit include consistent and accurate information regarding the air pollutants that make Greenidge major, and thus, subject to the Title V permitting requirements. The statement of basis says that the facility is major because of the potential emissions of NO_x, CO, and CO₂. However, the Description Section of the proposed permit states that the facility's potential to emit PM₁₀, PM, SO₂, NO_x, and CO is greater than 100 tpy. In addition, the Notice of Complete Application, the Public Notice, and the Notice of the Proposed Permit state that: (1) the facility's potential to emit PM₁₀, PM, SO₂, NO_x, and CO is greater than 100 tpy; and (2) the facility's

³ On January 12, 2002, EPA further defined its interpretation of statement of basis in a letter to Robert F. Hodanbosi, Ohio Environmental Protection Agency, which can be found at <http://www2.epa.gov/sites/production/files/2015-08/documents/sbguide.pdf>

potential to emit HAPs is greater than 25 tpy. The statement of basis and the permit must be updated to provide consistent and accurate information regarding the air pollutants which make Greenidge subject to the Title V permit requirements. Furthermore, the statement of basis does not include a pollutant specific summary of the facility's potential to emit. To address this concern this information should be included in the statement of basis as part of the basis for the permit decision.

2. Case-by-case nitrogen oxides (NO_x) RACT limit

The permit contains a case-by-case NO_x RACT limit of 0.12 lb/MMBTU for the facility's boiler while burning any of the following fuels, alone, or in mixture: natural gas, clean wood, waste wood, and waste oil. Also, the proposed permit requires the use of NO_x continuous emissions monitoring systems (CEMS). The proposed permit includes two add-on NO_x control devices (SNCR and SCR), and a NO_x combustion technique (over fire air). However, while firing natural gas alone, the proposed permit does not require Greenidge to use the SNCR and SCR; the proposed permit requires only the use of over fire air while firing on natural gas alone. Based on 6 NYCRR Part 227-2.4, the presumptive NO_x RACT emission limit that is applicable to very large boilers which combust natural gas, such as Greenidge's boiler, is 0.08 lb/MMBTU. There is no discussion provided in the statement of basis (or elsewhere in the record) of the NYSDEC's rationale for not requiring Greenidge to comply with the presumptive NO_x RACT emission limit of 0.08 lb/MMBTU instead of the 0.12 lb/MMBTU prescribed in the permit for when the facility is firing natural gas alone. Also, there is no explanation of the rationale for not requesting Greenidge to use add on NO_x control equipment while firing natural gas alone. Therefore, the statement of basis for this permit does not meet the requirements at 40 CFR 70.7(a) (5). To address this concern, the statement of basis should include documentation addressing these issues.

3. Lack of Non-Attainment New Source Review (NNSR) applicability analysis

New York's SIP-approved NNSR rules at 6 NYCRR, Part 231⁴ requires NYSDEC to conduct a NNSR applicability analysis for all regulated NSR pollutants for which the area is designated nonattainment. The facility is located in an ozone non-attainment area and emits NO_x and VOC emissions (which are ozone precursors). However, there is no information in the statement of basis or the permit application indicating whether a NNSR analysis was conducted, or why an analysis would not be required. The statement of basis for this permit does not meet the requirements at 40 CFR 70.7(a) (5). To address this concern the statement of basis should be updated to include such analysis, and the permit should be revised, as necessary.

⁴ See 75 Fed. Reg. 70140 (November 17, 2010), "On March 3, 2009, the State of New York, through the New York State Department of Environmental Conservation (NYSDEC), submitted to EPA Region 2 revisions to the New York State Implementation Plan (SIP). The submittal consists of revisions to three regulations that are already part of the New York SIP. The affected regulations are: 6 New York Code of Rules and Regulations (NYCRR) Part 231, New Source Review for New and Modified Facilities; 6 NYCRR Part 200, General Provisions; and 6 NYCRR Part 201, Permits and Certificates. The revisions were made to create a new New York State PSD regulation program and to update the existing New York State nonattainment regulations consistent with changes to the Federal NSR regulations published on December 31, 2002 (67 FR 80186)."'

4. Lack of Evaluation of the Applicability of the 40 CFR Part 60, New Source Performance Standards (NSPS) and 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants (NESHAP).

The statement of basis and application do not contain any information indicating that the NYSDEC or the facility has evaluated whether the boiler, upon reactivation, would be subject to any of the NSPS and NESHAP that are applicable for boilers firing wood, oil, and natural gas. The statement of basis for this permit therefore does not meet the requirements at 40 CFR 70.7(a) (5). To address this concern, the statement of basis should include such analysis and the permit should be revised, as necessary.

