On December 15, 2009, the U.S. EPA Administrator issued orders denying in part and granting in part petitions for objection to Title V operating permits for two proposed power plants – one proposed by American Electric Power in Arkansas and the other proposed by Cash Creek Generation, LLC in Kentucky. These orders were issued in In the Matter of American Electric Power Service Corporation, Southwest Electric Power Company, John W. Turk Plant, Fulton, Arkansas, Petition No. VI-2008-01 ("AEP Order") and In the Matter of Cash Creek Generation, LLC, Henderson, Kentucky, Petition Nos. IV-2008-1 and IV-2008-2 ("Cash Creek Order"). This note briefly discusses an issue on which the petitions for objection were granted in both orders – EPA’s policy for determining when proposed alternative production processes or pollution controls are considered unavailable and outside the scope of a BACT analysis since they would result in a “redesign of the source.”

The AEP Order
An improper application of EPA’s “redesigning the source” policy was the only one of four grounds raised by petitioners on which the EPA Administrator granted the petition for objection in the AEP Order. An objection was granted on the basis of a defective BACT analysis in which the state permit agency failed to provide a reasoned basis for rejecting use of IGCC technology under EPA’s “redefining the source” policy. (The Title V permit that was the subject of the petition incorporated PSD-derived terms from a companion PSD permit authorizing construction of the proposed coal-fired power plant with an ultra-supercritical steam boiler.

In its decision in In re Prairie State Generating Company, PSD Appeal No. 05-05 (August 24, 2006) ("Prairie State"), the EPA’s Environmental Appeals Board ("EAB"), referenced the following statement from EPA’s New Source Review Workshop Manual (Oct. 1990 Draft) ("NSR Manual"):  

"The issue of the availability of a proposed alternative production process is often complicated by the fact that any new production process necessarily involves some degree of redesign of an existing source. However, the degree of redesign is often determined by the degree to which the new production process departs from the status quo..."
EPA Objects to Power Plants’ Title V Permits for Failing to Adequately Explain Exclusion of Alternate Control Technology from BACT Analysis as Requiring a Redesign of the Source

“... historically, EPA has not considered the BACT requirements as a means to redefine the design of the source when considering available control alternatives.”

NSR Manual, at B.13. This concept is the germ of what has come to be known as EPA’s “redefining the source” policy. The state agency reviewing AEP’s application for the proposed Turk Plant relied upon this policy in rejecting public comments stating that IGCC technology should be considered in the BACT analysis for the proposed coal-fired plant.

EPA acknowledged that the Arkansas permit agency made a good faith effort to address the “redefining the source” policy consistent with prior EPA determinations. However, the Administrator stated that an EAB decision issued in In re: Desert Rock Energy Company, LLC, PSD Appeal Nos. 08-03 et al. (Sept. 24, 2009) (“Desert Rock”) has since determined that the justification employed by EPA offices for applying the redefining the source policy in the past is inadequate. Though the Desert Rock decision issued after the AEP permit was issued, the Administrator concluded that it nonetheless should be considered in her order concerning the petition for objection to AEP’s Title V permit. More specifically, the Administrator found that the AEP permit was issued without an adequate justification, including a reasoned basis on the record, by the state permit agency to support its conclusion that IGCC technology should be excluded from consideration in the BACT analysis under the “redefining the source” policy. (AEP Order, at 8 – 10). These conclusions were based on the following two deficiencies also found to be applicable to EPA Region 9’s permit decision as remanded by the EAB’s Desert Rock decision.

One, the Arkansas permit agency failed to address (as did Region 9 in the Desert Rock permit) why IGCC technology has been considered as a potentially available control technology in two state PSD reviews but would not be potentially available for application to the AEP plant. (The two state PSD decisions referenced include the Prairie State permit and the Christian County permit, both Illinois facilities.) Two, while the Arkansas agency relied upon AEP’s description of the basic design for its plant as a coal-fired supercritical PC plant, which is the first step in applying the redesigning the source policy, the state agency failed to move to the next step in the required analysis, which is to take “a ‘hard look’ at how AEP defined its project and to ‘discern which design elements were inherent to that purpose and which design elements could be changed to achieve pollutant reductions without disrupting the [applicant’s] basic business purpose.”’ AEP Order, at 10 (citing Desert Rock, Slip op. at 69).

As a result, the AEP permit has been remanded to the Arkansas agency for further proceedings to address the objection.

The Cash Creek Order
Of the eight issues raised in the petitions for objection, the Administrator’s Cash Creek Order granted the petitions on six different grounds. Only two will be discussed here: (i) an objection based on the failure of the applicant and the Kentucky agency to include the potential use of natural gas as a clean fuel in the BACT analyses (the permit was a consolidated PSD and Title V permit); and (ii) an objection based on the permit’s lack of an emission limit for PM2.5.

