



# **Air Quality Permitting Response to Public Comments**

**February 10, 2009**

**Permit to Construct No. P-2008.0066**

**Southeast Idaho Energy, LLC  
Power County Advanced Energy Center  
American Falls, Idaho**

**Facility ID No. 077-00029**

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**Final**



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## Acronyms, Units, and Chemical Nomenclature

AAC	acceptable ambient concentration
AACC	acceptable ambient concentration for carcinogens
AGR	acid gas removal
AIHA	American Industrial Hygiene Association
AN	ammonium nitrate
AQRVs	Air Quality Related Values
ATSDR	Agency for Toxic Substances and Disease Registry
BACT	Best Available Control Technology
BMPs	best management practices
Btu	British thermal unit
CAA	Clean Air Act
CaF <sub>2</sub>	fluorite
CFCs	chlorofluorocarbons
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
DRE	destruction removal efficiency
EF	emission factor
EIS	Environmental Impact Statement
EL	(screening) emission level
EPA	U.S. Environmental Protection Agency
°F	degrees Fahrenheit
FR	Federal Register
GHG	greenhouse gas
gpm	gallons per minute
HAP	Hazardous Air Pollutant
Hg	mercury
HNO <sub>3</sub>	nitric acid
H <sub>2</sub> S	hydrogen sulfide
IARC	International Agency for Research on Cancer
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
kg/ha	kilograms per hectare
lb/hr	pounds per hour
LDAR	leak detection and repair
m/sec	meters per second
MACT	Maximum Achievable Control Technology
mg/L	milligrams per liter
µg/m <sup>3</sup>	micrograms per cubic meter
MMBtu	million British thermal units
NAA	nonattainment area
NAAQS	National Ambient Air Quality Standard
NACAA	National Association of Clean Air Agencies
NADP/NTN	National Atmospheric Deposition Program/ National Trends Network
NEPA	National Environmental Policy Act
NH <sub>4</sub> Cl	ammonium chloride
NMOC	nonmethane organic compounds

## Acronyms, Units, and Chemical Nomenclature, continued

N <sub>2</sub> O	nitrous oxide
NO	nitrogen oxide
NO <sub>2</sub>	nitrogen dioxide
NO <sub>x</sub>	nitrogen oxides (this includes only NO and NO <sub>2</sub> for the purposes of NSR and PSD)
NSCR	non-selective catalytic reduction
NSPS	New Source Performance Standards
NSR	New Source Review
ODS	(stratospheric) ozone-depleting substances
OSHA	Occupational Safety and Health Administration (OSHA)
PC	permit condition
PCAEC	Power County Advanced Energy Center
PM	particulate matter
PM <sub>2.5</sub>	particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers
PM <sub>10</sub>	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
ppm	parts per million
ppmv	parts per million by volume
PSD	Prevention of Significant Deterioration
PSM	Process Safety Management
PTC	permit to construct
PTE	potential to emit
REL	Reference Exposure Level
RMP	Risk Management Plan
Rules	Rules for the Control of Air Pollution in Idaho
SAM	sulfuric acid mist
scf	standard cubic feet
SCL	significant contribution level
SCR	selective catalytic reduction
SIE	Southeast Idaho Energy, LLC
SIL	significant impact level
SIP	State Implementation Plan
SO <sub>2</sub>	sulfur dioxide
SO <sub>x</sub>	sulfur oxides
SSM	Startup, Shutdown, and Scheduled Maintenance (Plan)
TAP	Toxic Air Pollutant
TCEQ	Texas Commission on Environmental Quality
TMDL	total maximum daily load
TPY	tons per year
TRS	total reduced sulfur
T/yr	tons per year
VOC	volatile organic compound
ZLDS	zero liquid discharge system

## **1. BACKGROUND**

### ***Public Comment Period***

Southeast Idaho Energy, LLC's (SIE's) Power County Advanced Energy Center (PCAEC) proposed to be located near American Falls, Idaho, will be a major facility as defined in IDAPA 58.01.01.008 (i.e., the facility will emit or have the potential to emit 100 tons per year of any regulated air pollutant). In accordance with IDAPA 58.01.01.209.01.c of the Rules for the Control of Air Pollution in Idaho (Rules), DEQ provided a 30-day comment period on the draft Permit to Construct P-2008.0066 from September 24, 2008, through October 24, 2008. In response to a request from the Sierra Club, a notice was published on October 22, 2008, that extended the comment period for an additional 30 days, through November 24, 2008.

### ***Application Material Availability***

Because of the complexity of the proposed project and the level of public interest, DEQ added a page to the DEQ Web site specifically for this project. Application materials, major milestones, the projected schedule for permitting this project, the draft permit and statement of basis, and graphics developed for the informational meetings were posted and updated on this page as soon as the information became available. For example, the application materials received on Tuesday, April 29, 2008, were available on the DEQ Web site by the end of that week. The Web page also included the permit engineer's contact information and a link for interested parties to sign up to receive automatic email notifications whenever the Web page was updated.

### ***Informational Meetings and Public Hearings***

DEQ provided informational meetings regarding air quality permitting for this project in Pocatello, American Falls, and Fort Hall on September 22, 23, and 24, 2008, respectively. A public hearing was held in American Falls on October 9, 2008. An additional informational meeting and public hearing were provided in Pocatello on October 20, 2008.

### ***List of Commenters and Location of Individual Comments***

A list of individuals and organizations that provided comments in response to DEQ's proposed action is included as Appendix A to this Response to Comments document. Comments submitted by the public using the electronic comment form on the DEQ Web site, e-mail, U.S. Mail, or in written form at the hearings are included in Appendix B. The transcript for the American Falls public hearing is included as Appendix C, and the transcript from the Pocatello public hearing is included as Appendix D.

Comments received from the federal government level, i.e., the U.S. Environmental Protection Agency (EPA) and the Shoshone-Bannock Tribes, are included in Appendix E.

Because of the length of the comments provided, comments received from the Sierra Club are included as Appendix F.

### ***DEQ Response to Comments***

DEQ's responses to comments are provided in Section 3 of this Response to Comments document. To facilitate review, comments have been grouped by topic. Comments with a common theme have been grouped together as one comment and responded to as one comment. Where a number of commenters made similar comments, the identity of one or more of the commenters (but not necessarily all) has been included with the response.

## **2. SUMMARY OF PROJECT AND PERMIT CHANGES IN RESPONSE TO COMMENTS**

A number of changes and clarifications to the draft permit were made in response to comments, design decisions, and recently promulgated changes to EPA regulations applicable to the two project boilers. These changes are noted after each response in Section 3 of this Response to Comments document. A summary of these changes is provided below:

### **Changes to the draft permit:**

1. Permit duration has been corrected to be consistent with 40 CFR 52.21. The provision on the permit cover page stating that the permit was valid for two years has been corrected to state that the permit is valid for 18 months.
2. Draft Permit Condition 2.2, HAPs Limits, was deleted. The uncontrolled HAPs emissions from the facility do not exceed 25 tons per year, and except for carbonyl sulfide (COS), the uncontrolled emissions of any single HAP do not exceed 10 tons per year. Enforceable provisions were included in the draft permit to keep carbonyl sulfide (COS) emissions below 10 tons per year. A thermal oxidizer designed for 95% destruction removal efficiency is required to be operated on the AGR CO<sub>2</sub> vent, which is the only source of COS emissions. COS emissions are predicted to be 0.8 tons per year using this (CO) BACT technology.
3. New Permit Condition 2.2, Requirement to Modify PTC, was added. Because the detailed engineering has not yet been done for this proposed project, specific operating parameter ranges are not yet available for pollution control devices and process equipment that serves a secondary purpose reducing pollutant loads in the process stream. The permit requires that the applicant develop and submit to DEQ for review and comment an O&M manual, CO Fugitive BMP Plan, and SSM Plan. The operating parameters contained in these documents are incorporated by reference into the permit as enforceable conditions.

This requirement to modify the PTC serves two functions: it will eliminate the need for inspectors to determine which provisions in those plans are enforceable, and it will provide an opportunity for public review and comment on these provisions.

The timing for the PTC modification was set at 180 days after initial startup, although the plans must be submitted to DEQ at least 60 days prior to startup. It is typical for minor adjustments to be made to operating parameter ranges based on accumulated experience operating the processes. Deferring the permit modification until 180 days after initial startup is meant to take advantage of lessons learned during the initial shakedown period for this facility.

4. O&M manual provisions. The following changes were made to the permit condition requiring development and submittal of an O&M manual prior to startup:
  - Control equipment associated with the sulfuric acid plant has been deleted from the O&M manual list of equipment.
  - The ammonium nitrate neutralizer scrubber, which is an integral part of the ammonium nitrate process, has been added to the list of equipment that must be addressed in the O&M manual.
5. BACT for fluxant handling silos: clarification. The draft permit required that fluxant be stored in a silo or equivalent enclosure provided with a high efficiency baghouse (minimum 99%). Work practices were determined to be BACT for this source (silo filling emissions must be controlled by a baghouse or cartridge filter designed for minimum 99% capture, control device must be included in O&M manual provisions, and the emission point is subject to monthly visible emission inspections unless a baghouse leak detection system is installed). Work practices are BACT for this source, but Table 3.3 has been revised to include pound-per-hour PM/PM<sub>10</sub> limits for this emission point that are equivalent to the requirements contained in the draft permit, but

which may be more easily verified should DEQ determine that performance testing is warranted for this emission source.

6. Sulfuric acid plant option was deleted. On December 10, 2008, SIE submitted Addendum No. 3 to its application, stating that a design decision had been made to use a Claus sulfur recovery unit to produce elemental sulfur. The option to install a sulfuric acid plant has therefore been removed from the draft permit. Changes to the permit were made as follows:
  - Deleted all references to NSPS Subpart H, which applies to sulfuric acid plants.
  - Deleted the “sulfuric acid plant” option for the boilers. If a sulfuric acid plant were constructed, the package boiler would have been the only boiler installed and would have been operated on both natural gas and PSA tailgas. Using a Claus sulfur recovery unit instead, the remaining option included in the draft permit was to run the package boiler only on natural gas and only during startup and shutdown, with a similarly-sized steam superheater boiler installed that will be run on both natural gas and PSA tailgas and operated at full capacity during steady-state operations. During startup and shutdown, the combined operation of both boilers could not exceed 250 MMBtu/hr.
  - Deleted the discussion of the sulfuric acid plant in Permit Condition 7.1 and Table 7.1, and the sulfuric acid vent emission limits from Table 7.3.
7. Boiler BACT Limit units have been revised. The pound per day limits in Table 6.2 of the draft permit have been converted to equivalent limits in lb/MMBtu for PM, PM<sub>10</sub>, NO<sub>x</sub>, and CO, to allow easier comparison with published BACT limits for similar sources. The pound per hour limits remain in the permit as secondary limits.
8. Boiler Operations have been clarified. Boiler operations for the case in which a Claus sulfur recovery unit would be used were described in the applicable section in the draft permit. For clarity, however, Permit Condition 6.8 has been revised to highlight that the package boiler can be operated only during startup and shutdown, may burn only natural gas, and that when both the package boiler and steam superheater boiler are operating the combined heat input to the boilers cannot exceed 250 MMBtu per hour.
9. NSPS Subpart Db regulatory changes have been incorporated. On January 28, 2009, EPA promulgated changes to this New Source Performance Standard,<sup>1</sup> which applies to the package boiler and steam superheater boiler. The final rule included changes to the definitions to address gasified coal and included a new compliance option to exempt some sources from the NSPS opacity standard. Section 6 of the permit has been revised to show that the steam superheater boiler will be exempt from the NSPS opacity standard if the permittee installs a continuous emission monitoring system (CEMS) to monitor PM emissions from this stack. The state standard limiting the opacity to 20% still applies, however.
10. Thermal Oxidizer destruction removal efficiency (DRE) has been increased from 90% to 95%. SIE determined in consultation with its technology provider that 95% DRE was technically feasible for treating CO, COS, and H<sub>2</sub>S in the AGR CO<sub>2</sub> vent emissions (see Addendum No. 4 to the application). As a result of this change, the lb/hr emission rates in Table 7.2 were revised. The SO<sub>2</sub> limits were increased slightly from 3.6 lb/hr to 3.8 lb/hr and from 15.6 T/yr to 16.5 T/yr. The CO limits were reduced from 17.3 lb/hr to 8.7 lb/hr and from 75.9 T/yr to 38.0 T/yr.
11. BMPs for fugitive CO are now specifically required in Permit Condition 7.9 for the part of the gasifier island where CO concentrations in the process stream will be relatively high (i.e., from the gasifier to the last sour shift reactor). See the response to Comment 92. This does not represent a significant change to the permit: General Provision 2 in the draft permit already required that the permittee “maintain in good working order and operate as efficiently as

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<sup>1</sup> January 28, 2009, 74 FR 5072.

practicable, all treatment or control facilities or systems installed and used to achieve compliance with the terms and conditions of this permit....”

12. Syngas monitoring has been clarified. The draft permit required sampling and analysis of the syngas stream being vented to the gasifier flare during startup. Permit Condition 7.10 has been revised to clarify that the analyses must include determination of the concentration of sulfur compounds (to ensure that the amine scrubber is functioning as designed) and the concentration of the toxic metal compounds listed in Permit Condition 3.7.1.
13. Urea Granulation Stack BACT units have been revised. The pound per hour limits in Table 8.2 of the draft permit have been converted to equivalent limits in pounds per ton of product for PM and PM<sub>10</sub> to allow easier comparison with published BACT limits for similar sources. The pound per hour limits and the ton per year limit for PM<sub>10</sub> remain in the permit as secondary limits.
14. Urea Granulation Process Scrubber requirements have been clarified. The emission inventory and compliance modeling demonstration for the urea granulation process was based on the use of a wet scrubber that is an integral part of the urea granulation process (i.e., process equipment). Permit Condition 8.6 has been added to specifically require that this process equipment be designed to capture and recycle 98% of the PM/PM<sub>10</sub> dust from the air in the granulator and coolers.
15. Nitric Acid Plant BACT units have been revised. The 15.33 lb/hr nitric acid tailgas vent NO<sub>x</sub> limit in Table 9.2 of the draft permit has been converted to an equivalent limit of 50 parts per million by volume (ppmv) to allow easier comparison with published BACT limits for similar sources. At maximum production capacity of 575 tons of acid per hour, this limit is also equivalent to 0.64 lb/ton of acid produced. The pound per hour limits and the ton per year limit for NO<sub>x</sub> remain in the permit as secondary limits.
16. AN Neutralizer BACT has been clarified. The pound per hour PM/PM<sub>10</sub> emission limits shown in Table 9.2 of the draft permit have been clarified to note that these are not BACT limits. BACT for this source was determined to be work practices in lieu of an emission limit. Emissions are best controlled by following good operating practices for the scrubber within the neutralizer process. In addition, pound per hour and ton per year limits on NO<sub>x</sub> emissions from the nitric acid plant tailgas vent serve to limit the amount of nitric acid that can be produced and fed to the AN neutralizer and UAN process, and NO<sub>x</sub> emissions from the nitric acid plant tailgas vent are continuously monitored using a NO<sub>x</sub> CEMS. This provides reasonable assurance of the PM/PM<sub>10</sub> emissions from the AN neutralizer vent. The pound-per-hour PM/PM<sub>10</sub> limits for this emission point are equivalent to the work practices requirements contained in the draft permit, but may be more easily verified should DEQ determine that performance testing is warranted for this emission source.
17. Ammonium Nitrate Neutralizer Process Scrubber requirements have been clarified. The emission inventory and compliance modeling demonstration for the ammonium nitrate neutralizer vent was based on the use of a 90% efficient wet scrubber that is an integral part of the neutralizer process (i.e., process equipment). General Provision 2 in the draft permit required that the permittee “maintain in good working order and operate as efficiently as practicable, all treatment or control facilities or systems installed and used to achieve compliance with the terms and conditions of this permit....” Permit Condition 9.5.4 has been added to specifically require that this process equipment be designed to capture and recycle 90% of the PM/PM<sub>10</sub> within the process.
18. ZLDS and Cooling Tower BACT units have been revised. The pound per hour BACT PM/PM<sub>10</sub> emission limits for these two sources have been replaced by the equivalent percentage of total circulating water flow to allow easier comparison with published BACT limits for similar sources. These percent values were used to develop the pound per hour emission limits listed in the draft permit. The pound per hour and ton per year limits remain in the permit as secondary limits.

### **Project Changes that resulted in no Additional Permit Conditions**

1. Catalytic controls for N<sub>2</sub>O have been added to the design for the nitric acid plant. On January 9, 2009, SIE submitted Addendum No. 4 to its application, which included updated information regarding the nitric acid plant design. The vendor for the nitric acid plant process equipment reportedly typically installs catalytic controls for N<sub>2</sub>O for its clients in Europe, and SIE has made a design decision to include these controls to limit N<sub>2</sub>O emissions from the nitric acid tailgas vent to a maximum of 300 parts per million by volume (ppmv) as part of demonstrating compliance with the state toxic air pollutant (TAP) increment for N<sub>2</sub>O. Because the ambient impact associated with uncontrolled N<sub>2</sub>O emissions would also comply with the TAP increment, no monitoring or recordkeeping is required for N<sub>2</sub>O emissions (see the response to Comment 59).

### **3. PUBLIC COMMENT AND RESPONSES**

Public comments regarding the permit analysis and air quality aspects of the draft permit are summarized below. Due to the similarity of many of the comments received, the summary presented below combines and/or paraphrases some comments in order to eliminate duplication and to provide a more concise summary.

For air quality permitting, DEQ cannot take into consideration comments that are unrelated to air quality, e.g., comments simply stating support or opposition to a project; potential impacts associated with transport of feedstock or products by truck, rail, or pipeline; or the availability of groundwater or surface water for use at the proposed facility.

DEQ does not respond to questions, comments, and/or suggestions received during the comment period that do not relate to the air quality aspects of the permit application, the Department's technical analysis, or the draft permit. For this permit, however, a brief response has been provided for cases where the relevant information had already been provided in the application or where a concern was forwarded to the appropriate DEQ or EPA program office.

#### **AIR QUALITY REGULATORY PROGRAM**

**Comment 1. DEQ Regulations - Stringency. Comments were received suggesting that companies come to Idaho because our regulations are more lax than other states, that the lack of regulation has long term effects on our population, that air quality standards and rules in Idaho should be tightened, and that providing jobs should not outweigh protecting public health from industrial plant emissions.** (Christensen, Crane, Devore, et al.)

#### **Response:**

The text in quotes below was taken from the preamble to a 2002 EPA rulemaking regarding Prevention of Significant Deterioration (PSD) permitting:<sup>2</sup>

“The new source review (NSR) provisions of the Clean Air Act (CAA) are a combination of air quality planning and air pollution control technology program requirements for new and modified stationary sources of air pollution. In brief, section 109 of the CAA requires the EPA to promulgate primary National Ambient Air Quality Standards (NAAQS) to protect public health and secondary NAAQS to protect public welfare.” Public health includes the health of sensitive populations such as asthmatics, children, and the elderly. Public welfare includes, but is not limited to, effects on soils, waters, crops, vegetation, manmade materials, animals, wildlife, weather, visibility, and climate; damage to and deterioration of property, and hazards to transportation; as well as effects on economic values and on personal comfort and well-being, whether caused by transformation, conversion, or combination with other air pollutants. “Once those standards have been set, Idaho must develop, adopt, and submit to EPA for approval a State Implementation Plan (SIP) that contains emission limitations and other control measures to attain and maintain the NAAQS and to meet the other requirements of section 110(a) of the CAA.”

“Each SIP is required to contain a preconstruction review program for the construction and modification of any stationary source of air pollution to assure that the National Ambient Air Quality Standards (NAAQS) are achieved and maintained; to protect areas of clean air; to protect Air Quality Related Values (AQRVs) (including visibility) in national parks and other natural areas of special concern; to assure that appropriate emissions controls are applied; to maximize opportunities for economic development consistent with the preservation of clean air resources; and to ensure that any decision to

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<sup>2</sup> 67 FR 8186, December 31, 2002.

increase air pollution is made only after full public consideration of all the consequences of such a decision.”

Rules contained in the *Rules for the Control of Air Pollution in Idaho* (IDAPA 58.01.01, Rules) are an integral part of Idaho’s EPA-approved SIP. Where federal regulations are incorporated by reference, the Rules are updated each year to reflect changes to those regulations. Where changes in the federal program require that Idaho develop and submit a revised SIP for EPA approval, Idaho must submit the proposed SIP in accordance with EPA-defined schedules. Except for recent regulatory changes applicable to air quality permitting that have been proposed or will be proposed to the SIP, the Idaho air quality rules are the same as the federal rules except that Idaho implements a state program to regulate the emissions of toxic air pollutants (TAPs) in addition to the federal regulations governing hazardous air pollutants (HAPs).

In accordance IDAPA 58.01.23.799-802,<sup>3</sup> anyone may petition the Idaho Board of Environmental Quality to initiate a rulemaking to change the Idaho Rules. Suggested changes to rules that are broader in scope or more stringent than federal regulations must meet the requirements specified in Idaho law, and do not take effect until they are approved by the legislature.<sup>4</sup>

*Result: No change to the draft permit or statement of basis.*

**Comment 2. DEQ Permitting Program. Commenters asked that DEQ look at every detail of this project and issue a permit that is protective of the American Falls community. Comments were received asking why DEQ would consider permitting a facility that 1) is upwind of American Falls Reservoir and the Pleasant Valley area, and 2) emits pollutants.**

Response:

EPA has delegated the authority to DEQ to implement the Clean Air Act program in Idaho. Air quality permits for stationary sources are issued in accordance with the current Rules, which are part of Idaho’s SIP (see the response to Comment 1).

The permitting review includes an evaluation of the type and amount of pollutants that may be emitted and dispersion modeling that considers local terrain and meteorological conditions. The analyses must demonstrate that the impacts from the facility will not cause or significantly contribute to a violation of the National Ambient Air Quality Standards (NAAQS) and that the emissions of state-regulated toxic air pollutants will not exceed the applicable TAP increment.

DEQ’s obligation under the stationary source permitting program is to address the potential air quality impacts of a proposed project in accordance with the Rules as directed by the Idaho Legislature and the Board of Environmental Quality.

*Result: No change to the draft permit or statement of basis.*

**Comment 3. DEQ Inspection and Enforcement Program. Comments were received stating concerns based on a perceived lack of regulatory enforcement for air emissions from the former FMC-Astaris facility and the Simplot Don Siding Plant located near Pocatello.**

Response:

The former FMC-Astaris facility was located near Chubbuck on the Fort Hall Indian Reservation. Air quality permitting and enforcement for that facility were under the jurisdiction of EPA Region 10.

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<sup>3</sup> <http://adm.idaho.gov/adminrules/rules/idapa58/58index.htm>

<sup>4</sup> Idaho Code Sections 39-118B and 107D, available at <http://www.legislature.idaho.gov/idstat/TOC/IDStatutesTOC.htm>

The Simplot Don Siding Plant is located in Power County, just north of Pocatello, and on lands immediately to the east of the former FMC plant. Air quality permitting and enforcement under the Clean Air Act for that facility is within the jurisdiction of DEQ, under authorities delegated to DEQ by the EPA. When violations have occurred, the Simplot Don Siding Plant has been subject to enforcement action requiring correction of the problem(s) and payment of penalties.

Compliance information, including inspection reports and enforcement actions for Idaho facilities are public records that must be made available upon request.<sup>5</sup> In addition, anyone with questions regarding the permitting and compliance status of facilities located in southeast Idaho<sup>6</sup> is encouraged to contact DEQ's Pocatello Regional Office at (208) 236-6160 or toll-free at (888) 655-6160.

*Result: No change to the draft permit or statement of basis.*

**Comment 4. GHGs: Regulation of Greenhouse Gases (GHGs). Comments were received stating that the permit does not address emissions of greenhouse gases including CO<sub>2</sub> and N<sub>2</sub>O, the U.S. Supreme Court ruled that the EPA was not following the intent of the Clean Air Act in not regulating carbon dioxide emissions, that CO<sub>2</sub> must be regulated in this permit, that CO<sub>2</sub> regulations are imminent, and that permitting this facility should be deferred until GHG regulations are developed. (Sierra Club II.A, II.C, II.I.B)**

Response:

DEQ conducts an emission and regulatory review to ensure that stationary source applicants will comply with all applicable local, state, or federal emission standards. As defined in Section 006 of the Rules, an emission standard means a permit or regulatory requirement established by DEQ or EPA that limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis, including any requirements that limit the level of opacity, prescribe equipment, set fuel specifications, or prescribe operation or maintenance procedures for a source to assure continuous emission reduction.

Based on the information provided in the application, greenhouse gas (GHG) emissions that from this facility will include carbon dioxide (CO<sub>2</sub>) and nitrous oxide (N<sub>2</sub>O). These are not currently federally-regulated air pollutants and therefore do not have any associated requirements that would limit the level of emissions, prescribe equipment, set fuel specifications, or prescribe operation or maintenance procedures for a source to assure continuous emission reduction.

While there are a number of important state and federal initiatives currently underway regarding GHGs, Idaho DEQ believes that federal climate change legislation is critical to accomplish the goal of substantially reducing GHG emissions. At this time, EPA has not promulgated any regulation that would require states to include limitations on emissions of GHGs as part of this permit. In July 2008, however, EPA published an advance notice of proposed rulemaking for GHG emissions under the Clean Air Act,<sup>7</sup> and a proposed rule for CO<sub>2</sub> geologic sequestration wells.<sup>8</sup>

On the contrary, on December 18, 2008, the EPA Administrator issued an interpretation clarifying that the definition of "regulated NSR pollutant" excludes pollutants "for which EPA regulations require only monitoring or reporting, but includes each pollutant subject to either a provision in the Clean Air Act or regulation adopted by EPA under the Clean Air Act that requires actual control of emissions of that pollutant. ...To the extent approved State Implementation Plans contain the same language as used in

<sup>5</sup> [http://www.deq.idaho.gov/public/public\\_records.cfm](http://www.deq.idaho.gov/public/public_records.cfm)

<sup>6</sup> Bannock, Bear Lake, Bingham, Caribou, Franklin, Oneida, and Power Counties

<sup>7</sup> July 11, 2008, Advance Notice of Proposed Rulemaking: Regulating Greenhouse Gas Emissions under the Clean Air Act, accessible at <http://www.epa.gov/climatechange/anpr.html>

<sup>8</sup> July 15, 2008, Proposed rule for Federal Requirements Under the Underground Injection Control (UIC) Program for Carbon Dioxide (CO<sub>2</sub>) Geologic Sequestration (GS) Wells, accessible at [http://www.epa.gov/safewater/uic/wells\\_sequestration.html#regdevelopment](http://www.epa.gov/safewater/uic/wells_sequestration.html#regdevelopment)

40 C.F.R. § 52.21(b)(50) or 40 C.F.R. § 51.166(b)(49), States may interpret that language in state regulations in the same manner reflected in this memorandum.”<sup>9</sup> Idaho’s EPA-approved State Implementation Plan (SIP) incorporates 40 CFR 52.21(b)(50) by reference in Section 205.01 of the Rules. N<sub>2</sub>O is, however, a state-regulated noncarcinogenic toxic air pollutant (see the response to Comment 59).

*Result: No change to the draft permit or statement of basis (see Comment 59 for changes).*

**Comment 5. GHGs: Idaho regulations could be more stringent than federal law. Comments were received that if Idaho required BACT for CO<sub>2</sub> in this permit, and the EPA subsequently determined that CO<sub>2</sub> BACT is not required, that the state’s interpretation would be more stringent than federal law. As such, this “inconsistency” would not put Idaho’s SIP or PSD permits at risk.**

**The commenter also stated that a “PSD permitting authority has discretion under the Clean Air Act to modify the PSD permit based on comments raising alternatives or other appropriate considerations.”**

**The commenter also stated that preventing further impacts from CO<sub>2</sub> emissions clearly falls within the realm of section 39-102A of the Idaho Statutes: “...The absence of an air quality standard for a specific contaminant shall not preclude action by the Department to control such contaminants to assure the health, welfare and comfort of the people of the State.**

**The commenter also provided information regarding recent actions taken by western states to curb emissions of GHGs. (Sierra Club II.B, II.E, II.H, II.I.A)**

Response:

A December 18, 2008 EPA interpretation clarified that BACT does not apply to greenhouse gas emissions, which includes emissions of CO<sub>2</sub> (see the response to Comment 4).

DEQ issues permits based on the currently approved Rules. While the DEQ Board may promulgate rules that are more stringent than the Clean Air Act and standards adopted by the EPA under the Clean Air Act, these “more stringent” rules would not be effective until specifically approved by statute.<sup>10</sup> However, to date, neither the Board nor the legislature has exercised that authority.

The list of statutory actions taken by Montana, Washington, and California provided in the comment apply only to power plants and long-term power purchase contracts. None of these statutes would apply to the proposed project.

*Result: No change to the draft permit or statement of basis.*

**Comment 6. GHGs: The permit should include a “reopener” reservation of rights. Comments were received stating that the permit should include a “reopener” reservation of rights provision putting the applicant on clear notice that its CO<sub>2</sub> emissions will be regulated if the authority to do so under the Clean Air Act is established by federal legislation; this permit provision should serve as an express reservation of rights by Idaho to revisit the permit to regulate the facility’s CO<sub>2</sub> emissions. (Sierra Club II.I.B)**

Response:

A specific “reopener” provision in a permit to construct (PTC) for a major facility is not necessary. The proposed project is anticipated to begin operations in 2012. A permit condition included in Section 2 of

<sup>9</sup> December 18, 2008, EPA’s Interpretation of Regulations that Determine Pollutants Covered By Federal Prevention of Significant Deterioration (PSD) Permit Program, Stephen L. Johnson, Administrator

<sup>10</sup> Idaho Statutes, Title 39, Chapter 1, Section 39-118B, Relationship to Federal Law.

the draft permit clarifies that within one year after commencing operations or becoming a Tier I source (i.e., a Title V facility), SIE must submit an application for a Tier I Operating Permit. Idaho's Tier I Operating Permit program implements the federal program requirements under Title V of the Clean Air Act, which requires that the operating permit address *all* applicable federal requirements. If applicable GHG regulations have been promulgated, SIE will be required to demonstrate compliance with those GHG rules as part of their initial Tier I application. The Tier I Operating Permit must be renewed every five years, so at some point all major facilities must demonstrate compliance with new or revised standards.

*Result: No change to the draft permit or statement of basis.*

**Comment 7. GHGs: Limits and BACT analysis are required for emissions of CO<sub>2</sub>. Comments were received stating that the permit should include BACT limits after notice and public comment on a BACT analysis for CO<sub>2</sub>, that the CO BACT determination (thermal oxidizer for the Selexol AGR emissions) must justify converting CO to CO<sub>2</sub>, and that the amine scrubber used to remove sulfur compounds from syngas before flaring should be sized to accommodate the CO<sub>2</sub>-rich emission stream from the AGR during normal operations. (Sierra Club II.B, II.D.3, II.F)**

Response:

A December 18, 2008 EPA interpretation clarified that BACT does not apply to greenhouse gas emissions, which includes emissions of CO<sub>2</sub> (see the response to Comment 4).

*Result: No change to the draft permit or statement of basis.*

**Comment 8. GHGs: BACT analysis is required for nitric acid plant N<sub>2</sub>O emissions. Comments were received stating that the 1990 NSR Manual requires that an environmental impact analysis be performed to consider significant releases of greenhouse gases even if the top control option is selected for NO<sub>x</sub> in a top down analysis. (Sierra Club comment XV, with respect to N<sub>2</sub>O emissions from the nitric acid plant.)**

Response:

A December 18, 2008 EPA interpretation clarified that BACT does not apply to greenhouse gas emissions, which includes emissions of N<sub>2</sub>O (see the response to Comment 4).

The commenter appears to be referring to page B.47 of the 1990 Draft NSR Workshop Manual,<sup>11</sup> which states that “the applicant should identify any significant or unusual environmental impacts associated with a control alternative that have the potential to affect the selection or elimination of a control alternative. ...The procedure for conducting an analysis of environmental impacts should be made based on a consideration of site-specific circumstances.”

Reducing N<sub>2</sub>O emissions from the nitric acid tailgas vent would require a control device *in addition to* the BACT technology (SCR) selected for controlling NO<sub>x</sub> emissions because the SCR catalysts used to control NO<sub>x</sub> are different than those used to control N<sub>2</sub>O. N<sub>2</sub>O emissions would therefore not have the potential to affect the selection or elimination of a control alternative for controlling NO<sub>x</sub>, and should not be considered in the NO<sub>x</sub> BACT analysis.

As described in Addendum No. 4 to the application, however, SIE will install a catalytic decomposition device to control N<sub>2</sub>O emissions (a state-regulated toxic air pollutant) from the nitric acid tailgas vent (see the response to Comment 59).

*Result: No change to the draft permit or statement of basis.*

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<sup>11</sup> October 1990, Draft, New Source Review Workshop Manual, Prevention of Significant Deterioration and Nonattainment Permitting, EPA.

**Comment 9. GHGs: Carbon Capture and Sequestration. Comments were received stating that the capture and sequestration of CO<sub>2</sub> must be considered in the BACT analysis, complete capture must be considered, and that DEQ should not permit a facility with this carbon footprint. (Sierra Club II.D.2, Flynn)**

Response:

CO<sub>2</sub> is not a regulated NSR pollutant and is therefore not subject to BACT requirements (see the response to Comment 4).

*Result: No change to the draft permit or statement of basis.*

**Comment 10. GHGs: Compliance with Idaho GHG Policy. Comments were received suggesting that Governor Otter's Executive Order No. 2007-05, Establishing a State Policy Regarding the Role of State Government in Reducing Greenhouse Gases, requires DEQ to regulate emissions of CO<sub>2</sub> and other greenhouse gases from permitted stationary sources. (Shoshone-Bannock Tribes, Helm, Sierra Club II.G.)**

Response:

Executive Order No. 2007-05 does not require DEQ to regulate CO<sub>2</sub> emissions from industrial sources. The "coordination and implementation of greenhouse gas reduction efforts and other associated activities" mentioned in E.O. No. 2007-05 is directed towards and intended to pertain only to state agency greenhouse gas emissions. It does not apply to activities carried out by industry or the private sector as a whole.

As directed by the executive order, DEQ has worked with "all state government departments and agencies" to help them develop greenhouse gas reduction plans to reduce their own emissions. Those plans are now being implemented. DEQ has also developed a state-wide greenhouse gas emission inventory and is in the process of providing further recommendations to the Governor. Additional information regarding Idaho's GHG policies is available on the DEQ website.<sup>12</sup>

*Result: No change to the draft permit or statement of basis.*

**Comment 11. GHGs: Massachusetts v. EPA Supreme Court Decision. Comments were received citing this decision, stating that the court determined that CO<sub>2</sub> is a pollutant and must be controlled. (Sierra Club II.A, II.G, Keene Hueftle)**

Response:

The Supreme Court did find that EPA has the authority to regulate GHG emissions by establishing emission, performance, or other standards. However, to date, EPA has not exercised that authority by promulgating such regulations (see the response to Comment 4).

*Result: No change to the draft permit or statement of basis.*

**Comment 12. GHGs: EPA Environmental Appeals Board - Deseret Bonanza Decision. A comment was received asking what, if any, impact the EPA's Environmental Appeals Board decision on the Deseret Bonanza permit in Utah will have on coal developments in Idaho, specifically the PCAEC? (Sierra Club II.A, Jeremias Pink)**

Response:

In this case, PSD Appeal No. 07-03 before the EPA Environmental Appeals Board, the Sierra Club argued that an air quality permit for a new waste-coal-fired electrical generation unit at Deseret Power

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<sup>12</sup> [http://www.deq.idaho.gov/air/prog\\_issues/climate\\_change/ghg\\_state\\_government.cfm](http://www.deq.idaho.gov/air/prog_issues/climate_change/ghg_state_government.cfm)

Cooperative's Bonanza Power Plant in Utah could not be issued unless the applicant showed that the plant would use BACT to reduce CO<sub>2</sub> emissions. Because the proposed plant was to be located in Indian reservation lands, where the EPA has not delegated authority for implementing Clean Air Act regulations to the tribe(s), the EPA was the permitting authority. The Appeals Board did not rule that carbon dioxide was "subject to regulation." The Board determined that the administrative record for the permit did not include enough information to support omitting a BACT analysis for CO<sub>2</sub>. The Board remanded the permit to EPA Region VIII to reconsider whether BACT for CO<sub>2</sub> should be included and to develop a record supporting its decision.

Idaho DEQ reviews applications and issues air quality permits based on the current Rules. The EPA Appeals Board decision did not result in any new EPA regulations or immediate change to the Rules, so will have no direct affect on the permitting analysis for the PCAEC (see the response to Comment 2 and Comment 4).

Subsequent to the Deseret decision, a December 18, 2008 EPA interpretation clarified that BACT does not apply to emissions of CO<sub>2</sub> (see the response to Comment 4).

*Result: No change to the draft permit or statement of basis.*

**Comment 13. "No Build" option. A comment was received stating that DEQ should consider denying the permit under § 165(a)(2) of the Clean Air Act, based on policy considerations related to carbon dioxide and other harmful emissions. (Sierra Club II.E.)**

Response:

The "no build" option is considered only when a proven adverse environmental or socio-economic consequence exists. DEQ determined that the analysis submitted in the application demonstrates that the emissions from this proposed project will comply with applicable federal and state air quality standards. There are therefore no proven adverse environmental consequences associated with the emissions from this proposed project.

DEQ is not aware of any significant adverse socio-economic impacts associated with the construction and operation of this project. On the contrary, local government entities that will be responsible for managing the public infrastructure that may be needed in response to the potential short-term population increase during construction and the potential long-term increase in population during operation of the PCAEC, have expressed support for the proposed project. See Appendices B and D of the Response to Comments document for comments submitted by the American Falls Mayor and City Council, the American Falls School District, and Power County Planning & Zoning.

*Result: No change to the draft permit or statement of basis.*

**Comment 14. PM<sub>2.5</sub>: DEQ should not rely on EPA's Final PM<sub>2.5</sub> NSR Implementation Rule. A comment was received stating that DEQ should not rely on this rule because it is illegal and will be vacated. (Sierra Club V.4)**

Response:

See the response to Comment 25.

*Result: No change to the draft permit or statement of basis.*

**Comment 15. Potential to Emit: Statement of Basis template.** A comment was received stating that the titles of Table 3.2 and 3.3 in the draft statement of basis describing “controlled emissions” of criteria pollutants and HAPs/TAPs do not meet the definition of “potential to emit (PTE)”. (EPA 10)

Response:

The descriptions for these tables in the draft permit were consistent with the DEQ template used for all statements of basis.

*Result: The statement of basis template has been revised to clarify that the “controlled” emissions tables are meant to document the facility’s PTE.*

**Comment 16. Project Scope: Energy production.** Comments were received stating that this permit should be denied in favor of constructing wind power, solar power, and renewables, and that the project should use waste heat to produce power. Commenters also suggested that DEQ should not permit this facility, but instead should encourage development of “clean” energy sources such as wind power. (Friedemann, Wolfram)

Response:

DEQ’s role is to review submitted air quality permit applications to ensure that the proposed facility operations will meet applicable air quality standards (see the response to Comment 2). Please refer to the facility and process descriptions in Sections 1 and 2 of the application, and Section 1.1 of the statement of basis. Although the name of the facility includes the word “energy,” the proposed project does not include producing energy (except for the use of two emergency generators). The project, however, has proposed to make use of “waste heat” within the plant processes, e.g., for treating water in the Zero Liquid Discharge System.

*Result: No change to the draft permit or statement of basis.*

**Comment 17. Public Review of O&M Manual, SSM Plan, and Fugitive CO BMP Plan enforceable provisions.**

Discussion:

DEQ’s response to a number of comments points out that the draft permit requires SIE to develop an O&M manual describing how control devices will be operated and maintained, and an SSM Plan describing practices to be used to reduce the numbers of startups, malfunctions, and flaring of syngas. BACT for managing fugitive emissions of CO from the gasification island requires that SIE develop a best management practices (BMP) plan for monitoring and correcting equipment leaks of CO.

Each of these plans must be submitted to DEQ for review and comment prior to startup, and are incorporated by reference in the draft permit. Although these documents have not yet been developed, and are therefore not available for review by the public as part of the permit to construct permitting process, a permit condition has been added in Section 2 of the draft permit requiring that SIE submit a complete application to modify the initial PTC to incorporate the applicable provisions of these plans. As part of the PTC process, an opportunity for a public comment period will be provided, and the application materials (which will include the applicable plan provisions) will be made available for public review at that time.

*Result: The draft permit was revised to include a requirement that the PTC be modified to incorporate the applicable provisions of these plans. The draft statement of basis was revised accordingly.*

## AIR QUALITY IMPACTS

**Comment 18. Airshed already includes two nonattainment areas. A comment was received stating that the Portneuf Watershed (*sic*) already includes two nonattainment areas.**  
(Holmes)

### Response:

Portions of Power and Bannock Counties were designated a moderate nonattainment area for PM<sub>10</sub> when the Clean Air Act Amendments of 1990 were enacted. On November 5, 1998, EPA granted a request by the State to divide the nonattainment area into two areas, one that included only Fort Hall Indian Reservation lands (the Fort Hall nonattainment area) and a second (the Portneuf Valley nonattainment area), which includes lands under the regulatory jurisdiction of the State.

On July 13, 2006, EPA approved the maintenance plan and redesignated the Portneuf Valley as in attainment for PM<sub>10</sub>. For more detailed information, click on the link to “site-specific nonattainment area plans” on the DEQ website at [http://www.deq.idaho.gov/air/data\\_reports/planning/sip.cfm](http://www.deq.idaho.gov/air/data_reports/planning/sip.cfm).

The Fort Hall lands are still designated as being nonattainment for PM<sub>10</sub>, although the major stationary source that contributed to this designation (the FMC-Astaris plant, see 65 FR 51412 dated August 23, 2000) was shut down in December of 2001. The production facility has since been dismantled and removed. The air quality program for the Fort Hall Indian Reservation is under the jurisdiction of EPA 10. DEQ is aware of no action taken to date by the EPA to redesignate this area as being in attainment.

No part of Power or Bannock Counties has been designated as being in nonattainment for PM<sub>2.5</sub> (see the response to Comment 25).

*Result: No change to permit or statement of basis.*

**Comment 19. Airshed impacts from point sources are unknown. A comment was received stating that there has been relatively little assessment of air pollution impacts in southeastern Idaho – certainly not enough to know the full impacts of adding point sources to our pollution load.** (Germino)

### Response:

Over the years air quality in the Bannock County and Fort Hall Indian Reservation area has been studied by numerous agencies and consultants including the EPA, the U.S. Agency for Toxic Substances and Disease Registry (ASTDR), DEQ, Idaho State University, Dr. Judy Chow and Dr. John Watson of the Desert Research Institute, Dr. Glen Cass of the California Institute of Technology, and Dr. Delbert Eatough of Brigham Young University. These studies looked at particulate and gaseous pollutants, hazardous air pollutants, acid mists, and metals.

The Portneuf Valley (Cities of Pocatello and Chubbuck) in Southeastern Idaho has been extensively assessed from an air quality standpoint. From 1990 until 2006, the Portneuf Valley was designated as a PM<sub>10</sub> nonattainment area, meaning that the area did not meet the PM<sub>10</sub> 24-hour standard (see the response to Comment 18). This area is now in attainment for PM<sub>10</sub> and meets all other air quality standards.

The 2004 State Implementation Plan (SIP) for PM<sub>10</sub> reviewed and classified the air quality in the Portneuf Valley for all criteria pollutants as well as volatile organic compounds (VOCs) and precursors to secondary aerosol formation. Emissions were cataloged for all existing sources of pollution including industrial, mobile and area sources, and included estimated growth in the valley. The predicted inventory developed for the Portneuf Valley for 2010 is shown in Table 1:

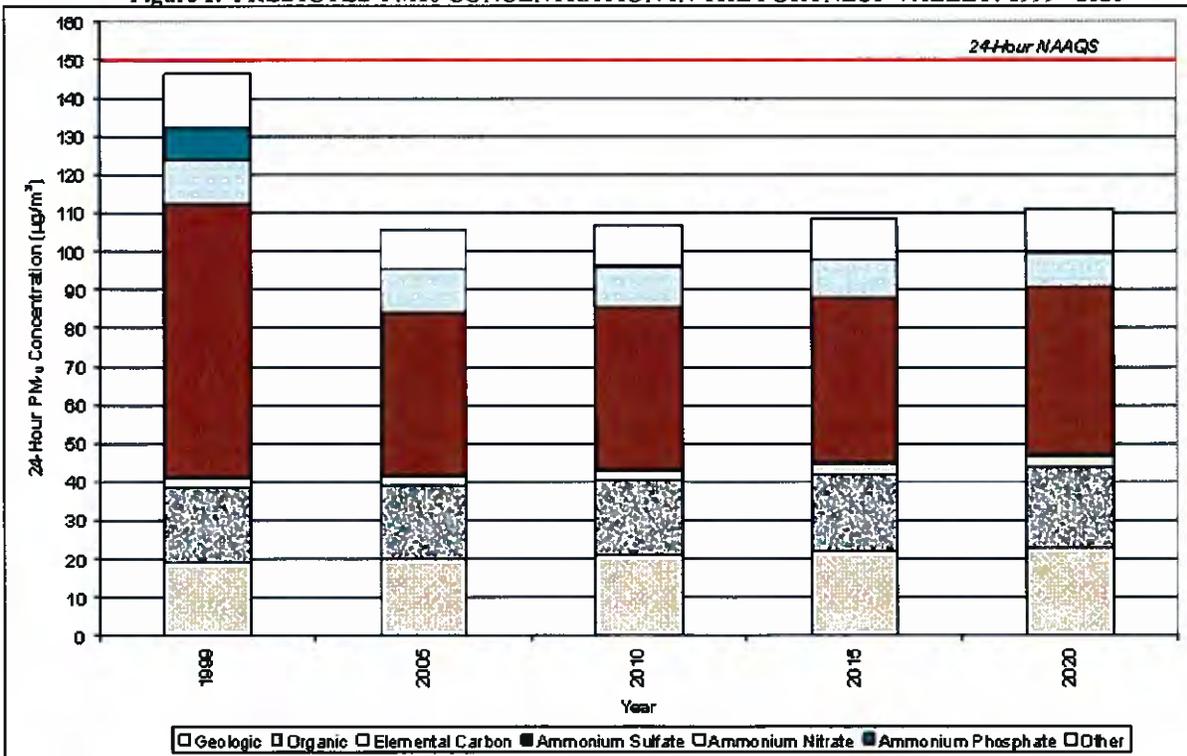
**Table 1. PREDICTED EMISSIONS INVENTORY FOR THE PORTNEUF VALLEY - 2010**

Pollutant	Predicted Emissions (TPY)	Largest Source
PM <sub>10</sub>	2,713	Paved Roads – reentrained dust (981 TPY)
PM <sub>2.5</sub>	699	Windblown Dust (agriculture) (147 TPY)
CO	17,520	Mobile exhaust on road (11,250 TPY)
NO <sub>x</sub>	2,300	Mobile exhaust on road (964 TPY)
SO <sub>2</sub>	2,587	J. R. Simplot Don Plant (2,209 TPY)
VOC	2,675	Solvent utilization (817 TPY)
Ammonia (NH <sub>3</sub> )	263	J. R. Simplot Don Plant (147 TPY)

A significant amount of airshed modeling was also completed to determine the areas of highest impact in the Portneuf Valley as well as modeling to predict whether or not the area will continue to comply with air quality standards through the year 2020. As an example, by 2020, the PM<sub>10</sub> concentrations in the Portneuf Valley are predicted to be 111 µg/m<sup>3</sup>, which is significantly less than the 24-hour NAAQS of 150 µg/m<sup>3</sup> (see Figure 1). Based on these analyses, the airshed can handle additional sources of pollution without exceeding any air quality standards, including the 24-hour PM<sub>2.5</sub> NAAQS, which was recently lowered to 35 µg/m<sup>3</sup>.

A majority of the air quality issues in the valley are not due to primary pollutants, but are from secondary aerosols. Secondary aerosols are formed when pollutants emitted from a stack or tailpipe combine in the atmosphere to form an aerosol (e.g., ammonium sulfate and ammonium nitrate) that acts like a fine particle. Based on the assessment of the PCAEC facility the impact to the Portneuf Valley will be very minimal (see the response to Comment 23, and Figures 7, 8, and 9 at the end of this section).

**Figure 1. PREDICTED PM<sub>10</sub> CONCENTRATION IN THE PORTNEUF VALLEY: 1999 - 2020**



*Result: No change to the draft permit or statement of basis.*

**Comment 20. Airshed impacts from acid rain deposition are unknown. A comment was received stating that there has been relatively little assessment of air pollution impacts in southeastern Idaho. “As an example, my students have collected mist and rain deposition with pH near 3.5 due to apparently H<sub>2</sub>SO<sub>4</sub>, yet I have never seen an assessment of acid deposition effects for this region.” (Germino)**

Response:

With regard to acidic wet deposition, or acid rain, DEQ is a cooperating sponsor of the National Atmospheric Deposition Program/ National Trends Network (NADP/NTN).

The NADP/NTN is a nationwide network of precipitation monitoring sites. The network is a cooperative effort between many different groups, including the State Agricultural Experiment Stations, U.S. Geological Survey, U.S. Department of Agriculture, and numerous other governmental agencies, universities, and private entities. For a full list of contributors, see the collaborating agencies page on the NADP website.<sup>13</sup> The NADP/NTN has grown from 22 stations at the end of 1978, their first year, to over 250 sites spanning the continental United States, Alaska, and Puerto Rico, and the Virgin Islands.

The purpose of the network is to collect data on the chemistry of precipitation for monitoring of geographical and temporal long-term trends. The precipitation at each station is collected weekly according to strict clean-handling procedures. It is then sent to the Central Analytical Laboratory where it is analyzed for hydrogen (acidity as pH), sulfate, nitrate, ammonium, chloride, and base cations (such as calcium, magnesium, potassium and sodium).

The concentrations of dissolved substances in precipitation are generally quite low (less than 1% of NADP precipitation samples have total dissolved chemical concentrations greater than 20 mg/L). Chemical measurements of precipitation samples require thorough quality assurance (QA) and quality control (QC) procedures to assure that meaningful data is obtained. Biases can result from: sample handling contamination; losses to sample container walls; chemical, physical, and biological changes; and variations in collection and analytical procedures. Stringent QA and QC procedures are essential for obtaining unbiased, precise, and representative atmospheric deposition measurements and for maintaining the integrity of the sample during collection, handling, and analysis. Equally stringent procedures must be applied to data management to assure that the accuracy of the data is maintained.

The Snake River Plain has two of the longest operating monitoring sites in the network. The Craters of the Moon NADP/NTN site has been operating since 1980, and in the western Snake River Plain the NADP/NTN monitoring site at Reynolds Creek in Owyhee County has been operating since 1983. The Park County, Wyoming NADP/NTN site in the Yellowstone Plateau has been operating since 1980.

The trend plots of the annual SO<sub>4</sub> wet deposition from 1980 through 2007 at Craters of the Moon shows a decline from just over 2 kilograms per hectare (kg/ha) in the early 1980s to just under 1 kg/ha in 2007. There is also a slight increase of laboratory pH measured from approximately 5.3 in the early 1980s to approximately 5.7 in 2007. According to EPA, normal rain is slightly acidic because CO<sub>2</sub> dissolves into it forming weak carbonic acid, giving the resulting mixture a pH of approximately 5.6 at typical atmospheric concentrations of CO<sub>2</sub>.

The NADP/NTN website is: <http://nadp.sws.uiuc.edu/>. Data for these sites, or any of the other 247 sites, may be accessed through the NADP website by clicking on “Data Access.”

The commenter did not say where the samples with pH levels near 3.5 were collected. Based on the current 2002 and proposed 2008 Clean Water Act §303(d)/§305(b) list of impaired waterways for which Total Maximum Daily Load (TMDL) studies have been done or have been proposed, none of the stream or river reaches near American Falls or Pocatello are being evaluated as a result of concerns regarding the pH.<sup>14</sup>

*Result: No change to the draft permit or statement of basis.*

<sup>13</sup> NADP website, <http://nadp.sws.uiuc.edu/sponsors.asp>

<sup>14</sup> Idaho DEQ website, Water Quality,

[http://www.deq.state.id.us/water/data\\_reports/surface\\_water/monitoring/2002.cfm](http://www.deq.state.id.us/water/data_reports/surface_water/monitoring/2002.cfm) and [2008.cfm](http://www.deq.state.id.us/water/data_reports/surface_water/monitoring/2008.cfm)

**Comment 21. Airshed air quality will be further degraded, especially during winter. A comment was received stating that the emissions from the PCAEC would further degrade the air quality in the Portneuf Watershed (*sic*), especially in winter. (Holmes)**

Response:

Dispersion modeling inputs used to predict ambient impacts from PCAEC emissions included surface meteorological conditions from hourly data collected at Aberdeen by the Idaho National Laboratory during the period from January 1, 2001 through December 31, 2005. Ambient impacts were evaluated using the dispersion model for weather conditions throughout these five years, including during the winter months. The modeling demonstrated that ambient impacts for criteria pollutants would be less than established “significance” levels, i.e., the emissions from the PCAEC would not cause a significant adverse impact to air quality.

*Result: No change to the draft permit or statement of basis.*

**Comment 22. Comparison with FMC and Simplot Don Siding Plant emissions. Comments were received stating concerns about the potential impacts of PCAEC emissions based on experience with ambient air quality impacts from the former FMC facility and the Simplot Don Siding Plant near Pocatello.**

Response:

Constructed in 1948, the former FMC-Astaris facility produced elemental phosphorus using shale from southeast Idaho phosphate mines. The emissions from that plant contributed significantly to air pollution problems in the airshed that includes the Fort Hall Indian Reservation, Pocatello, and other nearby communities. The plant was shut down in December of 2001, and the production facility has since been dismantled and removed.

The Simplot Don Siding Plant produces phosphoric acid, sulfuric acid, several grades of solid and liquid fertilizers, and other commercial chemical products. A comparison of reported actual emissions from the Don Plant and the maximum permitted emissions (the potential to emit or PTE) from both the Don Plant and the PCAEC is shown in Table 2. As shown in that table, the potential to emit PM<sub>10</sub>, NO<sub>x</sub>, and SO<sub>2</sub> from the PCAEC is substantially lower than the PTE from the Don Plant. The comparison of the Don Plant’s reported actual emissions and the Don Plant PTE shown in the table illustrates that a facility’s actual emissions for some pollutants may be substantially less than the allowable PTE.

**Table 2. COMPARISON OF EMISSIONS: DON SIDING PLANT AND PCAEC**

<b>Pollutant</b>	<b>Simplot Don Siding Plant Reported Actual Emissions 2007<sup>15</sup> (T/yr)</b>	<b>Simplot Don Siding Plant Potential to Emit<sup>16</sup> (T/yr)</b>	<b>PCAEAC Potential to Emit (T/yr)</b>
PM <sub>10</sub>	211 (PM <sub>10</sub> – PRI)	463.8	53.6
PM <sub>2.5</sub>	211 (PM <sub>2.5</sub> – PRI)	(463.8)	See Comment 25
CO	45.4	150	233
NO <sub>x</sub>	112	214	127
SO <sub>2</sub>	1,610	2,277	32.3
VOCs	3.30	7.6	5.1

*Result: No change to the draft permit or statement of basis.*

<sup>15</sup> [http://www.ffrdpocatello.org/images/simplot/pdf/JRS\\_Don\\_Plant\\_Emissions-5\\_Year\\_Statistics.pdf](http://www.ffrdpocatello.org/images/simplot/pdf/JRS_Don_Plant_Emissions-5_Year_Statistics.pdf)

<sup>16</sup> June 21, 2007, Tier I Operating Permit Renewal Application, J.R. Simplot, Don Siding Plant, DEQ Project T1-2007.0109.

**Comment 23. Demonstration of Compliance with NAAQS. Comments were received stating that the project impacts have not been compared against NAAQS. (Sierra Club VI)**

Response:

Significant impact levels (SILs) defined in the federal rules for NSR pollutants are incorporated into Idaho Rules as significant contribution levels (SCLs). “A SIL defines the level of ambient air impact that is considered a “significant contribution” to air quality. If the modeled maximum ambient impacts of a new source...are below the SILs, the source (1) is presumed not to cause or contribute significantly to a PSD increment or NAAQS violation, and (2) is not required to perform the multiple-source, cumulative impacts assessments that are otherwise required under PSD.”<sup>17</sup>

As discussed in Section 2.1.2 of the modeling memo contained in Appendix C of the draft statement of basis, if the estimated maximum pollutant impacts to ambient air from the PCAEC emissions do not exceed the significant contribution levels (SCLs) defined in Section 006 of the Rules, a full impact analysis is not required. A full impact analysis requires adding the appropriate ambient impact from the facility-wide emissions, impacts from any co-contributing sources, and DEQ-approved background concentrations. The total value is then compared to the applicable NAAQS.

The ambient impacts from the PCAEC emissions were predicted to be less than the SCL for all pollutants and all averaging periods. A full impact analysis—and comparison with NAAQS—was therefore not required.

To assist the public in evaluating the potential impacts from the PCAEC, however, DEQ developed graphics that illustrate the relative magnitude of the maximum predicted ambient impacts from the PCAEC, representative background concentrations, and the primary NAAQS for impacts. The primary NAAQS are set by the EPA to protect public health, which includes the health of sensitive populations such as asthmatics, children, and the elderly. The two graphics—one for the area near the facility location outside American Falls and the other for the area near Pocatello—are included as Figure 4 and Figure 7 at the end of this section. The graphics demonstrate that the predicted impacts from the PCAEC, combined with representative background concentrations, are well below the health-based standards for all criteria pollutants.

*Result: No change to the draft permit or statement of basis.*

**Comment 24. Demonstration of Compliance with NAAQS for Ozone. A comment was received stating that because the PCAEC will emit large amounts of ozone precursors NO<sub>x</sub> (127 TPY) and VOCs (5 TPY), that the facility impacts should be compared against the 8-hour ozone standard. The commenter noted that the EPA had recently lowered the ozone standard from 0.08 ppm to 0.075 ppm, and stated that ozone modeling should be performed to assess the impacts of project emissions on ozone air quality in Power County and other nearby areas. (Sierra Club A-#5)**

Response:

Summary: The ozone impact from the proposed project has been conservatively predicted to be 0.0058 ppm. Combined with the ozone “background” of 0.067 ppm measured at the nearest monitoring station (Craters of the Moon) the total ozone impact would be 0.0728 ppm, which does not exceed the 8-hour ozone standard of 0.075 ppm.

Analysis: Although the EPA has not yet published guidance for determining ozone compliance for individual sources, the level of VOC emissions (about 5 tons per year [TPY]) from the project is far below the level that would warrant ozone modeling. At 5 TPY, the VOC emissions from the proposed

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<sup>17</sup> May 16, 2008, Section III.C, Implementation of the New Source Review (NSR) Program for Particulate Matter Less than 2.5 Micrometers (PM<sub>2.5</sub>), 73 FR 28321, <http://www.epa.gov/fedrgstr/EPA-AIR/2008/May/Day-16/a10768.pdf>

project are also below the published minimum emission range for an assessment using a screening method such as the Scheffe<sup>18</sup> tables.

The Scheffe tables were developed based on results of the Reactive Plume Model-II, a Lagrangian-based photochemical model for new or modified sources emitting more than 25 tons per year (TPY) of nonmethane organic compounds (NMOC) in urban or rural areas. The values provided in the Scheffe screening tables were developed from a series of modeling analyses performed by Scheffe for several NMOC/NO<sub>x</sub> emissions ratios. An additional factor of 1.5 was applied to the modeling results. For example, the underlying modeling result in Scheffe's Table A2 for rural areas shows that the model run with the lowest NMOC/NO<sub>x</sub> ratio (a ratio of 1) and lowest NMOC emission rate (50 TPY) resulted in a modeled ozone concentration increment of 0.007 ppm, which is reported as 0.011 ppm in the screening values table for rural areas.

The tables are intended to provide very conservative screening level predictions that would exceed ozone formation produced by actual episodic events. Demonstrating ozone compliance using this screening method can be used to preclude the need to conduct resource-intensive photochemical modeling for a relatively small source of ozone precursor emissions.

The ozone impacts from PCAEC emissions can be estimated as follows:

- The PCAEC location and downwind impact area can be described as rural. Ozone monitoring in Idaho is limited and monitoring resources have been placed in locations where ozone is anticipated to be a concern. The nearest ozone monitor is located at Craters of the Moon National Monument, more than 70 miles away from the proposed project site. The "rural" Scheffe table was appropriately used by the applicant (see Addendum No. 4 to the application).
- Scheffe Screening Estimate:
  - Calculate the NMOC/NO<sub>x</sub> ratio based on annual emissions. For the purposes of this permitting project, it is reasonable to presume that NMOC emissions can be represented using the facility's total VOC emissions. The draft permit was based on total NO<sub>x</sub> emissions of 126.7 TPY. Removing the sulfuric acid plant option (see Addendum No. 3 to the application) results in lowering total NO<sub>x</sub> emissions to 109.1 TPY.

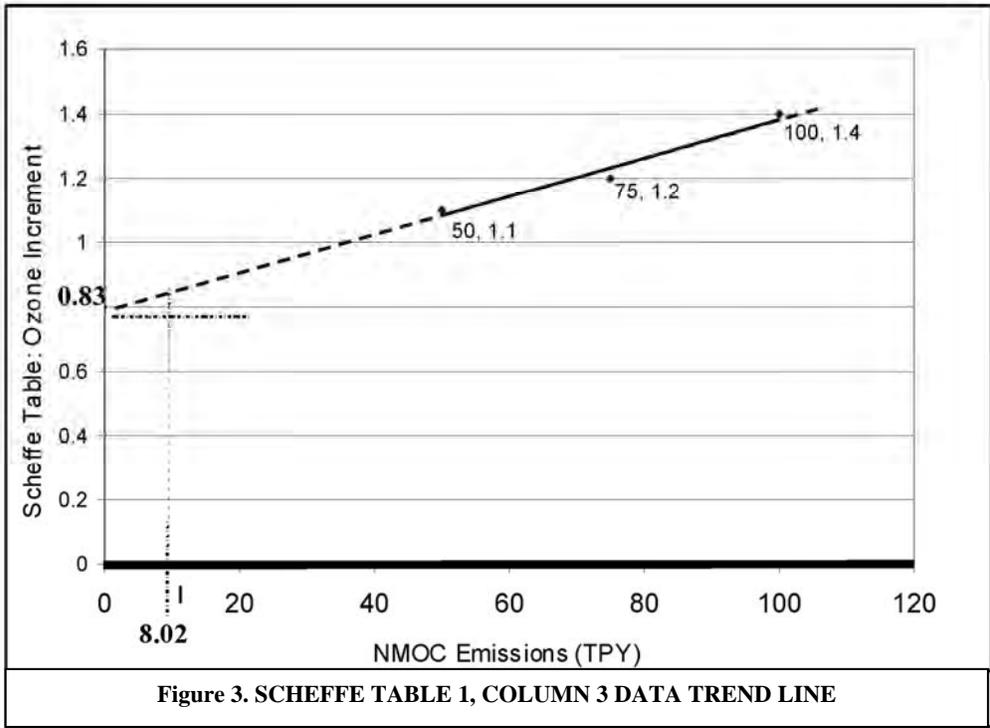
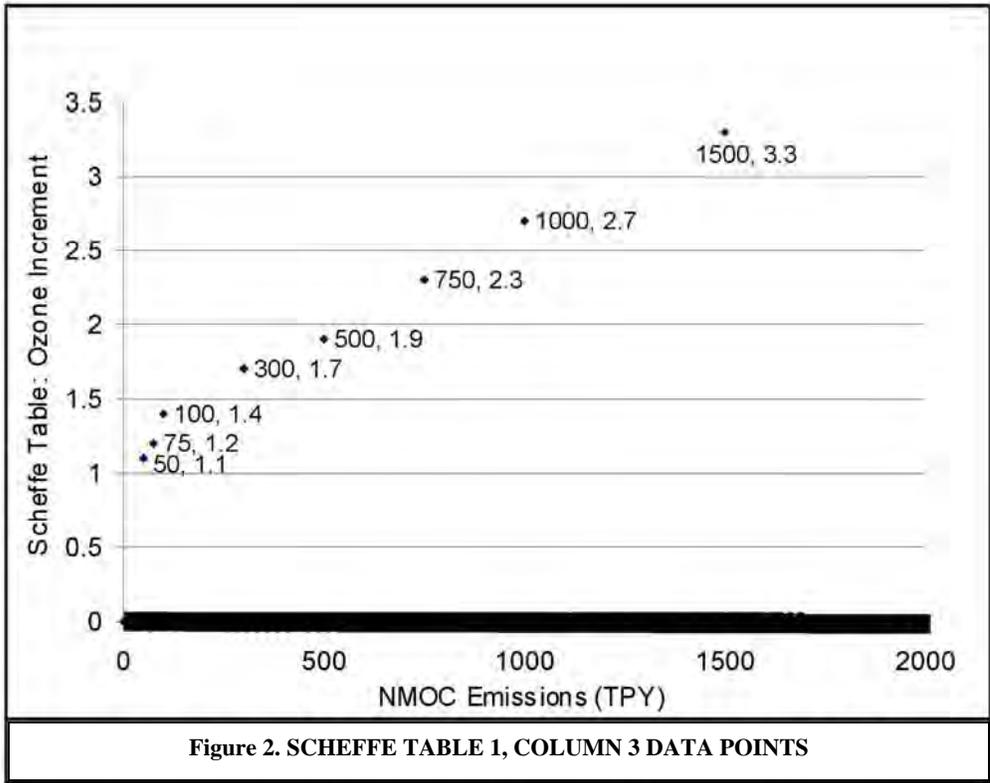
$$\frac{5.1 \text{ TPY VOC}}{109.1 \text{ TPY NO}_x} = 0.047 \rightarrow \text{Use Column 3 in Scheffe Table 1 (for ratios } < 5)$$

- Calculate "annualized" NMOC emissions based on the maximum short-term emissions. The maximum short-term VOC emissions for the facility are 1.83 lb/hr (see Section 3 of the draft statement of basis).

$$1.83 \text{ lb/hr} \times 8,760 \text{ hr/yr} \times T/2000 \text{ lb} = 8.02 \text{ TPY "annualized" NMOC emissions}$$

Estimate the ozone increment from Column 3 based on the annualized NMOC emissions of 8.02 TPY. The lowest NMOC (VOC) emission rate in this table is 50 TPY (six times higher than the value calculated for the PCAEC), meaning that any result taken directly from this table will greatly overestimate the ozone impact from the proposed project. The data points from Column 3 of the Scheffe table are shown in Figure 2. A trend line through the data points for the three lowest emission levels (50, 70, and 100 TPY) using a linear least squares fit was graphically extrapolated to estimate the ozone increment associated with annualized emissions of 8.02 TPY. As shown in Figure 3, the ozone increment associated with 8.02 TPY of NMOC/VOC emissions is conservatively predicted to be 0.83 pphm (0.0083 ppm) on a 1-hour average.

<sup>18</sup> September 1988, Richard Scheffe, VOC/NO<sub>x</sub> Point Source Screening Tables, U.S. EPA Office of Air Quality Planning and Standards, accessible at <http://ndep.nv.gov/bapc/download/model/scheffe.pdf>



In Addendum No. 4 to the application, SIE estimated the ozone increment based on a presumption that the six-fold reduction in emissions (8.02 TPY compared to the lowest table value of 50 TPY) would result in reducing the ozone increment by half (from 0.011 ppm to 0.0055 ppm). DEQ determined that the predicted ozone impact using the Scheffe screening method would be a bit higher at 0.0083 ppm (1-hour average).

The 0.075 ppm NAAQS for ozone is based on an 8-hour average. The 1-hour average result of 0.0083 ppm obtained using the Scheffe screening method can be converted to an 8-hour average by multiplying by a persistence factor of 0.7.<sup>19</sup> The Scheffe screening method ozone impact associated with emissions from the proposed project is therefore predicted to be 0.0058.

The ozone “background” can be determined using the fourth-highest daily maximum 8-hour average ozone concentration measured at the nearest monitoring location. The fourth highest 8-hour ozone concentration measured at the nearest ozone monitor (at Craters of the Moon National Monument, Site ID 160230101) in 2007 was 0.067 ppm.

Adding the Scheffe screening method 8-hour ozone concentration increase for the proposed project (0.0058 ppm) to the 8-hour monitored values, the estimated ambient ozone concentration is anticipated to be 0.0728 ppm for the 8-hour averaging period. This impact is less than the 8-hour ozone NAAQS of 0.075 ppm, and because the Scheffe screening method is a very conservative approach (i.e., significantly overpredicts the facility ozone impact) this easily demonstrates that the emissions from the proposed project will not cause a violation of the ozone standard.

*Result: No change to the draft permit or statement of basis.*

**Comment 25. Demonstration of Compliance for PM<sub>2.5</sub> NAAQS. Comments were received stating that the permit does not address emissions of PM<sub>2.5</sub>, including condensables and secondary formation of PM<sub>2.5</sub>. Commenters cited a Montana Board of Environmental Review decision<sup>20</sup> regarding the proposed Highwood Generating Station coal-fired power plant, saying that a BACT analysis for PM<sub>2.5</sub> is required, BACT emission limits for PM<sub>2.5</sub> must be included in the permit, and the PM<sub>2.5</sub> BACT analysis must be made available for public review prior to issuing a final permit. (Shoshone-Bannock Tribes, Sierra Club V.1, V.2, V.3)**

Response:

**Summary:** Compliance with PM<sub>2.5</sub> NAAQS is demonstrated for this project using PM<sub>10</sub> as a surrogate. This is appropriate for this project. As described in the paragraphs below, except for secondary formation of PM<sub>2.5</sub> from emissions of precursor species, PM<sub>2.5</sub> emissions are included in the PM<sub>10</sub> emission rates estimated for this project. Secondary formation of PM<sub>2.5</sub> was estimated by DEQ to be about 2.28 lb/hr (see below) which was not included in the PM<sub>10</sub> analysis. However, about 88% of the total 14.3 lb/hr modeled PM<sub>10</sub> emission rate is direct PM<sub>10</sub> emitted from sources for which PM<sub>2.5</sub> speciation data is unavailable or that are not likely to produce significant amounts of PM<sub>2.5</sub>.

PM<sub>2.5</sub> emissions would be expected to comprise just a fraction of the PM<sub>10</sub> emitted from the proposed project, and total PM<sub>2.5</sub> emissions would not exceed the 14.3 lb/hr modeled PM<sub>10</sub> emissions rate even if secondary PM<sub>2.5</sub> emissions are included. If PM<sub>2.5</sub> impacts are presumed to be the same as PM<sub>10</sub> modeled impacts (which, as discussed below, overpredicts the PM<sub>2.5</sub> impacts), it can be easily demonstrated that emissions from the PCAEC will not cause a violation of the PM<sub>2.5</sub> NAAQS, as shown in Table 3.

<sup>19</sup> December 31, 2002, State of Idaho Air Quality Modeling Guideline, DEQ Document ID AQ-011 (Rev. 1), p. 33, accessible at [http://www.deq.idaho.gov/air/permits\\_forms/permitting/modeling\\_guideline.pdf](http://www.deq.idaho.gov/air/permits_forms/permitting/modeling_guideline.pdf)

<sup>20</sup> May 30, 2008, Board of Environmental Review of the State of Montana, Case No. BER 2007-07 AQ, Southern Montana Electric Generation and Transmission Cooperative – Highwood Generating Station, Air Quality Permit No. 3423-00, accessible at <http://deq.mt.gov/ber/2008Agendas/SME/Order.pdf>

**Table 3. COMPARISON OF PM<sub>10</sub> AMBIENT IMPACTS WITH PM<sub>2.5</sub> NAAQS**

Location	Averaging Period	PM <sub>10</sub> Maximum Ambient Impact (µg/m <sup>3</sup> )	PM <sub>2.5</sub> Background (µg/m <sup>3</sup> )	Total (µg/m <sup>3</sup> )	PM <sub>2.5</sub> NAAQS (µg/m <sup>3</sup> )
Power County (American Falls)	24-hour	4.92	< 28 <sup>a</sup>	< 32.9	35
	Annual	0.69	< 8.19 <sup>a</sup>	< 8.9	15
Bannock County (Pocatello)	24-hour	< 0.5	28 <sup>a</sup>	< 28.5	35
	Annual	< 0.69	8.19 <sup>a</sup>	< 8.9	15

<sup>a</sup> The 3-year average of monitored PM<sub>2.5</sub> 24-hour 98<sup>th</sup> percentile results for 2004-2006 in Pocatello, and the 3-year average of monitored PM<sub>2.5</sub> annual means results for 2004-2006 in Pocatello (Garrett & Gould monitoring station). PM<sub>2.5</sub> monitoring has not been conducted in Power County. Because the area around American Falls is much less urban than Pocatello, however, it is reasonable to presume that the PM<sub>2.5</sub> background level in American Falls is less than in Pocatello.

For criteria pollutants, the threshold for triggering a full ambient impact analysis is based on the significant impact level or SIL (called the significant contribution level or SCL in the Rules). Demonstration that a facility’s emissions will not significantly contribute to a violation of an ambient air quality standard is also based on the SIL. As of this date, the EPA has not defined a SIL for PM<sub>2.5</sub>. Using PM<sub>10</sub> as a surrogate for PM<sub>2.5</sub> compliance, however, the PM<sub>10</sub> modeling results demonstrate that the emissions from the facility will not significantly contribute to a violation of the NAAQS.

The PM<sub>10</sub> emission rates described in the paragraphs below are the maximum 24-hour rates unless otherwise noted.

***The largest single source of PM emissions does not include a significant PM<sub>2.5</sub> fraction.***

As described Appendix D of the application,<sup>21</sup> more than 90% of PM emissions from the urea granulation vent is expected to be emitted as particles larger than PM<sub>10</sub>, and less than 1% of the total emitted as particles less than 1.0 microns. SIE’s estimate of PM<sub>10</sub> emissions conservatively presumed that 45% of total PM emissions rate of 20 lb/hr were emitted as PM<sub>10</sub>. This 9.0 lb/hr PM<sub>10</sub> emission rate is about 63% of the total 14.3 lb/hr modeled PM<sub>10</sub> emission rate.

***PCAEC direct PM<sub>10</sub> emissions include direct PM<sub>2.5</sub> emissions.***

The reference method used to measure “filterable” emissions of particulates captures emissions of PM<sub>2.5</sub> as a subset of PM<sub>10</sub>. Estimated PM<sub>10</sub> emissions from sources that do not include condensable gases or mists therefore (i.e., coal, petcoke, fluxant, and granular urea production and handling, cooling towers, and the ammonium nitrate neutralizer vent), include PM<sub>2.5</sub>. Emissions from these sources contributed 12.6 lbs out of the total 14.3 lb/hr (~88.1%) of the modeled PM<sub>10</sub> emissions for the proposed project. Because PM<sub>2.5</sub> makes up only part of the emissions of PM<sub>10</sub>, dispersion modeling based on PM<sub>10</sub> emissions will likely significantly overpredict the ambient impact due to PM<sub>2.5</sub> from these sources.

***PM<sub>10</sub> includes condensables and mists by definition in the Idaho Rules:***

Since May 1, 1994, particulate matter (PM) has been defined in Section 006 of the Rules as “[a]ny material, except water in uncombined form, that exists as a liquid or a solid at standard conditions.”

Since April 5, 2000, PM<sub>10</sub> emissions have been defined in Section 006 of the Rules as “[a]ll particulate matter, including condensable particulates, with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers emitted to the ambient air as measured by an applicable reference method, or an equivalent or alternative method in accordance with Section 157.”

<sup>21</sup> Appendix D includes page 11 from a paper entitled Urea Granulation Experience at AZOT, Grodno, Belarus, Paper 17 from the Tenth Stamicarbon Urea Symposium held in 2004.

***PCAEC PM<sub>10</sub> emission estimates included condensables:***

PM<sub>10</sub> emission estimates for sources burning natural gas and PSA tailgas at the PCAEC were based on AP-42 emission factors that included both the filterable and condensable particulate fractions (see Appendix D of the application). Emissions from gas-burning equipment contributed 1.46 lbs out of the total 14.3 lb/hr (~10.2%) of the modeled PM<sub>10</sub> emissions from the proposed project. Because only about 75% of PM<sub>10</sub> emissions from natural gas combustion are condensables,<sup>22</sup> dispersion modeling based on PM<sub>10</sub> emissions overpredicts the ambient impact due to PM<sub>2.5</sub> from these sources by about 25%.

PM<sub>10</sub> emission estimates for the diesel-fired emergency generators at the PCAEC were based on vendor data for new generators. Emissions from these two generators contributed 0.18 lbs out of the total 14.3 lb/hr (~1.3%) of the modeled PM<sub>10</sub> emissions from the proposed project. Typically, all particulate matter emitted from internal combustion engines is presumed to be less than 1 μm in size (i.e., is PM<sub>2.5</sub>)<sup>23</sup>, so dispersion modeling based on PM<sub>10</sub> emissions should adequately predict the ambient impact due to PM<sub>2.5</sub> from these sources.

***PM<sub>10</sub> compliance includes measuring condensables:***

For almost a decade (i.e., since at least the year 2000), DEQ has required that performance testing to demonstrate compliance with PM<sub>10</sub> limits include measuring the “back half” condensables. PM<sub>10</sub> emission limits listed in the draft permit for the package boiler, steam superheater boiler, the Selexol AGR CO<sub>2</sub> vent, urea granulation vent stack, and ammonium nitrate neutralizer vent specify that PM<sub>10</sub> includes condensable particulates.

***PM<sub>10</sub> BACT analysis and limits also limits PM<sub>2.5</sub>:***

As noted above, a significant part of the PM<sub>10</sub> emissions from combustion sources is PM<sub>2.5</sub> (about 75% of the 1.46 lb/hr PM<sub>10</sub> emissions from these sources, which represent about 10.2% of the facility’s total PM<sub>10</sub> emissions), and compliance with the PM<sub>10</sub> BACT limits listed in the draft permit for these sources includes capturing both the filterable and condensable “back half” of the emissions. For these sources, the BACT limit for PM<sub>10</sub> also serves as a BACT limit for PM<sub>2.5</sub>. A separate BACT analysis for PM<sub>2.5</sub> is not warranted.

As noted above, speciation of the PM<sub>10</sub> and PM<sub>2.5</sub> fractions is not known for the urea granulation vent, the largest single source of particulate emissions for the proposed project (9.0 lb/hr out of the 14.3 lb/hr modeled PM<sub>10</sub> emission rate, or about 63% of the total). The applicant has also stated that reliable information regarding the PM<sub>2.5</sub> fraction was not available for other sources including the feedstock handling, ammonium nitrate neutralizer vent, and cooling towers. Insufficient information is available to conduct a separate BACT analysis for PM<sub>2.5</sub> emissions from these sources.

PM<sub>10</sub> BACT controls for feedstock handling include negative-pressure railcar transfer enclosure(s), storage silos/enclosures, covered conveyors and transfer points, and high efficiency baghouses. Although information about the PM<sub>2.5</sub> fraction for these emissions is not readily available, direct PM<sub>2.5</sub> emissions will also be reduced using these controls. Condensable PM<sub>2.5</sub> will not be emitted from these sources. The PM<sub>10</sub> BACT controls and emission limits therefore also serve as BACT for PM<sub>2.5</sub> from these emission sources.

***PCAEC emissions of precursors could produce about 2.28 lb/hr of secondary PM<sub>2.5</sub> emissions:***

Fine particles can be emitted directly from a facility as filterable or condensable PM, or formed secondarily in the atmosphere from emissions of other compounds referred to as precursors. PM<sub>2.5</sub>

<sup>22</sup> EPA AP-42, Section 1.4, Natural Gas Combustion (7/98), Table 1.4-2

<sup>23</sup> EPA AP-42, Section 3.3, Gasoline and Diesel Industrial Engines (10/96), Table 3.3-1.

precursors subject to regulation include SO<sub>2</sub> and NO<sub>x</sub>. VOCs and ammonia emissions are “presumed-out” of regulation as PM<sub>2.5</sub> precursors, but may be regulated under certain conditions.

Secondary PM<sub>2.5</sub> emissions from SO<sub>2</sub> and NO<sub>x</sub>. The EPA has suggested ratios for interpollutant trading of SO<sub>2</sub> (40:1) and NO<sub>x</sub> (200:1) for primary PM<sub>2.5</sub> for the purposes of calculating offsets, but not netting.<sup>24</sup> However, for the purposes of this discussion the equivalent direct PM<sub>2.5</sub> emissions using these ratios can be estimated based on the maximum total hourly emissions of NO<sub>x</sub> and SO<sub>2</sub> from the proposed project (see Section 3 of the statement of basis) as follows:

$$6.36 \text{ lb/hr SO}_2 \times \frac{1 \text{ lb PM}_{2.5}}{40 \text{ lb SO}_2} \rightarrow 0.16 \text{ lb/hr PM}_{2.5}$$
$$64.7 \text{ lb/hr NO}_x \times \frac{1 \text{ lb PM}_{2.5}}{200 \text{ lb NO}_x} \rightarrow 0.32 \text{ lb/hr PM}_{2.5}$$

#### Secondary PM<sub>2.5</sub> emissions from VOCs.

Section V.A.5 of the preamble to EPA’s final PM<sub>2.5</sub> implementation rule<sup>24</sup> notes that the rule “does not, in general, require regulation of VOC as a precursor to PM<sub>2.5</sub> for the NSR program. However, a State may demonstrate to the [EPA]...or EPA may demonstrate that VOC emissions in a specific area are a significant contributor to that area’s ambient PM<sub>2.5</sub> concentrations. After such a demonstration, the State would regulate VOC (or a subset of VOC) as a PM<sub>2.5</sub> precursor for the NSR program in that area. ...[T]his “presumed-out” approach is appropriate for VOCs because of the complexity in assessing the role of VOCs in PM<sub>2.5</sub> formation. ...[T]he best policy is to continue to regulate VOC under NSR as a precursor to ozone,...which will potentially provide a co-benefit for PM<sub>2.5</sub> concentrations...” (see the response to Comment 24 for a discussion of the proposed projects potential ozone impacts).

VOCs with high molecular weight (i.e., with 25 carbon atoms or more and low vapor pressure) are emitted directly as primary organic particles and exist primarily in the condensed phase at ambient temperatures. These “condensables” are regulated as direct PM<sub>2.5</sub> emissions.

#### Secondary PM<sub>2.5</sub> emissions from ammonia.

Section V.A.6 of the preamble to EPA’s final PM<sub>2.5</sub> implementation rule<sup>24</sup> states that “[d]ue to the considerable uncertainty related to ammonia as a precursor, our final rules do not require ammonia to be regulated as a PM<sub>2.5</sub> precursor but do give States the option to regulated ammonia as a precursor to PM<sub>2.5</sub> in nonattainment areas for purposes of NSR on a case-by-case basis.” No areas in the vicinity of the proposed project have been designated as nonattainment for PM<sub>2.5</sub> (see below).

#### Secondary PM<sub>2.5</sub> emissions rate estimate.

Using these rough approximations (0.16 lb/hr PM<sub>2.5</sub> from SO<sub>2</sub> emissions, 0.32 lb/hr PM<sub>2.5</sub> from NO<sub>x</sub> emissions, and presuming that all of the 1.8 lb/hr VOC emission from the facility form secondary PM<sub>2.5</sub>), the emissions of precursors from the proposed project could result in the secondary formation of about 2.28 lb/hr of PM<sub>2.5</sub>, or about 16% of the total 14.3 lb/hr modeled PM<sub>10</sub> emissions rate. Note that the condensable fraction of the VOC emissions has already been included in the modeled PM<sub>10</sub> emissions rate (see above), which results in double-counting these emissions.

***Power County (American Falls) has not been identified as an area of concern for PM<sub>2.5</sub>, and Bannock County (Pocatello) has been recommended for designation as in attainment for PM<sub>2.5</sub>***

After lowering the 24-hour PM<sub>2.5</sub> NAAQS in 2006 from 65 µg/m<sup>3</sup> to 35 µg/m<sup>3</sup>, EPA asked all States and Tribes to submit recommendations for air quality designations (unclassifiable/attainment/nonattainment)

<sup>24</sup> May 16, 2008, Implementation of the New Source Review (NSR) Program for Particulate Matter Less than 2.5 Micrometers (PM<sub>2.5</sub>), 73 FR 28321, <http://www.epa.gov/fedrgstr/EPA-AIR/2008/May/Day-16/a10768.pdf>

for all areas under their jurisdiction. EPA recommended determining nonattainment area (NAA) boundaries based evaluating the following nine factors on a case-by-case basis:

1. Emissions in areas potentially included versus excluded from the NAA;
2. Air quality in areas potentially included versus excluded from the NAA;
3. Population density and the degree of urbanization, including commercial development in areas potentially included versus excluded from the NAA;
4. Traffic and commuting patterns;
5. Expected growth (including extent, pattern, and rate of growth);
6. Meteorology (weather/transport patterns);
7. Geography/topography (mountain ranges or other air basin boundaries);
8. Jurisdictional boundaries (e.g., counties, air districts, reservations, etc.); and
9. Level of control of emission sources.

A report listing all areas of Idaho and designation recommendations was submitted to the EPA in December 2007<sup>25</sup>. Based on monitoring data and the nine-factor analysis, a designation of unclassifiable was recommended for all portions of Power County (except for Tribal Lands).

All portions of Bannock County (except for Tribal Lands) were recommended for designation as attainment, based on monitoring data showing that the PM<sub>2.5</sub> 24-hour 98<sup>th</sup> percentile results for 2004-2006 were 32.5, 29.8, and 20.6 µg/m<sup>3</sup>, respectively. The 3-year average was 28 µg/m<sup>3</sup>.

The EPA finalized PM<sub>2.5</sub> designations on December 22, 2008. No part of Power or Bannock Counties were designated as nonattainment<sup>26</sup> and no part of the Fort Hall Indian Reservation was designated as nonattainment<sup>27</sup> (Tribal reservation lands include parts of Power and Bannock Counties). As shown in Table 3 above, the predicted worst-case ambient impacts from PCAEC emissions will not affect these determinations.

