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February 13, 2008

US EPA Administrator
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Re: Proposed Operating Permit for the Cash Creek Generation Station
Permit NO. V-07-017

Dear Administrator:

Enclosed please find a Petition pursuant to Clean Air Act § 505(b)(2) by Valley Watch for the above referenced matter.

If you have any questions, please advise.

Sincerely,

Garvey McNeil & McGillivray, S.C.

David C. Bender

Enclosure

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BEFORE THE ADMINISTRATOR

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

In the Matter of the Proposed Operating Permit for the Cash Creek Generation Station in Henderson County, Kentucky.

Source I.D. No. 21-101-00134

Permit No. V-07-017

Proposed by the Kentucky Environmental Protection Cabinet Department for Environmental Protection Division for Air Quality on November 30, 2007.

PETITION REQUESTING THAT THE ADMINISTRATOR OBJECT TO ISSUANCE OF THE PROPOSED TITLE V OPERATING PERMIT FOR THE CASH CREEK GENERATION STATION IN HENDERSON COUNTY, KENTUCKY.

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Date: February 13, 2008

Pursuant to Clean Air Act § 505(b)(2) and 40 CFR § 70.8(d), Valley Watch hereby petitions the Administrator ("the Administrator") of the United States Environmental Protection Agency ("U.S. EPA") to object to proposed Title V Operating Permit for the Cash Creek Generation Station, Henderson County, Kentucky ("Permit" or "Proposed Permit"). A copy of the Permit is attached as Exhibit A. The Permit was proposed to U.S. EPA by the Kentucky Department for Environmental Protection Division for Air Quality (hereinafter "KDAQ") more than 45 days ago. Valley Watch provided comments to the KDAQ on the draft permit. A true and accurate copy of Valley Watch's written comments is attached at Exhibit B. DAQ failed to respond to Valley Watch's comments regarding air quality impacts to downwind nonattainment areas in Indiana. A copy of KDAQ's response to other comments is attached as Exhibit C.

This petition is filed within sixty days following the end of U.S. EPA's 45-day review period, as required by Clean Air Act ("CAA") § 505(b)(2). The Administrator must grant or deny this petition within sixty days after it is filed. If the U.S. EPA Administrator determines that the Permit does not comply with the requirements of the CAA, or any "applicable requirement," he must object to issuance of the permit. 42 U.S.C. § 7661b(b); 40 C.F.R. § 70.8(c)(1) ("The [U.S. EPA] Administrator will object to the issuance of any permit determined by the Administrator not to be in compliance with applicable requirements or requirements of this part."). "Applicable requirements" include, *inter alia*, any provision of the Kentucky State Implementation Plan ("SIP"), including Prevention of Significant Deterioration ("PSD") requirements, any term or condition of any preconstruction permit, any standard or requirement under Clean Air Act sections 111, 112, 114(a)(3), or 504, acid rain program requirements. 40 C.F.R. § 70.2. "The Title V operating permits program is a vehicle for ensuring that existing air quality control requirements are appropriately applied to facility emission units in a single document... Such applicable requirements include the requirement to obtain preconstruction permits that comply with applicable new source review requirements." *In re Monroe Electric Generating Plant*, Petition No. 6-99-2 at p. 2 (EPA Adm'r 1999).

Therefore, the Administrator must look at whether an emission unit has gone through the proper New Source Review or PSD permitting process, including whether accurate "applicable requirements," such as accurate best achievable control technology limits, are incorporated into the Title V permit. *In re Chevron Products Co., Richmond, California*, Petition No. IX-2004-08 at pp. 11-12 and n.13 (EPA Adm'r 2005).

Here, the Administrator must object to the Proposed Permit for the Cash Creek plant because the Permit fails to comply with all applicable requirements, including SIP requirements and PSD permitting requirements. 42 U.S.C. § 7661d(b); 40 C.F.R. § 70.8(d); *New York Public Interest Research Group v. Whitman*, 321 F.3d 316, 333 n.11 (2nd Cir. 2002).

I. KENTUCKY FAILED TO RESPOND TO THE COMMENTS SUBMITTED BY VALLEY WATCH.

Implicit in Part 70's provision of public notice and comment is a requirement that a permitting agency consider and respond to comments. *In re Midwest Generation, LLC Joliet Generating Station*, Petition No. V-2004-3 at 5 (Adm'r June 24, 2005) (*citing In re Consolidated Edison Co., Hudson Ave. Generating Station*, Petition No. II-2002-10 at 8 (Adm'r Setember 30, 2003); *Home Box Office v. FCC*, 567 F.2d 9, 35 (D.C. Cir. 1977)). Valley Watch submitted comments to KDAQ on the draft permit for Cash Creek. Ex. B. However, in its response to comments, KDAQ did not respond to Valley Watch's comments. See Ex. C. For example, Valley Watch submitted the following comments:

> Immediately to the north of the proposed facility but across the Ohio River lay two counties that are in non-attainment of the standard for fine particles. Already this year, those counties, Warrick and Vanderburgh have found it necessary to issue air pollution "alerts" warning sensitive people to take precautions from breathing polluted air by staying indoors.

Last, July 19, as fine particle pollution rose into very unsafe levels and warnings were issued, a sixteen year old boy died after attending a morning football practice. His death, according to the coroner's report was due to a mitral valve problem in his heart, a condition known to be aggravated by fine particle pollution.