The permit was issued to authorize construction and operation of an integrated gasification combined cycle (IGCC) electric generation facility. The BACT issue arises from comments made to the Kentucky agency during the permit review process that the BACT analyses for the project failed to consider use of natural gas as a clean fuel as allegedly required under the statutory definition of BACT. EPA recognized that the proper scope of the BACT analysis no doubt turned on application of EPA’s policy concerning process and/or control options that would be considered unavailable because they would “redefine the [proposed] source.”
EPA's reasoning and conclusion concerning the issue of “redefining the source” appears to be strained and unduly selective in its use of precedent in this case. Though EPA here purports to be following the same track as in the AEP Order, above, concerning its reliance on the legal analysis of the “redefining the source” issue laid down in the Desert Rock and Prairie State decisions, the factual and legal context of the Cash Creek Order is substantially different. The AEP Order involves a permit for a proposed coal-fired power plant with an ultra-supercritical steam boiler that was challenged by petitioners urging that use of an IGCC plant, an alternative coal-based plant design, should have been considered in the first stage of the top-down BACT analysis. In contrast, the Cash Creek Order, ironically, involves a permit for construction of a coal-fueled IGCC plant that was opposed by petitioners’ contentions that the potential use of a different fuel – natural gas – should have been considered at the first stage of the BACT analysis.

The EPA remarked in the Cash Creek Order that, based on the record, the permit agency failed to provide a “reasoned explanation” why “the option of using exclusively natural gas is not ‘available’ for this facility.” Order at 8. This remark appears to ignore the critical principle stated by the EAB in Prairie State concerning application of EPA's “redefining the source” policy – the permit applicant defines the proposed facility's purpose or basic design in its permit application (subject to limited review by the permit agency) which may not be redesigned through BACT analysis. In Cash Creek, the applicant proposed an IGCC facility, which innately utilizes coal as the input to the gasification process to generate syngas to drive combustion turbine generators. It would seem that this application clearly implied that the applicant intends to use coal as the basic energy resource input to its electric generation facility. If the applicant's purpose or basic design had been only to generate electricity using gaseous fuel, it most likely would have proposed a natural gas-fired combustion turbine generation facility since the extensive gasification component of the IGCC plant would have been superfluous.

In this context, the EAB in Prairie State importantly observed (slip op., at 32 – 33) that,

"It has also been long-standing EPA policy that certain fuel choices are integral to the electric power generating station's basic design. See NSR Manual at B.13 ("applicants proposing to construct a coal-fired electric generator, have not been required by EPA as a part of a BACT analysis to consider building a natural gas-fired electric turbine although the turbine may be inherently less polluting per unit product); In re SEL Birchwood, Inc. 5 E.A.D. 25, 29-30 n.8 (EAB 1994) (switch to natural gas would redefine coal-fired electric generating plant); In re HAW. Commercial & Sugar Co., 4 E.A.D. 95, 99-100 (EAB 1992) (switch from coal to oil-fired combustion turbine not required): In re Old Dominion Elec. Coop., 3 E.A.D. 779, 793 (Adm’r 1992) (switch to natural gas would redefine coal-fired electric generating plant)."

It is difficult to conceive how the EPA Administrator can fault the Kentucky permit agency for not considering the possibility of using natural gas as an alternative primary fuel source in the face of such unequivocal past EAB precedent to the contrary cited in the Prairie State decision that is the ostensible guiding light for the Cash Creek Order. Superficially, the Administrator may be resting the Cash Creek Order on a hypertechnicality that the state agency did not use the talismanic words that a requirement to use natural gas as the primary fuel for the Cash Creek facility would “redefine the source.” If so, the decision would seem to border on the disingenuous.

This perception grows even stronger when it is considered that the EAB concluded in the Prairie State decision that the basic design of the proposed power plant at issue there was to generate electricity using solely coal originating from a coal mine at which the power plant was to be located. Given this basic design, the EAB opined that requiring the applicant and the state permit agency to consider the use of another source of coal—specifically, low sulfur western coal, let alone...
another type of fuel, in the BACT analysis for the plant would constitute redesigning the source.

The Cash Creek Order also granted the petition to object on the grounds that the permit failed to include a BACT limit for PM2.5 and relied inappropriately on EPA’s PM10 surrogate policy. This aspect of the Order is quite similar to a previous order granting a similar petition on this issue in regard to permits for a proposed Louisville Gas & Electric generation unit in Trimble County, Kentucky. Finally, we note that in both Orders, EPA declined to object to the two permits that were issued without BACT limits for CO2.

Summing up, the AEP Order and the Cash Creek Order are further examples of a new aggressive practice by EPA to use the Title V petition-for-objection process to advance changes in PSD permitting policy at EPA.