***Using PM<sub>10</sub> as a surrogate for PM<sub>2.5</sub> until Idaho's Rules are revised is consistent with EPA guidance:***

The preamble to EPA's final PM<sub>2.5</sub> implementation rule states "[w]hen the EPA promulgated the PM<sub>2.5</sub> NAAQS in 1997, [it] also issued a guidance document entitled 'Interim Implementation for the New Source Review Requirements for PM<sub>2.5</sub>' (John S. Seitz, EPA, October 23, 1997).<sup>28</sup> ... The 1997 guidance stated that sources would be allowed to use the implementation of a PM<sub>10</sub> program as a surrogate for meeting PM<sub>2.5</sub> NSR requirements until certain difficulties were resolved, primarily the lack of necessary tools to calculate the emissions of PM<sub>2.5</sub> and related precursors, the lack of adequate modeling techniques to project ambient impacts, and the lack of PM<sub>2.5</sub> monitoring sites."

Section V.H.3 of the rulemaking preamble addresses how the transition to the PM<sub>2.5</sub> NSR rules will take place for states like Idaho, which implement the PSD program under an EPA-approved State Implementation Plan (SIP).

The EPA fact sheet<sup>29</sup> issued along with the rulemaking clarifies that SIP-approved states have three years from the publication of the final rule (i.e., until May 16, 2011) to submit a revised SIP incorporating these NSR requirements, and that these states should continue to use the interim approach of relying on PM<sub>10</sub> as

<sup>25</sup> December 14, 2007, Letter from Governor Otter to Elin Miller, EPA X Regional Administrator, accessible at [http://epa.gov/ttn/naaqs/pm/designations/2006standards/rec/letters/10\\_ID\\_rec.pdf](http://epa.gov/ttn/naaqs/pm/designations/2006standards/rec/letters/10_ID_rec.pdf)

<sup>26</sup> EPA Final Designations Comparison, <http://www.epa.gov/pmdesignations/2006standards/documents/2008-12-22/finaltable.htm>

<sup>27</sup> EPA 2006 24-Hour PM<sub>2.5</sub> Standards – Tribal Designations, <http://www.epa.gov/pmdesignations/2006standards/tribal.htm>

<sup>28</sup> Available in the docket for this rulemaking, ID. No. EPA-HQ-OAR-2003-0062, and at <http://www.epa.gov/nsr/documents/nsrmemo.pdf>

<sup>29</sup> [http://www.epa.gov/air/nsr/documents/20080508\\_fs.pdf](http://www.epa.gov/air/nsr/documents/20080508_fs.pdf)

a surrogate for PM<sub>2.5</sub> until the revised SIP is adopted. Idaho will therefore continue to use PM<sub>10</sub> as a surrogate for PM<sub>2.5</sub> until additional technical information becomes available, state negotiated rulemaking takes place, and a revised SIP is submitted by the state and approved by the EPA.

*Result: No change to the draft permit or statement of basis.*

**Comment 26. PM<sub>2.5</sub> NAAQS alleged to be exceeded. Comments were received stating that PM<sub>2.5</sub> ambient impacts (using PM<sub>10</sub> as a surrogate) would exceed the PM<sub>2.5</sub> NAAQS. (Sierra Club V.4)**

Response:

A commenter suggested that adding the maximum 24-hour PM<sub>10</sub> ambient impact of 4.92 µg/m<sup>3</sup> from the PCAEC near American Falls to a measured 33.5 µg/m<sup>3</sup> PM<sub>2.5</sub> concentration measured more than 20 miles away in Pocatello would exceed the PM<sub>2.5</sub> NAAQS. PM<sub>2.5</sub> compliance is demonstrated based on the 3-year average of the 98<sup>th</sup> percentile of 24-hour concentrations at each population-oriented monitor.<sup>30</sup> As shown in Table 3, for the years 2004-2006, this value for the ozone monitor located in Pocatello is 28 µg/m<sup>3</sup>.

As shown in Figure 8 at the end of this section, the maximum 24-hour PM<sub>10</sub> impacts in the Pocatello area were predicted to be less than 0.5 µg/m<sup>3</sup>. If the PM<sub>2.5</sub> ambient impact were presumed to be equal to the modeled PM<sub>10</sub> impact in the vicinity of this monitoring station, adding 0.5 µg/m<sup>3</sup> to the highest measured PM<sub>2.5</sub> value of 33.5 µg/m<sup>3</sup> value would not cause an exceedance of the 35 µg/m<sup>3</sup> 24-hour PM<sub>2.5</sub> NAAQS.

*Result: No change to the draft permit or statement of basis.*

**Comment 27. Far-field Impacts – Blackfoot. Comments were received stating that particulate matter emissions from the proposed plant would reach Blackfoot and beyond. (Adams)**

Response:

Blackfoot is located approximately 41 miles (66.7 km) northwest of the proposed project site. Dispersion modeling for this project demonstrated that the PM<sub>10</sub> impacts would be negligible in the Pocatello area, which is half this distance from the facility compared to Blackfoot. See Figure 8 at the end of this section.

*Result: No change to the draft permit or statement of basis.*

**Comment 28. Far-field Impacts – Impact on monitored NAAQS exceedances near Chubbuck. Comments were received stating that the potential impacts of PCAEC emissions would exacerbate monitored exceedances of the PM<sub>10</sub> NAAQS. (Sierra Club, A-Comment#3)**

Response:

The commenter referred to measured PM<sub>10</sub> concentrations of 182 µg/m<sup>3</sup> (in 2005) and 161 µg/m<sup>3</sup> (in 2006) from a monitoring station located “south of Highway 30 and east of Weaver Road.” That monitoring station is operated by the Shoshone-Bannock Tribes, and is located in Power County at 42°54’35”N, 112°32’09”W at an elevation of 4,450 feet. The monitor is located just north of the Simplot Don Siding Plant near Pocatello, about 21.5 miles (34.7 km) northwest of the proposed project location.

The maximum 24-hour PM<sub>10</sub> impact from the PCAEC was predicted to be 4.92 µg/m<sup>3</sup>. This maximum ground-level impact was predicted to occur on elevated terrain located within about 4 miles of the facility.

<sup>30</sup> EPA, <http://epa.gov/air/criteria.html>

The ambient impacts from the PCAEC emissions drop off quite rapidly as the distance increases from the plant. For example, the maximum 24-hour PM<sub>10</sub> impact from the PCAEC at the nearest boundary of the Fort Hall Indian Reservation is less than or equal to 1.5 µg/m<sup>3</sup>. The maximum 24-hour PM<sub>10</sub> impact from the PCAEC in the area near the Tribes' monitor is less than or equal to 0.5 µg/m<sup>3</sup>, an impact that is an order of magnitude less than the 5.0 µg/m<sup>3</sup> SCL (see Figure 8 at the end of this section and the response to Comment 23).

The Rules require that the emissions from a facility will not cause or *significantly contribute* to a violation of any air quality standard. With a predicted maximum 24-hour PM<sub>10</sub> impact of 4.92 µg/m<sup>3</sup> at any point outside the plant boundary, the PCAEC emissions will not by themselves cause a violation of the 150 µg/m<sup>3</sup> PM<sub>10</sub> NAAQS. The maximum predicted ambient impact is also less than 5.0 µg/m<sup>3</sup>, the level defined in the Rules as "significant," so at no point will the PCAEC emissions *significantly contribute* to a violation of this standard (see the response to Comment 23).

*Result: No change to the draft permit or statement of basis.*

**Comment 29. Odors from H<sub>2</sub>S emissions. Comments were received noting historical concerns about sulfur odors in the Pocatello area, stating that the permit allows the emissions of hydrogen sulfide (H<sub>2</sub>S) in amounts that exceed odor thresholds, and stating that monitoring of H<sub>2</sub>S emissions using portable monitors should be required. (Greg Helm, Sierra Club comment XXI).**

Response:

Pocatello-area sulfur odors. The Simplot Don Siding Plant located near Chubbuck emits SO<sub>2</sub> into the Portneuf Valley airshed (see the response to Comment 22). When the Portneuf Valley is hit with an inversion, the air is stagnant and the pollutants have nowhere to go, at these times there is usually a sulfur smell in the valley. Although a smell can be detected, it is not indicative of pollutants exceeding any air quality levels. Depending on the pollutant, odors can be detected at concentrations in the range of parts per billion. The perception of odors is also very subjective, meaning that what one person finds bad another might not detect.

PCAEH H<sub>2</sub>S Emissions. Section 210 of the Rules requires that the facility-wide emissions of H<sub>2</sub>S be kept below a screening emission level (EL) increment at the point(s) of emission or below an acceptable ambient concentration (AAC) increment at all locations outside the facility boundary. The predicted H<sub>2</sub>S emissions from this facility were below the applicable EL; H<sub>2</sub>S emissions from this facility are therefore not expected to pose a health hazard to members of the public. Monitoring of H<sub>2</sub>S emissions using fixed or portable monitors within the plant is therefore not required in the draft air quality permit.

Sections 775-776 of the Rules require control of odorous emissions. The odor threshold for H<sub>2</sub>S is very low, about 0.5 parts per billion.<sup>31</sup> The concentration of H<sub>2</sub>S emissions in the sulfuric acid stack gas was estimated to be 1 part per million by volume (ppmv)(application, p. 3-63). The concentration of H<sub>2</sub>S emitted from the AGR CO<sub>2</sub> vent was not provided in ppmv in the application, but it is reasonable to presume that an odor would be detectable in the immediate vicinity of the exhaust point. It is not reasonable to presume, however, that members of the public would be likely to detect the "rotten egg" smell associated with H<sub>2</sub>S at locations outside of the plant boundary because:

- Fugitive emissions of H<sub>2</sub>S were estimated to be negligible, but would typically occur within the process building(s), which decreases the likelihood of being emitted to the outdoors.
- Emissions of H<sub>2</sub>S coming from the AGR CO<sub>2</sub> vent would be released from a tall stack (171 feet) at a relatively high velocity (about 18 meters per second), and at temperatures well above ambient (about 187°F). The release height, exit velocity, and thermal buoyancy associated with these releases increases the probability that the exhaust gases will become well-mixed in the

<sup>31</sup> ATSDR Medical Management Guidelines, Hydrogen Sulfide, <http://www.atsdr.cdc.gov/mhmi/mmg114.html>

atmosphere, and that H<sub>2</sub>S concentrations will be significantly diluted before reaching members of the public.

- The ability to detect odors and the perception of odors varies widely among individuals.

The draft permit requires that the facility maintain records of any odor complaints received, and to take appropriate action. Members of the public can also reach DEQ's Pocatello Regional Office to make a complaint using either a local number or a toll-free number. Air quality analysts in the Pocatello Regional Office respond as quickly as possible to every odor complaint called in to their office that is within their region. Reliance on citizen complaints allows the facility and DEQ to better identify the combination of plant operations and weather conditions that may lead to nuisance odors.

Repeated unresolved odor complaints to DEQ, or a significant number of complaints that are documented in the facility records, can lead to enforcement action. For example, DEQ could require that the facility revise their operations to better control the emissions of odor-causing pollutants. It is therefore not reasonable to restrict the emissions of H<sub>2</sub>S from this facility to levels below the odor threshold.

*Result: No change to the draft permit or statement of basis.*

**Comment 30. Visibility Impacts. Comments were received stating that the emissions from the plant would have unknown effects on long-distance visibility in the area, and that the emissions from the plant would impact views of the Buttes in the Arco desert, visibility at Craters of the Moon, Teton National Park, and Yellowstone National Park.. (Baxter, North)**

Response:

Based on a very conservative estimate of emissions (normal operations plus 50 cold starts) provided by SIE, federal land managers screened this project out from further review of visibility impacts to pristine areas (i.e., Class I areas). A screening-level visibility analysis provided in the application demonstrated that the emissions from this plant would not be visible from the nearest Class I area, Craters of the Moon National Monument.

*Result: No change to the draft permit or statement of basis.*

**Comment 31. Visibility Impacts – Comparison with plant in Tampa. A comment was received stating that the emissions from the PCAEC plant would be similar to the emissions shown in two photographs taken in Tampa, Florida. (ELB Music)**

Response:

One coal-fired power plant is located on Tampa Bay: The 1,800 megawatt (MW) Big Bend Power Station has four coal-powered units installed during the 1970s and 1980s.<sup>32</sup> The photograph submitted with the comment appears to be of this coal-fired power plant, which has emissions and potential visibility impacts that are in no way directly comparable to those from proposed PCAEC gasification project. The PCAEC impacts would be better compared to the Polk Power Station, an integrated gasification combined cycle (IGCC) power plant located near Mulberry, Florida, about 40 miles southeast of Tampa.

*Result: No change to the draft permit or statement of basis.*

## **APPLICATION COMPLETENESS**

**Comment 32. Application alleged to be incomplete. Comments were received stating that the application was incomplete because the potential to emit was not fully reported,**

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<sup>32</sup> TECO Energy, Big Bend Power Station, <http://www.tecoenergy.com/news/powerstation/bigbend/>

**BACT was not adequately researched, and the application did not include manufacturer information and operating parameters for equipment, MACT assessments for mercury and other HAPs. The commenter stated that it is erroneous to conclude that DEQ can “cover” this incomplete application by evaluating the yet-to-be-submitted Operation and Maintenance (O&M) manual. The commenter stated that DEQ must require that the applicant submit a complete application that includes each relevant operating parameter, all manufacturers of the process equipment and control equipment, and allow the public to review and comment on a complete application.** (Shoshone-Bannock Tribes)

Response:

DEQ disagrees. DEQ determined that the application was complete based on a review of the information provided in the application and supplemental addenda. Sufficient information was provided in the application and supplemental addenda to make regulatory applicability determinations and to develop reasonable and enforceable conditions for the draft permit to construct.

See the response to Comment 17 regarding the opportunity for public review of enforceable provisions contained in the O&M manual for the proposed project.

See the response to Comment 45 regarding MACT applicability to the proposed project.

See the response to Comment 75 regarding the potential to emit and acceptability of equipment descriptions provided in the application.

*Result: No change to the draft permit or statement of basis.*

**Comment 33. Completeness certification and completeness determination. A comment was received stating that the PCAEC application violates IDAPA 58.01.01.124 (truth, accuracy, and completeness) and 204 (which requires DEQ to make a completeness determination)....** (Shoshone-Bannock Tribes)

Response:

DEQ disagrees. The application was submitted in compliance with Section 123 of the Rules (i.e., the applicant certified that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete).

Section 124 requires that all documents submitted to DEQ be truthful, accurate, and complete. DEQ is aware of no information indicating that the submitted application was not truthful and accurate based on the information available to the applicant when the application was prepared. DEQ determined that the application was complete, and that sufficient information was provided to make regulatory applicability determinations and to develop reasonable and enforceable conditions for the draft permit to construct.

*Result: No change to the draft permit or statement of basis.*

**Comment 34. Nonattainment area permitting was not addressed. A comment was received stating that the PCAEC application violates IDAPA 58.01.01.204.** (Shoshone-Bannock Tribes)

Response:

Section 204 of the Rules governs permit requirements for new major facilities or major modifications in nonattainment areas. The proposed project is located in an area that is in attainment or unclassifiable for all pollutants. Section 204 of the Rules therefore does not apply to this project.

The potential impact on the existing PM<sub>10</sub> nonattainment area within the Fort Hall Indian Reservation, however, is addressed in the response to Comment 28.

*Result: No change to the draft permit or statement of basis.*

### **EMISSIONS: PARTICULATE MATTER**

**Comment 35. Baghouse efficiencies appear to be incorrectly calculated. Comments were received stating that particulate matter emissions from the feedstock baghouses were incorrectly calculated, and that the emissions are based on baghouse efficiencies of 49%, not 99%. (Shoshone-Bannock Tribes)**

Response:

DEQ disagrees. The feedstock handling emissions in the application were correctly calculated and were based on 99% capture efficiency. The commenter selected a somewhat unusual method for calculating the baghouse efficiency, but erred by using the controlled annual emission rate instead of the uncontrolled annual emissions. In addition, capture efficiencies are expressed in terms of the fraction that is captured, not the fraction that passes through the baghouse, so must be calculated by subtracting the ratio of controlled to uncontrolled emissions from 100%.

Example: Railcar Unloading (Commenter Calculation)

$$\text{Controlled PM}_{10} = 5,000 \text{ T/hr (throughput)} \times 0.00087 \text{ lb/hr (uncontrolled PM}_{10}) \times (1-0.99) \text{ (99\% capture efficiency)} = 0.044 \text{ lb/hr PM}_{10}$$

$$\text{Uncontrolled PM}_{10} = 912,500 \text{ T/yr (controlled throughput)} \times 0.00087 \text{ lb/hr (uncontrolled PM}_{10}) = 793.88 \text{ lb/yr} \times \text{year}/8,760 \text{ hr} = 0.09 \text{ lb/hr PM}_{10}$$

$$\text{Capture Efficiency} = 100\% \times (0.044/0.09) = 48.9\%$$

Example: Railcar Unloading (Correct Calculations):

$$\text{Controlled PM}_{10} = 5,000 \text{ T/hr (throughput)} \times 0.00087 \text{ lb/hr (uncontrolled PM}_{10}) \times (1-0.99) \text{ (99\% capture efficiency)} = 0.044 \text{ lb/hr PM}_{10}$$

$$\text{Uncontrolled PM}_{10} = (5000 \text{ T/hr} \times 8760 \text{ hr/yr}) \times 0.00087 \text{ lb/hr} = 38,106 \text{ lb/yr} \times \text{year}/8,760 \text{ hr} = 4.35 \text{ lb/hr PM}_{10} \text{ (uncontrolled throughput) (uncontrolled PM}_{10} \text{ EF)}$$

$$\text{Capture Efficiency} = 100\% \times (1 - 0.044/4.35) = 100\% \times (1 - 0.010) = 99\%$$

*Result: No change to permit or statement of basis.*

**Comment 36. Coal dust and granulated urea emissions. A comment was received stating that fugitive emissions from 150 uncovered railcars containing coal, railcars containing granulated urea, and fugitive emissions from the granulated urea process were not accounted for, are potentially significant, and their control equipment and operating parameters must be included for DEQ, EPA, and the public to assess this huge coal plant. Fugitive emissions from the granular urea process include crushing, screening, conveyor transfer to a storage area, and loadout into uncovered railcars for 70,000 tons of urea. (Shoshone-Bannock Tribes)**

Response:

Coal dust. Railcars transporting coal to the proposed project will have traveled a significant distance before reaching the American Falls area. It is highly unlikely that any fine materials will still be present at or near the surface of the coal in the railcars, so emissions due to wind erosion while the railcars are located on the siding at the PCAEC were appropriately presumed to be negligible.

Granular urea. The commenter is correct that emissions of PM/PM<sub>10</sub> from transfers, storage, and loadout of granular urea were not provided in the application or statement of basis. SIE provided additional clarification in Addendum No. 4 to their application, describing why negligible emissions are expected from the bulk handling and loadout of granular urea:

The proposed project is being designed to manufacture granular urea, which will be bulk loaded into railcars and tractor trailers. Urea will be stored onsite in covered, humidity controlled building(s) designed for up to 100,000 tons of storage. The proposed project does not include bagging operations.

Granular urea loading operations downstream of the urea storage building are an insignificant source of fugitive dust emissions, as noted in the Worley Parsons' final report contained in Appendix D of the application. Estimated emissions associated with urea product loading is described as "no emissions" in that report, as granular urea is a very consistent product with regards to granule size and distribution. This is appropriate based on the following considerations:

- Fines in the finished product must be negligible in order to meet the urea specification for the proposed project (included as an Attachment to Addendum No. 4 of the application), which states that 100% of the urea granules will be retained by a 1.18 millimeter (14 Tyler) screen. This means that all particles must be larger than the screen mesh opening of 1.18 millimeters (1,180 microns).<sup>33</sup> Average granule size is estimated to be 2.64 millimeters (2,640 microns). This is achievable because of the process configuration of the PCAEC, where fines are recycled back to the granulation process. This process is discussed on pages 2-44 through 2-46 of the application.
- EPA emission factor guidance<sup>34</sup> states that "[u]rea manufacturers presently control particulate matter emissions from prill towers, coolers, granulators, and bagging operations.... Nationwide, approximately 90% of urea produced is bulk loaded. Few plants control their bulk loading operations. Generation of visible fugitive particles is negligible."

In reviewing SIE's estimated emissions for granular urea handling, DEQ had reviewed the AP-42 guidance as well as a recently-issued permit for a similar facility in Oklahoma.<sup>35</sup> The permit notes that a sieve analysis of urea product showed no measurable PM<sub>10</sub>.

*Result: No change to the draft permit or statement of basis.*

**Comment 37. Coal dust emissions during railcar transport (Secondary Emissions). Comments were received stating that fugitive emissions of coal dust from coal trains passing through communities including Montpelier, Soda Springs, Lava, Pocatello and American Falls have not been addressed. (Baxter, Bray)**

Response:

Secondary emissions are those emissions which, although associated with a source, are not emitted from the source itself. The 1990 Draft NSR Workshop Manual clarifies that "secondary emissions must be considered in the PSD source impact analysis, if those emissions are specific, well-defined, quantifiable, and impact the same general area as the proposed project."<sup>11</sup>

Railcars transporting coal to the proposed project will have traveled a significant distance before reaching the American Falls area. It is highly unlikely that any fine materials will still be present at or near the surface of the coal in the railcars, so emissions due to wind erosion were appropriately presumed to be negligible.

*Result: No change to the draft permit or statement of basis.*

**Comment 38. PM emitted as mists. Comments were received stating that NAAQS, PSD increment, and visibility analyses for PM<sub>10</sub> did not include condensables, e.g., sulfuric acid mist,**

<sup>33</sup> American Society for Metals, ASM Handbook, Volume 15, Casting, p. 208, Table 1, Screen scale sieves equivalent, accessed at <http://books.google.com>

<sup>34</sup> EPA, AP-42, Section 8.2, Urea (7/93), accessible at <http://www.epa.gov/ttn/chief/ap42/ch08/final/c08s02.pdf>

<sup>35</sup> April 29, 2008, Oklahoma Department of Environmental Quality, Air Quality Division, Koch Nitrogen Company--Enid Nitrogen Plant, Urea Plant Expansion, accessible at <http://www.deq.state.ok.us/aqdnew/permitting/permissue/99092-c2p%20.pdf>

**nitric acid, and other emissions present as droplets or mist from the Selexol AGR CO<sub>2</sub> Vent, sulfuric acid vent, nitric acid unit tailgas vent(s), and the urea melt plant vent. (Sierra Club VI)**

Response:

On January 9, 2009, SIE submitted Addendum No. 4 to their application, which provided the following clarifications regarding the potential for PM emissions as mists:

Selexol AGR CO<sub>2</sub> Vent. Emission estimates associated with the Selexol AGR CO<sub>2</sub> vent were obtained from UOP and CSM technologies. UOP is the licensor of the Selexol technology, and CSM is a potential provider of the thermal oxidizer for CO, H<sub>2</sub>S, and COS abatement. UOP previously confirmed for SIE that the gas leaving the Selexol unit is free of moisture and other mists, as the syngas entering the Selexol system is treated to remove moisture. The CO<sub>2</sub> vent stream is composed of CO<sub>2</sub>, CO, H<sub>2</sub>S, and COS. According to UOP, there are no discernable acid compounds in the vent gas. The thermal oxidizer reduces the amount of CO, H<sub>2</sub>S, and COS to form more CO<sub>2</sub>, water, and SO<sub>2</sub>. The thermal oxidizer has a destruction efficiency of 95% for these compounds (see the response to Comment 91). Absent moisture or acid mist from the Selexol AGR process, it is reasonable to conclude that there are no quantifiable emissions of particulate matter (in the form of acid mist) from the Selexol system.

Sulfuric Acid Plant. In the draft permit, SIE retained the option of building either a sulfuric acid plant or a Claus sulfur recovery unit. On December 9, 2008, SIE submitted Addendum No. 3 to their application, stating that a design decision had been made to pursue the Claus option and forego the right to build the sulfuric acid plant. This decision eliminates a point source of emissions because the Claus unit is not a point source (all tailgas is recycled to the acid gas recovery system). Therefore, sulfuric acid mist emissions associated with the sulfuric acid plant initially proposed in the project design are no longer relevant to the permitting action. There are no other sources of sulfuric acid emissions in the proposed project.

Nitric Acid Tailgas Vent. The nitric acid unit's tailgas vent is not expected to emit particulate matter, either filterable or condensable. The project's technology provider has estimated emissions of nitric acid (HNO<sub>3</sub>) to be approximately 0.42 pounds per hour or 2.2 tons per year; however, nitric acid is not considered condensable particulate matter, because it remains gaseous at ambient temperature. SIE included chemical process information in Addendum No. 4 to their application showing that the dew point for HNO<sub>3</sub> is 27.41°F.

DEQ confirmed that there will be negligible emissions of HNO<sub>3</sub> as mist from this vent by reviewing a Material Safety Data Sheet for nitric acid<sup>36</sup> which states that at ambient temperature (70 °F), concentrated nitric acid is 100% volatile.

Urea Melt Plant Vent. The urea melt plant vent comes off the process water recovery system. The emissions from this vent are limited to ammonia (see the KBR report in Appendix D and Addendum No. 4 of the application). At an exhaust stack temperature of about 113°F, the ammonia will be emitted as a lighter-than-air gas.<sup>37</sup>

*Result: No changes to the draft permit. The draft statement of basis was revised to include this information, where appropriate.*

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<sup>36</sup> November 11, 2008, Mallinckrodt Baker, Inc., MSDS Number N3660, Nitric Acid 50%-70%, accessible at <http://www.jtbaker.com/msds/englishhtml/N3660.htm>

<sup>37</sup> April 22, 2008, Mallinckrodt Baker, Inc., MSDS Number A5472, Ammonia Solution, Strong, accessible at <http://www.jtbaker.com/msds/englishhtml/a5472.htm>

**Comment 39. Slag handling emissions of PM appear to be too low. A comment was received stating that the PM emissions from slag handling are underreported in Table 3.2 of the statement of basis. (ICL)**

Response:

DEQ disagrees. The emissions shown in the statement of basis match the emissions estimates provided in the application. DEQ determined that the emission estimate was acceptable, based on the following considerations:

Slag and slag storage physical characteristics. Based on observations of slag handling at a Coffeyville, Kansas gasification facility during a June 2008 site visit by the DEQ permit engineer, and an understanding that the slag from the PCAEC will be similar in size and consistency, however, significant PM emissions are not expected from slag handling and storage. The typical particle size is relatively large, the slag will be wet when first added to the storage pile, and the storage pile will be enclosed in a 3-sided bunker.

Slag production estimate. The slag production was based on 2,200 tons per day of coal and petcoke, rather than the 5,000 tons per day allowed in the draft permit, but assumes a 15% ash content for the coal/petcoke (i.e., 15% of the coal/petcoke feed ends up as slag). The highest ash content estimated for the coal and petcoke feedstocks was 10.6% and 2.0%, respectively (see p. 2-29 of the application). If no petcoke is included in the feed, this overestimates the amount of ash by about 1/3. If only petcoke is fed to the gasifier, this overestimates the amount of ash by a factor of 7.5. All of the maximum allowable 250 tons per day of fluxant is presumed to end up as slag. The assumptions used do not appear to under-predict the amount of slag that might be produced.

PM emissions were included for slag transfers to the storage pile and from the storage pile to trucks. SIE's estimated transfer point emissions presumed a large particle size (> 30 microns), and a moisture content of 4.8%. SIE used a mean wind speed of 10.04 miles per hour (mph). This value falls well within the range (1.3 to 15 mph) specified in the AP-42 table on page 13.2.4-4, Range of Source Conditions for Equation 1. This number can be checked independently using the NOAA website at <http://lwf.ncdc.noaa.gov/oa/climate/online/ccd/avgwind.html>). An additional 75% control for PM was applied because the moisture content will likely be considerably greater than 4.8%, and the presence of the bunker walls will limit the exposure to wind. The emissions estimates presume that material is transferred 24 hours per day, 365 days per year, which is a conservative approach.

PM emissions were included for wind erosion of the slag pile. SIE's estimated PM emissions from wind erosion of the slag pile appropriately used equations found in AP-42, Section 13.2.5, Industrial Wind Erosion. Calculations were based on a slag pile 10 meters in height, 29 meters square, subject to a daily fastest mile wind speed of 26.38 meters per second (59 mph).

*Result: No change to the draft permit or statement of basis.*

## **EXCESS EMISSIONS: STARTUPS AND UPSETS**

**Comment 40. Number of malfunctions and upsets should be limited. Comments were received stating that DEQ should not allow upset conditions, that the permit should limit the number malfunctions or upsets, including those that would bypass scrubbers at the gasifier flare, and should limit the number of upsets to no more than one per month. (Shoshone-Bannock Tribes, Greater Yellowstone Coalition, Felton)**

Response:

DEQ sets limits in air quality permits based on normal facility operations at the maximum allowable capacity. "Malfunction" is defined in the draft permit as "any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner." Malfunctions, or upset conditions, by definition, are unusual events that can not

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be reasonably foreseen or prevented. It is therefore unreasonable to limit the number of upsets at any facility. In accordance with General Provision 8 of the draft permit, excess emissions that occur during upsets and breakdowns must be reported to DEQ in accordance with Sections 130-136 of the Rules.

Excess emissions are defined in Section 006 of the Rules as “emissions that exceed an applicable emissions standard established for any facility, source or emissions unit by statute, regulation, rule, permit, or order.”

Startup, Shutdown, and Scheduled Maintenance (SSM) plan. To reduce emissions that may be emitted during startups and scheduled maintenance, however, a permit condition in Section 7 of the draft permit requires that SIE develop and submit an SSM plan for the gasification island. Procedures in the SSM plan must comply with the provisions of Sections 133.01 and 133.02 of the Rules. The SSM plan must be designed to minimize the frequency of shutdowns for scheduled maintenance or other reasons (thereby reducing the number of startups), malfunctions, and flaring. These work practices are incorporated by reference into the permit as enforceable permit conditions.

Risk Management Plan (RMP)/Process Safety Management (PSM) Plan. As noted in Section 4.9 of the draft statement of basis, SIE will be required to develop an RMP in accordance with 40 CFR 68 to prevent accidental emissions of extremely hazardous substances (e.g., ammonia) that may be present at the PCAEC in amounts greater than threshold quantities. The RMP—which focuses on preventing process accidents that might have consequences outside the facility boundaries—must be submitted to the EPA. Although not mentioned in the draft statement of basis, the PCAEC will also be subject to Occupational Safety and Health Administration (OSHA) PSM provisions under 29 CFR 1910.119, which require the development of hazard assessments and management procedures to prevent process accidents that would impact workers within the plant boundaries. Each of these efforts (RMP and PSM) is designed to limit the number of upsets at this facility.

*Result: No change to the draft permit or statement of basis.*

**Comment 41. Upset emissions will not be quantifiable. Comments were received stating that although testing of flared gas is required for startup conditions, no information will be collected regarding emissions during upsets that would bypass the scrubbers before being flared.** (Greg Helm)

Response:

DEQ disagrees. The permit does not allow bypassing the activated carbon beds or the amine scrubber prior to flaring of the syngas. Any emissions associated with such flaring must be reported as excess emissions (see the response to Comment 40). Unlike many industrial facilities in Idaho, designing the proposed project requires an understanding of the process chemistry and mass balance for each step of the process. It is reasonable to presume that SIE facility operators would be able to estimate emissions in the unlikely event of an accidental release.

*Result: No change to the draft permit or statement of basis.*

**Comment 42. Startup and Upset Limits are needed to control CO and CO<sub>2</sub>. Comments were received stating that the permit should limit the annual number of startups, heatups, shutdowns, and malfunctions or upsets to the number applied for in Appendix D of the application, for the purpose of applying BACT for CO and CO<sub>2</sub>.** (Sierra Club II.D.3)

Response:

A December 18, 2008 EPA interpretation clarified that BACT does not apply to greenhouse gas emissions, which includes emissions of CO<sub>2</sub> (see the response to Comment 4).

A limit on the number of malfunctions or upsets was not included in the draft permit (see the response to Comment 40).

The PCAEC will be designed to operate continuously during normal operations, with infrequent shutdowns for scheduled maintenance. Based on this consideration, DEQ determined that it was not appropriate to limit the number of startups for the proposed project. In accordance with General Provision 8 of the draft permit, excess emissions that occur during startup and scheduled maintenance must be reported to DEQ in accordance with Sections 130-136 of the Rules.

*Result: No change to the draft permit or statement of basis.*

**Comment 43. Class II area SO<sub>2</sub> impacts omit gasifier flare emissions during upsets. A comment was received stating that the SO<sub>2</sub> impacts in the Class II modeling were underestimated because they do not include emissions from the gasifier flare during emergency conditions. (Sierra Club A-#4)**

Response:

The Class II modeling analysis appropriately omitted emissions during emergency conditions. See the response to Comment 40 and Comment 41.

*Result: No change to the draft permit or statement of basis.*

**Comment 44. Class I area SO<sub>2</sub> impacts omit gasifier flare emissions during upsets. A comment was received stating that the FLM decision not to require a Class I analysis based on a Q/D evaluation addresses only annualized emissions. The commenter stated that the SO<sub>2</sub> impacts from gasifier flaring during upsets should modeled using CALPUFF and the resulting 3-hour and 24-hour concentrations compared against the applicable significant impact levels (SILs) and PSD Class I increments. (Sierra Club B-#9)**

Response:

The FLM screening approach and DEQ's review of visibility impacts appropriately omitted emissions during emergency conditions. See the response to Comment 40 and Comment 41.

*Result: No change to the draft permit or statement of basis.*

#### **FEDERALLY-REGULATED HAZARDOUS AIR POLLUTANTS (HAPs)**

**Comment 45. DEQ must establish MACT limits for Hazardous Air Pollutants. Comments were received stating that the proposed project has not been shown to be an "area source" for MACT and must otherwise comply with all applicable portions of MACT. (Shoshone-Bannock Tribes, Sierra Club IV)**

Response:

EPA MACT Regulations – Quick Facts. The Clean Air Act requires the EPA to develop regulations for facilities that are major sources of hazardous air pollutant (HAP) emissions, and that are also included in source categories listed in Section 112(B)(2) of the Clean Air Act. EPA published the initial list of 174 source categories in 1992. The current list of source categories can be found on EPA's website.<sup>38</sup>

*HAPs* are those pollutants known or suspected to cause cancer or other serious health effects, such a reproductive effects or birth defects, or adverse environmental effects. They can be in the form of

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<sup>38</sup> EPA, <http://www.epa.gov/ttn/atw/pollsour.html>

solids, liquids, or gases. Section 112(b) of the Clean Air Act currently lists 187 pollutants as regulated HAPs, including mercury compounds, formaldehyde, and polycyclic organic matter.

“*Major*” sources for HAPs emissions are defined as facilities that emit or have the potential to emit 10 tons or more per year of any HAP, or 25 tons or more per year of all HAPs.

“*Area*” sources for HAPs emissions are those facilities that emit or have the potential to emit less than 10 tons per year of any HAP, or less than 25 tons per year of all HAPs.

“*Potential to emit*” (PTE) is defined in Section 006 of the Rules as “the maximum capacity of a facility or stationary source to emit an air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is state or federally enforceable. Secondary emissions do not count in determining the potential to emit of a facility or stationary source.”

In cases where the EPA has not yet promulgated regulations that define the Maximum Achievable Control Technology (MACT) standards for a major source category, states must conduct a “case-by-case” MACT determination, in accordance with Section 112(j) of the Clean Air Act. Case-by-case MACT determinations are not required for area sources of HAPs.

PCAEC processes are covered by only two MACTS. Proposed operations at the PCAEC are not included in any of the 174 source categories except for 40 CFR 63, Subpart DDDDD and Subpart ZZZZ. However, neither of these MACT standards applies to the proposed project because:

- Subpart DDDDD, the “Boiler MACT,” was vacated in its entirety in a June 8, 2007 decision by the U.S. Court of Appeals for the District of Columbia Circuit. The package boiler and the steam superheater boiler at the PCAEC would not have been subject to this MACT, because the facility is not a major source of HAPs (see Appendix D of the application and Section 3.2 of the final statement of basis).
- Section 4.7 of the draft statement of basis describes why Subpart ZZZZ, a standard for stationary reciprocating internal combustion engines located at either major or area sources of HAPs, is not applicable to the two emergency generators proposed for use at the PCAEC.

The PCAEC is a synthetic minor source for HAPs. The uncontrolled emissions of all HAPs from the proposed project are less than 25 tons per year, but the uncontrolled emissions of carbonyl sulfide (COS) exceed 10 tons per year. See Appendix D of the application and Section 3.2 of the final statement of basis. PCAEC processes and equipment may be included in source categories for which an area source MACT will be developed by EPA in the future (e.g., industrial inorganic chemical manufacturing, industrial boilers, and agricultural chemicals and pesticides manufacturing<sup>39</sup>). To date, however, EPA has not promulgated area source MACTs for these source categories.

*Result: No change to the draft permit. The draft statement of basis was revised to include summary tables of uncontrolled and controlled HAPs emissions or statement of basis.*

**Comment 46. Uncontrolled HAPs emissions were not estimated. Comments were received stating that the application did not include estimates of uncontrolled HAPs emissions for determining whether the PCAEC is potentially a major source of HAPs.** (Greg Helm)

Response:

A facility’s status as a major source of HAPs emissions is based on the controlled emissions of HAPs, not on the uncontrolled emissions of HAPs (see the response to Comment 45).

*Result: No change to the draft permit or statement of basis.*

<sup>39</sup> 67 FR 43113, June 26, 2002

**Comment 47. HAPs monitoring is not sufficient to be practically enforceable. Comments were received stating that the permit does not require any HAPs monitoring to allow IDEQ to establish whether the PCAEC is in compliance with the established regulatory threshold limits. (Hueftle).**

Response:

DEQ disagrees. The uncontrolled emissions of all HAPs from the facility were less than 25 tons per year, and except for carbonyl sulfide (COS), the uncontrolled emissions of individual HAPs from all sources at the facility were each less than 10 tons per year. The draft permit required that emissions from the AGR CO<sub>2</sub> vent (the single source of COS emissions) be controlled using a thermal oxidizer designed with a minimum 90% destruction removal efficiency. The draft permit also required that SIE develop operating and maintenance procedures to ensure good operations of the thermal oxidizer; these parameters are incorporated by reference into the permit as enforceable conditions. Although the minimum DRE for the thermal oxidizer has been increased to 95% (see the response to Comment 91), the availability of enforceable provisions has not changed.

*Result: No change to the draft permit or statement of basis.*

**Comment 48. Mercury: EPA 10 strategies. One of EPA’s key strategies is to address unregulated atmospheric sources of mercury in Region 10. To this end, we plan to work with States, Tribes, and individual companies to develop voluntary agreements to reduce mercury emissions by taking advantage of the various pollution prevention and waste partnerships. Similarly, new sources with mercury emissions present an opportunity to minimize additional mercury emissions. (EPA 10)**

**Once the permit is issued, there is no mechanism to ensure that best practices are being followed to safeguard the public health. (EPA 10)**

Response:

The PCAEC is not an unregulated source of atmospheric mercury emissions. Emissions of mercury to the air from the proposed project are subject to Idaho’s toxic air pollutant rules.

EPA has not been prevented from pursuing a voluntary agreement regarding mercury emissions. In 2007, the EPA was aware of SIE’s plans to construct a coal gasification facility near American Falls. Nothing in DEQ’s air quality permitting process precluded EPA from contacting SIE to discuss their concerns regarding mercury emissions. The permitting process is not dependent on SIE “voluntarily” entering into any agreement with the EPA regarding the facility emissions.

DEQ’s EPA-approved air quality permitting and compliance inspection programs provide ways to ensure that best practices are followed. Clean Air Act requirements are implemented in Idaho by DEQ, under authority delegated by the EPA. The DEQ air quality program is conducted in accordance with an EPA-approved state implementation plan (SIP), and is subject to regular reviews by EPA 10 to ensure that the program meets EPA’s expectations. As part of this program, permits issued by DEQ must include limits on air pollutants as necessary to ensure that air quality standards are met. For any limit, the permit must specify monitoring and recordkeeping sufficient to determine that the facility is in compliance with that limit. DEQ inspectors conduct unannounced inspections of permitted facilities to ensure that the facility is being operated in accordance with the permit conditions. The frequency of inspections and the level of detail for each inspection depend on the potential emissions from the facility. Because the PCAEC will be subject to Title V permitting requirements, the most rigorous inspection schedule will apply to this facility.

EPA regulations for mercury do not apply to the proposed project. Under the EPA regulations, emissions of HAPs including mercury do not trigger BACT requirements. Under the Clean Air Act, the EPA currently regulates mercury emissions only through New Source Performance Standards (NSPS) for municipal waste combustion, electric utility steam generating units, and hospital and medical waste

incinerators; and National Emission Standards for Hazardous Air Pollutants (NESHAP) that require the use of maximum achievable control technology (MACT) for mercury cell chlor-alkali plants, Portland cement manufacturers, iron and steel foundries, and industrial boilers (although the “boiler MACT” has since been vacated). A case-by-case MACT analysis for mercury emissions from the two boilers proposed for the PCAEC was not required (see the response to Comment 45).

EPA has not promulgated rules under the Clean Air Act that explicitly require sources to consider the effects of atmospheric mercury deposition to plants, soils, or surface waters.

*Result: No change to the draft permit or statement of basis.*

**Comment 49. Mercury emission, controls, and handling were not adequately described. Comments were received stating that the absence of a detailed description of the mercury control equipment, the expected speciation of mercury emissions, the mercury handling practices, and monitoring of mercury emissions prevent meaningful and informed comment by EPA or the public (EPA Region 10, Sierra Club IV).**

Response:

DEQ disagrees. The syngas treatment train described in the application notes that activated carbon beds with a minimum removal efficiency of 95% will be used to remove most of the mercury in the syngas stream. When the permit application was submitted in April 2008, more detailed information was not yet available. This level of description, however, was adequate for the purpose of developing draft permit conditions for a large industrial facility for which detailed design had not yet begun.

Mercury emissions from the proposed project steady-state operations have been quantified and are significantly less than the screening emission level (EL) increment. Sources of mercury emissions during normal steady-state operations at the PCAEC include process heaters, pilots for the three flares, and a package boiler fired by natural gas, as well as a steam superheater boiler fired by natural gas or PSA tailgas. Mercury content of the PSA tailgas was presumed to be equal to concentrations typically found in natural gas. DEQ determined that this was reasonable, due to mercury reduction in process steps including the initial syngas quench, syngas treatment using activated carbon adsorption beds with a minimum 95% removal for mercury, and heat exchangers downstream of the carbon beds where the temperature of the syngas is reduced to about 32°F<sup>40</sup> which is expected to cause most of the remaining mercury to condense onto the walls of the heat exchangers.

Mercury emissions from these sources were provided in SIE’s application, based on operating each of these sources continuously throughout the year (i.e., 24 hours per day and 8,760 hours per year), were estimated to be 6.9E-05 lb/hr (0.000069 lb/hr). This emission rate is less than the screening EL increment of 1.0E-03 lb/hr (0.001 lb/hr) listed for mercury in Section 585 of the Rules. No further analysis was therefore required to demonstrate compliance with Idaho’s TAP rules for mercury.

Mercury emissions from the proposed project startup or upset operations are quantifiable and must be evaluated for reporting as excess emissions. The PCAEC will be designed to operate continuously during normal operations, with infrequent shutdowns for scheduled maintenance. Based on this consideration, DEQ determined that it was not appropriate to include startups in the permitted operations for the proposed project. The potential to emit for the PCAEC, therefore, does not include emissions during startups. In accordance with General Provision 8 of the draft permit, excess emissions that occur during startup and scheduled maintenance must be reported to DEQ (see Comment 42).

To ensure that mercury emissions during steady-state and startup or upset conditions would be quantifiable, however, the draft permit for the PCAEC required:

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<sup>40</sup> FLUOR/UOP, Synthesis Gas Purification in Gasification to Ammonia/Urea Complex, [http://www.gasification.org/Docs/Conferences/2004/26KUBE\\_Paper.pdf](http://www.gasification.org/Docs/Conferences/2004/26KUBE_Paper.pdf)

- Process heaters and the package boiler must be operated on natural gas only.
- Initial and periodic sampling and analysis of the coal, petcoke, and fluxant for metals including mercury, which provides information about the amount of metals being introduced into the gasification process.
- Initial and periodic sampling and analysis of the flared syngas for metals including mercury, which provides information about the metals that may be emitted during startup or upset conditions.
- Process equipment included in the syngas cleanup train (i.e., the activated carbon beds) must be designed to reduce mercury emissions by at least 95%.
- Operation, maintenance, and inspection procedures to ensure that the carbon beds are operated in this range must be specified in an O&M manual. The O&M manual must be submitted to DEQ for review and comment at least 60 days prior to startup of the activated carbon beds and must include specific information about how the device will be monitored, inspected, tested, and maintained.
- Procedures to minimize the number of startups, malfunctions, and flaring of syngas must be specified in an SSM plan to be submitted to DEQ for review and comment prior to startup.

The applicable O&M manual and SSM plan specifications are incorporated by reference into the draft permit as enforceable permit conditions.

Comparison of mercury emissions from facilities in southeastern Idaho:

As shown in Table 4, mercury (Hg) emissions from the PCAEC are predicted to be less than one pound per year. DEQ estimated the mercury emissions from flaring during startup using an EPA emission factor for mercury emissions from coal combustion, and presumed flaring of off-spec syngas for two hours during startup as described in SIE’s application. The calculation for worst-case startup emissions presumes a 95% reduction of the mercury in the syngas in the activated carbon beds, and 50 startups per year.

Predicted mercury emissions from other sources located in southeast Idaho have been included in the table to illustrate that the PCAEC will be a comparatively small source of mercury emissions.

**Table 4. COMPARISON OF MERCURY EMISSION RATES FOR IDAHO SOURCES**

<b>Emission Source</b>	<b>Assumptions</b>	<b>Mercury Emissions (pounds per year)</b>
PCAEAC	Steady-state operations	0.61 <sup>b</sup>
PCAEAC	Worst-Case: Steady-state operations plus 50 (~weekly) startups per year Minimum 95% reduction of mercury in the carbon beds.	1.0 <sup>b, e</sup>
Hot Mix Asphalt Plant, Portable	300,000 tons/year asphalt, used oil or diesel fuel, baghouse controls	0.80 <sup>c</sup>
Idaho State University, Pocatello Coal-fired boiler	3,854 T/yr coal, no controls <sup>a</sup>	1.43 <sup>d, e</sup>
BYU Idaho, Rexburg Coal-fired boilers	8,300 T/yr coal, no controls <sup>a</sup>	3.08 <sup>d, e</sup>
Ash Grove Cement, Inkom Cement kiln	2005 EPA Toxic Release Inventory (TRI)	7
P4/Monsanto, Elemental phosphorous plant Soda Springs	2005 EPA Toxic Release Inventory (TRI)	725

<sup>a</sup> Coal usage allowed under current air quality permits T2-030317 (ISU) and P-060500 (BYU).

<sup>b</sup> Total steady-state mercury emissions = 3.0E-04 TPY (0.61 pounds per year) from Application, Appendix D.

Estimated Startup emissions (syngas flaring estimated as coal combustion):

$$\frac{16 \text{ lb Hg}}{10^{12} \text{ Btu}} \times \frac{11,600 \text{ Btu}}{\text{lb}_{\text{coal}}} \times \frac{5,000 \text{ T}_{\text{coal}}}{\text{day}} \times \frac{2000 \text{ lb}}{\text{ton}} \times \frac{\text{day}}{24 \text{ hr}} \times \frac{2 \text{ hr}}{\text{startup}} \times (1-0.95) = 0.0077 \text{ lb Hg/startup}$$
$$0.0077 \text{ lb Hg/startup} \times 50 \text{ startups} = 0.39 \text{ lb Hg/yr}$$

<sup>c</sup> Based on emission factors from AP-42, Chapter 11.1 (4/04)

<sup>d</sup> Sample Calculation:  $\frac{16 \text{ lb Hg}}{10^{12} \text{ Btu}} \times \frac{11,600 \text{ Btu}}{\text{lb}_{\text{coal}}} \times \frac{3,854 \text{ T}_{\text{coal}}}{\text{year}} \times \frac{2000 \text{ lb}}{\text{ton}} = 1.43 \text{ lb Hg/year}$

<sup>e</sup> Mercury Emission Factor is from AP-42, Chapter 1.1 (9/98), Bituminous and Subbituminous Coal Combustion, Table 1.1-17

*Result: No change to the draft permit or statement of basis.*

**Comment 50. Mercury deposition. Comments were received regarding the potential impacts of mercury deposition onto surface waters, introduction of mercury into local crops either from atmospheric deposition or from using irrigation water from American Falls reservoir, and contamination of local groundwater from mercury in the reservoir. Comments received from the Shoshone-Bannock Tribes pointed to the potential impact of long-term deposition to American Falls Reservoir and to the Bottoms area was of particular concern.** (Shoshone-Bannock Tribes, EPA 10, Balsai, Bray)

Response:

PCAEC mercury emissions have been provided to EPA for future dispersion and deposition modeling. Atmospheric emissions and atmospheric deposition of mercury are just two of the many sources of mercury in our environment.<sup>41</sup> DEQ and EPA efforts are ongoing to better understand how regional emissions and discharges of mercury might result in impacts to vegetation, soils, surface waters, and aquatic plants and animals. As part of this effort, the EPA has conducted dispersion and deposition modeling for atmospheric mercury emissions in Idaho. The results of the most recent modeling were published in August of 2008.<sup>42</sup>

To ensure that mercury emissions from the proposed PCAEC are considered in any future modeling, information regarding the potential mercury emissions from the PCAEC was provided to the EPA workgroup by email from Carl Brown to EPA's Dwight Albright on January 9, 2009. Where mercury speciation information is not available, the EPA modeling group may presume speciation based on a number of factors including the type of emission sources (i.e., gas combustion) or the focus of the particular modeling run (e.g., emissions of reactive gas mercury). At EPA's request, DEQ provided additional information regarding stack parameters and emission rates for steady-state operations—and for an estimated 50 startups with syngas flaring from the gasifier flare—on February 6, 2009.

*Result: No change to the draft permit or statement of basis.*

**Comment 51. Mercury emissions were not included in Table 3.3 of the draft statement of basis. Table 3.3 of the statement of basis does not contain any estimate of the emissions of mercury.**

Response:

As shown in Appendix D of the application, permitted mercury emissions from the PCAEC during normal, steady-state operations were predicted to be 6.93E-05 lb/hr and 3.04E-04 tons per year (0.61

<sup>41</sup> Mercury in the Environment, accessible at [http://www.deq.idaho.gov/waste/prog\\_issues/haz\\_waste/mercury\\_new.cfm](http://www.deq.idaho.gov/waste/prog_issues/haz_waste/mercury_new.cfm)

<sup>42</sup> August 5, 2008, Model-Based Analysis and Tracking of Airborne Mercury Emissions to Assist in Watershed Planning, Final Revised Report, prepared by ICF International for the U.S. EPA Office of Water. Accessible at [http://www.epa.gov/owow/tmdl/pdf/final300report\\_10072008.pdf](http://www.epa.gov/owow/tmdl/pdf/final300report_10072008.pdf)

pounds per year). The predicted mercury emissions were significantly below the applicable screening emission level of 0.003 lb/hr that is listed in Section 585 of the Rules. It is not unusual to limit the discussion in Section 3 of the statement of basis to TAPs that exceed screening emission levels. A table describing the emissions of HAPs/TAPs has been added to the statement of basis (see the response to Comment 45).

*Result: No change to the draft permit. The draft statement of basis has been revised to include all evaluated TAPs emissions, including mercury.*

**Comment 52. Mercury emissions estimated by commenter to be 4,000 pounds per year. A comment was received stating that annual mercury emissions would be more than 4,000 pounds per year. (Thackray)**

Response:

The commenter used mercury contents that are available on the internet for Wyoming coals (0.01 ppm – 1.1 ppm), and calculated an average value of 0.105 ppm (presumed to be by weight). Based on gasifying coal at 5,000 tons per day, and his assumption regarding the mercury content, the commenter correctly calculated the annual emissions of mercury at ~385 pounds per year for the average mercury content, and ~4,000 pounds per year at a maximum mercury content of 1.1 ppm. This presumes that 100% of the mercury present in the coal is released to the atmosphere.

However, the PCAEC process is not directly comparable to coal combustion. Mercury emissions from the PCAEC are predicted to be less than one (1) pound per year (see the response to Comment 50).

*Result: No change to the draft permit or statement of basis.*

**Comment 53. Mercury emissions must be continuously monitored and frequent monitoring of all other HAPs must be required. (Hueftle)**

Response:

See the response to Comment 47.

*Result: No change to the draft permit or statement of basis.*

## **FEDERALLY-REGULATED RADIONUCLIDES**

**Comment 54. Radionuclide emissions from slag not demonstrated to be exempt. Comments were received stating that the Rules exempt evaluating the potential to emit radionuclides only if the PTE of radionuclides is less than 1% of the standard. Because slag from the gasifier process may contain radionuclides, or even concentrate them, DEQ should require PCAEC to assess the PTE of slag to determine compliance with 40 CFR Part 61, Subpart H, and the categorical exclusion contained in Section 221.02 of the Rules. (Shoshone-Bannock Tribes)**

Response:

The EPA, not DEQ, has the authority to regulate radionuclide emissions to the atmosphere. The EPA has promulgated National Emission Standards for Hazardous Air Pollutants for Radionuclides (Rad NESHAPs) for several source categories including from underground uranium mining and phosphorus plants. The operations proposed at the PCAEC are not included in any of the source categories currently regulated under Rad NESHAPs.

The 10 millirem per year emission standard for radionuclides specified in 40 CFR 61, Subpart H, “National Emission Standards for Emissions of Radionuclides other than Radon from Department of Energy Facilities,” does not apply to the PCAEC because it is not a Department of Energy facility.

*Result: No change to the draft permit or statement of basis.*

### **STATE-REGULATED TOXIC AIR POLLUTANTS (TAPs)**

**Comment 55. Coal dust and crystalline silica. The TAPs compliance demonstration must include coal dust and crystalline silica emissions. The commenter compared (Sierra Club comment XXII)**

Response:

#### Crystalline Silica and Coal Dust Emissions from Coal Handling

Particulate emissions from coal handling and storage are controlled by baghouses. SIE estimated PM<sub>10</sub> emissions from coal handling including from railcar unloading, transfers to hoppers, conveyor transfers, silo filling, and transfer from silos to the rod mill hoppers:

Fugitive coal dust from railcars on siding	(see Comment 36)
Railcar unloading (SRC01)	0.0435 lb/hr
Railcar hopper to conveyor (SRC02)	0.0407 lb/hr
Railcar conveyor to silo conveyor (SRC03)	0.0407 lb/hr
Silo conveyor to stacker conveyor (SRC04)	0.0407 lb/hr
Silo 1,2, and 3 Vents (SRC05, 06,07)	0.0407 lb/hr x 3
Silo 1, 2, and 3 Reclaimer (SRC08, 09,10)	0.0008 lb/hr x 3
Reclaim conveyor to rod mill hopper #1, #2 (SRC11, 12)	<u>0.0008 lb/hr x 2</u>

**PM<sub>10</sub> emissions from coal handling: 0.29 lb/hr**

#### Crystalline Silica Emissions from Sand Fluxant Handling

The commenter is correct that if silica sand is used as a fluxant, there may be emissions of crystalline silica from offloading the sand from railcars or trucks into a fluxant hopper, transferring sand from the hopper to a silo, filling the silo, and transferring sand from the silo to the rod mill hopper. DEQ does not believe, however, that there would be emissions of sand as a result of “breathing losses” during storage in the silo.

SIE addressed fluxant handling emissions as fugitive emissions. The draft permit, however, requires that enclosures described in Table 3.1 be constructed and maintained to control PM and PM<sub>10</sub> emissions from ...fluxant unloading, conveying, storage, and processing. Required controls include water sprays or equivalent means to provide a minimum 75% control of fugitive emissions, covered conveyors with enclosed transfer points, and storage in fully enclosed silo(s) equipped with a baghouse or cartridge filter with a minimum capture efficiency of 99% for PM/PM<sub>10</sub>.

Sand particle size depends on the grade of sand, and the amount of quartz (crystalline silica) can vary widely depending on the source of the sand. Based on information taken from the U.S. Department of Labor OSHA Silica Stakeholders Meeting Summary<sup>43</sup>, lake sand may be comprised of 90% crystalline silica, but only about 5% is respirable. The respirable silica content for reconditioned sand is about 7%. Based on the draft permit requirements, if sand fluxant is conservatively presumed to be 10% respirable crystalline silica, the emissions can be estimated as follows:

<sup>43</sup> June 2, 1998, OSHA Silica Stakeholders Meeting Summary, Session 1, Chicago, Illinois, accessed on December 8, 2008 at <http://www.osha.gov/dhs/stakeholdermeetings/Summary1.html>

Fluxant Railcar (or truck) unloading:  $250 \text{ T/hr} \times 0.00087 \text{ lb/ton} \times (1 - 0.75) = 0.054 \text{ lb/hr}$   
 (water sprays or equivalent, minimum 75% control, uncontrolled emission factor (EF) from SIE application)

Fluxant Hopper to Silo:  $250 \text{ T/hr} \times 0.00081 \text{ lb/ton} \times (1 - 0.96) = 0.0081 \text{ lb/hr}$   
 (covered conveyor w/enclosed transfer pts, uncontrolled EF from SIE application plus 96% control<sup>a</sup>)

Silo to Rod Mill Hopper :  $250 \text{ T/hr} \times 0.00081 \text{ lb/ton} \times (1 - 0.96) = 0.0081 \text{ lb/hr}$   
 (covered conveyor w/enclosed transfer pts, uncontrolled EF calculated by DEQ,<sup>a</sup> plus 96% control<sup>a</sup>)

Silo Filling (Sand):  $250 \text{ T/hr} \times 0.00099 \text{ lb/ton} \times (1 - 0.99) = \underline{0.002 \text{ lb/hr}}$   
 (baghouse/cartridge filter, Maricopa uncontrolled EF (sand)<sup>44</sup>, plus 99% control)

<sup>a</sup> 96% control for conveyor transfer points - see AP-42 Section 11.19.2.2

PM<sub>10</sub> Emissions from Sand Fluxant Handling: 0.070 lb/hr  
**Emissions of respirable crystalline silica: 0.007 lb/hr**

#### Demonstration of Compliance with TAPs Increment – Coal Dust

If all of the 0.29 lb/hr PM<sub>10</sub> emissions from coal handling were presumed to be coal dust, the 24-hour average emissions would exceed the screening emission level (EL) of 0.133 lb/hr for coal dust listed in Section 585 of the Rules. Modeling would therefore be required to demonstrate that the maximum 24-hour average ambient impact associated with these emissions will not exceed the AAC of 0.1 mg/m<sup>3</sup> (100 µg/m<sup>3</sup>) for coal dust. Dispersion modeling conducted by SIE predicted a maximum 24-hour impact of 4.92 µg/m<sup>3</sup> from facility-wide emissions of more than 14 lb/hr PM<sub>10</sub>. If all of the PM<sub>10</sub> emissions from the facility were emitted as coal dust, the ambient impact would be less than the applicable AAC of 100 µg/m<sup>3</sup>. The facility-wide PM<sub>10</sub> modeling results are therefore sufficient to demonstrate compliance with state TAP increments for emissions of coal dust.

#### Demonstration of Compliance with TAPs Increment – Crystalline Silica (as cristobalite)

Cristobalite has not been detected in coal mine dust,<sup>45</sup> so all crystalline silica emitted from coal handling is presumed to be in the form of quartz or fused silica. In Addendum No. 4 to the application, SIE clarified that sand fluxant can be reasonably presumed to contain negligible quantities of cristobalite.

#### Demonstration of Compliance with TAPs Increment – Crystalline Silica (as quartz or fused silica)

If all of the 0.29 lb/hr PM<sub>10</sub> emissions from coal handling combined with the 0.070 lb/hr PM<sub>10</sub> from sand fluxant handling were presumed to be crystalline silica (as quartz or fused silica), the 24-hour average emissions would exceed the screening emission level (EL) of 0.0067 lb/hr for quartz and fused silica listed in Section 585 of the Rules. Modeling would therefore be required to demonstrate that the maximum 24-hour average ambient impact associated with these emissions will not exceed the AAC of 0.005 mg/m<sup>3</sup> (5 µg/m<sup>3</sup>) for quartz and fused silica.

Dispersion modeling conducted by SIE predicted a maximum 24-hour impact of 4.92 µg/m<sup>3</sup> from facility-wide emissions of more than 14 lb/hr PM<sub>10</sub>. If all of the facility-wide PM<sub>10</sub> emissions were presumed to be emitted as quartz and fused silica, the ambient impact would be less than the applicable 5 µg/m<sup>3</sup> AAC. The facility-wide PM<sub>10</sub> modeling results are therefore sufficient to demonstrate compliance with state TAPs increments for emissions of crystalline silica that are not in the form of cristobalite.

*Result: No change to the draft permit. The draft statement of basis was revised to include discussions of coal dust and silica as TAPs emissions.*

<sup>44</sup> Maricopa County Air Quality Department, Emission Inventory Help Sheet for Concrete Batch Plants, [http://www.maricopa.gov/airquality/divisions/planning\\_analysis/docs/2007\\_helpsheets/07\\_concrete.pdf](http://www.maricopa.gov/airquality/divisions/planning_analysis/docs/2007_helpsheets/07_concrete.pdf)

<sup>45</sup> August 15, 1994, "Silica, Crystalline in coal mine dust, by IR, NIOSH Manual of Analytical Methods, Fourth Edition, accessible at <http://osh-thai.labor.gov.th/laborhealth/pdfs/7603.pdf>

**Comment 56. Crystalline silica probable carcinogenic effects should be evaluated. Comments were received stating that the California EPA, the Occupational Safety and Health Administration (OSHA), the American Conference for Governmental Industrial Hygienists (ACGIH), and the National Institute of Occupational Safety and Health (NIOSH) all consider crystalline silica to be a probable human carcinogen, and that DEQ should ensure that the risk of exposure to crystalline silica does not exceed the standards based on cancer risk. (Sierra Club comment XXII).**

Response:

Certain groups (including the state of California) do consider crystalline silica as a carcinogen. The International Agency for Research on Cancer (IARC) lists crystalline silica that is inhaled in the form of quartz or cristobalite *from occupational sources* as a Group 1 carcinogen.<sup>46</sup> In 2005 California's Office of Health Hazard Assessment (OEHHA) noted in its memo outlining a chronic Reference Exposure Level (REL) of 3 µg/m<sup>3</sup>, that there were currently no approved cancer potency factors for silica. California's REL is similar to the AACs (2.5 µg/m<sup>3</sup> for cristobalite and 5 µg/m<sup>3</sup> for quartz or fused silica) listed in Section 585 of the Rules. Idaho's toxic air pollutant rules are designed to be protective of human health and can allow for analysis beyond comparing to AAC and acceptable ambient concentration for carcinogen (AACC) increment levels. Since there is no peer-reviewed guidance on treating silica as a carcinogen, and since Idaho's current increment levels are consistent with other state's guidance, more advanced analysis is not warranted at this time.

*Result: No change to the draft permit or statement of basis.*

**Comment 57. Chloride and fluoride emissions. Comments were received stating that chloride and fluoride emissions for a gasification facility in Louisiana were predicted to be much higher than the levels estimated for the PCAEC, and stating concerns about fluoride emissions and fluorinosis in cattle based on local experience with emissions from the Simplot Don Siding Plant. (Sierra Club comment IV, Greg Helm)**

Response:

PCAEAC feedstock and processes are not comparable to Simplot Don Siding Plant operations. The Simplot Don Siding Plant located near Pocatello produces phosphoric acid, sulfuric acid, several grades of solid and liquid fertilizers, and other commercial chemical products. Fluorides are present in the phosphate rock used as feedstock at the Don Plant, and are retained in the phosphoric acid and phosphate fertilizer production processes. The PCAEC will not use phosphate rock as a feedstock, and will not produce phosphoric acid or phosphate fertilizers.

PCAEAC chloride and fluoride emissions. On January 9, 2009, SIE submitted Addendum No. 4 to their application, which included the following additional information regarding anticipated chloride and fluoride emissions from the PCAEC:

A discussion of the process for treating trace compounds like chlorides was included on page 2-35 of the application, in a subsection entitled Syngas Scrubbing. Trace metals, chlorides, and fluorides are adverse to the PCAEC's product mix, metallurgy, and process catalysts, and must be removed to ensure the product specifications and equipment and catalyst life expectancies are met. As noted in the DEQ's December 24, 2008 letter, public comments were submitted questioning the potential chloride and fluoride emissions from the Project. The basis of the comments is a study performed by the Department of Energy (DOE) entitled, "A Study of Toxic Emissions From a Coal-Fired Gasification Plant" (referred to hereafter as the DOE study). The DOE study is not applicable to the gasification technology or downstream processes of the PCAEC. The DOE study was performed on the predecessor to the Wabash Power Plant, which used E-Gas gasification technology that employs a convective syngas cooler. The

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<sup>46</sup> IARC website, <http://www.nationmaster.com/encyclopedia/List-of-IARC-Group-1-carcinogens>

PCAEC will utilize General Electric Quench gasifiers. Differences between the system evaluated in the DOE study and that proposed for the Project are discussed below.

Quench System. In contrast to the E-Gas technology, the Project's gasifiers employ a quench system, in which the syngas comes into contact with a water quench. The primary purpose of the quench system is to provide cooling and necessary water saturation to perform the downstream shift reaction. A secondary benefit of the quench system is the capture of certain ions, including chlorides and fluorides.

Use of the Syngas. Another difference between the facility evaluated in the DOE study and the PCAEC is the purpose of the syngas. In the DOE study, the facility burned the syngas to generate power. Therefore, any constituents that remained in the syngas would potentially end up in the air emissions of the power generating combustion unit. In contrast, the PCAEC is designed to process syngas into hydrogen, which is then consumed in the production of ammonia. The syngas must be cleaned and trace constituents removed, because the PCAEC processes include several catalytic systems that would be adversely impacted by these potential contaminants. Only the pressure swing adsorber (PSA) tailgas will be burned in the steam superheater boiler. All other syngas will be used in the ammonia production process. As a result, the potential for air emissions of trace constituents, like chlorides and fluorides, from combustion of the syngas at the PCAEC is materially less than from a comparably sized gasification-to electric power project (like the facility evaluated in the DOE study). Fluorides from the PCAEC will exit the system as fluorite,  $\text{CaF}_2$ , in the slag. And chlorides will exit the system in the zero liquid discharge system solids (ZLDS), as ammonium chloride ( $\text{NH}_4\text{Cl}$ ) salt. Both the fluorite and ammonium chloride salt in the ZLDS solids will be properly disposed of in a landfill.

Additional Limitations of the DOE Study. In addition to the significant differences between the type and use of the gasifier evaluated in the DOE study and the Project's gasifiers, other limitations of the DOE study are notable. First, the discussion of chloride and fluoride emissions in the DOE study was inconclusive. The following are two excerpts come from page 6-9 of the study:

(1) "The chloride material balance closure was about 54% This represents the upper boundary of the actual closure, since chloride was not detected in the incinerator and turbine exhausts, and the detection limits were used to estimate amounts in these streams. Internal mass balance closures around the sour water stripper and the gas turbine were also poor, in the range of 200-300 percent. The average measured chloride level in coal was 39  $\mu\text{g/g}$ , with a standard deviation of 7.4  $\mu\text{g/g}$ . Most of the chloride entering the plant in the coal would be expected to leave the system in the incinerator or turbine exhausts or in the stripped (sweet) water, but the measurements do not support this. Some chloride may also be fused into the slag matrix, and the slag analyzer may produce levels that are biased low. Therefore, a significant fraction of the chloride is unaccounted for in the plant."

(2) "The overall plant fluoride balance was poor, with an overall closure of only 28%. The average fluoride level of 66  $\mu\text{g/g}$  in the coal was higher than the chloride content. However, these concentrations are still quite low and are subject to analytical uncertainty and imprecision, as indicated by QA/QC results. The standard deviation of the analysis was 16  $\mu\text{g/g}$ , relatively high, but not enough to significantly impact the material balance. Most of the fluoride found in the discharge streams was contained in the slag, with a much smaller amount exiting in the sweet water. The fluoride analyses of the slag were consistent, with a low level of variability. Less than 1% of the fluoride in the coal was found in the incinerator and the turbine exhaust streams. The mode by which a substantial amount of fluoride leaves the plant is unknown, although its absence in the gas streams may indicate that the slag analysis was biased low and/or the coal analysis was biased high."

Close review of the DOE study reveals that the factors listed in Table ES-2 of the study are not appropriate, nor reliable, emission factors for the PCAEC.

The information provided in Addendum No. 4 underscores that the chloride and fluoride emissions from the PCAEC are not expected to be significant. During the development of the draft permit, DEQ had

made this determination based on a review of the recent final PSD permit for a similar operating facility located in Coffeyville, Kansas.<sup>47</sup>

*Result: No change to the draft permit or statement of basis.*

**Comment 58. Mercaptans. The application does not estimate emissions of mercaptans.** (Sierra Club comment XX)

Response:

On January 9, 2009, SIE submitted Addendum No. 4 to their application, which included the following additional information regarding anticipated mercaptan emissions from the PCAEC:

All thiols (or mercaptans) in the coal are expected to be destroyed in the gasifier. This is due to the high temperatures and pressures in the gasifier that react with sulfur compounds, such as mercaptans, to form carbonyl sulfide (COS) and hydrogen sulfide (H<sub>2</sub>S). This statement is supported by industry research. According to Research Report 59, *Gaseous Nitrogen and Sulphur Emissions from Coal Gasification*,<sup>48</sup> the gasification process destroys mercaptans. This was demonstrated by process sampling that showed that no sulfur compounds except COS and H<sub>2</sub>S are formed in an entrained flow coal gasification process. Additionally, thiols are not reported in the industry literature as being in the product gases from a GE gasifier. For these reasons, the Air Permit Application for the Project did not include an estimate of mercaptan emissions.

DEQ reviewed the referenced document, which underscores that SIE appropriately did not include emissions of mercaptans in their PTC application.

*Result: No change to the draft permit or statement of basis.*

**Comment 59. Nitrous oxide (N<sub>2</sub>O). Comments were received stating that emissions of N<sub>2</sub>O from the nitric acid plant have not been quantified.** (Sierra Club comment XV)

Response:

On January 9, 2009, SIE submitted Addendum No. 4 to their application, which included the following additional information regarding anticipated mercaptan emissions from the PCAEC:

Nitric acid is produced by oxidizing ammonia with air over a catalyst to produce nitrogen oxides (NO and NO<sub>2</sub>), which, in turn, react with water to form nitric acid (HNO<sub>3</sub>). This process also results in the formation of nitrous oxide (N<sub>2</sub>O), which does not “participate” in the downstream formation of nitric acid. The nitric acid production process is discussed in detail in Section 2, Page 2-46 of the Project’s Air Permit Application.

A typical nitric acid plant vents the nitrous oxide to the atmosphere with a nitric acid plant’s tailgas. The production of N<sub>2</sub>O varies widely by nitric acid plant and technology, and can range in concentration from 300 to 3500 ppmv.<sup>49</sup> The EPA estimates that approximately 9.5 kg of N<sub>2</sub>O is produced for every metric ton of acid produced unless additional controls are deployed.<sup>50</sup>

<sup>47</sup> August 6, 2007, KDHE Final PSD Permit, Coffeyville Resources Nitrogen Facility, accessible at [http://www.epa.gov/rgytgrnj/programs/artd/air/nsr/archives/2007/finalpermits/crnf\\_final\\_psd\\_permit.pdf](http://www.epa.gov/rgytgrnj/programs/artd/air/nsr/archives/2007/finalpermits/crnf_final_psd_permit.pdf)

<sup>48</sup> Day, S.J., Nelson, P.F., and Park, D.C., “Research Report 59, Gaseous Nitrogen and Sulphur Emissions from Coal Gasification,” Cooperative Center for Coal in Sustainable Development, June 2006. <http://www.ccsd.biz/publications/files/RR/RR%2059%20Gaseous%20Nitrogen%20formatted.pdf>

<sup>49</sup> 2004, Gary R. Maxwell, “Synthetic Nitrogen Products, A Practical Guide to the Products and Processes,” Kluwer Academics/Plenum Publishers, New York.

<sup>50</sup> 2001, EPA, “U.S. Adipic Acid and Nitric Acid N<sub>2</sub>O Emissions 1990-2020: Inventories, Projections, and Opportunities for Reductions.”

According to potential technology providers for the nitric acid plant at the PCAEC, an emission rate of 300 ppmv will be achieved using catalytic decomposition of N<sub>2</sub>O to atmospheric nitrogen and oxygen. NO<sub>x</sub> emissions will not be impacted by the catalytic decomposition of N<sub>2</sub>O. Therefore, SIE will control N<sub>2</sub>O emissions from the nitric acid plant to a concentration of 300 ppmv.

Nitrous oxide is listed in Idaho as a non-carcinogenic TAP under IDAPA 58.01.01.585. It has a screening EL of 6 lbs per hour and an AAC of 4.5 milligrams per cubic meter (mg/m<sup>3</sup>), on a 24-hr average. The 300 ppmv concentration corresponds to a mass emission rate of 88 lbs of N<sub>2</sub>O per hour, which is greater than the EL; modeling is therefore required for this pollutant.

The modeling analyses included with the application allow for a direct estimate of N<sub>2</sub>O concentrations associated with nitric acid production. As discussed in the Air Permit Application (Section 5, p. 5-126), SIE modeled the nitric acid plant independently in order to determine part-load operating conditions and their associated impacts to air quality. As part of this analysis, nitric acid emissions and ammonia emissions were modeled, and their impacts to air quality are expressed on a 24-hr average basis, in accordance with IDAPA 58.01.01.585. Ambient concentrations of nitrous oxide may be estimated by multiplying the modeled ambient concentration of either nitric acid or ammonia from the Air Permit Application by the emission rate of nitrous oxide, then dividing the resulting value by the corresponding emission rate of nitric acid or ammonia. The calculation of the maximum nitrous oxide concentration associated with the nitric acid plant utilizing this methodology is shown in Table 5.

**Table 5. DEMONSTRATION OF TAPS COMPLIANCE FOR NITROUS OXIDE**

Pollutant	Emission Rate (lb/hr)	Maximum Modeled 24-hr Concentration (mg/m <sup>3</sup> )	Impact Factor mg/m <sup>3</sup> per lb/hr	Calculated 24-hr Concentration (mg/m <sup>3</sup> )	IDAPA 58.01.01.585 AAC for N <sub>2</sub> O (mg/m <sup>3</sup> )
Nitric acid	0.44	0.00021	4.77E-04	---	---
Ammonia	2.19	0.00104	4.75E-04	---	---
N <sub>2</sub> O	88	Not modeled	4.76E-04 <sup>a</sup>	0.04	4.5

<sup>a</sup> Average of the impact factors for nitric acid and ammonia.

The ambient concentration of N<sub>2</sub>O from the nitric acid plant is approximately 0.04 mg/m<sup>3</sup>, which is approximately 0.9% of the 4.5 mg/m<sup>3</sup> AAC increment for nitrous oxide.

Compliance can be demonstrated using the uncontrolled N<sub>2</sub>O emissions. If ambient impact from 300 ppmv N<sub>2</sub>O emissions is scaled for an uncontrolled N<sub>2</sub>O emission rate of 3500 ppmv, the “uncontrolled” ambient impact would be 0.47 mg/m<sup>3</sup>. The nitrous oxide emissions from the nitric acid plant will not have an adverse impact to air quality, and concentrations will be within acceptable limits as defined in IDAPA 58.01.01.585. Because compliance can be demonstrated using the uncontrolled emissions, the permit will not require that the catalytic decomposition unit for N<sub>2</sub>O be installed or operated.

*Result: No change to the draft permit. The draft statement of basis was revised to address N<sub>2</sub>O TAPs emissions.*

**Comment 60. Sulfuric acid emissions. Comments were received stating that the permit does not appropriately address sulfuric acid emissions as a toxic air pollutant.** (Sierra Club XVIII)

Response:

On December 10, 2008, SIE submitted Addendum No. 3 to their application, stating that a design decision had been made to use a Claus sulfur recovery unit to produce elemental sulfur. The option to install a sulfuric acid plant has therefore been removed from the draft permit. Other than the sulfuric acid plant, there were no other sources within this project that might emit sulfuric acid.

*Result: The draft permit and statement of basis have been revised to delete the sulfuric acid plant option.*

**Comment 61. TAPs: Noncancer acute health effects were not quantified. Comments were received stating that toxics such as ammonia, benzene, and formaldehyde are known to cause noncancer health effects due to acute 1-hour exposure that is shorter than the modeled 24-hour exposure. (Sierra Club A-#7).**

Response:

Idaho's toxics air pollutant rules do not address acute (1-hour) exposures. Idaho's toxic air pollutant rules can allow for analysis beyond comparing to acceptable ambient concentration (AAC) and acceptable ambient concentration for carcinogens (AACC) increment levels. It is true that certain contaminants may give rise to health effects after acute (1 hour) exposures. However, with regard to the three examples listed by the commenter:

Ammonia is regulated as a noncarcinogen subject to a 24-hour standard. The maximum pound-per-hour ammonia emissions (i.e., the emissions that would be modeled for an acute 1-hour exposure) were estimated based on operations at maximum capacity. The inputs for the dispersion modeling presumed that ammonia was emitted at these maximum rates for each hour during a 24-hour period. The maximum 24-hour ambient impact of  $40.6 \mu\text{g}/\text{m}^3$ , therefore, is also representative of the acute 1-hour exposure concentration. This value is significantly below acute inhalation standards, including the 200 parts per million (ppmv) ( $13,929 \mu\text{g}/\text{m}^3$ ) American Industrial Hygiene Association (AIHA) Emergency Response Planning Guideline ERPG-2. The ERPG-2 is the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour without experiencing or developing irreversible or other serious health effects or symptoms which could impair an individual's ability to take protective action.<sup>51</sup>

$$\mu\text{g}/\text{m}^3 = \text{ppmv} \times (\text{pressure} \times \text{molar mass}/\text{RT}) =$$

$$(200 \text{ cm}^3_{\text{ammonia}}/\text{m}^3_{\text{air}}) \times (1 \text{ atm} \times 17.03052 \text{ g/mol}) / (82.06 \text{ atm cm}^3/\text{mol K} \times 298\text{K}) = 0.139 \text{ g}/\text{m}^3 = 13,929 \mu\text{g}/\text{m}^3$$

Benzene is regulated as a carcinogen subject to an *annual* standard. The maximum pound-per-hour emissions during normal operations were estimated based on operating each source of benzene emissions for 8,760 hours per year, except for the two emergency generators. Annualized emission rates were used for the generators. Because the generators will not typically be running, the maximum benzene concentration of  $9.0\text{E}-05 \mu\text{g}/\text{m}^3$  on an annual basis is also representative of the acute 1-hour exposure concentration. This value is significantly below acute inhalation standards, including the Agency for Toxic Substances and Disease Registry (ATSDR) acute inhalation minimal risk level of  $0.2 \text{ mg}/\text{m}^3$  ( $200 \mu\text{g}/\text{m}^3$ ).<sup>52</sup>

Formaldehyde is regulated as a carcinogen subject to an *annual* standard. The maximum pound-per-hour emissions during normal operations were estimated in the same manner as the ammonia emissions described above. The maximum formaldehyde concentration of  $0.013 \mu\text{g}/\text{m}^3$  on an annual basis is also representative of the acute 1-hour exposure concentration. This value is significantly below acute inhalation standards, including the ATSDR acute inhalation minimal risk level of  $0.004 \text{ mg}/\text{m}^3$  ( $4 \mu\text{g}/\text{m}^3$ ).<sup>53</sup>

As shown in the examples above, acute exposure guidance levels are considerably less restrictive than the 24-hour AAC or annual AACC increment values listed in Sections 585 and 586 of the Rules.

Demonstration that a facility's permitted emissions comply with the Idaho TAPs increments also demonstrates that emissions would not exceed acute (1-hour) health guidance as well. Unless a concern has been identified regarding potential acute exposure to a specific pollutant, it is typically not reasonable to evaluate 1-hour acute exposures for air quality permitting (which presumes normal facility operations).

*Result: No change to the draft permit or statement of basis.*

<sup>51</sup> ATSDR, Medical Management Guidelines for Ammonia (NH<sub>3</sub>), <http://www.atsdr.cdc.gov/mhmi/mmg126.html>

<sup>52</sup> July 2000, EPA-453/R-99-007, National Air Toxics Program: The Integrated Urban Strategy Report to Congress, accessible at <http://www.epa.gov/ttnatw01/urban/natpapp.pdf>

<sup>53</sup> July 2000, EPA-453/R-99-007, National Air Toxics Program: The Integrated Urban Strategy Report to Congress, accessible at <http://www.epa.gov/ttnatw01/urban/natpapp.pdf>

**Comment 62. TAPs: Cancer risks are based only on inhalation and noncancer chronic health effects were not addressed. Comments were received stating that the evaluation of potential cancer risks from this project did not include risks from pathways other than inhalation. Comments were received stating that the noncancer chronic health effects should be addressed and should include non-inhalation risks such as ingestion of soil, drinking water, and food. (Sierra Club A-#6, A-#7).**

Response:

Idaho's toxic air pollutant rules do not address depositional effects from air emissions. The toxic air pollutant rules can allow for analysis beyond comparing to AAC and AACC increment levels. If clear evidence of significant carcinogenic or noncarcinogenic risk existed as a result of air emissions, a detailed risk assessment that investigated depositional effects could be performed. However, the analysis submitted with the application and supplemental submittals demonstrated that none of the increment levels for carcinogens or noncarcinogens were exceeded for pollutants expected to be emitted from this facility.

For carcinogens, this means that the incremental increase in the risk from air emissions is very low (less than one in a million). For noncarcinogens, this means that the incremental increase in the risks from air emissions are a small fraction of levels that have been determined to be acceptable for chronic exposures in the workplace. A more detailed analysis or multipathway analysis is therefore not warranted.

See the response to Comment 48 regarding the potential deposition of mercury.

*Result: No change to the draft permit or statement of basis.*

### **FUEL SULFUR LIMIT APPLICABILITY**

**Comment 63. Fuel sulfur limit on coal is exceeded. Comments were received suggesting that the permit provision allowing a maximum 6% sulfur content in the coal feedstock is not in compliance with the Rules. (ICL supplemental comments)**

Response:

The requirements for sulfur content in fuels are contained in Sections 725 through 729 of the Rules. As stated in 725, the purpose of these rules is to prevent excessive ground level concentrations of sulfur dioxide from fuel burning sources in Idaho. DEQ conducted a negotiated rulemaking in 2007 to clarify that the sulfur limits apply only to *fuels* that will be used in *fuel burning sources*. This proposed rule clarification does not change the intent of the existing rules, and is scheduled to be considered for adoption by the Idaho Legislature during the 2009 legislative session. The application includes a discussion justifying why the 1% sulfur content limit for coal does not apply to this facility (see p. 5-157). DEQ concurred that coal for this facility is a feedstock, is not being burned as a fuel, and that the gasifier is not a fuel burning source. The draft permit limits the coal sulfur content to the 6% level assumed in SIE's process emission calculations and compliance demonstration.

*Result: No change to the draft permit or statement of basis.*

### **GASIFICATION TECHNOLOGY**

**Comment 64. The technology has not been proven. A comment was received stating that the technology for the proposed project has not been proven at this scale. (Christensen)**

Response:

The PCAEC will use the same or similar gasifiers, acid gas removal system (AGR), sulfur recovery unit, and fertilizer production processes as a plant in Coffeyville, Kansas. Other than the gasifiers and AGR,

the rest of the proposed project will use processes that have been commercially available and in use in the U.S. for a significant period of time.

*Result: No change to the draft permit or statement of basis.*

## **GASIFIER OPERATIONS**

**Comment 65. Permit should limit operations to one gasifier at any time. A comment was received stating that the permit should restrict the facility to operating only one gasifier in production mode at any time. (Sierra Club X)**

Response:

The description of the gasifier operations in Section 7.1 of the draft permit makes clear that two gasifiers will be installed, and that during normal operations one gasifier will be operated in production mode while the other is held in standby. The maximum feed to the gasifiers is limited to 5,000 tons per day of blended coal and petcoke, and 250 tons per day of fluxant. A separate condition requiring that only one gasifier be operated in production mode at any time is not necessary, nor is it reasonable. There is no evidence that the emissions from the gasification island or downstream processes would be increased if the facility split the maximum allowable feed and operated both gasifiers at the same time.

*Result: No change to the draft permit or statement of basis.*

## **HUMAN HEALTH IMPACTS**

**Comment 66. Health effects from PCAEC emissions. Comments were received stating that emissions from the proposed plant would affect the health of individuals for miles around it. (Adams)**

Response:

Graphics developed by DEQ illustrate that the predicted impacts from the PCAEC emissions, combined with representative background levels, will be well below national health-based standards (see the response to Comment 23). Compliance with state-regulated toxic air pollutants (TAPs) increments was demonstrated in the application, and discussed in the draft statement of basis. See the response to Comment 55 (coal dust and crystalline silica), Comment 57 (fluorides), and Comment 59 (N<sub>2</sub>O) for supplemental information demonstrating compliance with the applicable TAPs increments for these pollutants.

*Result: No change to the draft permit or the statement of basis*

**Comment 67. PCAEC emissions' affect on existing medical conditions (e.g., asthma). Comments were received from members of the public concerned that there would be immediate health consequences associated with emissions from this facility, and that the emissions of particulate matter, ammonia, and sulfur would exacerbate existing medical conditions, including asthma. (Scott Balsai)**

Response:

See the response to Comment 23.

*Result: No change to the draft permit or statement of basis.*

**Comment 68. Pennsylvania deaths during an inversion where there was a coal gasified plant. A comment was received stating that in a small valley town in Pennsylvania which had a coal gasified plant, 200 people died during an inversion, and noted that the area near the proposed project also experiences inversions. (Dohse)**

Response:

The commenter appears to be referring to the Donora smog disaster, which occurred in October of 1948 in Donora, Pennsylvania. Pollutants from steel smelting plants and coal furnaces near this small town located in the Monongahela River valley were trapped in this low-lying area during an inversion. Twenty people were killed and thousands were made ill. This event was critical to prompting the development of the first federal clean air act legislation in 1955.

As a result, operators of proposed facilities that will emit pollutants are required to demonstrate that the emissions will meet air quality standards and regulations. The predicted ambient impacts described in the draft statement of basis and shown graphically in Figure 4 through Figure 9 at the end of this section reflect the use of local hourly meteorological data from a five-year period. This ensures that the effects of local meteorological conditions, including inversions, are captured in the analysis.