A year earlier, in 2005, several boys collapsed during a football jamboree in Newburgh, IN for no apparent reason except that air pollutions levels that day and evening were also rising to unsafe levels.

The Henderson, County KY area is unique in that it sits on the southwestern edge of the largest concentration of coal fire power plants (by capacity) in the world. Just across the Ohio River in Evansville, a study was done by the Partnership for Health Care Information in conjunction with the University of Southern Indiana in 1998 (http://health.usi.edu/commhlth/asthma/asthma.htm) showed that a kid from 9-13 years of age in Evansville was more than five times as likely to be hospitalized with asthma than his counterpart in Ft. Wayne, IN, a town of very similar demographics. Evansville is surrounding by coal plants and Ft. Wayne has none within a 100 miles.

Fine particles are formed when the emissions of sulfur dioxide and nitrogen oxides mix with simple oxygen molecules (O2) to form sulfates and nitrates, both of which are usually fine particles. In this instance, 1,094 tons per year of those emissions will yield the potential for combining with oxygen to become fine particles downwind and further exacerbating the non-attainment problems that exist in Warrick and Vanderburgh Counties.

...

DAQ has not required the applicant to undertake an air quality analysis for ozone but it should. Since numerous other sources of VOC and NOX are seeking permission to build new facilities in the area, it is imperative to have a

Air quality analysis for NOx should be undertaken

complete understanding of Cash Creek's impact on ozone formation. To exempt Cash Creek from even undertaking an air quality analysis for ozone flies in the face of the impacts, both financial and to human health of the formation of ozone this plant will entail.

Recently, the USEPA "Staff" and its Clean Air Scientific Advisory Committee (CASAC) recommended a revision in the ozone standard to a level no higher than .070 parts per million, while acknowledging that a standard even lower would be better protective of human health.

Henderson County has a design value for ozone of .073 PPM which means that its current level exceeds that which the EPA staff and its CASAC contend to be harmful to human health. Daviess County, immediately adjacent to the east of Cash Creek has a design value of .074 PPM, also exceeding the scientific committee's recommendation....

While both Kentucky counties, Daviess and Henderson currently meet the higher level of the possible new standard, that could well change as emissions from the Cash Creek power plant and a number of other polluting proposals in those two counties come on line. Those other new plants include at least two ethanol plants in Henderson County and a major biodiesel plant in Owensboro. Those plants will emit VOC and some level of NOX that, when coupled with 703 tons of NOX from Cash Creek to form ozone.

... The addition of Cash Creek to the already saturated air in the region will serve to further assault the health of people who live downwind, particularly in counties that will soon find themselves in non-attainment for the NAAQS for ozone, namely Warrick and Vanderburgh Counties in Indiana. In fact, the selected location of Cash Creek is nearly ideal for maximum formation of ozone from the chemicals released by Cash Creek. Most scientific analysis sows that maximum ozone formation occurs between ten and twenty miles from the source of emissions. In this case, that is Newburgh, Indiana which is sixteen miles directly north... DAQ should demand the applicant analyze the impact of their emissions on the formation of ozone downwind in both Vanderburgh

and Warrick Counties in Indiana as well as the impact this plant will have on the residents of both Henderson and Daviess Counties in Kentucky.

Ex. B at 1-3. These comments are all relevant to the requirement for KDAQ to provide an opportunity for the public to comment on "the air quality impact of such source, alternatives thereto, control technology requirements, and other appropriate considerations." 42 U.S.C. § 7475(a)(2). There is no indication in the KDAQ response to comments that DAQ considered, much less responded to these comments. *See* Ex. C (Response to Comments). The Administrator must object for this failure to consider and respond to comments.

II. THE CLEAN AIR ACT REQUIRES THAT BACT LIMITS BE ESTABLISHED BASED ON CLEANER NATURAL GAS FUEL.

Congress specifically defined BACT to require consideration of less-polluting fuels as a way to reduce emissions. 42 U.S.C. § 7479(3) (defining BACT as the "maximum degree of reduction achievable... through... clean fuels..."). The applicable Kentucky SIP also defines BACT as requiring consideration of less-polluting fuels. 401 KAR 51:001, § 1(25). The legislative history of the Clean Air Act confirms that Congress intended to create a preference for lower polluting fuels. The 1990 Clean Air Act Amendments revised section 169(3) to expressly require "clean fuels" as a pollution control option that must be considered when determining BACT. Pub. L. No. 549 § 403(d), 104 Stat. 2399, 2631-32. EPA's contemporaneous interpretation of this amendment was that the "clean fuels" requirement in the definition of BACT codifies

the policy "that clean fuels are an available means of reducing emissions to be considered along with other approaches in identifying BACT level controls." Letter from William Rosenberg, U.S. EPA Assistant Adm'r for Air and Radiation, to Henry A. Waxman, Chair, Subcommittee on Health and Environment (Oct. 17, 1990), reprinted in 136 Cong. Rec. at S16916-17.

If there were any doubts as to what Congress intended when it required a permitting agency to consider clean fuels when establishing BACT limits, EPA put them to rest:

> The phrase 'clean fuels' was added to the definition of BACT in the 1990 Clean Air Act amendments. EPA described the amendment to add 'clean fuels' to the definition of BACT at the time the Act passed, 'as * * * codifying its present practice, which holds that clean fuels are an available means of reducing emissions to be considered along with other approaches to identifying BACT level controls.' EPA policy with regard to BACT has for a long time required that the permit writer examine the inherent cleanliness of the fuel.