5. Lack of Rationale for Not Using Air Pollution Controls While Firing Waste Oil Alone

The proposed permit authorizes the use of waste oil in the boiler without using the facility's NO_x and SO₂ air pollution controls provided that no other fuels are simultaneously being fired. However, there is no discussion in the statement of basis of the rationale for not using NO_x and SO₂ controls during this operating scenario. Additionally, there is no indication in the permitting record that NYSDEC evaluated the potential impact on public health and the environment of the uncontrolled emissions resulting from firing waste oil. The statement of basis therefore does not comply with the requirements at 40 CFR 70.7(a) (5). To address this concern (1) the statement of basis should be updated by including the basis for not requiring NO_x and SO₂ controls while firing waste oil alone; and (2) NYSDEC should provide documentation of its analysis of the potential impact of the uncontrolled emissions from the waste oil.

6. Air Pollution Control Efficiency for Clean and Waste Wood Scenario-Not Documented

Both the proposed permit and application state that (1) Greenidge's boiler will burn both clean and waste wood, which were previously authorized by the facility's prior Title V operating permit and combusted by its boiler; and (2) the emissions from the clean and waste wood would be controlled by the air pollution control equipment that was installed at the facility in 2006-2007 as part of the US Department of Energy (DOE)'s "Greenidge Multi-Pollutant Control Project" for controlling the emissions generated by Greenidge's coal-fired boiler.

However, there is no information in the statement of basis or application about how the firing of clean and waste wood alone, without coal, will impact the Multi-Pollutant Control Project. The statement of basis lacks an explanation of the efficiencies of the pollution control equipment in reducing the air pollutants generated by the combustion of clean and waste wood. For example, based on Greenidge's PSD applicability analysis, from May 2009 to March 2011, which represents the baseline period used by the facility for determining the baseline actual emissions, the only fuel combusted by the boiler was coal; there is no information about wood combustion during that period. Additionally, EPA's review of the US DOE's final report titled "Greenidge Multi-Pollutant Control Project-Final Report of work performed May 19, 2006-October 18, 2008," dated April 2009, indicates that the short duration of co-firing of waste wood with coal and limited amount of waste wood (less than 5% of the total heat input), did not permit DOE a thorough evaluation of the impact of the waste wood co-firing on the performance of the multi-

pollutant control system.⁵ Greenidge should provide information related to the efficiency of the control equipment in reducing the emissions resulting from combustion of clean and waste wood in the boiler, as provided by the manufacturer. The statement of basis should be updated to include a summary of this information.

7. Natural Gas Reburn System-Not Documented

It appears that Greenidge plans to operate the natural gas reburn system that was installed when the facility was combusting coal. The reburn system is a combustion modification technique which reduces the amount of NO_x formed in a coal-fired boiler.. As indicated by the US DOE final report, Greenidge's natural gas reburn system has not been used at least since 2006.⁶ The statement of basis describes process P6B, which is related to the use of natural gas by the facility's boiler, as "*Natural gas combustion for a portion of the boiler's heat input when operating in gas reburn mode in boiler B0006*". It is not clear to us why a natural gas reburn system will be used by Greenidge now since (1) the facility will no longer be combusting coal ; and (2) the proposed permit requires the use of over-fire air as a combustion technique for NO_x and both SCR and SNCR as controls for NO_x. It may be that Greenidge intends to use the natural gas reburn system for electrical generation but this is not explained in the statement of basis or permitting record. The statement of basis should have (1) documented the condition of the natural gas reburn system and described the physical changes necessary to enable the use of the system, since it has not been operated for a long time; (2) explained the purpose of using the natural gas reburn system; and (3) provided a description of the physical changes and changes in the method of operation needed to enable the use of the natural gas reburn system for electrical generation. However, these items were not addressed in either the statement of basis or the application. To address this concern the statement of basis should be updated by addressing the above listed issues.

⁵ See US DOE "Greenidge Multi-Pollutant Control Project-Final report of work performed May 19, 2006-October 18, 2008", dated April 2009 (page 205) which can be found at <http://www.netl.doe.gov/File%20Library/Research/Coal/major%20demonstrations/ppii/greenidge/GreenidgeProjectFinalReport-5-27-09.pdf>.

⁶ The US DOE "Greenidge Multi-Pollutant Control Project-Final report of work Performed May 19, 2006-October 18, 2008," at 33 (April 2009), states that "In 1996 the boiler was outfitted with a natural gas reburn system that is capable of providing up to about 20% of its heat input; however, the reburn system is not currently in use." The US DOE-Topical Report Number 28-Clean Coal Technology-Greenidge Multi-Pollutant Control Demonstration Project, dated February 2014, states "The unit [boiler] was equipped with a natural gas reburn system in the 1990s, but the system was no longer in use when this project commenced." page 7. These reports can be found at <http://www.netl.doe.gov/research/coal/major-demonstrations/power-plant-improvement-initiative/bib-greenidge>