*Result: No change to the draft permit or statement of basis.*

**MODELING ANALYSIS**

**Comment 69. Urea and ammonium nitrate process stack exit velocities seem high. Comments were received stating that the exhaust velocities for the urea melt plant vent, urea granulation vent, and the AN neutralizer vent seemed unreasonably high. (Sierra Club A-#1)**

Response:

SIE provided a copy of a December 17, 2008 email from KBR to SIE regarding the stack parameters in Addendum No. 4 to the application. According to the email, stack exit velocities for the Urea Melt Plant Vent, Urea Granulation Vent, and the AN Neutralizer Vent were estimated by KBR based on their experience with similar plants and similar technologies. The basis for the modeling parameters for these sources is contained in a letter report that is included in Appendix D of the application. KBR reconfirmed these values in their December 17, 2008 email, restating that the basis for the stack exit velocities and for the emission rate estimates are similar plant designs with which KBR is familiar.

*Result: No change to the draft permit or statement of basis.*

**Comment 70. VISCREEN model should not be used at distances greater than 50 km. A comment was received stating that CALPUFF should have been used instead of VISCREEN to estimate visibility impacts at Craters of the Moon, 74 km away from the PCAEC. (Sierra Club B-#10)**

Response:

The Federal Land Managers (FLMs) representative, John Notar, National Park Service, was contacted by SIE prior to submitting the PSD application. Based on the Q/D analysis presented by the applicant for this project, a refined Class I visibility analysis was not required for this project. See Appendix G of the permit application to review the email response from John Notar notifying SIE of the FLMs' decision.

The VISCREEN analysis was submitted by SIE at DEQ's request for information purposes, providing additional assurance of acceptable impact levels. VISCREEN is the appropriate model for a screening analysis performed for information purposes. Although other models may perform better for long range transport conditions, the fact that Example 1 in the Workbook for Plume Visual Impact Screening and

Analysis, revised October 1992, is a Level 1 screening analysis that uses a minimum distance of 70 kilometers and a maximum distance of 90 kilometers, indicates that EPA intended the VISCREEN model to be used to evaluate visual impairment for projects like SIE's PCAEC. The VISCREEN analysis for the PCAEC was based on a minimum distance of 74.7 kilometers and a maximum distance of 85.7 kilometers, which is about the same range as used in the workbook example.

*Result: No change to the draft permit or statement of basis.*

**Comment 71. Plume blight impacts were underestimated. A comment was received stating that the screening level visibility analysis did not include emissions during upset conditions, grossly underestimated the emissions of NO<sub>2</sub> and sulfates (SO<sub>4</sub>), and hence underestimated plume blight impacts. (Sierra Club B-#11)**

Response:

Emissions during upset conditions. The Level 1 screening visibility analysis appropriately omitted emissions during emergency conditions. See the response to Comment 40 and Comment 41.

In addition, the guidance on page 23 of the Workbook for Plume Visual Impact Screening and Analysis,<sup>54</sup> states:

“The values used for plume visual impact screening generally would be the maximum emission rates for which the air quality permit is being applied and would correspond to those used for short-term (i.e., 1-, 3-, and 24-hour average) air quality impact analyses.”

The emissions input into the VISCREEN model represent requested permit allowable emission rates.

SO<sub>4</sub> emission rates. The commenter stated that the modeled primary sulfate (SO<sub>4</sub>) emission rate was low and that all SO<sub>2</sub> emissions should be considered as SO<sub>4</sub> emissions in a screening analysis. This comment was not supported based on review of the Workbook or the Rules. The Workbook states the following on page 23:

“SO<sub>2</sub> emissions are not required as input to VISCREEN. Moreover, the issue of secondary sulfate formation (SO<sub>4</sub><sup>-</sup>) is not treated in VISCREEN because of the limited range of applicability of a steady state Gaussian dispersion model and because of the uncertainty of estimating the conversion of SO<sub>2</sub> to SO<sub>4</sub> in a coherent plume. More sophisticated plume visibility models treat both secondary sulfate and nitrate.”

If SO<sub>2</sub> emissions were required to be treated entirely as primary sulfate (SO<sub>4</sub>) emissions, the Workbook would have provided clear recommendation to either input all SO<sub>2</sub> emissions into the model, which the model would then evaluate as primary sulfate emissions, or the modeler would be directed to recalculate all SO<sub>2</sub> emissions as primary sulfate emissions for input to the VISCREEN model. The Workbook does not contain any such guidance. A more refined visibility analysis was not required because the visibility analysis performed did not exceed the Level 1 screening criteria.

Moreover, the primary sulfate emissions rate was attributed to the facility's sulfuric acid plant. In Addendum No. 4 to their application, SIE requested that the sulfuric acid plant option be removed from the draft permit. The Level 1 VISCREEN analysis, which included the primary sulfate emissions from the sulfuric acid plant, is therefore quite conservative, i.e., it overpredicts the plume blight impacts from normal plant operations.

NO<sub>2</sub> modeled emissions. The commenter also suggested that primary NO<sub>2</sub> emissions should have been input as 10% of the total 68.78 lb/hr NO<sub>x</sub> emission rate, or 6.878 lb/hr of primary NO<sub>2</sub>. The VISCREEN analysis submitted by SIE was based on a primary NO<sub>2</sub> emission rate of 0.94 lb/hr.

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<sup>54</sup> September 1988, with revised pages dated October 1992, Workbook for Plume Visual Impact Screening and Analysis, U.S. EPA, Office of Air Quality Planning and Standards, EPA-450/4-88-015.

However, a review of the discussion in Appendix B of the Workbook of the calculation methods for determining the concentration of NO<sub>2</sub> in the plume revealed that there are two ways that NO<sub>2</sub> concentration is calculated by the model. In the first option, NO<sub>2</sub> is estimated as suggested by the commenter as follows:

$$[NO_2] = [0.1 * NO_x] + BackgroundOzoneConcentration + [NO_2]_{primary}$$

Where [NO<sub>x</sub>] is calculated according to the following equation:

$$[NO_x] = Q_{NO_x} / \sqrt{2 * PI * \sigma_z * u * [2 * \tan(22.5 / 2) x]}$$

Therefore, if the modeler inputs a value for primary NO<sub>2</sub> equal to 10% of the NO<sub>x</sub> emissions, the model may double-count primary NO<sub>2</sub> emissions for one of the two cases. It is DEQ's conclusion that primary NO<sub>2</sub> emissions should only be input in the model if the source is known to emit primary NO<sub>2</sub>. The VISCREEN model accounts for the other assumptions within its programming code. This conclusion is supported by the statement listed on page B-3 of the Workbook which says, "...VISCREEN will also allow the user to input such species as (1) primary nitrogen dioxide (NO<sub>2</sub>) *if this species is directly emitted by the given chemical process* (emphasis added)."

## VISCREEN OUTPUT FOR INPUT OF 10% OF NO<sub>x</sub> AS PRIMARY NO<sub>2</sub>

Visual Effects Screening Analysis for  
Source: Southeast Idaho Energy  
Class I Area: Craters of the Moon NM

\*\*\* Level-1 Screening \*\*\*

Input Emissions for

Particulates	2.06 G /S
NO <sub>x</sub> (as NO <sub>2</sub> )	8.55 G /S
Primary NO <sub>2</sub>	.86 G /S
Soot	.00 G /S
Primary SO <sub>4</sub>	.11 G /S

\*\*\*\* Default Particle Characteristics Assumed

Transport Scenario Specifications:

Background Ozone:	.04 ppm
Background Visual Range:	110.00 km
Source-Observer Distance:	74.70 km
Min. Source-Class I Distance:	74.70 km
Max. Source-Class I Distance:	85.70 km
Plume-Source-Observer Angle:	11.25 degrees
Stability:	6
Wind Speed:	1.00 m/s

VISCREEN OUTPUT, continued

R E S U L T S

Asterisks (\*) indicate plume impacts that exceed screening criteria

Maximum Visual Impacts INSIDE Class I Area  
Screening Criteria ARE NOT Exceeded

Backgrnd	Delta E		Contrast		Alpha	Crit	Plume	Crit	Plume
	Theta	Azi	Distance	Alpha					
SKY	10.	84.	74.7	84.	2.00	.481	.05	.003	
SKY	140.	84.	74.7	84.	2.00	.254	.05	-.005	
TERRAIN	10.	84.	74.7	84.	2.00	.390	.05	.005	
TERRAIN	140.	84.	74.7	84.	2.00	.071	.05	.002	

Maximum Visual Impacts OUTSIDE Class I Area  
Screening Criteria ARE NOT Exceeded

Backgrnd	Delta E		Contrast		Alpha	Crit	Plume	Crit	Plume
	Theta	Azi	Distance	Alpha					
SKY	10.	0.	1.0	169.	4.90	2.369	.09	.024	
SKY	140.	0.	1.0	169.	2.08	.621	.09	-.019	
TERRAIN	10.	0.	1.0	169.	4.77	2.648	.09	.027	
TERRAIN	140.	0.	1.0	169.	2.04	.906	.09	.025	

*Result: No change to the draft permit or statement of basis.*

**NEW SOURCE PERFORMANCE STANDARDS**

**Comment 72. Subpart H, Standards of Performance for Sulfuric Acid Plants. Comments were received stating that NSPS Subpart H is applicable to the sulfuric acid plant. (EPA)**

Response:

On December 10, 2008, SIE submitted Addendum No. 3 to their application, stating that a design decision had been made to use a Claus sulfur recovery unit to produce elemental sulfur. The option to install a sulfuric acid plant has therefore been removed from the draft permit. The discussion regarding Subpart H applicability is therefore no longer relevant.

*Result: The draft permit and statement of basis have been revised to delete the sulfuric acid plant option. All references to Subpart H have been removed.*

**Comment 73. Subpart J, Standards of Performance for Petroleum Refineries. Comments were received stating that Permit Condition 2.19 refers to NSPS Subpart J, but the statement of basis indicates that Subpart J does not apply to the Claus sulfur recovery unit. (Sierra Club XXIII)**

Response:

The commenter is correct. The reference in draft Permit Condition 2.19 to NSPS Subpart J as being relevant to the PCAEC is in error.

*Result: No change to the draft permit. Revised Table 2.2 in the permit to delete reference to Subpart J.*

**Comment 74. Subpart Ja, Standards...for Petroleum Refineries (built) after May 14, 2007.** Comments were received stating that if processes at SIE meet the definition of “petroleum refinery,” they would be subject to Subpart Ja instead of J. (Sierra Club XXIV)

Response:

The commenter is correct. Section 60.100(b) limits the applicability of Subpart J to "...any Claus sulfur recovery plant under paragraph (a) of this section which commences construction, reconstruction, or modification after October 4, 1976, *and on or before May 14, 2007.*" The wording shown in italics was added to Subpart J on June 24, 2008, when Subpart Ja was published for the first time in the Federal Register.

*Result: No change to the draft permit. The draft statement of basis was revised to reflect the changes to Subpart J and new NSPS Subpart Ja that was issued while the permit was being drafted.*

**POTENTIAL TO EMIT**

**Comment 75. PTE determination requires manufacturer and operating parameter information. A comment was received stating that the lack of specific information for equipment manufacturers and operating parameters weakens DEQ’s ability to determine the PTE.** (Shoshone-Bannock Tribes)

Response:

DEQ disagrees. It is not unusual for pre-construction permitting that very detailed information is not yet available for specific processes units or control devices for a proposed project that may have relatively long lead times for procuring or manufacturing plant components. DEQ determined that the application included the information essential to evaluating the predicted emissions and ambient impacts from the proposed project.

A facility’s potential to emit (PTE) is defined in Section 006 of the Rules as “the maximum capacity of a facility or stationary source to emit an air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is state or federally enforceable. Secondary emissions do not count in determining the potential to emit of a facility or stationary source.”

The processes to be used at the PCAEC are not unusual in the U.S. (with the exception of the gasifier and Selexol acid gas removal unit). The essential information required to estimate the facility PTE was provided in the application, e.g., the type of equipment, maximum rated capacities for materials handling equipment, generators, and boilers, and the type of fuels to be used in fuel-burning equipment. Similarly, minimum control efficiencies for pollution control devices and estimated emissions (in pounds per hour and tons per year) were provided in the application.

*Result: No change to the draft permit or statement of basis.*

**Comment 76. Limits in Table 9.2 of the permit are not “practically enforceable.” A comment was received stating that the limits for the ammonia, nitric acid, ammonium nitrate, and the urea ammonium nitrate plants are not federally enforceable because the draft permit does not contain the conditions necessary to make the limits in Table 9.2 “practically enforceable.” (Sierra Club XVII)**

Response:

There are no limits imposed for the ammonia plant. Emissions from purging gases from the ammonia process (See Section 8 of the permit) are required to be routed to the process flare. Draft Permit Condition 8.5 includes specific provisions for installation of monitoring systems and recordkeeping that can be easily inspected or reviewed to ensure that the process flare is being operated as described in the application.

The NO<sub>x</sub> emissions limit for the nitric acid plant is practically enforceable. The draft permit requires continuous monitoring and recording (i.e., a NO<sub>x</sub> CEMS) of NO<sub>x</sub> emissions from the nitric acid plant.

In Table 9.1 of the draft permit, it is noted that the scrubber is an integral part of the ammonium nitrate (AN) neutralizer process. PM and PM<sub>10</sub> emissions rate from the AN neutralizer vent was based on reducing PM/PM<sub>10</sub> by 90% within the process. For clarity and consistency with permit provisions for similar process equipment that also serves to reduce emissions:

- Conditions have been added in Section 9 of the permit requiring that the scrubber be designed to capture and recycle at least 90% of the PM/PM<sub>10</sub> within the process (as described in the application), and
- Permit Condition 2.3 has been revised to require that the O&M manual include operating parameters for the scrubber within this process. Those parameters are incorporated as enforceable permit conditions per draft Permit Condition 2.4.

Design parameters for the process scrubber can be verified by reviewing engineering design information, and scrubber operating parameters can be verified during inspections and through records reviews.

The pound per hour PM/PM<sub>10</sub> emission limits shown in Table 9.2 of the draft permit have been clarified to note that these are not BACT limits. BACT for this source was determined to be work practices in lieu of an emission limit. Emissions are best controlled by following good operating practices for the scrubber within the neutralizer process. In addition, pound per hour and ton per year limits on NO<sub>x</sub> emissions from the nitric acid plant tailgas vent serve to limit the amount of nitric acid that can be produced and fed to the AN neutralizer and UAN process, and NO<sub>x</sub> emissions from the nitric acid plant tailgas vent are continuously monitored using a NO<sub>x</sub> CEMS. This provides reasonable assurance of the PM/PM<sub>10</sub> emissions from the AN neutralizer vent. The pound-per-hour PM/PM<sub>10</sub> limits for this emission point are equivalent to the work practices requirements contained in the draft permit, but may be more easily verified should DEQ determine that performance testing is warranted for this emission source.

*Result: The draft permit was revised as noted, with appropriate revisions to the draft statement of basis.*

## **PROJECT PHASING**

**Comment 77. How would the second phase (liquid fuels) relate to the first phase (fertilizers)? A comment was received asking how the “second phase” described in the application is related to the first phase that is currently being permitted, and how much impetus the first phase would provide for the second phase. (Jayne)**

Response:

As noted on p. 1-14 of SIE’s application, Phase I of the PCAEC project is intended to produce nitrogen-based fertilizers (and although not explicitly stated on that page, sulfur products). The viability of Phase I is not dependent on constructing Phase II (production of transportation fuels), funding for Phase II has not

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been secured at this time, and Phase I and II permitting actions are anticipated to be separated by more than three years. The permit and permit analysis are therefore limited to Phase I of the proposed PCAEC project.

*Result: No change to the draft permit or statement of basis.*

## **PSD - REGULATED POLLUTANTS**

**Comment 78. Identify PSD/BACT applicability for regulated NSR pollutants. Comments were received stating that the application and statement of basis must quantify emissions of, or identify PSD applicability for, each PSD-regulated pollutant. PSD/BACT applicability is not addressed for fluorides or total reduced sulfur (TRS). (Sierra Club III, Shoshone-Bannock Tribes)**

### Response:

PSD requirements apply to emissions of regulated New Source Review (NSR) pollutants that have the potential to be emitted at or above “significant” emission rates.

“Significant” emission rates are defined in federal rules contained in 40 CFR 52.21(b)(23)(i), and are also listed (except for PM<sub>2.5</sub> and emissions of NO<sub>x</sub> for ozone) in Section 006 of the Rules. For any regulated NSR pollutant not included in that list, the emission of any amount is considered “significant.” As shown in Table 6 below, the potential emissions of CO, NO<sub>x</sub>, PM, and PM<sub>10</sub> from the PCAEC are “significant.” Each of these NSR pollutants is therefore subject to PSD requirements.

**Table 6. PSD APPLICABILITY FOR REGULATED NSR POLLUTANTS**

Pollutant	Significant Emission Rate (Tons per Year (TPY))	PCAEC Potential to Emit (Tons per Year)		Is Pollutant Subject to PSD/BACT?
		April 2008 Application	Feb 2009 Permit	
Carbon monoxide (CO)	100	203	135	Yes
Nitrogen oxides (NO <sub>x</sub> ), as nitrogen dioxide (NO <sub>2</sub> )	40	127	109	Yes
Sulfur oxides, as sulfur dioxide (SO <sub>2</sub> ) <sup>b</sup>	40	32.3	23.4	No
Particulate matter (PM)	25	>66.7	>60.1	Yes
PM <sub>10</sub>	15	66.7 <sup>a</sup>	60.1	Yes
PM <sub>2.5</sub>	10 TPY of direct PM <sub>2.5</sub> emissions; 40 TPY of SO <sub>2</sub> emissions; 40 TPY of NO <sub>x</sub> emissions, unless demonstrated not to be a PM <sub>2.5</sub> precursor	See Comment 25 in in the Response to Comments document.		See Comment 25 in in the Response to Comments document.
Ozone	40 TPY of volatile organic compounds (VOCs) or 40 TPY of NO <sub>x</sub>	5.1 (VOCs) or 127 (NO <sub>x</sub> )	5.1 (VOCs) or 109 (NO <sub>x</sub> )	No Yes
Lead (elemental)	0.6	6.0E-04	6.0E-04	No
Fluorides, excluding hydrogen fluoride	3	Negligible <sup>c</sup>	Negligible <sup>c</sup>	No
Sulfuric acid mist	7	3.7	- 0 - <sup>d</sup>	No
Hydrogen sulfide (H <sub>2</sub> S)	10	2.3	1.9	No
Total reduced sulfur, <sup>e</sup> including H <sub>2</sub> S	10	2.3	1.9	No

**Table 6. PSD APPLICABILITY FOR REGULATED NSR POLLUTANTS**

Pollutant	Significant Emission Rate (Tons per Year (TPY))	PCAEC Potential to Emit (Tons per Year)		Is Pollutant Subject to PSD/BACT?
		April 2008 Application	Feb 2009 Permit	
Reduced sulfur compounds, including H <sub>2</sub> S	10	2.3	1.9	No
Class I and II ODS	---	- 0 - <sup>f</sup>	- 0 - <sup>f</sup>	No

<sup>a</sup> Does not reflect the reduction in emissions associated with revised estimates for the cooling tower.

<sup>b</sup> Sulfur dioxide is the measured surrogate for the criteria pollutant sulfur oxides. Sulfur oxides were made subject to regulation explicitly through the proposal of 40 CFR 60, Subpart J as of August 17, 1989.

<sup>c</sup> Fluorides are not expected to be emitted (see the response to Comment 57).

<sup>d</sup> Addendum No. 3 to the PCAEC application, received on December 10, 2008, deleted the sulfuric acid plant option.

<sup>e</sup> Total reduced sulfur means the total concentration of sulfur from H<sub>2</sub>S, methyl mercaptan (CH<sub>3</sub>SH), dimethyl sulfide ((CH<sub>3</sub>)<sub>2</sub>S), and dimethyl disulfide (CH<sub>3</sub> SSCH<sub>3</sub>). Mercaptans are not expected to be emitted (see the response to Comment 58).

<sup>f</sup> Federal and state regulations require capture and recycling of these materials when recharging or servicing equipment containing any Class I or II ozone depleting substance (ODS).

*Result: No change to the draft permit. The draft statement of basis was revised to include this table.*

**Comment 79. Pollutants exceeding PSD significant emission levels were not addressed. Comments were received stating that PSD significant emission levels were exceeded for NO<sub>x</sub>, CO, and other pollutants that were not even considered in the application.** (Sierra Club I, p.9)

Response:

The application and draft permit analysis addressed PSD requirements for PM, PM<sub>10</sub>, NO<sub>x</sub>, and CO. PSD was not triggered for any other regulated NSR pollutants. See the response to Comment 78.

*Result: No change to the draft permit or statement of basis.*

**Comment 80. PSD/BACT applicability was not addressed for sulfuric acid mist. Comments were received stating that the permit does not address PSD/BACT applicability or contain PSD avoidance for sulfuric acid mist (SAM).** (Shoshone-Bannock Tribes, Sierra Club XVIII)

Response:

On December 10, 2008, SIE submitted Addendum No. 3 to their application, stating that a design decision had been made to use a Claus sulfur recovery unit to produce elemental sulfur. The option to install a sulfuric acid plant has therefore been removed from the draft permit.

Other than the sulfuric acid plant, there are no other sources within this project that might emit sulfuric acid mist.

*Result: The sulfuric acid plant option has been deleted from the draft permit and statement of basis.*

## PSD – ADDITIONAL IMPACT ANALYSIS

**Comment 81. The permit considers only air quality impacts. A comment was received stating that because no federal land or money is involved, and Idaho has no program comparable to the National Environmental Policy Act (NEPA), an environmental**

**impact statement (EIS) is not required for this project. For this project, DEQ considered only air impacts. (Jayne)**

Response:

In accordance with 40 CFR 52.21(o)(1), SIE was required to provide an analysis of the impairment to visibility, soils, and vegetation that would occur as a result of the construction of the PCAEC and general commercial, residential, industrial and other growth associated with the construction of this source. An analysis was not required for impacts on vegetation having no significant commercial or recreational value.

Guidance contained in the 1990 Draft NSR Workshop Manual<sup>11</sup> notes that these analyses should be focused on the area of impact from the proposed new source. The *impact area* of a source is a “circular area with a radius extending from the source to (1) the most distant point where approved dispersion modeling predicts a significant ambient impact will occur, or (2) a modeling receptor distance of 50 km, whichever is less.”

The highest modeled concentration of each pollutant subject to PSD (PM<sub>10</sub>, CO, and NO<sub>x</sub>) from PCAEC emissions were all below significant ambient impact levels (see the response to Comment 23). There is therefore no area of impact for the proposed project. The discussion in the SIE application (see p. 5-151) for soils, vegetation, and visibility impacts reflects this.

A qualitative discussion is provided in the SIE application of potential growth impacts associated with adding approximately 150 full time jobs for plant operations. DEQ determined that the level of detail provided was appropriate for a proposed project of this size, and that the conclusions (minimal impacts) were reasonable.

These conclusions were further supported by comments from local officials submitted during the public comment period. Comments provided by American Falls elected officials did not raise any concerns regarding the potential increased infrastructure needs to handle growth associated with the PCAEC (see pp. 52-53 of the October 20, 2008 public hearing transcript contained in Appendix D, American Falls City Council resolution, read into the record by Mayor Amy Wynn). American Falls School District No. 381 voiced support for the project (see Appendix B), as did Randy Jensen, the principal of the American Falls middle school (see pp. 60-62 of the transcript contained in Appendix D). The proposed PCAEC project was required to obtain a special use permit from the Power County Planning and Zoning Board. The Board unanimously approved the special use permit, based on a demonstration that “all 37 detailed performance standards were met” (see pp. 55-57 of the transcript contained in Appendix D, testimony by Ben Steinlicht, a member of the Board).

In accordance with 40 CFR 52.21(o)(2), SIE was required to provide an analysis of the air quality impact projected for the area as a result of general commercial, residential, industrial and other growth associated with the PCAEC. A qualitative discussion of these impacts was provided in the SIE application (see p. 5-151).

*Result: No change to the draft permit or statement of basis.*

**Comment 82. Vapor and fine particulate emissions will cause visibility problems for travel. Comments were received stating that the emissions from the PCAEC will serve as nuclei for condensation, leading to increased haze and fog that will create more hazardous travel conditions. (Nickell, North, Trost)**

Response:

Emissions of PM, PM<sub>10</sub>, CO, and NO<sub>x</sub> from the PCAEC must be controlled using the best available control technology (BACT). Emissions of SO<sub>2</sub> from the plant represent a loss of potential sulfur product for the plant, so the plant operators have an incentive to keep these emissions as low as possible. With regard to vapor emissions, the draft permit requires that drift mist eliminators must be properly installed and maintained to reduce the amount of water vapor that would be emitted as a mist (PM<sub>10</sub>) from the

cooling towers. In addition, the cooling tower vendor has guaranteed a very low emissions rate for mist/PM<sub>10</sub> of 0.0005% of the total flow.

Dispersion modeling conducted for this project showed that the maximum concentration of PM<sub>10</sub>, NO<sub>x</sub>, and SO<sub>2</sub> from the PCAEC emissions was less than “significant” for each of these pollutants (see the response to Comment 23). As shown in Figure 4 developed by DEQ, these maximum concentrations are relatively small compared to background concentrations that are typically used to evaluate air quality impacts in rural areas like American Falls.

The commenter is correct that the PCAEC emissions could serve as condensation nuclei; however, it is unlikely that any increase in haze or fog attributable to these emissions would be detectable.

*Result: No change to the draft permit or statement of basis.*

### **PSD – BACT ANALYSIS**

**Comment 83. Plant should not go forward without significant changes to pollution control. A comment was received stating that the proposed project should not go forward without significant changes to pollution control being mandated. (Gardner)**

**Response:**

Emissions from the PCAEC must be shown to meet applicable federal and state air quality standards. In addition, best available control technology (BACT) must be used for emissions of several regulated NSR pollutants (see the response to Comment 78).

*Result: No change to the draft permit or statement of basis.*

**Comment 84. DEQ must conduct a rigorous BACT determination. A comment was received stating that the statement of basis does not include an assessment of DEQ’s analysis for BACT, and that DEQ relied on the applicant’s BACT analysis. EPA recommended that DEQ undertake a rigorous BACT determination to ensure that the BACT determinations are accurate and to correct those that must be updated. (EPA 10)**

**Response:**

In a PSD application, the applicant provides a BACT analysis and proposes BACT. DEQ’s responsibility is to review the applicant’s BACT analysis and determine whether the applicant’s analysis, proposed control technologies, and limits, represent BACT. Additional discussion regarding DEQ’s BACT determination has been added to the statement of basis, and where appropriate, limits in the draft permit have been clarified as to their applicability as BACT limits.

*Result: The draft permit and statement of basis were revised as noted.*

**Comment 85. BACT analysis does not appear to adhere to EPA’s five-step top-down process. Comments were received stating that the BACT analysis does not follow the EPA’s five-step process, and that omitting a top-down analysis is not appropriate even if the top control is selected. (EPA 10, Shoshone-Bannock Tribes, Sierra Club VII)**

**Response:**

DEQ disagrees. SIE’s approach for proposing BACT and DEQ’s approach for reviewing the BACT determinations were consistent with EPA guidance. Additional discussion regarding DEQ’s BACT determination has been added to the statement of basis, and where appropriate, limits in the draft permit have been clarified as to their applicability as BACT limits.

Selection of LAER or the top control alternative precludes the need to review other alternatives. In a July 5, 2000 letter, EPA noted that “PSD regulations require that LAER be the starting point for a top-down BACT analysis.”<sup>55</sup> In addition, the EPA’s 1990 Draft NSR Workshop Manual<sup>11</sup> states that “an applicant proposing the top control alternative need not provide cost and other detailed information in regard to other control options. In such cases, the applicant should document that the control option chosen is, indeed, the top, and review for collateral environmental impacts.” SIE explained on p. 4-81 of their application that the BACT analysis relied on this reasonable approach, which was used for the following sources:

- Coal and petcoke handling. SIE listed technically feasible technologies, and proposed LAER technologies for coal and petcoke handling (negative pressure rail car enclosure, covered conveyors and enclosed transfer points, silo storage of feedstocks, and high efficiency baghouses).

Review of multiple options that have similar control efficiencies is not required. The EPA’s 1990 Draft NSR Workshop Manual states that “[i]t is not EPA’s intent to encourage evaluation of unnecessarily large numbers of control alternatives for every emissions unit. . . . For example, if two or more control technologies result in control levels that are essentially identical considering the uncertainties of emissions factors and other parameters pertinent to estimating performance, the source may wish to point this out and make a case for evaluation and use only of the less costly of these options.”

DEQ imposed more rigorous BACT requirements than proposed by the applicant. The options proposed by the applicant were tightened by DEQ for the following sources:

- Fluxant handling. DEQ disagreed with the option proposed by the applicant, and the draft permit required covered conveyors, enclosed transfer points, high efficiency baghouses or equivalent for handling these materials, and work practices in lieu of an emissions limit.

Five-Step Top-Down Analysis is not required. A commenter is correct that federal and state regulations require “control technology review.” However, strict adherence to the EPA’s five-step top-down process as described in the Draft NSR Workshop Manual<sup>56</sup> is recommended, but not required, for determining BACT.

*Example: Michigan BACT Determination Policy.* As one example, in 2005 Michigan established a four-tiered BACT determination policy for its minor and major NSR programs.<sup>57</sup>

- Level 1. Any proposed BACT analysis which selects to achieve LAER will be accepted without additional review.
- Level 2. A comparison of the proposed BACT against BACT determinations in other permits for the same or similar sources within the past 5 years, considering any new technical developments that reduce emissions further or decrease the impacts of that control.
- Level 3. Considers controls that have been accepted as BACT in recent permits for similar air emission streams from different processes or industry types.
- Level 4. A detailed five-step top-down analysis similar to the procedure described in the 1990 Draft NSR Workshop Manual.

The Michigan policy notes that “. . . it is in the best interest of both the applicant and the AQD to avoid the fourth level of evaluation because it is . . . time and resource intensive, which causes permit delays; and not

<sup>55</sup> July 5, 2000, Letter from Pamela Blakely, Chief, Permits and Grants Section, Air and Radiation Division, EPA Region 5 to Donald E. Sutton, Illinois Environmental Protection Agency.

<sup>56</sup> October 1990, U.S. EPA, New Source Review Workshop Manual, Prevention of Significant Deterioration and Nonattainment Area Permitting, <http://www.epa.gov/ttn/nsr/gen/wkshpman.pdf>

<sup>57</sup> August 24, 2005, Michigan Department of Environmental Quality, Air Quality Division, Operational Memorandum No. 20, “Best Available Control Technology (BACT) Determinations,” RTP Environmental, NSR Guidance Memos, #160.

likely (based on past experience) to result in substantially different control options than otherwise indicated by the first three levels of review.”

*Example: TCEQ BACT Determination Policy.* The Texas Commission on Environmental Quality (TCEQ) has also issued guidance for a three-tiered approach for developing and reviewing BACT determinations.<sup>58</sup>

- Tier I. Emission reduction performance levels accepted as BACT in recent permit reviews for the same process and industry continue to be acceptable – *if no new technical developments have been made that indicate additional reductions are economically or technically feasible.*
- Tier II. Consider controls that have been accepted as BACT in recent permits for similar air emission streams in a different process or industry.
- Tier III. A detailed technical and quantitative economic analysis of all emission reduction options available for the process under review.

*BACT decision is to be made by the State, not the EPA.* As noted in a Senate Report on the 1977 Clean Air Act Amendments:

“The decision regarding the actual implementation of best available control technology is a key one, and the committee places this responsibility with the State, to be determined on a case-by-case judgment. It is recognized that the phrase has broad flexibility in how it should and can be interpreted, depending on the site.

In making this key decision on the technology to be used, the State is to take into account energy, environmental, and economic impacts and other costs of the application of best available technology. The weight assigned to such factors is to be determined by the State. ... The only Federal guidelines are the EPA new source performance and hazardous emissions standards, which represent a floor for the State’s decision.

The directive enables the State to consider the size of the plant, the increment of air quality which will be absorbed by any particular major emitting facility, and such other considerations as anticipated and desired economic growth for the area. This allows the State and local communities to judge how much of the defined increment of significant deterioration will be devoted to any major emitting facility. ... This is strictly a State and local decision; this legislation provides the parameters for that decision.”<sup>59</sup>

“In determining BACT and LAER...the State exercises considerable discretion. ...EPA lacks authority to take corrective action merely because the Agency disagrees with a State’s lawful exercise of the discretion in making BACT and LAER or related determinations. State discretion is bounded, however, by the fundamental requirements of administrative law that agency decisions not be arbitrary or capricious, be beyond statutory authority, or fail to comply with applicable procedures.”<sup>60</sup>

*Result: The draft permit and statement of basis were revised as noted.*

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<sup>58</sup> April 2001, TCEQ, Evaluating Best Available Control Technology (BACT) Air Permit Applications, Draft RG-383, RTP Environmental, NSR Guidance Memos, #20B.

<sup>59</sup> May 10, 1977, Report of the Committee on Environment and Public Works, United States Senate, together with Additional Views to accompany S. 252, RTP Environmental, NSR Guidance Memos, #11T-31.

<sup>60</sup> May 20, 1999, Letter from John S. Seitz, Director, EPA OAPQS, to Robert Hodanbosi and Chrales Lagges, STAPPA/ALAPCO, RTP Environmental, NSR Guidance Memos, #12O.

**Comment 86. Incremental cost basis used instead of the “no controls” option. The BACT cost effectiveness analysis appears to have been done based on an incremental basis rather than based on the “no controls” option.** (EPA 10, Shoshone-Bannock Tribes)

Response:

EPA’s 1990 Draft NSR Workshop Manual<sup>11</sup> includes two options for evaluating economic impacts: total cost effectiveness and incremental cost effectiveness (see p. B-6 of the workshop manual). The incremental cost effectiveness approach used in the SIE application for the PCAEC has been used and approved in a number of PSD permits issued in EPA Region 10 **and by EPA Region 10**, including:

- U.S. EPA Region 10
  - Wanapa Energy Center, Final Permit #R10PSD-OR-05-01 (Permit issued by EPA Region 10 for a facility located on tribal lands in Oregon.)
- Washington Department of Ecology
  - TransAlta, Centralia Generation, LLC, Centralia, Final Permit #PSD 01-01
  - Longview Fiber, Longview, Final Permit #PSD 01-03
  - Boise Cascade, Wallula, Final Permit #PSD 01-07
  - Conoco Phillips, Ferndale, Final Permit #PSD 00-02
  - Conoco Phillips, Ferndale, Final Permit #PSD 05-01

*Result: No change to the draft permit or statement of basis.*

**Comment 87. BACT analysis requires manufacturer and operating parameter information. A comment was received stating that the lack of specific information for equipment manufacturers and operating parameters weakens DEQ’s ability to determine the BACT.** (Shoshone-Bannock Tribes)

Response:

DEQ disagrees. The processes to be used at the PCAEC are not unusual in the U.S. (with the exception of the gasifier and Selexol acid gas removal unit). Similarly, the control devices proposed as BACT have been commercially available for a long time.

*Result: No change to the draft permit or statement of basis.*

**Comment 88. BACT requires continuous emission monitoring systems (CEMS) with electronic data recording. Comments were received stating that although the technology is available for the company to install continuous emission monitors with electronic data recording on all of the stacks, DEQ is instead relying on the company to “self-monitor” many of their emissions. This method has been shown not to work in other southeast Idaho factories. Idaho should require continuous emission monitors with electronic storage of any excursions from the standards to protect the public from excess emissions.** (Gill, Greater Yellowstone Coalition, Hart)

Response:

DEQ disagrees. As noted in the 1990 Draft NSR Workshop Manual (see p. B.4),<sup>11</sup> compliance with emission limits can be demonstrated in a number of ways:

- Initial performance tests (i.e., source tests);
- Continuous emission monitoring; and

- Surrogate compliance measures, including process monitoring, equipment design or operation, and work practices.

The draft permit for the PCAEC requires a combination these approaches as appropriate for each emissions source.

*Result: No change to the draft permit or statement of basis.*

**Comment 89. Cleaner Feedstocks: Low sulfur and ash coal and petcoke were not considered. Comments were received stating that the BACT analysis is flawed because it does not consider use of lower sulfur and ash coal and petcoke (Sierra Club VII)**

Response:

As noted on p. 1-16 of the application, “[t]he Project will also produce other products that have market value. The sulfur in the syngas will be captured in a Selexol unit and oxidized in a Haldor Topsoe Wet Sulfuric Acid plant to form sulfuric acid for direct sale.” The text on p. 1-19 notes that “the sulfur compounds removed in the amine scrubber will be sent to the sulfuric acid plant to produce sulfuric acid,” and the Project processes described in Section 2 of the application include a description of “sulfuric acid manufacture.” As pointed out in other comments (see Comment 72), the PCAEC is intended to produce sulfur products in addition to other fertilizer products.

Because higher sulfur levels in the feedstock are needed to produce sulfur products, the use of low-sulfur coal and petcoke was not considered for the proposed project.

*Result: The draft permit and statement of basis were revised to clarify that elemental sulfur is meant to be a product, not a “saleable byproduct” from operations at the PCAEC.*

**Comment 90. Cleaner Feedstocks: Natural gas should have been considered in lieu of gasification. Comments were received stating that in order to reduce GHG emissions, the BACT analysis should have considered using natural gas instead of coal gasification to manufacture fertilizer products. (Sierra Club D.1)**

Response:

A December 18, 2008 EPA interpretation clarified that BACT does not apply to greenhouse gas emissions (see the response to Comment 4), so consideration of alternative feedstocks that would reduce GHG emissions was not warranted for the proposed project.

In addition, the PCAEC is intended to produce sulfur products (see the response to Comment 89). The sulfur content of natural gas is very low, so natural gas was not considered for the proposed project.

*Result: No change to the draft permit or statement of basis.*

**Comment 91. CO BACT for AGR CO<sub>2</sub> vent thermal oxidizer efficiency should be 95% instead of 90%. A comment was received stating that a thermal oxidizer should be achieve 95% efficiency for control of CO rather than the 90% determined to be BACT (Sierra Club XIII)**

Response:

SIE confirmed in Addendum No. 4 to the application that using improved catalyst manufacturing technology and higher catalyst surface area, the thermal oxidizer vendor (CSM) can guarantee a 95% destruction removal efficiency (DRE) for CO and COS. This results in a reduction of CO emissions from 17.33 lb/hr to 8.66 lb/hr and reduces COS emissions from 0.37 lb/hr to 0.19 lb/hr. As a result of the higher efficiency for treating the CO and COS, SO<sub>2</sub> emissions increase slightly, from 3.57 lb/hr to 3.76 lb/hr.

Although CO<sub>2</sub> is not a regulated NSR pollutant (see the response to Comment 4), increasing the efficiency of the thermal oxidizer from 90% to 95% will result in an increase of CO<sub>2</sub> emissions from this source.

*Result: The draft permit and statement of basis have been revised to reflect a 95% DRE for the thermal oxidizer.*

**Comment 92. CO BACT limits must be included for fugitive CO emissions. A comment was received stating that the permit must include emission limits or work practices for fugitive emissions of CO. (Sierra Club XIX)**

Response:

As described in the application (see p. 2-37), the syngas will be composed of about 56 mole percent CO after the initial treatment steps (sour water scrubber and activated carbon beds). The sour water-gas shift reaction is also known as the CO shift. After treatment in the two stage CO-shift reactors, the CO concentration in the syngas will be decreased to approximately 0.1 percent by volume. Monitoring of fugitive emissions of CO within the gasification island is therefore reasonable only where the process equipment may contain significant concentrations of CO, i.e., from the gasifier quench to the final stage of the CO shift.

Leak detection and repair (LDAR) practices are typically associated with VOC emissions.<sup>61</sup> However, LDAR best management practices (BMPs) that are designed to identify leaking equipment so that emissions can be reduced through repairs are equally applicable to controlling fugitive emissions of CO from equipment leaks. The draft permit has been revised to require specific BMP work practices for fugitive CO for piping and equipment located between the gasifier/quench outlet to the outlet of the final sour water-gas shift reactor.

*Result: The draft permit has been revised to require a Fugitive CO BMP Plan be developed and implemented to better define work practices to control fugitive CO emissions from the gasification block. The draft statement of basis has been revised accordingly.*

**Comment 93. PM/PM<sub>10</sub> BACT requires that opacity limits be set in the permit. A comment was received stating that BACT includes a “visible emissions standard by definition,” citing 0% opacity limits set for the Greater Des Moines Energy Center and Charter Steel. Comments were received stating that opacity should be limited to 0% for the package boiler, the steam superheater boiler, and the gasifier heaters. DEQ must impose 0% opacity (rather than the 20% limit in the draft permit) or provide an analysis justifying why not. (Sierra Club IX and XI)**

Response:

An opacity limit is not required for BACT. BACT is defined in 40 CFR 52.21(b)(12) as “an emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under (the) Act which would be emitted from” the proposed stationary source.

The parenthetical reference to a visible emission standard was included in this definition in 1978 (43 FR 26380, June 19, 1978). This makes clear that an emissions limitation may include a visible emission standard, but does not require that an opacity limit be set. A review of the listings in the EPA’s RACT/BACT/LAER Clearinghouse<sup>62</sup> shows that PM BACT entries that list an opacity limit in addition to an emission limit are not typical.

<sup>61</sup> <http://www.epa.gov/compliance/resources/publications/assistance/ldarguide.pdf>

<sup>62</sup> EPA RACT/BACT/LAER Clearinghouse, available at <http://cfpub.epa.gov/rblc/bl02.cfm>

The 1990 Draft NSR Workshop Manual<sup>11</sup> mentions opacity only once (see p. H-6), suggesting that where “continuous, quantitative measurements are infeasible, surrogate parameters must be expressed in the permit. Examples of surrogate parameters include: mass emissions/opacity correlations...” The correlation between the mass of particulates emitted and opacity can vary widely depending on the particle size (e.g., emissions of large particles can mean that a significant mass of pollutants may be emitted while observed opacity levels are quite low).

Referenced BACT determinations for opacity are partially incorrect With regard to the two examples cited by the commenter, the opacity limit applied in the Charter Steel permit (RBLC ID No. WI-0181) process pickling heater is 20%, not 0%. In the case of the air quality permit for the Greater Des Moines Energy Center,<sup>63</sup> the commenters are correct that 0% opacity limits have been applied to two Model 501F natural gas-fired combustion turbines, a 43.3 MMBtu/hr natural gas-fired boiler, and a 7.16 MMBtu/hr natural gas-fired dew point heater.

*Result: No change to the draft permit or statement of basis.*

**Comment 94. NO<sub>x</sub>, CO, and SO<sub>2</sub> limits in the permit are not BACT for the boilers. A comment was received stating that NO<sub>x</sub> and CO should each be limited to 5 ppmv@ 3% O<sub>2</sub>, and SO<sub>2</sub> should be limited to 0.0001 lb/MMBtu for the package boiler and the steam superheater boiler. (Sierra Club IX)**

Response:

The PCAEC is not subject to BACT for SO<sub>2</sub> (see the response to Comment 78).

AES emissions and control technologies are not comparable to the PCAEC boilers. The CO and NO<sub>x</sub> emission limits suggested by the commenter were obtained from a BACT determination for a 2,088 MMBtu/hr natural gas fired boiler at the AES power plant location in Huntington Beach, California. The capacity of this boiler is more than eight times larger than the 250 MMBtu/hr capacity of the boilers for the proposed project. Because the cost effectiveness (cost per ton of emissions reduction) of adding pollution control devices is better for sources with large emissions, the AES boiler is provided with additional add-on controls compared to the PCAEC boilers. Emissions from the AES boiler are controlled using low-NO<sub>x</sub> burners, flue gas recirculation (FGR), selective catalytic reduction (SCR), and an oxidation catalyst.

PCAEAC boiler control technologies are BACT. The BACT analysis contained in the application and in Addendum No. 1 to the application demonstrated that the BACT technology was a low-NO<sub>x</sub> burner and FGR for the package boiler, and a low-NO<sub>x</sub> burner and SCR for the steam superheater boiler.

PCAEAC NO<sub>x</sub> and CO BACT limits are at the low end of the reported range for similarly-sized natural gas-fired industrial boilers. As described in the BACT analysis submitted in Addendum No. 1 to the application, recently permitted boilers had a NO<sub>x</sub> emission rate range of 0.011 to 0.7 lb/MMBtu. As part of the review of the proposed BACT limits, DEQ had also queried the RBLC database for the “lowest emission rate” final determination for natural gas-fired industrial boilers (less than or equal to 250 MMBtu/hr and greater than 250 MMBtu/hr) over the past decade. The query returned the same information reported by the applicant: a range of 0.011 to 0.7 lb/MMBtu for NO<sub>x</sub> emission limits for the smaller boilers, and a range of 0.007 to 0.61 lb/MMBtu for the larger boilers. The NO<sub>x</sub> emission limit in the draft permit (equivalent to 0.02 lb/MMBtu) is contained within the lowest 2% of this range of values.

The range of lowest CO emission rates over the same period was 0.03 to 1.47 lb/MMBtu for smaller boilers and from 0.01 to 1.13 lb/MMBtu for boilers larger than 250 MMBtu/hr. A BACT limit of 0.0008 lb/MMBtu from a 2001 permit in New York was dropped from consideration because it appears to

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<sup>63</sup> November 20, 2006, Iowa Department of Natural Resources, Title V Operating Permit, MidAmerican Energy Company: Pleasant Hill Combustion Turbines, <http://www.iowadnr.gov/air/prof/oper/tv/final/97-TV-006R1.pdf>

be an outlier. The CO emission limit in the draft permit (equivalent to 0.074 lb/MMBtu) is contained within the lowest 4% of this range of values.

Comparison with NACAA CO emission test data tables is not appropriate. Information collected by National Association of Clean Air Agencies (NACAA) demonstrates that CO emissions vary over a wide range, even for similarly-sized industrial boilers. DEQ has also noted that results from CO performance testing can vary considerably even when testing identical boiler units located at the same facility. The test data shown in the NACAA tables submitted by the commenter do not include information about the control devices installed on the boilers. For these reasons, these tables cannot reasonably be used to develop BACT emission limits.

The NO<sub>x</sub> and CO BACT limits for the package boiler in the draft permit are appropriate. SIE's design decision to install a Claus sulfur recovery unit instead of a wet sulfuric acid plant means that the 250 MMBtu/hr package boiler will be operated only during startup and shutdown. Startup was estimated in the application to require about 2 hours once the gasifiers are preheated. If a similar period for shutdown is presumed, and a very conservative estimate of annual startups is set to 50 (i.e., about weekly), the package boiler would be operated only about 200 hours per year. The BACT analysis included in Section 5 of the application demonstrated that a low-NO<sub>x</sub> burner and FGR were BACT for the package boiler if operated continuously throughout the year. Given the dramatic reduction in the predicted operating hours for this boiler (200 hours per year is only about 2.2% of the 8,760 hours presumed in the BACT analysis), the applicant could likely demonstrate that BACT for this boiler would not require either a low-NO<sub>x</sub> burner or FGR.

*Result: No change to the draft permit or statement of basis.*

**Comment 95. PM, PM<sub>10</sub>, NO<sub>x</sub>, SO<sub>2</sub>, CO, and VOC BACT limits are required for the Gasifier Heaters. A comment was received stating that the work practice standards “good combustion practices” and “natural gas combustion, exclusively” for the gasifier heaters should only be used when “technological or economic limitations on the application of measurement methodology to a particular emissions unit would make the imposition of an emissions standard infeasible.” (Sierra Club XI)**

Response:

The PCAEC is not subject to BACT for SO<sub>2</sub> or VOCs (see the response to Comment 78).

The natural gas-fired gasifier heaters at the PCAEC will be sized to operate at 9 MMBtu/hr while on standby and 25 MMBtu/hr during startup conditions. As noted on p. 1-19 of the application, preheating the gasifiers from a cold start requires about 40 hours. In the table below, annual emissions associated with preheating each gasifier were very conservatively estimated by DEQ based on 50 startups per year. In order to meet the BACT economic threshold of \$10,000 per ton of pollutant reduction, the maximum annual cost for a control measure or control device for each pollutant subject to BACT could not exceed the values shown in the table. A brief review of the control equipment cost estimates contained in Section 4 of the application demonstrates that equipment and operational costs are typically more than \$100,000. Requiring add-on control equipment for these relatively small natural gas-fired heaters is therefore not reasonable.

The work practice standards imposed by the draft permit represent BACT for PM, PM<sub>10</sub>, CO, and NO<sub>x</sub> emissions from these heaters.

**Table 7. GASIFIER HEATER EMISSIONS OF POLLUTANTS SUBJECT TO BACT**

Pollutant	AP-42, Section 1.4 Emission Factor	Steady State Emissions 9 MMBtu/hr x 8,760 hr/yr	Cost Threshold	Startup Emissions 25 MMBtu/hr x 40 hr x 50 startups	Cost Threshold
	(lb/MMBtu)	(TPY)	(Annual \$)	(TPY)	(Annual \$)
PM/PM <sub>10</sub>	7.45E-03	0.294	\$2,940	0.186	\$1,860
NO <sub>x</sub>	9.80E-02	3.865	\$38,650	2.45	\$24,500
CO	8.42E-02	3.246	\$32,460	2.15	\$21,500

*Result: No change to the draft permit or statement of basis.*

**Comment 96. PM BACT for the Gasifier Heaters should be 0.01 gr/dscf. A comment was received stating that the SIE application acknowledges that the BACT limit for process-derived fuel combustion for a cooler at the Encoal Corporation’s North Rochelle facility in Wyoming is 0.01 gr/dscf, which required installation of an add-on scrubber. The commenter stated that DEQ must impose a 0.01 gr/dscf limit (instead of the 0.015 gr/dscf limit in the draft permit) or provide an analysis justifying why not. (Sierra Club XI)**

Response:

Add-on controls are easily shown to be uneconomical for these relatively small natural gas-fired heaters. The work practices imposed by the draft permit represent BACT for these sources (see the response to Comment 95).

*Result: No change to the draft permit or statement of basis.*

**Comment 97. Startup/upset/malfunction limits for PM/PM<sub>10</sub>, NO<sub>x</sub>, VOC, and opacity are required for the gasifier flare during startup, shutdown, and malfunctions. A comment was received stating that the gasifier flare should be able to meet the 0% opacity, 0.200 lb/MMBtu NO<sub>x</sub> and 0.0060 lb/MMBtu VOC limits specified for the Homeland Energy plant in Iowa. (Sierra Club XII)**

Response:

Emission limits during malfunctions will not be included in the permit (see the response to Comment 40 and Comment 41).

The PCAEC is not subject to BACT for VOCs (see the response to Comment 78). An opacity limit is not required (see the response to Comment 93).

The PCAEC gasifier flare operation is not directly comparable to the Homeland Energy flares. Flare emissions from similarly-sized flares burning similar fuels should be comparable. However, the emission limits described by the commenter for the three flares at the Homeland Energy Solutions, LLC plant in Lawler, Iowa (RBLC ID No. IA-0089; Iowa permit nos. 07-A-967P, 07-A-968P, and 07-A-969P) are based on:

- Burning natural gas or syngas at a maximum heat input capacity of 25 MMBtu/hr. As shown in Appendix D of the PCAEC application, the heat input to the gasifier flare when burning syngas during startup is predicted to be more than 43 times larger at 1,079 MMBtu/hr.
- Burning syngas with a different composition. The syngas to be burned in the Homeland flares is composed of 31.5% CO, 19.7% H<sub>2</sub>, 39.6% N<sub>2</sub>, 4.7% methane, 0.2% hydrocarbons, and 10 ppm

H<sub>2</sub>S with a high heating value of 216 Btu/scf.<sup>64</sup> Syngas that will be flared during PCAEC startup will have higher CO (45.3%), H<sub>2</sub> (35.8%), and significantly lower N<sub>2</sub> (0.6%) and methane (0.05%), with a heating value of about 261 MMBtu/scf.

PCAEC gasifier flare emissions were appropriately calculated using TCEQ BACT assumptions. The flare emission rates for the Homeland Energy plant and the predicted PCAEC flare steady-state and startup emission rates are shown for comparison in Table 8. As shown in the application, the PCAEC flare emissions were calculated using AP-42 emission factors for natural gas combustion and TCEQ guidance for calculating flare emissions<sup>65</sup> and estimating BACT emissions.<sup>66</sup> DEQ also reviewed recent TCEQ guidance for flares.<sup>67</sup>

**Table 8. COMPARISON OF HOMELAND ENERGY AND PCAEC GASIFIER FLARE EMISSIONS**

Flare Description	CO (lb/MMBtu)	NO <sub>x</sub> (lb/MMBtu)	PM/ PM <sub>10</sub> (lb/MMBtu)
Homeland Energy Flare (on syngas or natural gas)	1.10	0.200	0.0076
PCAEC Gasifier Flare (steady-state, 1.5 MMBtu/hr natural gas pilot plus N <sub>2</sub> purge gas)	0.35	0.068	0.0075
PCAEC Gasifier Flare (startup, 1.5 MMBtu/hr natural gas pilot plus syngas)	3.08	0.07	0.03

The TCEQ guidance notes that PM/PM<sub>10</sub> emissions aren't required to be calculated if the flare is required to be smokeless. The CO and NO<sub>x</sub> emissions were appropriately calculated by SIE using recommended assumptions from the TCEQ BACT guidance and the specific composition of the syngas expected to be produced at the PCAEC.

Performance testing of flares is not practical. Testing of flares in the field has been described as “nearly impossible.”<sup>68</sup> In accordance with 1990 NSR PSD Workbook guidance, if “there is no economically reasonable or technologically feasible way to accurately measure the emissions, and hence to impose an enforceable standard, [the reviewing agency] may require the source to use design, alternative equipment, work practices or operational standards to reduce emissions of the pollutant to the maximum extent.” For this reason, emission standards for flares were not set in the draft permit; compliance for the gasifier flare is assured by following the work practices specified in draft Permit Condition 7.5.1. (See the BACT discussion in Section 4 of the statement of basis.)

*Result: No change to the draft permit. The draft statement of basis was revised to provide more detail regarding the BACT analysis for the gasifier flare.*

**Comment 98. NO<sub>x</sub> BACT for the package boiler should be SCR.** (EPA 10, Shoshone-Bannock Tribes)

Response:

As described in Addendum No. 1 to the application, the package boiler will be operated only during startup and shutdown. Because the PCAEC will be designed and operated to minimize the numbers of

<sup>64</sup> 2007, Industrial Coal Gasification System for US Midwest Ethanol Plant, presented by Econo-Power International Corporation at the Gasification Technologies Conference, October 15-17, 2007, accessible at <http://www.gasification.org/Docs/Conferences/2007/33WAKE.pdf>

<sup>65</sup> 2000, Texas Commission on Environmental Quality (TCEQ), Air Permit Technical Guidance for Chemical Sources: Flares and Oxidizers, RG-109, Draft, October 2000

<sup>66</sup> 2006, TCEQ “Current BACT” [for flares], accessible at [http://www.tecq.state.tx.us/assets/public/permitting/air/Guidance/NewSourceReview/bact/bact\\_flares.pdf](http://www.tecq.state.tx.us/assets/public/permitting/air/Guidance/NewSourceReview/bact/bact_flares.pdf)

<sup>67</sup> January 2007, TCEQ, Technical Supplement 4, Flares, accessible at [http://www.tecq.state.tx.us/assets/public/comm\\_exec/pubs/rg/rg360/rg-360-06/techsupp\\_4.pdf](http://www.tecq.state.tx.us/assets/public/comm_exec/pubs/rg/rg360/rg-360-06/techsupp_4.pdf)

<sup>68</sup> 2006, Industrial-Scale Flare Testing, *Environmental Management*, American Institute of Chemical Engineers, May 2006, accessible at [http://www.johnzink.com/products/flares/pdfs/05CEP\\_FlareTesting.pdf](http://www.johnzink.com/products/flares/pdfs/05CEP_FlareTesting.pdf)

startups and the permit requires an SSM plan to help ensure that this is the case, the additional costs associated with installing SCR for the package boiler are not warranted for this source. The applicant's analysis demonstrated that a low-NO<sub>x</sub> burner coupled with FGR was BACT for the package boiler when burning only natural gas.

BACT for the package boiler when burning PSA tailgas should have been shown as SCR, not FGR. DEQ identified this inadvertent error in the draft permit during informal discussions with EPA. However, the option to burn PSA tailgas in the package boiler was deleted as a result of Addendum No. 3 to the application (removal of the option to use a Haldor-Topsoe sulfuric acid plant).

*Result: No change to the draft permit or statement of basis.*

**Comment 99. NO<sub>x</sub> BACT for the nitric acid production should be 0.524 lb/ton of acid.** (Sierra Club XIV)

Response:

RBLB BACT Limits. A review of BACT limits in permits issued in 2004 or later for nitric acid plants shows BACT limits set at the NSPS "floor" of 3.0 lb/ton of acid produced (2005) and 0.524 lb/ton (2004, for Plant 7, for the Kennewick, Washington PSD facility referenced by the commenter<sup>69</sup>). In that 2004 permit, a limit of 0.3 lb/ton was imposed for emissions from the Plant 9 nitric acid plant located at the same facility. That limit was subsequently increased to 0.6 lb/ton in the 2008 permit referenced by the commenter.<sup>70</sup> Each of these BACT limits for the Kennewick facility is *averaged over all operating hours during any consecutive 12-calendar month period.*

PCAEC BACT Limit is more stringent than the Kennewick limit. As noted in Section 4 of the application, SCR technology control for NO<sub>x</sub> typically ranges from 50 to 200 ppmv. In the application (see p. 4-100), SIE further states that NO<sub>x</sub> emissions from the nitric acid will be held to the lowest value in this range, 50 ppmv. On a mass basis, this results in 15.33 lb/hr of NO<sub>x</sub> emissions when producing 575 tons per day of nitric acid. The NO<sub>x</sub> emissions rate was determined by scaling design information for a 525 ton per day Weatherly nitric acid plant using SCR as BACT (with 100 ppmv NO<sub>x</sub> emissions) to the proposed production level of 575 tons per day, and dividing the resulting pound-per-hour rate by two to reflect a maximum 50 ppmv NO<sub>x</sub> concentration.

The BACT limit in the draft permit of 15.33 lb/hr for NO<sub>x</sub> emissions from the nitric acid plant (nitric acid tailgas vent) is equivalent to 50 ppmv and to 0.64 lb/ton of acid at the maximum production rate of 575 tons of acid per day. This limit applies at all times during steady-state operations, and is hence more stringent than the "rolling 12-month average" limits imposed on the Kennewick facility's nitric acid plants.

*Result: The draft permit has been revised to change the NO<sub>x</sub> BACT limit to 50 ppmv, which is equivalent to 15.33 lb/hr and to 0.64 lb/ton of acid at full production rates, with appropriate revisions to the statement of basis.*

**Comment 100. PM BACT for the AN Neutralizer Vent requires a control device. Comments were received stating that an add-on control device will be needed to meet BACT for PM<sub>10</sub> from the AN Neutralizer Vent, based on AP-42 Section 8.3 emission factors.** (Sierra Club comment XVI)

Response:

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<sup>69</sup> [http://www.ecy.wa.gov/programs/air/psd/psd\\_pdfs/PSD0401\\_final.pdf](http://www.ecy.wa.gov/programs/air/psd/psd_pdfs/PSD0401_final.pdf), issued to Kennewick Fertilizer Operations on August 27, 2004.

<sup>70</sup> [http://www.ecy.wa.gov/programs/air/psd/psd\\_pdfs/PSD0401\\_final1stAmend.pdf](http://www.ecy.wa.gov/programs/air/psd/psd_pdfs/PSD0401_final1stAmend.pdf), issued to Kennewick Fertilizer Operations on July 10, 2008.

The presence of a wet scrubber as an integral part of the ammonium nitrate process is noted in Table 9.1 in the draft permit and Table 3.1 in the draft statement of basis. As described in the application (see the KBR report in Appendix D), BACT for the ammonium nitrate (AN) neutralizer vent is typically a wet scrubber with a capture efficiency of 90% for particulate matter. The emissions estimate for PM/PM<sub>10</sub> from the AN neutralizer scrubber was based on 90% recovery and recycling of PM/PM<sub>10</sub> within the ammonium nitrate process. The draft permit has been revised to clarify that 90% recovery of PM/PM<sub>10</sub> within the AN neutralizer process is required, represents BACT for this source, and the scrubber must be addressed in the O&M manual.

Process Description. The purpose of the AN Neutralizer vent is to vent steam, because the reaction of nitric acid with ammonia (to produce ammonium nitrate) produces steam. The wet scrubber associated with the AN neutralizer vent is an integral part of the ammonium nitrate process, because the scrubber provides for product recovery and recycle. An inherent co-benefit to the scrubber operation is particulate matter emissions control.

As shown in Figure 2-11 and described in the text on p. 2-48 of the application, the neutralizer includes a wet scrubber within the neutralizer/scrubber unit. A stream of the liquid ammonium nitrate and water is taken from the neutralizer and mixed with a portion of the nitric acid feed. This liquid is used to scrub the vapor leaving the neutralizer/scrubber. The vapor is then sent to a process condensate tank, where it is cooled and most of the water is condensed. The exhaust from the process condensate tank includes CO<sub>2</sub>, some of the steam, and any remaining particulate matter.

Prior to treatment, the process steam is sent to a venturi for desuperheating, where it is mixed with scrubbing liquor through a sprayer. The liquor is recycled from the cyclonic scrubber column, and therefore contains nitric acid to react with any ammonia still contained in the process steam. The steam then enters the cyclonic column where it goes through high-efficiency demisters, removing ammonium nitrate aerosol from the steam prior to venting.

PM/PM<sub>10</sub> Emissions. The emission factors used by the commenter are contained in AP-42 Section 8.3, “Ammonium Nitrate,” which were last updated in 1993. As shown in Table 8.3-2 of that section, the uncontrolled PM emission factor from a neutralizer ranges from 0.09 to 8.6 lb per ton of product, and the controlled PM emission factor ranges from 0.004 to 0.43 lb per ton of product. These emission factors were based on reference materials developed from 1979 – 1981, and 1991. While AP-42 emission factors can be helpful if no other information is available, preference is always given to vendor data (for preconstruction compliance reviews) and source test data from the facility (for demonstrating compliance after construction or for subsequent analyses for facility modifications).

The controlled PM emission factor used by SIE for emissions from the AN neutralizer vent was 1.5 lb/hr, based on Stamicarbon vendor information. This represents an emission rate of about 0.05 lb/ton of product from the production of 715 tons per day of ammonium nitrate, which is in the mid-range of “controlled” emission factors listed in AP-42. The emission estimate was based on Stamicarbon technology using a wet scrubber with a minimum PM capture efficiency of 90% (see the KBR report included in Appendix D of the application).

*Result: The draft permit was revised to clarify that AN neutralizer scrubber parameters are federally enforceable (see the response to Comment 76).*

**Comment 101. BACT is required for PM emitted as sulfuric acid mist (SAM). Comments were received stating that the permit does not contain limits or practically enforceable conditions to comply with BACT for PM as SAM. (Sierra Club XVIII)**

Response:

On December 10, 2008, SIE submitted Addendum No. 3 to their application, stating that a design decision had been made to use a Claus sulfur recovery unit to produce elemental sulfur. The option to

install a sulfuric acid plant has therefore been removed from the draft permit. Other than the sulfuric acid plant, there are no other sources within this project that might emit sulfuric acid mist.

*Result: The sulfuric acid plant option has been deleted from the permit and the statement of basis.*

**Comment 102. PM BACT emission limit for baghouses is too high. Baghouses are usually able to perform at lower emission rates than those selected as BACT for emission units SRC01 – 07 (coal handling). (EPA 10)**

Response:

DEQ disagrees. The pound-per-hour emission limits in the draft permit represent BACT for a new state-of-the-art coal and petcoke handling facility.

As an example, controlled emission factors for coal railcar unloading with baghouse controls for a facility in Colorado were 0.0002 and 0.0001 lb/ton for PM and PM<sub>10</sub>, respectively.<sup>71</sup> At the 5,000 ton per hour unloading rate proposed for the PCAEC, this would result in PM and PM<sub>10</sub> emissions of 1.0 lb/hr and 0.5 lb/hr, respectively. These emission levels are significantly higher than the limits included in the draft permit for railcar unloading emissions (see Table 9).

Recent BACT determinations (see the RBLC summary tables in Appendix E of the application) and the discussion of best demonstrated technology (BDT) in the proposed NSPS Subpart Y,<sup>72</sup> emissions from coal handling should be limited to 0.0050 gr/dscf. The emissions estimates provided by the applicant reflect the installation of state-of-the-art coal and petcoke handling equipment. As shown in the table below, the pound-per-hour emissions limits set in the draft permit are equivalent to grain loading levels considerably less than 0.0050 gr/dscf at the design flow rates for the baghouses.

**Table 9. PM and PM<sub>10</sub> BACT LIMITS FOR COAL AND PETCOKE HANDLING**

Source	PM		PM <sub>10</sub>	
	Draft Permit (lb/hr)	Equivalent Grain Loading (g/dscf)	Draft Permit (lb/hr)	Equivalent Grain Loading (g/dscf)
SRC01, Railcar Unloading	0.09	0.0009	0.044	0.0004
SRC02 - SRC07 Conveyor transfers and silo filling	0.09	0.0009	0.04	0.0004
SRC08 – SRC12 Reclaim conveyor transfers	0.002	0.00002	0.001	0.00001

*Result: No change to the draft permit or statement of basis.*

**Comment 103. PM controls for slag handling controls do not represent BACT. A comment was received stating that the controls for PM emissions from slag handling do not represent BACT. (ICL)**

Response:

DEQ disagrees. Providing a 3-sided bunker for storage of a vitrified slag that will have a relatively large particle size and a high moisture content represents BACT for this emissions source. Total PM and PM<sub>10</sub> emissions from slag handling were estimated to be 0.26 TPY and 0.13 TPY, respectively. The BACT cost threshold used for this project was \$10,000 per ton, so any control measure (e.g., enclosure) or control device with total costs exceeding \$2,600 per year for PM and \$1,300 per year for PM<sub>10</sub> would be screened out based on excessive costs.

<sup>71</sup> January 1, 2007, Operating Permit, Platte River Power Authority – Rawhide Energy Station, available at <http://www.cdphe.state.co.us/ap/downop/lr142p04.pdf>

<sup>72</sup> April 28, 2008, 73 FR 22901, Proposed Rule, Standards of Performance for Coal Preparation Plants.

*Result: No change to permit. The draft statement of basis has been revised to include a discussion of the BACT controls for slag handling.*

#### **COMMENTS NOT DIRECTLY RELATED TO AIR QUALITY PERMITTING**

**Comment 104. Water and wastewater. Comments were received regarding the source of the water for the plant, and whether wastewater discharges from the plant would impact the Snake River or Snake River aquifer.**

Response:

The source of water for the plant is described on page 1-17 of the application. Other than drift/mist from the cooling towers, there are no wastewater discharges proposed from this facility.

*Result: No change to the draft permit or statement of basis.*

**Comment 105. Handling and disposal of slag. Comments were received expressing concerns regarding the use of the coal gasification slag for road mix or disposal at a landfill based on historical experience with naturally-occurring radioactive materials (NORMs) in industrial slag from the former FMC plant. (EPA 10)**

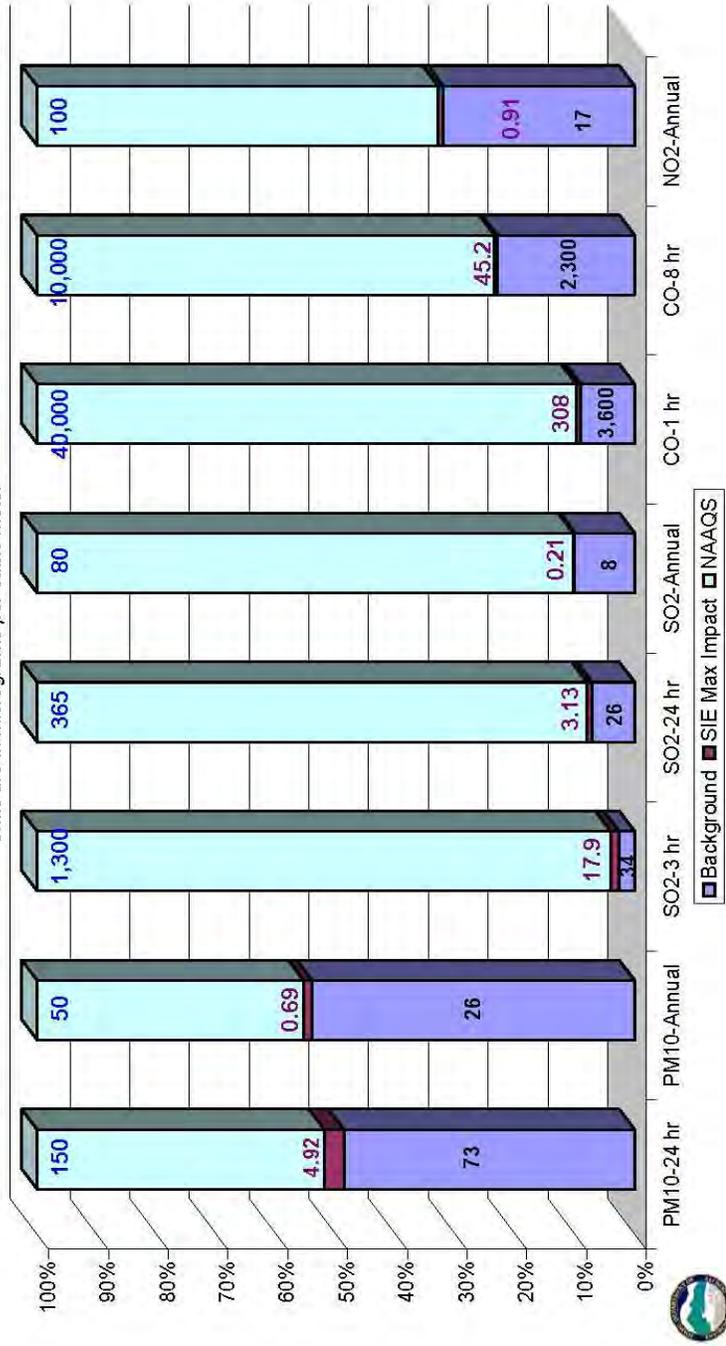
Response:

The commenter provided contact information for Rick Poeton, who works in the Radioactive Materials Disposal Program at EPA Region 10 in Seattle. This information has been passed along to SIE with a recommendation that they contact Mr. Poeton directly. Discussions regarding the characterization and final uses or disposal of the gasifier slag will occur outside of the air quality permitting process.

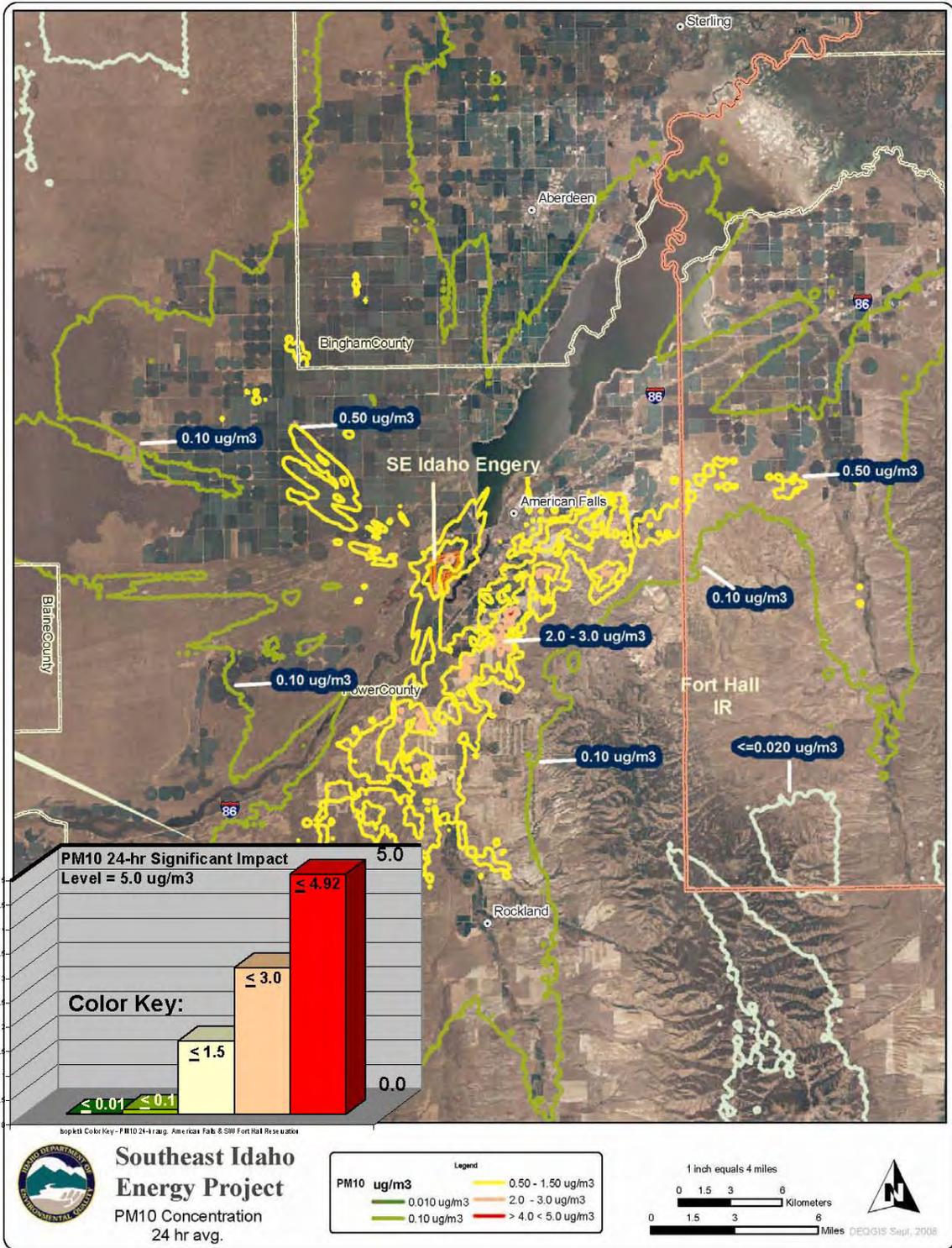
*Result: No change to the draft permit or statement of basis.*

**SIE's PCAEC Maximum Ambient Impacts compared to Primary National Ambient Air Quality Standards (NAAQS)**

Primary Standards: Set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Background values shown are representative values for the American Falls area. Units are in micrograms per cubic meter



**Figure 4. PRIMARY NAAQS COMPARISON—CRITERIA POLLUTANTS (AMERICAN FALLS)**



**Figure 5. PM<sub>10</sub> IMPACTS, 24-HOUR AVERAGING PERIOD (AMERICAN FALLS)**

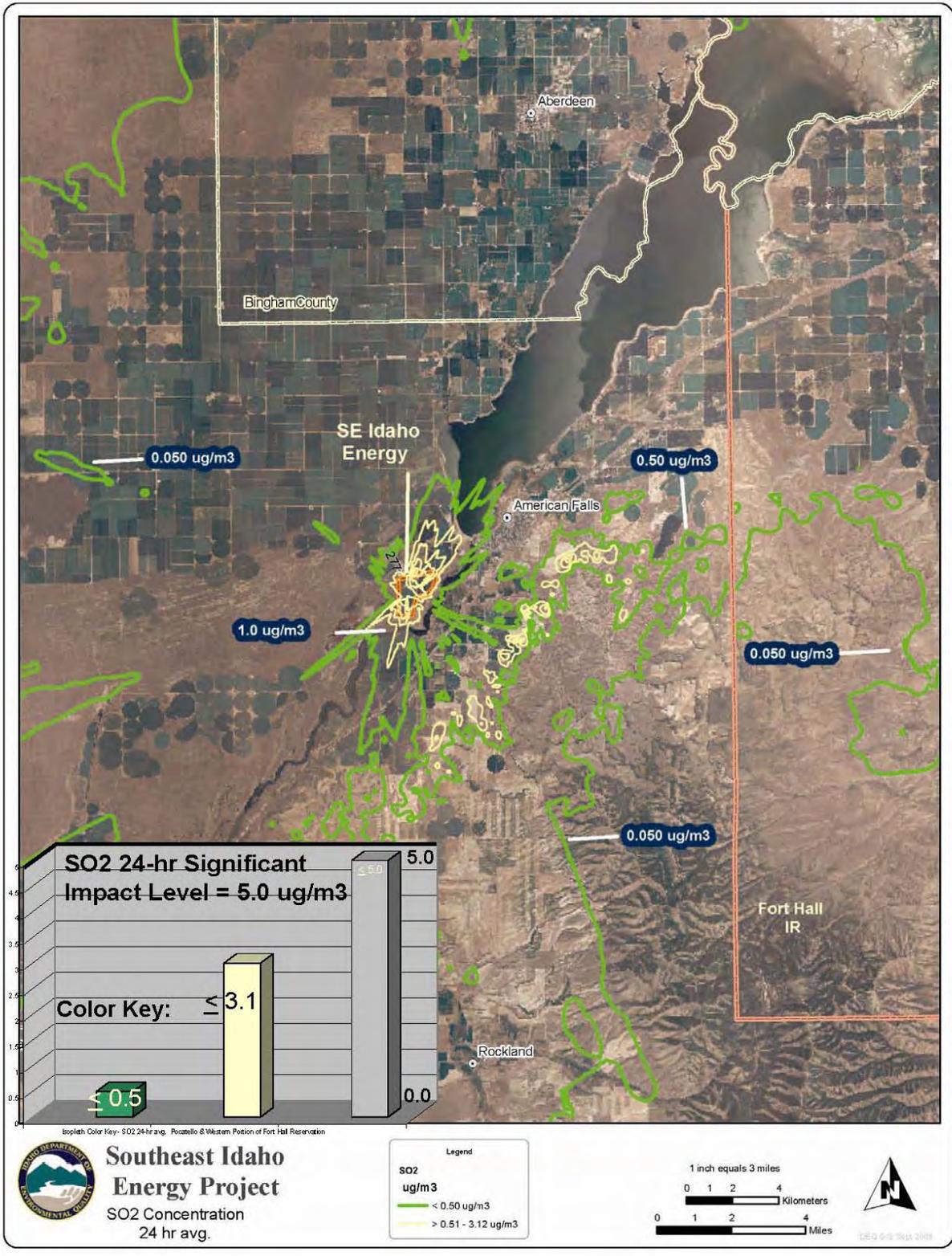
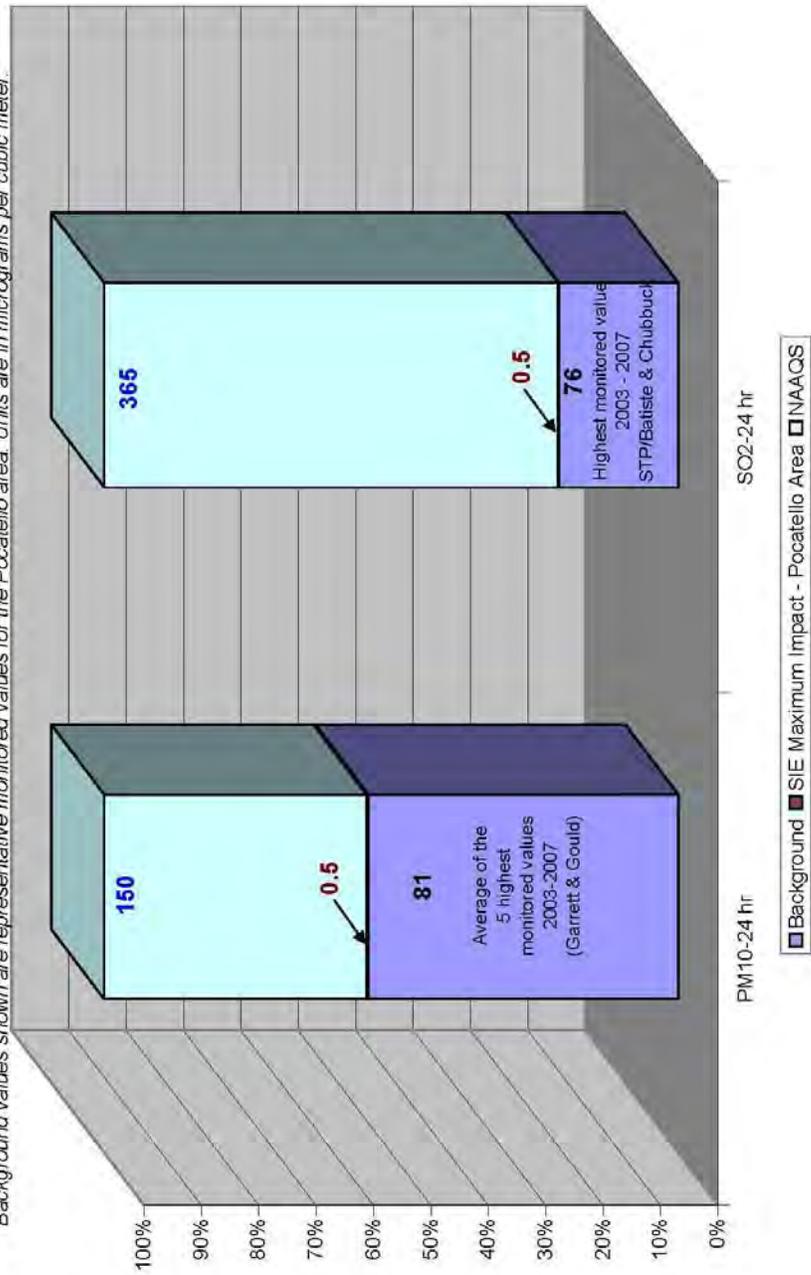


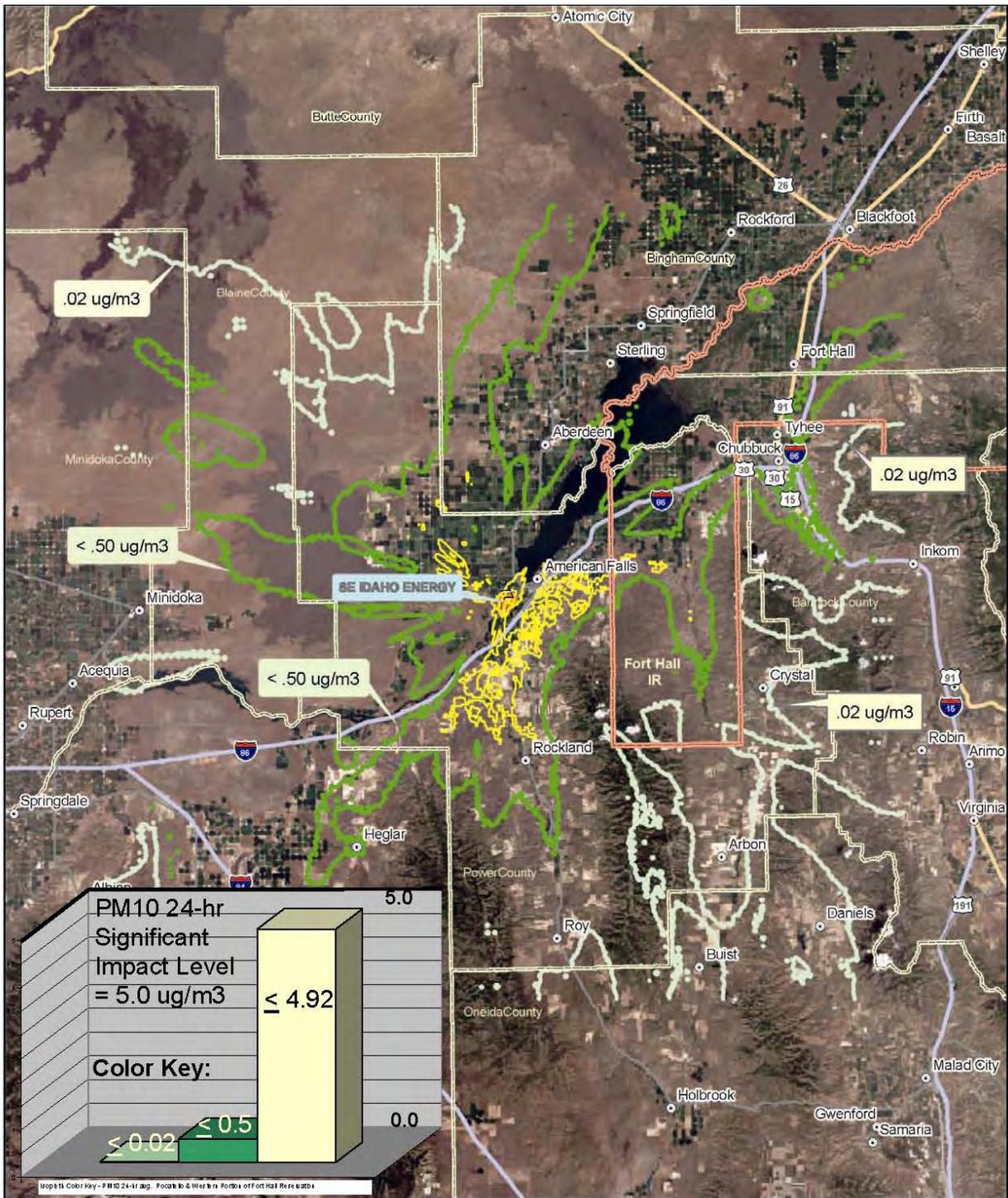
Figure 6. SO<sub>2</sub> IMPACTS, 24-HOUR AVERAGING PERIOD (AMERICAN FALLS)

**SIE's PCAEC Maximum Ambient Impacts in the Pocatello Area compared to Primary National Ambient Air Quality Standards (NAAQS)**

*Primary Standards: Set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Background values shown are representative monitored values for the Pocatello area. Units are in micrograms per cubic meter.*

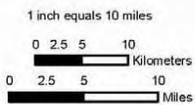


**Figure 7. PRIMARY NAAQS COMPARISON—PM<sub>10</sub> AND SO<sub>2</sub> (AMERICAN FALLS)**

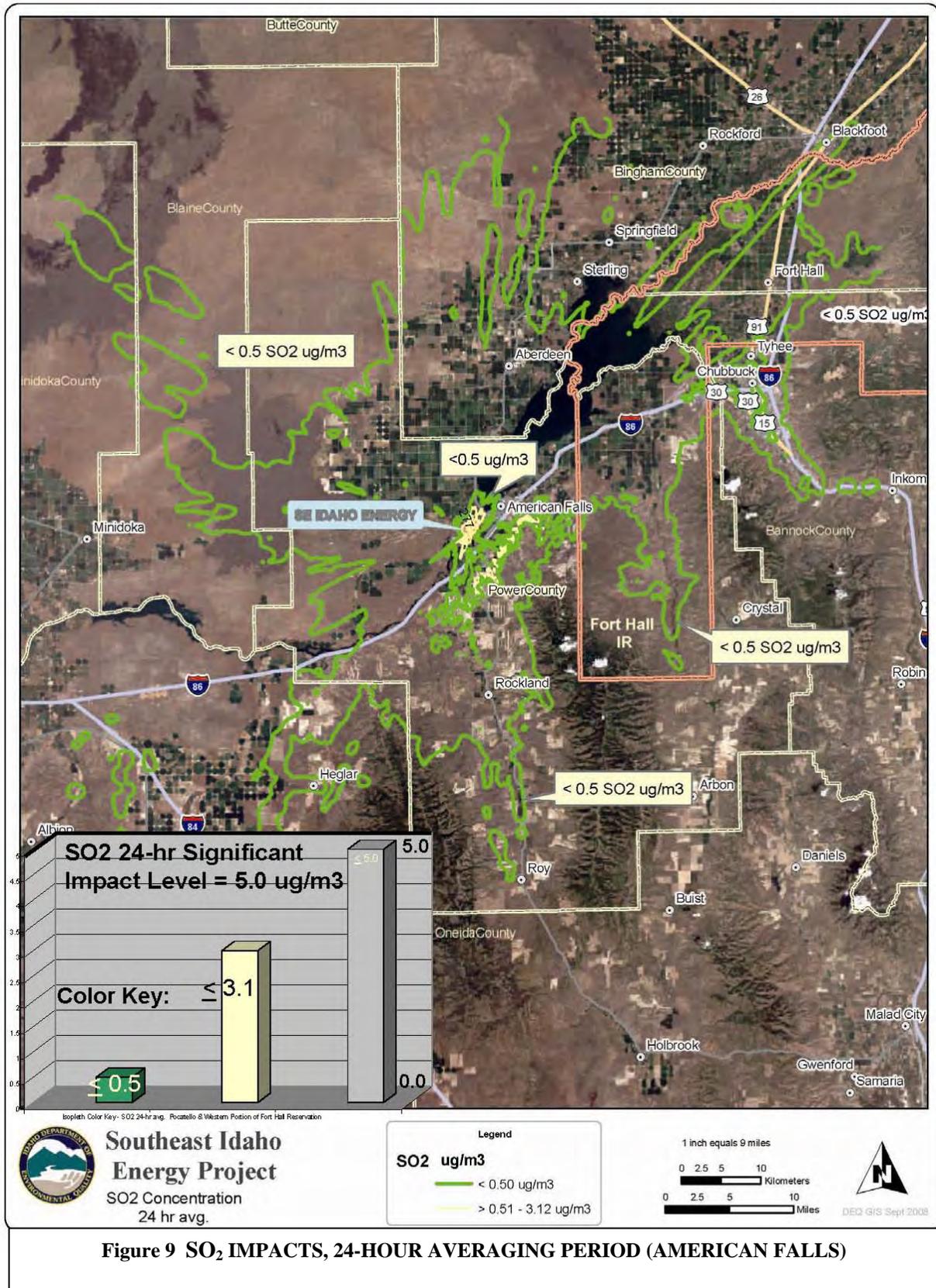


**Southeast Idaho Energy Project**  
 PM10 Concentration  
 24 hr avg.

Legend	
PM10 ug/m3	< 0.50 ug/m3
	0.50 - 4.92 ug/m3
	<= 0.020 ug/m3



**Figure 8. PM<sub>10</sub> IMPACTS, 24-HOUR AVERAGING PERIOD (AMERICAN FALLS)**



## **Appendix A**

### **Public Comments Submitted for**

### **Permit to Construct**

*List of Individuals and Organizations that Submitted Comments*

**P-2008.0066**

P-2008.0066, Comments Received on Draft PTC for Southeast Idaho Energy's Power County Advanced Energy Center

	A	B	C	D	E
	First	Last	Email, DEQ website, or U.S. Mail	American Falls Hearing Transcript	Pocatello Hearing Transcript
1					
2	<b>Federal/Tribal Comments</b>				
3	Richard Albright, Director	U.S. EPA, Region X, Office of Air, Waste, and Toxics	X		
4	submitted by Roger Turner	Shoshone-Bannock Tribes	X		
5	<b>Public Comments</b>				
6	Betty B.	Adams	X		
7	Maribeth	Alder	X		
8	Sid and Marilyn	Allen	X		
9	Amy Wynn, Mayor	American Falls Mayor and City Council			X
10		American Falls Rotary Club	X		
11	Ronald R. Bollinger, Superintendent	American Falls School District	X		
12	David G.	Anderson			X
13	Randy	Anderson	X		
14	John	Arvas			X
15	Katie	Ballard	X		
16	Scott S.	Balsai	X		
17	Colden, Lenny (Laura), Arwen, Iris	Baxter	X		
18	Laurie	Beebe	X		
19	David	Bethke		X	
20	Richard D.	Boardman			X
21	Robert	Bodell			X
22	Roger	Bray (RRJames113@aol.com)	X		
23	George	Buehler	X		
24	Del	Butler			X
25	John	Carlson	X		
26	Sandy	Carlson	X		
27	Angelat	Carpenter	X		
28	Larry	Chrstensen	X		
29	Brenda	Clinger	X		
30	Dallas	Clinger	X		
31	Ralph G.	Cottle	X		
32	Joann	Crane	X		
33	Jean and Bill	Davidson	X		
34	Robert	Devine	X		
35	Sandra	Devore	X		
36	Kathleen	Dohse	X		
37	Joan	Downing	X		
38	Braden	Driscoll			X
39	Dirk	Driscoll		X	X
40	Christopher	Dungey	X		
41	Aaron	Eakman	X		
42		<a href="mailto:elbmusic@hotmail.com">elbmusic@hotmail.com</a>	X		
43	Barbara C.	Felton	X		
44	Carol L.	Flynn	X		
45	Ralph	Friedemann	X		
46	Rod	Fuger		X	X
47	Camille	Gardner	X		
48	Matthew J.	Germino	X		
49	Stephanie	Gill	X		
50	Marv Hoyt, Idaho Director	Greater Yellowstone Coalition	X		
51	Matt	Gregson	X		
52	Dave	Griffiths	X		
53	Michelle	Gustin-Jones	X		
54	Jacob	Haerberle	X		
55	James L.	Halderson	X		
56	John	Hart	X		
57	James C.	Heiser	X		
58	Karen	Helland Tate	X		
59	Greg	Helm	X		X
60	Brian	Holmes	X		
61	M. Keene	Hueftle	X		

P-2008.0066, Comments Received on Draft PTC for Southeast Idaho Energy's Power County Advanced Energy Center

	A	B	C	D	E
1	First	Last	Email, DEQ website, or U.S. Mail	American Falls Hearing Transcript	Pocatello Hearing Transcript
62	Justin Hayes, Program Director	Idaho Conservation League	x		
63	Allen	Jackson	x		
64	Barbara	Jackson	x		
65	Jerry	Jayne	x		
66	Kristen	Jensen			x
67	Randy	Jensen			x
68	Jim	Johnston			x
69	LeRoy	Jones	x		
70	Richard L., "Rick"	Kearns	x		
71	Kenneth	Khang	x		
72	Joanna	Kirkpatrick	x		
73	Cathy	Kriloff	x		
74	Lynda	MacButch	x		
75	Scott	MacButch	x		
76	Sue	MacButch	x		
77	Margaret L.	Marshall	x		
78	Susan	Matsuura	x		
79	Sandra D.	Mayden	x		
80	Willis J.	McAleese	x		
81	Bill	Meadows		x	
82	Mike	Miera			x
83	Roy F. and Suzanne B.	Miller	x		
84	Annette	Neil	x		
85	Brian	Nelson	x		
86	Barbara	Nicholls	x		
87	Melvin G.	Nicholls	x		
88	Ben	Nickell	x		
89	Barbara	North	x		
90	William	Norton	x		
91	Vivian L.	Paul	x		
92	Joseph J.	Pavek	x		
93	Ronald W.	Peterson	x		
94	Jeremias	Pink	x		
95		Pocatello Resident	x		
96	Mitch	Popa	x		
97	Margo and Dennis	Proksa	x		
98	Muriel R.	Roberts	x		
99	Shirley	Rodgers	x		
100	Ann	Rogers	x		
101	Dorothy	Rogers	x		
102	Maxine	Rogers	x		
103	Kent	Rudeen		x	
104	Sheryl	Savage	x		
105	John	Schmidt	x		
106	Jeff	Schutte			x
107	William	Sharp			x
108	Debra M.	Shell	x		
109	Andrea Issod, Staff Attorney	Sierra Club and Idaho Conservation League	x		
110	J'neane	Smith	x		
111	Charles	Spradlin	x		
112	Bob	Steinlicht			x
113	Stephen	Stokes	x		
114	Ben	Strand		x	
115	Richard	Taylor	x		
116	Glenn	Thackray	x		
117	Charles H.	Trost	x		
118	Roger	Turner			x
119	Mari	Tusch			x
120	Mike	Wade	x		
121	Steve	Wallace	x		

P-2008.0066, Comments Received on Draft PTC for Southeast Idaho Energy's Power County Advanced Energy Center

	A	B	C	D	E
1	First	Last	Email, DEQ website, or U.S. Mail	American Falls Hearing Transcript	Pocatello Hearing Transcript
122	Valorie	Watkins			x
123	Victor	Watts	x		x
124	James R.	Weimer			x
125	Charles A.	Whitmire	x		
126	Valerie	Williams	x		
127	Jennie	Winter	x		
128	Earle	Wolfrom	x		
129	Greydon	Wright			x
130	Norman	Wright		x	x

## **Appendix B**

### **Public Comments Submitted for**

### **Permit to Construct**

*Comments Received through the DEQ Website, email, U.S. Mail, or  
submitted as a written comment at a public hearing*

**P-2008.0066**

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Name: **Betty B. Adams**

Email Address: bettebadams@msn.com

Affiliation: concerned citizen

Comments: I have been reading about the coal burning fertilizer plant that is applying for permits West of American Falls. We know it is going to put out pollutants that will affect the health of people for miles around it. It will put even more mercury into American Falls reservoir and there will be some people who will eat the fish from it. The particulate matter in the air when the wind blows, and it blows a lot in Idaho, will reach to Blackfoot and beyond.