Inter-Power of New York, 5 E.A.D. 130, 134 (EAB 1994) (emphasis added, internal citations omitted); *see also In re Knauf Fiberglass, GmbH*, 8 E.A.D. 121, 136 (EAB 1999); *Old Dominion Electric Cooperative*, 3 E.A.D. at 779, 794 n. 39 (1992) ("BACT analysis should include consideration of cleaner forms of the fuel proposed by the source."); *Hibbing Taconite*, 2 E.A.D. 838, 842-843 (EPA Adm'r 1989) (remanding a permit because the permitting agency failed to consider burning natural gas as a viable pollution control strategy); *In re East Kentucky Power Coop. Inc.*, Order Objecting to State Issued Permit V-06-007 at p. 30 (EPA Adm'r. Aug. 30, 2007) (objecting to Title V permit issued by

Kentucky for failure to demonstrate that cleaner fuel, low sulfur coal, was not achievable and should not be used to establish BACT); U.S. EPA Region 4, Air Permits Section, Comments on Draft PSD Permit for Duke Energy Carolinas, LLC, Cliffside Steam Station, Unit 6 Project at 4 (Oct. 3, 2007) (because the proposed unit can burn either subbituminous or bituminous coal, the fuel type is not fundamental to the project and BACT must be established based on the cleaner PRB coal) (attached as Exhibit D). "The Act is explicit that 'clean fuels' is one of the control methods that EPA has to consider." *Sierra Club v. EPA*, 499 F.3d 653, 655 (7th Cir. 2007). The United States Court of Appeals for the Ninth Circuit similarly held, in *Hawaiian Elec. Co., Inc. v. EPA*, that low sulfur fuel could be selected as BACT for a facility proposing to burn high sulfur fuel. 723 F.2d 1440, 1442 (9th Cir. 1984).

The proposed Cash Creek plant will be capable of burning either synthetic gas made from coal or natural gas. *See e.g.*, Proposed Permit § B, Emission Units 01 & 02, 1.a. In fact, the applicant acknowledges that it does not intend to burn synthetic gas in the combustion turbines for the first 6 to 12 months of operation and, instead, intends to operate the combustion turbines solely on natural gas. *See* Response to Comments at p. 3 ("This change is requested because the combined cycle power block is expected to commence operational testing with natural gas fuel approximately six (6) to twelve (12) months prior to the introduction of synthesis gas from the gasifiers.")

Despite being able to burn clean natural gas, the Permit does not establish BACT limits based on cleaner natural gas – but instead provides two limits, depending on

which fuel is used – lower limits for clean natural gas and higher limits for dirtier synthetic gas. These limits are set forth in the following table.

	Synthetic Gas Limit	Natural Gas Limit
NOx	0.0331 lb/MMBtu	0.0246 lb/MMBtu
CO	0.0485 lb/MMBtu	0.0449 lb/MMBtu
PM- filterable	0.0085 lb/MMBtu	N/a
PM-condensable	0.0217 lb/MMBtu	0.0063 lb/MMBtu
SO2	0.0158 lb/MMBtu	0.0006 lb/MMBtu
H2SO4	0.0035 lb/MMBtu	0.0001 lb/MMBtu

Proposed Permit § B, Emission Units 01 & 02 pp. 3-4. In other words, KDAQ expressly recognized that when the combustion turbines are fired on natural gas, the facility will achieve lower emission rates than when it fires synthesis gas. Nevertheless, KDAQ failed to establish the BACT limit based on the clean fuel, as required by the plain meaning of BACT. 42 U.S.C. § 7479(3); 401 KAR 51:001, sec. 1(25).

The use of a clean fuel in this plant does not impermissibly require the redesign of a facility. The facility's preference to use dirtier synthetic fuel is not a fundamental design that is immune from consideration in a BACT determination. The Seventh Circuit held that an applicant cannot dictate the specific fuel to be used in a BACT determination because such an interpretation would eviscerate the statute's clear requirement to consider clean fuels other than the fuel proposed by the applicant. Discussing a change from high sulfur to low sulfur coal in that case, the Seventh Circuit held that an applicant cannot escape some changes to its preferred design when necessary to allow Congress' intent to establish BACT limits based on clean fuel.

> Some adjustment in the design of the plant would be necessary in order to change the fuel source from high-sulfur

> to low-sulfur coal, but if it were no more than would be necessary whenever a plant switched from a dirtier to a cleaner fuel the change would be the adoption of a "control technology." Otherwise "clean fuels" would be read out of the definition of such technology.

Sierra Club, 499 F.3d at 656. In fact, both the Environmental Appeals Board and the Seventh Circuit in the Prairie State case noted that it is not the burning of an alternative fuel, but the structures to receive a different fuel (coal from a distant mine in that case) that would require a redesign beyond that envisioned by the Act. *Id.* at 657; see also *In re Hibbing Taconite Company*, 2 E.A.D. at 842-43 (Adm'r 1989) (explaining that the "redefining the source" policy only prevents the permitting agency from requiring the applicant to build a different type of facility, not a fuel with different characteristics).