I have friends and relatives that have arrived in Pocatello about this time of year for a visit, and wondered why I would choose to live here with the amount of pollution that the Simplot plant is spewing out. I am not sure I can live here with another fertilizer plant spewing poison into the air to further ruin my breathing. I don't suppose loosing one old lady will be anything to worry about, but perhaps loosing future people and businesses that would move to Pocatello and the surrounding area would be a bad thing. I believe this may very well become a problem. The damage this plant will do to the environment and inhabitants of this areas will be a problem that cannot be hidden.

Please do not let this plant operate under the current rules.

Betty B. Adams

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Name: **Maribeth Alder**

Email Address: maribethalder@hotmail.com

Affiliation: concerned Pocatello resident

Comments: Please deny the permit for the Southeast Idaho Energy (SIE) Power County Advanced Energy Center. The damage to the air quality of Power, Bannock, and Bingham Counties is much too high a price to pay for this project. It has only been since the demise of the FMC plant that Pocatello has enjoyed improved air quality; please do not take that away from us.

RECEIVED

NOV 03 2008

Department of Environmental Quality  
State Air Program

October 30, 2008

DEQ  
Attn: Faye Webber  
1410 N. Hilton Street  
Boise, ID 83706

Re: SEIE Project

To Whom It May Concern:

We were unable to attend the Department of Environmental Quality public hearing concerning the Southeast Idaho Energy application on Thursday, October 9<sup>th</sup> because we were in the middle of harvest, but we wanted our opinion made known.

We live near the reservoir, just a few miles northeast of the proposed plant and directly downwind from it, and farm in the Pleasant Valley area. We are very concerned about emissions this plant will produce and can't understand why the DEQ would even consider giving it a permit due to its location upwind from the reservoir, American Falls, Pocatello, and directly across from the new American Falls High School.

We adamantly oppose the plant being located here, and are not willing to sacrifice our clean water and clean air. With the whole country committed to going green and producing clean energy, why would a permit even be considered for a plant with this carbon footprint and other pollutants?

Sincerely,



Sid & Marilyn Allen  
2799 Vollmer Loop  
American Falls, ID 83211  
(208) 226-7907

## American Falls Rotary Club American Falls, ID



October 29, 2008

To: Idaho Department of Environmental Quality

From: American Falls Rotary Club

As the American Falls Rotary Club, we have been following the developments of the Power County Advanced Energy Center since its inception. We know it will benefit our community and provide fertilizer for local consumption. We support the construction and operation of the Advanced Energy Center in American Falls, Idaho, and we urge you to issue and Air Quality Permit.

We are certainly interested in the jobs this project will create and the positive effect it will have on our economy. This project will create good manufacturing jobs, and with our country's economic troubles, we need all the American manufacturing jobs we can get. Just like the rest of the country, American Falls and southeast Idaho need an economic boost. We understand that this project will create three years of construction jobs and well-paying permanent operations jobs. The construction workers will eat, shop, and live in our community. The permanent employees will buy homes, use services, and raise their families here. We also know spin-off business will result from the plant locating here. Constructing this project will provide an economic boost for our community, our region, and our country.

We understand that the byproduct from this center can be used in a productive way. We have heard that the aggregate is non-toxic, non-hazardous and non-radioactive. There are local companies who would be interested in using the aggregate in cement or for other construction projects. Sulfur will be separated from the syngas and sold as elemental sulfur or sulfuric acid, both common components in fertilizer.

It is our understanding that this plant will be built with cutting edge technology using the best available control technologies to produce fertilizer in an environmentally responsible manner. We know that the company is going above and beyond requirements to protect our environment from particulate matter by enclosing their coal handling processes. We have looked at the emissions from this center as shown in the application for the Air Quality Permit and understand that they are well within the standard established by federal and state agencies to protect the most sensitive populations.

Even with all the economic benefits and environmental protections, we would not want this project in our community if it were not safe for our families. As the state

environmental quality agency, you have been given the responsibility to investigate projects and determine if they are safe for our community and our children. We ask that you look at every detail of this project and write the permit to protect our community. Please be fair and timely in issuing this permit.

We look forward to having this project in our community.

Sincerely,

American Falls Rotary

Signatures:

Kyle Jones  
Ralph Jones  
Ronald H. Willey  
Bob Seader  
Elaine Simpson  
Ann Hula  
Doug Willey  
Wade Pray  
Jerry R. Anderson  
Donna Brennan  
Mark  
Karen Hammond  
Steve

# AMERICAN FALLS SCHOOL DISTRICT NO. 381

Ronald R. Bolinger, Ed. D.  
Superintendent

827 Fort Hall Avenue  
American Falls, Idaho 83211  
(208) 226-5173



RECEIVED

NOV 13 2008

Department of Environmental Quality  
State Air Program

November 10, 2008

At its October 27<sup>th</sup> meeting the Board of Trustees for School District #381 discussed the proposed plant known as the Power County Advanced Energy Center to be located west of American Falls.

The board unanimously voted to support the project and urge the DEQ to issue a Air Quality Permit based on the fact that the plant will be built with the latest technology to control the environment for the protection of our students.

The economic benefits for the project are many. The proposed plant will provide fertilizer for the crops of the eastern Idaho area and produce a number of direct and indirect jobs for our residents.

We anticipate that the project will bring an increased student population to the district, but are certain that the economic market value increase will provide for additional infrastructure for the needs for any additional classrooms.

There has been a great deal of effort and investigation that has been dedicated to the development of the project. We have been assured that all federal and state environmental quality requirements have been met as part of the research for the project. When the environmental quality agency that has been given the responsibility to determine and insure the safety for our community and our children verifies those findings, the board would urge your timely issuance of this permit.

If you have any questions, please do not hesitate to contact me at (208) 226-5173.

Sincerely,

Ronald R. Bolinger, Ed.D.  
Superintendent

*"Encouraging Every Student Every Day"*

---

Name: **Randy Anderson**

Email Address: highbasin@gmail.com

Affiliation:

Comments: I wish the Idaho DEQ to not issue a permit to SIE for it's coal fertilizer plant for the following reasons:

- 1) Last spring the US supreme court ruled that the EPA was not following the intent of The Clean Air act in not regulating carbon dioxide emissions. With the upcoming administration change there will likely new considerations in EPA regulations as a result of this ruling. Please do not allow this plant to be constructed knowing that EPA regulations of carbon dioxide emissions may soon be legislated.
- 2) The Idaho DEQ only regulates mercury inhalation and ignores other accumulations such as in the water ways, food supply and/or wildlife such as fisheries contamination. As I understand it the DEQ is going to review mercury regulation in February 2009. Due to the potential health repercussions for mercury please postpone permitting this plant until mercury is further considered.
- 3) My last objection is the subjective effects of this plant on Pocatello's air quality. The winter-time air in this city is already degraded enough to be deemed a non-attainment area and with good reason. It is hard to even be outdoors in this city during these inversions giving one the sense that you can actually taste the air. This makes it hard to exercise or even ride a bike to work on these days (which will further degrade air quality). We can not afford the affects of any more industrial pollution to Pocatello's failing air quality.

I do not believe SIE's claims that they will be sequestering it's pollution in Wyoming gas fields; I believe it will be sequestered in the respiratory systems of Pocatello's citizens. Please do not issue a permit for this plant! Thank you

---

Name: **Katie Ballard**

Email Address: katie@ballard.myrf.net

Affiliation: home owner

Comments: It is a good project.

---

From: **Scott Balsai** [acoustic.reflections@gmail.com]

To: Cheryl Robinson;

Subject: Powewr County Advanced Energy Center

Date: Sunday, November 23, 2008 10:33:04 AM

I would like it to be known that I, Scott Balsai, am against the approval of the "Power County Advanced Energy Center". I suffer from a form of asthma which is exacerbated by types of air pollution which may contain, not only particulate matter, but ammonia and sulfur. Therefore, besides the environmental global warming concerns of CO2 emissions, I am also very concerned about the immediate health consequences which will have to be endured by the residents of the local communities. I feel that the medical costs which will undoubtedly ensue as more of the "externalized" costs to the community should also be calculated into the "costs" of having a plant like this in the area. Days missed from work, days missed from school, as well as more enduring and more serious extended health consequences of a plant like this are enough, considering the geographic morphology of our area, to not allow a plant like this to come into the area. (Remember we already have a plant like Simplot contributing to the creation of an unhealthy local environment.)

I also wonder if anyone has looked at the possible threat to the local agricultural industry of possible mercury "fallout" leaching into crops, such as potatoes, from the use of irrigation water from the American Falls reservoir. The fish in the reservoir may only be the proverbial tip of the iceberg. Also I wonder about what seem to me to be the inevitable contamination of the local ground water with the same mercury leaching into the aquifer from the use of water from the reservoir.

These concerns and more are why I can not allow myself to sit quietly by and watch this plant go through.

I might also remind the DEQ of what they stand to lose if they support the construction and utilization of a facility like this should the worst fears of local residents like me come to be seen as more accurate than the DEQ's estimate of the negative consequences of this plant or other plants like it. It seems to me that the successful future of an organization like the DEQ largely rests on the integrity and credibility of its analysis and its conclusions. A Department of Environmental Quality which is seen by its public as merely a compliant partner in the development and use of "dirty" industry, may be a department that may appear to be contrary to its mission of protecting the public health and welfare and cease to exist amidst a less complacent political environment.

I, personally, would like to see the continuance of a DEQ with the reputation of integrity and credibility that I have come to expect from such an organization dedicated to the protection of the public health and welfare.

Yours sincerely,

Scott S. Balsai

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From: **Colden Baxter** [coldenbaxter@gmail.com]

To: Faye Weber

Subject: public comment on air quality permit for proposed Southeast Idaho Energy Power County Advanced Energy Center near American Falls

Faye Weber  
Air Quality Division  
DEQ State Office  
1410 N. Hilton  
Boise, ID 83706

We are writing to voice our firm opposition to the proposed Southeast Idaho Energy Power County Advanced Energy Center, and to urge you to deny the air quality permit for this project. As citizens of Pocatello, we are convinced the proposed coal burning fertilizer plant is a bad deal for our region for a number of reasons.

This plant would discharge contaminants into our air-shed that pose health risks that we consider unacceptable for our children (we have two daughters). This plant would not just affect the American Falls area—it would have consequences for the entire air-shed that includes Pocatello.

We also feel that the emissions that would come from this plant would be bad for the business and sustainable economic growth of our community. Pocatello and surrounding areas do not need the economic stigma of a reputation for "bad air." Moreover, these emissions would have unknown effect on long-distance visibility in our area. Hence, our future "view-shed" (and associated property values, recreational and tourist attracting power, the power of the community to attract other new businesses and the university to attract new students) may also be placed at risk through this project.

From the standpoint of air quality and visibility, we are concerned not only with the direct emissions that would accompany the project, but we realize that the plant's presence would mean huge amounts of coal would pass by open rail car through our city. In a community that can already be windy and dusty, added coal dust would be unwelcome.

Finally, we do not consider a coal-burning facility to be a good long-term investment for local communities. We know now that coal burning is implicated in many environmental problems. Our area has already suffered many such environmental woes, including superfund sites, degraded air quality, and contaminated waters. If this plant is permitted, this will send a signal to citizens like our selves that the standards for permitting are inadequate to protect the health (in the broadest sense) of our community.

You represent the "Department of Environmental Quality"—this project threatens the quality of our environment. Do not permit this project to move forward.

Sincerely,

Colden and Lenny (Laura) Baxter  
(and daughters Arwen and Iris)  
833 E Halliday St  
Pocatello, ID 83201

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Name: **Laurie Beebe**

Email Address: [beebe@dcdi.net](mailto:beebe@dcdi.net)

Affiliation: American Falls resident

Comments: Concern - What impact will the proximity of the proposed plant be on the Snake River and nearby aquifer? If carbon is injected into the ground, won't that result in a temperature increase of the soil and in turn warm the river and aquifer water? What will the results be for the downstream water users and the natural environment of the Snake River and aquifer?

The location of the proposed plant is next to one of the only free-flowing stretches of the Snake River in this County. Will that be compromised?

---

From: **RRJames113@aol.com (Roger Bray)**

To: Faye Weber

Subject: (no subject)

Where is the waste water used in the process going to be released? If it is in a holding tank, how secure is that tank, how long will the water be "held", and where will it eventually end up? How will the "used" water affect the River and aquifer?

In the summer, residents can smell odors from potato processing at Lamb-Weston, the city sewage plant, a feedlot, and a dairy. I'm sure no matter what regulations and precautions are taken, odors from this plant will be evident. So, in this small community we will smell potato-by product, sewage, cows, and now sulfur.

I was in favor of the original plans of this company to produce power, but changing to a plant that produces fertilizer is an entirely different ball game. Please consider all aspects of this proposal VERY carefully.

I am writing to oppose the coal gasification plant proposed near American Falls. There are many issues which I believe have not been addressed. This location is too near too many sensitive areas to approve an untested theory that could have disastrous effects on so many vital public interests.

A simple review of the map shows that this will be located up wind of one of Idaho's most vital economic resources our Upper Snake River agricultural lands that produce wheat, potatoes and many other cash crops for consumption the world over. There are too many variables about what may be released as pollutants, pollutants that could severely hamper the marketability of our food. If I were a Potato producer from another region I would market against the questionable contaminants being introduced into the soil and therefore the agriculture products that harvested from the lands. Just show the Co 2 plume from a distance then fade back to the potatoes being harvested in the near foreground. After all a picture is worth a thousand words.

Second, American falls reservoir is already under a watch area for mercury content in the fish, with some people being told that they should not eat fish from that water. We need to find ways for correcting this problem, the new coal plant has great potential to exacerbate this situation.

Another problem is that this plant is to produce a great amount of co 2 that will have to compromise the quality of life that is part an parcel to the draw of Idaho to tourists and those who want to live here. This coal plant is not a good fit for such and fragile eco-system as Idaho's. While we get good winds at times, they tend to bunch polluted air up against the mountains to the East and will only exponentially diminish what is often now marginal air quality at certain times.

Now throw in the transport of the coal through Montpelier, Soda Springs, Lava, Pocatello, and American Falls. Daily, hundreds of railroad cars laden with coal will be spewing coal dust through out south Idaho and our cities. It appears that no provision has been made to monitor nor control this condition. This alone is cause to not send this project forward.

Many other factors are present that I believe have not even been openly talked about as part of a diligent review of the potential negative impact that can befall the surrounding areas. This plant will be located within a few miles of public use lands. It is less than 50 miles from the Idaho National Laboratory which should not have to sacrifice its position as an essential National Laboratory. There is a major population and economic corridor that should not be compromised within a 50 mile eastern radius of this site. Rexburg, Idaho Falls, Shelley, Firth, Blackfoot, the Fort Hall reservation, Chubbuck, and Pocatello could be greatly harmed if some standards are met while other rather abstract one's regarding the potential for CO 2 release, and mercury release are not appropriately evaluated for the potential harm they can bring to bear on so many of us in South Idaho and beyond.

Extending the area of impact out to 150 miles or less there are many other important areas that could be negatively effected. There is Crater's of the Moon National Park, Teton National Park, and Yellowstone National Park--the Jewel of our National Park system. Won't we get a lot of positive press if this idealistic proposal turns into a terrible reality that harms our National Parks and the fisheries on the famed Henry's Fork and South Fork of the Snake River. For that matter consider the streams, lakes, and reservoirs that could be harmed by airborne contaminants that can be placed into their watersheds over time: Blackfoot, Palisades, Chesterfield, Rire, Aston, Mackay, Jackson Lake, Yellowstone Lake, to name just a few.

As you can see I believe this is an ill conceived proposal that has not been properly evaluated for all of its far ranging negative impacts! Please resist the willingness to sacrifice our South Eastern Treasures. Trading off these treasures for the sake a few jobs is unconscionable.

Roger Bray  
6 Debbie Drive  
Pocatello, Idaho 83204

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Name: **George Buehler**  
Email Address: cyb@ida.net  
Affiliation: downwind citizen  
Comments: For more reasons than I have time to specify I STRONGLY OPPOSE THIS PROJECT !!!

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From: **John Carlson** (jcarlson@idfbins.com)  
To: Cheryl Robinson;  
Subject: Against proposed air quality permit  
Date: Tuesday, November 25, 2008 12:56:07 PM

My name is John Carlson. Please do not permit this coal plant to come to South East Idaho. I am against it. Please send me an email stating that you have received this petition.

Thanks, JOHN

[You may be disappointed if you fail, but you are doomed if you don't try. ---- Beverly Sills](#)

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From: **Sandy Carlson** [jcarlson@idfbins.com]  
Sent: Wednesday, November 26, 2008 12:07 PM  
To: Cheryl Robinson  
Subject: RE: Against proposed air quality permit

My mother called and said that they want an email from her and she doesn't have one.  
Please add her name as being against the coal plant.  
Sandy Carlson 2339 So. 2<sup>nd</sup> Ave. Pocatello, Idaho 208-233-3427  
Thanks,  
JOHN

DEQ Note: Mrs. Carlson left a voicemail message early Tuesday morning, November 25, 2008.  
Because she left the message only a matter of hours after the comment period was scheduled to close, this email submitted on her behalf from her son was accepted.  
-Cheryl Robinson, Permit Engineer

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Name: **Angelat Carpenter**  
Email Address: angelakate@gmail.com  
Affiliation: Pocatello Resident  
Comments: The air pollution in the Pocatello area is already a strong negative aspect for our community. Please don't allow South East Idaho Energy to place a coal fire plant in our area. Our country needs to move away from coal and towards clean energy sources.

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Name: **Larry Christensen**  
Email Address: christensenll@cablone.net  
Affiliation: Citizen South Eastern Idaho  
Comments: It belies credulity that we are even considering the permitting of the coal gasification plant near American Falls. In view of our mercury problems, to permit such a facility to be built in Idaho simply because it will produce something other than power is extremely difficult to understand. The no mercury rule should be universally applied in the state of Idaho. To sacrifice our health, our future, and the our quality and way of life for a few pieces of silver should be not be permitted. The amount of other harmful products, such as, Nox, Sox, Co2, Selenium, Arsenic etc. In addition, the technology has not been proven at this scale and certainly not at the "pilot" plants. Co2 rules and regulations are coming. To go in the opposite direction at this time would show not only just how gullible and ill informed we are but will discourage many others who are coming or planning to come to Idaho because of our great quality of life here in Idaho. I strongly encourage you not to permit this facility. I do not want to live under the air quality standards of those who live back east. Please tighten our air quality standards and rules here in Idaho. Thankyou very much.

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Name: **Brenda Clinger**  
Email Address: brenclinger@hotmail.com  
Affiliation: Resident of Power County  
Comments: I am in favor of this project. I think the economical development the project will bring to our county will be very benefical. The company has been very good about answering all questions and concerns that I had. Thank you.

---

Name: **Dallas Clinger**  
Email Address: dallasclinger@hotmail.com  
Affiliation:  
Comments: I urge you to approve this application. I live approximately 5 miles downwind from the proposed project and I have attended the public hearing on this project. The emissions are well within the standards that have been set. I hope you will listen more to those of us who live in the affected area than to those environmental reactionaries that may respond from outside this affected area. The economic benefit to our community is tremendous and the proposed emissions are minimal. I strongly support the approval of this permit. Dallas Clinger

RECEIVED  
NOV 03 2008  
Department of Environmental Quality  
State Air Program

October 17, 2008

Idaho Department of Environmental Quality

To Whom It May Concern:

I am writing this letter to express my support for the Advanced Energy Center's current proposal to build a fertilizer plant in American Falls, Idaho. I do not understand all of the technical procedures or environmental requirements for such a plant to be constructed. However, if all terms, conditions and requirements are met, it seems to me that this economical stimulus to Eastern Idaho will be significant. I will leave to you whether the project complies in all aspects with environmental requirements. I just say that new jobs, monetary injection and economic growth are worth a serious consideration for our area. Thank you for allowing me to mention my thoughts.

Sincerely,

Ralph G. Cottle

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Name: **Joann Crane**

Email Address: cyb@ida.net

Affiliation: educator

Comments: I think SIE is a horrible idea. It is being proposed here because of Idaho's lax environmental standards. I strongly oppose the construction of this facility.

---

Name: **Jean and Bill Davidson**

Email Address: Davidson\_jd@yahoo.com

Affiliation:

Comments:

Please deny licensing the coal fired plant proposed in Power County. Having lived in Pocatello for more than 30 years, we have been witness to a great deal of air pollution, and it always settles like a cloud right over Pocatello. To drive beyond the city limits and look back on a day of inversion is to see what residents of Pocatello have to deal with and breathe even when the air is supposedly clean.

Coal fired plants do emit bad stuff -- and saying "a little bit" is okay is not acceptable. "None" is the word we're looking for -- most importantly in these days of intense global warming indications. We've read that coal-fired plants are the worst contributors to global warming. Coal-fired plants emit so much CO2 into the air. How can that be good? Furthermore, to suggest that the emissions will not float over Pocatello is ludicrous. Of course the emissions will get here -- and it isn't fair to jeopardize our health when there are so many clean-air alternatives being set forth. Wind, solar, nuclear. Why must we use a proven polluter - coal fired plants???

It is the responsibility of DEQ to protect the public from things that harm the environment, is it not? Idahoans may be slow in putting forth laws and restrictions against harmful emissions but things will change eventually and Idaho will not want polluting giants living in our state. It is easier to keep them out NOW than to remove them once they are here. Already the fish in the reservoirs are showing harmful mercury concentrations. Are you willing to assume responsibility for wiping out the abilities of kids to eat the fish they catch? It's happening. It will be worse if this plant goes in.

You have the charge and the responsibility to protect our environmental quality. Please live up to that charge and deny this plant. Our quality of life depends upon your meeting your obligations to the residents of Idaho. Our very lives depend on your decision. You have no obligation to the promoters of pollution. Like we tell our kids, Just Say NO.

Thank you.

--Jean and Bill Davidson

421 Wayne Avenue

Pocatello, ID 83201

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Name: **Robert Devine**

Email Address: devibob@gmail.com

Affiliation:

Comments: Hi Faye, In a time when we are increasingly able to get energy from sources that do not provide air quality issues, it would be a travesty to approve going backward to allow plants that spew pollution in large quantities, causing health problems, allergies, and much more.

Please reject this proposal. If the time comes when a proposal has a true and honest chance for producing energy from a clean coal technology which traps virtually all emissions, then perhaps reconsideration would be due. Until then, please no.

Sincerely,  
Robert Devine  
Pocatello

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From: **Devore, Sandra** [sandrade@portmed.org]  
To: Cheryl Robinson;  
Subject: Power County Advanced Energy Center  
Date: Tuesday, November 18, 2008 4:38:18 PM

*I live in Aberdeen and I oppose building this plant. Too many companies come to Idaho because our regulations are more lax than other states. We need to address the air quality and the long term effects on the population. My observation at this point is that we do not need all these so called jobs at the expense of our children and our children's children. If you look at the obituaries we need to ask is why so many Idahoans dying at such an early age? Maybe companies like Simplot may have something to do with the toxins in the air.*

*Don't let outsiders pollute Idaho.*  
*Sandee DeVore*  
*Employee Health Coordinator*  
*Portneuf Medical Center*  
*phone 239-1897 fax 239-1896*

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Name: **Kathleen Dohse**  
Email Address: kdohse@cableone.net  
Affiliation:  
Comments:  
Attached is my official comment opposing the coal-burning fertilizer plant scheduled to be built near American Falls.

I oppose the construction and operation of the coal-burning fertilizer plant in the American Falls vicinity. In support of my opposition, I cite Idaho Statute, Title 39-102A, Legislative Intent in Creating Department of Environmental Quality. "The legislature finds and declares that: (1) The creation and establishment of the department of environmental quality to protect human health and the environment as its sole mission is in the public's interest...."

In these difficult economic times, I can understand the desire to bring jobs to the area, however, I believe environmental and human health "is in the public's interest." The Pocatello area experiences a higher rate of asthma and respiratory related illness than normal. The prevailing wind is from the west, so we can expect more air pollution and more respiratory problems. There will be even more chemicals emitted from the coal gasification process in addition to the coal dust blown along the way from the uncovered train cars (2,000-2,300 tons of coal every day). In a small valley town in Pennsylvania which had a coal gasified plant, 200 people died during an air inversion--and nothing was done about it. We experiences air inversions too! So what protection do we have? Did DEQ prevent the Superfund site west of Pocatello? How did DEQ protect the cattle that contracted fluorosis from eating vegetation contaminated with effluents from the phosphate plant west of town? And what about the mercury tainted fish caught from the American Falls Reservoir? (Recommended that small children and pregnant or nursing mothers eat no more than one serving per week).

Let's bring only clean industries to Idaho. Deny the permit for the coal-burning fertilizer plant and abide by DEQ's stated "sole mission is in the public interest" and follow Idaho's motto as seen on our road signs, "Idaho is too great to pollute."

---

Kathleen Dohse  
1436 Marguerite Avenue  
Pocatello, ID 83201-3554  
208-237-4260  
kdohse@cableone.net

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Name: **Joan K. Downing**

Email Address: downjoan@gemstate.net

Affiliation:

Comments:

As an elderly person suffering from asthma and congestive heart failure, I am very concerned about the possibility of the transportation of thousands of tons of coal to a plant in Power County, just across the border from Pocatello, every day. All the residents of our city know that the wind blows right around the corner from Simplot/former FMC site into our valley. There is plenty of micro material in our air all the time, from dust blowing off the fields. We must not add to it!

I do hope that the DEQ will do more to regulate air pollution in our city, rather than allowing a probable addition of coal dust being transported in, and coal being burned to our health detriment.

Joan K. Downing, 960 Wayne Ave. Pocatello, 83201, 208-233-0585

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Name: **Christopher Dungey**

Email Address: cdungey@dcdi.net

Affiliation: private citizen

Comments: I am writing in response to the air quality concerns for the proposed Southeast Idaho Energy (SIE) Power County Advanced Energy Center. I am strongly opposed to the plant. The fact that carbon dioxide emissions are not yet regulated does not dismiss the fact that the bigger picture is not local concerns but global concerns. It is beyond me to think that our local, state and federal government officials can somehow believe it is OK to continue down this path of 'same old same old' and never once give it any thought that maybe a change to cleaner technologies might be a better investment for the future of our communities, countries and the world. The fact that the Sierra Club and others have begun to take notice of this proposal seems to indicate there is a serious flaw with this plant's permit and the impact it will have on the SE Idaho communities. Again, I strongly oppose this project, period! Thank you for your time, Christopher Dungey

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Name: **Aaron Eakman**

Email Address: ameakman@earthlink.net

Affiliation: Private Citizen

Comments: I am strongly opposed to the Idaho Energy (SIE) Power County Advanced Energy Center. If Simplot is not bad enough! My family must endure yet another polluter of great magnitude! NO!!! Please note that the particulate matter will unduly disrupt the sanctity of the American Falls and Pocatello areas, easily extending to Blackfoot and Idaho Falls. Not to mention the disruptions due to innumerable tons of coal being railed through the region. I did not move to this area to be faced with pollutants so near to me and my family. Should this plant proceed, you will see how quickly we can move out of this area!!! Coal is the wrong solution, unfortunately greed is motivating what is clearly an ill-conceived project. Again, I strongly oppose this plant.

Aaron Eakman  
1592 Emerald Dr.  
Pocatello, ID 83202

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Name: ELB Music

Email Address: elbmusic@hotmail.com

Subject: coal gass plant

Attachments: 6718 compressed.jpg; 6726 compressed.jpg

Don't build it. Here is the one in Tampa, Florida. Ours will look (and smell) just like it.  
Please see attached photo. I took it in Tampa.



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Name: **Barbara C. Felton**  
Email Address: barfelt@msn.com  
Affiliation:  
Comments:

The DEQ should not permit ANY number of "upset conditions". It should closely monitor and enforce strict observance of emissions. BACT is necessary to regulate CO2 emissions. DEQ must disallow any mercury emissions which might enter the adjacent AF Reservoir or other surrounding waters.

Actually, this whole damned project should be disallowed. It should be moved to the coal source(s) in Wyoming. To haul coal over here is absolutely nutty when reason would put it in Wyoming - if at all.

Barbara C. Felton Pocatello, Id 83202

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Name: **Carol L. Flynn**

Nov. 24, 2008

RECEIVED  
NOV 26 2008  
Department of Environmental Quality  
State of Idaho

Please don't allow the proposed coal  
burning fertility plant to be built.  
It has been so wonderful, the last couple  
of years being without FMC polluting our  
air & land. Carbon dioxide will be  
regulated, hopefully very soon after  
we get rid of that mess even better  
Burgess Administration we have had  
to endure.  
Let's build the plant to the new  
standards that we know are coming.  
If it can't be built to new standards  
— So be it — that means it's too toxic!

Sincerely  
Carol L. Flynn  
506 S. 7th Av.  
Pocatello Id 83201  
208-232-4656

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Name: **Ralph and Judy Friedemann**

Email Address: fried@woodpecker.myfr.net

Affiliation:

Comments:

DEQ: We are against any coal-fired plants. We are against Coal gasification. They all are polluting. I'm not certain coal gasification works. To me this is just another way for someone to develop a coal fired plant using gasification as a cover. We have global warming and coal has been and could be the biggest problem. We need to stop any type of coal fired plants from entering Idaho. We have a mercury problem. We can't even keep fish we catch without worrying about mercury content. Coal fired plants will screw up our drinking water. We ran off Sempra. Why even consider coal fired plants? Let's start considering wind power, solar power and renewables. We all know coal is nasty stuff. Keep it out of Idaho. Please.

Ralph Friedemann

VP of CPR

Jerome, Idaho

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Name: **Camille Gardner**

Email Address: dougcamille0502@msn.com

Affiliation:

Comments: While I'm sure you'll probably ignore this "little guy" opinion, I'm writing to comment that there are plenty of us here in Bannock Co that don't want this project and the pollution and air quality problems associated with it. Too often money and politics comes as a priority over our health and quality of life. If the people of Bannock county (where many of the pollution problems will end up) were asked to vote on this issue, we certainly would hear a different voice than the media is presenting of everyone seeming to be in favor of this project. This should not go forward without significant changes to pollution control being mandated.

---

Name: **Matthew J. Germino**

Email Address: germmatt@isu.edu

Affiliation:

Comments:

Dear Faye:

I hope the EPA will NOT permit the coal-powered fertilizer plant being considered for American Falls. Air quality is already marginal for much of the population in SE Idaho, particularly considering the scanty economic benefits to the region in return for the plague of air quality. Furthermore, having worked on air quality impacts in the Northeastern US and ecology of SE Idaho, it is clear to me that there has been relatively little assessment of air pollution impacts in SE Idaho - certainly not enough to know the full impacts of adding point sources to our pollution load. As an example, my students have collected mist and rain deposition with pH near 3.5 due to apparently to H<sub>2</sub>SO<sub>4</sub>, yet I have never seen an assessment of acid deposition effects for this region.

Our early-morning sulfur smell that permeates our houses and neighborhoods is an ever present indication that a few individuals are profiting from health impacts to many thousands of others. Unfortunately for the current fertilizer plant proposal, existing air quality is already marginalized by the present fertilizer plant. In fact, the pollution existing already gives the impacted urban areas a black eye from the perspective of others who might consider relocating their business here. On the other hand, air quality seems to have improved a bit over the last few decades, and so we are able note this has a prospect for economic and cultural improvement. I hope the EPA will consider the bigger picture of how even supposedly permissible pollution levels will impact the environmental welfare of the majority of citizens of SE Idaho, and thus not permit new coal-fired power in the region.

Instead, EPA should encourage the municipalities and corporation to work together on a more innovate, contemporary solution to industrial development. Whereas a new coal-powered plant would be an unambiguous message to the nation that SE Idaho is well behind the times, a renewable-energy plant

would send a more positive message that would bode much better for our environmental and economic future. Plus, it is strange that a new fertilizer plant is proposed when a close-by plant was just shut down and we are told that the existing plant is troubled by ore supply. The big picture of this proposal does not make sense.

Best regards  
Matt Germino

Matthew J Germino, PhD  
Associate Professor  
Department of Biology  
Idaho State University  
921 S 8th Ave, Stop 8007  
(650 Memorial Dr for FedEx Express)  
Pocatello, ID 83209-8007  
ph: 208-282-3285

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Name: **Stephanie Gill**  
Email Address: blueflax@allidaho.com (Ronald Gill)  
Affiliation:  
Comments for the Public Comment Period

DEQ's air quality permit to construct the Power County Advanced Energy Center does not adequately address the following:

1. Requiring the Advanced Energy Center to limit greenhouse gases by installing the Best Available Control Technology (BACT) for carbon dioxide emissions. The 2007 Supreme Court Ruling (Mass. vs. EPA) established the status of CO<sub>2</sub> as a major greenhouse gas. EPA defines it as a pollutant. The recent EPA closure of the Bonanza plant in Utah makes it clear that BACT must be used.
2. Requiring the Advanced Energy Center to limit PM<sub>2.5</sub> by installing BACT for small particulates. EPA defines PM<sub>2.5</sub> as a pollutant. Though standards have yet to be established, DEQ is still responsible for limiting all pollutants by requiring use of BACT.
3. Limiting mercury in respect to the additive effect of mercury from the proposed plant on the already elevated levels in fish tissues in the American Falls Reservoir and the Snake River.
4. Limiting the number of "upsets" - the uncontrolled emission events in which pollutants bypass or overwhelm the control technology.
5. Requiring installation of continuous emission monitors with electronic storage of excursions from standards. This is a BACT and should be required.

Please enter my comments into the public record and respond to them.

Sincerely,  
Stephanie Gill



1983 - 2008  
*Celebrating 25 Years  
of Conservation Success*

# Greater Yellowstone Coalition

162 North Woodruff • Idaho Falls, Idaho 83401 • (208) 522-7927 • [idaho@greateryellowstone.org](mailto:idaho@greateryellowstone.org)

November 18, 2008

RECEIVED

NOV 20 2008

DEPARTMENT OF ENVIRONMENTAL QUALITY  
STATE A Q PROGRAM

Faye Weber  
Air Quality Division  
DEQ State Office  
1410 N. Hilton  
Boise, ID 83706

RE: Comments on Southeast Idaho Energy – Power County Advanced Energy Center

The following comments are submitted by the Greater Yellowstone Coalition (GYC). GYC is a regional, membership conservation organization based in Bozeman, MT with offices in Cody and Jackson, WY, and in Idaho Falls, ID, with approximately 20,000 members and supporters. GYC's mission is to protect the lands, waters, and wildlife of the Greater Yellowstone Ecosystem (GYE). The GYE is an area of approximately 18 million acres encompassing all or parts of six national forests and includes and surrounds Yellowstone and Grand Teton National Parks. It is the largest intact ecosystem in the lower 48 states.

1. There are many shortfalls and gaps in IDEQ's draft air quality permit for this large industrial plant in S.E. Idaho, and the citizens deserve a stringent air quality permit at this proposed coal plant. Here are some of the concerns:
2. Several plant processes may be subject to "upset conditions" where emissions are released to the atmosphere without passing through a scrubber. This could amount to a black cloud that will be transported to downwind communities. Idaho DEQ is proposing allow the company to have an unlimited number of these upsets. The Agency should revise the air permit to limit the number of these uncontrolled emission events.
3. This coal plant will release huge amounts of **Greenhouse Gases**, at a time when other states are scrambling to control these harmful emissions. The Governor of Idaho passed an Executive Order in 2007 directing Idaho DEQ to initiate efforts to account for and limit carbon dioxide. Unfortunately the Southeast Idaho Energy Company has asked for a permit that allows all the greenhouse gases to be released to the atmosphere. Allowing a coal plant to start up without controlling carbon emissions is a backward step for Idaho. Indeed, this may be the very reason that the Coal plant has selected Idaho for its proposed factory... that is, the lack of any Rules to control harmful Greenhouse Gases. Recently a Federal Court ruled that Carbon Dioxide is an Air "Pollutant" and that EPA and States need to establish limits on their emissions.

Bozeman Office • P.O. Box 1874 • Bozeman, Montana 59771 • (406) 586-1593 • Fax (406) 556-2839  
Cody Office • 1285 Sheridan Ave., Ste. 215 • Cody, Wyoming 82414 • (307) 527-6233 • Fax (307) 527-6290  
Jackson Office • P.O. Box 4857 • Jackson, Wyoming 83001 • (307) 734-6004 • Fax (307) 734-6019

[www.greateryellowstone.org](http://www.greateryellowstone.org)

4. The Coal plant has failed to estimate emissions of fine particulate matter (PM 2.5), and failed to address controls of this pollutant. These very fine particles that will be emitted by the factory are dispersed over long distances, remain suspended in the air for long periods of time, and have proven to cause cardio-pulmonary diseases, because they are ingested deeply into the lung tissue. The EPA promulgated a rule-making in October 2006, making it mandatory for emission sources to limit these pollutants. PM 2.5 also contributes significantly to widespread haze that reduces visibility
5. Coal contains Mercury as a by-product, and with the American Falls Reservoir already designated as a "fish-Advisory" because of elevated Mercury in fish tissues, this is no time to allow a poorly controlled coal plant to be located up-wind from the Snake River and American Falls Reservoir.
6. The technology is available for the company to install continuous emission monitors on several of their smoke stacks...but the company is not installing them. Instead the Idaho DEQ is depending on the company to "self-monitor" emissions. This method has been shown to not work in other Southeast Idaho factories. IDEQ should require continuous emission monitors with electronic storage of any excursions from the standards to protect the public from excess emissions.

Sincerely,



Marv Hoyt  
Idaho Director

---

Name: **Matt Gregson**

Email Address: mnmgreg@myway.com

Affiliation: Pocatello Resident

Comments: If this is the same plant that was turned away from Pocatello, due to environmental concerns, among others. That has reworded their application to take advantage of a loophole in our State, related to mercury emissions, I feel that I must voice my opinion. By moving this plant 15 minutes down the road to a more welcoming community and changing their wording to omit power production and thereby take advantage of an incredibly egregious loophole. There is no room in our State for any lax treatment of Mercury production. I do not feel that I am as stupid as the lawyers of this company seem to feel the people of Idaho are. Yes, we did vote for legislators that created this opportunity for this plant, but that does not mean we will allow it to happen. The water demands, Mercury production, pollution and the interaction of their environmental waste products with those already present from Simplot's are enough reason alone to send them looking outside our State. The impact on potato farming in the A.F. area alone should be reason to send them packing. We are not dumb country bumpkins that a large company with overpaid lawyers can dupe by a change in semantics and going 15 miles down the road. This type of energy production is not what our present needs and our future needs to be saddled with. We already have enough environmentally hazardous issues to deal with locally (FMC residues, Railroad water table concerns and existing Mercury/pollution concerns) Thank you for your time.

---

Name: **Dave Griffiths**

Email Address: idhomer@yahoo.com

Affiliation: none

Comments: The American Falls SIE project should be permitted with out further ado. CO2 is not regulated. further the most prominent green house gas in the atmosphere is water vapor comprising 70% of the total, CO2 makes up most of the remaining 30% with the bulk of the CO2 coming from natural sources. Man made CO2 emissions contribute .035% to the atmosphere less than the variation in weather statistical tracking tabulations. CO2 can be sequestered or converted to Diesel fuel which we (USA) will need for the foreseeable future since no technology is capable of powering planes trains and OTR trucks.

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Name: **Michelle Gustin-Jones**

Email Address: mgustinjones@yahoo.com

Affiliation: none

Comments:

Faye Weber, DEQ,

I am against the proposed coal burning fertilizer plant in Power County, ID. Air quality was been proven to be impacted by any coal plant no matter how clean they claim to be. The water needed is also a grave concern. Water is already hotly contended due to the demand by farmer's, for an industry already in place, dams and fishing. We can not put further demands on this valuable and limited resource.

Michelle Gustin-Jones  
265 So 14th Ave  
Pocatello, ID 83201

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Name: **Jacob Haerberle**

Email Address: haebjaco@isu.edu

Affiliation:

Comments: Please do not allow the coal plant. The damage from it will only make the situation we face in Idaho worse. Poisoned waters need to be cleaned, not poisoned further.

---

Name: James L. Halderson

RECEIVED  
NOV 14 2008  
Department of Environmental Quality  
State Air Program

Dept of Environmental Quality  
Attention: Faye Weber  
1410 North Hilton  
Boise, Idaho 83706-1255

10Nov08

Gentlemen,

This correspondance is for purposes of commenting on several significant aspects of the proposal "Advanced Energy Center" project to be developed near American Falls, Idaho. Your docket No. AQ-0819.

In reviewing the extensive company permit application at the American Falls Public Library, I primarily concentrated on air and water emission factors as well as the energy flow from feedstock to final product.

In brief, my conclusions are:

1. Emissions appear to be substantially lower than for other common processes which produce the same end products. There appears to be little indication that current air quality or water quality permit limits would be exceeded. Since the proposed technology gives evidence of being environmentally superior to currently used production practices, development of such should be encouraged with all deliberate speed.
2. Feedstock for the proposed facility is domestic in source which will reduce our country's dependence on foreign feedstock sources, particularly crude petroleum. Altho the volume of products from the proposed facility are not very significant initially, when compared to total national production at the present time, the evidence of superior technology should drive future production of these products in a very positive direction.

Sincerely,

*James L. Halderson*  
James L. Halderson, P.E., PhD

---

Name: **John Hart**

Email Address: john@ediam.com

Affiliation:

Comments:

1) Idaho Dept. of Environmental Quality must require the Southeast Idaho Energy (SIE) Power County Advanced Energy Center to limit greenhouse gases by installing the Best Available Control Technology (BACT) for carbon dioxide (CO<sub>2</sub>) emissions. CO<sub>2</sub> is a major greenhouse gas. The recent EPA Environmental Appeals Board decision in Utah makes it clear that BACT must be considered. DEQ can not legally ignore this ruling.

2) Idaho DEQ is proposing to allow the company to have an unlimited number of "upset conditions". Ask the Agency to revise the air permit to limit the number of these uncontrolled emission events.

3) The proposed permit fails to estimate emissions of fine particulate matter (PM 2.5), and fails to address controls of this pollutant. The EPA promulgated a PM<sub>2.5</sub> rule-making in October 2006, making it mandatory for emission sources to limit these pollutants. PM 2.5 also contributes significantly to widespread haze that reduces visibility.

4) Coal contains Mercury as a by-product, and with the American Falls Reservoir already designated as a "fish-Advisory" because of elevated Mercury in fish tissues, this is no time to allow mercury source to be located up-wind from the Snake River and American Falls Reservoir.

5) The technology is available for the company to install continuous emission monitors on several of their smoke stacks...but the company is not installing them. Instead the Idaho DEQ is depending on the company to "self-monitor" many of their emissions. This method has been shown to not work in other Southeast Idaho factories. IDEQ should require continuous emission monitors with electronic storage of any excursions from the standards to protect the public from excess emissions.

6) IDEQ is required, in the proposed permit, to express all emission quantities in terms of "tons per year". This unit of measurement is easily understood by the general public yet IDEQ has chosen instead to use terms that the lay-public can not readily understand. This is not allowable.

John Hart  
944 8th  
Idaho Falls, Idaho 83401

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From: **James Heiser** [jcheiser@gmail.com]

To: Cheryl Robinson;

Subject: Power County Advanced Energy Center

Date: Wednesday, November 19, 2008 9:45:05 AM

Ms. Robinson:

I live near where this proposed AEC site is to be located. While I remain a supported of alternative energy solutions, I have to admit that I am opposed to this project on several points.

1) This plant will dump an unacceptable level of polutants into the air [sic]

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From: **James Heiser** [jcheiser@gmail.com]  
To: Cheryl Robinson;  
Subject: Power County Advanced Energy Center  
Date: Wednesday, November 19, 2008 9:57:37 AM

Ms Robinson:

I live in Aberdeen and subsequently will be near this proposed project site. I am opposed to the building of this plant for several reasons other than it will be too close to home. Far too many companies come to Idaho because our regulations are more lax than other states which allows them to build plants that they otherwise couldn't. It is time that we in Idaho address the air quality and the long term effects that our lack of regulation have on the population. It is my opinion that at this point we do not need all these jobs at the expense of potentially lethal air that our children and our children's children would be forced to breathe from the unregulated plants. One look at the obituaries will beg the question of why so many Idahoans are dying at such an early age? It's possible that companies like Simplot may have something to do with the toxins in the air and these may be the root cause of at least some of these early deaths.

Please, let's not let outsiders pollute Idaho. It is a breathtaking state that deserves to remain healthy and as clean as possible.

This letter in no way is representative of the Company I work for (Harper-Leavitt). These are strictly my own personal views on the subject.

Thank you for your consideration.

**James C. Heiser**

---

Name: **Karen Helland Tate**  
Email Address: helkare@isu.edu  
Affiliation:  
Comments:

To whom it may concern:

I urge you to NOT permit the coal burning fertilizer plant to be built near American Falls. As a citizen of Pocatello I am greatly concerned about life quality if this plant is constructed. Carbon dioxide and other greenhouse gases will be released into air everyday. President elect Obama is planning to implement a law governing these emissions as illegal. I feel this plant is going in before the Bush administration is out. Please let's do the right thing and protect our environment for ourselves and the following generations. Let's look at the long term over the short term. Let's create new jobs with wind, solar and other energy sources than have little negative effect on our fragile environment. Also the pollution of open coal cars traversing the area will have a negative impact on our air which isn't the greatest as it is.

Thank you for the opportunity to comment.

Karen Helland Tate  
4344 Zeibarth Rd.  
Pocatello, ID 83204

---

Name: **Greg Helm**  
Email Address: greghelm@allidaho.com  
Affiliation:

Comments:  
Faye Weber  
Air Quality Division  
DEQ State Office  
1410 N. Hilton  
Boise, ID 83706  
Email: faye.weber@deq.idaho.gov

Subject: Permit to Construct- Air Permit- Power County Advanced Energy Center

Comments on Power County Advanced Energy Center (hereafter PCAEC)

Thank-you for this opportunity to comment on this important Air Quality Permit.

The applicant failed to provide emission estimates and control technology for PM 2.5 particles, a National Ambient Air Quality Standard (NAAQS). These very fine particles that will be emitted by the PCAEC are dispersed over long distances, remain suspended in the air for long periods of time, and have proven to cause cardio-pulmonary diseases, because they are ingested deeply into the lung tissue.

PM2.5 is a pollutant for which National Ambient Air Quality Standards ("NAAQS") have been established and subsequently revised in response to well-documented public health concerns. As such, PM2.5 is indisputably a "pollutant subject to regulation under the CAA." 42 U.S.C. § 7475(a)(4); see also 40 C.F.R. 52.21(b)(50) (expressly defining regulated pollutants for purposes of the Prevention of Significant Deterioration ("PSD") program to include "[a]ny pollutant for which a national ambient air quality standard has been promulgated"). Accordingly, EPA has acknowledged that "[t]he obligation to implement PSD is triggered upon the effective date of the NAAQS."

Nevertheless, the proposed air quality permit for the Power County Advanced Energy Center contains no BACT analysis or limitation for the facility's PM2.5 emissions. See Statement of Basis, pp. 41-48. The EPA promulgated a rule-making in October 2006, making it mandatory for emission sources to limit these pollutants. PM 2.5 also contributes significantly to widespread haze that reduces visibility, as well as well documented adverse health impacts. Unfortunately, this pollutant was not addressed by the applicant (PCAEAC) in their permit and, likewise, not addressed in the draft permit. As a practical matter, control technology that is effective for PM10 may not be sufficiently effective to control the finer sized PM2.5 particles emitted by the coal plant. Best Available Control Technology (BACT) needs to be installed for PM 2.5 sources within this coal plant.

The permit, if it is to be compliant with the Clean Air Act, must be denied and returned for a revision that includes control of PM 2.5.

The applicant's coal plant will also produce approximately 150 tons per hour of Carbon Dioxide (CO2) from the gasifier of the plant. The company has not committed to controlling greenhouse gas emissions. Huge amounts of Carbon Dioxide will be released to the environment from this facility. The Washington D.C. Federal Circuit Court recently ruled that carbon dioxide is a pollutant, as defined by the Clean Air Act (42 U.S.C. § 7475(a)(4)) and must be controlled. These gases contribute to adverse environmental impacts. Idaho's Governor recognized the damages of this pollutant when, in May, 2007 he passed an Executive Order (attached) directing Idaho DEQ to account for, and to minimize harmful carbon dioxide emissions. It would be a large step backward for the State of Idaho to accept a coal plant that does not control these greenhouse gases, at a time when other States are scrambling to control these pollutants. The IDEQ must deny this permit, based on the omission of carbon dioxide control technology or this coal plant will be in violation of the Clean Air Act, referenced above.

The Idaho Code at Chapter 1, Title 39-115, specifically mandates that IDEQ's Director issue permits that control "regulated air pollutants" as defined by the Clean Air Act. The IDEQ will be in violation of this Code if they fail to include PM2.5 and Carbon Dioxide.

Inadequate BACT Analysis - The application and IDEQ's Statement of Basis for this permit failed to follow EPA's guidance on BACT analyses. The Clean Air Act places the responsibility of proposing BACT on

the applicant and the confirmation of BACT on the permitting agency, in this case IDEQ. Idaho DEQ rules at IDAPA 58.01.01.205, stipulate that BACT is required "...for each regulated air pollutant for which a new major facility would have the potential to emit in excess of the significant rates."

It is inferred from the application that PM10, NOX, SO2, CO and VOC, may be "significant" facility-wide. Yet, the permit contains no limits for the Gasifier Heater Vents #1 or #2 pursuant to BACT or otherwise.

Since BACT includes a "visible emissions standard" by definition, opacity from the heaters should be limited, pursuant to BACT, to 0%, not 20%, as was required for Greater Des Moines Energy Center in Iowa and Charter Steel in Wisconsin. Furthermore, neither the application nor IDEQ's Statement of Basis, specifically state which pollutant BACT applies.

PCAEC and IDEQ must consider N2O, a greenhouse gas and the most likely form of NOx emissions, in the required environmental impact analysis even if the top control option is selected for NOX in a top down analysis. It is well established that in the production of nitric acid, nitrous oxide (N2O), is also produced. The permit is based on an incomplete top-down analysis and BACT for NOX emissions in its most likely form, N2O, from nitric acid production has not been ensured. The applicant and IDEQ must fully assess BACT controls for NOx in their final permit.

Inadequate MACT Limits for Mercury and Other HAPs - The draft permit and statement of basis fails to describe a Maximum Achievable Control Technology ("MACT") analysis for the PCAEC and to set corresponding enforceable emission limits for mercury and all other hazardous air pollutants ("HAPs") to be emitted by the proposed emitting units, as required by the Clean Air Act, section 112, 42 U.S.C. § 7412. A MACT analysis often results in lower emissions limits than would a BACT analysis for the same pollutant.

MACT requirements apply to "major sources" that have the potential to emit 10 or more tons per year of any one HAP or 25 or more tons per year of a combination of HAPs. 42 U.S.C. § 7412(a)(1). IDEQ and PCAEC have not even provided estimates of uncontrolled HAP emissions from the coal plant to determine whether they would exceed the major source. Instead, IDEQ proposes to allow PCAEC to side-step MACT requirements by limiting their HAP emissions.

IDEQ's proposal to allow PCAEC to take "synthetic minor" status with respect to HAP emissions is flawed. Although the draft permit establishes HAP emissions limits below threshold levels, the limits are not "practicably enforceable." The draft permit fails to require any HAPs monitoring whatsoever to allow IDEQ to determine whether PCAEC is in compliance with the established limits. Of particular concern are the Mercury emissions from this facility as there is a Mercury-based Fish Advisory in the American Falls Reservoir at the present time and any new contribution of Mercury deposition could ruin the fishery in these waters and impair the health of the public who consume fish from these waters. In spite of these concerns the PCAEC failed to estimate emissions of these HAPs (see Table 3.3). The PCAEC needs to go back and revise their permit to address the significant gap in addressing HAPs in this permit process.

To comply with Clean Air Act section 112, IDEQ should perform a MACT analysis for each HAP that will be emitted by the Power County Advanced Energy Center and establish corresponding emissions limits in the PTC permit. At the very least, IDEQ must require continuous emissions monitoring of mercury and frequent monitoring of all other HAPs emitted by the Power County Advanced Energy Center.

Upset Condition Limits Needed - Several plant processes may be subject to "upset conditions" where emissions are released to the atmosphere without passing through a pollution scrubber or control device. This could amount to a black cloud that will be transported to downwind communities. Also, because the flare is steam assisted, the emissions may look like steam or water vapor as they exit the stack initially but, in fact will contain large volumes of pollutants. The draft permit places no limit on the number of malfunctions, or upsets, that would by-pass scrubbers at the gasifier flare. (Since stack testing at this flare is required, except during a "start-up" event, no one will know the emissions when an upset malfunction requires venting to the flare.) I recommend that IDEQ limit number of upsets or malfunctions to no more than one per month. To allow any more than this, will mean that the company cannot control its emissions.

PCAEC submitted an incomplete PTC application - The permit Application violates the requirement for completeness at IDAPA 58.01.01.124 -124. TRUTH, ACCURACY AND COMPLETENESS OF DOCUMENTS, as well as section 58.01.01.204 which requires a completeness determination by IDEQ for any PTC permit. The PCAEC violated the aforementioned Rules in the following ways:

IDAPA Air Rules requires that "All documents submitted to the Department shall be truthful, accurate and complete." The application has reported numerous cases where they are still trying to determine the manufacturer of their control equipment. There are over twenty cases where the applicant did not submit the manufacturer of process equipment or control equipment, rather they have reported it as "To-Be-Determined" in their application. The conclusion may be drawn that the applicant is not properly prepared to construct such a large coal processing plant, and the gaps in providing the manufacturer of control equipment is a serious deficit in their application.

These gaps in information limit IDEQ's ability to perform a BACT and MACT analyses. Additionally the application reports that 150 un-covered railroad cars of coal are scheduled to be parked at the facility, but no accounting of the associated emissions, and no control technology was proposed in the draft permit for this fugitive source.

IDEQ has an obligation to return this PTC permit back, as incomplete, and require a complete application that includes each relevant operating parameter, all manufacturers of the process equipment and control equipment, and to allow the public to review and comment on a complete application. The PCAEC has violated the requirement for completeness at 58.01.01.124 and IDAPA 58.01.01.204.

Potential to Emit - Neither the application nor the statement of basis contains sufficient information detailing the facility's potential to emit (PTE) air pollutants. Table 3.2 in the statement of basis is labeled as "Controlled Emissions Estimates of Criteria Pollutants" and Table 3.3 is entitled "Controlled HAPs Summary." Neither of these references fulfils the definition of potential to emit (PTE) assessment as required by EPA or as required in the State Rules at IDAPA 58.01.214.02. Since a facility's PTE can be a critical element in determining applicability of various regulations, it is important to document this as part of a construction permit. The statement of basis should include the PTE for each emissions unit and the facility as a whole.

As pointed out in a previous section, there are several fugitive sources of pollutants that were not addressed by the application, Statement of Basis, or draft PTC permit: uncovered railcars of coal, granulated urea product, transfer points of granulated urea, including crushers, screens, conveyers and railcar loading. There is no description or PTE or assessment of its potential-to-emit (see Figure 2-9 of application).

New Source Performance Standards - The PCAEC needs to demonstrate compliance with 40 CFR Part 60, Subpart H, Standards of Performance for Sulfuric Acid Plants. Subpart H does apply to this unit.

Hydrogen Sulfide Emissions - IDEQ is violating IDAPA 58.01.01.776.01. by allowing PCAEC to emit H<sub>2</sub>S in quantities known to be odorous and irritating to neighboring communities. IDAPA 58.01.01.776.01 requires the control of odors and IDAPA 58.01.01.006.05 identifies "odor" as an "air pollutant/air contaminant", yet the coal plant is permitted to emit H<sub>2</sub>S and other reduced sulfurs in amounts that exceed odor thresholds.

To ensure compliance with 58.01.01.776, the IDEQ should not rely on detection of odors such as H<sub>2</sub>S from laypersons but should require periodic monitoring of H<sub>2</sub>S leaks using portable monitors. Portable monitors can be set to detect H<sub>2</sub>S concentrations as low as 0.05 ppmv[1].

CEMS- Continuous Emission Monitors (CEMs) should be installed on all exits stacks where technically feasible. For example, all baghouse stacks should be required to have continuous opacity monitors installed, with record-keeping requirements to allow the facility operators and IDEQ staff monitor the emissions from these stack sources. These CEMs would be particularly beneficial in this permit, given the low efficiency required in the draft permit of feedstock area baghouses, and the lack of an adequate BACT analysis.

In summary this proposed application by the Power County Advanced Energy Center falls considerably short of what is required by the Clean Air Act and Idaho Air Quality Permit rules. The PCAEC failed to address two critical pollutants, PM 2.5 and Carbon Dioxide, completely, even though they are "regulated pollutants". Further, the applicant failed in many ways to fully report Potential To-Emit (PTE) values for all pollutants, rendering the application "incomplete". Although the applicant is required to demonstrate Best Available Control Technology (BACT) for pollutants that may be significant, they failed in many cases to adequately research and employ BACT for their emission sources. The applicant also failed to adequately report their Potential-To-Emit (PTE) in sufficient detail to allow IDEQ to assess appropriate emission limits. The application and draft permit also failed to incorporate MACT assessments for Mercury and other Hazardous Air Pollutants (HAPs), as required by EPA.

The applicant reported over twenty pieces of process equipment or control equipment under the status of "To Be Determined". The applicant failed to address several sources of fugitive emissions, including large numbers of un-covered railcars of coal and granulated urea, as well as several transfer points of granulated urea. The conclusion, from all these gaps in the application is that they submitted an incomplete application. The IDEQ has an obligation to return this application back, and require a comprehensive assessment and reporting of PTE, BACT, for all pollutants and MACT for all hazardous Air Pollutants.

I would also like to "Ditto" the Sierra Club's written comments submitted in regards to Power County Energy Center's air quality permit.

Thank-you again for the opportunity to comment on this important air quality permit to construct.

Sincerely,  
Greg Helm  
346 So. Johnson  
Pocatello, ID 83204  
208-233-1574

---

Name: **Brian Holmes**

Email Address: amy\_brian\_2@msn.com

Affiliation:

Comments: At this time, the Idaho DEQ should not issue a permit to Southeast Idaho Energy IE for it's Power County Advanced Energy Center near American falls for the the following reasons:

1. At present, the EPA does not regulate carbone dioxide emission under the intent of The Clean Air Act. Until the EPA regulates carbon dioxide emissions as requested by the US Supreme Court, a permit for the plant should not be considered.
2. Currently, only mercury inhalation is regulated by the Idaho DEQ. Other accumulations of mercury such as mercury contamination of food, water, and wildlife and fisheries not considered. As the Idaho DEQ is scheduled to revisit other mercury contamination pathways in 2009, considering a permit for a mercury emitter such as the Advanced Energy Center is premature at this time.
3. The Advanced Energy Center will contribute to the cumulative air pollution of the Portneuf Watershed. As there are already two non-attainment areas in the watershed, permitting a an emitter of 192 tons of carbon monoxide, 131 tons of nitrogen oxides, 72 tons of sulfur oxides, 96 tons of particulates and 63 tons of ozone-related ("volatile organic") compounds will further degrade the air quality in the area, especially in winter. We already have to deal with the acrid tasting air from the Simplot Don Plant and the high particulate pollution from dust. Permitting another emitter such as the Advanced Energy Center is simply too much for the citizens of this area to take.

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Power Co. Coal Plant

From: **Keene Hueftle** [kh4momearth@dat.com]

Sent: Sunday, November 23, 2008 8:47 PM

To: Faye Weber

Cc: Cheryl Robinson; Bruce Olenick; Skinner.Susan@epamail.epa.gov; Mayor CHASE; John Sigler, PhD; hsanger@pocatello.us; Rick Kearns; Roger TURNER; 'Greg Helm'

Subject: Power Co. Coal Plant

Importance: High

Faye Weber

Air Quality Division

DEQ State Office

1410 N. Hilton

Boise, ID 83706

Email: faye.weber@deq.idaho.gov

Subject: Permit to Construct- Air Permit- Power County Advanced Energy Center  
Comments on Power County Advanced Energy Center (hereafter "PCAEC")

Thank-you for this opportunity to comment on this important Air Quality Permit.

The applicant failed to provide emission estimates and control technology for PM 2.5 particles, a National Ambient Air Quality Standard (NAAQS). These very fine particles that will be emitted by the PCAEC are dispersed over long distances, remain suspended in the air for long periods of time, and have proven to cause cardio-pulmonary diseases, because they are ingested deeply into the lung tissue.

PM2.5 is a pollutant for which National Ambient Air Quality Standards ("NAAQS") have been established and subsequently revised in response to well-documented public health concerns. As such, PM2.5 is indisputably a "pollutant subject to regulation under the CAA." 42 U.S.C. § 7475(a)(4); see also 40 C.F.R. 52.21(b)(50) (expressly defining regulated pollutants for purposes of the Prevention of Significant Deterioration ("PSD") program to include "[a]ny pollutant for which a national ambient air quality standard has been promulgated"). Accordingly, EPA has acknowledged that "[t]he obligation to implement PSD is triggered upon the effective date of the NAAQS."

Nevertheless, the proposed air quality permit for the Power County Advanced Energy Center contains no BACT analysis or limitation for the facility's PM2.5 emissions. See Statement of Basis, pp. 41-48. The EPA promulgated a rule-making in October 2006, making it mandatory for emission sources to limit these pollutants. PM 2.5 also contributes significantly to widespread haze that reduces visibility, as well as well documented adverse health impacts. Unfortunately, this pollutant was not addressed by the applicant (PCAEC) in their permit and, likewise, not addressed in the draft permit.

As a practical matter, control technology that is effective for PM10 may not be sufficiently effective to control the finer sized PM2.5 particles emitted by the coal plant. Best Available Control Technology (BACT) needs to be installed for PM 2.5 sources within this coal plant.

The permit, if it is to be compliant with the Clean Air Act, must be denied and returned for a revision that includes control of PM 2.5.

The applicant's coal plant will also produce approximately 150 tons per hour of Carbon Dioxide (CO2) from the gasifier of the plant. The company has not committed to controlling green-house gas emissions. Enormous amounts of Carbon Dioxide will be released to the environment from this facility.

The Washington D.C. Federal Circuit Court recently ruled that carbon dioxide is a pollutant, as defined by the Clean Air Act (42 U.S.C. § 7475(a)(4)) and must be controlled.

These gases contribute to adverse environmental impacts. Idaho's Governor recognized the damages of this pollutant when, in May, 2007 he passed an Executive Order (attached) directing IDEQ to account for, and to minimize harmful carbon dioxide emissions.

It would be a large step backward for the State of Idaho to accept a coal plant that does not control these greenhouse gases, at a time when other States are scrambling to control these pollutants.

For the sake of the people's health, the IDEQ must deny this permit, based on the omission of carbon dioxide control technology or this coal plant will be in violation of the Clean Air Act, referenced above.

The Idaho Code at Chapter 1, Title 39-115, specifically mandates that IDEQ's Director issue permits that control "regulated air pollutants" as defined by the Clean Air Act. The IDEQ will be in violation of this Code if they fail to include PM2.5 and Carbon Dioxide.

Inadequate BACT Analysis - The application and IDEQ's Statement of Basis for this permit failed to follow EPA's guidance on BACT analyses. The Clean Air Act places the responsibility of proposing BACT on the applicant and the confirmation of BACT on the permitting agency, in this case IDEQ.

Idaho DEQ rules at IDAPA 58.01.01.205, stipulate that BACT is required "...for each regulated air pollutant for which a new major facility would have the potential to emit in excess of the significant rates." It is inferred from the application that PM10, NOX, SO2, CO and VOC, may be "significant" facility-wide. Yet, the permit contains no limits for the Gasifier Heater Vents #1 or #2 pursuant to BACT or otherwise.

Since BACT includes a "visible emissions standard" by definition, opacity from the heaters should be limited, pursuant to BACT, to 0%, not 20%, as was required for Greater Des Moines Energy Center in Iowa and Charter Steel in Wisconsin. Furthermore, neither the application nor IDEQ's Statement of Basis, specifically state which pollutant BACT applies.

PCAEC and IDEQ must consider N2O, a greenhouse gas and the most likely form of NOx emissions, in the required environmental impact analysis even if the top control option is selected for NOX in a top down analysis. It is well established that in the production of nitric acid, nitrous oxide (N2O), is also produced. The permit is based on an incomplete top-down analysis and BACT for NOX emissions in its most likely form, N2O, from nitric acid production has not been ensured. The applicant and IDEQ must fully assess BACT controls for NOx in their final permit.

Inadequate MACT Limits for Mercury (Hg) and Other HAPs - The draft permit and statement of basis fails to describe a Maximum Achievable Control Technology ("MACT") analysis for the PCAEC and to set corresponding enforceable emission limits for mercury and all other hazardous air pollutants ("HAPs") to be emitted by the proposed emitting units, as required by the Clean Air Act, section 112, 42 U.S.C. § 7412. A MACT analysis often results in lower emissions limits than would a BACT analysis for the same pollutant.

MACT requirements apply to "major sources" that have the potential to emit 10 or more tons per year of any one HAP or 25 or more tons per year of a combination of HAPs. 42 U.S.C. § 7412(a)(1). IDEQ and PCAEC have not even provided estimates of uncontrolled HAP emissions from the coal plant to determine whether they would exceed the major source. Instead, IDEQ proposes to allow PCAEC to side-step MACT requirements by limiting their HAP emissions.

IDEQ's proposal to allow PCAEC to take "synthetic minor" status with respect to HAP emissions is flawed. Although the draft permit establishes HAP emissions limits below threshold levels, the limits are not "practicably enforceable."

The draft permit fails to require any HAPs monitoring whatsoever to allow IDEQ to determine whether PCAEC is in compliance with the established limits.

Of particular concern are the Mercury emissions from this facility as there is a Mercury-based Fish Advisory in the American Falls Reservoir at the present time and any new contribution of Mercury

deposition could ruin the fishery in these waters and impair the health of the public who consume fish from these waters.

In spite of these concerns the PCAEC failed to estimate emissions of these HAPs (see Table 3.3). The PCAEC needs to go back and revise their permit to address the significant gap in addressing HAPs in this permit process.

To comply with Clean Air Act section 112, IDEQ should perform a MACT analysis for each HAP that will be emitted by the Power County Advanced Energy Center and establish corresponding emissions limits in the PTC permit.

At the very least, IDEQ must require continuous emissions monitoring of mercury and frequent monitoring of all other HAPs emitted by the Power County Advanced Energy Center.0

Upset Condition Limits Needed - Several plant processes may be subject to "upset conditions" where emissions are released to the atmosphere without passing through a pollution scrubber or control device.

This could amount to a black cloud that will be transported to downwind urban communities and the rural folks in the path of the air stream.

Also, because the flare is steam assisted, the emissions may look like steam or water vapor as they exit the stack initially but, in fact will contain large volumes of pollutants.

The draft permit places no limit on the number of malfunctions, or upsets, that would by-pass scrubbers at the gasifier flare. (Since stack testing at this flare is required, except during a "startup" event, no one will know the emissions when an upset malfunction requires venting to the flare.)

I recommend that IDEQ limit number of upsets or malfunctions to no more than one per month. To allow any more than this, will mean that the company cannot control its emissions.

PCAEC submitted an incomplete PTC application - The permit Application violates the requirement for completeness at IDAPA 58.01.01.124 -124. TRUTH, ACCURACY AND COMPLETENESS OF DOCUMENTS, as well as section 58.01.01.204 which requires a completeness determination by IDEQ for any PTC permit. The PCAEC violated the aforementioned Rules in the following ways: IDAPA Air Rules requires that "All documents submitted to the Department shall be truthful, accurate and complete." The application has reported numerous cases where they are still trying to determine the manufacturer of their control equipment.

There are over twenty cases where the applicant did not submit the manufacturer of process equipment or control equipment, rather they have reported it as "To-Be-Determined" in their application. The conclusion may be drawn that the applicant is not properly prepared to construct such a large coal processing plant, and the gaps in providing the manufacturer of control equipment is a serious deficit in their application.

These gaps in information limit IDEQ's ability to perform a BACT and MACT analyses.

Additionally the application reports that 150 un-covered railroad cars of coal are scheduled to be parked at the facility, but no accounting of the associated emissions, and no control technology was proposed in the draft permit for this fugitive source.

IDEQ has an obligation to return this PTC permit back, as incomplete, and require a complete application that includes each relevant operating parameter, all manufacturers of the process equipment and control equipment, and to allow the public to review and comment on a complete application.

The PCAEC has violated the requirement for completeness at 58.01.01.124 and IDAPA 58.01.01.204. Potential to Emit - Neither the application nor the statement of basis contains sufficient information detailing the facility's potential to emit (PTE) air pollutants. Table 3.2 in the

statement of basis is labeled as "Controlled Emissions Estimates of Criteria Pollutants" and Table 3.3 is entitled "Controlled HAPs Summary."

Neither of these references fulfils the definition of potential to emit (PTE) assessment as required by EPA or as required in the State Rules at IDAPA 58.01.214.02

Since a facility's PTE can be a critical element in determining applicability of various regulations, it is important to document this as part of a construction permit.

The statement of basis should include the PTE for each emissions unit and the facility as a whole.

As pointed out in a previous section, there are several fugitive sources of pollutants that were not addressed by the application, Statement of Basis, or draft PTC permit: uncovered railcars of coal, granulated urea product, transfer points of granulated urea, including crushers, screens, conveyers and railcar loading.

There is no description or PTE or assessment of its potential-toemit (see Figure 2-9 of application).

New Source Performance Standards - The PCAEC needs to demonstrate compliance with 40 CFR Part 60, Subpart H, Standards of Performance for Sulfuric Acid Plants. Subpart H does apply to this unit.

Hydrogen Sulfide Emissions - IDEQ is violating IDAPA 58.01.01.776.01. by allowing PCAEC to emit H2S in quantities known to be odorous and irritating to neighboring communities.

IDAPA 58.01.01.776.01 requires the control of odors and IDAPA 58.01.01.006.05 identifies "odor" as an "air pollutant/air contaminant", yet the coal plant is permitted to emit H2S and other reduced sulfurs in amounts that exceed odor thresholds.

To ensure compliance with 58.01.01.776, the IDEQ should not rely on detection of odors such as H2S from lay persons, but they should require periodic monitoring of H2S leaks using portable monitors. Portable monitors can be set to detect H2S concentrations as low as 0.05 ppmv1.

CEMS- Continuous Emission Monitors (CEMs) should be installed on all exits stacks where technically feasible. For example, all baghouse stacks should be required to have continuous opacity monitors installed, with record-keeping requirements to allow the facility operators and IDEQ staff monitor the emissions from these stack sources. These CEMs would be particularly beneficial in this permit, given the low efficiency required in the draft permit of feedstock area baghouses, and the lack of an adequate BACT analysis.

In summary this proposed application by the Power County Advanced Energy Center falls considerably short of what is required by the Clean Air Act and Idaho Air Quality Permit rules.

The PCAEC failed to address two critical pollutants, PM 2.5 and Carbon Dioxide, completely, even though they are "regulated pollutants". Further, the applicant failed in many ways to fully report Potential To-Emit (PTE) values for all pollutants, rendering the application "incomplete".

Although the applicant is required to demonstrate Best Available Control Technology (BACT) for pollutants that may be significant, they failed in many cases to adequately research and employ BACT for their emission sources. The applicant also failed to adequately report their Potential-To-Emit (PTE) in sufficient detail to allow IDEQ to assess appropriate emission limits.

The application and draft permit also failed to incorporate MACT assessments for Mercury and other Hazardous Air Pollutants (HAPs), as required by EPA.

The applicant reported over twenty pieces of process equipment or control equipment under the status of "To Be Determined"

The applicant failed to address several sources of fugitive emissions, including large numbers of uncovered railcars of coal and granulated urea, as well as several transfer points of granulated urea. The conclusion, from all these gaps in the application is that they submitted an incomplete application.

The IDEQ has an obligation to return this application back, and require a comprehensive assessment and reporting of PTE, BACT, for all pollutants and MACT for all hazardous Air Pollutants.

Thank you for the opportunity to comment on this very controversial air quality permit to construct.

Also, you will be receiving a letter from one of the SEIEN members, Dr. Rick Kearns, Pocatello, that contains direct human health maladies caused by various kinds of air borne pollutants.

I am also endorsing Dr. Kearns letter, and request that you add my name to his letter.

Sincerely,

M. Keene Hueftle, PhD, Chair  
South East Idaho Environmental Network (SEIEN)  
1630 Monte Vista  
Pocatello, ID, 83201

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From: **Idaho Conservation League**, Justin Hayes [jhayes@wildidaho.org]  
Sent: Monday, November 24, 2008 4:59 PM  
To: Faye Weber  
Subject: Additional comments on SEI

Faye Weber  
Air Quality Division  
DEQ State Office  
1410 N. Hilton  
Boise, ID 83706

RE: Idaho Conservation League supplemental comments on proposed Permit to Construct (#P-2008.0066) for Southeast Idaho Energy

Dear Ms. Weber;

Thank you for allowing us to submit comments on the proposed Permit to Construct (#P-2008.0066) for Southeast Idaho Energy. For thirty-four years, the Idaho Conservation League has been Idaho's voice for clean water, clean air, and wilderness—values that are the foundation to Idaho's extraordinary quality of life. The Idaho Conservation League works to protect these values through citizen action, public education, and professional advocacy. As Idaho's largest state-based conservation organization we represent over 9,500 members, many of whom have a deep personal interest in protecting air quality and the emission of pollutants that exacerbate global warming.

These comments supplement additional comments that the Idaho Conservation League has submitted in concert with the Sierra Club.

#### PM Emissions

We are concerned that the PM emissions from Slag Handling are under reported in Table 3.2 in the Statement of Basis. Further, we do not believe that the controls provided for PM emissions at the slag area represent BACT.

#### Mercury

SEI's PTC and the Statement of Basis fails to provide information regarding potential mercury emissions and specificity about mercury controls. In addition, a monitoring program that includes speciation of mercury should be required.

#### Sulfur content of coal

SEI's PTC allows for coal with a sulfur content of 6%. We believe that this is violation of DEQ rules.

#### BACT Analysis

We support EPA's comments with regard to the short comings of the BACT analysis and incorporate EPA's comments into our own by reference.

Again, thank you for the opportunity to provide additional comments on this matter. Please do not hesitate to contact me if you have questions about our comments.

Sincerely,

Justin Hayes  
Program Director  
Idaho Conservation League  
PO Box 844, Boise, ID 83701  
208.345.6942 x 24 • fax 208.344.0344  
<http://www.wildidaho.org> • <http://blog.wildidaho.org>

Idaho Conservation League preserves Idaho's clean water, wilderness and quality of life.

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From: **Allen Jackson** [jackalle@isu.edu]  
To: Cheryl Robinson;  
Subject: Application Permit Coal Plant  
Date: Monday, November 24, 2008 1:10:00 PM  
To: Ms. Cheryl Robinson

Here are comments regarding a permit on the proposed coal plant to produce fertilizer, located near American Falls, Idaho.

I appreciate the opportunity to comment within the deadline provided for public hearing.

Comments regarding the permit application for the proposed coal plant upwind from the American Falls Reservoir designed to produce fertilizer:

The expected burning of 230 tons of coal per day by the proposed coal plant to produce fertilizer will inevitably add airborne mercury into the air and into the local watersheds each year with a cumulative impact. Several studies have shown that as much as 70% of these toxic emissions end up in local waterways and fish. When elementary mercury levels lands in water it is transformed to methyl mercury, the most toxic form of mercury, absorbed by micro-organisms found in water and sediment. By the process of bioaccumulation the toxins accumulate at each step in the food chain. Organic mercury concentrations can be more than 1,000 times greater in the fish that in the surrounding water.