KDAQ's only reaction to the public's comment about clean fuel was to state that the IGCC will use coal to produce synthesis gas (syngas) as the "primary fuel" and natural gas is a "secondary fuel." Response to Comments at p. 24. This response does not address the comment, however, because a BACT determination is not dependant on an arbitrary assertion of primary vs. secondary fuels. Moreover, KDAQ's response fails to recognize that the plant can burn natural gas as the primary fuel and will do so for six months to a year.

Here, the plant would not require a redesign to burn cleaner natural gas. Indeed, the applicant intends to burn natural gas—not only as a backup fuel, but as the primary fuel for the first six months to year of operation. Unless the applicant demonstrates that the use of clean-fuel natural gas is not cost-effective (there is no technological, energy or

environmental impacts) the BACT limits must be based on this clean fuel. *Citizens for Clean Air v. EPA*, 959 F.2d 839, 845 (9th Cir. 1992) ("The top-down approach places the burden of proof on the applicant to justify why the proposed source is unable to apply the best technology available."); *see also In re: Spokane Regional Waste-to-Energy Applicant*, PSD Appeal No. 88-12 (EPA June 9, 1989)); *NSR Manual* at B.2; *see also In re: Inter-Power of New York, Inc.* 5 E.A.D. 130, 135 (EAB 1994) ("Under the 'top-down' approach, permit applicants must apply the most stringent control alternative, unless the applicant can demonstrate that the alternative is not technically or economically achievable."); *In re Pennsauken County, New Jersey Resource Recovery Facility*, 2 E.A.D. 667 (Adm'r 1988), available at 1988 EPA App. LEXIS 27, 28 (Nov. 10, 1988) ("Thus, the 'top-down' approach shifts the burden of proof to the applicant to justify why the proposed source is unable to apply the best technology available.").

There is no evidence in the record that burning natural gas is not cost effective. Therefore, it cannot be rejected for that reason. "Before a control option may be rejected on cost-effectiveness grounds, the [agency] must have a reasonably accurate idea what the cost-effectiveness is." *In re Masonite Corp.*, 5 E.A.D. 551, 566 (EAB 1994). Moreover, the fact that the facility will burn natural gas only for six months or more, and that many other facilities burn natural gas in combustion turbines to generate electricity, belies any suggestion that doing so is not cost-effective.

The failure to establish lower BACT limit based on clean natural gas results in limits that do not satisfy the requirement for BACT limits. This results in a deficient permit and requires an objection by the Administrator.

III. THE NSPS STANDARD FOR STATIONARY COMBUSTION TURBINES APPLIES.

The Proposed Permit fails to include applicable requirements for the combustion turbines based on 40 C.F.R. pt. 60, Subpart KKKK. The Statement of Basis for the draft permit indicated that the combustion turbines would fire at least 50% synthetic coal gas. Based on this assumption, KDAQ determined that subpart KKKK would not apply. However, as became apparent in the applicant's comments on the draft permit, the applicant intends to run the combustion turbines on natural gas only for the first 6 to 12 months. *See* Response to Comments, Appx. A at p. 3. Therefore, it is not correct, as KDAQ assumed, that the turbines will burn more than 50% synthetic gas fuel. Instead, the turbines are subject to the NSPS standard in Subpart KKKK. The failure to include those applicable NSPS requirements necessitates an objection by the Administrator.

IV. THE PERMIT LACKS A PM2.5 BACT LIMIT.

The KDAQ identified PM2.5 as a pollutant subject to BACT. Revised Statement of Basis at 14 ("The following pollutants are subject to BACT:... PM2.5..."). However, the Permit does not include a BACT limit for PM2.5 emissions. Kentucky's PSD program, which is incorporated into the Kentucky SIP, requires a BACT limit "for <u>each</u> regulated NSR pollutant for which the source has the potential to emit in significant

amounts." 401 KAR 51:017, sec. 8(2). A "regulated NSR pollutant" includes any "pollutant for which a national ambient air quality standard has been promulgated..." and any other "pollutant that otherwise is subject to regulation under 42 U.S.C. 7401 to 7671q...." 401 KAR 51:001, Section 1(210)(a), (d). As KDAQ admits, PM2.5 is a "regulated NSR pollutant" because EPA established a "national ambient air quality standard" for PM2.5 in 1997. 62 Fed. Reg. 38711; 40 C.F.R. § 50.7.

The public commented on the lack of a PM2.5 BACT limit. KDAQ responded that:

> While the Division acknowledges that PM2.5 is a regulated pollutant, at this time EPA has not yet implemented NSR regulations for PM2.5 NAAQS. It is well established that EPA has proposed the interim use of PM10 as a surrogate for PM2.5 until NSR rules have been implemented. EPA has represented that:
>
> "In view of the significant technical difficulties that now exist with respect to PM2.5 monitoring, emissions, estimation, and modeling, EPA believes that PM10 may properly be used as a surrogate for PM2.5 in meeting NSR requirements until these difficulties are resolved. When the technical difficulties are resolved, EPA will amend the PSD regulations under 40 C.F.R. § 51.166 and 52.21 to establish a PM2.5 significant emission rate and EPA will also promulgate other appropriate regulatory measures pertinent to PM2.5 and its precursors."
>
> Memorandum from John Seitz, Office of Air Quality Planning and Standards, "Interim Implementation of New Source Review Requirements for PM2.5" (October 2, 1997).
>
> This position was recently reaffirmed in specific guidance to the states:
>
> "Using the surrogate PM2.5 nonattainment major NSR program, States should assume that a major-stationary

> source's PM0 emissions represent PM2.5 emissions and regulate tese emissions using either Appendix S or the State's SIP-approved nonattainment major NSR program.
>
> Memorandum from Stephen Page, Office Air Quality and Planning and Standards (April 5, 2005).

Response to Comments at 23 (Exhibit C).

Because PM2.5 is undoubtedly a "regulated NSR pollutant" under 401 KAR 51:001, sec. 1(210), KDAQ cannot duck its obligation to establish a BACT limit. PM2.5 will be emitted from the Cash Creek facility in a "significant" amount because there is no dispute that it will be emitted at "any emission rate." 401 KAR 51:001, sec. 1(221)(b); 401 KAR 51:017, sec. 8(2). KDAQ, and for that matter U.S. EPA, cannot piggyback one regulatory failure on another. The fact that U.S. EPA failed to establish specific implementing regulations for PM2.5 for a decade after PM2.5 because a regulated pollutant does not further excuse states from implementing the plain language requirement to set BACT limits for PM2.5. Nothing in the Kentucky SIP conditions the requirement to establish BACT limits on U.S. EPA first establishing implementation protocols and reference test methods. 401 KAR 51:001, sec. 1(210), (221), and 401 KAR 51:017, sec. 8(2). Instead, the SIP plainly requires a BACT limit. *Id.*

Moreover, as EPA, itself, has acknowledged, the Page and Seitz memos cited by KDAQ are merely guidance and cannot trump the statutory and regulatory requirements of the Clean Air Act.

> [The state] cites EPA policy guidance as saying that "States should use PM10 as a surrogate for PM2.5" until federal PM2.5 NSR implementation regulation rules are

> promulgated. While this is a reasonable depiction of current EPA policy guidance, please note that EPA has also said (in its April 5, 2005, policy guidance memo) that "statements in this policy guidance do not bind State and local governments and the public as a matter of law."

U.S. EPA Region 4, Air Permits Section, Comments on Draft PSD Permit for Duke Energy Carolinas LLC, Cliffside Steam Station, Unit 6 Project at p. 6 (Oct. 31, 2007); *see also* Memorandum from Stephen Page, Implementation of New Source Review Requirements in PM-2.5 Nonattainment Areas, p. 4 ("The statements of [the 1997 Seitz memo] do not bind State and local governments and the public as a matter of law.").

Furthermore, the bases for the Seitz and Page memos no longer exist. The U.S. EPA issued a draft PM2.5 implementation rule on November 1, 2005, in which it stated: "To date, some permitted entities have been using PM10 emissions as a surrogate for PM2.5 emissions. Upon promulgation of this rule, EPA will no longer accept the use of PM10 as a surrogate for PM2.5." 70 Fed.Reg. 66,057 (November 1, 2005). The preamble to the draft rule also reconfirmed that the difficulties in testing, emission estimating and modeling, which were the basis of the original surrogate proposal in the Seitz Memo, no longer existed. *Id.* The final implementation rule, published April 25, 2007, stated as to Title V regulations: "To date, some permitted entities have been using PM10 emissions as a surrogate for PM2.5 emissions. Upon promulgation of this rule, EPA will no longer accept the use of PM10 as a surrogate for PM2.5." 72 Fed. Reg. 20,659 (April 25, 2007). If there were any doubt that PM2.5 must be regulated as a separate pollutant from PM10, EPA stated: "In summary, the purpose of the statements made in the preamble to

the proposal was to notify sources that as of the promulgation of this final rule, the EPA will no longer accept the use of PM10 emissions information as a surrogate for PM2.5 emissions information [] given that both pollutants are regulated by a National Ambient Air Quality Standard and therefore are considered regulated air pollutants." *Id.* at 20,660.

Thus, the final implementation rule clarifies that PM2.5 data must be used for NSR permitting: "Circumstances necessitating the quantification of PM2.5 emissions and the submittal of this information include: (1) Determining all of the pollutants for which a source is major; (2) determining whether an applicable requirement or program applies, e.g., determining the applicability of a SIP requirement or a PSD or nonattainment NSR program, etc; or (3) determining what fees a source owes a permitting authority as a result of considering PM2.5 emissions." 72 Fed. Reg. at 20,659. There is simply no remaining doubt that PM2.5 must be addressed as PM2.5 and not as PM10 for PSD permitting.

Furthermore, the premise for U.S. EPA establishing NAAQS for PM2.5 was that the PM10 standards were not sufficient. In establishing the PM2.5 standard, EPA recognized that "The characteristics, sources and potential health effects of larger or 'coarse' fraction particles (from 2.5 to 10 microns in diameter) and smaller for 'fine' particles (smaller than 2.5 microns in diameter) are very different." National Ambient Air Quality Standards for Fine Particles: Guidance for Designating Areas: Fact Sheet, U.S. EPA (July 17, 1997) available at

http://www.epa.gov/ttn/oarpg/t1/fact_sheets/pmfact.pdf; *see also* Proposed Rule to Implement the Fine Particle National Ambient Air Quality Standards, 71 Fed. Reg. 65,984, 65,992 (November 1, 2005) (stating that PM10 and PM2.5 "are generally associated with distinctly different source types and formation processes"); 72 Fed. Reg. 20,586, 20599 (April 25, 2007) (noting that PM2.5 and PM10 are different "in terms of atmospheric dispersion characteristics, chemical composition, and contribution from regional transport"); *id.* at 589 (stating that "[i]n contrast to PM[10], EPA anticipates that achieving the NAAQS for PM[2.5] will generally require States to evaluate different sources for controls, to consider controls of one or more precursors [to PM2.5] in addition to direct PM emissions, and to adopt different control strategies."). In light of that finding, reverting to compliance with PM10 standards as a surrogate for PM2.5 standards is inadequate. The Administrator must object to the Permit and KDAQ must include a BACT limit for PM2.5.