Humans are exposed when they eat fish contaminated with mercury. Mercury poisoning causes lung, kidney, heart and immune system damage. People should not have to stop eating fish because of mercury pollution. An industry that pollutes our waterways should not be "permitted" until meeting legally defined standards as defined in the Clean Air Act and the Clean Water Act. What is the legal standard?

Currently the EPA's proposed Clean Air Mercury Rule would allow coal fired plants until 2018 to reduce their mercury emissions by 70%. In response 16 states sued the EPA arguing for a stricter time frame for a 90% reduction. On February 8<sup>th</sup> of this year the United States Court of Appeals for the District of Columbia handed down a decision. The EPA lost the suit. Until the EPA issues a new court approved mercury control rule and enforces it, the permitting of the proposed coal plant under the old standard

should be denied. Twenty states have issued statewide advisories due to mercury in fresh water lakes and rivers. Federal

Centers of Disease Control have estimated that as many as 630,000 children were being born each year with unsafe levels of mercury. The effects can be irrevocable neurological damage and learning disabilities. The EPA and the DEQ should be leading the way in establishing and enforcing the higher standards on mercury control required by law rather than permitting a coal plant on an old standard that threatens the health of present and future generations.

Allen Jackson, 440 University Drive, Pocatello, ID 83201

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From: **Barbara Jackson** [jackbarb@isu.edu]  
To: Cheryl Robinson;  
Subject: Permit  
Date: Monday, November 24, 2008 7:27:42 AM  
Dear Ms. Robinson

The time is short, but I am adding my voice to those informed and responsible citizens calling you and the Department of Environmental Quality to NOT give a permit to the coal burning fertilizer plant in Power County. Because:

1. Even Brian Williams on national ABC news on Fri. Nov. 21, said the truism "There is NO such thing as "clean" coal.
2. As Chuck Trost pointed out, "The greenhouse gases, such as carbon dioxide and nitrous oxides, as well as the fine particulate matter (PM 2.5)" will not only be damaging to the environment as a whole but to our area as well.
3. The mercury that settles in the American Fall Reservoir is a toxic addition to the already elevated levels of mercury in the fish there. So why teach a kid to fish, when it's not safe to eat???? Fish is a healthy food when it's safe to eat.
4. The required amount of water to cool the proposed towers for cooling is unacceptable for a state that has a low water resource to start with. You know that we are already mining our aquifer for our current usage.
5. \*The most important point is that you and the Department of Environmental Quality have the power and the responsibility to protect the citizens of our state and our area. There are many people who do not understand the enormity of this decision. Do you and your department have the COURAGE and the back bone to do what is RIGHT? Even though carbon dioxide is not regulated, you KNOW what is at stake.\*

I hope you and your department will make your decision based on the future of our children's health (do you have children?) and not the almighty dollar.

Sincerely Yours,

Barbara Jackson  
440 University Drive  
Pocatello, ID 83201

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Name: **Jerry Jayne**

Email Address: [gajwild@srv.net](mailto:gajwild@srv.net)

Comments:

Nov. 24, 2008

*SIE Proposed Coal Gasification Project, Air Quality Permit*

*Dear DEQ;*

*Following are my comments and questions on the Southeast Idaho Energy (SIE) proposal project near American Falls. The project would gasify 2,000 to 2,300 tons of coal per day to produce ammonia, urea, and urea ammonium nitrate, with saleable byproducts to include elemental sulfur or sulfuric acid and slag/frit for sale for road mix or other uses.*

*Air Emissions – The proposed permit estimates the following air emissions in tons/yr:*

*Carbon Monoxide, 205; Nitrogen Oxides, 127; Sulfur Oxides, 32;*

*Particulates, PM10, 67; VOC, 5*

*Why are the smaller particulates, PM2.5, not included? These smaller particles are factors in health considerations and in formation of haze.*

*An SIE fact sheet indicates an estimated 2.3 million tons of CO2 to be emitted per year, with vague indications that it might be sequestered in the future. But the permit appears not to mention CO2. I realize that DEQ does not regulate CO2, but you should. At least, the estimated amount should be indicated on the permit. Will DEQ make a proposal to the next Legislature to allow you to regulate CO2?*

*Other Considerations - Since no federal land nor money is involved, and since the State of Idaho has nothing comparable to NEPA, no EIS is required for this proposed project. For this project, DEQ considers only air impacts.*

*So this proposal is troubling, because it may very well have significant environmental impacts in addition to air impacts. For example, how much energy is required and what would be the effects of providing it? What would be the impacts on roads and traffic?*

*And there is a possible second phase involving the production of gasoline and diesel fuel from coal. How would that relate to this project, the "first phase"? How much impetus would the first phase provide for the second phase, which might very well be dirtier than the first?*

*This is a major project, and it is unfortunate that no comprehensive and disinterested environmental study seems to be available.*

*Sincerely,*

*Jerry Jayne*

*1568 Lola St.*

*Idaho Falls, ID 83402*

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Name: **LeRoy Jones**

Email Address: [leroyajones@yahoo.com](mailto:leroyajones@yahoo.com)

Affiliation:

Comments:

To whom in may concern

I am against the proposed coal burning fertilizer plant. I hate to see our area become an experiment in technologies with promise but that are hardly proven to be clean. Burning coal WILL release carbon dioxide and mercury. Should we be building a new coal plant on the cusp of what many expect to be a

highly regulated endeavor, BEFORE PROPER SAFEGUARDS ON CARBON DIOXIDE EMISSIONS ARE ESTABLISHED BY THE FEDERAL GOVERNMENT. Why now? Lets wait before we make this step.

Plus, why should a small group in Power County get the benefits while others downwind get the pollution?

LeRoy Jones  
265 S 14th  
Pocatello ID 83201  
203-234-1241

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Name: **Richard L. "Rick" Kearns Ed.D.**

Email Address: kearrick@cablone.net

Affiliation: Idaho State University

Comments: The Southeast Idaho Energy proposal for a coal gasification plant west of American Falls is a potential health nightmare for downwind communities. The DEQ must consider their own environmental model which shows that the communities of Pocatello, Chubbuck, Inkom and the adjacent rural areas most likely to be impacted by the particulate bearing prevailing winds.

SIE is projected to use 2 million gallons of water daily. One major problem with this much use of water is the resulting water vapor which will be released into the atmosphere. The water vapor problem exacerbates the pollution problem by trapping sulphur dioxide which chemically transforms into sulphuric acid and nitrogen oxide which transforms into nitric acid. Add to those pollutants the problems associated with carbon dioxide, mercury and other particulates. The vapor trapped pollutants will then be carried outward from the plant site by the prevailing winds. As indicated by the Idaho Department of Environmental Quality model, Pocatello and the neighboring urban and rural areas are projected to be the areas most severely impacted by the winds carrying these particulates. With winter high pressure inversions, these polluting particulates will be trapped in the Pocatello Valley, and placing urban and rural residents at risk for the myriad of resulting health problems.

According to the American Lung Association, 24,000 people each year die prematurely because of pollution from coal-fired plants, Additionally, 38,000 heart attacks, 12,000 hospital admissions and 550,000 asthma attacks are tied to coal fired plant production.

A mercury study report to Congress by the U.S. EPA indicated that toxic mercury emissions from coal-fired plants deposit from the air into water bodies and then concentrate in fish. The National Research Council, in a 2000 publication, reported that eating mercury-contaminated fish damages the brains and nervous systems of children and can harm cardiovascular and immune systems in adults. In another U.S. EPA report it linked the health effects of prenatal methylmercury exposure to include:

- v Poor performance on tests of attention and language
- v Impaired memory
- v Inability to process and recall information
- v Impaired visual and motor function

A Centers for Disease Control and Protection Report in January 2003 found that 1 in 12 women of childbearing age already has mercury levels above EPA's safe health threshold. The proposed SIE plant will likely be a contributing factor to Pocatello and other down wind urban and rural communities adding to these health problems.

It is time for our society to look beyond financial gain at the expense of the health of its citizens, even the citizens of neighboring communities. At this point in time, however, Southeast Idaho residents can only hope that the IDEQ will have the good sense to recognize the health and environmental risks facing the down wind communities and reject the SIE proposal.

Richard L. "Rick" Kearns Ed.D.  
Professor Emeritus  
ISU College of Health Professions

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Name: **Dr. Kenneth Khang**  
Email Address: kekhang5@msn.com  
Affiliation:

Comments: I would like to state my opposition to the proposed plant as a concerned resident of Pocatello. Pocatello stands to take the brunt of the adverse environmental consequences of the plant in a number of ways.

First, Pocatello sits in a valley down wind of the proposed plant. Thus, its air quality will be adversely affected. Having lived in San Francisco, Seattle, and Portland, I have lived with air quality problems before. For such a small town whose main attraction is its outdoor recreational activities, Pocatello already has more air quality issues than it should. There are many days when the surrounding hills cannot be seen due to the smog. The proposed plant will make Pocatello less attractive to its residents, potential "clean" industries, and visitors.

Second, the railroad tracks that will carry the coal to the plant will come right through Pocatello. The coal dust from these trains will also have an adverse environmental impact. Coal dust floating in the air will further adversely impact the air quality and soot is likely to start showing up on surfaces around town. Again, this will have a negative impact on the environment in and around Pocatello.

Third, although carbon dioxide is currently not regulated by the DEQ, this does not imply that it does not have adverse environmental consequences. Much of this unregulated adverse impact will be borne by those those living in and around Pocatello. Further, Federal regulation of carbon dioxide is likely coming. Shouldn't we try to be forward-looking in our decision-making?

Fourth, there is the issue of water. My understanding is that the plant will require large amounts of water for its cooling towers. Pocatello and Eastern Idaho are in the middle of a drought. Water quality and scarcity are becoming an issue here. The plant will likely exacerbate this issue.

I realize that the plant is probably now coming and those of us who live here will either have to live with it or move. I had hoped that the plant would not get to this stage, and now it seems it is too late. My family and I moved here four years ago because of the high quality of life. Unfortunately, that quality of life is now endangered.

My final comment is that I am in favor of economic development in this region. However, do we want growth that makes us more like Seattle or Pittsburgh? If clean coal is so great, then why isn't everyone around the country jumping on the band wagon and building one. I think they are not, because it isn't. Unfortunately, by the time we in Idaho figure that out, it will be too late.

Thank you for the opportunity to comment on this issue.

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Name: **Joanna Kirkpatrick**  
Email Address: jkirk@spro.net  
Affiliation:  
Comments:  
Dear DEQ

We do NOT want ANY coal plants of any type, period. Coal gasification is still air-polluting. Let the businesses who want to spend money on these invest in Idaho wind power and more transmission grids in ID.

Joanna Kirkpatrick, PhD  
2005 N 17th St  
Boise, ID 83702

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From: lee [mailto:silverchest@halpersmith.myrf.net]  
Sent: Thursday, September 25, 2008 2:40 PM  
To: undisclosed-recipients:  
Subject: [Fwd: Re: pub comment--coal gasification--Power county]

Please circulate to your lists

[http://www.deq.idaho.gov/Applications/NewsApp/checkNewsCache.cfm?news\\_id=2441](http://www.deq.idaho.gov/Applications/NewsApp/checkNewsCache.cfm?news_id=2441)  
September 24, 2008

DEQ seeks comment on proposed air quality permit to construct for Power County Advanced Energy Center; public hearing scheduled

AMERICAN FALLS ÿ The Idaho Department of Environmental Quality (DEQ) is seeking public comment on a proposed air quality permit to construct for the Southeast Idaho Energy (SIE) Power County Advanced Energy Center to be built southwest of American Falls.

The permit will regulate emissions that will be generated in the manufacture of fertilizers using coal gasification technology at the facility.

DEQ has determined that operation of the facility under the proposed permit conditions will not cause or contribute to violation of any ambient air quality standard and will not injure or unreasonably affect human or animal life or vegetation.

The deadline for submitting written comments addressing air quality considerations regarding the proposed permit is 5 p.m. MDT, Friday, October 24, 2008.

A public hearing at which public comments may be submitted will be held 6:30-8:30 p.m., Thursday, October 9, in the Community Room of the American Falls Library, 308 Roosevelt St.

The proposed permit and related documents are available for review in PDF format on DEQ's Web site (link at left).

For technical information on the proposed permit, contact Cheryl Robinson, DEQ Air Quality Division, at (208) 373-0502 or [cheryl.robinson@deq.idaho.gov](mailto:cheryl.robinson@deq.idaho.gov).

Submit written comments on the proposed permit online via DEQ's Web site or by mail or email to:

Faye Weber  
Air Quality Division  
DEQ State Office  
1410 N. Hilton  
Boise, ID 83706  
Email: [faye.weber@deq.idaho.gov](mailto:faye.weber@deq.idaho.gov)

---

Name: **Cathy Kriloff**

Email Address: ckriloff@hotmail.com

Affiliation: Concerned citizen

Comments: As a resident of Pocatello for 11 years and a private citizen, I am very strongly opposed to the proposed coal gasification plant in American Falls. I understand that DEQ can only comment on the scientific validity of SIE's proposal and measure its compliance against already established regulations. I also understand that the plant offers the attraction of numerous jobs for Power County. However, I would argue in favor of seeking to strengthen the existing regulations, for example related to mercury, and to put in place regulations where they do not already exist, for example related to carbon dioxide emissions. I would also argue for promoting new jobs through developing cleaner renewable energy options such as solar and wind that seem natural to pursue in Idaho.

It is irresponsible in the face of overwhelming scientific evidence regarding the nearing of a tipping point on global warming and the human impact on climate change to move forward with the construction of a facility that will in fact further contribute to the problem on a large scale. The lack of appropriate regulations prohibiting such construction in Idaho does not justify allowing it to take place. Rather it probably explains why a company would even consider transporting raw materials from Wyoming to Idaho in order to process them.

In summary, I am deeply concerned about the resulting impacts of the proposed plant on air and water quality and carbon emissions. The resulting price for our local environment and more generally our planet is simply not outweighed by the apparent short-term economic benefits. It is my sincere hope that construction of the plant can be prevented by some means. Even better would be to find a way to promote development of a clean, sustainable, more forward-thinking and truly "Advanced Energy Center".

Thank you for your time and consideration.

Dr. Cathy Kriloff,

Professor of Mathematics

---

Name: **Cathy Kriloff**

Email Address: ckriloff@hotmail.com

Affiliation: Concerned citizen

Comments:

As a follow-up, last night I attended a meeting of the Snake River Alliance at which Dr. Arjun Makhijani spoke. I was encouraged to hear him say he had helped make the case to some of our state legislators for completely eliminating dependence on carbon-emitting sources of energy by aiming to convert entirely to the use of wind and solar power. While the SIE plant is not currently proposing to produce energy, its emissions would certainly run counter to this goal and ought to be considered in the context of its impacts on energy policy.

Thank you,

Cathy Kriloff

EMAILING FOR THE GREATER GOOD

Join me

From: Roy F. and Suzanne B. Miller

**Roy F. Miller, Jr.**

6034 Fruitwood Lane  
Pocatello, Idaho 83204  
(208) 233-4416

RECEIVED

NOV 26 2008

Department of Environmental Quality  
State Air Program

November 24, 2008

Faye Weber  
Air Quality Division  
DEQ State Office  
1410 No. Hilton  
Boise, ID 83706

To Whom It May Concern:

We are writing to object to the permitting of the proposed coal fired fertilizer plant at American Falls, ID.

We long time residents of Pocatello remember too well the inversions and continual smog created by the combined Simplot and FMC plants, and the damages that were done to our health and to our ability to expand our employer base.

It would be irresponsible for Idaho DEQ to jeopardize the long term future of the residents of this area simply to benefit one out of state company wishing to take advantage of our lax environmental regulations.

We urge you to deny this permit, or to attach (and enforce) stringent emission requirements.

Yours truly,



Roy Miller, Jr.



Suzanne B. Miller

**From:** [Roy and Suzanne Miller](#)  
**To:** [Cheryl Robinson;](#)  
**Subject:** Proposed Coal fired plant at American Falls, Id  
**Date:** Monday, November 24, 2008 9:34:39 AM

-- Comments received in this email were identical to the hard copy letter sent by U.S. Mail. --

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From: **Lynda MacButch** [mslanyards@tetontel.com]  
To: Cheryl Robinson;  
Subject: Coal Plant  
Date: Tuesday, November 18, 2008 10:21:29 AM

I WAS BORN, RAISED AND STILL LIVE IN POCATELLO (48 YEARS). IF THIS COAL PLANT IS BUILT I WILL MOVE OUT OF IDAHO AS FAST AS I CAN, TAKING WITH ME, MY FAMILY AND BUSINESS. AS FAR AS I AM CONCERNED IT WILL RUIN SOUTH EAST IDAHO.

With the overwhelming scientific consensus pointing to human activity as the major cause of the earths precipitous and uncontrolled heating, even taking into account cyclical climate change over the past 600,000 years, which is well documented from ice core samples in both Greenland and Antarctica, we can't ignore the chief green house gas causing this which is the generation of carbon dioxide.

Scientists believe the amount of CO2 taken out of the atmosphere by plants was almost perfectly balanced with the amount put back into the atmosphere by respiration, volcanic activity and decay until the start of the industrial revolution.. We now know that since the start of the Industrial Revolution that the concentration globally has increased by over 30%, and will grow exponentially in the future unless we do something.

We can't let the near sighted focus of a few, concerned with economic gain over ride the immediate danger to our planet, ourselves and its wildlife, which are without a voice.

As the ISJ reported, the American Falls Coal Plant alone will account for 5% of the CO2 emissions for the whole state of Idaho, and Idaho has no regulation for CO2 emissions.

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From: **Scott MacButch** [arctic@tetontel.net]  
To: Cheryl Robinson;  
Subject: Coal Plant  
Date: Tuesday, November 18, 2008 9:39:43 AM

For what it is worth, hear is my 2 1/2 cents worth as I'm definately against the coal plant near American Falls.:

With the overwhelming scientific consensus pointing to human activity as the major cause of the earths precipitous and uncontrolled heating, even taking into account cyclical climate change over the past 600,000 years, which is well documented from ice core samples in both Greenland and Antarctica, we can't ignore the chief green house gas causing this which is the generation of carbon dioxide.

Scientists believe the amount of CO2 taken out of the atmosphere by plants was almost perfectly balanced with the amount put back into the atmosphere by respiration, volcanic activity and decay until the start of the industrial revolution.. We now know that since the start of the Industrial Revolution that the concentration globally has increased by over 30%, and will grow exponentially in the future unless we do something.

We can't let the near sighted focus of a few, concerned with economic gain over ride the immediate danger to our planet, ourselves and its wildlife, which are without a voice.

As the ISJ reported, the American Falls Coal Plant alone will account for 5% of the CO2 emissions for the whole state of Idaho, and Idaho has no regulation for CO2 emissions

There is no regulation that they sequester the CO2 and pipe this to Wyoming as the promoters suggest and this technology is unproven at best.

Scott MacButch  
2201 N Jana Ln  
Pocatello, ID 83204

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From: **Sue MacButch** [mailto:suemug1@hotmail.com]  
Sent: Wednesday, October 22, 2008 1:17 PM  
To: Cheryl Robinson  
Subject:

Hello,

I have a question regarding the proposed power county coal gasification project that I hope you can answer. After reading the information on the air emissions I find nothing that addresses the Carbon Dioxide emissions. There is a paragraph stating that the plant will be built to capture CO2 but I am skeptical about that claim because I have read there are only 4 Carbon Capturing storage plants in the world.. I also understand that the process is not fully developed and is extremely. So my question is this, are they able to do carbon capturing?

Thank you for your time.

Sue MacButch  
e-mail Suemug1@hotmail.com

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Name: **Margaret L Marshall**  
Email Address: gsmlee1@cableone.net  
Affiliation: "Mother,Grandmother,Greatgrandmother!  
Comments: Having clean air is a priority in considering an area for raising a family. With Simplot, and FMC having been west of the city of Pocatello for many years; there were days when you could taste and smell the pollutants. PLEASE let's not allow more to be sifted from Power county by allowing the coal plant being considered to operate there.

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Name: **Susan Matsuura**  
Email Address: mats\_suz@yahoo.com

Comments: Coal Fired Plant! I am opposed to the establishment of a plant that puts untold amounts of CO2 in our atmosphere. Our environment and the place we live cannot absorb this. I question other emissions that will be allowed to escape as well. Our airshed should not be considered an open dump where gases are allowed to accumulate and interfere with the health of our world and the life forms that inhabit it.

Sincerely,

Susan Matsuura  
754 S. 19th  
Pocatello, ID 83201

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Name: **Sandra D. Mayden**

Email Address: [buznsandy@msn.com](mailto:buznsandy@msn.com)

Affiliation:

Comments: I would like to register my opposition to the building of the proposed coal burning plant west of American Falls due to what I believe to be very adverse effects on our environment. The amount of carbon dioxide and other greenhouse gases that will be released into the atmosphere are not acceptable. We need to be doing everything in our power to reverse the very real problem of global warming. I am also very concerned about the amount of water that will be required to operate the plant. I would urge you to not approve the permit application.

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Name: **Willis McAleese**

Email Address: [mcalwill@isu.edu](mailto:mcalwill@isu.edu)

Affiliation:

Comments: Dear DEQ,

I would like you to note my strong recommendation that the proposed Southeast Idaho Energy (SIE) Power county Energy Center proposal be denied. It is clear to me that the air quality and related environmental risks are simply too great to just rubber stamp the request through the system. President Elect Barack Obama will be asking Congress to put limits on Carbon dioxide output - specifically related to coal powered plants. The Power County proposal estimates that 12 tons of carbon dioxide will be emitted every day.

Frankly, it is my opinion that if the plant be allowed to go forward at this time, it will be a serious breach of public trust and a lack of good stewardship of our increasingly fragile environment in Southeast Idaho. Thank you for your time and effort concerning this critical public health issue.

Sincerely,

Willis J McAleese, Ph.D.

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-----Original Message-----

From: [EnvConcern@deq.idaho.gov](mailto:EnvConcern@deq.idaho.gov) [mailto:[EnvConcern@deq.idaho.gov](mailto:EnvConcern@deq.idaho.gov)]

Sent: Monday, November 24, 2008 11:08 AM

To: Webmaster

Subject: Customer Response Mail

Name: **Annette Neil**

E-mail: [charebeared@wmconnect.com](mailto:charebeared@wmconnect.com)

Mail: 1025 Meadowbrook

City: Pocatello, Idaho 83201

Phone: 1-208-233-0797

Please keep this confidential: no  
comment:

Coal Generator Plant to be put outside, of American Falls Reservoir, and its affect of the air, water, and ground pollution. The smog along Interstate 15 is all ready so dense you can't see to drive. The vegetation is dead on the media and up the side of the freeway. The fish are high in mercury right now. We need clean energy like the wind generators,  
Let's try clean not dirty.

Came From: [http://www.deq.idaho.gov/about/env\\_concern.cfm](http://www.deq.idaho.gov/about/env_concern.cfm)

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Name: **Brian Nelson**

Email Address: brian.nelson13@us.army.mil

Affiliation: Concerned Citizen

Comments: There has got to be a better way than to build a NEW coal power plant. We should be finding ways to end the current ones. We are better than this. I think most people would be willing to even pay a little extra if it meant significant improvement to environmental quality. I just can't believe this is actually being considered. I guess climate change means nothing to this area.

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Name: **Barbara Nicholls**

Email Address: Mbnicholls@aol.com

I, Barbara Nicholls, am strongly apposed to the PCAEC, the proposed coal-gasification plant by American Falls, Idaho.

I hope that the decision will be that more lengthy and in-depth studies are needed. President-elect Obama is so close to being our official president; he is a president strongly for environmental quality and will have a strong say about coal gasification plants, air pollutants, and positive environmental energy alternatives.

The proposed plant would have 100's of boxcars of open coal being transported daily, burn 230 tons of coal per day, and emit 12,000 tons of carbon dioxide per day plus supposedly-okay amounts of heavy metals and carbon monoxide. This can not make for healthy air ! I feel that this plant would be an environmental step backward.

I live in Pocatello. The regular wind flow direction would bring air pollutants into our area and surrounding areas.

Thank you for reading my comments. Again, I hope you say that more lengthy studies are needed on the air quality effects on the surrounding areas and more lengthy, in-depth studies and limits are needed on the proposed huge carbon dioxide omissions.

Sincerely,

Barbara Nicholls

9440 West Caribou Road, Pocatello, Idaho - (208)233-0714

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Name: **Melvin G. Nicholls**

Email Address: Mbnicholls@aol.com

COMMENT ON PROPOSED COAL BURNING FERTILIZER PLANT BY AMERICAN FALLS, IDAHO AND AIR QUALITY

There is no way that this plant will not cause air pollution for a large part of our area! I am not in favor of having this plant be approved at all much less approved as being one that will be good for our air quality. I do not see this plant as an intelligent answer to the needs of all our futures.

I hope that you will conclude that more lengthy studies will be required so that Obama will have a chance to speak and act on coal burning plants, carbon dioxide omissions, and positive alternatives for a quality environment.

Thank you for reading my comment.

Melvin G. Nicholls

9440 West Caribou Road, Pocatello, Idaho - 83204 (208)233-0714

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Name: **Ben Nickell**

Email Address: ben@nickell.org

Affiliation: I work at Idaho State University

Comments: I am concerned about air quality in inversion conditions of the coal burning fertilizer plant near American Falls as well as impacts on air quality of 100's of tons of coal being transported through the area daily.

Particulates and heavy metal contamination of the air and eventually land and fish and wildlife in and around the American Falls reservoir and Massacare Rocks area will suffer, and bleed over up the valley towards Blackfoot and Idaho Falls and even into the Pocatello area.

It seems that the Pocatello area is finally emerging from the relics of pollution from it's industrial past, and has potential to diversify the economy but not if significant new sources of pollution are added.

I am also concerned about the safety of road conditions on 1-84 with a significant new source of water vapor being emitted.

I think that much more study and methods of reducing contamination should be considered. I also think that the plant should be located in a area that is not so environmentally sensitive that won't has a big an impact of fish, wildlife, and human populations.

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Name: **Barbara North**

Email Address: barbsmail05@hotmail.com

3824 Jason Ave  
Pocatello, ID 83204

23 November 2008

Faye Weber  
Air Quality Division  
DEQ State Office  
1410 N Hilton  
Boise, ID 83706

Dear Ms. Weber,

I am registering a NO vote against the proposed permit of Southeast Idaho Energy for a coal-fired fertilizer plant west of American Falls, Idaho. I am a long-time resident of the area affected by this proposed plant.

I believe the pollutants released into our air and into our environment will be at unacceptable levels. The addition of gasses like carbon dioxide and nitrous oxide combined with fine particulate matter will form nuclei for condensation. The haze and fog produced from these nuclei will create far more hazardous living and travel conditions in southeast Idaho. This pollution will also affect the health of our American Falls Reservoir and our views of the Buttes on the Arco Desert. The inversions in the winter are already awful to live through with our current polluters. The effluents from another will reduce our air quality considerably.

Please do not allow this coal-fired fertilizer plant to receive a permit to pollute here.

Sincerely,  
Barbara North

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Name: **William Norton**  
Email Address:  
Affiliation: 648 pipefitter  
Comments: yes we need the jobs

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Name: **Vivian L. Paul**



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Name: **Joseph J. Pavak**  
Email Address: [sjpavak@msn.com](mailto:sjpavak@msn.com)

Faye Weber  
Air Quality Division  
DEQ State Office  
1410 N. Hilton  
Boise, ID 83706  
Email: [faye.weber@deq.idaho.gov](mailto:faye.weber@deq.idaho.gov)

**Subject:** Permit to Construct- Air Permit- Power County Advanced Energy Center

Comments on Power County Advanced Energy Center (hereafter "PCAEC")

Thank-you for this opportunity to comment on this important Air Quality Permit.

The applicant failed to provide emission estimates and control technology for PM 2.5 particles, a National Ambient Air Quality Standard (NAAQS). These very fine particles that will be emitted by the PCAEC are dispersed over long distances, remain suspended in the air for long periods of time, and have proven to cause cardio-pulmonary diseases, because they are ingested deeply into the lung tissue.

PM<sub>2.5</sub> is a pollutant for which National Ambient Air Quality Standards (“NAAQS”) have been established and subsequently revised in response to well-documented public health concerns. As such, PM<sub>2.5</sub> is indisputably a “pollutant subject to regulation under th[e] CAA.” 42 U.S.C. § 7475(a)(4); see also 40 C.F.R. 52.21(b)(50) (expressly defining regulated pollutants for purposes of the Prevention of Significant Deterioration (“PSD”) program to include “[a]ny pollutant for which a national ambient air quality standard has been promulgated”). Accordingly, EPA has acknowledged that “[t]he obligation to implement PSD is triggered upon the effective date of the NAAQS.”

Nevertheless, the proposed air quality permit for the Power County Advanced Energy Center contains no BACT analysis or limitation for the facility’s PM<sub>2.5</sub> emissions. See Statement of Basis, pp. 41-48. The EPA promulgated a rule-making in October 2006, making it mandatory for emission sources to limit these pollutants. PM 2.5 also contributes significantly to widespread haze that reduces visibility, as well as well documented adverse health impacts. Unfortunately, this pollutant was not addressed by the applicant (PCAEC) in their permit and, likewise, not addressed in the draft permit. As a practical matter, control technology that is effective for PM<sub>10</sub> may not be sufficiently effective to control the finer sized PM<sub>2.5</sub> particles emitted by the coal plant. Best Available Control Technology (BACT) needs to be installed for PM 2.5 sources within this coal plant.

The permit, if it is to be compliant with the Clean Air Act, must be denied and returned for a revision that includes control of PM 2.5.

The applicant’s coal plant will also produce approximately 150 tons per hour of Carbon Dioxide (CO<sub>2</sub>) from the gasifier of the plant. The company has not committing to controlling green-house gas emissions. Huge amounts of Carbon Dioxide will be released to the environment from this facility. The Washington D.C. Federal Circuit Court recently ruled that carbon dioxide is a pollutant, as defined by the Clean Air Act (42 U.S.C. § 7475(a)(4)) and must be controlled. These gases contribute to adverse environmental impacts. Idaho’s Governor recognized the damages of this pollutant when, in May, 2007 he passed an Executive Order (attached) directing Idaho DEQ to account for, and to minimize harmful carbon dioxide emissions. It would be a large step backward for the State of Idaho to accept a coal plant that does not control these greenhouse gases, at a time when other States are scrambling to control these pollutants. The IDEQ must deny this permit, based on the omission of carbon dioxide control technology or this coal plant will be in violation of the Clean Air Act, referenced above.

The Idaho Code at Chapter 1, Title 39-115, specifically mandates that IDEQ’s Director issue permits that control “regulated air pollutants” as defined by the Clean Air Act. The IDEQ will be in violation of this Code if they fail to include PM<sub>2.5</sub> and Carbon Dioxide.

**Inadequate BACT Analysis** - The application and IDEQ’s Statement of Basis for this permit failed to follow EPA’s guidance on BACT analyses. The Clean Air Act places the responsibility of proposing BACT on the applicant and the confirmation of BACT on the permitting agency, in this case IDEQ. Idaho DEQ rules at IDAPA 58.01.01.205, stipulate that BACT is required “...for each regulated air pollutant for which a new major facility would have the potential to emit in excess of the significant rates.”

It is inferred from the application that PM<sub>10</sub>, NO<sub>x</sub>, SO<sub>2</sub>, CO and VOC, may be “significant” facility-wide. Yet, the permit contains no limits for the Gasifier Heater Vents #1 or #2 pursuant to BACT or otherwise.

Since BACT includes a “visible emissions standard” by definition, opacity from the heaters should be limited, pursuant to BACT, to **0%**, **not 20%**, as was required for Greater Des Moines Energy Center in Iowa and Charter Steel in Wisconsin. Furthermore, neither the application nor IDEQ’s Statement of Basis, specifically state which pollutant BACT applies.

PCAEC and IDEQ must consider N<sub>2</sub>O, a greenhouse gas and the most likely form of NO<sub>x</sub> emissions, in the required environmental impact analysis even if the top control option is selected for NO<sub>x</sub> in a top down analysis. It is well established that in the production of nitric acid, nitrous oxide (N<sub>2</sub>O), is also produced. The permit is based on an incomplete top-down analysis and BACT for NO<sub>x</sub> emissions in its most likely form, N<sub>2</sub>O, from nitric acid production has not been ensured. The applicant and IDEQ must fully assess BACT controls for NO<sub>x</sub> in their final permit.

**Inadequate MACT Limits for Mercury and Other HAPs** - The draft permit and statement of basis fails to describe a Maximum Achievable Control Technology (“MACT”) analysis for the PCAEC and to set corresponding enforceable emission limits for mercury and all other hazardous air pollutants (“HAPs”) to be emitted by the proposed emitting units, as required by the Clean Air Act, section 112, 42 U.S.C. § 7412. A MACT analysis often results in lower emissions limits than would a BACT analysis for the same pollutant.

MACT requirements apply to “major sources” that have the potential to emit 10 or more tons per year of any one HAP or 25 or more tons per year of a combination of HAPs. 42 U.S.C. § 7412(a)(1). IDEQ and PCAEC have not even provided estimates of uncontrolled HAP emissions from the coal plant to determine whether they would exceed the major source. Instead, IDEQ proposes to allow PCAEC to side-step MACT requirements by limiting their HAP emissions.

IDEQ’s proposal to allow PCAEC to take “synthetic minor” status with respect to HAP emissions is flawed. Although the draft permit establishes HAP emissions limits below threshold levels, the limits are not “practically enforceable.” The draft permit fails to require any HAPs monitoring whatsoever to allow IDEQ to determine whether PCAEC is in compliance with the established limits. Of particular concern are the Mercury emissions from this facility as there is a Mercury-based Fish Advisory in the American Falls Reservoir at the present time and any new contribution of Mercury deposition could ruin the fishery in these waters and impair the health of the public who consume fish from these waters. In spite of these concerns the PCAEC failed to estimate emissions of these HAPs (see Table 3.3). The PCAEC needs to go back and revise their permit to address the significant gap in addressing HAPs in this permit process.

To comply with Clean Air Act section 112, IDEQ should perform a MACT analysis for each HAP that will be emitted by the Power County Advanced Energy Center and establish corresponding emissions limits in the PTC permit. At the very least, IDEQ must require continuous emissions monitoring of mercury and frequent monitoring of all other HAPs emitted by the Power County Advanced Energy Center.<sup>0</sup>

**Upset Condition Limits Needed** - Several plant processes may be subject to “upset conditions” where emissions are released to the atmosphere without passing through a pollution scrubber or control device. This could amount to a black cloud that will be transported to downwind communities. Also, because the flare is steam assisted, the emissions may look like steam or water vapor as they exit the stack initially but, in fact will contain large volumes of pollutants. The draft permit places no limit on the number of malfunctions, or upsets, that would by-pass scrubbers at the gasifier flare. (Since stack testing at this flare is required, except during a “start-up” event, no one will know the emissions when an upset malfunction requires venting to the flare.) I recommend that IDEQ limit number of upsets or malfunctions to no more than one per month. To allow any more than this, will mean that the company cannot control its emissions.

**PCAEC submitted an incomplete PTC application** - The permit Application violates the requirement for completeness at IDAPA 58.01.01.124 -124. TRUTH, ACCURACY AND COMPLETENESS OF DOCUMENTS, as well as section 58.01.01.204 which requires a completeness determination by IDEQ for any PTC permit. The PCAEC violated the aforementioned Rules in the following ways:

IDAPA Air Rules requires that “All documents submitted to the Department shall be truthful, accurate and complete.” The application has reported numerous cases where they are still trying to determine the manufacturer of their control equipment. There are over **twenty cases** where the applicant did not submit the manufacturer of process equipment or control equipment, rather they have reported it as “To-Be-Determined” in their application. The conclusion may be drawn that the applicant is not properly prepared to construct such a large coal processing plant, and the gaps in providing the manufacturer of control equipment is a serious deficit in their application.

These gaps in information limit IDEQ’s ability to perform a BACT and MACT analyses. Additionally the application reports that 150 un-covered railroad cars of coal are scheduled to be parked at the facility, but no accounting of the associated emissions, and no control technology was proposed in the draft permit for this fugitive source.

IDEQ has an obligation to return this PTC permit back, as incomplete, and require a complete application that includes each relevant operating parameter, all manufacturers of the process equipment and control equipment, and to allow the public to review and comment on a complete application. The PCAEC has violated the requirement for completeness at 58.01.01.124 and IDAPA 58.01.01.204.

**Potential to Emit** - Neither the application nor the statement of basis contains sufficient information detailing the facility’s potential to emit (PTE) air pollutants. Table 3.2 in the statement of basis is labeled as “Controlled

Emissions Estimates of Criteria Pollutants" and Table 3.3 is entitled "Controlled HAPs Summary." Neither of these references fulfils the definition of potential to emit (PTE) assessment as required by EPA or as required in the State Rules at IDAPA 58.01.214.02. Since a facility's PTE can be a critical element in determining applicability of various regulations, it is important to document this as part of a construction permit. The statement of basis should include the PTE for each emissions unit and the facility as a whole.

As pointed out in a previous section, there are several fugitive sources of pollutants that were not addressed by the application, Statement of Basis, or draft PTC permit: uncovered railcars of coal, granulated urea product, transfer points of granulated urea, including crushers, screens, conveyers and railcar loading. There is no description or PTE or assessment of its potential-to-emit (see Figure 2-9 of application).

**New Source Performance Standards** - The PCAEC needs to demonstrate compliance with 40 CFR Part 60, Subpart H, Standards of Performance for Sulfuric Acid Plants. Subpart H does apply to this unit.

**Hydrogen Sulfide Emissions** - IDEQ is violating IDAPA 58.01.01.776.01. by allowing PCAEC to emit H<sub>2</sub>S in quantities known to be odorous and irritating to neighboring communities. IDAPA 58.01.01.776.01 requires the control of odors and IDAPA 58.01.01.006.05 identifies "odor" as an "air pollutant/air contaminant", yet the coal plant is permitted to emit H<sub>2</sub>S and other reduced sulfurs in amounts that exceed odor thresholds.

To ensure compliance with 58.01.01.776, the IDEQ should not rely on detection of odors such as H<sub>2</sub>S from laypersons but should require periodic monitoring of H<sub>2</sub>S leaks using portable monitors. Portable monitors can be set to detect H<sub>2</sub>S concentrations as low as 0.05 ppmv<sup>73</sup>.

**CEMS**- Continuous Emission Monitors (CEMs) should be installed on all exits stacks where technically feasible. For example, all baghouse stacks should be required to have continuous opacity monitors installed, with record-keeping requirements to allow the facility operators and IDEQ staff monitor the emissions from these stack sources. These CEMs would be particularly beneficial in this permit, given the low efficiency required in the draft permit of feedstock area baghouses, and the lack of an adequate BACT analysis.

In summary this proposed application by the Power County Advanced Energy Center falls considerably short of what is required by the Clean Air Act and Idaho Air Quality Permit rules. The PCAEC failed to address two critical pollutants, PM 2.5 and Carbon Dioxide, completely, even though they are "regulated pollutants". Further, the applicant failed in many ways to fully report Potential To-Emit (PTE) values for all pollutants, rendering the application "incomplete". Although the applicant is required to demonstrate Best Available Control Technology (BACT) for pollutants that may be significant, they failed in many cases to adequately research and employ BACT for their emission sources. The applicant also failed to adequately report their Potential-To-Emit (PTE) in sufficient detail to allow IDEQ to assess appropriate emission limits. The application and draft permit also failed to incorporate MACT assessments for Mercury and other Hazardous Air Pollutants (HAPs), as required by EPA.

The applicant reported over twenty pieces of process equipment or control equipment under the status of "To Be Determined". The applicant failed to address several sources of fugitive emissions, including large numbers of uncovered railcars of coal and granulated urea, as well as several transfer points of granulated urea. The conclusion, from all these gaps in the application is that they submitted an incomplete application. The IDEQ has an obligation to return this application back, and require a comprehensive assessment and reporting of PTE, BACT, for all pollutants and MACT for all hazardous Air Pollutants.

Thank-you again for the opportunity to comment on this important air quality permit to construct.

Sincerely,

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Name: **Ronald W Peterson**

Email Address: rwp51aefa@hotmail.com

Affiliation:

Comments: Faye, I would like to comment on the proposed coal gasification plant near American Falls. I am concerned that the issue of CO<sub>2</sub> gas has not been adequately addressed. It seems that everyone is

saying that it will be okay and we will figure it out in the future if it is a problem. What makes us think that a LLC company will be able to secure future financing to fund the changes that may be needed if they are unable to meet air quality standards in the future. What happens then? Do they walk away and leave a huge cleanup mess or do we give them pollution credits so they do not have to meet the standards?

Another question I have is the mercury emissions which may very well be the worst of all the potential emissions because it does not break down in the environment and is eventually passed thru the food chain. What is being done to meet the zero mercury tolerance standard of the State of Idaho? I would hope that DEQ is looking out for these issues and will help protect the citizens rather than looking to help the "out of area" interests of a Limited Liability Corporation that has no interest in the area other than trying a venture to generate money for their investors which if it fails, they will walk away with no further liability. Can we afford that risk to our air quality and environmental quality?

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From: **Jeremias Pink** [miaspink@aol.com]  
To: Cheryl Robinson;  
Subject: EPA Decision  
Date: Friday, November 14, 2008 2:00:31 PM

Ms. Robinson,

I just heard about the EPA's Thursday decision not to grant a Utah coal plant a permit based on its lack of CO2 controls (article below). What, if any, impact will this decision have on coal developments in Idaho, specifically the PCAEC?

Just wondering,

Jeremias Pink

Pocatello From Time Magazine @  
<http://www.time.com/time/health/article/0,8599,1859049,00.html?iid=tsmodule>

Environmentalists have long known that when it comes to climate change, coal will be a [dealbreaker](#). The carbon-intensive fossil fuel provides nearly half of the United States' electricity, and is responsible for some 30% of the country's greenhouse gas emissions. That's just due to the coal plants already operating — as the U.S. looks to expand its energy supply to meet rising demand in the future, over 100 coal plants are in various stages of development around the country. If those plants are built without the means to capture and sequester underground the carbon they emit — and it's far from clear that such technology will be commercially viable in the near-term — our ambitious goals to reduce greenhouse gas emissions and avert climate change will be meaningless.

OA

Related

That's why a decision issued on Thursday by the Environmental Protection Agency's (EPA) Environmental Appeals Board is so important. Responding to a lawsuit filed by the Sierra Club over a new coal plant being build on American Indian reservation land in Utah, the board ruled that the EPA has no valid reason to refuse to regulate the CO2 emissions that come from new coal-powered plants. The decision pointed to a May 2007 ruling by the Supreme Court that recognized CO2, the main cause of climate change, is indeed a pollutant under the federal Clean Air Act and therefore needs to be regulated by the EPA. In the months since that landmark decision, the EPA — with the support of the Bush Administration — has doggedly refuse to regulate CO2, much to the dismay of environmentalists. The board's decision will force the EPA to consider CO2 when issuing permits for new power plants, potentially making it — at least in the short-term — all but impossible to certify new coal power plants. That's because the EPA will need to reconfigure its rules on dealing with CO2, which is found in greater concentrations in coal than any other fossil fuel, that force plants in the permitting process to be reevaluated, delaying them for months or longer. "In a nutshell it sends [new plants ]back to the drawing board to address their CO2

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Southeast Idaho Energy, PCAEC, Response to Comments

emissions," says Bruce Nilles, director of the Sierra Club's National Clean Coal campaign. "In the short term it freezes the coal industry in its tracks."

The Sierra Club had originally sued to stop the construction of Deseret Power's Bonanza Generating Station in Vernal, Utah, part of their nationwide campaign to stop new coal. The 110-megawatt plant, which received its EPA permit in July 2007, would have emitted 3.37 million tons of CO<sub>2</sub> a year — the equivalent to putting another 660,000 cars on the road. In detail, Thursday's decision means that any new air pollution permits for coal plants will require that Best Available Control Technology (BACT) be used to reduce CO<sub>2</sub> emissions, the same criteria currently used for other pollutants, like sulfur dioxide or soot. BACT requires companies involved in power plants to use the best available technology to control pollutants — it's a tool to keep pollution controls up to date as both safety technology and our understanding of pollution improves. In the past, CO<sub>2</sub> wasn't affected by BACT because the EPA didn't recognize it as a pollutant. This decision changes that.

Right now, however, there is no definition of BACT for CO<sub>2</sub>, and environmentalists estimate it will take six months to a year to figure that out. In the meantime, all other coal plants in the permitting process, or stuck in the courts, will be frozen. Over the longer term, it's possible that new coal plants may be impossible to certify at all until a technology exists to greatly reduce or sequester carbon emissions from coal plants — and currently none has been proven. "The decision says the EPA can't ignore CO<sub>2</sub>," says Nilles.

That effectively punts the future of coal in America to President-elect Barack Obama's incoming Administration. It's not yet clear how he'll act, but his renewable energy advisor Jason Grumet has said that Obama would be willing to use the EPA to directly regulate CO<sub>2</sub> — something President George W. Bush has refused to do. "This lays the groundwork for Obama to move quickly to put in place a regulatory system and begin to achieve CO<sub>2</sub> reduction and build that clean, 21st century economy he talks about," says Nilles. Obama's position on coal isn't exactly clear, though he has said that he will work to develop "clean coal" plans that can capture and sequester carbon. What's certain is that the future of coal just got a lot cloudier — and the future of the climate might be a bit brighter.

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From: **Mitch Popa** [redwoodmitch@yahoo.com]

To: Cheryl Robinson;

Subject: Proposed coal plant comment.

Date: Friday, November 21, 2008 12:31:37 PM

I would like to state my opposition to the proposed coal powered energy plant to be located in Power County. In a time when we're beginning to realize the impacts of global warming and what causes it, I am amazed that this plant is even being considered. Just because Idaho doesn't regulate CO<sub>2</sub> emissions should not, in my opinion, be viewed as permit justification. Times have changed and it is 'time' for us to start thinking about the long-term consequences of our actions. Let's hope our grand children's children look back on us with pride instead of disgust. Do the right thing, consider the air and the environmental impact and oppose this plant. I am beginning a website called [sustainabletv.org](http://sustainabletv.org). It's going to feature programming on all things sustainable and expose those that are doing harm to our planet. It would be great if we could feature Idaho in a positive light and one which shows we care instead of the story we'll do if this goes through.

sincerely,  
Mitch Popa

From: Pocatello Resident

ec 01 08 04:01p

US EPA Pocatello

208-282-4885

p.2

RECEIVED

DEC 01 2008

Department of Environmental Quality  
State Air Program

SIE LISTS PETROLEUM COKE AS A FEEDSTOCK  
TO THE PROCESS, WITHOUT INDICATION OF  
~~BY~~ WHAT PROPORTION OF THE CHARGE.  
PETROLEUM COKE IS THE FINAL BYPRODUCT  
OF OIL REFINING AND CONTAINS AN ARRAY OF  
COMPOUNDS SUCH AS HEAVY METALS CONSIDERED  
AS HAZARDOUS - SIE SHOULD BE REQUIRED  
TO CHARACTERIZE THE COKE AND INDICATE  
WHERE THE HAZARDOUS SPECIES REPORT.

DEQ Note:

This unsigned comment was hand-delivered to the EPA's Community Outreach office in Pocatello sometime during the week of November 24, 2008. Sue Skinner (see below) was out of the office that week, but faxed this to DEQ's attention when she returned on December 1, 2008.

Sue Skinner  
Environmental Protection Specialist  
EPA Region 10  
Community Place Based-Pocatello  
c/o Idaho State University, Dept. of Biology, Rm 406  
921 S. 8th Ave, Stop 8007  
Pocatello, ID 83209  
(208) 282-4326  
fax (208) 282-4885

---

Name: **Margo and Dennis Proksa**

Email Address: blackrockforge@cableone.net

Comments:

Hello,

We have been opposed to any development that uses coal because the technology is dirty and Idaho's people and nature need to be protected.

A plant that emits PM 2.5 and Carbon Dioxide will have adverse health impacts especially on the young, elderly, those with respiratory health problems like asthma and emphysema and will spoil the view!

Carbon dioxide is the main cause of global warming and it must not be allowed to increase at a time when we are trying to lessen greenhouse gases-not just locally but globally.

There are no technological controls proposed for this plant. When "upset conditions" happen emissions do not pass through a scrubber or control device.

When 150 uncovered railroad cars pass by my house/day, I know the dust will not only enter my lungs but will also stick to the drivit siding on our house!

When people hear about all the jobs and all the money coming in to their community with a project like this, you can easily understand why they are in favor of it. Our state and nation have a responsibility to scrutinize the facts associated with and reported by anyone with a proposal like this. The tendency to give it permission to operate is in the hands of a few regulators who come and go, who get swayed by the state of the economy and the desperate people who overlook hazards because they want a job.

We've been here before. We know coal is abundant but it is not clean.

We know a decision like this will affect all of us and the landscape in negative ways. Future generations will wonder why we aren't smart enough to learn from our mistakes.

Experts have testified that this permit application has a lot of unanswered questions about emissions. Some of us are just experts at trying to maintain our health and the health of future generations, and keeping the landscape from being destroyed by polluting industry.

Thank you for listening!

Sincerely,

Margo & Dennis Proksa  
5192 West Old Hwy 91  
Pocatello, ID 83204

---

From: **Muriel Roberts** [murielroberts@cableone.net]

Sent: Thursday, November 20, 2008 6:46 AM

To: Faye Weber

Subject: SEI Power County Advanced Energy Center

Faye Weber:

As a citizen of Pocatello, Idaho, who has been working to clean up the air in our valley for over 30 years, I now appeal to the Idaho DEQ to prevent further pollution of our air by SIE.

My concerns are especially about CO2, particulates in the 2.5 range, and Mercury emissions. I recognize that DEQ does not at this moment have established limits on CO2 emissions, but I believe that how the plant will monitor and control CO2 emissions must be considered in the possible granting of a permit. There is control technology available to reduce these emissions. BACT must be required, at the very least.

I request that DEQ require continuous emission monitoring at the proposed plant. The people of this valley deserve to be protected.

Though it is not an issue in this permitting process, I am also very concerned about the effect of bringing in all the necessary coal to American Falls, through the Portneuf Valley.

This plant is not any more welcome when sited in American Falls than it was in its previous incarnation at the FMC site.

Please do your duty to protect our valley from further pollution.

Muriel R. Roberts  
545 1/2 South Nineteenth Avenue  
Pocatello ID 83201

208.232.5424

---

Name: **Shirley Rodgers**

Email Address: rogershirl@pocy.myrf.net

Affiliation: citizen

Comments: I oppose the construction of the SIE Advanced Energy Center in Power County. I attended the DEQ presentation in Pocatello and am aware that the SIE planners have planned to control primary air pollutants to levels below the present EPA standards. I believe the promoters are trying to get permission to start construction before EPA standards are tightened.

I am especially concerned about carbon dioxide. The effect of CO2 on global warming is well documented. Any coal fired plant will emit tremendous amount of CO2 and the POSSIBILITY of piping CO2 to Wyoming is a pipe dream and not a plan.

The enormous number of railroad coal cars passing through Pocatello is also a concern. Coal dust escapes from those cars and pollutes wherever it falls or flies. I was a child in the days of coal-burning furnaces. Coal dust was everywhere indoors and out. It is terrible stuff. Coal cannot be clean.

Heavy industry requires enormous amounts of water. Water is a scarce and precious resource in Idaho. Has the water needs of this project been factored into the permit study? It should be.

Although the DEQ permitting process for this plant falls into the Air Quality Division, there are other factors to be considered. I urge that DEQ CONSIDER ALL POTENTIAL IMPACTS ON THE ENVIRONMENTAL QUALITY IN SOUTHEAST IDAHO FOR NOW AND THE FUTURE from the effects of this proposed plant before granting any permits.

I oppose this permit and the construction of this plant.

Name: **Ann Rogers**

Monday 11/23/08

Faye Weber  
Air Quality Div  
DEQ

Dear Ms. Weber,

Please deny the proposed coal fire plant west of Idaho Falls.

A coal fire fertilizer plant would harm our air quality, our water and our lungs.

Preserve our health and environment.

Say "NO" to the coal fire plant.

Sincerely,  
Ann Rogers  
3511 Valley Rd  
Pocatello, ID 83201

RECEIVED  
NOV 26 2008  
Department of Environmental Quality  
State Air Program

Name: **Dorothy Rogers**  
Email Address: dndrogers7@gmail.com

I am a resident of Pocatello and am opposed to the proposed plant for American Falls. I am not happy about the CO2 emissions and mercury emissions that such a plant will emit. I am also concerned about the increased train traffic that this plant will create.

Thank you Dorothy Rogers

Name: Maxine Rogers

I don't want to see the coal plant built near  
American Falls. For all the reasons Chuck writes and  
for my own life.

Maxine Rogers  
3459 Palatine Rd  
Pocahontas  
83201

RECEIVED

NOV 26 2008

Department of Environmental Quality  
State Air Program

Name: Sheryl Savage

To Whom it May Concern:

I am concerned about the  
coal burning fertilizer plant  
proposed for W of Am. Falls.

This plant would pollute our  
air with heavy metals, carbon  
monoxide & particulates. Carbon  
~~oxide~~ dioxide & other greenhouse  
gases would be released each  
day.

Pocahontas already has pollution  
from Lamb Weston & Simplot plants  
~~already pollute~~ our air. Please  
no more!

RECEIVED

NOV 26 2008

Department of Environmental Quality  
State Air Program

Sheryl Savage  
345 Lark Lane  
Pocahontas, ID 83201

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Name: **John Schmidt**  
Email Address: jschmidt06@gmail.com  
November 23, 2008

Dear Faye,

I wish to submit the following comments regarding the proposed coal gasification facility in American Falls.

First and foremost, I have serious concerns regarding the CO<sub>2</sub> emissions this facility would generate if Idaho Department of Environmental Quality (DEQ) were to permit it to go forward. CO<sub>2</sub> is a major contributor to global warming and as such it must be considered in any air quality permits issued by DEQ. DEQ, for their part, is choosing to simply ignore CO<sub>2</sub> in this permit, but as the recent decision by the EPA's Appeals Board for the proposed Utah (Bonanza) facility ruled, not only must DEQ consider CO<sub>2</sub>, but you must require the Best Available Control Technology (BACT) for this emission.

For this facility, unfortunately, there has been no discussion about what BACT might look like or what it would entail. DEQ must go back and inform the public what they plan to do with CO<sub>2</sub>. To continue ignoring CO<sub>2</sub> is a legal non-starter. If DEQ were to ignore the Bonanza decision and issue a permit that did not require BACT for CO<sub>2</sub> they will end up in court and they will lose, costing the taxpayers of Idaho a considerable amount of money. DEQ should deny the permit now and require SIE to go back and develop and submit to DEQ and the public detailed plans on how they will deal with CO<sub>2</sub>.

Other concerns of mine include the following points:

- Idaho DEQ is proposing to allow the company to have an unlimited number of "upset conditions". Ask the Agency to revise the air permit to limit the number of these uncontrolled emission events.
- The proposed permit fails to estimate emissions of fine particulate matter (PM 2.5), and fails to address controls of this pollutant. The EPA promulgated a PM<sub>2.5</sub> rule-making in October 2006, making it mandatory for emission sources to limit these pollutants. PM 2.5 also contributes significantly to widespread haze that reduces visibility.
- Coal contains Mercury as a by-product, and with the American Falls Reservoir already designated as a "fish-Advisory" because of elevated Mercury in fish tissues, this is no time to allow mercury source to be located up-wind from the Snake River and American Falls Reservoir.
- The technology is available for the company to install continuous emission monitors on several of their smoke stacks...but the company is not installing them. Instead the Idaho DEQ is depending on the company to "self-monitor" many of their emissions. This method has been shown to not work in other Southeast Idaho factories. IDEQ should require continuous emission monitors with electronic storage of any excursions from the standards to protect the public from excess emissions.
- DEQ is required, in the proposed permit, to express all emission quantities in terms of "tons per year". This unit of measurement is easily understood by the general public yet DEQ has chosen instead to use terms that the lay-public can not readily understand. This is not allowable.

I urge DEQ to deny the permit at this time and that further permit proposals take into account the points raised by myself and other. Thank you for accepting my comments.

John Schmidt  
8862 Maple Grove Lane  
Pocatello, ID 83201

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Name: **Debra M. Shell**  
Email Address: dmssq@allidaho.com

November 23, 2008

Air Quality Division  
Department of Environmental Quality State Office  
1410 N. Hilton  
Boise, ID 83706

To Whom It May Concern:

I am writing express my opinion about the construction of the proposed coal burning fertilizer plant planned for construction west of American Falls. I feel very strongly that this plant SHOULD NOT be constructed for several reasons.

- 1) The carbon dioxide to be released each day is astounding, and, even though this is not a regulated emission, it has been proven that this emission endangers human, as well as animal, welfare. Southeast Idaho Energy, the company planning to build the plant, has said that it may build a pipeline to Wyoming to sequester the carbon dioxide, but it is not planned for several years, is not a certainty, and proposes technology that is far from proven. For Idaho to allow this amount of carbon dioxide emissions, when the rest of the country is seriously working to minimize/eliminate these emissions, is ludicrous and should not be allowed.
- 2) Three huge cooling towers are proposed, with water usage of 2 million gallons of water per day. Where will all the water come from? We already have significant water rights/water usage issues in Idaho, and this is a substantial amount of water that basically does not exist for this plant's use.
- 3) Although the proposed plant specifications claim that it will meet current Idaho air quality regulations, pollutants released into the air when coal is burned are still significant. Fine particulate matter, carbon dioxide, and nitrous oxides act as condensation nuclei and will create haze and fog. The area between American Falls and Pocatello is already hazardous at times, and the addition of this plant will exacerbate this problem. Having lived in Pocatello since the mid-1970's, I am very aware of the inversion problems the Portneuf Valley suffers when contaminant nuclei are present.
- 4) Dozens of open coal rail cars will pass through the area each day. The coal dust released from these cars has not even been addressed by Southeast Idaho Energy.
- 5) Mercury released in emissions, although below Idaho DEQ regulated levels, is still a significant pollutant when considered that a significant portion of it may settle out in American Falls Reservoir. This reservoir is already designated as a "fish advisory" because of elevated levels of mercury in fish, and additional emissions will only make the problem worse.

I strongly protest the permitting and construction of this plant. Just when the rest of the country, and hopefully many Idahoans, are recognizing the importance of being as "green" as we can be, and using as many non-carbon producing technologies as possible, surely Idaho won't be so foolish as to allow for this plant to come into being.

I ask the Idaho Department of Environmental Quality to use all good conscience and deny the permit for this facility.

Sincerely,  
Debra M. Shell

5812 W. Buckskin Rd.  
Pocatello, ID 83201  
208-234-0722  
[dmssq@allidaho.com](mailto:dmssq@allidaho.com)

---

From: **J'neane Smith** [jneanesmith329@mac.com]  
To: Cheryl Robinson;  
Subject: Proposed gasification plant  
Date: Sunday, November 23, 2008 12:22:43 PM

My name is J'neane Smith. I have lived in Pocatello since 1976. I do NOT want a gasification plant to be built in southeast Idaho. I taught at Chubbuck Elementary School from 1976 to 2005. I breathed the foul air from FMC and Simplot nearly every day. It was very noticeable that the air quality improved when FMC closed. Even though it is stated that a new plant would be "much cleaner," I do NOT want Southeast Idaho to take even one tiny step backwards in quality of our natural resources.

I have read in the Idaho State Journal that many people are concerned with carbon dioxide and mercury emissions. As a long time resident, I, too, am very concerned about these. The impact of emissions from industries using coal are far reaching, not only to the health of every individual living within many miles of such a plant, but also the animals and plants from which we get much of our food. Once the plant construction would be completed, the "sweetness" of the jobs that were created for that construction would be gone, and the valley would be left with a health issue that lingers many years longer than the construction phase. Years of medical bills would far out last such economic benefit from a short construction time.

PLEASE do NOT allow another industry that uses a "dirty" fuel, such as coal, to enter our Southeast Idaho area. There is going to be a big demand for "green" industries that will provide just as many jobs for construction as we enter into a world that MUST be more cognizant of future impacts. Let us not step backwards, but look forwards to "green industries" for the sake of every living thing.

Thank you for your time,

J'neane Smith

5777 Hilo Drive,  
Pocatello, Idaho  
830204  
208-233-5777

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-----Original Message-----

From: EnvConcern@deq.idaho.gov [mailto:EnvConcern@deq.idaho.gov]  
Sent: Monday, November 24, 2008 9:59 AM  
To: Webmaster  
Subject: Customer Response Mail

Name: **Charles Spradlin**  
E-mail: charbeared@wmconnect.com  
Mail: 1025 Meadowbrook  
City: Pocatello, Idaho 83201  
Phone: 1-208-233-0797

Please keep this confidential: no

comment: The coal plant to be located upwind from the American Fall's Reservoir. Putting pollutants, into the air and water.

The train loads of coal coming and going to and from the plant dropping coal dust all along the track contaminating all along the way.

The air inversion that happens along the freeway now is smelly and hard to breath. The valley floor fills up with smog. Are you going to take away the very air we breath?

Came From: [http://www.deq.idaho.gov/about/env\\_concern.cfm](http://www.deq.idaho.gov/about/env_concern.cfm)

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Name: **Stephen A. Stokes**  
Email Address: s\_stokes@qwestoffice.net

Faye Weber  
Air Quality Division  
DEQ State Office  
1410 N. Hilton  
Boise, ID 83706  
Email: faye.weber@deq.idaho.gov

My name is Stephen Stokes. I live and work in Pocatello. I am submitting this written comment on the coal gasification plant.

As was mentioned on the website, SIE has proposed to gasify coal and manufacture ammonia, urea, and urea ammonium nitrate at the facility to be located on Lamb Weston Road, approximately two miles southwest of American Falls.

I am not a scientist, so I cannot make any arguments based on the specifications of SIE's proposal.

I can, however, make some general comments on what it is like to live downwind from heavy industry. I have lived my whole life in Pocatello. I remember growing up that there were days you could not see the sun because of pollutants from FMC and Simplot that were being held close to the ground because of inversions. To this day, you can smell FMC on a daily basis. I remember battling ear infections and sinus infections that, the doctor said, were caused by particulates in the air.

I am in fear that the coal gasification plant will be more of the same - another heavy industry pumping out pollutants in Power County for the residents of Bannock County to breathe in. I do not want my son to grow up breathing coal dust, ammonia, urea and urea ammonium nitrate.

Thank you for listening to my concerns.

Sincerely,

Stephen A. Stokes

Meyers Law Office, PLLC  
P.O. Box 4747  
Pocatello, Idaho 83201  
Telephone: 208-233-4121  
Facsimile: 208-233-4174

---

Name: **Richard Taylor**  
Email Address: rtaylor@prodigy.net

Faye,

As a Power County resident, I am deeply concerned about the environmental impact that the proposed energy center may have upon all of us. I don't know that the projected revenues for our county are in any way commensurate to the carbon we would add. I subscribe to the concept of global warming, and no amount of revenue justifies the cost--from a global perspective. Look no further than the melting of all of the glaciers/ice--and the impact upon Polar Bears --among other things.

I ask you to at least halt the project until more studies can be done, and perhaps more people can weigh in.

I would like to see this county obtain the revenues that it seeks. But, there are other ways. The two proposed wind farms come to mind.

I don't think it is possible to put a dollar amount on the long term harm the center may cause. It just can't be justified. Moreover, speaking for myself--I'm not so sure that projects like this don't cross an ethical line...long term...for future generations. Some things are far more important than money. Contributing to global warming is one of them.

Sincerely,

Richard Taylor

---

Name: **Glenn Thackray**  
Email Address: gdthackray@hotmail.com

Please find appended below my comments on the draft Permit to Construct for SIE's "Power County Advanced Energy Center."

Thank you.  
Glenn Thackray  
Pocatello

Faye Weber  
Air Quality Division  
DEQ State Office  
1410 N. Hilton  
Boise, ID 83706

Dear Ms. Weber:

For several years, I have followed with interest the efforts of Southeast Idaho Energy, LLC, to construct a coal processing plant in Power County. The jobs and other economic impacts promised by this facility are certainly enticing, as is the production of large amounts of fertilizer. However, those benefits must be balanced against the health and environmental impacts of the plant.

I am a geologist with more than 25 years experience in the field. While not a specialist in air quality science, I am familiar with air quality issues and coal contaminants. I have read the draft "Permit to Construct" for Southeast Idaho Energy's "Power County Advanced Energy Center." This is a complex document, and one that I dare say will be rather difficult for the non-technical public to understand. Because of the scale of this project, a non-technical summary of impacts is warranted.

While there is much to digest in this draft permit, mercury emissions are clearly one of the greatest concerns for emissions from this plant. Mercury levels in several southern Idaho waterways have recently been found to be elevated, and this plant will add to that problem, to a degree that is not made clear in the permit. I am very surprised that the permit addresses neither the magnitude of mercury emissions nor the potential health or environmental impacts.

It appears that the current incarnation of this project as a fertilizer plant, rather than its original design as a power plant, is a result of Idaho's declination of mercury emissions levels above the current zero emissions. I am concerned that the DEQ has not addressed the importance of the likely mercury emissions, especially given the history and name of this facility as an "advanced energy center."

The permit describes a 95% capture rate for mercury. At first reading, that sounds like a significant reduction. However, the concentration of mercury emissions (5%) is not as important as the total amount that will be vented to the atmosphere, especially given the large coal throughput of this plant.

Since the permit does not describe neither the mercury emissions values nor the mercury content of the coal feedstock necessary to determine annual mercury emissions, I have done some informal calculations of my own. The USGS coal quality database <<http://energy.er.usgs.gov/coalqual.htm#>> lists mercury percentages for Wyoming coal samples ranging from .01-1.1 ppm, with an average value of .105 ppm. My results:

1. Using the average value (.105 ppm) and the 5,000 tons per day maximum coal processing rate from the permit, I calculate annual mercury emissions of 385 pounds.\*
2. Using the maximum value (1.1 ppm) and the 5,000 tons per day maximum coal processing rate from the permit, I calculate annual mercury emissions of more than 4,000 pounds.\*

Given the toxicity of mercury, these are significant values. If the DEQ is to issue a permit for this plant, the potential effects of this level of mercury output needs to be addressed. What are Idaho's rules for mercury? How will these mercury emissions relate to the national mercury emissions trading scheme? Even if Best Available Control Technologies are used, the impacts of total mercury emissions need to be a determining factor in the permitting of this plant.

The raw coal is also stated to contain: "Arsenic, Cadmium, Chromium (total and hexavalent), Cobalt, Lead, Manganese, Mercury, and Nickel," several of which are potentially toxic. The reduction rates for the non-mercury trace elements need to be addressed.

Thank you for considering my comments.

Sincerely,

Glenn Thackray  
227 South 9th Ave.  
Pocatello, ID 83201

\*I note that these are informal calculations, rechecked but not independently verified.

RECEIVED  
NOV 21 2008  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
STATE A.Q. PROGRAM

November 19, 2008

MS Faye Weber  
Air Quality Division  
DEQ State Office  
1410 N. Hilton Ave.  
Boise, ID 83706

Dear MS Weber

I am very much opposed to your granting a permit to the Southeast Idaho Energy Company for the purpose of their building a coal burning fertilizer plant near American Falls. The amount of coal to be burned and the carbon dioxide to be released are absolutely staggering. As I calculated it, nearly 4,000 tons of coal will be burned per day and almost 12,000 tons of carbon dioxide and other greenhouse gases will be released into the air each day. Carbon dioxide is not yet a regulated emission, but President Elect Obama has said that he favors declaring that carbon dioxide emissions are endangering human welfare, and he expects to sign an executive order requiring greenhouse gases be capped. Southeast Idaho Energy Company has said that they may build a pipeline to Wyoming and sequester the carbon dioxide deep in the ground, but this technology is far from proven and it is not required for their permit. There is a moratorium on building coal fired power plants in Idaho, and since this proposed plant would bring all the pollution to eastern Idaho's air that would occur from a coal fired power plant, this plan looks to me like a simple act of bait and switch. As both Senators McCain and Obama said during their respective campaigns, "You can put lipstick on a pig, but it is still a pig."

As was said on the recent PBS Frontline show, "We are standing on the precipice of hell and seem incapable of grasping what is at stake here," and "Every environmental disaster starts with our putting parochial needs above the nation." Global warming is all too real and this plant is a stupid idea. There will be at least 150 open railroad cars of coal coming and going through Pocatello from either Wyoming or Utah every day of the year. There will be an unknown amount of fugitive coal dust blowing in the wind from the crushed coal, especially in the empty cars returning each day. Will this increased coal dust cause problems? The permit application does not address them.

Then three huge cooling towers are proposed, with water usage of two million gallons of water per day. Think of all the steam in the air from the cooling towers as well as that from evaporating slag piles. The stretch of I-

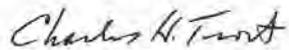
86 between Chubbuck and Massacre Rocks is already a death trap during the night and in the early morning in the winter months due to dense ice fog. The Lamb Weston and Simplot's plants are primarily responsible for most of this. Can you even imagine how much more dangerous this stretch of highway will become with this huge new source of water vapor? People have already been squashed like bugs by semis on the Interstate, but it was their own fault for driving too slow. Is this an air quality problem? Not according to IDEQ. In addition to the human dangers, many birds are already dying on foggy nights below American Falls dam. Idaho Power has forty high tension lines crossing the Snake River right below the dam, which act like a spider web for birds flying down river. Last winter there was a dead bald eagle on the ice below the power lines, there is currently an American white pelican lying there, and I have seen many ducks and geese with broken wings in this section of the Snake River. The Migratory Treaty Act has established that it is illegal to kill these protected birds, yet the wires from Idaho Power Company and the fog from Lamb Weston are currently doing just that during winter months. These conditions will be tremendously exacerbated by the huge amount of water vapor from the coal cooling towers and the slag piles.

There is no such thing as clean coal. The pollutants released into the air when it is burned can be deadly. Carbon monoxide kills by asphyxiation. The greenhouse gasses, such as carbon dioxide and nitrous oxides, as well as the fine particulate matter (PM 2.5) will act as condensation nuclei and create both haze and fog (which equals smog). We will no longer be able to see the buttes out on the Arco desert from Pocatello. Coal contains mercury as a by-product and coal-fired power plants are the largest source of human-generated mercury pollution in the U.S. There will be an unspecified number of "blow-offs" from this plant during which mercury, sulphur dioxide and the PM 2.5 and PM 10 particles will be released. The particles and gases will serve as condensation nuclei for and the pollutants will settle out in the water. American Falls Reservoir is already designated as a "fish-advisory" because of elevated levels of mercury in the flesh of game fish in this reservoir. This is no time to allow a poorly controlled coal plant to be located just up-wind from American Falls Reservoir.

Most of the effluents will blow up valley past Blackfoot and Idaho Falls, but there will be days of inversion in the winter just like we now have from the Simplot plant, only worse. The entire Portneuf Valley from Pocatello to Inkom will occasionally fill up with smog. One such inversion from a coal-fired plant in a small valley town in western Pennsylvania resulted in the deaths of over 200 people. Do you think the coal plant was

held responsible? Nope, they had a permit. For anyone who suffers from either asthma or a heart condition this coal-fired plant could be just such a killer here in Pocatello. Please do not allow this plant to be permitted. We owe it to ourselves, our children, and to the environment.

Sincerely,



Charles H. Trost  
225 N. Lincoln Ave.  
Pocatello, ID 83204

---

Name: Mike Wade

RECEIVED

NOV 28 2008

DEPARTMENT OF ENVIRONMENTAL QUALITY  
STATE A Q PROGRAM

To

Faye Webber

Air Quality Division

From

Mike Wade

9115 Cinnamon Ridge

Pocatello Id. 83204

Faye;

I just want to say what I feel about the American Falls project. I mainly wish that the permits could be delayed long enough for the Obama regime to give it its consideration. He has stated that he'll bankrupt coal plants by taxing carbon dioxide emissions. If this proves true a delay could save investors a lot of money. Maybe some of my concerns could be used to base this delay on.

First coal is not clean and the poisons have to be kept out of the environment. Dealing with waste left over from the products produced has to be disposed of in a certain way that keeps it out of the air and the ground water. Has a permit been worked out for this special dump?

The carbon dioxide we know will always be put into the atmosphere. If there is a claim to the contrary have they worked out a route to get the pipeline to Wyoming. I don't think it's fair that this idea is put to the public without any intention to do the necessary preliminary planning and acquiring the right of ways. If the cost was actually known it would probably be so high that the project would be moved closer to the receiving cavities.

The water it will consume is said to be about the same volume that would otherwise be used to irrigate the 450 acres of crops. But this irrigating goes on for only three months a year and a significant amount of that is returned to the ground water, It is statements like this that seems more like a manipulation of opinion than and attempt to inform opinion.

This coal plant is sited too close to our city for no good reason. This will turn out to be the 'mistake by the lake'. American falls enjoyed polluting Pocatello with their tax cow FMC and this coal plant is to be its replacement. I doubt that Boise, where the colony called Idaho is ruled from, would allow such a chemical experiment to be sited within 25 miles of its inhabitants. If this turns out like FMC there will be environmental infractions piled up and the regulation would be toothless.

Finally global warming should be addressed before a permit is issued. This is such an important matter that everyone must see their contribution one way or another as a moral action. If the idea of global warming as caused by human liberation of carbon dioxide is fuzzy to you then I can't believe you are in a position of such importance.

Thank you for allowing me to express my opinion and I hope you feel empowered.

Mike Wade

---

Name: **Steve Wallace**  
Email Address: stevewallace@cableone.net  
Affiliation: concerned citizen  
Comments: Sirs:

Re: SEI Advanced Energy Center, American Falls.

Firstly I would request that the public comment term be extended by a number of months. I've only recently become aware of the potential impacts of this plant and would like more time to review the application information.

At this time, I would initially say that I am opposed to this project. It seems to have gone through several 'incarnations' as though the developers are still trying to figure out exactly what they are going to do.

This 'energy plant' sounds more like a pollution factory than anything else - a sort of FMC version 2.0. The list of by-products is a frightening witch's brew of poison. Why are they building this here in Idaho? Why not in Wyoming near the source material?

You folks at DEQ are familiar with FMC and the last thing this valley needs is another spewing, stinking, filthy, factory.

---

Name: **Victor Watts**  
Email Address: chessidahoutah@cableone.net  
Affiliation: My Family  
Comments: HI

If the DEQ EPA and State of Idaho allow this Coal Plant to be built in American Falls they should:

1. Require the company have an ongoing DEPOSIT of some sort (such as 1% of sales, etc). This deposit could be then either be used to CLEAN UP ANY MESS LEFT WHEN THEY CLOSE, if the company leaves no mess, then the money could be used as severance pay to employees losing their jobs. PLEASE introduce legislation or make it a requirement to do this.
  2. THE AIR, WATER QUALITY SHOULD BE THE COMBINED AMOUNT OF ALL POLLUTERS IN THE STATE NOT JUST ONE COMPANY. A LIMIT SHOULD BE SET FOR THE STATE.
- What happens if 10 of these plants fill the valley eventually, each passing the emmissions regulations. THE COMBINED POLLUTANT WOULD BE AT I'M SURE UNHEALTHY LEVELS.

PLEASE ADDRESS THIS. PLEASE USE COMMON SENSE.

PLEASE CLEAN UP FMC, BEFORE YOU PROCEED OPENING A NEW FERTILIZER PLANT.

PLEASE DO NOT LET THIS COMPANY JUST DO WHATEVER IT WANTS FOR THE SAKE OF JOBS. THEIR ARE OTHER WAYS TO CREATE JOBS. THIS IS NOT THE KIND OF ECONOMIC DEVELOPMENT IDAHO WANTS.

Thank you,

Victor Watts  
Pocatello ID.

---

Name: **Charles A. Whitmire**  
Email Address: 1cw@cableone.net  
Affiliation: Idaho Resident.

I tried your DEQ web site but application errors kept occurring.

Background: I have lived in southeast Idaho for a number of years. I came from a county in Texas that has more heavy industry than the whole state of Idaho that I love dearly. I was working as a supervisor at the Shell Oil Company refinery in Deer Park Texas in 1986 and we built a coal Gasification plant there. I have worked in coal-fired powerhouses, co-generation plants, solar electric and geothermal plants as well as INL. Saudi Arabia in 77 Sunoco Refinery Contract Supervisor 2004. Colleges and 35 years in the business has educated me. I want to see America become energy independent while my fellow Americans are kept safe, healthy and prosperous. There is now new technology just engineered that removes CO2 from Coal Power plants emissions that are beyond the expectations of the design engineers. The target was 21 lbs of CO2 in the targeted time frame. 52.9 lbs of CO2 was removed. More than double the projected amount at extremely cost efficient ratios. The scrubber unit utilized Caustic Soda and the process event was documented on film, certified by professionals and performed at the Arizona Cardinals football stadium at Tempe, Ariz. My point is, we have the technology now for coal to be green economically. Surely my fellow Americans are fed up with OPEC dictating our freedom and economics by oil prices. As with any industry there are wastes that are produced, contained and processed in accordance with Federal EPA Laws and state laws. Companies, I think, have come to realize "an ounce of prevention is worth a pound of cure" as well as "Chemicals contained can't be blamed". America needs the jobs and the energy independence. Energy is a national security issue. However, there is one large problem that has been overlooked or no one wants to acknowledge it exists. It does not pertain to "AIR Quality" for that is not the only avenue for pollution. This source, in my opinion, is why, is not addressed immediately on a national scale will have devastating health effects as never seen before.. Coal is transported almost entirely by trains in the U.S. We all know why train tracks follow and have to cross (with open space beneath) rivers in America. This close proximity to watersheds provides the vehicle for raw coal to leach into our waters via the train cars that are not leakproof underneath and not covered on top. After all a train traveling 35 mph into a headwind of 35 mph produces a 70 mph wind. You can verify this by walking down any major east to west railroad track and looking down at the coal already deposited there. Maps are readily available that show train tracks and the close proximity to streams rivers lakes, etc. Of course it will be up to the courts to decide who is responsible for the improper handling of this vast and valuable commodity, that if not contained, will affect millions throughout the USA, not just Idaho.. Oil companies went thru major litigations historically and as recent as EXXON-Valdez in Alaska for improper handling and consequential environmental disaster. I feel if I was a railroad CEO I would be scrambling to correct their problem in Emergency Status. The Coal Gasification Plant should be built. There are HEALTHY SOLUTIONS available so all Americans and Industry WINS. This is one problem that needs to be corrected immediately to continue utilizing our vast resources of cheap coal while protecting and preserving our nation for future generations. Thank You and God Bless America.

---

Name: **Valerie Williams**  
Email Address: wasivale@cableone.net  
Affiliation: citizen  
Comments: November 18, 2008

To Whom It May Concern:

It is my intention to make formal public comment on the proposed Power County Advanced Energy Center. I am not a member of an activist group. I am not an employee of a large, competitive corporation, nor am I an unreasonable person who does not like to see progress or change. I am simply a concerned citizen. I have approximately ten acres located directly downwind of the proposed Power County Advanced Energy Center in the subdivision formerly known as Portneuf Plateau, now Cumberland Acres in Bannock County. Five of those acres are currently planted in hay, four are in pasture grass for my horses, while on the last acre I have built a barn and plan to build my dream home.

I purchased this ground in order to enjoy the beautiful, green country atmosphere Bannock County has to offer me and my animals. However, I am deeply concerned about the CO2 emissions this plant will produce. I realize the EPA has no regulations regarding CO2 emissions, none the less, I believe I have reason to be concerned.

Greenhouse gas production and global warming are of great concern. Discharging CO2 into the air will have a negative effect. I would like to be able to continue to live on this planet for the rest of my life and not have to worry about the harmful effects produced by this plant. I vehemently oppose building this plant. There are other methods which can be implemented to produce the products offered by the Energy Center. Let's not endanger our own livelihood just for the sake of giving someone a job or boosting a sagging economy.

If you have any questions regarding my comments, please feel free to email me at wasivale@cableone.net.

Sincerely,

Valerie Williams

---

From: **Jennie Winter** [moontree@allidaho.com]

To: Cheryl Robinson;

Subject: Coal Gasification

Date: Saturday, November 22, 2008 5:44:32 AM

Cherl, Please tell me how I can work to prevent the coal gasification plant from becoming a reality. Thank you. Jennie Winter 775-3178

---

Name: **Earle Wolfrom**

Email Address: earlewolfrom@yahoo.com

Attachments: Idaho\_coal.pdf

I am a resident of the State

Earle Wolfrom

1482 S. Higbee

Idaho Falls, ID

I have attached a 3 paragraph comment.

Thank you for democracy.

Earle

Thank you for taking the opportunity to review my concern and suggestions regarding Air Quality Permit P-2008.0066. The entire reading of this document convinces me, should the regulations be followed, the Power County, ID coal processing plant will not significantly disturb local air quality under ideal conditions. I also understand carbon dioxide emissions are an important factor in climatology and as emissions, are not currently regulated. As economics weigh heavy on meeting regulations, carbon dioxide will most likely not be captured at this coal processing plant. To reduce the global impact of this site, I propose a regulation for energy efficiency be enforced. The effect, hopefully, is to reduce carbon dioxide emissions while not hindering production and/or profit. By utilizing waste heat, the plant could reduce either direct energy consumption or provide a net increase for other users while maintaining or even reducing overall carbon dioxide emissions.

As stated in the permit, there will be multiple flare points at the plant. Depending on the frequency of operation, I propose additional measures to capture and utilize these gases. More disturbing is a few of the flue stacks will emit gases as hot as 1800F. High temperature emissions are directly correlated to inefficient processing Please regulate these high temperature emissions to a more reasonable heat loss value, respecting

available efficiency attainable. Installation of on site electrical turbines to utilize would reclassify the fertilizer processing facility, and the location away from public infrastructure prevents utilization as a community steam plant. The commercial use of the excess heat should be left to the company to decide where to profit, and not released into the atmosphere.

Curtailling carbon dioxide emissions through regulation of heat emissions, the coal to fertilizer plant will be better received on a global scale. Increasing efficiency of the process and/or distribution of waste heat will work to provide a community wide net reduction of atmospheric carbon dioxide emissions. Demonstrating Idaho is fully cooperative with the green business movement motivates the entire nation to move forward in the direction lead by this Rocky Mountain state.

Thank You,  
Earle Wolfrom  
1482 S Higbee  
Idaho Falls, ID 83404

## **Appendix C**

### **Public Comments Submitted for Permit to Construct**

*October 9, 2008 American Falls Public Hearing Transcript*

**P-2008.0066**

RECEIVED

OCT 24 2008

Department of Environmental Quality  
State Air Program

TRANSCRIPT OF PUBLIC HEARING  
SOUTHEAST IDAHO ENERGY, LLC  
APPLICATION & PERMIT TO CONSTRUCT  
DOCKET NO. AQ-0819  
OCTOBER 9, 2008, 6:30 P.M.  
AMERICAN FALLS, IDAHO



T&T REPORTING

CERTIFIED SHORTHAND REPORTERS

**ORIGINAL**

REPORTED BY  
Lanice M. Lewis

POST OFFICE BOX 51020  
IDAHO FALLS, IDAHO 83405  
208.529.5491 • FAX 208.529.5496 • 1.800.529.5491

A P P E A R A N C E S

FREDERICK F. BELZER, Hearing Officer

850 East Center, Suite B-2

Post Office Box 1358

Pocatello, Idaho 83204

MELISSA GIBBS, Airshed Coordinator

DEPARTMENT OF ENVIRONMENTAL QUALITY

444 Hospital Way, #300

Pocatello, Idaho 83201



1 publication was made in the Power County Press on  
2 September 24, 2008. The publication was timely  
3 made and all necessary notice requirements have  
4 been met.

5 All interested parties attending this  
6 proceeding are asked to sign in on the roster  
7 and to indicate a desire, if any, to make an oral  
8 presentation. I ask that you try to limit your  
9 comments to five minutes. After a brief  
10 statement prepared by DEQ staff summarizing the  
11 application, the results of their analysis, and  
12 the proposed permit, each person will be given an  
13 opportunity to speak on the proposed permit.

14 Since these proceedings are being  
15 recorded, I ask those making oral presentations  
16 to come forward, state their name, and provide  
17 the spelling of their last name.

18 At this time DEQ's statement will be  
19 read into the record followed by the oral  
20 presentations. Thank you.

21 MS. GIBBS: Mr. Hearing Officer, ladies  
22 and gentlemen, my name is Melissa Gibbs, Airshed  
23 Coordinator, with DEQ out of Pocatello Regional  
24 Office.

25 This statement was prepared by Cheryl

1 Robinson, a staff engineer at DEQ, who led the  
2 team that developed the proposed air quality  
3 permit for Southeast Idaho Energy's Power County  
4 Advanced Energy Center. This statement briefly  
5 summarizes the air emissions and environmental  
6 impacts, requirements of the proposed permit, and  
7 the process for incorporating public input.

8 DEQ, under authority of Idaho statute  
9 and the Rules for the Control of Air Pollution in  
10 Idaho, issues air quality permits to maintain the  
11 air quality standards established to protect  
12 public health and the environment. Air quality  
13 permits establish the emission limits for  
14 regulated pollutants identifying the requirements  
15 for use of pollution control technology, and set  
16 the terms and conditions for testing, monitoring,  
17 and record keeping that will be used to determine  
18 facility compliance.

19 The provisions of the final permit will  
20 be enforceable by the State of Idaho, the Federal  
21 Environmental Protection Agency, and by the  
22 public through a citizen suit.

23 Under Emissions and Impacts: This  
24 permit to construct addresses sources of air  
25 pollutants at a proposed new facility to be known

1 as the Power County Advanced Energy Center or  
2 PCAEC. The proposed facility will gasify coal  
3 and petroleum coke, also called petcoke, to  
4 manufacture ammonia, urea in both liquid and  
5 granular form, and urea ammonium nitrate.

6 Saleable byproducts from the  
7 manufacturing process includes slag from the  
8 gasifier, which could be sold for use as road  
9 mix, and either elemental sulfur or sulfuric  
10 acid. The annual air emissions from the PCAEC  
11 sources from steady-state operations are  
12 estimated to be approximately as follows:

13 Particulate matter with aerodynamic  
14 diameter less than or equal to a nominal 10  
15 micrometers, or PM10, will be 53 tons per year.  
16 Sulfur dioxide, or SO2, will be 33 tons per year.  
17 Carbon monoxide, CO, will be 203 tons per year.  
18 Nitrogen oxides, NOX, will be 127 tons per year.  
19 And volatile organic compounds, VOCs, will be 5.1  
20 tons per year.