V. THE PERMIT LACKS A BACT LIMIT FOR CO2.

The Clean Air Act prohibits the construction of a new major stationary source of air pollutants except in accordance with a prevention of significant deterioration (PSD) construction permit. 42 U.S.C. § 7475(a); 40 C.F.R. §52.21(a)(2)(iii); 401 KAR 51:107. As noted above for PM2.5, a significant increase in emissions of any pollutant subject to regulation under the Clean Air Act is subject to the PSD program. Because Carbon Dioxide (CO2) has been regulated under the Clean Air Act since 1993, and will be

emitted in a "significant" amount[1] from the Cash Creek plant, the Title V permit for the facility must include a CO2 BACT limit.

Section 821(a) of the Act provides:

> Monitoring. - The Administrator of the Environmental Protection Agency **shall promulgate regulations** within 18 months after the enactment of the Clean Air Act Amendments of 1990 **to require that all affected sources subject to the Title V of the Clean Air Act shall also monitor carbon dioxide emissions** according to the same timetable as in Sections 511(b) and (c). **The regulations shall require that such data shall be reported to the Administrator.** The provisions of Section 511(e) of Title V of the Clean Air Act shall apply for purposes of this section in the same manner and to the same extent as such provision applies to the monitoring and data referred to in Section 511.

42 U.S.C. 7651k note; Pub.L. 101-549; 104 Stat. 2699 (emphasis added). In other words, Congress specifically ordered EPA "to promulgate regulations" requiring that facilities covered by Title IV of the Act monitor and report their CO_2 emissions in § 821. EPA's §821 regulations, promulgated under the authority in the Clean Air Act, and therefore constitution regulations "under the Act," were finalized on January 11, 1993 and require CO_2 emissions monitoring. 40 CFR §§75.1(b), 75.10(a)(3), 75.33, 75.57, 75.60 - 75.64. These requirements, including the requirement to monitor CO2, are also included in various state implementation plans, including Wisconsin's. *See* Wis. Admin. Code §§ NR 438.03(1)(a) (requiring reporting of pollutants listed in Table I, including CO2), adopted under the Act at 40 C.F.R. § 52.2570(c)(70)(i); NR 439.095(1)(f) (Phase I and

[1] 401 KAR 51:001, Section 1(222) (significant for any "regulated NSR pollutant that is not listed in [401 KAR 51:001(222)(a)] any emissions rate" (emphasis added)). There is no dispute that there will be an increase in CO2 of "any" amount.

phase II acid rain units... shall be monitored for... carbon dioxide..."), adopted under the Act at 40 C.F.R. § 52.2570(c)(73)(i)(I). Compliance is mandated by 40 CFR §75.5, which prohibits operation in violation of the CO2 monitoring and reporting requirements and provides that a violation of any Part 75 requirement is a violation of the Act.

While these regulations require monitoring and reporting, rather than establishing a cap on CO2 emissions, that distinction is irrelevant. The plain language meaning of "regulation" includes monitoring and reporting. The most basic canon of statutory interpretation is that words should be given their plain meaning, and Webster's defines "regulation" as "an authoritative rule dealing with details or procedure; (b) a rule or order issued by an executive authority or regulatory agency of a government and having the force of law." Section 821, as well as the implementing regulations in Part 75 and various SIPs, are enforceable CO2 rules, constituting "regulation under the Act." Indeed, the Supreme Court has long held that information gathering, record keeping, and data publication rules are indisputably within the conventional understanding of "regulation." *Buckley v. Valeo*, 424 U.S. 1, 66-67 (1976) (record keeping and reporting requirements are regulation of political speech). Moreover, as the Court in *Alabama Power Co. v. Costle*, 636 F.2d 323, 403 (D.C. Cir. 1979), held, PSD applies to pollutants in addition to those for which air quality standards or other limits have been promulgated:

> The only administrative task apparently reserved to the Agency . . . is to identify those . . . pollutants subject to

> regulation under the Act which are thereby comprehended by the statute. The language of the Act does not limit the applicability of PSD only to one or several of the pollutants regulated under the Act,
>
> ... the plain language of section 165... in a litany of repetition, provides without qualification that each of its major substantive provisions shall be effective after 7 August 1977 with regard to each pollutant subject to regulation under the Act, or with regard to any "applicable emission standard or standard of performance under" the Act. As if to make the point even more clear, the definition of BACT itself in section 169 applies to each such pollutant. The statutory language leaves no room for limiting the phrase "each pollutant subject to regulation."
> ...

On April 2, 2007, the Supreme Court reconfirmed that that carbon dioxide and other greenhouse gases are "pollutants" under the Clean Air Act—clarifying that they are, indeed, "*subject to* regulation." *Massachusetts v. EPA*, 127 S.Ct. 1438, 1460 (2007).