21 Air dispersion modeling was conducted  
22 to evaluate the impacts of the maximum permitted  
23 emissions on ambient air quality. The maximum  
24 predicted concentration at any receptor from the  
25 modeling for steady-state operations were below

1 the significant impact levels defined in the  
2 rules, so the facility was not required to  
3 conduct a full impact analysis.

4 In a full impact analysis, the ambient  
5 impact from the facility must be added to the  
6 representative background concentration and  
7 compared to the national ambient air quality  
8 standards or NAAQS.

9 The primary NAAQS' standards are  
10 federal limits set to protect public health,  
11 including the health of sensitive populations  
12 such as asthmatics, children, and elderly. To  
13 help the public better understand the predicted  
14 ambient impacts from the emissions from this  
15 facility, DEQ compared the maximum modeled  
16 impacts, together with representative background  
17 concentrations, with the national standards.

18 The predicted maximum ambient  
19 concentrations in micrograms per cubic meter, the  
20 representative background concentrations near  
21 American Falls and the total impact as a  
22 percentage the health-base national standards are  
23 as follows: For PM10, 4.9 micrograms per meter  
24 cubed plus 73 micrograms per meter cubed  
25 background, or about 52 percent of the 24-hour

1 standard, and 0.7 micrograms per meter cubed plus  
2 26 micrograms per meter cubed background, or  
3 about 53 percent of the annual standard.

4 For sulfur dioxide, or SO<sub>2</sub>, 17.9  
5 micrograms per meter cubed, plus 34 micrograms  
6 per meter cubed background, or about 4 percent of  
7 the 3-hour SO<sub>2</sub> standard. 3.1 micrograms plus 26  
8 micrograms background or about 8 percent of the  
9 24-hour standard. And 0.2 micrograms per meter  
10 cubed plus 8 micrograms per meter cubed  
11 background or about 10 percent of the annual  
12 standard.

13 For carbon monoxide, or CO, 308  
14 micrograms per meter cubed plus 3,600 micrograms  
15 per meter cubed background, or about 9.8 percent  
16 of the 1-hour standard; and 45 micrograms per  
17 meter cubed plus 2,300 micrograms per meter cubed  
18 background, or about 23 percent of the 8-hour  
19 standard. For nitrogen oxide, or NO<sub>x</sub>, 0.19  
20 micrograms per meter cubed plus 17 micrograms per  
21 meter cubed background, or about 18 percent of  
22 the annual standard.

23 For residents in the Pocatello area,  
24 DEQ also compared the maximum modeled short-term  
25 impacts for particulate matter in SO<sub>2</sub> together

1 with representative background concentrations  
2 with the national standards.

3 The predicted maximum ambient  
4 concentrations in the Pocatello area in  
5 micrograms per meter cubed, the representative  
6 background concentrations in Pocatello and the  
7 total impact as percentage of the health-based  
8 national standards are as follows: For the  
9 24-hour average PM10 standard, 0.5 micrograms per  
10 meter cubed plus 81 micrograms per meter cubed  
11 background, or about 54 percent of the 24-hour  
12 standard.

13 The maximum impact due to PM10  
14 emissions from the PCAEC is about 0.3 percent of  
15 the standard. For sulfur dioxide, or SO2, 0.5  
16 micrograms per meter cubed plus 76 micrograms per  
17 meter cubed background, or about 21 percent of  
18 the 24-hour standard. The maximum impact due to  
19 SO2 emissions from the PCAEC is about 0.1 percent  
20 of the standard.

21 Permit requirements: The PCAEC is a  
22 fuel conversion facility as well as a chemical  
23 plant and will emit more than 100 tons per year  
24 each of carbon monoxide and oxides of nitrogen.  
25 The facility is therefore subject to the

1 Prevention of Significant Deterioration, or PSD  
2 requirements, and emissions of pollutants  
3 regulated under the Clean Air Act must be  
4 controlled using what's known as Best Available  
5 Control Technology, or BACT.

6 The emergency engine generators must be  
7 certified by the manufacturer as meeting federal  
8 emission standards, and are limited to using  
9 ultra-low sulfur diesel fuels that meet federal  
10 requirements. The permittee is required to  
11 operate, inspect, and maintain these generators  
12 to ensure continued compliance with these federal  
13 emission standards.

14 Non-emergency use of each generator is  
15 limited to 100 hours per year. A non-resettable  
16 hour meter must be installed on each generator to  
17 track generator operations. Records must be  
18 maintained that demonstrate that each shipment of  
19 diesel fuel meets the federal requirements.

20 Except for the package boiler and steam  
21 superheated boiler, all other fuel burning  
22 equipment at the facility is limited to burning  
23 pipeline-quality natural gas. Tailgas from the  
24 pressure swing adsorber, the PSA, must be burned  
25 in the steam superheated boiler and under certain

1 conditions in the package boiler.

2 Each of these boilers must be equipped  
3 with a low-NOX burner. A flue gas recirculation,  
4 or an FGR system, must be installed on the  
5 package boiler to reduce NOX emissions if it will  
6 burn only natural gas. A selective catalytic  
7 reduction, or SCR system, must be installed to  
8 reduce NOX emissions for any boiler that will  
9 burn PSA gas, tailgas.

10 Each of the boilers must be equipped  
11 with continuous emission monitoring system, also  
12 known as CEMS, for NOX. Initial and periodic  
13 performance tests are required for each of these  
14 boilers to demonstrate compliance with the  
15 pound-per-hour emission limits listed in the  
16 permit. The permittee must also monitor the  
17 sulfur content of the PSA tailgas.

18 The emissions of metals from the  
19 facility were estimated based in part on the  
20 metal content of the coal, petcoke, and fluxant,  
21 a material used to ensure that the slag doesn't  
22 stick to the inside of the gasifier. The  
23 permittee is required to conduct initial and  
24 periodic chemical analysis of the metals content  
25 of representative samples of these feedstocks.

1                   The sulfur content of the coal in  
2                   petcoke must also be monitored and recorded on an  
3                   as-received basis. The amount of each feedstock  
4                   material fed to the gasifiers must be monitored  
5                   and recorded. This provides a means to ensure  
6                   that the assumptions used in the permitting  
7                   analysis adequately represented the amount of  
8                   these materials and sulfur actually introduced  
9                   into the process.

10                   To ensure that the pollution control  
11                   devices used to reduce the emissions of  
12                   particulate matter, SO<sub>2</sub>, carbon monoxide, and  
13                   oxides of nitrogen, and mercury operate at or  
14                   above the efficiencies assumed in the permitting  
15                   analysis, the permit requires that an Operations  
16                   and Maintenance Manual, or an O&M manual, be  
17                   submitted to DEQ for review and comment prior to  
18                   operating any of the air pollution control  
19                   devices at this facility.

20                   The O&M manual must include specific  
21                   provisions for operation, inspection, and  
22                   maintenance of these devices. The provisions are  
23                   incorporated by reference into the permit and are  
24                   federally enforceable as permit conditions.

25                   During startup conditions

1 off-specifications, synthetic gas, or syngas,  
2 produced in the gasifier, will be treated before  
3 being flared. A means must be provided to  
4 monitor and record the syngas flow rate and the  
5 duration of any flaring. The permittee is also  
6 required to conduct initial and periodic  
7 performance tests for the gasifier flare  
8 emissions.

9 These tests must include sampling and  
10 analyzing the syngas after it has been treated,  
11 but before it is sent to the flare. This  
12 provides a means to ensure that these emissions  
13 can be accurately characterized and quantified.

14 In addition, the permittee must develop  
15 a Startup, Shutdown, and Schedule maintenance  
16 plan that describes the procedures necessary to  
17 minimize the frequency of gasifier shutdowns and  
18 startups, prevent malfunctions, prevent the  
19 flaring of acid gas, or other gases containing  
20 sulfur compounds, and to minimize the quantity of  
21 emissions at all times, including periods of  
22 startup, shutdown, malfunction, and scheduled  
23 maintenance. This plan must be submitted to DEQ  
24 for review and comments.

25 The gasifier flare is one of three

1 flares at the facility. Purge gases from the  
2 ammonia synthesis reactor and vent gases from the  
3 urea process will be flared in the process flare.  
4 Venting from ammonia storage will be flared in  
5 the ammonia flare. Each of these flares must be  
6 equipped with a natural gas pilot, a means to  
7 continuously monitor the pilot and a means to  
8 measure the flow rate of the gas being flared and  
9 the duration of the flaring.

10 The permit requires that the emissions  
11 from handling and storing of coal, petcoke, and  
12 fluxant be controlled using enclosures, covered  
13 conveyors, and transfer points and storage silos  
14 combined with fabric filters, or baghouses to  
15 control emissions of particulate matter.

16 The permit establishes a limit on  
17 visible emissions from the baghouse stacks and a  
18 pound per hour emission rate for PM and PM10.  
19 To ensure continuing compliance, the permittee  
20 must either conduct monthly inspections of  
21 visible emissions, or install baghouse leak  
22 detection systems.

23 Initial and periodic performance tests  
24 are required to demonstrate compliance with the  
25 pound-per-hour emission limits listed in the

1 permit.

2 Emissions from the acid gas removal, or  
3 AGR, unit must be treated before being released  
4 to the atmosphere. A carbon monoxide-rich  
5 exhaust stream must be treated using a thermal  
6 oxidizer which converts the carbon monoxide to  
7 carbon dioxide. The exhaust stream containing  
8 high concentrations of sulfur compounds must be  
9 treated using either a Claus sulfur recovery  
10 unit, or a wet sulfuric acid plant.

11 If a Claus unit is used, the tailgas  
12 from this unit must be recycled into the process  
13 so that there are no emission points from this  
14 part of the process.

15 If a wet sulfuric acid plant is used to  
16 reduce the sulfur content of this exhaust system,  
17 the tailgas from the sulfuric acid plant must be  
18 treated to quench -- in a quench tower, scrubber,  
19 and mist filter to control particulate matter and  
20 sulfur compound emissions and must also pass  
21 through an SCR unit to control NOX emissions  
22 before being exhausted to the atmosphere.

23 Emissions from the urea granulation  
24 process must be controlled by a wet scrubber.  
25 Initial and periodic performance tests must be

1 conducted to verify that the emissions from the  
2 urea granulation vent are in compliance with the  
3 pound-per-hour emission limits listed in the  
4 permit. To ensure continuous compliance with  
5 these limits, the urea granulation production is  
6 limited in the permit and the production rate  
7 must be monitored and recorded.

8 Emission sources from two sources --  
9 emissions from two sources, the urea melting  
10 plant vent and the ammonium nitrate neutralizer  
11 vents are controlled using good operating  
12 practices. To ensure compliance, the permittee  
13 must monitor the visible emissions from these two  
14 sources as part of a required monthly inspection.

15 Tailgas from the nitric acid plant must  
16 pass through an SCR unit to reduce NOX emissions  
17 before being exhausted to the atmosphere. A NOX  
18 CEMS, or continuous emission monitor, must be  
19 installed to continuously monitor NOX emissions  
20 from this exhaust point.

21 Particulate matter emissions from the  
22 Zero Liquid Discharge System and the Cooling  
23 Tower must be controlled using drift and mist  
24 eliminators. Initial and periodic performance  
25 testing is required to ensure compliance with the

1 pound-per-hour emission limits listed in the  
2 permit.

3 A facility-wide permit condition  
4 requires that the permittee reasonably control  
5 fugitive dusts at all times. An inspection of  
6 sources of fugitive emissions must be conducted  
7 and documented on a quarterly basis.

8 For the public comment: DEQ is  
9 interested in your comments on the proposed  
10 permit. Comments on the technical analysis  
11 permit terms and conditions and how well the  
12 permit conforms or does not conform to state or  
13 federal air quality regulations are the most  
14 helpful to us.

15 DEQ will respond to oral comments made  
16 at this hearing and written comments received at  
17 our state office in Boise before 5:00 p.m.  
18 mountain daylight time or mountain standard time  
19 on October 24th, 2008.

20 The final decision on the proposed  
21 permit will be made within the confines of  
22 applicable air quality rules and regulations  
23 after consideration of all public comments. The  
24 final DEQ action and public comment response  
25 package will be on DEQ's Web site at

1 www.deq.idaho.gov.

2 If anyone needs additional information  
3 on the public comment process, please call Faye  
4 Weber at the DEQ state office in Boise at  
5 (208) 373-0440. Thank you for your participation  
6 in the public comment process.

7 And if I could just ask one thing, if  
8 you are going to provide testimony, if you will  
9 bring yourself up to the forward stand in the  
10 front so the court reporter can take your  
11 comments easily, I'd appreciate it. Thank you.

12 HEARING OFFICER BELZER: Thank you. To  
13 begin the comment process, I will call upon  
14 persons who indicated on the roster a wish to be  
15 heard. Again, these proceedings will be  
16 recorded. I ask that those making oral  
17 presentations come forward, state their name,  
18 spell their last name, and proceed with their  
19 comments. And I think it would be fine if you  
20 just stood right in the middle of the aisle  
21 there. The microphone should pick you up.

22 The first name we have, and I'll  
23 apologize in advance if I mispronounce someone's  
24 name. Rod Fuger.

25 ROD FUGER: For the record, my name is

1 Rod Fuger, F-U-G-E-R.

2 I'm president of the Idaho Building  
3 Trade Council. The council consists of 14  
4 affiliated local unions with 13,000 trained and  
5 skilled workers that support this project. I've  
6 also lived here 54 years, my entire life, so I'm  
7 not real new to the area.

8 I commend the DEQ for the stringent  
9 permit process that protects the surrounding  
10 communities and environment. This permit should  
11 be issued not only for the economic boost to the  
12 area but also because of the engineering,  
13 scientific, and technical advances that have  
14 occurred over the last several years that have  
15 been incorporated into the design of this plant.

16 If any members of the Building Trades'  
17 Council, including myself, felt that this plant  
18 could possibly harm any of our family or your  
19 family, I can assure you that that we would be  
20 adamantly opposed to this project.

21 After reviewing the information and the  
22 safeguards, we feel this plant could be built and  
23 operated with very little impact, if any, to the  
24 surrounding community, and we urge the DEQ to  
25 issue this permit. That concludes my statement.

1 HEARING OFFICER BELZER: Thank you,  
2 sir.

3 The next person who signed up to  
4 provide public comment is Brett Crompton.

5 BRETT CROMPTON: My name is Brett  
6 Crompton, C-R-O-M-P-T-O-N, and I'm speaking --  
7 here speaking in favor of the approval of the air  
8 quality permit application submitted by Southeast  
9 Idaho Energy.

10 In my capacity as a member of the Power  
11 County Development Authority and as publisher of  
12 the Power County Press, the weekly newspaper  
13 covering the area where the coal gasification  
14 facility will be built, it has been my privilege  
15 to work with representatives of Southeast Idaho  
16 Energy on this project.

17 But first I want to commend the Idaho  
18 DEQ for their diligence in studying this permit  
19 and doing their best research -- best to research  
20 the technology. With that knowledge, it is nice  
21 to see the work they have done has come to the  
22 same conclusion that we have that the SIE project  
23 will have no significant impact on air quality  
24 surrounding American Falls or anywhere. The DEQ  
25 has done a great job in technically investigating

1 this and studying the project.

2 I do, however, question the DEQ's  
3 decision to drag the process on even longer by  
4 adding another public hearing comment period in  
5 Pocatello. If the project is of such great  
6 concern to the residents of Pocatello, I would  
7 certainly think they could drive the short  
8 distance to American Falls to comment.

9 This is where the plant is going to be  
10 located and as such is where the only required  
11 public hearing should be held. Is a hearing  
12 scheduled in American Falls each time a Pocatello  
13 business requests an air permit? Was a public  
14 hearing scheduled in American Falls when Hoku  
15 announced plans to locate in Pocatello? The  
16 answer to both questions is no.

17 By adding a second hearing, the DEQ not  
18 only further politicizes the project and adds a  
19 couple more weeks on to the schedule, but forces  
20 any American Falls' residents who might want to  
21 counter the arguments from those in Pocatello to  
22 drive the half hour or so to do.

23 I appreciate the DEQ's desire to bend  
24 over backwards to satisfy the handful of  
25 complaints from Pocatello, but when is enough

1           enough? It is time to move forward.

2                       Over the past couple of years, I have  
3           found the representatives of Southeast Idaho  
4           Energy to be very open and forthcoming in keeping  
5           us informed about the project and what it will  
6           mean for our area both environmentally and  
7           economically.

8                       I have also had the opportunity to  
9           visit a couple of operating coal gasification  
10          plants and attend conferences on coal  
11          gasification technology. I am very comfortable  
12          with the information that has been provided by  
13          SIE on this project, by the knowledge I have  
14          gained through my own research, and by the  
15          findings of DEQ.

16                      Politics aside, the technical facts  
17          speak for themselves. This permit should be  
18          approved and be moved through the DEQ's final  
19          process of approval as quickly as possible.

20                      HEARING OFFICER BELZER: Thank you.  
21          Kent Rudeen.

22                      TIM RUDEEN: Thank you. My name is  
23          Kent Rudeen, R-U-D-E-E-N. I'm a lifelong  
24          resident of American Falls and Power County and  
25          also a member of the Power County Development

1 Authority. I've worked with several of these  
2 people for many years, actually. We've been  
3 affiliated with Southeast Idaho Energy for two to  
4 three years. We've followed the engineering and  
5 design from even well before it was submitted as  
6 a permit.

7 I'm confident that in the 15 months or  
8 so the DEQ has had to review the engineering,  
9 that the impacts on the environment and the  
10 health and welfare of our citizens will be  
11 minimized and, in fact, insignificant.

12 I'm confident it will be done  
13 professionally, competently, and carefully, and  
14 well within the current standards intended to  
15 protect the health and welfare of the humans and  
16 the environment.

17 I thank DEQ for their due diligence and  
18 recommended that they approve this permit on  
19 time. Thank you.

20 HEARING OFFICER BELZER: Thank you.  
21 Next, Norman Wright.

22 NORMAN WRIGHT: I'm Norman Wright,  
23 W-R-I-G-H-T. I want to say that I've been told  
24 less than two years ago, I had no idea what coal  
25 gasification was. But since that time, I've had

1 the opportunity to attend field trips to Tampa,  
2 Florida and also Coffeyville, Kansas and had  
3 tours of gasification plants and learned a lot  
4 about it.

5 I saw they could be clean,  
6 environmentally friendly plants as long as  
7 they're done correctly. And that's why DEQ has  
8 this process. DEQ has shown that this plant can  
9 be friendly and to the environment. And they've  
10 done so through their reports.

11 There's no way, though, that this plant  
12 should be built without those DEQ reports and  
13 those policies because I believe every plant  
14 should be kept it's peak to the fire, and that is  
15 they should do the best process as possible to  
16 protect the environment.

17 But besides that, we do need processing  
18 plants in the U.S. They keep going to foreign  
19 countries, so does our jobs. We need to keep  
20 those plants here because we have best controls  
21 for the environment as possible. And if we don't  
22 think a bad environment plant in China can't  
23 affect us, just wait for a couple of days and it  
24 will eventually get here.

25 So if we can't build them here the best

1 way possible, then we shouldn't drive them away  
2 to some other country. And bottom line, this is  
3 security for the United States. The day that we  
4 have to import all of our food, we'll find out  
5 how friendly this country can become.

6 Now, the idea that we want it built in  
7 our backyard. I have heard that so much in the  
8 Idaho State Journal it makes me sick. I'm sorry,  
9 it's got to be built somewhere. We need that  
10 somewhere. Next time you go home at night and  
11 the person that's telling me that, I'm going to  
12 say, by gosh, you better walk home and you better  
13 not turn the lights on because that came from  
14 somewhere. And it's got to be built.

15 But I'm disappointed in DEQ. I'm  
16 sorry, this was a final hearing. This plant is  
17 built in American Falls not in Pocatello. When  
18 do we get a say what they build in Pocatello?  
19 I'm sorry, folks, this is nonsense. You  
20 scheduled this as a hearing and then you cave in  
21 to political pressure. I thought DEQ was  
22 supposed to be scientific. To me, I'm sorry, it  
23 just went political. When next time they build a  
24 plant in Pocatello, by gosh, I want hearings in  
25 American Falls. Thank you.

1 HEARING OFFICER BELZER: Thank you.

2 Next is Ben Strand.

3 BEN STRAND: My name is Ben Strand,  
4 S-T-R-A-N-D, and I live in American Falls. I've  
5 lived in American Falls for about 24 years.

6 I've studied gasification process.  
7 I've been to some of their plants. I've been to  
8 several of the informational meetings. I was at  
9 the one in Pocatello. I was at one here. I have  
10 visited, like I said, some coal gasification  
11 plants. I've smelled the air. I've heard the  
12 noise. I've looked at their environmental issues  
13 from my own perspective.

14 I am a member of the PCDA, so I've -- I  
15 know the company as well and I feel comfortable  
16 with the company. I think that community needs  
17 economic development and a more diversified  
18 economy here. We're one of the higher paying  
19 counties in taxes, and you can look uptown and  
20 there's a lot of empty business' buildings.

21 And we're trying to improve our waste  
22 treatment facility, and our water system, and all  
23 these things, and we keep needing more money and  
24 we don't have much place to go for it accept for  
25 just -- you know, everyone, and it isn't really a

1 real strong economy area.

2 The ag business is the area. This area  
3 is not well diversified, but we're lucky to have  
4 ag business here with the farmers and that's the  
5 strength of this county and this will really help  
6 diversify it and bring some new expertise and  
7 jobs of different types into this community.

8 Most of the kids that grow up here  
9 leave because a lot of them go to college and  
10 there isn't a lot to attract them to come back  
11 here. So I think this would be one thing to help  
12 with it.

13 There isn't a lot of businesses that  
14 are willing to come here. You would like to say,  
15 okay, I want to have an INTEL here or a Micron  
16 here, even though you talk about diversification,  
17 Micron laid off 15 percent today. It was  
18 announced. But you'd like to have something that  
19 was perfect. Well, that probably isn't too  
20 realistic because the site they have out here,  
21 they have what they need; they have power; they  
22 have rail cars; access; they have the basics; the  
23 land; they have the water.

24 There's kind of a misinformation that  
25 they're going to be using a tremendous amount of

1 water, but the water is going to be about the  
2 same amount that farm is being used right now to  
3 irrigate the ground and the property that's on it  
4 right now.

5 And I've read the 169 application pages  
6 in your Web page. And I've read several of the  
7 referenced articles in there. And I guess I  
8 conclude with everything that there will be a  
9 little slight increase in air chemicals, but I  
10 want to emphasis slight, and I think it's minor.  
11 I live downwind from this plant, about a mile and  
12 a half, and I can say this that the primary wind  
13 direction is coming right to my house. I'm a  
14 mile and a half away. Okay.

15 It is heavy industrial zoned already.  
16 That's another thing. And I think -- well, I  
17 support the project and I hope we move forward on  
18 it quickly. And I think you've done a good job,  
19 DEQ, with looking at their application and  
20 defining some of the -- the increases and  
21 explaining when you're sampling things and how  
22 much they're going to increase and, of course, if  
23 you drive a semi or a diesel or if you take a  
24 tractor down the road, it's going to increase the  
25 chemicals in the air, fugitive dust emissions,

1 everything like this, everything has something.

2 But I think what we have here is a good  
3 fit for this area, and I guess I look at it that  
4 I think I speak from a little bit of experience.  
5 I have an engineering degree and I've worked in  
6 the food business manufacturing for over 30  
7 years; I'm now retired. And I've been all over  
8 the northwest, and I've been Europe, and I've  
9 seen plants like this similar, you know, not  
10 this -- this is -- this will be its own identity,  
11 but in close proximity to houses right around it.

12 And, you know, that probably isn't the  
13 ideal, but there's places where they're doing  
14 that, and there's some places where there aren't  
15 any houses around it too, so...

16 So I just hope that you -- well, the  
17 other thing I would like to I guess agree with  
18 Norm because I think it's important for the  
19 strength of our overall economy, some of these  
20 fertilizers that they will be producing, we're  
21 importing over 50 percent of them today and the  
22 costs have gone skyrocketed.

23 And any time you increase the supply  
24 locally, if the demand stays the same, the price  
25 is going to go down or it's not going to go up,

1 so I think it's -- it would help the country and  
2 help our economy.

3 And I guess that's about all I have to  
4 say.

5 HEARING OFFICER BELZER: Thank you.  
6 Bill Meadows.

7 BILL MEADOWS: I have to stand over  
8 here, if that's all right. My name is Bill  
9 Meadows, M-E-A-D-O-W-S. And I'd like to commend  
10 the DEQ for their hearing process. It's a  
11 process that will protect our future and it is  
12 needed.

13 And SIE, to my understanding, is not  
14 asking for variances. They're two to three  
15 percent of the emissions that are currently under  
16 law and I think it's a very good fit for our  
17 community.

18 They're -- my family is some of  
19 original homesteaders of this county. I am third  
20 generation in this county and -- well, our family  
21 has lived here for 105 years. And in that 105  
22 years, we've seen lot of change in our county.  
23 My grandfather came, Power County was a marketing  
24 area for agricultural commodities. And there was  
25 growth and a lot of opportunity for our children.

1                   They're -- in my father's generation,  
2 they are the industrial growth came to our  
3 community. And at the time the industrial growth  
4 came, they used best technologies. The same as  
5 we are asking now, let's use our best  
6 technologies to protect our environment.

7                   In my generation, I've seen Power  
8 County turn from a hustling, bustling community  
9 that had opportunity for our young people to  
10 almost an abandoned town there, so this plant  
11 that we are proposing, the coal gasification  
12 plant, is very vital to our economic community in  
13 this.

14                   We have excellent services, excellent  
15 libraries, schools, community services that can  
16 handle the people that will be coming in. And if  
17 we don't utilize those and keep our children here  
18 instead of exporting all our intelligence, we  
19 will continue to die. So I fully support passing  
20 of the gasification plant.

21                   As I see the process that has happened  
22 to date, we have a process that gives public time  
23 to all those considered, and I think there are  
24 two factions of groups out there. One faction  
25 there's the -- I would term them the "what if"

1 gang. What if this happens and what if this  
2 happens. Their tactics are good. We need to  
3 consider the "what ifs" but the "what if" people,  
4 the "what if" gangs, their -- their sole purpose  
5 is to ask enough questions to slow the process  
6 down so much that it never happens.

7 And then there are also the -- another  
8 faction out there that I feel is slowing the  
9 process down and those people I would probably  
10 call them the -- you know, I forgot what I was  
11 going to say. Those people I would call them the  
12 nature conservatives.

13 THE REPORTER: I'm sorry. The what?

14 BILL MEADOWS: The nature conservative  
15 people.

16 They don't want any kind of industrial  
17 growth or any kind of growth. Basically they're  
18 happy with sagebrush and wood ticks, there, so...  
19 I see those people as slowing the process down.  
20 And from my understanding I think DEQ is  
21 listening and evaluating those type of people and  
22 those people should not be able to stop this  
23 process.

24 So in summation on this, I think that  
25 we're all aware of our American economy and the

1 problems that we have now. We can't all blame  
2 them on Wall Street. And some of that blame is  
3 America has become consumers of world products  
4 and not producers of world products.

5 And we will continue to struggle on the  
6 world scene financially if we don't become world  
7 producers of products. We have an unlimited  
8 supply of coal in this nation and we should be  
9 able to use 21st technology with very low  
10 emissions and foster that energy for our  
11 citizens.

12 If we don't use 21st technology to  
13 progress, what's going to happen to the 22nd  
14 technology? You can't skip 21st and go to 22nd.  
15 So it's very important because we have a  
16 tremendous amount of coal reserves, we need to  
17 use them in an environmentally friendly manner.  
18 Gasification brings that process to us.

19 And I believe that it is a process that  
20 will catch on in the United States. There's  
21 advertising about clean coal process. That's  
22 what they're talking about. And we need to adapt  
23 that to our economy so we become producers as  
24 some of the other folks have talked about.

25 And in closing, I would urge DEQ to

1 consider the facts that have been presented by  
2 SIE. I'm very comfortable with them. I'm also a  
3 member of PCDA, and I've been in this process for  
4 about four years now, and it's an excellent fit  
5 for our county.

6 They -- SIE has been very sensitive on  
7 all our environmental considerations that we've  
8 had, and I would urge you to expedite the  
9 process, make the decisions, and allow us to move  
10 forward. Thank you very much.

11 HEARING OFFICER BELZER: Thank you.

12 Dirk Driscoll.

13 DIRK DRISCOLL: My name is Dirk  
14 Driscoll, D-R-I-S-C-O-L-L.

15 THE REPORTER: How do you spell your  
16 first name?

17 DIRK DRISCOLL: D-I-R-K, with a K not a  
18 T.

19 THE REPORTER: Okay.

20 DIRK DRISCOLL: Some people get a  
21 little mixed up.

22 I'm from Aberdeen, Idaho, and I've been  
23 a life-long resident of Aberdeen/American Falls  
24 area. I'm in favor. I'd like to go on record to  
25 say that I support everything that's been said

1 here tonight. I appreciate all the expertise  
2 that's been put into this. I'm not very educated  
3 to the things which are happening, but I have a  
4 lot of faith in the people that are, and the DEQ,  
5 and I commend you for the processes that you've  
6 been going through, the things I've read, the  
7 hearing that we came to a few weeks ago here.

8 I also would like to compliment SIE. I  
9 think they've come in and over this period of  
10 time, I think we were all wondering what this  
11 was going to be and how was it going to be  
12 handled. They've handled it very professionally.  
13 They've been community friendly. They haven't  
14 pushed. They haven't shoved. They've been very  
15 articulate of the way that they've presented the  
16 things both personally as well as in the meetings  
17 that we've attended.

18 I am also part of the Aberdeen Chamber  
19 of Commerce, a farmer, a taxpayer in Power  
20 County. We just want to go on record to say that  
21 we feel like this is a win/win situation for this  
22 community, for this area, for southeast Idaho. I  
23 think it helps us to be more self reliant in the  
24 spirit of pioneering.

25 We have some of the best minds that

1 have put these things together. As you see  
2 things develop over the world-wide scope of  
3 things, and I'm sure there's going to be a few  
4 challenges. There are always are with everything  
5 that we do. But with the expertise of the people  
6 working together, the kind of technology we have,  
7 those thing will be short hiccups and this will  
8 be a win/win situation for our area.

9 I know it's going to be built. I just  
10 hope that it's built here, and I'd like to go on  
11 record to say we support that as a family, as a  
12 group of the Chamber of Commerce in Aberdeen that  
13 there has been a majority in favor of this, and  
14 we hope that it's built here and that it's in a  
15 speed -- a step process that was mentioned here  
16 earlier. Thank you.

17 HEARING OFFICER BELZER: Thank you. I  
18 notice some folks came in after we started. We  
19 have a sign-up sheet. If anyone would like to  
20 sign up and make a public comment, you're welcome  
21 to do so now.

22 DAVID BECK: I might.

23 HEARING OFFICER BELZER: I'd ask you,  
24 sir, if you would just take a minute to put your  
25 name and fill that out.

1                   DAVID BETHKE: I might just put it in  
2 after I talk.

3                   HEARING OFFICER BELZER: Okay.

4                   DAVID BETHKE: My name is David Bethke.  
5 I live in American Falls. And I'm one of the  
6 present land owners where the plant is going to  
7 be built on.

8                   THE REPORTER: How do you spell your  
9 last name?

10                  DAVID BETHKE: B-E-T-H-K-E: I'm a land  
11 owner and I always felt that my name and family  
12 has been on the line for agreeing to sell this  
13 land if it does go through.

14                  So I've watched this process pretty  
15 close all the way through, as you might imagine,  
16 hoping that it would be all clean and good  
17 because there's a lot at stake for me. Not just  
18 because we sold the land, that's secondary as far  
19 as I'm concerned. It's living in this community  
20 and bringing something in that's going to be  
21 worthy for generations to come, so that's about  
22 it.

23                  HEARING OFFICER BELZER: Thank you.  
24 Anyone else who would like to sign in and make a  
25 comment?



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<p><b>0</b></p> <p>0.1 (1) 9:19 0.19 (1) 8:19 0.2 (1) 8:9 0.3 (1) 9:14 0.5 (2) 9:9,15 0.7 (1) 8:1</p> <hr/> <p><b>1</b></p> <p>1-hour (1) 8:16 10 (2) 8:14 8:11 100 (2) 9:23 10:15 105 (2) 30:21,21 127 (1) 6:18 13,000 (1) 19:4 14 (1) 19:3 15 (2) 23:7 27:17 169 (1) 28:5 17 (1) 8:20 17.9 (1) 8:4 18 (1) 8:21</p> <hr/> <p><b>2</b></p> <p>2 (1) 3:16 2,300 (1) 8:17 2008 (2) 3:1,6 4:2 17:19 38:13 203 (1) 6:17 208 (1) 18:5 21 (1) 9:17 21st (2) 33:9,12,14 22nd (2) 33:13,14 23 (1) 8:18 24 (2) 4:2 26:5 24-hour (2) 7:25 8:9 9:9,11,18 24th (2) 17:19 38:13 26 (1) 8:2,7</p> <hr/> <p><b>3</b></p> <p>3,600 (1) 8:14 3-hour (1) 8:7 3.1 (1) 8:7 30 (2) 3:22 29:6 308 (1) 8:13 33 (1) 6:16 34 (1) 8:5 373-0440 (1) 18:6</p> <hr/> <p><b>4</b></p> <p>4 (1) 8:6 4.9 (1) 7:23 45 (1) 8:16</p> <hr/> <p><b>5</b></p> <p>5.1 (1) 6:19 5:00 (2) 17:17 38:11 50 (1) 29:21 52 (1) 7:25 53 (2) 6:15 8:3 54 (2) 9:11 19:6 58.01.01.209.01.c (1) 3:25</p> <hr/> <p><b>6</b></p> <p>6:30 (2) 3:1,6 38:9</p> <hr/> <p><b>7</b></p>	<p>7:20 (2) 38:9,14 73 (1) 7:24 76 (1) 9:16</p> <hr/> <p><b>8</b></p> <p>8 (2) 8:8,10 8-hour (1) 8:18 81 (1) 9:10</p> <hr/> <p><b>9</b></p> <p>9 (2) 3:1,6 9.8 (1) 8:15</p> <hr/> <p><b>A</b></p> <p>abandoned (1) 31:10 aberdeen (2) 34:22 35:18 36:12 aberdeen/american (1) 34:23 able (2) 32:22 33:9 above (1) 12:14 accept (1) 26:24 accepted (1) 3:18 access (1) 27:22 accurately (1) 13:13 acid (2) 6:10 13:19 15:2,10,15,17 16:15 act (1) 10:3 action (1) 17:24 actually (2) 12:8 23:2 adamantly (1) 19:20 adapt (1) 33:22 added (1) 7:5 adding (2) 21:4,17 addition (1) 13:14 additional (2) 18:2 38:6 addresses (1) 5:24 adds (1) 21:18 adequately (1) 12:7 adsorber (1) 10:24 advance (1) 18:23 advanced (2) 3:12 5:4 6:1 advances (1) 19:13 advertising (1) 33:21 aerodynamic (1) 6:13 affect (1) 24:23 affidavits (1) 3:19 affiliated (2) 19:4 23:3 ag (2) 27:2,4 agency (1) 5:21 ago (2) 23:24 35:7 agr (1) 15:3 agree (1) 29:17 agreeing (1) 37:12 agricultural (1) 30:24 air (2) 3:9 5:2,5,9,10,11,12,24 6: 10,21,23 7:7 10:3 12:18 17:13, 22 20:7,23 21:13 26:11 28:9,25 airshed (1) 4:22 aisle (1) 18:20 allow (1) 34:9 almost (1) 31:10 already (2) 28:15 38:6 ambient (2) 6:23 7:4,7,14,18 9:3 america (1) 33:3 american (2) 3:16 7:21 20:24 21:8,12,14,20 22:24 25:17,25 26:</p>	<p>4,5 32:25 37:5 ammonia (2) 3:14 6:4 14:2,4,5 ammonium (2) 3:14 6:5 16:10 amount (2) 12:3,7 27:25 28:2 33: 16 analysis (2) 4:11 7:3,4 11:24 12: 7,15 17:10 analyzing (1) 13:10 announced (2) 21:15 27:18 annual (2) 6:10 8:3,11,22 another (2) 21:4 28:16 32:7 38:7 answer (1) 21:16 apologize (1) 18:23 applicable (1) 17:22 application (2) 3:8 4:11 20:8 28: 5,19 appointed (1) 3:5 appreciate (2) 18:11 21:23 35:1 approval (2) 20:7 22:19 approve (1) 23:18 approved (1) 22:18 approximately (2) 3:15 6:12 aq-0819 (1) 3:10 area (2) 8:23 9:4 19:7,12 20:13 22:6 27:1,2,2 29:3 30:24 34:24 35:22 36:8 aren't (1) 29:14 arguments (1) 21:21 around (2) 29:11,15 articles (1) 28:7 articulate (1) 35:15 as-received (1) 12:3 aside (1) 22:16 assumed (1) 12:14 assumptions (1) 12:6 assure (1) 19:19 asthmatics (1) 7:12 atmosphere (2) 15:4,22 16:17 attend (2) 22:10 24:1 attendance (1) 38:13 attended (1) 35:17 attending (1) 4:5 attract (1) 27:10 authority (2) 6:8 20:11 23:1 available (1) 10:4 average (1) 9:9 aware (1) 32:25 away (2) 25:1 28:14</p> <hr/> <p><b>B</b></p> <p>b-e-t-h-k-e (1) 37:10 back (1) 27:10 background (2) 7:6,16,20,25 8: 2,6,8,11,15,18,21 9:1,6,11,17 backwards (1) 21:24 backyard (1) 25:7 bact (1) 10:5 bad (1) 24:22 baghouse (2) 14:17,21 baghouses (1) 14:14 based (1) 11:19 basically (1) 32:17 basics (1) 27:22 basis (2) 12:3 17:7</p>	<p>beck (1) 36:22 become (2) 25:5 33:3,6,23 begin (1) 18:13 believe (2) 24:13 33:19 below (1) 6:25 belzer (2) 3:3,4 18:12 20:1 22:20 23:20 26:1 30:5 34:11 38:17,23 37:3,23 ben (2) 26:2,3,3 bend (1) 21:23 besides (1) 24:17 best (2) 10:4 20:19,19 24:15,20, 25 31:4,5 35:25 bethke (2) 37:1,4,4,10 better (2) 7:13 25:12,12 bill (2) 30:6,7,8 32:14 bit (1) 29:4 blame (2) 33:1,2 boiler (2) 10:20,21,25 11:1,5,8 boilers (2) 11:2,10,14 boise (2) 17:17 18:4 boost (1) 19:11 both (2) 6:4 21:16 22:6 35:16 bottom (1) 25:2 brett (2) 20:4,5,5 brief (1) 4:9 briefly (1) 5:4 bring (2) 18:9 27:6 bringing (1) 37:20 brings (1) 33:18 build (2) 24:25 25:18,23 building (2) 19:2,16 buildings (1) 26:20 built (1) 19:22 20:14 24:12 25:6, 9,14,17 36:9,10,14 37:7 burn (2) 11:6,9 burned (1) 10:24 burner (1) 11:3 burning (2) 10:21,22 business (2) 21:13 27:2,4 29:6 business* (1) 26:20 businesses (1) 27:13 bustling (1) 31:8 byproducts (1) 6:6</p> <hr/> <p><b>C</b></p> <p>c-r-o-m-p-t-o-n (1) 20:6 call (2) 18:3,13 32:10,11 called (2) 6:3 38:8 came (2) 25:13 30:23 31:2,4 35:7 36:18 capacity (1) 20:10 carbon (2) 6:17 8:13 9:24 12:12 15:4,6,7 carefully (1) 23:13 cars (1) 27:22 catalytic (1) 11:8 catch (1) 33:20 cave (1) 25:20 cems (2) 11:12 16:18 center (2) 3:12 5:4 6:1 certain (1) 10:25 certainly (1) 21:7 certified (1) 10:7</p>
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REPORTER'S CERTIFICATE

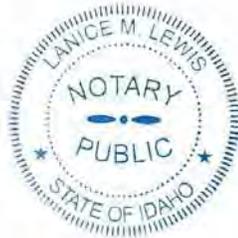
STATE OF IDAHO )  
COUNTY OF BONNEVILLE ) ss.  
)

I, Lanice M. Lewis, Court Reporter and Notary Public in and for the State of Idaho, do hereby certify:

That within entitled hearing was taken down by me in shorthand at the time and place therein named and thereafter reduced to typewriting under my direction, and that the foregoing transcript contains a full, true and verbatim record of said hearing.

I further certify that I have no interest in the event of the action.

WITNESS my hand and seal this 22nd day of October 2008.



*Lanice M. Lewis*  
\_\_\_\_\_  
Lanice M. Lewis  
Notary Public in and for  
the State of Idaho

My Commission Expires: 11/10/12

**Appendix D**  
**Public Comments Submitted for**  
**Permit to Construct**

*October 20, 2008 Pocatello Public Hearing Transcript*

**P-2008.0066**

Transcript of the Testimony of:  
**DEQ Application Public Hearing**

**Date:** October 20, 2008

**Volume:** I

**Case:**

**Printed On:** October 28, 2008

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Deposition of: DEQ Application Public Hearing October 20, 2008

TRANSCRIPT OF PUBLIC HEARING  
SOUTHEAST IDAHO ENERGY, LLC  
APPLICATION & PERMIT TO CONSTRUCT  
DOCKET NO. AQ-0819  
OCTOBER 20, 2008, 7:30 P.M.  
POCATELLO, IDAHO

Lanice M. Lewis

tntreport@ida.net

T&T Reporting

208/529-5491

A P P E A R A N C E S

FREDERICK F. BELZER, Hearing Officer  
850 East Center, Suite B-2  
Post Office Box 1358  
Pocatello, Idaho 83204

CHERYL ROBINSON,  
DEPARTMENT OF ENVIRONMENTAL QUALITY

1 October 20, 2008 7:30 p.m.

2 (The following hearing was held.)

3 HEARING OFFICER BELZER: Let the record  
4 show that I am Frederick F. Belzer the hearing  
5 officer appointed to conduct this proceeding. It  
6 is 7:30 p.m. on October 20, 2008. This is the  
7 time and place set to receive oral comments on  
8 the application and the proposed permit to  
9 construct an air pollution-emitting source  
10 relating to Docket No. AQ-0819, Permit No.  
11 P-2008.0066 for Southeast Idaho Energy, LLC, SIE,  
12 Power County Advanced Energy Center, PCAEC.

13 SIE proposes to gasify coal and  
14 manufacture ammonia, urea, and urea ammonium  
15 nitrate at a new facility located approximately  
16 2 miles southwest of American Falls on Lamb  
17 Weston Road. Written comments will also be  
18 accepted at this hearing.

19 Let the record show that affidavits are  
20 on file regarding publication of the notice of  
21 the opportunity for public comment at least  
22 30 days prior to the close of the scheduled  
23 comment period as specified in the Department of  
24 Environmental Quality (DEQ) rules and  
25 regulations, IDAPA 58.01.01.209.01.c. Such

1 publication was made in the Power County Press on  
2 September 24, 2008. The publication was timely  
3 made and all necessary notice requirements have  
4 been met.

5 All interested parties attending this  
6 proceeding are asked to sign in on the roster  
7 and to indicate a desire, if any, to make an oral  
8 presentation. I ask that you try to limit your  
9 comments to five minutes. After a brief  
10 statement prepared by DEQ staff summarizing the  
11 application, the results of their analysis, and  
12 the proposed permit, each person will be given an  
13 opportunity to speak on the proposed permit.

14 Since these proceedings are being  
15 recorded, I ask those making oral presentations  
16 to come forward, state their name, and to provide  
17 the spelling of their last name.

18 At this time DEQ's statement will be  
19 read into the record followed by the oral  
20 presentations. Thank you.

21 MS. ROBINSON: Mr. Hearing Officer,  
22 ladies and gentlemen, my name is Cheryl Robinson.  
23 I'm a staff engineer at DEQ and led the team that  
24 developed the proposed air quality permit for  
25 Southeast Idaho Energy's Power County Advanced

1 Energy Center, PCAEC. This statement briefly  
2 summarizes the air emissions and environmental  
3 impacts, requirements of the proposed permit, and  
4 the process for incorporating public input.

5 DEQ, under authority of Idaho statute  
6 and the Rules for the Control of Air Pollution in  
7 Idaho (Rules), issues air quality permits to  
8 maintain the air quality standards established to  
9 protect public health and the environment. Air  
10 quality permits establish the emission limits for  
11 regulated pollutants, identify the requirements  
12 for use of pollution control technology, and set  
13 the terms and conditions for testing, monitoring,  
14 and record keeping that will used to determine  
15 facility compliance.

16 The provisions of the final permit will  
17 be enforceable by the State of Idaho, the Federal  
18 Environmental Protection Agency, and by the  
19 public through a citizen suit.

20 Emissions and Impact: This permit to  
21 construct addresses sources of all air pollutants  
22 at a proposed new facility to be known as the  
23 Power County Advanced Energy Center or PCAEC.  
24 The proposed facility will gasify coal and  
25 petroleum coke, also called petcoke, to

1 manufacture ammonia, urea in both liquid and  
2 granular form, and urea ammonium nitrate.

3           Saleable byproducts from the  
4 manufacturing process includes slag from the  
5 gasifier, which could be sold for use as road  
6 mix, and either elemental sulfur or sulfuric  
7 acid. The annual air emissions from the PCAEC  
8 sources from steady-state operations are  
9 estimated to be approximately as follows:

10           Particulate matter with an aerodynamic  
11 diameter less than or equal to a nominal 10  
12 micrometers, PM10, 53 tons per year. Sulfur  
13 dioxide, SO2, 33 tons per year. Carbon monoxide,  
14 CO, 203 tons per year. Nitrogen oxides, NOX, 127  
15 tons per year. And volatile organic compounds,  
16 VOCs, 5.1 tons per year.

17           Air dispersion modeling was conducted  
18 to evaluate the impact of the maximum permitted  
19 emissions on ambient air quality. The maximum  
20 predicted concentration at any receptor from the  
21 modeling for steady-state operations were below  
22 the, quote, significant, unquote, impact levels  
23 defined in the rules, so the facility was not  
24 required to conduct a full impact analysis.

25           In a full impact analysis, the ambient

1 impact from the facility must be added to  
2 representative background concentrations and  
3 compared to the national ambient air quality  
4 standards or NAAQS.

5 The primary NAAQS' standards are  
6 federal limits set to protect public health,  
7 including the health of, quote, sensitive,  
8 unquote, populations such as asthmatics,  
9 children, and the elderly. To help the public  
10 better understand the predicted ambient impacts  
11 from the emissions from this facility, DEQ  
12 compared the maximum modeled impacts, together  
13 with representative background concentrations,  
14 with the national standards.

15 The predicted maximum ambient  
16 concentrations in micrograms per cubic meter, the  
17 representative background concentrations near  
18 American Falls and the total impact as a  
19 percentage of the health-base national standards  
20 are as follows: For PM10, 4.9 micrograms per  
21 cubic meter plus 73 micrograms per cubic meter  
22 background, or about 52 percent of the 24-hour  
23 standard, and 0.7 micrograms per cubic meter plus  
24 26 micrograms per cubic meter background, or  
25 about 53 percent of the annual standard.

1 For sulfur dioxide, or SO<sub>2</sub>, 17.9  
2 micrograms per cubic meter, plus 34 micrograms  
3 per cubic meter background, or about 4.0 percent  
4 of the 3-hour standard. 3.1 micrograms per cubic  
5 meter plus 26 micrograms per cubic meter  
6 background or about 8.0 percent of the 24-hour  
7 standard. And .2 micrograms per cubic meter plus  
8 8 micrograms per cubic meter background or about  
9 10 percent of the annual standard.

10 For carbon monoxide, or CO, 308  
11 micrograms per cubic meter plus 3,600 micrograms  
12 per cubic meter background, or about 9.8 percent  
13 of the 1-hour standard; and 45 micrograms per  
14 cubic meter plus 2,300 micrograms per cubic meter  
15 background, or about 23 percent of the 8-hour  
16 standard. For nitrogen oxides, or NO<sub>x</sub>, 0.9  
17 micrograms per cubic meter plus 17 micrograms per  
18 cubic meter background, or about 18 percent of  
19 the annual standard.

20 For residents in the Pocatello area,  
21 DEQ also compared the maximum modeled short-term  
22 impacts for particulate matter in SO<sub>2</sub> together  
23 with representative background concentrations  
24 with the national standards.

25 The predicted maximum ambient

1 concentrations in the Pocatello area in  
2 micrograms per cubic meter, the representative  
3 background concentrations in Pocatello and the  
4 total impact as a percentage of the health-based  
5 national standards are as follows: For 24-hour  
6 average PM10, 0.5 micrograms per cubic meter plus  
7 81 micrograms per cubic meter background, or  
8 about 54 percent of the 24-hour standard.

9           The maximum impact due to PM10  
10 emissions from the PCAEC is about 0.3 percent of  
11 the standard. For sulfur dioxide, or SO2, 0.5  
12 micrograms per cubic meter plus 76 micrograms per  
13 cubic meter background, or about 21 percent of  
14 the 24-hour standard. The maximum impact due to  
15 SO2 emissions from the PCAEC is about 0.1 percent  
16 of the standard.

17           Permit requirements: The PCAEC is a  
18 fuel conversion facility as well as a chemical  
19 plant and will emit more than 100 tons per year  
20 each of CO and NOX. The facility is therefore  
21 subject to the Prevention of Significant  
22 Deterioration, PSD requirements, and emissions of  
23 pollutants regulated under the Clean Air Act must  
24 be controlled using what's known as Best  
25 Available Control Technology, BACT.

1           The emergency engine generators must be  
2 certified by the manufacturer as meeting federal  
3 emission standards, and are limited to using  
4 ultra-low sulfur diesel fuels that meet federal  
5 requirements. The permittee is required to  
6 operate, inspect, and maintain these generators  
7 to ensure continued compliance with these federal  
8 emission standards.

9           Non-emergency use of each generator is  
10 limited to 100 hours per year. A non-resettable  
11 hour meter must be installed on each generator to  
12 track generator operations. Records must be  
13 maintained that demonstrate that each shipment of  
14 diesel fuel meets the federal requirements.

15           Except for the package boiler and steam  
16 superheater boiler, all other fuel burning  
17 equipment at the facility is limited to burning  
18 pipeline-quality natural gas. Tailgas from the  
19 pressure swing adsorber, PSA, may be burned in  
20 the steam superheater boiler and under certain  
21 conditions in the package boiler.

22           Each of these boilers must be equipped  
23 with a low-NOX burner. A flue gas recirculation,  
24 FGR system, must be installed on the package  
25 boiler to reduce NOX emissions if it will burn

1 only natural gas. A selective catalytic  
2 reduction, SCR system, must be installed to  
3 reduce NOX emissions for any boiler that will  
4 burn PSA tailgas.

5 Each of the boilers must be equipped  
6 with a continuous emission monitoring system,  
7 CEMS, for NOX. Initial and periodic performance  
8 tests are required for each of these boilers to  
9 demonstrate compliance with pound-per-hour  
10 emission limits listed in the permit. The  
11 permittee must also monitor the sulfur content of  
12 the PSA tailgas.

13 The emissions of metals from the  
14 facility were estimated based in part on the  
15 metals content of coal, petcoke, and fluxant, a  
16 material used to ensure that the slag doesn't  
17 stick to the inside of the gasifier. The  
18 permittee is required to conduct initial and  
19 periodic chemical analysis of the metals content  
20 of representative samples of these feedstocks.

21 The sulfur content of the coal in  
22 petcoke must also be monitored and recorded on an  
23 as-received basis. The amount of each feedstock  
24 material fed to the gasifiers must be monitored  
25 and recorded. This provides a means to ensure

1 that the assumptions used in the permitting  
2 analysis adequately represented the amount of  
3 these metals and sulfur actually introduced into  
4 the process.

5 To ensure that the pollution control  
6 devices used to reduce the emissions of  
7 particulate matter, SO<sub>2</sub>, CO, NO<sub>X</sub>, and mercury  
8 operate at or above the efficiencies assumed in  
9 the permitting analysis, the permit requires that  
10 an Operations and Maintenance Manual, an O&M  
11 manual, be submitted to DEQ for review and  
12 comment prior to operating any of the air  
13 pollution control devices at this facility.

14 The O&M manual must include specific  
15 provisions for operation, inspection, and  
16 maintenance of these devices. These provisions  
17 are incorporated by reference into the permit and  
18 are federally enforceable as permit conditions.

19 During startup conditions  
20 off-specifications, synthetic gas, or syngas,  
21 produced in the gasifier, will be treated before  
22 being flared. A means must be provided to  
23 monitor and record the syngas flow rate and the  
24 duration of any flaring. The permittee is also  
25 required to conduct initial and periodic

1 performance tests for the gasifier flare  
2 emissions.

3           These tests must include sampling and  
4 analyzing the syngas after it has been treated,  
5 but before it is sent to the flare. This  
6 provides a means to ensure that these emissions  
7 can be accurately characterized and quantified.

8           In addition, the permittee must develop  
9 a Startup, Shutdown, and Scheduled maintenance  
10 plan that describes the procedures necessary to  
11 minimize the frequency of gasifier shutdowns and  
12 startups, prevent malfunctions, prevent the  
13 flaring of acid gas, or other gases containing  
14 sulfur compounds, and to minimize the quantity of  
15 emissions at all times, including periods of  
16 startup, shutdown, malfunction, and scheduled  
17 maintenance. This plan must be submitted to DEQ  
18 for review and comments.

19           The gasifier flare is one of three  
20 flares at this facility. Purge gases from the  
21 ammonia synthesis reactor and vent gases from the  
22 urea process will be flared in the process flare.  
23 Venting from ammonia storage will be flared in  
24 the ammonia flare. Each of these flares must be  
25 equipped with a natural gas pilot, a means to

1 continuously monitor the pilot, and a means to  
2 measure the flow rate of the gas being flared and  
3 the duration of the flaring.

4 The permit requires that emissions from  
5 handling and storing of coal, petcoke, and  
6 fluxant be controlled using enclosures, covered  
7 conveyors, and transfer points, and storage silos  
8 combined with fabric filters, or baghouses, to  
9 control emissions of particulate matter.

10 The permit establishes a limit on  
11 visible emissions from the baghouse stacks and a  
12 pound-per-hour emission rates for PM and PM10.  
13 To ensure continuing compliance, the permittee  
14 must either conduct monthly inspections of  
15 visible emissions, or install baghouse leak  
16 detection systems.

17 Initial and periodic performance tests  
18 are required to demonstrate compliance with the  
19 pound-per-hour emission limits listed in the  
20 permit.

21 Emissions from the acid gas removal,  
22 AGR unit, must be treated before being released  
23 to the atmosphere. The CO-rich exhaust  
24 stream must be -- the exhaust must be treated  
25 using a thermal oxidizer which converts the CO to

1 carbon dioxide. The exhaust stream containing  
2 high concentrations of sulfur compounds must be  
3 treated using either a Claus sulfur recovery  
4 unit, or a wet sulfuric acid plant.

5 If a Claus unit is used, the tailgas  
6 from this unit must be recycled into the process  
7 so that there are no emission points from this  
8 part of the process.

9 If a wet sulfuric acid plant is used to  
10 reduce the sulfur content of this exhaust stream,  
11 the tailgas from the sulfuric acid plant must be  
12 treated in a quench tower, scrubber, and mist  
13 filter to control particulate matter and sulfur  
14 compound emissions and must also pass through an  
15 SCR unit to control NOX emissions before being  
16 exhausted to the atmosphere.

17 Emissions from the urea granulation  
18 process must be controlled by a wet scrubber.  
19 Initial and periodic performance tests must be  
20 conducted to verify that the emissions from the  
21 urea granulation vent are in compliance with the  
22 pound-per-hour emission limits listed in the  
23 permit. To ensure continuous compliance with  
24 these limits, the urea granulation production is  
25 limited in the permit and the production rate

1 must be monitored and recorded.

2 Emissions from two sources, the urea  
3 melt plant vent and the ammonium nitrate  
4 neutralizer vents, are controlled using good  
5 operating practices. To ensure compliance, the  
6 permittee must monitor the visible emissions from  
7 these two sources as part of a required monthly  
8 inspection.

9 Tailgas from the nitric acid plant must  
10 pass through an SCR unit to reduce NOX emissions  
11 before being exhausted to the atmosphere. A NOX  
12 CEMS must be installed to continuously monitor  
13 NOX emissions from this exhaust point.

14 Particulate matter emissions from the  
15 Zero Liquid Discharge System and the Cooling  
16 Tower must be controlled using drift and mist  
17 eliminators. Initial and periodic performance  
18 testing is required to ensure compliance with the  
19 pound-per-hour emission limits listed in the  
20 permit.

21 A facility-wide permit condition  
22 requires that the permittee reasonably control  
23 fugitive dusts at all times. An inspection of  
24 sources of fugitive emissions must be conducted  
25 and documented on a quarterly basis.

1           Public comment: DEQ is interested in  
2 your comments on the proposed permit. Comments  
3 on the technical analysis, permit terms and  
4 conditions, and how well the permit conforms or  
5 does not conform to state or federal air quality  
6 regulations are the most helpful to us.

7           DEQ will respond to oral comments made  
8 at this hearing and written comments received at  
9 our state office in Boise before 5:00 p.m.  
10 mdt/mst November 24th, 2008.

11           The final decision on the proposed  
12 permit will be made within the confines of the  
13 applicable air quality rules and regulations  
14 after consideration of all public comments. The  
15 final DEQ action and the public comment response  
16 package will be on DEQ's Web site at  
17 [www.deq.idaho.gov](http://www.deq.idaho.gov).

18           If anyone needs additional information  
19 on the public comment process, please call Faye  
20 Weber at the DEQ state office in Boise at  
21 (208) 373-0440. Thank you for your participation  
22 in the public comment process.

23           HEARING OFFICER BELZER: Thank you. To  
24 begin the comment process, I will call upon  
25 persons who indicated on the roster a wish to be

1 heard. Again, these proceedings will be  
2 recorded. I ask that those making oral  
3 presentations come forward, state their name,  
4 spell their last name, and proceed with their  
5 comments.

6 I have the sign-in sheet here. I'll  
7 apologize in advance for mispronouncing anyone's  
8 name. James R. Weimer.

9 JAMES R. WEIMER: Good evening. I'm  
10 James R. Weimer. I am an apprenticeship training  
11 director.

12 Last month I attended the informational  
13 meeting held. It clearly showed that this  
14 facility will meet the DEQ requirements. At that  
15 meeting, I heard a few people say that your  
16 regulations are not stringent enough. It is my  
17 understanding that this facility will be built  
18 with cutting edge technology and the best  
19 available control technologies.

20 I feel that the company is doing its  
21 part to build a clean industrial facility. Let  
22 this company do its job and have some jobs for  
23 our citizens. This is a good project. It will  
24 be good for the state. It will be good for the  
25 area. It will create jobs for our citizens, and

1 in short, I favor this project.

2 HEARING OFFICER BELZER: Robert Bodell.

3 ROBERT BODELL: Mr. Hearing Officer, my  
4 name is Robert Bodell, B-O-D-E-L-L. See, Jim, I  
5 can do it better than you can.

6 And I represent the IBEW, International  
7 Brotherhood of Electrical Workers, and we're  
8 certainly interested in the jobs this project  
9 will create. We hope that many of those jobs  
10 will be union jobs because we can compete very  
11 effectively with non-union workers on cost. We  
12 can do it better and we can do it safer.

13 But we wouldn't be for this project if  
14 we thought it would be -- it would do to the  
15 environment that what the old technologies did in  
16 the past. This project won't.

17 I'm not an expert, but I have looked at  
18 the numbers and the company's application and  
19 I've looked at your numbers in the air permit.  
20 They make it very clear that emissions from this  
21 plant across the board will be a very small  
22 fraction of emissions from traditional coal  
23 plants or plants built with old technologies.

24 And based on your numbers, there will  
25 be a very small impact on Power County and hardly

1 any effect in Pocatello. And I and my members of  
2 my local union support this project. Thank you.

3 HEARING OFFICER BELZER: Thank you.  
4 Mike Miera.

5 MIKE MICRA: It's Mike Miera,  
6 M-I-E-R-A.

7 And I'm in favor of this facility 100  
8 percent and would like to kindly remind the  
9 opposing people of this facility that we are in  
10 the year 2008 and not 1908. This project is not  
11 going to be built recklessly and/or  
12 irresponsibly.

13 As our economy struggles locally and  
14 nationally, we have an opportunity right here to  
15 grow and to prosper with clean coal energy in a  
16 safe manner. And it is sad and very unfortunate  
17 that the local paper, and I hope that they have  
18 somebody here, I would like to say shame on the  
19 Idaho State Journal for printing nothing but  
20 negative articles on this subject with untrue and  
21 misleading so-called journalism.

22 HEARING OFFICER BELZER: Richard D.  
23 Boardman.

24 RICHARD D. BOARDMAN: Thank you for  
25 your time, Mr. Hearing Officer. My name is

1 Richard D. Boardman, spelled B-O-A-R-D-M-A-N. I  
2 have a doctorate in chemical engineering. I grew  
3 up in an area of southern Utah where they  
4 attempted to develop coal. Due to the scenic  
5 surroundings, that was a difficult thing to  
6 accomplish in the 1970s.

7 I prepared myself to work in the area  
8 of coal utilization, clean coal. My studies are  
9 in gasification in combustion and clean coal air  
10 pollution control, and in atmospheric  
11 environmental chemistry.

12 I've been at the Idaho National Lab for  
13 19 years. I lead an energy security initiative  
14 and a group which is working on the modeling and  
15 development of these types of plants for  
16 potential applications throughout United States.

17 I have not been engaged or employed by  
18 any of the commercial or the state entities with  
19 regard to this plant and the views I offer are my  
20 own personal views. They do not reflect the  
21 opinion of the Idaho National Lab.

22 But I would like to have it known on  
23 the record that one year ago, I testified before  
24 the U.S. Congress in a similar platform as this  
25 as an invited testimony by the National Defense

1 Resource Counsel to talk about synthetic fuels  
2 and chemicals made from converting coal into  
3 these types of products. And so I think I have  
4 an objective point of view and I would like to  
5 share some of my opinions this evening with you.

6           Several comments I would like to make,  
7 first of all, having become aware of this  
8 project, I spent some time to study a little more  
9 about this particular project. I spoke with  
10 Mr. Matt Leigh, who is one of the project leads,  
11 and I was able to understand the technology down  
12 on a specific technology basis; how it's being  
13 built; how it's being implemented; which  
14 technologies they're using, and the methods which  
15 they have used to come to what I will call here a  
16 pre-front and engineering design or a pre-feed.

17           And I would add to the record that I  
18 believe them to be using mature technology,  
19 state-of-the-art technology, and that they are --  
20 deploy it in the manner in which will accomplish  
21 what they have purported it would in the air  
22 permit record.

23           Let me make a few comments about this.  
24 We're concerned about the use of coal because it  
25 has some deleterious effects, particularly with

1 regard to mercury. This type of plant will have  
2 very, very miniscule amounts if even perceptible  
3 amounts of mercury emissions. The process is  
4 very capable of capturing up to nearly  
5 100 percent of this mercury which is contained in  
6 the coal which is fed to it.

7           It will also very effectively clean all  
8 the other acid gas, or if you will, the SO2 and  
9 the NOX emissions. As you've seen in the  
10 presentation, the amounts of these emissions are  
11 considerably low. They're not zero, but they're  
12 low compared to other coal-fired facilities, PC  
13 coal plants which generate electricity.

14           This process is inherently clean  
15 because it has to as a function clean this syngas  
16 up before the ammonia can be synthesized in the  
17 vacuum. And so the way these plants are built,  
18 they're able to capture a relatively pure stream  
19 CO2, that's the greenhouse gas emissions that  
20 most are concerned about.

21           They capture that CO2 in part to bring  
22 it back into the process to make the urea. Let  
23 us be reminded that all of the farming activities  
24 in this state use fertilizers. They're not going  
25 to cease using that fertilizer and they will buy

1 it on the market. It will be produced some place  
2 using a fossil energy resource.

3 So to state that we were -- let me see  
4 if I can phrase this properly so it will be  
5 understood. They will buy urea fertilizer and  
6 where it is produced there will be CO2 emissions.  
7 Unless that CO2 is captured and potentially  
8 sequestered or used for other uses such as  
9 enhanced oil recovery. This does not increase  
10 the amount of CO2 that will otherwise be emitted.

11 China's in the process of building  
12 right now eight to ten of these plants even  
13 larger than the one that is proposed. Those CO2  
14 emissions will not likely be controlled in any  
15 fashion. And those will wind up in the global  
16 accumulation of greenhouse gases.

17 This project has an opportunity and is  
18 being designed such that at an appropriate time  
19 the project can elect to take the CO2 and use  
20 that in the region for enhanced oil recovery.  
21 Studies are commencing are underway for  
22 sequestration of CO2 in this region. So in the  
23 future, it's conceivable that that could be  
24 sequestered if that becomes -- if there's an  
25 impetus to do so and it could obviously do that

1 economically.

2 I know the project has been looking at  
3 these opportunities as it was described to me by  
4 the project lead, and so it should be known that  
5 if it becomes appropriate in the future, they can  
6 handle the very last of the CO2 which would be  
7 emitted. Thus making this plant cleaner, cleaner  
8 compared to those foreign countries which will  
9 otherwise produce this ammonia and this urea only  
10 to sell it to us, transport it over great  
11 distances, using fossil energy to transport it to  
12 this country and emitting more greenhouse gases  
13 to the environment.

14 So I submit through the record that  
15 it's within our capability to take control of  
16 greenhouse gas emissions by constructing these  
17 plants on our domestic soils, such that we have  
18 the economic benefit of jobs and that we can also  
19 then at an appropriate time and an appropriate  
20 manner control and manage those very last CO2  
21 emissions, which I have referred to.

22 Now, a couple of comments if you will  
23 allow me about water use and potential use of  
24 biomass. What we've not heard about here tonight  
25 because this is the process of achieving the air

1 permit, would be that I would like to understand  
2 for myself personally what the water use will be  
3 when they shift the syngas to make hydrogen,  
4 which is the essential component for the ammonia  
5 which goes into the urea, a specific amount of  
6 water is required.

7           This project will have cooling towers  
8 which will emit moisture from those cooling  
9 towers and additionally they will use water to  
10 make up the hydrogen. It would be convenient to  
11 know, just for the record, what amount of water  
12 use will be required and where that will be  
13 derived from in the state's water supply  
14 resources.

15           Additionally, I would also suggest that  
16 we've seen that greenhouse gas emissions can even  
17 further managed through the use of biomass as a  
18 feedstock. There is significant amounts of  
19 biomass in the State of Idaho from the  
20 agriculture, from the dairy industries, and  
21 potentially at an appropriate time, this type of  
22 plant could use that biomass as a feedstock to be  
23 converted into the ammonia.

24           Some projects throughout the United  
25 States currently contemplate the use of some

1 biomass as a blending feedstock with the coal to  
2 help mitigate some of those greenhouse gas  
3 emissions. So the project may have in the  
4 future, as circumstances develop, potentially  
5 even in their pre-feed studies, to look at  
6 possible sources of biomass to add to the coal.

7 Thus taking advantages of the  
8 environmental benefits of the biomass, which  
9 could be used, as well as the economies of the  
10 coal, which are necessary to make these plants  
11 possible. So with that, I will close my  
12 testimony and thank you for your time.

13 HEARING OFFICER BELZER: Thank you.  
14 Valorie Watkins.

15 VALORIE WATKINS: Thank you. My name  
16 is Valorie Watkins. It's W-A-T-K-I-N-S. I am a  
17 life-long resident of Pocatello and for the past  
18 three years I have been working with the Power  
19 County Development Authority to assist in  
20 bringing economic development to this area.

21 Property previously occupied by the  
22 former FMC Phosphorus Plant, in adjacent Power  
23 County is a primary focus of our development  
24 efforts. And it was that site which first  
25 attracted Southeast Idaho Energy to the area to

1 construct a clean coal gasification facility.

2 In the early stages of developing the  
3 project, SIE made some major changes. They moved  
4 the project to Power County's heavy industrial  
5 zone, two miles southwest of American Falls. And  
6 they decided to make fertilizer products, not  
7 power.

8 Since my first encounter with the  
9 company president, Ramesh Raman, and the skilled  
10 engineers who work for his company, I have been  
11 impressed with their knowledge and commitment to  
12 developing a project that is the right fit for  
13 this region of Idaho.

14 These are highly trained, talented, and  
15 principled people who understand the technology  
16 necessary to utilize one of our country's most  
17 abundant resources, coal.

18 To many, coal is a dirty word.  
19 Recalling the days of smoggy ash-filled air that  
20 hung over this valley when burning coal was the  
21 primary source of heat and energy. But this  
22 plant will not burn coal. It uses a vastly  
23 different process.

24 Most people, like myself, who lack  
25 chemical or engineering background, are unaware

1 of what coal gasification technology can produce.  
2 From synthetic natural gas to transportation  
3 fuels to fertilizers and chemicals used in making  
4 even film and Tylenol.

5 It's quite amazing and I've learned a  
6 lot in the past three years about this process  
7 from my visits to two gasification plants. One  
8 in North Dakota and the other in Kansas. Coal  
9 gasification has been around since the early  
10 1900s. And in the past 60 years, the technology  
11 has improved making it more economical,  
12 efficient, and cleaner.

13 Just think about this, the 2008 hybrid  
14 vehicle of today is not your dad's '58 Chevy.  
15 Scientific-advances have improved everything in  
16 our lives. The cars we drive; the electronics we  
17 can't live without; the medical care that saves  
18 lives. An industrial processes, like coal  
19 gasification, have improved as well.

20 Federal and state laws regulate these  
21 industrial processes to protect the environment  
22 and our citizens. The Idaho Department of  
23 Environmental Quality is charged with the  
24 responsibility of enforcing these laws and  
25 regulations and they do so with a team of

1 engineers, and technicians who are well qualified  
2 and dedicated to doing a good job.

3 Because the Power County Advanced  
4 Energy Center will be a state-of-the-art  
5 facility, I am confident the IDEQ team has  
6 thoroughly investigated, verified, and confirmed  
7 the data in SIE's air permit application.

8 In issuing the proposed air permit,  
9 IDEQ has determined that emissions from this  
10 plant are well below permitted limits. I  
11 encourage the IDEQ to continue their recent  
12 scientific and technical approach in reviewing  
13 the public comments and then without delay to  
14 issue the final permit.

15 Power County eagerly awaits the  
16 construction and operation of the Advanced Energy  
17 Center and we welcome Southeast Idaho Energy and  
18 the benefits this project will bring to all of  
19 eastern Idaho. Thank you.

20 HEARING OFFICER BELZER: Thank you.  
21 Mari Tusch.

22 MARI TUSCH: My name is Mari Tusch.  
23 I'll spell first and last. M-A-R-I, T-U-S-C-H.

24 I'm a resident of Pocatello for the  
25 past 30 years and I have attended the previous

1 informational meeting that DEQ held last month.  
2 I was impressed with the technical capability of  
3 the staff. I was also impressed with the DEQ's  
4 concern about protecting our environment and  
5 holding private industry accountable for their  
6 facility.

7           While there were a lot of questions  
8 about things outside the scope of the air quality  
9 permit, DEQ clearly showed that this facility  
10 meets and for the most part greatly exceeds  
11 DEQ's requirements to issue an air quality  
12 permit.

13           From the facts that were presented at  
14 the informational meeting, this project appears  
15 to be far below any limits that have been set to  
16 protect the public health and environment. Some  
17 people seem to believe that the Advanced Energy  
18 Center will be like the plants built in the 1940s  
19 and '50s, but there's a reason that this  
20 particular process is called clean coal  
21 technology. It's not the same.

22           Senator Obama and Senator McCain don't  
23 seem to agree on much, but they do agree that  
24 this country needs clean coal technology. So no  
25 matter who is elected, our country is likely to

1 have an energy policy that supports this type of  
2 technology.

3 I have also been impressed with the  
4 efforts made by the Advanced Energy Center to go  
5 beyond what the regulatory entities require. For  
6 example, to control particulate from the coal,  
7 they are spending an additional \$50 million to  
8 handle all the coal in a closed system.

9 I am certainly interested in the jobs  
10 that this project will provide and the  
11 significant economic impact it will have, but I  
12 would not be in support of it if I believed we  
13 were sacrificing our environment and quality of  
14 life to have it here.

15 Based on everything I have learned  
16 about this project, which I have followed from  
17 its inception, I believe that our environment  
18 will be protected and that the positive benefits  
19 to our region will be significant.

20 I urge the DEQ to issue the air quality  
21 permit quickly so this project can move forward  
22 on schedule. Thank you for your time.

23 HEARING OFFICER BELZER: Thank you.

24 John Arvas.

25 JOHN ARVAS: Good evening. Arvas,

1 A-R-V-A-S. My name is John Arvas and I'm not a  
2 chemist and I'm not any other type of scientist.  
3 I can't tell you the symbol for mercury or very  
4 many any other minerals. I can tell you carbon  
5 dioxide is CO2. I'm fairly simple at that.

6 But, nonetheless, I also want to let  
7 people know that clean air, clean water is  
8 extremely important for this area. A lot of  
9 people in this room, let alone this town and  
10 county and all of this whole state, enjoy going  
11 outside, and I too enjoy going outside, and I  
12 want to be able to share that with my children.

13 I want to be able to take them outside  
14 anywhere in southeast Idaho, not just Bannock  
15 County or Power County, but everywhere, and to  
16 know that it's going to be a safe environment.

17 I also want my kids to have a chance,  
18 like I did, to stay and raise their families in  
19 the town that they were born and raised in, just  
20 like I was, or I was able to do. If they are  
21 going to have this chance, I want to help make a  
22 strong region diversified in different industries  
23 and employment opportunities. From what I can  
24 gather, the Advanced Energy Center will help  
25 accomplish this.

1 Like I said, I'm not a chemist, but I  
2 received my BA in finance from Idaho State  
3 University, and as a commercial lender in town, I  
4 do realize our nation's economy is hurting,  
5 unemployment is starting to skyrocket and times  
6 are getting tough for everyone.

7 Southeast Idaho Energy proposed --  
8 Southeast Idaho Energy's proposed Advanced Energy  
9 Center will bring 100s of jobs into our region,  
10 create fertilizer that can be used by our  
11 farmers, and the CO2 is hopefully going to be  
12 piped to the oil fields in Wyoming and to be used  
13 over there.

14 Both of these -- all of these  
15 activities will help keep and raise money to be  
16 spent in our communities and help support all the  
17 small business owners around in our areas. I  
18 cannot tell you what will happen to our  
19 environment when the plant is up and flow is  
20 running, I just don't have the knowledge for  
21 that.

22 I have to reply -- rely upon the EPA  
23 and Idaho's DEQ to maintain and monitor our  
24 environment. If the EPA and DEQ say our  
25 environment will be fine and the emissions will

1 be minimal, I will take their word. If their job  
2 tomorrow is going to keep our environment safe  
3 for the people that live in this area.

4 If SIE's proposed Energy Center will  
5 create a 150 permanent jobs, create additional  
6 business opportunities for Union Pacific and  
7 possibly lead to the creation of new businesses  
8 to support SCI's -- or excuse me, SIE's  
9 operations, will have no effect on our  
10 environment, we should grant them this permit.

11 We want to show people we are willing  
12 to have business neighbors like SIE come into our  
13 area. This permit is as much for our region as  
14 it is for SIE. Hopefully DEQ will be able to  
15 issue this permit with no delay.

16 HEARING OFFICER BELZER: Thank you.  
17 Roger Turner.

18 ROGER TURNER: Thank you. My name is  
19 Roger Turner, T-U-R-N-E-R. Thank you for the  
20 opportunity to comment on this important air  
21 quality permit.

22 The draft permit fails to account for  
23 and control two important pollutants: PM2.5,  
24 fine particulate matter, and carbon dioxide. The  
25 applicant failed to provide emission estimates

1 and control technology for PM2.5 particles, a  
2 national ambient air quality standard. These  
3 very fine particles that will be emitted by the  
4 factory are dispersed over long distances, remain  
5 suspended in the air for long periods of time,  
6 and have proven to cause cardiopulmonary diseases  
7 because they are ingested deeply into the lung  
8 tissue.

9           The EPA promulgated a rule in October  
10 2006 making it mandatory for emission sources to  
11 limit these pollutants. PM2.5 also contributes  
12 significantly to wide-spread haze that reduces  
13 visibility. Unfortunately, this pollutant was  
14 not addressed by the applicant in their permit,  
15 and, likewise, not addressed in the draft permit.

16           Best available control technology needs  
17 to be installed for PM2.5 sources within this  
18 coal plant. The permit, if it is to be compliant  
19 with the Clean Air Act, must be denied as  
20 written. The applicant's coal plant will produce  
21 approximately 150 tons per hour of carbon dioxide  
22 from the gasifier of the plant.

23           The company is not committing to  
24 controlling greenhouse gases. Huge amounts of  
25 carbon dioxide will be released to the

1 environment from this facility. The  
2 Washington, DC federal circuit court recently  
3 ruled that carbon dioxide is a pollutant as  
4 defined in the Clean Air Act and must be  
5 controlled.

6           These gases contribute to adverse  
7 environmental impacts. Idaho's governor  
8 recognized the damages of this pollutant when in  
9 May of 2007 he passed the executive order --  
10 which I have attached to my testimony --  
11 directing the Idaho DEQ to account for and to  
12 minimize harmful carbon dioxide emissions.

13           I'll even read a little excerpt of  
14 that. There's a lot of "whereas" but then it  
15 comes down to "now, therefore, I, CL Butch Otter,  
16 governor of the State of Idaho by the authority  
17 vested in me under the Constitution and the laws  
18 of the State of Idaho, do hereby order that the  
19 director of IDEQ shall develop greenhouse gas  
20 emission inventory with recommendations and  
21 methods to reduce greenhouse gases. And  
22 recognizing Idaho's interest and continued growth  
23 economic development and energy." So I think the  
24 governor looked ahead a year ago and said that  
25 DEQ should begin to enforce carbon dioxide.

1           It would be a large step backward for  
2 the State of Idaho to accept a coal plant that  
3 does not control these greenhouse gases at a time  
4 when other states are scrambling to control these  
5 pollutants.

6           The IDEQ must deny this permit based on  
7 the emission of carbon dioxide control  
8 technology, or they will be in violation of the  
9 Clean Air Act as referenced above.

10           Another concern that I have is the  
11 upset conditions that are being allowed by this  
12 plant. Emissions are being released to the  
13 atmosphere without passing through a pollution  
14 scrubber or control device. This could amount to  
15 a black cloud that will be transported to  
16 downwind communities.

17           Also because the flare is steam  
18 assisted, the emissions may look like steam or  
19 water vapor as they exit the stack initially,  
20 but, in fact, will contain large volumes of  
21 pollutants. The draft permit places no limit on  
22 the number of malfunctions or upsets that would  
23 bypass the scrubbers at the various flares,  
24 especially with the gasifier flare.

25           By the way, since stack testing of this

1 flare is required later after operation, during a  
2 start-up event that is -- it's only limited to  
3 start-up events. And the problem is there may be  
4 several malfunctions that aren't start-ups and we  
5 will never know the emissions from those because  
6 they aren't required to test them.

7 I recommend that IDEQ limit the number  
8 of upsets, malfunctions to no more than one per  
9 month, including start-ups. To allow any more  
10 than this will mean the company cannot control  
11 its emissions. After a year, the company and  
12 IDEQ should reevaluate the modeled impact that  
13 Cheryl presented after looking at all the upsets  
14 and then determine whether or not the visibility  
15 impairment of Class I areas may occur or whether  
16 there is a violation of the PS -- in exceedance  
17 of PSC increments.

18 So you have this situation where you  
19 have all these flares. You have a gasifier  
20 flare, ammonia flare, two urea flares, and a  
21 process flare that are virtually uncontrolled.  
22 Granted, as Cheryl said, they have to have a --  
23 make sure that these have a pilot light type of  
24 thing to keep them lit and have to record the  
25 number of times they use them, but otherwise the

1 permit totally lacks the number of upset  
2 malfunctions that are going to occur.

3           When the plant's running and tuned up,  
4 it may not be perfectly tuned, it may not have a  
5 large number of emissions. But we've seen around  
6 town what happens with certain other facilities  
7 that have furnaces that have poorly controlled  
8 upset frequencies, and I think everybody will  
9 agree that Pocatello can have problems with  
10 upsets.

11           Several of the -- parts of the permit  
12 have -- show emissions. Just for an example, on  
13 feedstock handling, they're going to pull in up  
14 to 150 rail cars of coal into this facility. But  
15 fugitive dust from coal cars that are uncovered  
16 are not even listed in the emission inventory.

17           I had mentioned already in my questions  
18 before this that the applicant has a big deficit  
19 on reporting the number of types of equipment  
20 that they're going to install. And some of it  
21 including the very parameters that IDEQ needs to  
22 determine the success of this project. The  
23 company needs to pull it to go back and redo this  
24 permit and show all of the -- all of the  
25 manufactured equipment that they intend on using.

1 I won't go into this in detail, but  
2 I've also done a calculation here that shows that  
3 although the company has indicated that they --  
4 all of their feedstock with baghouses are  
5 99 percent efficient. I ran through the  
6 calculation that I have submitted and it looks  
7 like it's 44 percent and I've also submitted that  
8 by e-mail.

9 IDEQ is lax in many sections of this  
10 permit. And this could really help American  
11 Falls and the folks downwind. For example,  
12 simple things like they've -- they require  
13 baghouses, but most baghouses require cleaning  
14 systems to clean out the dust in them.

15 There's -- there's a technology out  
16 there's that's been out there forever for them to  
17 put warning systems for when the baghouses aren't  
18 operating correctly and that this go to a control  
19 system where an operator can determine the  
20 instant that a baghouse isn't working properly.  
21 That isn't required in this permit. The permit  
22 should require these types of close reporting.

23 Also on all the baghouses and several  
24 of the other Essex stacks were technically  
25 feasible. DEQ should require continuous emission

1 monitors so that they can continuously follow the  
2 emissions of this plant. Right now, just for  
3 example, baghouse stacks, there is no continuous  
4 emissions required of this plant.

5           So I appreciate the idea that the  
6 company has promised that this is a clean plant,  
7 but it looks to me like maybe they are -- maybe  
8 they're going to have trouble controlling these  
9 upsets. And why didn't they include PM2.5 when  
10 they know that -- that emission pollutant is  
11 coming down the line, even if -- even if  
12 technically they may not be required to in their  
13 opinion? And why haven't they included carbon  
14 dioxide when the governor has already suggested  
15 that this be controlled? And, lastly, why hasn't  
16 DEQ on their own required control of carbon  
17 dioxide emissions?

18           You know, one of the first things that  
19 I learned when I came to Idaho, that this state  
20 is very clean. We depend on hydropower. There  
21 is no need -- and there's no indication that  
22 smoke belching coal-fired plants in this state.

23           And I guess I would just say to you,  
24 that given all the unknowns and uncertainties of  
25 this plant, we may very well be taking a giant

1 step backwards with this type of plant.

2 Thank you. I've got a copy.

3 HEARING OFFICER BELZER: Thank you.

4 Jeff Schutte.

5 JEFF SCHUTTE: Jeff Schutte,

6 S-C-H-U-T-T-E. As a resident of southeast Idaho,

7 I support this project because it gives our area

8 a chance to be a leader in clean coal technology.

9 Through the combined resources of

10 Southeast Idaho Energy, Idaho State University,

11 and INL we can become a technology leader in

12 using our country's large coal supplies to make

13 us a lot less dependent on energy and imports.

14 As a contractor, I would like to see

15 this plant built and I would like to see and be

16 able to use the slag it produces. I've read

17 about the slag and it won't be radioactive,

18 toxicous or hazardous. I understand the company

19 has to have testing done to prove that. But slag

20 from similar plants is being used for road fill

21 and construction.

22 Of course, I wouldn't be for this

23 project if it wasn't good from an environment

24 standpoint. The company's application and the

25 draft air permit show that it will only have a

1 very minor impact on air quality.

2 We look forward to having this project  
3 in our community. Thanks.

4 HEARING OFFICER BELZER: Okay. Thank  
5 you. Jim Johnston.

6 JIM JOHNSTON: I'm Jim Johnston,  
7 J-O-H-N-S-T-O-N. Thank you very much Mr. Hearing  
8 Examiner. I appreciate the opportunity to  
9 pontificate for a moment. I don't wish to repeat  
10 the previous testimonies that have given, but  
11 after listening to the presentation, I support  
12 the application process that is taking place.

13 You have high standards that will  
14 protect the quality of air. My family is pleased  
15 with the improved quality of air in the Pocatello  
16 area that we've experienced, especially in the  
17 last ten years.

18 My biggest urging would be to move this  
19 process along so that our economy can be aided by  
20 the new jobs that will be created. I'm a real  
21 estate broker and believe that this facility will  
22 help all of southeastern Idaho, all of our  
23 economy at a time when a shot in the arm is  
24 really needed.

25 The air permit you're putting together

1 for this project looks good. It appears that it  
2 will keep our air clean while the project creates  
3 good jobs and other benefits for this area. I  
4 thank you for your work and hope that you will  
5 grant the final permit soon.

6 HEARING OFFICER BELZER: Thank you.  
7 David Mead. David Mead. Dirk Driscoll.

8 DIRK DRISCOLL: My name is Dirk  
9 Driscoll, D-R-I-S-C-O-L-L. I am a lifelong  
10 resident of Aberdeen and American Falls area,  
11 involved in an agriculture business with family  
12 and I try to be active in the community, both of  
13 Aberdeen and American Falls. We are in support  
14 of this very much and hope that it is expedited  
15 quickly and appropriately from everything that we  
16 have seen.

17 Over a year ago when this endeavor was  
18 announced and meetings began, there was  
19 uncertainty and caution among many of the  
20 communities of American Falls and Aberdeen. But  
21 due to the very professional manner of SIE in  
22 being committed to being very upfront and  
23 specific in details and available for questions  
24 and concerns and comments, they have turned  
25 uncertainty and caution to excitement and

1 enthusiasm for this facility to be built in our  
2 area.

3 SIE has proceeded carefully and  
4 appropriately in every aspect as we have walked  
5 through the meetings with them, and we commend  
6 them for their very professional manner that they  
7 have done this. We have been very impressed with  
8 DEQ and their research and investigation of the  
9 proposed application and the very professional  
10 and understandable way that the facts have been  
11 presented.