KDAQ ignored the requirement of a CO2 BACT limit based on KDAQ's assertion that:

> The definition of Best Available Control Technology found at 401 KAR 51:001, Section (25) is clear that BACT is required for "each regulated NSR pollutant that will be emitted from a proposed major stationary source or major modification..." Major stationary source and major modification are also clearly defined according to emissions of regulated NSR pollutants for which a NAAQS has been promulgated, pollutants subject to NSPS under Section 111 of the CAA, Class I and II substances subject to a standard under Section 602 of the CAA, and pollutants otherwise subject to regulations under the CAA. 401 KAR Section 51:001 Section 1(210).
>
> No NAAQS or NSPS has been established for carbon dioxide (CO2), CO2 is not a Class I or II substance nor is it otherwise

> regulated under any provision of the CAA at this time. Therefore, no BACT analysis is required for CO2 in this permit application and approval. Kentucky is required by statute to implement a PSD program that is no more stringent than federal requirements. KRS 224.10-100(26). Where there are no federal regulations establishing requirements for CO2 at stationary sources, Kentucky is prohibited from imposing any such requirements.

Response to Comments at 42 (Exhibit C).

KDAQ is incorrect that BACT only applies to pollutants subject to a NAAQS or NSPS standard or that is a Class I or Class II substance under Clean Air Act section 602. Both the Act and the Kentucky SIP require BACT "for each pollutant subject to regulation under" the Clean Air Act—or "Regulated NSR Pollutant." 42 U.S.C. § 7475(a)(4); 401 KAR 51:017, § 8. The Kentucky SIP (and 40 C.F.R. pts. 51 and 52) define a "Regulated NSR Pollutant" as one of four categories:

1) a pollutant for which a NAAQS has been promulgated;
2) a pollutant subject to an NSPS standard;
3) a class I or class II substance (42 U.S.C. §§ 7671-7671q); or
4) "A pollutant that is otherwise subject to regulation under 42 U.S.C. 7401 to 767q, except that any hazardous air pollutant (HAP) listed in 42 U.S.C. 742(b)(2)..."

401 KAR 51:001, Section 1(211). KDAQ's interpretation would limit "Regulated NSR Pollutant" to the first three categories, rendering the fourth category mere surplusage, contrary to the applicable cannons of interpretation that prohibit such interpretation. *Babbitt v. Sweet Home Chapter of Cmtys. for a Great Or.*, 515 U.S. 687, 698 (1995) (applying the cannon of interpretation disfavoring an interpretation that renders statutory language surplusage). Put another way, for the fourth subcategory to have any

meaning, it must include pollutants other than those for which a NAAQS has been established, those controlled by an NSPS standard, or those Class I and Class II ozone depleting substances covered by the first, second and third subcategories in the definition of "Regulated NSR Pollutant." Moreover, if only those pollutants that are subject to a NAAQS, NSPS or ozone depleting substance provision were regulated pollutants for purposes of a BACT limit, there would have been no reason to expressly exclude pollutants regulated under CAA § 112, as the fourth category of Regulated NSR Pollutants does.

In short, the plain language of the Clean Air Act does not support KDAQ's attempt to artificially limit BACT to pollutants subject to NAAQS, NSPS or CAA § 602. CO2 is clearly a pollutant subject to regulation under the Act and, therefore, subject to a BACT limit. The permit lacks the mandatory CO2 BACT limit and the Administrator must, therefore, object.

VI. KDAQ UNLAWFULLY TRUNCATED ITS ANALYSIS OF ALTERNATIVES AND THE PUBLIC INPUT TO ALTERNATIVES UNDER THE CLEAN AIR ACT BASED ON AN INAPPLICABLE STATE STATUTE.

Clean Air Act section 165(a)(2) provides the public an opportunity to comment on the proposed source, including "alternatives thereto" and "other appropriate considerations." 42 U.S.C. § 7475(a)(2). The public commented that CO2 must be considered as part of this process and noted a number of methods to reduce the CO2 impact from the Cash Creek plant.

KDAQ ignored these comments, despite the fact that they are expressly provided for in section 165(a)(2), based on KDAQ's apparent belief: (1) that the comments were based on the Kyoto Protocol; and (2) that state law can trump the Clean Air Act. *See* Response to Comments at 33 ("The Division is expressly prohibited from promulgating administrative regulations or imposing permit conditions on the emission of carbon dioxide or other green house gases pursuant to the Kyoto Protocol for the purpose of reducing global warming until authorized by the General Assembly or by federal statute. KRS 224.20-125.") KDAQ fails to understand that the public's comments specifically referenced, and are provided for, under CAA section 165. The comments were not referencing the "Kyoto Protocol." Moreover, even if the comments somehow implicated the Kyoto Protocol, the fact that CAA § 165 requires KDAQ to consider global warming aspects of permitting a new plant when raised by the public means that KRS 224.20-125 is not implicated. *See* KRS 224.20-125 (providing that the statute does not control when consideration of CO2 is provided for by federal statute).

KDAQ's refusal to consider public's comments on alternatives to the proposed plant due to global warming concerns, as required by CAA § 165(a)(2), is unlawful. Section 165 is an "applicable requirement" for a new major source construction under the Act, as is the parallel requirement in the Kentucky SIP. 401 KAR 51:017, Section 15; 40 C.F.R. § 51.166(q)(2)(v). KDAQ's failure to comply requires an objection by the Administrator. 42 U.S.C. § 7661d(b).