12 I believe that it shows America as its  
13 best at this time. In the correlated way that  
14 these things come to be with the best of  
15 technology available as we go into the future.  
16 We need this in our area, in our communities and  
17 feel that it is a win/win situation for all  
18 concerned and have every confidence in time that  
19 this bear out.

20 It is going to be built. We hope that  
21 it will be -- this recommendation will be passed  
22 that it may be built in American Falls. Thank  
23 you.

24 HEARING OFFICER BELZER: Thank you.  
25 Rod Fuger.

1                   ROD FUGER: My name is Rod Fuger,  
2 F-U-G-E-R. I'm a long life resident of southeast  
3 Idaho for 54 years.

4                   I am president of the Idaho Building  
5 Trades Council and business manager for the  
6 pipefitters here in Pocatello. With their  
7 affiliates and membership, they come out and  
8 support this project, not only because it brings  
9 jobs but because it has the technology and the  
10 size to build this plant.

11                   Southeast Idaho might as well be  
12 leading this endeavor to make this kind of  
13 fertilizer. I honestly believe that any of us  
14 thought that there's going to be a problem with  
15 our family, children, we'd probably be contesting  
16 it, but we are supporting this project on the  
17 science of it. Thank you.

18                   HEARING OFFICER BELZER: Thank you.  
19 Greydon Wright.

20                   GREYDON WRIGHT: It's Greydon Wright,  
21 W-R-I-G-H-T.

22                   THE REPORTER: How do you spell the  
23 first name?

24                   GREYDON WRIGHT: G-R-E-Y-D-O-N. My  
25 name is Greydon Wright. I'm a senior in civil

1 engineering at Idaho State University and a  
2 resident of American Falls.

3 I would like to first commend DEQ for  
4 the wonderful job they've done so far in this  
5 permit application. They have really extensively  
6 looked into it and spent a lot of time. And I  
7 believe that they've done a good job at this.

8 When I first heard of coal  
9 gasification, I had no idea what it was. So I  
10 spent some time doing some research on this  
11 company, and I also wrote some research papers  
12 for environmental classes at ISU. And I've  
13 talked to the engineers in charge of this project  
14 to find out what exactly it's about.

15 I'm in favor of this plant for many  
16 reasons because not only will it help stimulate  
17 the local economy in American Falls, but it will  
18 also help the Pocatello economy. This plant is  
19 said to create 750 to 1,000 construction jobs,  
20 and then 150 jobs once that plant is up and  
21 running.

22 And everyone knows, as well as I do,  
23 that most people will not live in American Falls;  
24 they'll probably live here in Pocatello. And if  
25 if they do live in American Falls, they'll do

1 their shopping in Pocatello. So it's not going  
2 to only help American Falls, but it will help  
3 Pocatello.

4 The United States is the largest  
5 fertilizer importer in the world. And this  
6 proposed gasification plant will produce over  
7 3,000 tons of fertilizer a day. So this will not  
8 make the U.S. an independent country when it  
9 comes to fertilizer, but it's a start, and we got  
10 to start somewhere.

11 And also the U.S. is sitting on the  
12 world's largest coal supply, so why aren't we  
13 using it? We need to begin to become a more  
14 independent country and this is a great start.

15 But I would like to say I am  
16 disappointed in DEQ because this plant is being  
17 built in American Falls not Pocatello. When Hoku  
18 went through their permitting process, did they  
19 hold a permit meeting such as this in American  
20 Falls? No. So why do we have to have one here  
21 Pocatello? Is it because of all the political  
22 pressure?

23 And my last comment is that when the  
24 Idaho State Journal ever talks about this coal  
25 gasification plant, they're always pretty

1 negative about it. And whenever they have a  
2 picture, it's always a coal-fired power plant,  
3 not a coal gasification plant.

4 So if you actually want to know some  
5 research -- do some research on it, don't read  
6 the Journal. The U.S. Department of Energy's Web  
7 site has a lot of good information on this plant.  
8 Thank you.

9 HEARING OFFICER BELZER: Thank you.  
10 Braden Driscoll.

11 BRADEN DRISCOLL: My name is Braden  
12 Driscoll. The last name D-R-I-S-C-O-L-L.

13 THE REPORTER: How about the first  
14 name?

15 BRADEN DRISCOLL: Braden.

16 THE REPORTER: How do you spell it?

17 BRADEN DRISCOLL: B-R-A-D-E-N.

18 I, as well, am pretty much a full  
19 lifetime resident of the Aberdeen/American Falls  
20 area. I spent some time in Utah at college and  
21 have spent time in an area where there is some  
22 pollution in the air. And it was noticeable, but  
23 great steps were taken to reduce that and  
24 hopefully improve it over time.

25 I am for this project because I know of

1 the emphasis that has been put recently in our  
2 government. Not only in the United States, but  
3 also around the world to protect the environment.  
4 And at times the pendulum swings a little too  
5 far. There is risk in everything we do in life.  
6 We cannot fully minimize risk. It's part of our  
7 existence here to learn to deal with it.

8 But I'm excited about it. It create --  
9 it will create jobs. It's a great example of  
10 entrepreneurship and innovation. This will be a  
11 benefit to all stakeholders, employees,  
12 customers, communities, and investors. There's  
13 data for and against as there is in any project.

14 This company has gone to a lot of work  
15 as has the DEQ. As I mentioned before, there is  
16 risk in anything. We can't be afraid of the  
17 future and afraid of progress. We will be fine.  
18 There will be many benefits from this over time  
19 with our -- it will improve our economies, the  
20 schools, higher education, our quality of life.

21 And I just say, let's just use some  
22 common sense here and get moving on this project  
23 and get it done. Thank you.

24 HEARING OFFICER BELZER: Thank you.

25 Amy Wynn.

1           AMY WYNN: Thank you for your time. I  
2 am Amy Wynn -- W-Y-N-N -- mayor of the City of  
3 American Falls.

4           And at this time, I'd like to take the  
5 opportunity to read a resolution into the record  
6 that was on behalf of the city council of the  
7 City of American Falls.

8           "Whereas, the City of American Falls is  
9 an incorporated city in the County of Power,  
10 State of Idaho; and whereas, the mayor and  
11 council of the City of American Falls are duly  
12 elected officials of the City of American Falls;  
13 and whereas, a significant economic development  
14 in the region is being considered and its  
15 environmental impact is being reviewed by those  
16 who regulate such matters; and whereas, the  
17 undersigned having reviewed and studied the  
18 matter and with the help, safety, and economic  
19 development of its citizens in mind, and those in  
20 surrounding cities, and in the region; now,  
21 therefore, the unsigned mayor and council of the  
22 City of American Falls, County of Power, State of  
23 Idaho do unanimously support and approve the  
24 application of the Power County Advanced Energy  
25 Center for the regulatory approvals for the

1 benefit of our citizens and the region.

2 Done and dated this 15th day of  
3 October, 2008. Amy Woodworth Wynn, Mayor;  
4 H. Norman Wright, Council President; Kristen  
5 Jensen, Council Person; Marc G. Beitia, Council  
6 Person; and Dan Hammond, Council Person; Stuart  
7 Pankratz, Council Person; C. Dean Weaver, Council  
8 Person." And I do have a copy of that that we'd  
9 like to have added to the record.

10 And I would like to state that  
11 certainly the elected officials of the City of  
12 American Falls have all of the citizen's health  
13 and safety in mind when we look at this.  
14 We're -- our children live there as well as all  
15 the other people there. These are our friends,  
16 our neighbors, and our family.

17 And the environmental impact is at the  
18 forefront of our mind. Council members have  
19 traveled; have seen these in operation. It's  
20 something that we've studied extensively and  
21 something that we unanimously support, and hope  
22 that DEQ helps further this along. Thank you.

23 HEARING OFFICER BELZER: Thank you.  
24 Norman Wright.

25 NORMAN WRIGHT: I'm Norman Wright,

1 W-R-I-G-H-T.

2 I believe most of us didn't even know  
3 what coal gasification was and still would not  
4 know if we're using the Idaho State Journal as  
5 our informational source; for they haven't gotten  
6 it right yet.

7 This can be a clean, friendly  
8 environmental plant. It has shown that through  
9 its DEQ permit and it shows it throughout the  
10 other plants that are currently being built. The  
11 United States does need processing plants. Sure  
12 it's nice to say we want to be the best, but if  
13 we're outsourcing our jobs, what good does that  
14 do us?

15 We also have through DEQ permitting  
16 process, EPA permitting process still some of the  
17 best environmental permits in the world. If we  
18 don't build this plant here, it will be built  
19 some place else. And then we can complain about  
20 how our jobs went overseas.

21 Bottom line, this produces fertilizer.  
22 This produces fuel. I think that this plant and  
23 plants like it can really help the security in  
24 the United States. If we don't have fertilizer,  
25 we won't eat. And that's important to all of us.

1           The idea that we did not want it built  
2 here in our backyard, that's a great aspect. We  
3 should do that whenever possible, but think about  
4 that for a minute, these plants have to be built  
5 someplace. And better off to have them in our  
6 backdoor where we're watching them than someplace  
7 else.

8           I agree, air pollution is important.  
9 But if nothing is too much, I'm really surprised  
10 I don't see more bicycles out here for all of you  
11 drove here. So, therefore, wasn't that pollution  
12 also? It's nice that the good citizens of  
13 Pocatello are really looking out for us in  
14 American Falls. We really appreciate it. But  
15 remember, if our plant burps, the air is fouled.  
16 If your plant burps here in Pocatello, we'll call  
17 this area the dead zone, for trichlorine  
18 siting (phonetic) gas is a whole lot more  
19 deadlier than PM2s are.

20           Thank you very much and I urge this  
21 plant to get going.

22           HEARING OFFICER BELZER: Thank you.  
23 Bob Steinlicht.

24           BOB STEINLICHT: Bob Steinlicht,  
25 S-T-E-I-N-L-I-C-H-T. I am the building

1 administrator for Power County. I would like to  
2 thank the DEQ for their well thought out and well  
3 prepared and very informative draft for air  
4 quality permit in reference to the application to  
5 construct the Power County Advanced Energy  
6 Center.

7           Early planners in Power County provided  
8 for heavy industrial zone for just such a  
9 development. This zone contains 6,735 acres and  
10 is protected on three sides by a one half mile  
11 wide buffer zone. The buffer zone on the fourth  
12 side is the Snake River. These buffers separate  
13 any other uses so no conflict of use occurs.

14           To further ensure intended uses of the  
15 heavy industrial zone, Power County required  
16 refined energy holdings also known as Power  
17 County Advanced Energy Center to submit an  
18 application for a special use permit. The reason  
19 for the special use permit was basically for the  
20 reason that technology required for clean coal  
21 gasification was not presently spelled out in the  
22 codes and we wanted to allow for intense public  
23 review of the application.

24           At the hearing held on August 5th,  
25 2008, public testimony found that everyone to be

1 100 percent favorable. Following deliberations  
2 by Power County Planning and Zoning Board, all  
3 six members gave a unanimous decision to grant  
4 the special use permit. All 37 detailed  
5 performance standards were met and proved to have  
6 been monitored and maintained by the PCAEC.

7 The application was as detailed and  
8 complete as the one submitted to DEQ for the air  
9 quality permit. Refined energy holdings, also  
10 known as PCA, has demonstrated at every juncture  
11 to be a good fit for Power County and all of  
12 southeast Idaho. Pocatello will also have  
13 immediate and direct financial benefit.

14 I, again, stress this to be an intended  
15 use application placed in an intended zone for  
16 the application. It would appear that those  
17 persons from Power County living in the immediate  
18 proximity have no concerns. So why should those  
19 living 30 miles away be alarmed? There are no  
20 reasons for these concerns.

21 This is a good application and should  
22 receive total and prompt approval. Thank you.

23 HEARING OFFICER BELZER: Thank you.

24 David G. Anderson.

25 DAVID G. ANDERSON: David G. Anderson,

1 A-N-D-E-R-S-O-N. I'm the president of American  
2 Falls Chamber of Commerce, and I'm 100 percent in  
3 favor of this permit.

4 Not only the increased jobs, I  
5 physically see no harm in any of the designs of  
6 the plant, and as far as -- the only negative  
7 comment I've heard is the particulates of  
8 mercury. I think you'll get exposed to more  
9 mercury out of a fish out of the reservoir than  
10 you'll ever out of this plant. Thank you.

11 HEARING OFFICER BELZER: Thank you.  
12 Kristen Jensen.

13 KRISTEN JENSEN: My name is Kristen  
14 Jensen, and it's spelled with an E-N. It's  
15 J-E-N-S-E-N.

16 I am currently a member of the American  
17 Falls City Council and have been for the past 16  
18 years. I am also the director of Economic  
19 Development for Power County and part of Bingham  
20 County.

21 Our area is in need of diversification  
22 relating to business investment. The Power  
23 County Advanced Energy Center will allow us to  
24 diversify our economy, as well as attract  
25 employees with skill sets that differ from the

1 current employment opportunities our area has to  
2 offer.

3 I am pleased to state for the record  
4 that I have spent many hours researching  
5 information relating to clean coal gasification.  
6 I have attended two workshops specifically  
7 addressing coal gasification. I have also toured  
8 two gasification plants; one in Tampa, Florida;  
9 and one in Coffeyville, Kansas. I have seen  
10 these plants in operation.

11 The plant in Kansas uses the same type  
12 of gasifier that will be used in Power County.  
13 From these efforts, I have learned that coal  
14 gasification is a clean and safe way to use the  
15 coal reserves in the United States.

16 As a resident of American Falls and a  
17 mother of four, I have no hesitation requesting  
18 the DEQ to continue this review process in a  
19 timely fashion so that our area can achieve more  
20 economic stability and embrace cutting-edge  
21 technology.

22 I feel that the DEQ has diligently  
23 learned about this process as well. And I have  
24 faith that the project will be granted an air  
25 permit.

1 HEARING OFFICER.BELZER: Thank you.

2 Randy Jensen.

3 RANDY JENSEN:- My name is Randy Jensen,  
4 J-E-N-S-E-N, and I am a lifelong resident of  
5 Pocatello and American Falls.

6 And for five years during my teenage  
7 years, I worked as a furnace cleaner of coal  
8 furnaces and boilers in Pocatello, so I would  
9 like to say that I have a more intimate  
10 relationship with coal and soot than anyone in  
11 this room and probably the PCPs, and COs, and all  
12 the other stuff that goes with that. But I will  
13 just -- Mr. Boardman's testimony was far superior  
14 to mine on results of coal.

15 But I have been the principle of the  
16 middle school in American Falls for 20 years.  
17 The benefits of this plant are obviously  
18 attractive. A major investment in our community  
19 and a product that will be used locally and a  
20 creation of good paying jobs. With the jobs the  
21 center will provide many of our young people will  
22 be able to remain in southeast Idaho and raise  
23 their families. There are currently few  
24 opportunities for our American Falls' students  
25 who earn degrees to come back and live.

1 Even with all theses benefits, if the  
2 emissions from this center were harmful to our  
3 children, which they are not, I could not support  
4 this project. The fact is the emissions are well  
5 within standards set to protect the most  
6 sensitive populations such as our children.

7 I am confident that the Idaho  
8 Department of Environmental Quality has done a  
9 competent and thorough job of reviewing and  
10 analyzing the center's application. I attended  
11 earlier meetings that you have had, and the DEQ  
12 results have shown that in every area their plan  
13 is far under regulations and that the center will  
14 only have a very minor impact on air quality.

15 I support this project and the  
16 opportunities it will create for our community.  
17 In a time of economic uncertainty and turmoil,  
18 this project will be a tremendous boost to the  
19 economy of southeast Idaho, especially Pocatello.

20 The 1,000-plus construction jobs this  
21 plant will create over the next six years will  
22 help southeast Idaho make it through what appears  
23 to be a time of recession in our country.

24 I am not sure if you consider the  
25 quality of the organization or only look at the

1 environmental impact, but I can say from the  
2 hearings I have been involved with Southeast  
3 Idaho Energy that they are a quality  
4 organization. They are open and forthright in  
5 all of their doings. Their goal is the long-term  
6 success of our community along with the success  
7 of other businesses.

8 Southeast Idaho Energy held 12 open  
9 houses in southeast Idaho where their lead  
10 engineers were present and also their president  
11 was available to answer questions. It is  
12 unfortunate that those speaking against this  
13 plant did not attend one of those open houses.

14 I encourage the DEQ to act quickly and  
15 responsibly in granting the air permit.

16 HEARING OFFICER BELZER: Thank you.  
17 Greg Helm.

18 GREG HELM: My name is Greg Helm, last  
19 name spelling is H-E-L-M.

20 The State of Idaho is out of sync with  
21 our national objectives of reducing our carbon  
22 footprint. Idaho and the state's environmental  
23 agencies are not living up to the mission  
24 statement that they profess to live by. The  
25 talk, directions, and actions exhibited by these

1 agencies whose sole purpose is to protect the  
2 environmental and health and safety of the public  
3 is unacceptable.

4 To be more specific, the mission  
5 statement of the Department of Environmental  
6 Quality reads as follows. "To protect human  
7 health and preserve the quality of Idaho's air,  
8 land, and water for use and enjoyment today and  
9 in the future."

10 The IDEQ is most definitely not living  
11 up to this mission statement. They are not  
12 following explicit directions given them by an  
13 executive order issued by the state's governor  
14 which reads as follows: "The director of the  
15 Environmental Quality shall take a leadership  
16 role with all state government departments and  
17 agencies that shall serve as the central point of  
18 contact, coordination, and implementation of  
19 greenhouse gas reduction efforts and other  
20 associated activities."

21 The DEQ shall also develop a greenhouse  
22 gas emission inventory and provide  
23 recommendations to the governor on how to reduce  
24 greenhouse gas emissions in Idaho. IDEQ is in  
25 violation of this executive order and I will

1 elaborate further on this further in my comments.

2 Furthermore, IDEQ's office should not  
3 have allowed any further permitting to large  
4 industrial plants that would per -- that would be  
5 major polluters. This is absurd. They needed to  
6 table all applications of this type until the  
7 executive order directives have been compiled and  
8 completed.

9 The permit as it is written violates  
10 the spirit, if not even the letter of the  
11 governor's executive order. Idaho law is  
12 regulating the level of emissions from industrial  
13 facilities need to be changed. Currently the  
14 laws regulating pollutant emissions are the same  
15 as the federal emission regulations.

16 Idaho is fully capable of leading our  
17 leading nation as a carbon-neutral state. With  
18 Idaho's vast forests, millions of acres of  
19 wilderness area, the largest of any in the lower  
20 48 states, rich farm land, and desert vegetation,  
21 Idaho stands to be a leader in balancing our  
22 carbon footprint.

23 Unfortunately, this is not the case.  
24 It is very apparent that Idaho's doors are wide  
25 open to large polluting industrial facilities.

1 Idaho does not require an environmental impact  
2 study to be completed prior to permitting any new  
3 plant or facility. This is absolutely absurd.  
4 As mentioned, Idaho pollutant emission  
5 restrictions are no stronger than federal  
6 regulations.

7 It is time for the citizens of Idaho  
8 to take a stance and force state law makers and  
9 officials to implement more stringent emission  
10 standards. It is absurd that with the nation's  
11 push to become green that leaders and citizens  
12 of Power County even entered into the idea of  
13 bringing in a plant that intends to burn coal,  
14 petcoke, and possibly other forms of dirty  
15 feedstock.

16 There is no such thing as clean coal  
17 technology. It's the new buzz word every  
18 politician is throwing around. Coal is dirty.  
19 If the phrase was cleaner coal technology, I  
20 might buy into that. But bottom line, coal is  
21 the dirtiest fuel source there is.

22 Coal contains a list of hazardous  
23 pollutants longer than both of my arms. We are  
24 teaching our children to be green. And then we  
25 have a county bringing in black industry and this

1 old adage, do as I say not as I do. This type of  
2 attitude is unacceptable.

3 We who live in Pocatello and Bannock  
4 County as well as neighboring counties to the  
5 north are, quote, downwinders of the proposed  
6 facility. The effects of being downwinders is  
7 currently affecting Idaho's water in the Snake  
8 River Basin and American Falls Reservoir. And it  
9 is also affecting the soil and vegetation. All  
10 due to air born pollutants coming from the State  
11 of Nevada. Air travels and the pollutants in  
12 that air travels right along with it.

13 Why don't I want any more pollutants  
14 into the airshed in the Portneuf Valley? We  
15 already have too many. Adding to that is wrong  
16 and harmful to those who have health related  
17 problems. Ten percent of the residents of  
18 southeast Idaho suffer from asthma. We are  
19 seeing close to epidemic numbers in the increase  
20 in asthma among children.

21 From 1980 to 2007 there has been more  
22 than a 300 percent increase in asthma, and the  
23 contact pollutants that are associated with that  
24 are a big contributor. The pollutants from this  
25 proposed facility will add to the already

1 polluted area in the valley.

2 Let me be clear, I am not against  
3 economic development. In fact, I personally  
4 promote it, but it needs to be done responsibly.  
5 Courting green industries should be at the  
6 forefront of our state and county leaders.

7 There are many issues with the proposed  
8 facility that need to be addressed. There are  
9 many shortfalls and gaps in IDEQ's draft air  
10 quality permit for this large industrial plant in  
11 southeast Idaho, and the citizens deserve a  
12 stringent air quality permit at this proposed  
13 coal plant.

14 Here some of the concerns I have.  
15 Several plant processes may be subject to upset  
16 conditions where emissions are released into the  
17 atmosphere without passing through scrubbers.  
18 This could amount to a black cloud, as mentioned  
19 earlier, that will be transported to downwind  
20 communities.

21 DEQ is proposing to allow the company  
22 to have an unlimited number of these upsets.  
23 This agency should revise the air permit to limit  
24 these number of controls -- uncontrolled emission  
25 events. The coal plant will release huge amounts

1 of greenhouse gases at a time when other states  
2 have plans in place to control these harmful  
3 emissions.

4 Idaho DEQ has not yet even drafted a  
5 rule to begin control of these harmful emissions.  
6 Allowing a coal plant to start up without  
7 controlling carbon emissions is a backward step  
8 for Idaho. In deed, this may be the very reason  
9 that the coal plant has selected Idaho for this  
10 proposed factory; that is, the lack of any  
11 preliminary plans to control greenhouse gases.

12 Coal contains mercury as a byproduct as  
13 well as many other minerals and metals. And the  
14 American Falls Reservoir already is designated as  
15 a fish advisory because of elevated mercury in  
16 fish tissues. This is no time to allow a fully  
17 controlled coal plant to be located upwind from  
18 the Snake River and American Falls Reservoir.

19 The emissions that are coming from the  
20 gold mines in Nevada traveling through the air  
21 are the contributor to the mercury that we have  
22 in the American Falls Reservoir in the Snake  
23 River Plain. Adding more to that is  
24 unacceptable.

25 The technology is available for the

1 company to install continuous emission monitors  
2 on several of their smoke stacks. The company is  
3 not installing them. Instead the DEQ is  
4 depending on the company to self-monitor itself.  
5 This is unacceptable. This method has been shown  
6 in the past to not work in other facilities.  
7 IDEQ should require continuous emission monitors  
8 at this coal plant to protect the public from  
9 excess emissions.

10           The plant will produce 3,600 tons per  
11 days of carbon dioxide from the gasifier. Many  
12 states in this type of gasification facility are  
13 requiring sequestration of CO2 before any type of  
14 permitting is allowed.

15           Sequestration is a pipe dream as they  
16 are talking about putting a pipe from here to  
17 Wyoming. And, in deed, it is a pipe dream. It's  
18 all talk. A lot of this stuff that they have  
19 been shown and proven is all talk. It hasn't  
20 been proven.

21           We need to force them to sequester all  
22 CO2 emissions coming out of that facility. The  
23 facility is not committing to controlling carbon  
24 dioxide emissions. IDEQ must require best  
25 available technology for PM10 2.5 and CO2.

1           The Federal Clean Air Act requires  
2 major emitting facilities to reduce their  
3 emissions to the greatest extent possible by  
4 installing best available control -- control  
5 technology, BACT, for each pollutant subject to  
6 regulation under the act 42U.S.C and 74/75 A4 as  
7 defined by the Federal Clean Air Act BACT means.  
8 An emission limitation based on the maximum  
9 degree of reduction of each pollutant subject to  
10 regulation under this act emitted from or which  
11 results from any major emitting facility, which  
12 the permitting authority on a case-by-case basis  
13 taking into account energy, environmental, and  
14 economic impacts and other costs determined as  
15 achievable for such facility, and through  
16 application of production processes and available  
17 method systems and techniques including fuel  
18 cleaning -- clean fuels or treatment of  
19 innovative fuel combustion techniques for control  
20 of each such pollutant.

21           Because fine particulate matter, PM2.5  
22 and carbon dioxide are pollutants subject to  
23 regulation under the Federal Clean Air Act, IDEQ  
24 is required to establish BACT determined limits  
25 on a project emissions of these pollutants. IDEQ

1 must establish BACT determined limits for PM2.5.

2           Very fine particulates classified as  
3 PM2.5 are produced chiefly by combustion  
4 processes and by atmospheric reactions of various  
5 gaseous pollutants and they can remain suspended  
6 in the atmosphere for days to weeks and be  
7 transported many thousands of kilometers. The  
8 national ambient air quality standards for  
9 particulate matter proposed rule 71 federal  
10 regulation 2619, 2625, dated January 17th, 2006.

11           Widespread dispersion of PM2.5 poses a  
12 major human health threat because these  
13 particulates contain microscopic solids or liquid  
14 droplets that are so small that they can get deep  
15 into the lungs and cause serious health problems  
16 in both the human respiratory and cardiovascular  
17 systems.

18           EPA particulate matter health and  
19 welfare, quote, I have the Web site address  
20 there, which is dated and checked October 8th,  
21 2008. Even short term exposure of 2.5 causes  
22 asthma, especially in children. Other  
23 respiratory illnesses, heart attacks, and  
24 premature death especially in people with heart  
25 and lung disease.

1 I have a lot more here. All right.

2 And I do appreciate Power County coming over  
3 here. And, yes, you folks impact of this  
4 facility will impact the folks here in Pocatello.

5 I am for economic development, but I am  
6 definitely against coal. There's cleaner  
7 technology out there and, yes, clean coal is a  
8 buzz word. It's not clean. It's proven. It's  
9 an oxymoron.

10 And I would like to submit the rest of  
11 this in writing in order to cut this short, and I  
12 would hope that these comments would be addressed  
13 and also read by these residents of Power County  
14 so that they can understand really the dinosaur  
15 that they're getting themselves into.

16 Thank you very much.

17 HEARING OFFICER BELZER: Thank you.

18 I'll receive those comments.

19 GREG HELM: I'll also submit these in  
20 writing.

21 HEARING OFFICER BELZER: Victor Watts.

22 VICTOR WATTS: Sorry, I didn't have  
23 anything prepared --

24 HEARING OFFICER BELZER: If you could  
25 turn around, sir, and spell your last name. It's

1 easier for her --

2 VICTOR WATTS: Victor Watts,

3 W-A-T-T-S --

4 HEARING OFFICER BELZER: -- to pick

5 this up.

6 VICTOR WATTS: I'm just your regular

7 Joe Plumber. And --

8 UNIDENTIFIED SPEAKER: Are you

9 licensed?

10 VICTOR WATTS: All I hear is inquiry.

11 All I hear is like talking money, money, money.

12 A lot of the people that have come up to

13 represent this for this, they all have a vested

14 interest in either the -- building it, or maybe

15 they're using the fertilizer. I don't really

16 think that's right.

17 I know that the State of Idaho uses

18 about 10 or 11 percent funds for economic

19 development and I was curious if any of the

20 taxpayer money has been used to bring this

21 company in, or this -- to promote it. Because I

22 think that's wrong as well.

23 I've lived here since 1978 and I've

24 driven by FMC all the time and there's a big

25 black hill over there, and there's been no effort

1 to cover it up with trees or anything. You know,  
2 I think this new company that's coming in here  
3 ought to -- you know, why don't they spend some  
4 money and green that hill?

5 And I've heard a lot of talk about how  
6 the scrubbers and the -- how they're going to  
7 burn it off and stuff like this. Well, in my  
8 house I use a furnace filter to clean out the  
9 air. Now, the funny thing is you have to take  
10 out the furnace filter when it gets dirty and  
11 where does that furnace go -- where does that  
12 filter go? It goes into the dump, the Pocatello  
13 dump. Okay.

14 This -- this plant uses probably some  
15 sort of scrubber, cleaner, filters where do these  
16 filters go? They probably go into a dump  
17 somewhere. And they probably leach into the  
18 water.

19 Another question I have is why don't  
20 they build it somewhere close -- closer to the  
21 coal? I mean, it seems more reasonable. Why  
22 wouldn't you build it closer to where the coal  
23 actually comes from?

24 I don't know how many people have  
25 property around this -- where this proposed plant

1 is going to be, but I have a feeling that it  
2 would devalue your property around this. I mean,  
3 the property around FMC is Simplot's. It's  
4 probably not worth a lot, as far as, you know,  
5 housing and different things like that. You're  
6 not going to build, you know, stores and stuff  
7 around that property.

8 I think that there's other options,  
9 there's other types of businesses to bring in  
10 jobs, like solar, wind power. I don't think coal  
11 is the way to go, even though we have a lot of  
12 it.

13 And you use -- it's fertilizer plant --  
14 well, that's another thing I don't understand.  
15 At first this was proposed as a power -- power  
16 plant which, you know, we all use power. We  
17 probably have to have it, you know.

18 When I lived in Arizona for a couple  
19 years, they had a system where, you know, you  
20 would -- you would reduce your -- you'd only dry  
21 your clothes on a certain day of the week. We  
22 don't even have that in Idaho so we haven't even  
23 explored the levels to bring down our consumption  
24 of energy.

25 But now it's not even an energy plant.

1 It's a fertilizer plant. And a fertilizer plant,  
2 there's runoff from fertilizer. You know, I  
3 really think we need to go -- try to go organic.  
4 Fertilizer -- they talk about the Mississippi  
5 River. Fertilizer goes down the Mississippi  
6 River, gets into the Gulf of Mexico, and I  
7 believe that the Gulf of Mexico is like a dead  
8 ocean. There's nothing in there. And it's  
9 because those fertilizers run into the ocean.

10 And like I said, there's other options.  
11 There's organic farming. I don't think that we  
12 need a whole lot of more Big Macs, you know. I  
13 could stand to lose a few more Big Macs. We  
14 don't need huge tomatoes and huge things. I  
15 mean, my stomach cannot take anymore. If we go  
16 to organic -- you know, I'm 6-foot 8. I'm  
17 probably 280 pounds and I could stand to lose  
18 some weight.

19 People talk about how this will bring  
20 in jobs. And this is great. But a lot of times  
21 when you bring in jobs and economic development,  
22 you see lot of -- you can see an increased level  
23 of crime. Another concern I have is, you know,  
24 Idaho we kind of live in a desert. I know  
25 Pocatello gets -- has some water from the

1 reservoir and Palisades, but I think that if we  
2 bring in more people, we're going to -- slowly  
3 we're going to run out of water and I think this  
4 is a real concern. I think the water might  
5 become more valuable than the fertilizer.

6 And, you know, I don't have a vested  
7 interest. I'm not a contractor. I don't have  
8 a -- you know, I don't grow potatoes. I'm not a  
9 son of Simplot, you know. So I'm asking you  
10 what's in it for me? A lot of what I see from  
11 FMC, I've seen the smoke and everything billowing  
12 out. You know, why doesn't this company put in a  
13 small fund ahead of time like for health care to  
14 the City of Pocatello to address future problems  
15 because right now the FMC -- there's a -- there's  
16 a stain on that hillside.

17 I think that this company deceives the  
18 public from going from a power idea to a  
19 fertilizer idea.

20 You work for the EPA; is that correct?

21 HEARING OFFICER BELZER: I'm not going  
22 to respond to any questions you have, and I'll  
23 ask you to try to wrap it up. We're going to try  
24 to limit it to five minutes. The hour is getting  
25 late.

1 VICTOR WATTS: Sir, I challenge you to  
2 walk up the hill on FMC, there's ponds there. I  
3 challenge you to drink the water from one of  
4 these ponds. If you are willing to do this, then  
5 I will accept, you know, anything that -- any  
6 sort of pollution that comes from there.

7 This water that's in those ponds  
8 eventually gets into our rivers and lakes and  
9 streams. And I honestly, if you were willing to  
10 go up there and just take a drink of the water  
11 from one of these ponds -- you know, if it  
12 supposed to be cleaned up, it's probably clean,  
13 right? So if you go up there you just take a  
14 drink. That would be great.

15 That would that show me that -- that  
16 your business, your EPA has done its job and  
17 cleaned up the water and the land up there. That  
18 it's safe enough that you and I and our children  
19 we can all drink from it.

20 HEARING OFFICER BELZER: I'll ask you  
21 to finish your comments. Thank you.

22 VICTOR WATTS: I'm done. Thank you.

23 HEARING OFFICER BELZER: Thank you.

24 William Sharp.

25 WILLIAM SHARP: I'm William Sharp.

1 That's S-H-A-R-P. I've been retired here for  
2 roughly ten years. And I'm a resident here of  
3 Pocatello. I've been here since I moved from  
4 Oregon 33 years ago.

5           And when we came here, we took a look  
6 at the environmental concerns and so forth of  
7 Idaho as compared to Oregon. And we looked --  
8 first of all, why would you want to put a plant  
9 here in Idaho? As some of the others have  
10 pointed out ahead of me, that, yes, you are  
11 closer to the coal fields, and so forth, if you  
12 were to produce this plant elsewhere. So it is  
13 politically motivated perhaps that maybe we're  
14 easy on pollution.

15           In the State of Oregon, for example, a  
16 very environmentally concerned community, our  
17 governor at the time, Tom McCall, he said -- he  
18 told the Californians, come visit, but don't live  
19 here. Because we don't really want to increase  
20 the size of the State of Oregon. We want our  
21 good environmental quality.

22           And actually I saw in that state where  
23 at one time for a short period of time, they shut  
24 down a paper processor for putting too much  
25 mercury into the Willamette River.

1 THE REPORTER: What river?

2 WILLIAM SHARP: The Willamette. Some  
3 people here pronounce it Willamette, but it is  
4 the Willamette.

5 So then I watched them -- the State of  
6 Oregon turn down an aluminum plant that they were  
7 going to bring in from a foreign manufacturer and  
8 they said, yeah, you meet a lot of our  
9 requirements, and so forth, but we do not need  
10 any extra pollution in this state.

11 So I'm not against development. I am  
12 for responsible development. I -- for example,  
13 as we take a look here, we saw the wind turbines  
14 that they were trying to bring in. I was very  
15 much in favor of those, and I hope that they do  
16 come up with more wind power.

17 But my purpose here tonight is to talk  
18 talk to you about the carbon footprint and --  
19 you've come up with very different estimates here  
20 of the amount put into the air; I see one  
21 estimate here is 3,600 tons per day. And I'm  
22 very concerned with that as well as some of the  
23 other pollutants that might be there.

24 My expertise was in the area of drugs,  
25 and as some of you people have watched -- some of

1 your pharmaceutical houses, they put out drugs  
2 onto the market and they say, yes, this has been  
3 approved by the Food and Drug Administration.  
4 And it was.

5           And then what happened, well, a few  
6 years down the road, here, well, people started  
7 having problems and they died. And by the way,  
8 while your heirs, they can sue them and get the  
9 money from that if you wanted to commit your life  
10 to something like that. All I'm playing up to is  
11 you people tell me that, hey, these standards  
12 here, they've been approved. Yes, they can --  
13 they're great. We can use them. But be careful  
14 because you do not know what those pollutants  
15 really happen to be.

16           So with something like that, I see some  
17 of you talking about, well, they can use slag on  
18 the roads. I believe we used to use slag on the  
19 roads in Pocatello, if I remember correctly. I  
20 don't believe we do that anymore.

21           And, in fact, we had a previous  
22 legislator who at one time when he pointed out  
23 all the air pollution coming from these stacks  
24 out here to the west of Pocatello, his comment  
25 was, yeah, it looks like money to me.

1           So with something like that, I would  
2 like to point out to you that with my concern  
3 here on the carbon footprint, there's -- and you  
4 can pick up -- there are two articles today in  
5 the Wall Street Journal concerning carbon  
6 footprint and so forth.

7           One which is talking about changing  
8 here and where you could set aside if you had a  
9 dump that was producing methane and then you make  
10 an agreement with them and you get a certain of  
11 money to work something out with them so you  
12 don't have to burn coal.

13           But I would like to point out to you  
14 also that big coal -- one of the headlines here,  
15 big coal is campaigning to keep its industry on  
16 the candidate's minds.

17           And it points out here that the  
18 president of the American Coalition for Clean  
19 Coal Electricity -- a Virginia group funded its  
20 country's major coal burning utilities, coal  
21 producers, and railroads that haul coal over the  
22 past year, this organization has spent nearly \$40  
23 million on television, and radio spots, and other  
24 outreach to bolster the public support for coal.

25           So it's something here that -- yes, if

1 you say our's is better, here it is. And I would  
2 also point out to you as has been pointed  
3 previously this evening here in the same article  
4 here that Senator Obama and McCain, they indicate  
5 here, both of them, that they support setting  
6 economic wide caps on industry of emissions of  
7 greenhouse gases.

8           They also point out here that many  
9 independent energy experts agreed that technology  
10 is critical to make a dent in greenhouse gases.  
11 And what they're saying is, yeah, we need an  
12 improvement in technology to come up with this  
13 for our greenhouse gases. And not nearly enough  
14 money is being spent right now to come up and  
15 produce this technology.

16           So it also points out finally here that  
17 some legislators are demanding a halt to the  
18 construction of new conventional coal-fired power  
19 plants that lack carbon capture and storage  
20 technologies. And as I believe this plant here  
21 is -- it says, yes, maybe down the road we'll  
22 send our carbon dioxide over to Mont -- excuse  
23 me. Over here to Wyoming. Maybe they will,  
24 maybe they won't. I don't know.

25           But it is a problem, and as pointed out

1 here nationally and internationally, I think we  
2 need to take a look at something like that.  
3 Thank you.

4 HEARING OFFICER BELZER: Thank you.  
5 Keene Hueftle. Del Butler.

6 DEL BUTLER: Thank you. My name is Del  
7 Butler, B-U-T-L-E-R. I've been a resident of  
8 Pocatello for about the last 36 years. In that  
9 same amount of time, I've been employed by  
10 Simplot. I've got about 35 years of experience  
11 in the manufacturing of fertilizer products. And  
12 the last nine of those 35 years, I spent as plant  
13 manager of the facility here west of Pocatello.

14 I should say that I'm not here  
15 representing Simplot; nor have I been requested  
16 or instructed by the Simplot organization to  
17 come, so my views are certainly my own.

18 With years of operations, I'm quite  
19 confident in the DEQ and EPA's ability to be able  
20 to implement the best control regulations that  
21 would require best control technology where it's  
22 applicable and to have control limits that would  
23 meet pertinent regulations as they would apply to  
24 that particular facility.

25 Without being too redundant, I'd like

1 to hit just a couple of points, which is  
2 throughout the Pocatello area, there's been this  
3 mindset that says the example would be to look at  
4 the Bridger Plant to get an indication of what  
5 you may have as a result of coal gasification and  
6 we ought not to confuse a coal-fire operation  
7 with a coal gasification process.

8           If I might, I'd like to take you back  
9 just a little bit in time into the industrial  
10 revolution. We're certainly everything was not  
11 done exactly right. But there were great  
12 innovations that had taken place during that  
13 period. And the fact that the U.S. has been  
14 willing to be the leader in a variety of  
15 technologies and industry, is what's kept our  
16 nation in a position of being great and the great  
17 economic power that it is.

18           But I would even suggest that with this  
19 new technology, which is very well proven and our  
20 friend from INEL articulated that issue very  
21 well, that we should recognize that there -- as  
22 this new technology is developed that we need to  
23 capitalize on it.

24           Another interesting point that we need  
25 to recognize within our economy or within the

1 world as a whole, the fertilizer industry is  
2 really a noble-type industry. When I first  
3 started in the employment arena in the late '60s,  
4 early '70s, since that time frame, the world  
5 population has virtually doubled.

6 In that same time frame, hunger  
7 throughout the world has gone down by about  
8 30 percent. And so it's interesting that you can  
9 have a population double and hunger at the same  
10 time go down rather dramatically.

11 Quite frankly, it takes these  
12 fertilizer products to be able to help accomplish  
13 that. I wouldn't suggest that's the only facet.  
14 It takes transportation. It takes a myriad of  
15 other items to be able to make that accomplish --  
16 or be able to accomplish that particular task.

17 But the fact of the matter is, if we  
18 were to go organic or if we were to go to a  
19 variety of other poorly thought out alternatives,  
20 the success rate and the impact on the world  
21 would be rather dramatic.

22 I think that it's also important for us  
23 to develop a variety of energy resources. Coal  
24 gasification is one of those that, yes, it can be  
25 used to make electricity; it can be used to make

1 a variety of different fuel sources; it can also  
2 be used to make fertilizers. That's part of the  
3 beauty of coal.

4 I suspect that you would probably --  
5 and you're hearing a little bit of an outcry  
6 today, but I suspect that regardless of the  
7 choices that you make, be it wind power, be it  
8 nuclear power, be it coal, be it research for  
9 coal or gas, or oil fields, that you'll have a  
10 similar type outcry.

11 But the world literally and certainly  
12 the nation can't be put in a position to where we  
13 don't move ahead and take care of those pressing  
14 issues such as hunger across the world.

15 I have also been responsible for the  
16 full range of operations of these kinds of  
17 operating facilities. I know that they can be  
18 done safely. I know that there will be areas  
19 within this proposed facility that would require  
20 process safety management, just the same as it  
21 would require various environmental controls, and  
22 safeguards.

23 And I'm confident that all of those  
24 hurdles can be met, and I strongly support moving  
25 forward in a timely fashion of this particular

1 project. Thank you.

2 HEARING OFFICER BELZER: Thank you.

3 That concludes the list of those stating a desire  
4 to make comments from the sign-in roster. Are  
5 there any that would like comment that did not  
6 express this desire on the roster? Any who would  
7 like to speak a second time?

8 This hearing having been called  
9 commenced at 7:30 p.m. It is now 9:19 p.m. and  
10 the hearing is closed. All final written  
11 comments must be received by DEQ by 5:00 p.m.  
12 mountain standard time/mountain daylight time  
13 November 24, 2008. Thank you.

14 (The hearing concluded at 9:19 p.m.)

15 -ooOoo-

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**Appendix E**  
**Comments Submitted for**  
**Permit to Construct**

*Federal Comments: U.S. EPA and the Shoshone-Bannock Tribes*

**P-2008.0066**

# The SHOSHONE-BANNOCK TRIBES



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Comments submitted by e-mail- 11/24/2008

TO:

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Docket # AQ-0819

Subject: Permit to Construct- Air Permit- Power County Advanced Energy Center

Comments on Power County Advanced Energy Center (hereafter "PCAEC")

**Tribes are "affected State"** - Thank-you for this opportunity to comment on this important Air Quality Permit. The Shoshone-Bannock Tribes are an "affected State" as defined by Section 505 of the Clean Air Act and amendments and as such we request that IDEQ carefully consider and respond to the following comments.

The draft permit fails to account for and control two important pollutants: PM 2.5 (fine particulate matter) and Carbon Dioxide.

**PM 2.5 must be regulated** - The applicant failed to provide emission estimates and control technology for PM 2.5 particles, a National Ambient Air Quality Standard (NAAQS). These very fine particles that will be emitted by the PCAEC are dispersed over long distances, remain suspended in the air for long periods of time, and have proven to cause cardio-pulmonary diseases, because they are ingested deeply into the lung tissue.

Page 1 of 9

PM<sub>2.5</sub> is a pollutant for which National Ambient Air Quality Standards (“NAAQS”) have been established and subsequently revised in response to well-documented public health concerns. As such, PM<sub>2.5</sub> is indisputably a “pollutant subject to regulation under th[e] CAA.” 42 U.S.C. § 7475(a)(4); see also 40 C.F.R. 52.21(b)(50) (expressly defining regulated pollutants for purposes of the Prevention of Significant Deterioration (“PSD”) program to include “[a]ny pollutant for which a national ambient air quality standard has been promulgated”). The IDEQ is obligated to include PM 2.5 in their permit as outlined in the Idaho Rules IDAPA 58

Accordingly, EPA has acknowledged that “[t]he obligation to implement PSD is triggered upon the effective date of the NAAQS.” Rule to Implement the Fine Particle National Ambient Air Quality Standards, Notice of Proposed Rulemaking, 70 Fed. Reg. 65,984, 66,043 (Nov. 1, 2005). Indeed, EPA is proposing to rely on BACT emission limits to help achieve attainment of the PM<sub>2.5</sub> NAAQS across the country. See Prevention of Significant Deterioration (PSD) for Particulate Matter Less Than 2.5 Micrometers (PM<sub>2.5</sub>) — Increments, Significant Impact Levels (SIL), and Significant Monitoring Concentrations (SMC), Proposed Rule, 72 Fed. Reg. 54,112 (September 21, 2007).

Nevertheless, the proposed air quality permit for the Power County Advanced Energy Center contains no BACT analysis or limitation for the facility’s PM<sub>2.5</sub> emissions. See Statement of Basis, pp. 41-48. The EPA promulgated a rule-making in October 2006, making it mandatory for emission sources to limit these pollutants. PM 2.5 also contributes significantly to widespread haze that reduces visibility, as well as adverse health impacts. Unfortunately, this pollutant was not addressed by the applicant (PCAEC) in their permit and, likewise, not addressed in the draft permit. As a practical matter, control technology that is effective for PM<sub>10</sub> may not be sufficiently effective to control the finer sized PM<sub>2.5</sub> particles emitted by the coal plant. Best Available Control Technology (BACT) needs to be installed for PM 2.5 sources within this coal plant.

The permit, if it is to be compliant with the Clean Air Act, must be denied and returned for a revision that includes control of PM 2.5.

**Carbon Dioxide must regulated** - The applicant’s coal plant will also produce approximately 150 tons per hour of Carbon Dioxide (CO<sub>2</sub>) from the gasifier of the plant. The company has not committed to controlling green-house gas emissions. Huge amounts of Carbon Dioxide will be released to the environment from this facility. The Washington D.C. Federal Circuit Court recently ruled that carbon dioxide is a pollutant, as defined by the Clean Air Act (42 U.S.C. § 7475(a)(4)) and must be controlled. These gases contribute to adverse environmental impacts. Idaho’s Governor recognized the damages of this pollutant when, in May, 2007 he passed an Executive Order (attached) directing Idaho DEQ to account for, and to minimize harmful carbon dioxide emissions. It would be a large step backward for the State of Idaho to accept a coal plant that does not control these greenhouse gases, at a time when other States are scrambling to control these pollutants. Carbon dioxide is also “subject to regulation,” as that term is defined, under Section 111 of the Clean Air (Standards of performance for Stationary Sources). The IDEQ must deny this permit, based on the omission of carbon dioxide control technology or this coal plant will be in violation of the Clean Air Act, referenced above.

The Idaho Code at Chapter 1, Title 39-115, specifically mandates that IDEQ's Director issue permits that control "regulated air pollutants" as defined by the Clean Air Act. The IDEQ will be in violation of this Code if they fail to include PM2.5 and Carbon Dioxide, but more importantly the PCAEC will be in violation of this Code and the Clean Air Act (section 111) if they fail to include in their final permit adequate emission estimates and the installation of Best Available Control Technology for these pollutants at this facility upwind of the Fort Hall Reservation.

**Inadequate BACT Analysis** - The application and IDEQ's Statement of Basis for this permit failed to follow EPA's guidance on BACT analyses, including the "Top-Down" analysis for each emission point, an excerpt of the guidance is as follows:<sup>1</sup>

In brief, the top-down process requires that all available control technologies a reranked in descending order of effectiveness. The PSD applicant first examines the most stringent -- or "top" -- alternative. That alternative is established as BACT unless the applicant can demonstrate, and the permitting authority in its informed judgment agrees, that technical considerations, or energy, environmental, or economic impacts justify a conclusion that the most stringent technology is not "achievable" in that case. If the most stringent technology is eliminated in this fashion, then the next most stringent alternative is considered, and so on.

The Clean Air Act places the responsibility of proposing BACT on the applicant and the confirmation of BACT on the permitting agency, in this case IDEQ. Specifically, "Best Available Control Technology" ("BACT"), is a federal requirement codified at 40 C.F.R. 52.21(j)(2) and is incorporated by reference within the State Rules at IDAPA 58.01.01.107.03(d); and 2) whose rules stipulate that BACT is required "...for each regulated air pollutant for which a new major facility would have the potential to emit in excess of the significant rates."

However, neither the application nor IDEQ's Statement of Basis, specifically state which pollutant BACT applies. Furthermore, neither document delineates the applicability of BACT analyses on Fluorides, PM 2.5, Sulfuric Acid Mist (SAM) or Total Reduced Sulfur (TRS).

BACT analyses of PM 2.5 and CO2 must be done by IDEQ because they are regulated pollutants. Carbon Dioxide is a pollutant that is "subject to regulation," as it is used in the Clean Air Act as well as the PSD regulations, and PCAEC must get a BACT-based permit limit for these pollutants.

In addition, where cost effectiveness analysis was performed as part of BACT, it was done erroneously by the applicant: for example, in evaluating use of selective catalytic reduction (SCR) for the package boiler, the cost effectiveness analysis was performed on an incremental basis rather than

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<sup>1</sup> John Calcagni, Memorandum, Background Memorandum, on BACT Top-Down Policy, June 13, 1989

based on the "no controls" basis. BACT determinations, including cost effectiveness, needs to be accurate and up to date in the PTC permitting process.

The inadequacy of the BACT analysis by the applicant and IDEQ is also demonstrated by the poor efficiency of the feedstock baghouse scrubbers which are shown to be considerably less efficient than the industry standard. As pointed out in another section of these comments, the applicant failed to provide the IDEQ manufacturer and operating parameters of a number of air control devices, reporting them as "To-Be-Determined", which further weakens IDEQ's ability to perform BACT analyses, or to assess the Potential To Emit (PTE) for pollutants. This permit application must be denied until the IDEQ can obtain the information necessary to complete a BACT analysis that conforms with the EPA's Top-Down guidance

**Inadequate MACT Limits for Mercury and Other HAPs** - The draft permit and statement of basis fails to describe a Maximum Achievable Control Technology ("MACT") analysis for the PCAEC and to set corresponding enforceable emission limits for mercury and all other hazardous air pollutants ("HAPs") to be emitted by the proposed emitting units, as required by the Clean Air Act, section 112, 42 U.S.C. § 7412. A MACT analysis often results in lower emissions limits than would a BACT analysis for the same pollutant. In establishing BACT, a permitting authority balances the cost of achieving emissions reductions with the environmental impact of pollutant emissions. A MACT analysis, by contrast, looks solely at the maximum emissions reductions achievable, and accordingly may result in lower permitted emissions limits.

MACT requirements apply to "major sources" that have the potential to emit 10 or more tons per year of any one HAP or 25 or more tons per year of a combination of HAPs. 42 U.S.C. § 7412(a)(1). IDEQ and PCAEC have not even provided estimates of uncontrolled HAP emissions from the coal plant to determine whether they would exceed the major source. Instead, IDEQ proposes to allow them to side-step MACT requirements by limiting their HAP emissions. Specifically, "HAP emission limits were set at 8 tons per year for any HAP and 20 tons per year for all HAPs to provide a federally-enforceable limit to keep the facility as a minor or synthetic minor source for HAPs." Statement of Basis, p. 49; see also Draft Permit, p. 7

IDEQ's proposal to allow PCAEC to take "synthetic minor" status with respect to HAP emissions is severely flawed. Case law is clear that "a proposed facility that is physically capable of emitting major levels of the relevant pollutants is to be considered a major emitting facility under the Act unless there are legally and practicably enforceable mechanisms in place to make certain that the emissions remain below the relevant levels." Weiler v. Chatham Forest Products, Inc., 392 F.3d 532, 535 (2d Cir. 2004) (emphasis added); see also National Min. Ass'n v. U.S. E.P.A., 59 F.3d 1351, 1362 (D.C. Cir. 1995) (a facility's potential to emit pollutants above threshold levels may only be limited by "effective controls" to avoid major source review) (emphasis in original).

Within this draft permit IDEQ does set HAP emissions limits below threshold levels, but unfortunately these limits are not "practicably enforceable." The draft permit fails to require any HAPs monitoring whatsoever to allow IDEQ to determine whether PCAEC is in compliance

with the established limits. Of particular concern is the Mercury emissions from this facility as there is a Mercury-based Fish Advisory in the American Falls Reservoir at the present time and any new contribution of Mercury deposition could ruin the fishery in these waters and impair the health of Tribal members, and members of the public, who fish these waters. In spite of these Mercury exposure risks, the PCAEC failed to estimate emissions of these HAPs (see Table 3.3). The PCAEC needs to go back and revise their permit to address the significant gap in addressing HAPs in this permit process.

To comply with Clean Air Act section 112, IDEQ should perform a MACT analysis for each HAP that will be emitted by the Power County Advanced Energy Center and establish corresponding emissions limits in the PTC permit. ( Although PCAEC proposes to control mercury emissions using activated carbon beds, the company has not performed an analysis to determine whether the proposed control technology represents MACT for the facility.) At the very least, IDEQ must require continuous emissions monitoring of mercury and frequent monitoring of all other HAPs emitted by the Power County Advanced Energy Center.

**Upset Condition Limits Needed** - Several plant processes may be subject to “upset conditions” where emissions are released to the atmosphere without passing through a pollution scrubber or control device. This could amount to a black cloud that will be transported to downwind communities. Also, because the flare is steam assisted, the emissions may look like steam or water vapor as they exit the stack initially but, in fact will contain large volumes of pollutants. The draft permit places no limit on the number of malfunctions, or upsets, that would by-pass scrubbers at the gasifier flare. (Stack testing at this flare is required, but not during a “start-up” event, consequently no one will know the emissions when an upset malfunction requires venting to the flare.) I recommend that IDEQ limit number of upsets or malfunctions to no more than one per month. To allow any more than this, will mean that the company cannot control it’s emissions. After one year of operation the company and the IDEQ should re-evaluate the modeled impact to the ambient level of NAAQS and visibility, based on actual emissions from these “upsets”, “start-ups” and “malfunctions”. The Agency should revise the air permit to limit the number of these uncontrolled emission events.

**PCAEC submitted an incomplete PTC application** - The permit Application violates the requirement for completeness at IDAPA 58.01.01.124 -124. TRUTH, ACCURACY AND COMPLETENESS OF DOCUMENTS, as well as section 58.01.01.204 which requires a completeness determination by IDEQ for any PTC permit. The PCAEC violated the aforementioned Rules in the following ways:

IDAPA Air Rules requires that “All documents submitted to the Department shall be truthful, accurate and complete.” The application has reported numerous cases where they are still trying to determine the manufacturer of their control equipment. In fact, there are over **twenty cases** where the applicant did not submit the manufacturer of process or control equipment, rather they have reported it as “To-Be-Determined” in their application. The conclusion may be drawn that the applicant is not properly prepared to construct such a large coal processing plant, and the gaps in providing the manufacturer of control equipment is a serious deficit in their application.

For example, many of PCAEC's feedstock handling pieces of equipment require baghouse control equipment. Their emission estimates to IDEQ depend upon a control efficiency of 99% -an efficiency that if it is to be achieved, should leave nothing to guess-work. Yet for many of these sources of feedstock emissions the baghouse manufacturer, cleaning method, and operating parameters are left under the status of "To Be Determined". All baghouses, if they are to operate efficiently, must have an automatic bag-cleaning capability such as a reverse air pulse system, among other methods, along with a warning system to alert the operators of reduced efficiency, otherwise particulate emissions, will not be adequately controlled.

IDEQ cannot evaluate the baghouse efficiency, or flow limits, temperature limits, or bag cleaning systems without reviewing manufacturer capability. These gaps in information clearly limit IDEQ's ability to perform a BACT and MACT analyses. But the gaps in the application are not limited to the feedstock emission sources. PCAEC failed to include control equipment for the Syngas cleanup train, the wet scrubber for the urea granulator, nitric acid plant control device. Additionally the application reports that 150 un-covered railroad cars of coal are scheduled to be parked at the facility, but no accounting of the associated emissions, and no control technology was proposed in the draft permit for this fugitive dust source. The application reports (at 2-51) that 70,000 tons of granulated urea will be crushed, screened, transferred via conveyers to a storage area, and then loaded into uncovered railcars, yet no analyses of these process fugitives or the railcar fugitives were found in the application or statement-of-basis. (Railcars stationed on PCAEC property are emission sources and must be controlled by the applicant.)

The facility is under-reporting their emissions by submitting an incomplete application. The permit should be revised to require controls from all fugitive sources, and the emission estimates revised accordingly. Together, these sources of emissions are potentially significant and their control equipment and the operating parameters must be included for IDEQ, EPA, and the public, to assess this huge coal plant. It is erroneous to conclude that the IDEQ can "cover" this incomplete application by evaluating the yet-to-be-submitted Operation and Maintenance (O&M) manual. IDEQ has an obligation to return this PTC permit back, as incomplete, and require a complete application that includes each relevant operating parameter, all manufacturers of the process equipment and control equipment, and to allow the public to review and comment on a complete application. The PCAEC has violated the requirement for completeness at 58.01.01.124 and IDAPA 58.01.01.204.

**Potential to Emit** - Neither the application nor the statement of basis contains sufficient information detailing the facility's potential to emit (PTE) air pollutants. Table 3.2 in the statement of basis is labeled as "Controlled Emissions Estimates of Criteria Pollutants" and Table 3.3 is entitled "Controlled HAPs Summary." Neither of these references meets the definition of potential to emit (PTE) assessment as required by EPA or as required in the State Rules at IDAPA 58.01.214.02. Since a facility's PTE can be a critical element in determining applicability of various regulations, it is important to document this as part of a construction permit. The statement of basis should include the PTE for each emissions unit and the facility as a whole. In the case of NOx, PM10, and PM2.5 where modeled concentrations are close to the regulatory threshold level, more detailed modeling of these pollutants are needed to assure

compliance with PTE requirements, and a revision of the permit to provide for enhanced monitoring, and stringent recordkeeping and reporting requirements to ensure that the levels of these pollutants are below regulatory screening levels. As pointed out in a previous section, there are several fugitive sources of pollutants that were not addressed by the application, Statement of Basis, or draft PTC permit: uncovered railcars of coal, the granulated urea crusher (what is the control device at this source?), the other transfer points at the urea granulator including the screen, conveyers, railcar loading and uncovered railcar (fugitive dust source). There is no description or assessment of the potential-to-emit (see Figure 2-9 of fugitive emissions at the urea granulation plant. All of these above-described deficits in emission estimates and PTE analyses when considered as a whole results in an application that under-reports emissions, does not meet the PSD permitting Rules (40 CFR part 52 *et seq*) nor BACT guidelines of EPA nor those of the State's (at IDAPA 58.01.214.02).

**Radionuclides and Slag-** Idaho Air Quality Rules (IDAPA 58.01.01 *et seq*) exempt the need to perform an assessment of the potential to emit only if the PTE of radionuclides is less than 1% of the standard. Because slag from the gasifier process may contain radionuclides, or even concentrate them, the IDEQ should require PCAEC to assess the Potential to Emit of slag to determine compliance with both 40 CFR Part 61, Subpart H, and IDAPA's rule for categorical exclusion at IDAPA 58.01.01.221.02.

**New Source Performance Standards** - We agree with the Region 10, EPA's position (see Nov. 18, 2008 letter from Richard Albright to Martin Bauer) on the applicability of NSPS Standards with respect to the need for the PCAEC to demonstrate compliance with 40 CFR Part 60, Subpart H, Standards of Performance for Sulfuric Acid Plants. Specifically, in the statement of basis, IDEQ states that 40 CFR Part 60, Subpart H, Standards of Performance for Sulfuric Acid Plants does not apply to the sulfuric acid production unit proposed for this project. The processes at the PCAEC facility and at the facility addressed in the prior Subpart H applicability determinations are substantially different. At the PCAEC facility, a Selexol unit will be used to remove hydrogen sulfide (H<sub>2</sub>S) from the syngas stream. H<sub>2</sub>S is then stripped out of the Selexol solvent and sent to the sulfuric acid production unit. In this configuration, the sulfuric acid production unit cannot be considered a control unit, and consequently, Subpart H does apply to this unit.

Performance testing at the ZLDS should be more frequently than once per five years.

Although applicant claims that efficiency of baghouses offer 99% efficiency over uncontrolled emissions, the draft permit allows the feedstock sources to operate at a much reduced range of efficiency. See calculation copied below which uses the data provided from applicant's "uncontrolled" emission rate of PM<sub>10</sub> and compares that figure to the permitted emission limit of this pollutant. (See Table 3-2, page 17). The result shows that IDEQ is allowing the applicant to operate this baghouse control at only 49% efficiency, when most manufacturers claim that the efficiency is 99% for this technology. This error is repeated throughout the feedstock section of the draft permit. The IDEQ needs to revise the permit so that the control technology actually achieves BACT, which is 99% efficiency at these baghouse controls.

**Sample feedstock efficiency calculation**

<u>Feedstock emissions</u>	(912,500 tons/year)	annual uncontrolled
<u>Source</u>	Uncontrolled emissions in lbs/ton (see Table 3.2) page 17	emissions - in lbs
Railcar unloading pm-10	0.00087	793.875
	uncontrolled emissions in lbs/Hr	0.090625
PM10 Emissions permitted after control: .044 lbs per hour (Table 3.3 of permit)		
Actual control efficiency of PM 10 in permit.....	.044/.0906 X 100 = 49%	
Efficiency claimed in application:	99%	

The IDEQ permit has not required the applicant to install baghouse cleaning systems, or warning systems within their permit. (BACT analyses needs to be completed by IDEQ on this issue.) The permit should be revised to require electronic bag failure systems on all baghouses, and require close monitoring and thorough reporting requirements of the baghouse operations. Otherwise, this plant may exceed estimated emissions and adversely affect visibility of nearby Class I airsheds, possibly exceed PSD increments, and certainly exceed the 99% efficiency claimed by this coal plant.

Continuous Emission Monitors (CEMs) should be installed on all exits stacks where technically feasible. For example, all baghouse stacks should be required to have continuous opacity monitors installed, with record-keeping requirements to allow the facility operators and IDEQ staff monitor the emissions from these stack sources. These CEMs would be particularly beneficial in this permit, given the low efficiency required in the draft permit of feedstock area baghouses. Furthermore, a BACT analysis of appropriate opacity limits should be done by IDEQ because opacity levels at other plants can achieve much better than the 20% proposed at this facility's baghouse exhausts and from other point source exhaust stacks.

**Incorporate by Reference SIERRA Club Comment** - The Tribal Air Quality Department hereby incorporates by reference the comments submitted by the Sierra Club, Public Comments on proposed Air Quality Permit to construct For Southeast Idaho Energy Pwer County Advanced Energy Center, Docket Number AQ- 0819, Project Number P-2008.0066".

In summary this proposed application by the Power County Advanced Energy Center falls considerably short of what is required by the Clean Air Act and Idaho Air Quality Permit rules. The PCAEC failed to address two critical pollutants, PM 2.5 and Carbon Dioxide, completely, even though they are "regulated pollutants". Carbon Dioxide emissions contribute to adverse environmental impacts in the State of Idaho. Idaho's Governor recognized the damages of this pollutant when, in May, 2007 he passed an Executive Order (attached) directing Idaho DEQ to account for, and to minimize harmful carbon dioxide emissions. The IDEQ needs to recognize the Executive Order and require controls of greenhouse gases within the PTC permit. Further, the applicant failed in many ways to fully report Potential To-Emit (PTE) values for all

pollutants, rendering the application "incomplete". Although the applicant is required to demonstrate Best Available Control Technology (BACT) for pollutants that may be significant, they failed in many cases to adequately research and employ BACT for their emission sources. The applicant also failed to adequately report their Potential-To-Emit (PTE) in sufficient detail to allow IDEQ to assess appropriate emission limits. The application and draft permit also failed to incorporate MACT assessments for Mercury and other Hazardous Air Pollutants (HAPs), as required by EPA and Idaho's Administrative Rules.

The applicant reported over twenty pieces of process equipment or control equipment under the status of "To Be Determined". The applicant failed to address several sources of fugitive emissions, including large numbers of un-covered railcars of coal and granulated urea, as well as several transfer points of granulated urea. The conclusion, from all these gaps in the application is that they submitted an incomplete application. The IDEQ has an obligation to return this application back, and require a comprehensive assessment and reporting of PTE, BACT, for all pollutants and MACT for all hazardous Air Pollutants, before allowing construction to begin.

Thank-you again for the opportunity to comment on this important air quality permit to construct.

Sincerely,



Roger Turner,  
Air Quality Manager

cc: Richard Albright, Region 10, Director of Air  
Sue Skinner, Community Based coordinator, EPA, Pocatello

attachment (Idaho Executive Order 2007-05)  
Sierra Club Comments, incorporated by reference, attached hereto



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## *The Office of the Governor*

THE OFFICE OF THE GOVERNOR  
EXECUTIVE DEPARTMENT  
STATE OF IDAHO  
BOISE

**EXECUTIVE ORDER NO. 2007-05**

**ESTABLISHING A STATE POLICY REGARDING THE ROLE OF STATE GOVERNMENT IN  
REDUCING GREENHOUSE GASES**

*WHEREAS, there are indications that atmospheric concentrations of greenhouse gases are rising and are*

[http://gov.idaho.gov/mediacenter/execorders/eo07/eo\\_2007\\_05.html](http://gov.idaho.gov/mediacenter/execorders/eo07/eo_2007_05.html)

11/24/2008

*projected to continue to increase; and*

*WHEREAS, human activities contribute to creation of greenhouse gases; and*

*WHEREAS, greenhouse gases are believed to trap heat in the atmosphere and have been linked by the U.S. National Academy of Sciences to drought, reduced snow pack, altered precipitation patterns, more severe forest and rangeland fires, and forest diseases; and*

*WHEREAS, the Western Governors' Association projects that rising levels of greenhouse gases in the atmosphere could have economic and environmental impacts on the West in coming decades, and*

*WHEREAS, the causes and effects of rising greenhouse gases, to the degree they are understood, may extend to the Western United States and the State of Idaho, and it is incumbent upon states to take a leadership role in developing responsive state-level policies and programs to reduce greenhouse gas emissions, develop alternative energy sources and use energy efficiently,*

*NOW, THEREFORE, I, C.L. "BUTCH" OTTER, Governor of the State of Idaho, by the authority vested in me under the Constitution and the laws of the State of Idaho do hereby order that:*

- 1. The Director of the Department of Environmental Quality shall take a leadership role to work with all state government departments and agencies and shall serve as the central point of contact for coordination and implementation of greenhouse gas reduction efforts and other associated activities.*
- 2. The Director of the Department of Environmental Quality shall develop a greenhouse gas emission inventory and provide recommendations to the Governor on how to reduce greenhouse gas emissions in Idaho, recognizing Idaho's interest in continued growth, economic development and energy security.*



*IN WITNESS WHEREOF, I have hereunto set my hand and caused to be affixed the Great Seal of the State of Idaho at Boise, Idaho, on this 16th day of May in the year of our Lord two-thousand and seven and of the Independence of the United States of America the two hundred thirty-first and of the Statehood of Idaho the one hundred seventeenth.*

C.L. "BUTCH" OTTER  
GOVERNOR

BEN YURSA  
SECRETARY OF STATE

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[http://gov.idaho.gov/mediacenter/execorders/eo07/eo\\_2007\\_05.html](http://gov.idaho.gov/mediacenter/execorders/eo07/eo_2007_05.html)

11/24/2008

Mr. Turner also attached a copy of the Sierra Club/ICL comments. The original Sierra Club/ICL submittal to DEQ is included in Appendix F



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10

1200 Sixth Avenue, Suite 900  
Seattle, Washington 98101-3140

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Department of Environmental Quality  
State Air Program

Reply To: AWT-107

Martin Bauer  
Administrator, Air Quality Division  
Idaho Department of Environmental Quality  
1410 N. Hilton  
Boise, Idaho 83706

Re: Draft Permit to Construct for Southeast Idaho Energy, LLC

Dear Mr. Bauer:

This letter follows up on discussions between your staff at the Idaho Department of Environmental Quality (IDEQ) and my staff at Region 10 regarding the draft Permit to Construct (PTC) for the Southeast Idaho Energy, LLC (SIE) facility in American Falls. Based on a review of the draft permit and statement of basis for this permit action, we have a number of concerns regarding this draft permit.

**1. New Source Performance Standards:**

In the statement of basis, IDEQ states that 40 CFR Part 60, Subpart H, Standards of Performance for Sulfuric Acid Plants does not apply to the sulfuric acid production unit being contemplated for this project. As we had indicated to IDEQ staff in prior discussions, this is an erroneous determination. The processes at the SIE facility and at the facility addressed in the prior Subpart H applicability determinations are substantially different. At the SIE facility, a Selexol unit will be used to remove hydrogen sulfide (H<sub>2</sub>S) from the syngas stream. H<sub>2</sub>S is then stripped out of the Selexol solvent and sent to the sulfuric acid production unit. In this configuration, the sulfuric acid production unit cannot be considered a control unit, and consequently, Subpart H does apply to this unit.

**2. Potential to Emit:**

It does not appear that the statement of basis contains details of the facility's potential to emit (PTE) air pollutants. Table 3.2 in the statement of basis is labeled as "Controlled Emissions Estimates of Criteria Pollutants" and Table 3.3 is entitled "Controlled HAP/TAPs Summary." Neither description meets the definition of potential to emit (PTE). Since a facility's PTE can be a critical element in determining applicability of various regulations, it is important to document this as part of a construction permit. The statement of basis should include the PTE for each emissions unit and the facility as a whole.

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In some instances, where the PTE is marginally below a regulatory threshold, it is important to require an enhanced level of monitoring to assure compliance with the PTE. In this permit action, it appears that modeled concentrations of NO<sub>x</sub> and PM<sub>10</sub> are marginally below thresholds requiring a more detailed modeling analysis. In such an instance, we recommend that IDEQ require either that a detailed analysis be performed or include adequate monitoring, recordkeeping and reporting requirements to ensure that the permittee does not exceed the emission levels used in the screening analysis.

### **3. Best Available Control Technology:**

The statement of basis does not contain an assessment of IDEQ's analysis for BACT. It appears that IDEQ has relied entirely on the applicant's analysis in generating Table 4.6 BACT Determination for Each Emission Point. In the absence of an agency BACT determination, we reviewed the applicant's submittal. It appears that the applicant's analysis does not adhere to EPA's five-step, top-down process. As a result, we cannot necessarily agree with how the analysis progressed from Step 1: Identify all Control Technologies to Step 2: Eliminate Technically Infeasible Technologies. For example, baghouses are usually able to perform at lower emission rates than selected as BACT for emission units SRC01 through SRC07. In addition, it appears that the cost effectiveness analysis may have been performed incorrectly: for example, in evaluating use of selective catalytic reduction (SCR) for the package boiler, the cost effectiveness analysis was performed on an incremental basis rather than based on the "no controls" option. We recommend that IDEQ undertake a rigorous BACT determination to ensure that the BACT determinations are accurate and to correct those that need to be updated. Please do not hesitate to contact my staff for additional help.

### **4. Mercury:**

Over the past few years, EPA and IDEQ have worked together to identify the extent of contamination of mercury in the Idaho environment. The public in Idaho has also shown an unprecedented level of concern for the introduction of new sources of mercury emissions. Tissue samples from fish taken from the American Falls Reservoir and the Portneuf River show elevated levels of mercury contamination. In addition, the Bottoms area, adjacent to the reservoir, is also of great concern to the Shoshone Bannock Tribe.

Given our increased understanding of the results of air deposition of mercury, and the impact of local sources on nearby watersheds, we are concerned that the statement of basis does not adequately address the magnitude or impact of these new mercury emissions to the surrounding area: for example, Table 3.3 Controlled HAP/TAPs Emissions does not contain any estimate of emissions of mercury. The absence of a detailed description of the mercury control equipment, the expected speciation of mercury emissions, the mercury handling practices, and monitoring of mercury emissions prevent meaningful and informed comment by

EPA or the public. Once the permit is issued, there is no mechanism to ensure that best practices are being followed to safeguard public health.

As you are aware, at Region 10 we have translated our concern about widespread mercury contamination into an increased investment on mercury issues. The cornerstone of our efforts is a region-wide mercury strategy. One of the key activities in the mercury strategy is to address unregulated atmospheric sources in Region 10. To this end, we plan to work with States, Tribes, and individual companies to develop voluntary agreements to reduce mercury emissions by taking advantage of the various pollution prevention and waste partnerships. Similarly, new sources with mercury emissions present an opportunity to minimize additional mercury emissions. We look forward to discussing these challenges with you.

**5. Slag:**

The use of coal gasification slag for roads or for disposal at a landfill came up as options during the recent public information meetings. EPA has historical experience with slag sales and other uses of slag in Southeast Idaho where the raw materials (phosphate ore) have various content of Natural Occurring Radioactive Materials (NORM) which are often concentrated upon processing into slag. It is widely known that many coal deposits in the Western United States also contain NORM and often other non-organics. Although slag may pass the Toxicity Characteristic Leaching Procedure (TCLP), the material itself may have lasting radioactivity. We recommend that the feedstock and resulting slag be analyzed for potential problem contaminants prior to any owner/operator developing market plans to sell slag as a byproduct. If you have any questions regarding these points about use of the slag, please contact Rick Poeton at 206-553-8633.

If you have any questions, please contact me at 206-553-1847, or Pat Nair of my staff at 208-378-5754.

Sincerely



Richard Albright, Director  
Office of Air, Waste and Toxics

cc: Faye Weber, IDEQ  
Roger Turner, Shoshone-Bannock Tribe



**Appendix F**  
**Comments Submitted for**  
**Permit to Construct**

*Sierra Club and Idaho Conservation League Comments*

**P-2008.0066**



Idaho Conservation League

November 24, 2008

**VIA EMAIL**

Faye Weber  
Air Quality Division  
Department of Environmental Quality State Office  
1410 North Hilton  
Boise, Idaho 83706

faye.weber@deq.idaho.gov

**Re: Public Comments on Proposed Air Quality Permit to Construct for Southeast Idaho Energy Power County Advanced Energy Center, Docket Number AQ - 0819, Project Number P-2008.0066.**

The Sierra Club and Idaho Conservation League respectfully submit the following comments on the Proposed Air Quality Permit to Construct for Southeast Idaho Energy's (SIE), Power County Advanced Energy Center (the Center), to Docket Number AQ - 0819, Project Number P-2008.0066. The Idaho Department of Environmental Quality (IDEQ) proposes to issue a permit to SIE allowing the company to construct a new coal gasification plant in Power County, Idaho. The proposed plant will manufacture in its first phase nitrogen-based fertilizers from coal and petroleum coke derived Syngas. Phase II of the project will produce diesel or other transportation fuels from coal. This plant would result in a huge source of air pollution for the state of Idaho.

The Sierra Club is a national nonprofit organization of approximately 1.3 million members and supporters dedicated to exploring, enjoying, and protecting the wild places of the earth; to practicing and promoting the responsible use of the earth's ecosystems and resources; to educating and enlisting humanity to protect and restore the quality of the natural and human environment; and to using all lawful means to carry out these objectives. The Northern Rockies Chapter of the Sierra Club has approximately 2,776 members in the state of Idaho.

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For thirty-four years, the Idaho Conservation League has been Idaho's voice for clean water, clean air, and wilderness—values that are the foundation to Idaho's extraordinary quality of life. The Idaho Conservation League works to protect these values through citizen action, public education, and professional advocacy. As Idaho's largest state-based conservation organization we represent over 9,500 members from all parts of Idaho. Many of our members live, work and recreate in areas that will be impacted by the emissions from the proposed Southeast Idaho Energy facility. Our members have a deep personal interest in protecting local and regional air quality and in reducing the impacts of global warming exacerbated by this proposed facilities' emissions.

We much appreciate the agency granting our request for a time extension to comment, which has allowed us to examine in depth the proposed draft permit for the project. From our review of the permit, we respectfully conclude that the permit overlooks major requirements of the Clean Air Act and Idaho's air regulations and that the agency's permitting process was flawed. Among these flaws, many PSD-regulated pollutants were not evaluated to see if they triggered BACT requirements, MACT standards are not practically enforceable, where SIE undertook a BACT analysis, it was erroneous, and PM2.5 is completely ignored. Greenhouse gases were not addressed in the permit, and given the recent Environmental Appeals Board ruling in *In re Desert Power Electric Cooperative, Slip Op.*, PSD Appeal No. 07-03 (E.A.B. 2008), IDEQ must either complete a BACT analysis for CO2 or suspend permitting proceedings until the EPA acts. For all the reasons discussed below, the IDEQ should not issue the final permit at all, or if it does issue the permit, it should substantially revise the terms and conditions from those found in the draft permit.

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## I. LEGAL FRAMEWORK: THE CLEAN AIR ACT AND “PREVENTION OF SIGNIFICANT DETERIORATION PROGRAM”

Congress sought, in the Clean Air Act, a means “to protect and enhance the quality of the Nation’s air resources so as to protect the public health and welfare.” 42 U.S.C. § 7401(b)(1). The Act achieves that goal by establishing “National Ambient Air Quality Standards,” at levels intended to prevent serious injury to human health and welfare.

Congress has found, moreover, that the National Ambient Air Quality Standards alone are insufficient to fully protect public health; they “do not adequately protect against genetic mutations, birth defects, cancer, or diseases caused by long-term chronic exposures or periodic short-term peak concentrations, and hazards due to derivative pollutants and to cumulative or synergistic impacts of various pollutants; and they do not adequately protect against crop damage and acid rain.” *Hawaiian Elec. Co. v. U.S. EPA*, 723 F.2d 1440, 1447 (9th Cir. 1984). To protect the public against those threats, once the National Standards have been met, the Clean Air Act requires that States continue to prevent “significant deterioration” in air quality. *See* 42 U.S.C. § 7470.

Idaho’s Prevention of Significant Deterioration program regulates large, stationary sources of air pollution – including coal-fired plants such as the proposed facility – primarily through a series of connected permitting requirements. IDAPA 58.01.01.01 *et. seq.* The State of Idaho’s Rules for Control of Air Pollution in Idaho were approved by the EPA as meeting the requirements of the Clean Air Act for preventing significant deterioration of air quality. 40 C.F.R. § 52.683. The most important of those permits (and the permit being addressed in these comments) must be obtained prior to the construction of any new major source of air pollution. *See* IDAPA 58.01.01.200-228 (incorporating 40 C.F.R. 52.21 by reference). That preconstruction permit, generally referred to as a “PSD permit,” has two central purposes, each critical to the Clean Air Act’s overall air-quality scheme: 1) the permit sets the limits that will govern the plant’s emissions of air pollutants to a rate consistent with the use of the best available methods, systems, and techniques of pollution-control (in Clean Air Act jargon, these methods, systems, and techniques are used to determine an emission limit which is called the “Best Available Control Technology” (“BACT”)), 40 C.F.R. 52.21(j)(2) (incorporated by reference IDAPA 58.01.01.107.03(d) and 58.01.01.205.01); and 2) the application must provide a comprehensive public assessment of the plant’s impact on air quality, ensuring that air quality remains consistent with the Clean Air Act’s National Ambient Air Quality Standards as well as various site specific ambient air quality standards, some of which are referred to as “increments,” 40 C.F.R. 52.21(m)(incorporated by reference IDAPA 58.01.01.107.03(d) and specifically directed at 58.01.01.203); *see In re Encogen Cogeneration Facility*, 8 E.A.D. 244, 247, 1999 E.P.A. App. LEXIS 6, at \*9 (E.A.B. 1999) (noting that emissions limits and analysis of impacts on air quality constitute the “core of the [Prevention of Significant Deterioration] regulations”).

Idaho has adopted air quality standards for seven air pollutants. IDAPA 58.01.01.577; 40 C.F.R. 50 *et seq.* The Center is to be located in Power County, which is designated as attainment (or unclassified) for the criteria pollutants under the Clean Air Act. 40 C.F.R. 81.313. Therefore, the facility is subject to Prevention of Significant Deterioration (PSD) permitting for all pollutants for which the proposed project would result in a significant net emissions increase. 40

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C.F.R. 52.21(b) (incorporated by reference IDAPA 58.01.01.107.03(d) and 58.01.01.205.01). The proposed project exceeds PSD significant emission increases for nitrogen oxides (NO<sub>x</sub>) and carbon monoxide (CO), as well as other pollutants that were not even considered in the application. Among the applicable PSD requirements, the proposed plant must comply with best available control technology (BACT) limits, 40 C.F.R. 52.21(j)(2) (incorporated by reference IDAPA 58.01.01.107.03(d) and 58.01.01.205.01) and demonstrate no exceedances of an ambient air standard or maximum increase over baseline ("increment"), 40 C.F.R. 52.21(m) (incorporated by reference IDAPA 58.01.01.107.03(d) and specifically directed at IDAPA 58.01.01.203). The project must also analyze impacts to visibility, soils, and vegetation as a result of either the project or as a result of general growth associated with the project, 40 C.F.R. 52.21(o) (incorporated by reference IDAPA 58.01.01.107.03(d) and specifically directed at IDAPA 58.01.01.203).

## II. THE DRAFT PERMIT DOES NOT ADDRESS GREENHOUSE GASES.

The Department has completely ignored the Center's greenhouse gas emissions. This failure to address CO<sub>2</sub> and other greenhouse gas emissions for a new, massive, and long-lived source of such pollution is contrary to state and federal law.

The Center would be a major producer of greenhouse gases in Idaho and the Western United States. The Center has a potential to emit approximately 2.3 million tons of CO<sub>2</sub> for each year of operation, totaling 115 million tons over its 50-year operational life.<sup>1</sup> Idaho's annual emissions for CO<sub>2</sub> is about 37 million tons per year.<sup>2</sup> Thus, the Center would contribute about 5% of Idaho's annual CO<sub>2</sub> emissions. Additionally, the Center will produce 1789 tons of N<sub>2</sub>O in phase one. N<sub>2</sub>O is 310 times more potent as a greenhouse gas than CO<sub>2</sub> yet Idaho does not account for N<sub>2</sub>O in emissions estimates. Idaho's emissions data is underestimated because this greenhouse gas is not yet monitored.<sup>3</sup> The significant emissions from the Center proposed project would be a very large step in the wrong direction for Idaho.

### A. Given Developments in Federal Law, the PSD Permit Should Not Issue Without a BACT-Based Emissions Limit for Carbon Dioxide.

A PSD permit for a source that emits significant quantities of a pollutant "subject to regulation" under the Clean Air Act must include an emissions limit based on the best available control technology ("BACT") for that pollutant. 42 U.S.C. § 7475(a)(4); *see also* 40 C.F.R. § 52.21(b)(50) (2007) (incorporated by reference into IDAPA 58.01.01.107.03(d) and IDAPA 58.01.01.203.01.) The Supreme Court has determined that carbon dioxide and other GHGs are "pollutants" under the Act. *Massachusetts v. EPA*, 127 S. Ct. 1438 (2007). As discussed in below, CO<sub>2</sub> is subject to regulation under the Act because various statutory and regulatory

<sup>1</sup> Idaho Department of Environmental Quality, *Power County Energy Center: Air and Water Quality Fact Sheet*, [http://www.deq.idaho.gov/air/permits\\_forms/permitting/pcaec/fact\\_sheet\\_air\\_water.pdf](http://www.deq.idaho.gov/air/permits_forms/permitting/pcaec/fact_sheet_air_water.pdf) (last visited Nov. 11, 2008).

<sup>2</sup> Center for Climate Strategies, *Idaho Greenhouse Gas Inventory and Reference Case Projections 1990-2020: Executive Summary v* (Spring 2007), [http://www.wrapair.org/ClimateChange/ID\\_GHG\\_I&F\\_Report\\_WRAP\\_08-20-07.pdf](http://www.wrapair.org/ClimateChange/ID_GHG_I&F_Report_WRAP_08-20-07.pdf) (last visited Nov. 17, 2008).

<sup>3</sup> *Id.* at D-7.

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provisions require monitoring, reporting, and control of CO<sub>2</sub> emissions. The Center's PSD permit must therefore include a BACT emission limit for CO<sub>2</sub>.

In a recent opinion that has crucial implications for state agencies, the federal Environmental Appeals Board ("EAB") addressed the question of whether CO<sub>2</sub> is "subject to regulation" under the Clean Air Act. *In re Deseret Power Electric Cooperative*, Slip Op., PSD Appeal No. 07-03 (E.A.B. 2008). In *Deseret*, the EAB remanded a PSD permit to the Environmental Protection Agency ("EPA") Region 8 for its failure to adequately justify excluding CO<sub>2</sub> from its BACT analysis. The EAB rejected every reason EPA offered to support its contention that it did "not now have the authority to impose a CO<sub>2</sub> BACT limit." *Id.* at 8-9.

Although the EAB "ha[s] the authority to resolve legal questions on behalf of the [EPA] in issuing the [EPA's] final decision," it chose to remand the permit rather than deciding whether CO<sub>2</sub> is subject to regulation under the Act, noting that "even legal and interpretive questions are best resolved on the basis of a well-developed record." *Id.* at 62 n.63. The EAB therefore did not consider various arguments in favor of requiring BACT for CO<sub>2</sub> emissions, instead allowing the EPA region to consider those arguments in the first instance. *Id.* at 55 n.57. The EAB held that EPA could not issue a PSD permit lacking a CO<sub>2</sub> BACT limit without "develop[ing] an adequate record for its decision, including reopening the record for public comment." *Id.* at 64. Because of the national implication of the decision, the EAB recommended that EPA consider taking an "action of nationwide scope" to address whether BACT limits must be applied to CO<sub>2</sub>. *Id.*

Ultimately, EPA is sure to interpret the Clean Air Act as requiring BACT for CO<sub>2</sub> emissions. The Clean Air Act mandates it, the EAB has rejected all of EPA's rationales for refusing to regulate CO<sub>2</sub>, and the incoming Administration has made numerous public statements on the need to address greenhouse gases. EPA's action will affect SIP-approved programs such as Idaho's, because the Act provides that states may only set standards that are at least as stringent as federal law. 42 U.S.C. § 7416; 70 C.F.R. § 70.1(c). If the IDEQ were to treat CO<sub>2</sub> as an unregulated pollutant while EPA determines the contrary, the IDEQ would put both the PSD permit and the Idaho SIP at risk.