VII. KDAQ ERRONEOUSLY FAILED TO CONSIDER LOWER SAM BACT LIMITS BASED ON THE FALSE BELIEF THAT THE ELM ROAD PERMIT LIMITS WERE FOR A CFB BOILER.

The Proposed Permit contains a BACT limit for sulfuric acid mist (SAM) of 0.0035 lb/MMBtu. Proposed Permit p. 4 ¶ h. The public commented that the KDAQ must consider previously permitted BACT limits in a top-down BACT process and that the Elm Road IGCC unit has a permitted SAM BACT limit of 0.0005 lb/MMBtu. *See* Response to Comments at p. 55. This represents a limit 85% lower than the limit in the Proposed Permit. However, KDAQ utterly refused to consider the lower Elm Road BACT limit based on KDAQ's false belief that "the Elm Road facility is a CFB, not a gasifier, and is not an appropriate 'like facility' for consideration of appropriate emissions from Cash Creek." *Id.* KDAQ is wrong. The Elm Road facility is not a CFB. It was permitted for two supercritical pulverized coal boilers and one IGCC unit. The SAM BACT limit referenced in public comments was for the IGCC unit. *See* Wisconsin Air Pollution Control Construction Permit 03-RV-166 § I.II.11.1. ("The [SAM] emissions may not exceed 0.0005 pound per million Btu, (BACT).") (Attached as Exhibit E). A 0.0005 lb/MMBtu limit, based on the permitted limit for the Elm Road IGCC unit, is presumed to be BACT for the Cash Creek units because the applicant has not demonstrated that it is not technologically feasible, not cost effective, or that it would cause unique adverse energy or environmental collateral impacts. *NSR Manual* at B.24; *Newmont Nevada Energy Investments, LLC, TS Power Plant*, PSD Appeal No. 05-04, Slip Opinion at 16 (EAB Dec. 21, 2005). In short, neither the applicant nor KDAQ offers

evidence refuting that the Cash Creek units can achieve this lower BACT limit for SAM. Therefore, the Administrator must object to the Permit as containing an erroneous SAM BACT limit.

VIII. KDAQ FAILED TO RESPOND TO COMMENTS REGARDING THE CORRECT EMISSION RATE TO USE FOR MODELING MATERIAL HANDLING AND STORAGE PROCESS EMISSIONS.

The public also commented to the KDAQ stated that: "If the modeling did not use the maximum theoretical emission rate for each source, the agency must reject the modeling demonstration and require the applicant to resubmit proper modeling. *See NSR Manual* at C.45-46." Letter from Meleah Geertsma to James Morse, KDAQ, at p. 13 (June 29, 2007) (Exhibit B). Those comments pointed out that modeling conducted to determine compliance with air standards and increment limits in support of a permit must be done at maximum allowable emission rates. *NSR Manual* at C.42-C.46. Unless there is an enforceable short-term limit on emissions, modeling for short-term standards (like 24 hour PM) must be done assuming maximum theoretical throughput for coal handling and maximum emissions for coal pile wind erosion. *See NSR Manual* C.45 ("For both NAAQS and PSD increment compliance demonstrations, the emission rate for the proposed new source or modification must reflect the maximum allowable operating conditions as expressed by the federally enforceable *emissions limit, operating level* and *operating factor* for each applicable pollutant and averaging time." (emphasis original)). This was not done for the Cash Creek permit. Rather, the annual presumed throughput and annual average coal pile erosion emissions were used for determining

compliance with 24-hour PM standards. *See e.g.*, Permit Application at p. 5-23 (mean annual wind speed of 7 mph used, rather than maximum 24-hour mean wind speed). This is a material error in the permit requiring an objection. Moreover, KDAQ's failure to respond to comment on this point is also an error that requires an objection by the Administrator. *See e.g., In re Midwest Generation, LLC, Waukegan Generating Station,* Order Responding to Petition to Object at p. 4 (Adm'r September 22, 2005) (objecting to proposed permit and holding that where a petitioner raises an issue in the public comment period, the permitting agency is required to respond) (*citing Home Box Office v. FCC*, 567 F.2d 9, 35 (D.C. Cir. 1977)).

Dated this 13th day of February, 2008.

GARVEY MCNEIL & MCGILLIVRAY, S.C.

David C. Bender
Christa Westerberg

Attorneys for Valley Watch, Inc.

BEFORE THE ADMINISTRATOR
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

In the Matter of the Proposed Operating Permit for the Cash Creek Generation Station in Henderson County, Kentucky.

Source I.D. No. 21-101-00134

Permit No. V-07-017

Proposed by the Kentucky Environmental Protection Cabinet Department for Environmental Protection Division for Air Quality on November 30, 2007.

CERTIFICATE OF SERVICE

STATE OF WISCONSIN)
) ss
COUNTY OF DANE)

I make this statement under oath and based on personal knowledge. On this day I caused to be served upon the following persons a copy of Valley Watch's Petition to the United States Environmental Protection Agency In the Matter of the Proposed Operating Permit for the Cash Creek Generation, LLC, Cash Creek Generating Station in Henderson, Kentucky, via Certified Mail, Return Receipt Requested:

Stephen L. Johnson
US EPA Administrator
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460