One danger for this permit is that EPA may simply invalidate it – and stop construction of the Plant – under Section 167 of the Act for failure to include CO<sub>2</sub> BACT limits. *See Alaska Dep't of Envtl. Conservation v. EPA*, 540 U.S. 461, 484-95 (2004) (upholding EPA's invalidation of state PSD permit because "Congress . . . vested EPA with explicit and sweeping authority to enforce CAA 'requirements' relating to the construction and modification of sources under the PSD program, including BACT."). Although EPA's use of this power may be "rare," it is justified where the state permitting agency has not based a BACT determination on reasoned analysis. *Id.* at 491 n. 14, 493-95.

Second, EPA could object to a Title V permit that does not include BACT limits for carbon dioxide. 42 U.S.C. §§ 7661(d)(b)(3), 7661d(c). If EPA objects to a permit, it may not be used unless it is first revised to take the objection into account. *Id.* Third, the EPA could make a finding of SIP inadequacy and call for the state to revise the SIP. *See* 42 U.S.C. 7410(k)(5).

Accordingly, the IDEQ should suspend permitting for the Center while EPA considers whether carbon dioxide is “subject to regulation,” and thus subject to BACT emissions limits. If the state finalizes the permit without a CO<sub>2</sub> limit, the Center may soon find that it does not have a valid PSD permit under federal law.

B. If the IDEQ Proceeds with the Permitting Process, it Must Require BACT Emissions Limits for Carbon Dioxide after Notice and Public Comment.

If the IDEQ nevertheless chooses to act on this issue before EPA does, it should limit the Center’s CO<sub>2</sub> emissions after notice and public comment on a BACT analysis for carbon dioxide. Thus, even in the unlikely event that EPA determines that BACT is not required for CO<sub>2</sub>, the state’s interpretation would be *more* stringent than federal law. As such, the inconsistency would not put the state’s SIP or PSD permits at risk. See 42 U.S.C. § 7416; 70 C.F.R. § 70.1(c). The IDEQ should make this determination for the following reasons.

1. Carbon Dioxide Is Currently Regulated Under The Clean Air Act.

Commenters maintain that the plain language of the Act compels permitting agencies to impose BACT-based limits on CO<sub>2</sub> emissions. While in *Deseret* the EAB held that the plain language of the Act is not “so clear and unequivocal” as to mandate the conclusion that CO<sub>2</sub> is currently a “subject to regulation,” the EAB did not reject, or even consider, a number of Sierra Club’s arguments that the Act does in fact regulate carbon dioxide. See *Deseret*, at 26, 55 n.57. Moreover, it found that construing the Act to require BACT for CO<sub>2</sub> is not only plausible, but is also supported by the only regulatory history that speaks directly to the meaning of “subject to regulation.” *Deseret*, Slip. Op. at 38-42. In any event, the EAB’s decision is not the final word on whether the CO<sub>2</sub> is a regulated pollutant under the plain language of the Act. See, e.g., *Colorado Farm Bureau Fed’n v. United States Forest Serv.*, 220 F.3d 1171, 1173-74 (10th Cir.2000) (action is not final unless “the action marks the consummation of the agency’s decisionmaking process”).

As discussed above, the EPA is highly likely to find on remand that the text of the Act does in fact mean that CO<sub>2</sub> is a regulated pollutant. Or, if the EPA decides the contrary, that decision would be appealable to the appropriate federal court. 42 U.S.C. § 7607(b). Accordingly, the question of whether CO<sub>2</sub> is “subject to regulation” under the plain language of the Act remains open. The following discussion explains why the IDEQ can and should answer it in the affirmative.

a. Section 821

Section 821(a) of the Clean Air Act Amendments of 1990 directed EPA to promulgate regulations to require certain sources to monitor carbon dioxide emissions and report monitoring data to EPA. 42 U.S.C. § 7651k note. In 1993, EPA promulgated these regulations, which are set forth at 40 C.F.R. Part 75. The regulations generally require monitoring of carbon dioxide emissions through the installation, certification, operation and maintenance of a continuous emission monitoring system or an alternative method, 40 C.F.R. §§ 75.1(b), 75.10(a)(3); preparation and maintenance of a monitoring plan, *id.* § 75.33; maintenance of certain records,

*id.* § 75.57; and reporting of certain information to EPA, including electronic quarterly reports of carbon dioxide emissions data, *id.* §§ 75.60 – 64. Section 75.5 of the federal regulations prohibits operation of an affected source in the absence of compliance with the substantive requirements of part 75, and provides that a violation of any requirement of part 75 is a violation of the Clean Air Act. Thus, carbon dioxide is currently regulated under Title IV of the Act. See *Buckley v. Valeo*, 424 U.S. 1, 66-67 (1976) (finding record-keeping and reporting requirements to be regulation of political speech).

Significantly, Congress used the same term – “regulation” – in sections 165(a)(4) and 821 of the Clean Air Act. In section 165 Congress expressly and unambiguously makes BACT a requirement for any pollutant “subject to *regulation*,” 42 U.S.C. § 7475(a)(4) (emphasis added), and in section 821 Congress requires EPA to establish “*regulations*” requiring monitoring, recordkeeping, and reporting for carbon dioxide emissions, *id.* § 7651k note (emphasis added). Basic tenets of statutory interpretation demand that these two provisions must be read consistently – “regulation” used in one section of the Act cannot be appropriately understood to mean something different than the same term used elsewhere.<sup>4</sup>

A more narrow reading of “regulation” for purposes of section 165(a)(4) of the Act to include only those measures that restrict emissions would be especially inappropriate, as the Act already includes terminology that is specifically intended to identify such requirements. In particular, 42 U.S.C. §§ 7602(k), 7651d(a)(1), and 7617(a)(7) establish and use the terms “emission limitation” and “emission standard” to refer to regulatory requirements that limit or restrict emissions. See also 42 U.S.C. § 7617(a)(5) (distinguishing between regulations that establish emission standards and “other” regulations). Thus, if Congress had intended for BACT to apply only where a pollutant is subject to an emission limitation or emission standard, it would have done so expressly.

Notably, the only regulatory history that directly interprets the meaning of “subject to regulation under this Act” supports the view that CO<sub>2</sub> is subject to regulation by virtue of section 821 and its implementing regulations. The preamble to the 1978 PSD regulations states:

Some questions have been raised regarding what “subject to regulation under this Act” means relative to BACT determinations. The Administrator believes that the proposed interpretation published on November 3, 1977, is correct and is today being made final. As mentioned in the proposal, **“subject to regulation under this Act” means any pollutant regulated in Subchapter C of Title 40 of the Code of Federal Regulations** for any source type. This then includes \* \* \*.

43 Fed. Reg. 26,388, 26,397 (June 19, 1978) (cited in *Deseret*, Slip Op. at 38-39)(emphasis added). The preamble proceeded to identify the general categories of pollutants then regulated in Subchapter C of Title 40. *Id.*

The regulations that implement section 821 by requiring monitoring and reporting of CO<sub>2</sub> emissions are located in Subchapter C of Title 40. As the EAB noted in *Deseret*, the 1993 rulemaking that added the section 821 regulations to Subchapter C did not withdraw this 1978

<sup>4</sup> See *Merrill Lynch v. Dabit*, 547 U.S. 71, 86 (2006).

interpretation. *Deseret*, Slip Op. at 42. Thus the only existing EPA interpretation of the meaning of “subject to regulation” in section 165 of the Act reinforces the view that BACT is required for CO<sub>2</sub> emissions because CO<sub>2</sub> is subject to regulation under the Act.

*b. Regulation of emissions from landfills*

In addition to section 821 of the Act and its implementing regulatory requirements, greenhouse gases such as carbon dioxide and methane are also regulated as a component of landfill gases. EPA has promulgated emission guidelines and standards of performance for municipal solid waste (MSW) landfill emissions. 40 C.F.R. §§ 60.33c, 60.752. “MSW landfill emissions” are defined as “gas generated by the decomposition of organic waste deposited in an MSW landfill or derived from the evolution of organic compounds in the waste.” 40 C.F.R. § 60.751. EPA has specifically identified carbon dioxide as one of the components of the regulated “MSW landfill emissions.” *See* Air Emissions from Municipal Solid Waste Landfills – Background Information for Final Standards and Guidelines, U.S. EPA, EPA-453/R-94-021 (Dec. 1995), available at <http://www.epa.gov/ttn/atw/landfill/landflpg.html> (explaining “MSW landfill emissions, or [landfill gas], is composed of methane, carbon dioxide, and NMOC.”). Thus, carbon dioxide is regulated through the landfill emission regulations at 40 C.F.R. Part 60 Subparts Cc, WWW. *See also* 56 Fed. Reg. 24468 (May 30, 1991) (“Today’s notice designates air emissions from MSW landfills, hereafter referred to as ‘MSW landfill emissions,’ as the air pollutant to be controlled”).

*c. Regulation of carbon dioxide under state implementation plans*

Finally, carbon dioxide is also regulated under various state implementation plans (SIPs), which in turn constitutes regulation under the Clean Air Act. Most significantly, EPA has now approved and promulgated a Delaware state implementation plan revision that sets limits on CO<sub>2</sub> emissions. Specifically, in a Federal Register notice that became effective on May 29, 2008, EPA promulgated its approval of CO<sub>2</sub> emission standards, operating requirements, record keeping and reporting requirements, and emissions certification, compliance and enforcement obligations for new and existing stationary electric generators in Delaware. *See* 73 Fed. Reg. 23,101. The control requirements approved and promulgated by EPA included a CO<sub>2</sub> emission standard of 1900 lbs/MWh for existing distributed generators, 1900 lbs/MWh for new distributed generators installed on or after January 1, 2008, and 1,650 lb/MWh for new distributed generators installed on or after January 1, 2012. *See* Delaware Department of Natural Resources and Environmental Control (DNREC), Regulation No. 1144: Control of Stationary Generator Emissions, §3.2; *see also* 73 Fed. Reg. at 23,102-103 (codifying approval in the Code of Federal Regulations at 40 C.F.R. § 52.420).

In EPA’s proposed and final rulemaking notices for the Delaware SIP revision, the Agency plainly stated that it was approving the SIP revision “under the Clean Air Act” (*see* 73 Fed. Reg. 11,845 (March 5, 2008)) and “in accordance with the Clean Air Act.” *See* 73 Fed. Reg. at 23,101. EPA’s action in approving the SIP revision made the control requirements and obligations part of the “applicable implementation plan” enforceable under the Clean Air Act. *See* 42 U.S.C. § 7602(q).

Many Clean Air Act provisions authorize EPA enforcement of requirements and prohibitions under the “applicable implementation plan.” *See, e.g.*, 42 U.S.C. § 7413(a)(1) (authorizing EPA Administrator to issue a compliance order, issue an administrative penalty, or bring civil action against the violating party); *id.* at (a)(2) (Administrator may enforce the “applicable implementation plan” if states fail to do so); *id.* at (b)(1) (requiring the Administrator to commence a civil action or assess and recover a civil penalty against the owner or operator of a source or facility that violates an “applicable implementation plan”). In addition, EPA’s action makes the emission standards and limitations enforceable by a citizen suit under section 304 of the Clean Air Act: 42 U.S.C. § 7604.

The Supreme Court has made clear that the requirements under an EPA-approved state implementation plan are federally-enforceable obligations under the federal Clean Air Act:

The language of the Clean Air Act plainly states that EPA may bring an action for penalties or injunctive relief whenever a person is in violation of any requirement of an “applicable implementation plan.” § 113(b)(2), 42 U.S.C. § 7413(b)(2) (1982 ed.). There can be little or no doubt that the existing SIP remains the “applicable implementation plan” even after the State has submitted a proposed revision.

*General Motors Corp. v. United States*, 496 U.S. 530, 540 (1990).

Thus CO<sub>2</sub> is a pollutant subject to regulation under the Clean Air Act both because it is subject to monitoring and reporting requirements, and because it is subject to emissions limits.

In sum, section 165 of the Clean Air Act requires a BACT limit for “any pollutant subject to regulation” under the Act. 42 U.S.C. § 7475(a)(4). Accordingly, in light of *Massachusetts v. EPA* and the regulation of carbon dioxide under section 821, landfill gas regulations, and state implementation plans, a plain-language reading of the Act compels the conclusion that section 165 requires BACT limits for carbon dioxide emissions from coal-fired power plants under the PSD program.<sup>5</sup>

## 2. Carbon Dioxide Is Subject To Further Regulation under the Act.

Carbon dioxide is also “subject to regulation,” as that term is defined, under a number of the Clean Air Act’s other provisions, including sections 111 and 202.

### a. *Pollutants Subject To Future-Enacted Regulation Are “Subject To Regulation”*

Emissions of a pollutant need not be currently regulated for the pollutant to be “subject to” regulation under the Clean Air Act. “Subject to regulation” means “capable of being regulated” and is not limited to pollutants that are “currently regulated.” The plain meaning of

<sup>5</sup> Although the EAB disagreed in *Deseret* with Sierra Club’s argument that the plain language of the Clean Air Act compels a reading that carbon dioxide is a regulated pollutant, it did not identify anything in the Act that is inconsistent with Sierra Club’s reading of section 821 as making carbon dioxide “subject to regulation.”

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section 165(a)(4) extends not only to air pollutants for which there are regulatory requirements, but also to air pollutants for which EPA and the states *possess but have not exercised authority* to impose such requirements.

EPA has recognized the general principle that “[t]echnically, a pollutant is considered regulated once it is *subject to regulation* under the Act. A pollutant *need not be specifically regulated* by a section 111 or 112 standard to be considered regulated.” 66 Fed. Reg. 59161, 59163 (Nov. 27, 2001) (citing 61 Fed. Reg. 38250, 38309 (July 23, 1996)) (emphasis added).

EPA has also previously interpreted the phrase “subject to” in the context of the Resource Conservation and Recovery Act (RCRA) and Clean Water Act as meaning “should” be regulated, as opposed to currently regulated:

RCRA section 1004(27) excludes from the definition of solid waste “solid or dissolved materials in ... industrial discharges which are point sources subject to permits under [section 402 of the Clean Water Act].” For the purposes of the RCRA program, EPA has consistently interpreted the language “point sources *subject to permits* under [section 402 of the Clean Water Act]” to mean point sources that *should have* a NPDES permit in place, whether in fact they do or not. Under EPA’s interpretation of the “subject to” language, a facility that should, but does not, have the proper NPDES permit is in violation of the CWA, not RCRA.

Memo from Michael Shapiro and Lisa Friedman (OGC) to Waste Management Division Directors, Interpretation of Industrial Wastewater Discharge Exclusion from the Definition of Solid Waste at 2 (Feb. 17, 1995) (emphasis added). This interpretation of “subject to” is not limited to the context of environmental regulation. See *Kennedy v. Commonwealth Edison*, 410 F.3d 365, 371 (7th Cir. 2005) (holding that the phrase “‘subject to’ does not require proof that an employer has [actually] reduced an employee’s wages” under Fair Labor Standards Act, 29 U.S.C. § 213); *Klein v. Rush-Presbyterian – St. Luke’s Medical Center*, 990 F.2d 279, 286 (7th Cir. 1993) (holding that the phrase “‘[s]ubject to reduction’ does not mean that a reduction was actually made,” under Fair Labor Standards Act).

*b. Sections 111 And 202 Of The Act Require EPA To Promulgate Regulations Limiting Emissions Of Pollutants From New Stationary Sources And Motor Vehicles*

Section 111 of the Act requires EPA to promulgate regulations establishing standards of performance for emissions of “air pollutants” from new stationary sources. 42 U.S.C. § 7411. Section 202 requires EPA to promulgate regulations establishing standards applicable to emissions of “any air pollutant” from motor vehicles. 42 U.S.C. § 7521. Carbon dioxide is emitted from stationary sources and motor vehicles. Regulation under sections 111 and 202 is required where air pollution “may reasonably be anticipated to endanger public health or welfare.” 42 U.S.C. § 7411(b)(1)(A); 42 U.S.C. § 7521(a)(1). In *Massachusetts v. EPA*, the Court held that if EPA makes an endangerment finding for a pollutant, it must regulate emissions of the pollutant from new motor vehicles. 127 S. Ct. at 1462. The same analysis applies with equal force to section 111. Given this regulatory scheme and the Supreme Court’s determination

that EPA is authorized to regulate carbon dioxide and other greenhouse gases as “pollutants” under the Act, carbon dioxide is unquestionably a pollutant subject to regulation under the Act.

EPA is not only authorized to establish emission limitations for carbon dioxide emissions under sections 202 and 111, but is required to do so because there is no question that emissions of those pollutants from motor vehicles, power plants and other sources “may reasonably be anticipated to endanger the public health and welfare.”<sup>6</sup> This standard, reflecting the precautionary nature of the Clean Air Act, does not require proof of actual harm. Congress directed that regulatory action taken pursuant to an endangerment finding would be designed to “precede, and, optimally, prevent, the perceived threat.” *Ethyl Corp. v. EPA*, 541 F.2d 1, 13 (D.C. Cir. 1976). EPA is not required to document “proof of actual harm” as a prerequisite to regulation; rather, EPA is supposed to act where there is “a significant risk of harm.” *Id.* at 12–13. In *Ethyl Corp.*, noting the novelty of many human alterations of the environment, the Court of Appeals for the District of Columbia Circuit found:

Sometimes, of course, relatively certain proof of danger or harm from such modifications can be readily found. But, more commonly, 'reasonable medical concerns' and theory long precede certainty. Yet the statutes – and common sense – demand regulatory action to prevent harm, even if the regulator is less than certain that harm is otherwise inevitable.

*Id.* at 25.<sup>7</sup> The 1977 Clean Air Act Amendments confirmed and adopted the precautionary interpretation enunciated in *Ethyl Corp.*, enacting special provisions, Pub. L. No. 95-95, § 401, 91 Stat. 790-91 (Aug. 7, 1977), designed to “apply this interpretation to all other sections of the act relating to public health protection.” H.R. Rep. No. 294, 95th Cong., 1st Sess. 49 (1977); *accord, id.* at 51 (amendments are designed, *inter alia*, to “emphasize the precautionary or preventive purpose of the act (and, therefore, the Administrator’s duty to assess risks rather than wait for proof of actual harm)”). Congress rejected the argument that, “unless conclusive proof of actual harm can be found based on the past occurrence of adverse effects, then the standards should remain unchanged,” finding that this approach “ignores the commonsense reality that ‘an ounce of prevention is worth a pound of cure.’” *Id.* at 127.

<sup>6</sup> Significantly, the Supreme Court in *Massachusetts v. EPA*, also held that, having received a request to regulate CO<sub>2</sub> under a particular statutory provision, EPA could not invoke extra-statutory factors to decide not to regulate or to avoid addressing the applicable regulatory criteria. In short, EPA may appropriately respond to the outstanding petitions for rulemaking only by actually addressing whether or not CO<sub>2</sub> endangers public health or welfare. 127 S. Ct. at 1462 (“[U]se of the word ‘judgment’ is not a roving license to ignore the statutory text. It is but a direction to exercise discretion within defined statutory limits.”). In *Green Mountain Plymouth Dodge Jeep v. Crombie*, the United States District Court for the District of Vermont, relying on *Massachusetts v. EPA*, stressed the importance of controlling emissions of greenhouse gases, even where the sources at issue make only a relatively small contribution to the very large global problems presented by global warming. Case Nos. 2:05-cv-320 and -304, slip op. at 46-47, 93-94 and 234 (Sept. 12, 2007). The court rejected an automobile industry challenge to Vermont regulations establishing greenhouse gas emission standards for automobiles.

<sup>7</sup> *Accord, Industrial Union Dep’t v. American Petroleum Institute*, 448 U.S. 607, 656 (1980) (plurality opinion) (agency need not support finding of significant risk “with anything approaching scientific certainty,” but rather must have “some leeway where its findings must be made on the frontiers of scientific knowledge,” and “is free to use conservative assumptions in interpreting the data,” “risking error on the side of overprotection rather than underprotection”).

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The precautionary nature of the Clean Air Act creates a low threshold for findings relating to the negative consequences of air pollution. Indeed, the Supreme Court analysis in *Massachusetts v. EPA*, addressing the petitioners' standing, outlines harms caused by global warming that are more than adequate to establish endangerment under the Clean Air Act. As discussed above, other sources similarly describe adverse impacts that clearly show that the endangerment criteria of the Act have been met, and that any official finding of such is little more than a formality.

Quite simply, there is no question that greenhouse gas emissions that contribute to global warming endanger public health and welfare. As a result, not only is carbon dioxide currently "subject to regulation" under the Act because of existing statutory authority to regulate, but EPA and the states have a statutory *obligation* to adopt regulations that establish emission limitations for carbon dioxide and other greenhouse gases pursuant to various provisions of the Act. Global warming's far-reaching and grave public health and welfare impacts, which are in large part attributable to carbon dioxide emissions from power plants, automobiles and other sources, compel EPA to exercise its authority under sections 111 and 202 of the Clean Air Act to regulate greenhouse gas emissions.

Thus, carbon dioxide is "subject to regulation under the Clean Air Act" both because EPA and the states currently have authority to regulate them as pollutants under the Act and because EPA and the states have an obligation to do so under particular provisions of the Act.

*c. EPA Must Promulgate Additional Clean Air Act Regulations Governing Greenhouse Gases*

In addition to regulation under section 111 and 202 of the Clean Air Act, the Consolidated Appropriations Act of 2008 requires EPA to use its existing authority under the Clean Air Act to establish regulations that require monitoring and reporting of greenhouse gases, including CO<sub>2</sub>, across all sectors of the economy by June 2009. 2008 Consolidated Appropriations Act (H.R. 2764, Public Law 110-161); *see* <http://www.epa.gov/climatechange/emissions/ghgrulemaking.html>.

EPA has no discretion regarding whether to promulgate these regulations and no endangerment finding is required. Because EPA must promulgate these Clean Air Act regulations governing carbon dioxide, it is subject to regulation under the Act and BACT limits are required.

3. Georgia Recently Affirmed the View that Carbon Dioxide is "Subject to Regulation" under the Act.

A Georgia court recently overturned the decision of a Georgia Department of Environmental Protection ALJ granting an air permit to a new facility because the agency had not performed a BACT analysis for CO<sub>2</sub>.<sup>8</sup> The Georgia ruling overturned a state-issued air permit for the 1,200-megawatt Longleaf coal plant because "the permit contains no CO<sub>2</sub>

<sup>8</sup> *Friends of the Chattahoochee Inc. et al. vs. Dr. Carol Couch & Longleaf Energy Ass. LLC.*, 2008CV146398 (Fulton County, GA Jun. 30, 2008) (appeal pending).

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emissions limits.” *Id.* at 6. “There was no effort to identify, evaluate, or apply available technologies that would control CO<sub>2</sub> emissions, and the permit contains no CO<sub>2</sub> emission limits.” *Id.* at 7. The judge cited the *Massachusetts v. EPA* 2007 Supreme Court decision that recognized carbon as a pollutant under the federal Clean Air Act and concluded that “there is no question that CO<sub>2</sub> is ‘subject to regulation under the [Clean Air] Act.’” *Id.* at 7. Since CO<sub>2</sub> is “otherwise subject to regulation under the Act,” a PSD permit could not issue for Longleaf without CO<sub>2</sub> emission limitations based on a BACT analysis. The Center’s air permit is invalid for the same reason.

C. Even if Carbon Dioxide Were Not Currently “Subject to Regulation”, Regulation Controlling Carbon Dioxide Emissions Is Imminent.

Numerous levels of government are already taking action to address the climate crisis by setting targets for reducing greenhouse gas pollution. President-elect Obama made climate change a central issue in his campaign and is committed to implementing aggressive programs to stop global warming, including implementing a cap-and-trade program aimed to reduce greenhouse gases by 80% below 1990 levels by the year 2050.<sup>9</sup> At the same time, the next Congress will continue the carbon legislation work of its predecessors. It is widely anticipated that some form of federal carbon legislation will take effect well before the project becomes operational.<sup>10</sup> Indeed, yet another group of large corporations recently urged Congress to act quickly.<sup>11</sup> Idaho lags behind this movement at its own peril.

D. The BACT Analysis for Carbon Dioxide Must Consider All Feasible Control Technologies.

BACT requires a comprehensive analysis of all potentially available emission control measures, expressly including input changes (such as use of clean fuels), process and operational changes, and the use of add-on control technology. Additionally, it requires that a new source comply with emission limits that correspond to the most effective control measures available, unless the source can affirmatively demonstrate that use of the most effective control measures would be technologically or economically infeasible.

BACT is defined under federal law as follows:

an emissions limitation (including a visible emissions standard) based on the maximum degree of reduction for each pollutant subject to regulation under the [Clean Air] Act which would be emitted from any proposed major stationary source or major modification which the Administrator, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification *through application of*

<sup>9</sup> Brian Knowlton, *Obama Reaffirms Targets on Climate Change*, N.Y. Times, Nov. 18, 2008, available at <http://www.nytimes.com/2008/11/19/us/politics/19climate.html>. See also Barack Obama for President website, New Energy for America, available at [http://my.barackobama.com/page/content/newenergy\\_more#emissions](http://my.barackobama.com/page/content/newenergy_more#emissions) (last visited Nov. 17, 2008)

<sup>10</sup> See, e.g., Zachary Coile, *Energy industry preparing for limits*, Seattlepi.com, August 28, 2006.

<sup>11</sup> *Big U.S. Corporations Urge Quick Cap and Trade Legislation*, Environment New Service (Nov. 19 2008), at <http://www.ens-newswire.com/ens/nov2008/2008-11-19-091.asp>.

*production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant.*

See 40 C.F.R. § 52.21(b)(12) (emphasis added); see also CAA §169(3), 42 U.S.C. §7479(3).

There are at least three readily-available options for limiting the Center's greenhouse gas emissions that could and should be considered in a top-down BACT analysis. These options include: 1) use of natural gas instead of coal 2) mandating carbon capture and sequestration, and 3) review of all technically feasible control options.

### **1. IDEQ Must Explore Natural Gas To Limit Carbon Dioxide in the Top-Down BACT Analysis**

Natural gas is the traditional source for nitrogen-based fertilizer in the United States.<sup>12</sup> Using coal gasification instead of natural gas to produce fertilizer results in a significant increase in carbon dioxide emissions. The interest in coal-to-fertilizer plants is directly tied to the rise in the price of natural gas.<sup>13</sup> The use of coal instead of natural gas may be cost-effective in an unregulated carbon market. However, it is a process that introduces more greenhouse gases into the atmosphere and therefore is a short-sighted approach that will exacerbate the climate crisis. Further, Idaho also has no coal reserves and currently only consumes 403 thousand short tons of coal per year.<sup>14</sup> Wyoming in comparison consumes 27,906 thousand short tons per year.<sup>15</sup> Idaho's relatively low production of greenhouse gases should be maintained and reduced, not expanded through unnecessary consumption of fossil fuels.

### **2. The Potential for Complete Carbon Sequestration Must Be Evaluated**

SIE claims that the Center will "be built to capture most of the 2.3 million tons per year of CO<sub>2</sub> that it produces."<sup>16</sup> SIE's application presents a vague situation that depends on the construction of a pipeline to Utah, Wyoming and/or Colorado where the CO<sub>2</sub> could be sold for use in enhanced oil recovery (EOR) projects. See Application 3-54. Also, SIE suggests shipping the CO<sub>2</sub> to Wyoming. *Id.* However there are no provisions in the permit to enforce sequestration of this massive amount of greenhouse gas. In other words, SIE can capture the CO<sub>2</sub> and simply release it all into the atmosphere at the other end of the pipe. The capture and sequestration of CO<sub>2</sub> must be considered in the top-down BACT analysis, and complete capture must be considered.

<sup>12</sup> Environmental Protection Agency, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: Industrial Processes* 4-15 (Apr. 15, 2008), [http://epa.gov/climatechange/emissions/downloads/08\\_Industrial.pdf](http://epa.gov/climatechange/emissions/downloads/08_Industrial.pdf).

<sup>13</sup> Mathew L. Wald, *Search for New Oil Sources Leads to Processed Coal*, N.Y. Times, July 5, 2006, available at <http://www.nytimes.com/2006/07/05/business/05coalfuel.html> (last visited Nov. 19, 2008).

<sup>14</sup> Energy Information Administration Website, Historical Energy Data, *Idaho State Energy Profile*, [http://www.eia.doe.gov/overview\\_hd.html](http://www.eia.doe.gov/overview_hd.html) (last visited Nov. 18, 2008).

<sup>15</sup> Energy Information Administration Website, *Historical Energy Data, Wyoming State Energy Profile*, [http://www.eia.doe.gov/overview\\_hd.html](http://www.eia.doe.gov/overview_hd.html) (last visited Nov. 18, 2008).

<sup>16</sup> [http://www.deq.idaho.gov/air/permits\\_forms/permitting/pcaec/fact\\_sheet\\_air\\_water.pdf](http://www.deq.idaho.gov/air/permits_forms/permitting/pcaec/fact_sheet_air_water.pdf)  
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The EPA, in comments on a draft EIS for the proposed White Pine plant in Nevada, directed the federal Bureau of Land Management (BLM) to “discuss carbon capture and sequestration and other means of capturing and storing carbon dioxide as a component of the proposed alternatives.”<sup>17</sup> The EPA’s determination that it is appropriate for the BLM to consider carbon capture and sequestration and other means of carbon dioxide storage at the White Pine plant is a reasonable indication that carbon capture and sequestration (and other means of storing carbon) could be considered in the top-down BACT process for the Clean Air Act PSD permit.

### **3. IDEQ Must Review Technically Feasible Control Options for Carbon Dioxide**

Even if CO<sub>2</sub> will be piped and sold in EOR operations, the IDEQ and SIE must include in the PSD application and permit application review an analysis of technically feasible control options for minimizing CO<sub>2</sub> emissions during startup of the facility and during any other time during which the sale of CO<sub>2</sub> is not feasible.

SIE should propose, and IDEQ should require, both work practice standards to limit the amount of CO and CO<sub>2</sub> available to be vented during startup or during inability to export CO<sub>2</sub>. For instance, at the very least the permit should limit the annual number of startups, heat ups, upsets, and shutdowns to only that applied for in Appendix D of the application in order to limit CO and CO<sub>2</sub>, pursuant to BACT.

SIE should also justify the collateral environmental impacts in the selection of a thermal oxidizer, over other CO control technologies, to control 438 tons of CO emissions per year from the gasification island by oxidizing those emissions to 1,404,365 tons of global warming CO<sub>2</sub> per year. In addition, SIE should justify why the amine gas scrubber could not be sized to accommodate the CO<sub>2</sub>-rich streams during steady state operation of the Soloxol Acid Gas Removal process which has the potential to emit the most CO<sub>2</sub> of any of the SIE processes. An amine scrubber, such as that proposed during startup to control emissions of raw syngas from the gasifiers, is effective at destroying large amounts of CO<sub>2</sub> such as that contained in process streams at refineries.

#### **E. The IDEQ Should Conduct An Alternatives Analysis That Considers Global Warming Impacts.**

Regardless of whether carbon dioxide is currently a pollutant subject to regulation under the Clean Air Act, the IDEQ, as the delegated permitting authority for the Center, has the authority to require evaluation of greenhouse gas emissions and establish appropriate permit conditions or otherwise address these emissions. EPA’s Office of Air and Radiation, Office of General Counsel, and the Environmental Appeals Board have expressed the opinion that permitting authorities have broad discretion to consider alternatives, conduct or require analyses, and impose permit conditions to address issues under Clean Air Act section 165(a)(2) beyond the required BACT analysis. See *In re Prairie State*, PSD Appeal 05-05, 12 E.A.D. \_\_\_ (Aug. 24, 2006); *In re Knauf Fiber Glass*, 8 E.A.D. 1212, (EAB 1999); *In re Hillman Power*, 10 E.A.D.

<sup>17</sup> EPA Comment on the Draft EIS for the White Pine Energy Station at 14 (Exhibit 3).  
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673, 692 (EAB 2002).<sup>18</sup> The EAB has consistently held that states have broad discretion to consider various options, including, among other things, broad discretion to independently evaluate options and alternatives, and to adopt conditions or requirements that they deem appropriate.

EPA has recognized that “a PSD permitting authority still has an obligation under section 165(a)(2) to consider and respond to relevant public comments on alternatives to the source,” and that a “PSD permitting authority *has discretion under the Clean Air Act to modify the PSD permit based on comments raising alternatives* or other appropriate considerations.” BRIEF OF THE EPA OFFICE OF AIR AND RADIATION AND REGION V, *In re Prairie State*, PSD Appeal 05-05, 12 E.A.D. \_\_\_ (EAB, Aug. 24, 2006). Moreover, the EAB has made clear that a permitting authority has discretion to modify a permit based on consideration of “alternatives” whether or not the commenters raise the issues:

Indeed, the permit issuer is not required to wait until an “alternative” is suggested in the public comments before the permit issuer may exercise the discretion to consider the alternative. Instead, the permit issuer *may identify an alternative on its own*. This interpretation of the authority conferred by CAA section 165(a)(2)’s reference to “alternatives” is consistent with the Agency’s longstanding policy that, . . . “this is an aspect of the PSD permitting process in which *states have the discretion to engage in a broader analysis if they so desire.*”

See *In re Prairie State*, PSD Appeal 05-05 (Aug. 24, 2006) (quoting the NSR Workshop Manual at B.13).

In fact, under this authority, a permitting authority can engage in a wide-ranging exploration of options. Under this authority the IDEQ clearly has the discretion to require specific evaluation and control of carbon dioxide emissions, and/or to require other action to mitigate potential global warming impacts. Failure to do so in this case is a material breach of the agency’s obligations to the people of Idaho and the United States.

To date, there has been no specific assessment of available measures or options to reduce the expected greenhouse gas emissions from the Plant. The IDEQ could require any number of possible actions to address the carbon dioxide footprint of the proposed plant. Options include requiring construction of a more efficient facility, requiring the purchase of carbon dioxide offsets, or some combination of these approaches or others.

Among the alternatives the IDEQ should consider under § 165(a)(2) of the Act is the “no-build” option, under which the IDEQ would deny the PSD permit based on policy

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<sup>18</sup>This discretion even extends to requiring specific additional BACT analysis. In *Knauf*, the Board explained that although “[s]ubstitution of a gas-fired power plant for a planned coal-fired plant would amount to redefining the source . . . redefinition of the source is not always prohibited. This is a matter for the *permitting authority’s discretion. The permitting authority may require consideration of alternative production processes in the BACT analysis when appropriate. See NSR Manual at B.13-B.14; Old Dominion*, 3 E.A.D. at 793 (permit issuer has discretion “to consider clean fuels other than those proposed by the permit applicant.”).” *Knauf*, 8 E.A.D. at 136 (emphasis added).

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considerations related to carbon dioxide and other harmful emissions.<sup>19</sup> The consideration of such options should be subject to a process of public discussion.

In combination with one or all of the above alternatives, the Center could counteract some of the enormous carbon dioxide emissions from the Plant through offsets. Offsets can be an essential component of reducing carbon dioxide emissions because they can be implemented quickly for a relatively low cost. There are a number of ways in which the Center could create offsets, including programs to increase the energy efficiency in buildings, factories, or transportation, generating electricity from renewable energy sources like wind or solar, shutting down older and less efficient plants, and capturing carbon dioxide in forests and agricultural soils. Another advantage of offsets is that they often result in other environmental, social, and economic co-benefits such as reductions in other dangerous pollutants, restoration of degraded lands, improvement in watersheds and water quality, creation of jobs and lower prices for electricity and gasoline.

F. IDEQ Must Conduct A BACT Analysis And Set A BACT Emission Limit for CO<sub>2</sub> because Emissions will be Significant

Air pollutants emitted above defined “significance” levels must be regulated with a BACT emission limitation. The significance level for any pollutant that is not listed in the table at 40 C.F.R. § 52.21(b)(23)(i), is any “net emission increase.” 40 C.F.R. § 52.21(b)(23)(ii); (incorporated by reference IDAPA 58.01.01.107.03(d) and 58.01.01.205.01). There is no significance level for CO<sub>2</sub> listed in the table at 40 C.F.R. § 52.21(b)(23)(i). Thus, the obligation to adopt a BACT emission limitation for CO<sub>2</sub> is triggered by *any increase* in emissions of CO<sub>2</sub>. 42 U.S.C. §§ 7475(a)(1), (4), and 7479(3); 40 C.F.R. § 52.21(j)(2); 40 C.F.R. § 52.21(b)(23)(ii).

There is no dispute that the Center would emit significant quantities of CO<sub>2</sub>; in fact, the facility has a potential to emit 2.3 million tons of CO<sub>2</sub> for each year of operation (totaling almost 115 million tons of CO<sub>2</sub> over its 50-year operational life.)<sup>20</sup> Phase II of the project which will produce transportation fuels will greatly increase the greenhouse gas emissions. Yet the draft permit does not contain BACT emission limitations for carbon dioxide or nitrous oxide.

G. IDEQ Must Consider CO<sub>2</sub> Emissions to Fulfill the Governor’s Order to Implement Greenhouse Gas Reduction.

Recognizing the dangers global warming poses to the state’s natural resources and quality of life, the Governor of Idaho has recently committed the state to reduce greenhouse gas

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<sup>19</sup> The Board has said:

We are unable to reconcile the view that consideration of need for a facility is outside the scope of section 165(a)(2) of the Clean Air Act with the text of the statute and prior decisions. The statutory text’s plain meaning does not lend itself to excluding public comments that request consideration of the “no build” alternative to address air quality concerns. Moreover, the Board’s and Administrator’s prior decisions would appear to recognize that consideration of “need” is an appropriate topic under section 165(a)(2). See *In re EcoEléctrica*, LP, 7 E.A.D. 56, 74 (EAB 1997)

*In re Prairie State*, PSD Appeal 05-05, 12 E.A.D. \_\_\_ (EAB Aug. 24, 2005).

<sup>20</sup> Idaho Department of Environmental Quality, Power County Energy Center: Air and Water Quality Fact Sheet, [http://www.deq.idaho.gov/air/permits\\_forms/permitting/pcaec/fact\\_sheet\\_air\\_water.pdf](http://www.deq.idaho.gov/air/permits_forms/permitting/pcaec/fact_sheet_air_water.pdf) (last visited Nov. 11, 2008).  
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emissions in the state, Governor's Exec. Order No. 2007-05. The Governor recognizes that "greenhouse gases are believed to trap heat in the atmosphere and have been linked by the U.S. National Academies of Sciences to drought, reduced snow pack, altered precipitation patterns, more severe forest and rangeland fires, and forest diseases." Exec. Order No. 2007-05.

Due to these findings, the Governor directs IDEQ to

[T]ake a **leadership** role to work with all state government departments and agencies and . . . serve as the central point of contact for coordination and implementation of greenhouse gas reduction efforts and other associated activities. [and to] . . . develop a greenhouse gas emission inventory and provide recommendations to the Governor on how to reduce greenhouse gas emissions in Idaho . . . .

Exec. Order No. 2007-05.

IDEQ has the responsibility to prioritize the reduction of greenhouse gases, including CO<sub>2</sub>. As mentioned above, Idaho is also a member of WRAP and an observer in WCI, both regional partnerships committed to addressing climate change. Issuing this permit without any consideration of greenhouse gas emissions, despite the high emissions levels of CO<sub>2</sub> the Center will produce, would be in blatant disregard of this executive order and the priorities of the state.

H. The Draft Permit Should Be Denied Under Idaho Law Because Carbon Dioxide Pollution From the Project Would Be Injurious To Human Health And Welfare

The Governor's executive order builds on the protections mandated in Idaho's Environmental Protection and Health Act. Idaho's Environmental Protection and Health Act states a broad legislative policy to protect the health, general welfare and property of the people of the state:

It is hereby recognized by the legislature that the protection of the environment and the promotion of personal health are vital concerns and are therefore of great importance to the future welfare of this state. It is therefore declared to be the policy of the state to provide for the protection of the environment and the promotion of personal health and to thereby protect and promote the health, safety and general welfare of the people of this state.

Idaho Code Ann. § 39-102.

These provisions confer broad authority on IDEQ to protect the people of Idaho from adverse effects of air pollution. *See* Idaho Code Ann. § 39-102A. Greenhouse gas emissions are included in the statutory definition of "air pollution." Specifically, Idaho Code section 39-103(2) states:

"Air pollution" means the presence in the outdoor atmosphere of any contaminant or combination thereof in such quantity of such nature and duration and under such conditions as would be injurious to human health or welfare, to animal or

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plant life, or to property, or to interfere unreasonably with the enjoyment of life or property.

Idaho Code Ann. § 39-103(2).

As stated in the Governor's Executive Order 2007-05 and discussed further below, evidence abounds that carbon dioxide is present in the atmosphere at concentrations that will be injurious to human health and welfare, animals and plant life. The increasing concentration of CO<sub>2</sub> in the atmosphere certainly qualifies as "air pollution" under the definition in Idaho Code section 39-103(2). Preventing further impacts from CO<sub>2</sub> emissions falls clearly within the realm of section 39-102A.

The Idaho Administrative code also specifically provides for the regulation of chemical emissions such as greenhouse gases that are not otherwise provided for in the regulations: Control Of Unregulated Contaminants. The absence of an air quality standard for a specific contaminant shall not preclude action by the Department to control such contaminants to assure the health, welfare and comfort of the people of the State.

IDAPA 58.01.01.576.

The federal Clean Air Act's definition of public welfare corroborates the premise that greenhouse gas pollution is properly regulated as a threat to public welfare. The Clean Air Act provides a broad definition of "welfare" that encompasses a host of environmental ills:

All language referring to effects on welfare includes, but is not limited to, effects on soils, waters, crops, vegetation, manmade materials, animals, wildlife, weather, visibility, and climate, damage to and deterioration of property, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being, whether caused by transformation, conversion, or combination with other air pollutants.

42 U.S.C. § 7602(h) (2006).

Of particular importance here, "welfare" refers to "effects on . . . weather . . . and climate." *Id.* Thus, the most basic effect of global climate change — an increase in the Earth's average mean temperature — is directly implicated as an effect on public welfare under the Act. As discussed, global climate change is already resulting in well-documented impacts on climate and weather, including air and ocean temperature increases, widespread melting of snow and ice, changes in precipitation amounts and wind patterns, and more frequent extreme weather events such as hurricanes, heat waves, floods, and droughts.

The Supreme Court recently affirmed in *Massachusetts v. EPA* that carbon dioxide and other greenhouse gases are "pollutants" under the Clean Air Act. 127 S.Ct. 1460 (2007). Thus, carbon dioxide is unquestionably a pollutant subject to regulation under the Act. *See* Section III(b)(ii)(1) below.

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Other states have begun to recognize the key link between greenhouse gas pollution and the protection of public welfare. The Secretary of the Kansas Department of Health and Environment recently denied an air permit application for two large new coal-fired boilers, pursuant to a statutory provision authorizing him to take action to protect the health of persons or the environment where the emission of air pollution presents a substantial endangerment to the health of persons or the environment.<sup>21</sup> In an opinion requested by the Secretary, the Kansas Attorney General wrote:

[I]t is our opinion that *if* the secretary makes a factual determination that a particular emission constitutes air pollution and that such emission presents a substantial endangerment to the health of persons or the environment, *then* even in the absence of federal or state regulations setting limitations for a particular pollutant, [the Kansas statute] authorizes the secretary to take actions as necessary to protect the health of persons or the environment. Such actions may include denying an air quality application on the basis of anticipated emissions of a particular pollutant . . .

Op. Kan. Att’y Gen. No-2007-31 (Sept. 24, 2007) at 3.<sup>22</sup> The Governor and the Secretary of the Kansas Department of Health and Environment appropriately recognized the imminent threat of global warming to citizens of that state and the United States. She recognized also the need for concrete and deliberate action to address global warming – understanding that the only way to begin solving the problem is to begin scrutinizing each decision about a major new source of greenhouse pollutants. Kansas took the responsible course of action, and Idaho should do no less.

Taken together, both state and federal law lead to the ineluctable conclusion that greenhouse gas emissions must be controlled because of their threat to public health and welfare. Because the proposed project would be a large new source of CO<sub>2</sub> and N<sub>2</sub>O, because carbon dioxide pollution contributes to global warming, and because global warming is injurious to human, plant and animal life, the Idaho Department of Environmental Quality should exercise their authority to deny the permit in its present form.

I. CLIMATE CHANGE BACKGROUND – The Proposed Plant Will Contribute To The Climate Change Crisis

Global warming is a threat to public health, welfare, and the environment. The Intergovernmental Panel on Climate Change (IPCC) was established by the World Meteorological Organization and the United Nations Environment Programme in 1988. The IPCC’s mission is to comprehensively and objectively assess the scientific, technical and socio-economic information relevant to human-induced climate change, its potential impacts, and options for adaptation and mitigation. See <http://www.ipcc.ch/about/index.htm>. The IPCC

<sup>21</sup> See Kansas Department of Health and Environment, *KDHE Denies Sunflower Electric Air Quality Permit*, October 18, 2007, available at [http://www.kdheks.gov/news/web\\_archives/2007/10182007a.htm](http://www.kdheks.gov/news/web_archives/2007/10182007a.htm)

<sup>22</sup> Paul J. Morrison, Kansas Attorney General, ATTORNEY GENERAL OPINION NO. 2007-31, September 24, 2007, available at [http://www.kdheks.gov/download/KS\\_Atty\\_General\\_Opinion\\_10.17.07.pdf](http://www.kdheks.gov/download/KS_Atty_General_Opinion_10.17.07.pdf)

completed its First Assessment Report in 1990, its Second Assessment Report in 1995, and its Third Assessment Report in 2001. See <http://www.ipcc.ch/ipccreports/assessments-reports.htm>. The IPCC recently finalized its Fourth Assessment Report, "Climate Change 2007." *Id.*

The summaries include the following significant conclusions relevant to Idaho:

- Warming in the Western mountains of North America will likely cause decreased snowpack, more winter flooding and reduced summer water flow, exacerbating competition for over-allocated water resources;
- Forests in North America will be more susceptible to wildfires, as warmer summer temperatures will extend the high-fire ignition risk by 10-30%. Forests are also more likely to be sensitive to disturbances from diseases and insects;
- In North America, major challenges are projected for crops that are near the warm end of their suitable range or depend on highly utilized water resources;
- Approximately 20-30% of plant and animal species assessed so far are likely to be at increased risk of extinction if increases in global average temperatures exceed 1.5-2.5 Degrees Celsius;
- Even the most stringent mitigation efforts cannot avoid further impacts of climate change in the next few decades, which make adaptation essential, particularly in addressing near term impacts. Unmitigated climate would, in the long term, be likely to exceed the capacity of natural, managed and human systems to adapt.
- Global greenhouse gas (GHG) emissions have grown since pre-industrial times, with an increase of 70% between 1970 and 2004;
- Fuel switching from coal to gas, renewable heat and power (hydropower, solar, wind, geothermal and bioenergy), and early applications of carbon capture and storage (e.g., storage of removed carbon dioxide from natural gas) are key mitigation technologies and practices currently commercially available.

The IPCC has assessed the different greenhouse gases varying abilities to trap heat in the atmosphere, relative to each other. Carbon Dioxide is the most well-known greenhouse gas and has increased in the atmosphere by over 36% since pre-industrial times. Nitrous Oxide is an important greenhouse gas that has increased in the atmosphere by about 16% since pre-industrial times and has about 310 times as powerful heat-trapping effects as CO<sub>2</sub>.<sup>23</sup> The reports authoritatively document the adverse environmental and socio-economic impacts of global warming at local, regional, national and global scales, and the primary role of the burning of fossil fuels, including coal, in causing global warming. The evidence in the IPCC reports

<sup>23</sup>Idaho Department of Environmental Quality, Power County Energy Center: Air and Water Quality Fact Sheet, [http://www.deq.idaho.gov/air/permits\\_forms/permitting/pcaec/fact\\_sheet\\_air\\_water.pdf](http://www.deq.idaho.gov/air/permits_forms/permitting/pcaec/fact_sheet_air_water.pdf) (last visited Nov. 11, 2008).  
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conclusively shows that greenhouse gases, including CO<sub>2</sub>, endanger public health, welfare, and the environment.

Many researchers have highlighted the severity of the threats posed by global warming. A recent study found that from 2000 to 2006, the average emissions growth rate was 3.3% per year, compared to 1.3% per year during the 1990s. The study estimates that global warming is happening faster than expected, and attributes this to recent growth in the world economy, increasing carbon intensity, and decreasing efficiency in carbon sinks on land and in oceans. This evidence suggests that even the estimates of the IPCC are too conservative, and that the threat of global warming may be even more imminent than originally anticipated.

Global warming also exacerbates the problem of ground-level ozone (“smog”), intensifying the public health dangers associated with air quality violations. Breathing ozone can trigger a variety of health problems, including chest pain, coughing, throat irritation, and congestion, and repeated exposure can lead to bronchitis, emphysema, asthma, and permanent scarring of lung tissue. In addition, global warming will result in increased surface water evaporation, which in turn could lead to more wildfires and increased dust from dry soil, both of which generate particulate matter emissions. Particulate matter triggers a host of health problems, including aggravated asthma, development of chronic bronchitis, irregular heartbeat, nonfatal heart attacks, and premature death in people with heart or lung disease.

While global warming will have a significant impact on the human environment, IDEQ appears to not even have considered these effects. Consideration of the direct and collateral effects from construction of the proposed plant must be analyzed before any permit decision is made.

#### A. Western States Are Taking Action To Address The Climate Crisis

The Western States are taking the lead to stop global warming. California has enacted the landmark “Global Warming Solutions Act of 2006,” which seeks to reduce greenhouse gas emissions to 80 percent below 1990 levels by 2050. California and Washington have both adopted carbon dioxide emission limitations of 1100 pounds per megawatt-hour for power plants. Montana recently adopted a minimum sequestration mandate, providing that new coal plants must capture and sequester a minimum of 50% of the carbon dioxide produced. The table below summarizes the carbon dioxide emission standards and limits adopted by these states.

**Table 1: Western State Carbon Dioxide Emission Limitations (as of December 2007)**

STATE LAW	STANDARD	APPLICABILITY	EFFECTIVE DATE
State of Montana, HB 0025, signed into law by Gov. Schweitzer on May 14, 2007	Mandate for the facility to capture and sequester a minimum of 50% of the carbon dioxide produced.	Applies to new electric generating units “primarily fueled by coal.”	January 1, 2007

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State of Washington, SB 6001, signed into law by Gov. Gregoire on May 3, 2007	The lower of 1100 pounds of greenhouse gases per megawatt-hour or the average available GHG emission output of new combined cycle natural gas thermal electric generation turbines commercially available and offered for sale.	Triggered upon long-term financial commitments: (1) new ownership interest or upgrade to baseline power plant, or (2) new/renewed contract with a term of five years or more.	July 1, 2008
State of California, SB 1368, signed into law by Governor Schwarzenegger on Sept. 29, 2006	Greenhouse gas emissions performance standard shall be established by administrative agency at a rate that is no higher than the rate of emissions of greenhouse gases for combined-cycle natural gas baseload generation; CPUC recently established 1100 pounds of CO <sub>2</sub> per MW-hour as the operative standard	Applies to long-term contracts for baseload power of five years or longer	CPUC rules for IOUs took effect February 1, 2007

Numerous states are also using executive or administrative powers to begin tackling climate change. Through a 2006 executive order, Arizona is targeting emissions reductions of 50 percent below 2000 levels by 2040. New Mexico's target of 75 percent emissions reduction below 2000 levels by 2050 will be accomplished through increased state use of renewable energy, a "clean cars" program, tax incentives for biofuels, and investment in energy efficient buildings. Idaho has enacted its own executive order on climate change, which is discussed further below.

Many states are also regulating carbon pollution from auto tailpipe emissions, led by California's adoption of AB 1493 (Pavley). New Mexico and Oregon have adopted the California tailpipe standards.

**B. Idaho Has Committed to Taking Action to Address the Climate Crisis.**

Idaho has firmly committed to working towards climate change and issuing a new permit for a facility that would emit 5% of the state's greenhouse gas emissions is inconsistent with the policy commitments Idaho has made towards reduction of greenhouse gases in Western

Regional Air Partnership (WRAP), Western Climate Initiative (WCI) and as mandated in the Governor's Executive Order.

The Governor ordered Idaho's Department of Environmental Quality to take action to reduce greenhouse gases in the State. Governor's Exec. Order No. 2007-05 (May 16, 2007). Governor Otter determined "it is incumbent upon states to take a leadership role in developing responsive state-level policies and programs to reduce greenhouse gases." *Id.* The Governor recognizes that "rising levels of greenhouse gases in the atmosphere could have economic and environmental impacts on the West in coming decades." *Id.* Governor Otter ordered the IDEQ to take on this "leadership role" and "develop a greenhouse gas emission inventory and provide recommendations to the Governor on how to reduce greenhouse gas emissions in Idaho." *Id.*

In response to this order, IDEQ had the Center for Climate Strategies produce a Greenhouse Gas report that inventoried Idaho's greenhouse gases and made projections for future use.<sup>24</sup> According to the report, the state contributes about .05% of the total U.S. greenhouse gas emissions for CO<sub>2</sub> (based on 2004 figures).<sup>25</sup> However, Idaho's per capita rate of CO<sub>2</sub> production of 26 MtCO<sub>2</sub>/yr is higher than the national average of 25 MtCO<sub>2</sub>/yr. Idaho's gross greenhouse emissions increased by 31% from 1990-2005, while the national average only increased by 16%. Thus, Idaho's contribution to the greenhouse gas problem, while small overall, is significant in proportion to its small population and is increasing disproportionately to the national average.

Idaho is a member of the Western Regional Air Partnership (WRAP), which is a collaborative effort of tribal governments, state governments and various federal agencies to implement regional haze regulations and deal with other common air quality issues. WRAP members are participating in information sharing and collecting inventory of greenhouse gas emissions as part of this initiative.<sup>26</sup> The Governor's order was a commitment to this regional strategy.

Idaho is also an observer in the Western Climate Initiative (WCI), which is lead by seven governors and four Canadian premiers working to collectively reduce greenhouse gases in the region, primarily through a market-based cap-and-trade system.<sup>27</sup> WCI aims to implement a program that would reduce greenhouse gas emissions in the region to 15% below 2005 levels by 2020.<sup>28</sup> The partner states, not yet including Idaho, have agreed to start reporting emissions starting in 2011, for the year 2010. Idaho's neighbors are thus working towards regional strides to affect climate change.

We detailed in the previous sections on steps that the IDEQ must take to address carbon emissions from the proposed project. Even if it concludes that those steps are not required, which

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<sup>24</sup> Randy Strait, Steve Roe, Alison Bailie, Holly Lindquist, Alison Jamison, *Idaho Greenhouse Gas Inventory and Reference Case Projections 1990-2020*, Center for Climate Strategies (Spring 2007), available at [http://www.wrapair.org/ClimateChange/ID\\_GHG\\_I&F\\_Report\\_WRAP\\_08-20-07.pdf](http://www.wrapair.org/ClimateChange/ID_GHG_I&F_Report_WRAP_08-20-07.pdf).

<sup>25</sup> *Id.*

<sup>26</sup> Western Regional Air Partnership Website, <http://www.wrapair.org/ClimateChange/index.html>.

<sup>27</sup> Western Climate Initiative Website, <http://www.westernclimateinitiative.org/Index.cfm>.

<sup>28</sup> Western Climate Initiative, Press Release September 23, 2008,

<http://www.westernclimateinitiative.org/ewebeditpro/items/O104F19871.PDF> (last visited Nov. 17, 2008).

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we respectfully insist would be contrary to law, the IDEQ should either temporarily stay the permit process or include a “reopener” reservation-of-rights provision in the permit. A stay would ensure that Idaho does not foreclose its options to address greenhouse gas pollutants just as Congress appears poised to act. Alternatively, a “reopener” reservation of rights provision should be included in the permit, putting the applicant on clear notice that its carbon dioxide emissions will be regulated if authority to do so under the Clean Air Act is established by federal legislation; this permit provision should serve as an express reservation of rights by Idaho to revisit the permit to regulate the facility’s carbon dioxide emissions.

### **III. The application and statement of basis must quantify emissions of, or identify PSD applicability for, each PSD-regulated pollutant.**

Idaho requires that an application for a permit to construct include the “the nature and amount of emissions (including secondary emissions)”<sup>29</sup> and that the amount of emissions be “quantified in tons per year”<sup>30</sup>.

Page 1-13 of the application and Section 4.4 of the Statement of Basis discusses applicability to 40 CFR 52.21 “Prevention of Significant Deterioration” (PSD) by classifying the center as a “major source” whose emissions must be quantified. However neither document explicitly indicates which pollutants trigger the application of Best Available Control technology (BACT), and neither indicates whether BACT is required for the following PSD-regulated pollutants potentially emitted from the SIE process: Particulate Matter Less than 2.5 Microns (PM<sub>2.5</sub>), Fluorides, Sulfuric Acid Mist (SAM), and each pollutant that comprises the group “Total Reduced Sulfurs” (TRS).

### **IV. DEQ Must Establish MACT Limits For Hazardous Air Pollutants**

As indicated in Comment #1, SIE must quantify emissions of all regulated pollutants as part of the application to construct. IDAPA 58.01.01.202. and IDAPA 58.01.01.314; IDAPA 58.01.01.314. However, Appendix D of SIE’s application does not estimate emissions of several hazardous air pollutants (HAPs) from the coal-to-fertilizer gasification process, including mercury, chloride, and fluoride. Mercury emissions are a special concern since the project is located near the Snake River. Impacts of mercury emissions on fish caught in the river and consumed by local populations, especially children, should be quantified. The American Falls Reservoir presently has a “Fish Consumption Advisory” designated there by the Idaho Department of Health & Welfare based on elevated levels of Mercury in these fisheries.<sup>31</sup>

HAPs, also known as toxic air pollutants or air toxics, are a group of chemicals and compounds that pose the greatest public health concern. According to EPA, exposure to HAPs may result in “an increased chance of getting cancer or experiencing other serious health effects. These health effects can include damage to the immune system, as well as neurological,

<sup>29</sup> Idaho Department of Environmental Quality, Rules for the Control of Air Pollution in Idaho (IDAPA) 58.01.01.202. and IDAPA 58.01.01.314.

<sup>30</sup> IDAPA 58.01.01.314.

<sup>31</sup><http://healthandwelfare.idaho.gov/DesktopModules/Documents/DocumentsView.aspx?tabID=0&ItemID=11810&MIId=12869&wversion=Staging>

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reproductive (e.g., reduced fertility), developmental, respiratory and other health problems.<sup>32</sup> In addition, documented impacts of HAPs include degrading air, water and soil quality, threatening wildlife and damaging animal and plant habitat.<sup>33</sup>

Mercury is an extremely hazardous neurotoxin that is dangerous at very low levels. Mercury emitted from coal plants becomes methylmercury in the environment, where it becomes toxic in even minute amounts. Readily absorbed by living tissues, methylmercury can cause serious birth defects, central nervous system and brain damage, diminished intelligence, and, recent evidence suggests, autism. According to the FDA standard, it would only take one pound of methylmercury to contaminate 500,000 pounds of fish, which, when consumed by humans and wildlife, increases their mercury levels. EPA has found that 1 in 6 women has levels of mercury in her blood above the safe standard, putting her future children at risk for learning and behavioral problems associated with mercury poisoning.

MACT requirements apply to “major sources” that have the potential to emit 10 or more tons per year of any one HAP or 25 or more tons per year of a combination of HAPs. 42 U.S.C. § 7412(a)(1). While Condition No. 2.2 “caps” emissions of HAPs below the thresholds which would warrant the application of MACT, the permit contains no conditions indicating how compliance with Condition 2.2 will be ensured for the 186 HAPs other than H<sub>2</sub>S, i.e. no testing, monitoring, record keeping, and/or reporting. Specifically, “HAP emission limits were set at 8 tons per year for any HAP and 20 tons per year for all HAPs to provide a federally-enforceable limit to keep the facility as a minor or synthetic minor source for HAPs.” Statement of Basis, p. 49; see also Draft Permit, p. 7

Guidance from the United States Environmental Protection Agency and legal precedence<sup>34</sup>, require that in order to limit potential-to-emit to render a source an “area source” for MACT applicability, the permitting authority must issue a “federally enforceable” permit containing practically enforceable conditions before the first deadline to comply with a substantive emission limitation of an applicable MACT<sup>35</sup>.

As the EPA pointed out in a recent letter to IDEQ, “the absence of a detailed description of the mercury control equipment, the expected speciation of mercury emissions, the mercury handling practices, and monitoring of mercury emissions prevent meaningful and informed comment by EPA or the public.”<sup>36</sup>

In addition to mercury, the compounds of Chloride and Fluoride are the HAPS expected to be emitted in highest quantities from the gasification process. As part of an application for a

<sup>32</sup> <http://www.epa.gov/ttn/atw/allabout.html> (last visited Nov. 4, 2008).

<sup>33</sup> [http://www.nature.nps.gov/air/Studies/air\\_toxics/docs/2008FinalReport/WACAP\\_Report\\_Volume\\_I\\_Main.pdf](http://www.nature.nps.gov/air/Studies/air_toxics/docs/2008FinalReport/WACAP_Report_Volume_I_Main.pdf) (last visited November 5, 2008), see also <http://www.epa.gov/ttn/caaa/t3/reports/eurtcl.pdf> (last visited November 5, 2008).

<sup>34</sup> *Weiler v. Chatham Forest Products, Inc.*, 392 F.3d 532, 535 (2d Cir. 2004); *National Min. Ass'n v. U.S. E.P.A.*, 59 F.3d 1351, 1362 (D.C. Cir. 1995)

<sup>35</sup> Stein, Kathy A., *Guidance on Enforceability Requirements for Limiting Potential to Emit through SIP and §112 Rules and General Permits*, United States Environmental Protection Agency, January 25, 1995; Seitz, John S., *Options for Limiting the Potential to Emit (PTE) of a Stationary Source Under Section 112 and Title V of the Clean Air Act (Act)*, United States Environmental Protection Agency, January 25, 1995

<sup>36</sup> Letter from R. Albright, US EPA, to M. Bauer, IDEQ Administrator, dated Nov. 18, 2008.

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gasification project in Louisiana, the United States Environmental Protection Agency (US EPA), the US Department of Energy (US DOE), the Electric Power Research Institute (EPRI), and the Louisiana Gasification Technology, Inc. conducted a study entitled "A Study of Toxic Emissions From A Coal-Fired Gasification Plant" on a process was similar to that of SIE. The study indicated that compounds of Cl- and F- were expected to be emitted in the highest quantities at 740 and 38 lb/10<sup>12</sup> Btu, respectively.<sup>37</sup> Yet, there are no specific enforceable limits on chloride or fluoride in the draft permit.

Therefore, SIE has not been shown to be an "area source" (synthetic minor) for MACT and must otherwise comply with all applicable portions of MACT.

**V. IDEQ Must Establish BACT Limits for PM<sub>2.5</sub> and the Project PM<sub>2.5</sub> 24-hour impact will exceed NAAQs.**

**1. The Health Threat Posed By PM<sub>2.5</sub>**

PM<sub>2.5</sub> (sometimes referred to as fine particulate matter) is the smallest and most dangerous category of particulate matter by the Clean Air Act and its Amendments. These particles are small enough to be extremely invasive and to cause serious respiratory illness in humans. Risk to human health and welfare caused by fine particulate matter is so great that in 2006 the US EPA was prompted to revise its 1997 National Ambient Air Quality Standard (NAAQS) for PM<sub>2.5</sub> to a level that is nearly twice as stringent as the 1997 standard.

Very fine particles classified as PM<sub>2.5</sub> are "produced chiefly by combustion processes and by atmospheric reactions of various gaseous pollutants," and they "can remain suspended in the atmosphere for days to weeks and be transported many thousands of kilometers."<sup>38</sup> Widespread dispersion of PM<sub>2.5</sub> poses a major human health threat because these particles "contain[] microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems." in both the human respiratory and cardio-vascular systems.<sup>39</sup> Even short-term exposure to PM<sub>2.5</sub> causes asthma (especially in children), other respiratory illnesses, heart attacks, and premature death (especially in people with heart or lung disease).<sup>40</sup>

**2. The National Ambient Air Quality Standards For PM<sub>2.5</sub>**

The magnitude of the human health threat posed by PM<sub>2.5</sub> recently prompted EPA to strengthen federal regulation of PM<sub>2.5</sub> under the Clean Air Act. In 1997, EPA set primary

<sup>37</sup> Radian Corporation, DCN 95-643-004-07, "A Study of Toxic Emissions From A Coal-Fired Gasification Plant", Prepared for US Department of Energy, Electric Power Research Institute, and Louisiana Gasification Technology, Inc, December 1995

<sup>38</sup> National Ambient Air Quality Standards for Particulate Matter; Proposed Rule, 71 Fed. Reg. 2,619, 2,625 (Jan. 17, 2006).

<sup>39</sup> EPA, Particulate Matter, "Health and Welfare," <http://www.epa.gov/oar/particlepollution/health.html> (last checked October 18, 2008)

<sup>40</sup> See *id.*; see also 71 Fed. Reg. at 2,627-49 (reviewing extensive scientific literature documenting health problems caused by PM<sub>2.5</sub> exposure); National Ambient Air Quality Standards for Particulate Matter, Final Rule, 71 Fed. Reg. 6,144, 6,151-52 (Oct. 17, 2006) (same).

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health-based National Ambient Air Quality Standards for PM<sub>2.5</sub>. However, by 2005, many newly completed studies on PM<sub>2.5</sub>-related sickness and mortality had convinced staff scientists at EPA that “thousands of premature deaths” and “similarly substantial numbers of incidences of hospital admissions, emergency room visits, aggravation of asthma and other respiratory symptoms, and increased cardiac-related risk” would occur nationally even when the 1997 PM<sub>2.5</sub> NAAQS were met.<sup>41</sup> In 2006, EPA therefore revised the 24-hour NAAQS for PM<sub>2.5</sub> to be nearly twice as stringent as the original 1997 NAAQS.<sup>42</sup>

### 3. The Clean Air Act BACT Requirements Apply to PM<sub>2.5</sub> Emissions From the Center

PM<sub>2.5</sub> is a pollutant for which National Ambient Air Quality Standards (“NAAQS”) have been established and subsequently revised in response to severe and well-documented public health concerns. As such, PM<sub>2.5</sub> is indisputably a “pollutant subject to regulation under th[e] CAA.” 42 U.S.C. § 7475(a)(4); see also 40 C.F.R. 52.21(b)(50) (expressly defining regulated pollutants for purposes of the Prevention of Significant Deterioration (“PSD”) program to include “[a]ny pollutant for which a national ambient air quality standard has been promulgated”).

Accordingly, EPA has acknowledged that “[t]he obligation to implement PSD is triggered upon the effective date of the NAAQS.”<sup>43</sup> Indeed, EPA is proposing to rely on BACT emission limits to help achieve attainment of the PM<sub>2.5</sub> NAAQS across the country.<sup>44</sup>

Nevertheless, the proposed air quality permit for the Advanced Energy Center contains no BACT analysis or limitation for the facility’s PM<sub>2.5</sub> emissions. See Statement of Basis, pp. 41-48. As explained in the attached decision of the Montana Board of Environmental Review regarding the proposed Highwood Generating Station in Central Montana, the Clean Air Act requires permitting authorities to establish BACT-determined emissions limits specifically for emissions of PM<sub>2.5</sub>. To comply with clear requirements of the Clean Air Act, IDEQ must require a BACT analysis for PM<sub>2.5</sub> and incorporate BACT-determined PM<sub>2.5</sub> emissions limits into the permit for the Advanced Energy Center. In addition, to ensure meaningful opportunity for public participation, IDEQ must make a subsequent PM<sub>2.5</sub> BACT analysis available for public review before any final air quality permit issues.

### 4. A PM<sub>10</sub> Analysis Does Not Suffice for PM<sub>2.5</sub>

Idaho (except Indian Country) is a “SIP-approved state” for the purposes of PSD.<sup>45</sup> SIE and IDEQ have completely ignored PM<sub>2.5</sub> as a PSD-regulated pollutant. Specifically, the permit

<sup>41</sup> 71 Fed. Reg. at 2,643.

<sup>42</sup> See 71 Fed. Reg. 6,144 (changing the 24-hour PM<sub>2.5</sub> standard from 65 micrograms per cubic meter (“µg/m<sup>3</sup>”) to 35 µg/m<sup>3</sup>).

<sup>43</sup> Rule to Implement the Fine Particle National Ambient Air Quality Standards, Notice of Proposed Rulemaking, 70 Fed. Reg. 65,984, 66,043 (Nov. 1, 2005).

<sup>44</sup> See Prevention of Significant Deterioration (PSD) for Particulate Matter Less Than 2.5 Micrometers (PM<sub>2.5</sub>) Increments, Significant Impact Levels (SIL), and Significant Monitoring Concentrations (SMC), Proposed Rule, 72 Fed. Reg. 54,112 (September 21, 2007).

<sup>45</sup> <http://www.epa.gov/air/nsr/live/vy.html>, US EPA “Prevention of Significant Deterioration Program Status – May 2007”

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application analysis does not even quantify PM<sub>2.5</sub> nor does it identify SIE as a source of “significant” emissions either for direct PM<sub>2.5</sub> or by virtue of “significance thresholds” for its precursors NO<sub>x</sub>, SO<sub>2</sub>, and VOC at 40 TPY. The permit application analysis does not even make mention of the intent to use PM<sub>10</sub> as a surrogate for PM<sub>2.5</sub> nor does it compare PM<sub>10</sub> emission rates to the 24-hr and annual PM<sub>2.5</sub> NAAQS.

Use of PM<sub>10</sub> to calculate PM<sub>2.5</sub> would not suffice because the modeled PM<sub>10</sub> emissions, and would-be modeled PM<sub>2.5</sub> emissions, are severely underestimated by not including the condensable portion of PM as required by definition in IDAPA 58.01.01.75 and the draft permit. They do not account for the secondary formation due to chemical conversion of precursors such as NO<sub>x</sub> and SO<sub>2</sub>. Condensable PM and secondary chemical conversion may double the PM<sub>2.5</sub> impacts modeled with filterable PM alone. Already, Condition #22 shows that SIE has underestimated emissions of sulfuric acid and condensable PM<sub>10</sub> emissions. Therefore, the modeled impacts do not demonstrate that there is no adverse impact to the National Ambient Air Quality Standards as indicated in the statement of basis and the draft permit.

Even with the condensable portion, however, calculation of PM<sub>2.5</sub> using PM<sub>10</sub> emissions shows 24-hour concentration will exceed NAAQS in violation of IDAPA 58.01.01.203.02. Table 3.4 of the Idaho DEQ Statement of Basis reports a modeled total 24-hour PM<sub>10</sub> impact of 4.92 ug/m<sup>3</sup>. Assuming PM<sub>10</sub> as a surrogate, the maximum PM<sub>2.5</sub> impact from SIE is then 4.92 ug/m<sup>3</sup>. The US EPA AirData website indicates that in 2005 the 98<sup>th</sup> percentile measurement at the Pocatello monitoring station is 33.5 ug/m<sup>3</sup>. Using this measurement of 33.5 ug/m<sup>3</sup> as the background, the total 24-hr concentration will be 38.42 ug/m<sup>3</sup> (4.92+33.5). **This total 24-hour concentration will exceed the PM<sub>2.5</sub> 24-hour NAAQS of 35 ug/m<sup>3</sup>.** This is a strong basis alone to deny approval of this permit in accordance with IDAPA 58.01.01.203.02.

The “Final PM<sub>2.5</sub> NSR Implementation Rule” took effect on May 16, 2008.<sup>46</sup> IDEQ should not rely on this rule, however, because it is illegal and will eventually be vacated. The rule unlawfully allow facilities to ignore certain emissions when determining whether the facility is a “major source,” thus subjecting it to regulation; they also unlawfully continue to allow facilities to use larger particles (PM<sub>10</sub>) as a surrogate for measuring PM<sub>2.5</sub> and fail to require regulation of PM<sub>2.5</sub> precursor pollutants. IDEQ takes a major risk by relying on this illegal rule that will eventually be vacated.

Controlling case law provides that vacatur of an unlawful agency action renders that action a nullity—i.e., the agency action lacks any legal significance and is treated as if it never happened. *See, e.g., Environmental Defense v. Leavitt*, 329 F. Supp. 2d 55, 64 (D.D.C. 2004) (“When a court vacates an agency’s rules, the vacatur restores the status quo before the invalid rule took effect.”); *Environmental Defense v. EPA*, 489 F.3d 1320, 1325 (D.C. Cir. 2007) (while remanded regulations remain in effect, vacated regulations do not); *Campanale & Sons, Inc. v. Evans*, 311 F.3d 109, 127 (1st Cir. 2002) (option of vacating a regulation described as “overturning it in its entirety”).

<sup>46</sup> *Federal Register*, Volume 73, No. 96, “EPA-HQ-OAR-2003-0062, FRL-8566-1, RIN-2060-AN86, 40 CFR parts 51 and 52, Final Rule: Implementation of New Source Review (NSR) for Particulate Matter Less Than 2.5 Micrometers (PM<sub>2.5</sub>), pp 28321 - 28350

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**VI. IDEQ did not ensure compliance with National Ambient Air Quality Standards, PSD Increment, and Visibility Analysis for PM<sub>10</sub> (and PM<sub>2.5</sub>) because SIE did not include condensables in the impact analyses for PM<sub>10</sub>.**

The definition of “Particulate Matter Emissions” and “PM-10 Emissions” makes clear that the condensable portion of particulate matter must be included in any estimate of PM<sub>10</sub> emissions. Furthermore, guidance by the US EPA has required that any applicability determination, application of BACT, or demonstration of compliance with NAAQS, PSD Increment, or Visibility Analysis should include the condensable portion of PM<sub>10</sub>. Yet, SIE consistently omits from the table entitled “Emission Characterization – Steady State Operation: Summary of Emissions-Point Sources” and the column entitled “PM<sub>10</sub>”, the contribution to PM<sub>10</sub> from sulfuric acid mist, nitric acid, and other emissions present as droplets or mist. A review of this table on page 5 of Appendix D to the April 2008 application shows no entries for PM<sub>10</sub> from the Solxol AGR CO<sub>2</sub> Vent, Sulfuric Acid Vent, the “Nitric Acid Unit Tailgas” vent(s), or from the Urea Melt Plant Vent. Yet all of these sources have the potential to emit mist or droplets (PM, PM<sub>10</sub>, and PM<sub>2.5</sub>). Nevertheless, IDEQ has tentatively approved the value resulting from these omissions, 15.40 lb/hr and 66.67 TPY, as an indication of compliance with the NAAQS for PM<sub>10</sub>, the PSD Increment for PM<sub>10</sub>, and requirements for visibility analysis. SIE and IDEQ must re-evaluate compliance with these requirements after the inclusion of condensable matter in the PM<sub>10</sub> estimate before granting permission to construct.

**VII. The permit is flawed because the application does not consider inherently-lower emitting coal and pet coke for sulfur and ash.**

Use of high-sulfur coal and pet coke leads to higher SO<sub>2</sub> emissions and higher fine particulate emissions. By SIE’s own admission on pages 1-17 and 1-18 and Figure 1-5, this project is not a “mine-mouth” power plant and will be located near a rail line providing access to any coal in two-thirds of the United States. On page 2-29, SIE also acknowledges that the project will be capable of burning fuels from various ranks. Furthermore, SIE acknowledges that the main product from this process is not sulfur or sulfuric acid, though they are saleable by-products, but fertilizer in the form of urea or urea ammonium nitrate (UAN). Yet, IDEQ proposes to approve the use of high-sulfur coals and pet coke, the sulfur content of which has no benefit to the generation of hydrogen through sulfur removal or Haber-Bosch-like process to be used by SIE.

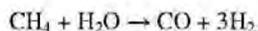
SIE proposes to burn coal from Utah and Colorado from the SUFCO and West Elk mines, respectively. SIE estimated a sulfur content ranging from 0.4% to 6.0 % by weight. Ash contents of coal are proposed to range from 8 to 10.6%. IDEQ allows the sulfur content of the fuel mixture (pet coke and coal) to the highest end of that estimate (6.0%) in Condition No. 2.14<sup>47</sup>, thereby allowing great flexibility in the sulfur content of the coal component of the fuel mixture gasified. BACT demands lower sulfur content because the coal’s sulfur content estimate is overblown and there is no contribution from sulfur to syngas production.

<sup>47</sup> Page 51 of the IDEQ Statement of Basis concurs with SIE’s assertion, on page 5-157 and 5-158 of the April 2008 application, that the gasifiers are not subject to the 1.0% sulfur content in draft permit condition no. 2.12  
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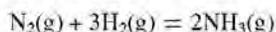
First, there is no evidence that suggests that any coal mined from the SUFCO mine would ever reach sulfur content as high as 6.0% as indicated on page 2-29 of the SIE application. In fact Union Pacific Railroad's own web site, reports a sulfur content of only 0.4% by weight for coal from the SUFCO mine<sup>48</sup>. This sulfur content is further supported by the US Geological Survey COALQUAL database which shows a sulfur content of 0.5% to 1.9% between 1975 and 1980<sup>49</sup>. Sulfur contents from the West Elk mine of Colorado are expected to around 0.4% by weight as well<sup>50</sup>.

The acid gas removal processes used to generate hydrogen for fertilizer production only need a feed stream composition 25% hydrogen sulfide (H<sub>2</sub>S) to be effective.<sup>51</sup> **Yet the stream to the Solexol process at SIE is proposed to contain 40% H<sub>2</sub>S.**<sup>52</sup>

Furthermore, the following reactions associated with production of ammonia using the Haber process show that there is no contribution from sulfur in syngas (abbreviated as CH<sub>4</sub>) to this production. The nitrogen comes from air processed in the air separation unit.



Using a form of iron oxide, as the catalyst:



Therefore, high sulfur coal has no benefit to the production of fertilizer.

Page B.10 of the 1990 Draft New Source Review Workshop Manual: Prevention of Significant Deterioration and Non-Attainment New Source Review (herein referred to as the "The 1990 NSR Manual"), requires the top-down BACT analysis include consideration of inherently-lower emitting processes **and combinations of these processes with add-on control technologies**. SIE has proposed and IDEQ has tentatively approved two add-on controls for the removal of sulfur, however **neither the application nor the statement of basis considered the use of lower sulfur-containing fuels, and consequently lower ash containing fuels, for the production of syngas with similar heat values to those fuels proposed by SIE.**

SIE should be required to consider the gasification of just low-sulfur coal or coal/petcoke blends, such as a 70/30 blend to account for the higher heat value of petcoke, or blends with a more even split using higher heat value coal, rather than allow SIE to exceed recent BACT

<sup>48</sup> <http://www.uprr.com/customers/energy/coal/utah/sufco.shtml>, Union Pacific Railroads: Customers: Utah Mines: SUFCO Mine, Accessed on 11/03/2008; <http://www.bnsf.com/markets/coal/mineguide/sufco.html>, BNSF Railway: Markets and Services: Coal: Mine Guide: Utah: SUFCO Mine – Arch Coal, Inc., Accessed on 11/03/2008

<sup>49</sup> <http://energy.er.usgs.gov/products/databases/CoalQual/intro.htm>, US Geological Survey COALQUAL Database: Proximate & Ultimate Analysis, Heat of Combustion, Forms of Sulfur, Ash Fusion Temp: Utah: Sevier County, Accessed on 11/03/2008

<sup>50</sup> [http://www.uprr.com/customers/energy/coal/colorado/west\\_elk.shtml](http://www.uprr.com/customers/energy/coal/colorado/west_elk.shtml), Union Pacific Railroads: Customers: Colorado Mines: West Elk Mine, Accessed on 11/03/2008

<sup>51</sup> [http://en.wikipedia.org/wiki/Haber-Bosch\\_process](http://en.wikipedia.org/wiki/Haber-Bosch_process), Wikipedia, Claus Process, Accessed 11/20/2008

Report from Refined Energy Holdings, LLC: Worley Parsons: Appendix: Calculations, page 29 attached to Appendix D of SIE Application submitted by Tom Hornyack on April 28, 2008 to IDEQ

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emissions limits just because it proposes to use high-sulfur petcoke with add-on controls. SIE must justify not selecting a combination of inherently lower emitting fuels and the top add control as BACT with an economic, energy, or environmental impact analysis.

**VIII. IDEQ Must base the permit on a complete Top-Down BACT Analysis that identifies all technically feasible control options for each regulated pollutant**

SIE's BACT analysis is seriously flawed. First, the application does not contain an explicit statement as to which NSR-regulated pollutants are emitted in amounts subject to BACT, as described in comment 1. Even worse, for several emission sources, SIE's application does not identify all technically feasible control options. SIE states on page 4-81 of their application that because they selected what they believe to be the top control, a "top-down analysis" is unnecessary. This directly contradicts Clean Air Act requirements.

On page 4-87 of Appendix E to the April 2008 application, SIE referenced the sources they consulted when determining BACT. The list of references does not include several state-supported RACT/BACT/LAER Clearinghouses (RBLCs), which can be more current than the federal RBLC, it does not include data compiled by the National Association of Clean Air Agencies (NACAA formerly "STAPPA ALAPCO") for best performing industrial boilers (see Table 3 attached at the end of this comment document), and it does not show that SIE reviewed control technologies abroad as recommended in the 1990 NSR Manual. Also, there is nothing precluding a source from searching the internet or other sources for vendors that specialize in control equipment for their particular process type. By not consulting all information sources SIE and IDEQ failed to comply with 52.21(j). The problems associated with the lack of these reviews on pollution controls are detailed in further comments below.

Federal and state regulations require "control technology review." 40 CFR 52.21(j), incorporated by reference in IDAPA 58.01.01.205.01. BACT is "one of the most critical elements of the PSD permitting process." *In re Knuaf Fiber Glass, GmbH*, 8 E.A.D. 121, 131 (EAB 1999) ("Knauf I"). BACT is defined as:

an emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under Act which would be emitted from any proposed major stationary source or major modification which the Administrator, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant.

40 C.F.R. § 52.21(b)(12). To ensure that the limits in the final PSD permit ensure "maximum degree of reduction," based on applicable production processes, fuel cleaning, clean fuels, and other pollution control techniques, the permit applicant is required to propose a permit limit that constitutes BACT and to supply sufficient information on the control option used to achieve that limit. *In re Genesee Power Station Ltd.*, 1993 EPA App. LEXIS 23 at \*13-14 (EAB 1993). Specifically, the applicant must provide "a detailed description of the system of continuous

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emissions reduction planned for the source or modification, emission estimates,” and any other information necessary to ensure a detailed analysis leading to a limit ensuring maximum achievable pollution reduction. 40 C.F.R. § 52.21(n); NSR Manual at B.24. Each step of the BACT analysis, and especially a decision to reject an effective pollution reduction option in favor of a less effective option when establishing a BACT limit “must be adequately explained and justified.” *Knauf I*, 8 E.A.D. at 131; NSR Manual at B.26-B.29; *In re General Motors, Inc.*, 10 E.A.D. 360, 379 (EAB 2002); *In re Steel Dynamics, Inc.*, 9 E.A.D. 165, 206-07 (EAB 2002); *In re Masonite Corp.*, 5 E.A.D. 551, 546-69 (EAB 1994).

To ensure that the BACT determination is “reasonably moored” to the Clean Air Act’s statutory requirement that BACT represent the maximum achievable reduction through the use of various pollution control techniques, U.S. EPA established a top-down analysis process outlined in the NSR Manual. *Alaska Dept. of Env’tl Conservation v. Env’tl Protection Agency*, 540 U.S. 461, 485 (2004).

**IX. The permit is flawed because SIE and IDEQ did not assign the BACT emission limitation for NO<sub>x</sub>, CO, SO<sub>2</sub>, and Opacity from the package boiler and superheated steam boiler.**

**NO<sub>x</sub> and CO**

In determining BACT for NO<sub>x</sub> from the Package Boiler and Superheated Steam Boiler, SIE failed to consider all BACT determinations such as the one for the boiler at American Electric Services (AES) issued in 2006 to by the South Coast Air Quality Management District.<sup>52</sup> SIE proposed only Flue Gas Recirculation (FGR) for control of NO<sub>x</sub> emissions from the only the package boiler. To IDEQ’s credit, consistent with AES’s BACT determination it required the installation and operation Low-NO<sub>x</sub> Burners with FGR and Selective Catalytic Reduction for control of NO<sub>x</sub>. However, both SIE and IDEQ failed to require the emission limitation associated with the top control or “BACT”, by definition.

**Even though the AES boiler is 10 times bigger than each of the boilers proposed by SIE, SIE and IDEQ have allowed emission rates, from the package and superheated steam boiler, higher than that of the AES boiler.** SIE’s boilers should be able to achieve at least the emission limitations imposed on the AES boiler. Instead, SIE’s proposed BACT determinations for NO<sub>x</sub> and CO compare to AES’s as follows:

<sup>52</sup> <http://www.aqmd.gov/bact/427061-aes-huntington-beach-rev.pdf>, South Coast Air Quality Management District, “Section I AQMD LAER/BACT Determinations”, Boiler, A/N 427061, AES, 2,088 MMBtu/hr  
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Table 2. Comparison of BACT Limits at SIE with that of AES

BACT-regulated Pollutant	AES	SIE Proposed Limits <sup>53</sup>
NO <sub>x</sub>	5 ppmvd @3%O <sub>2</sub>	<b>0.02 lb/MMBtu , 16.5 ppmvd @ 3% O<sub>2</sub></b>
CO	5 ppmvd @3% O <sub>2</sub>	<b>0.074 lb/MMBtu, 60.9 ppmvd @ 3% O<sub>2</sub></b>

Furthermore, SIE and IDEQ failed to consider data compiled by NACAA for industrial boiler performance. This data (shown in the attached Tables 3)<sup>54</sup> indicates that at least **16 other gaseous fuel-fired industrial boilers rated at 200 MMBtu/hr or more can achieve emission rates below a 0.074 lb/MMBtu for CO, the limit proposed for each of SIE's boilers.**

The flaws in SIE and IDEQ's BACT determinations for NO<sub>x</sub> the package boiler and superheated steam boiler will allow **as much as an additional 15 tons of NO<sub>x</sub> to be illegally emitted each year contributing to respiratory problems, acid rain, nutrient overload in streams, the formation of other toxic pollutants, decreased visibility, and global warming<sup>55</sup>.** Even worse, the flaws in SIE and IDEQ's BACT determinations for CO the package boiler and superheated steam boiler will allow **as much as an additional 75 to 79 tons of toxic CO gas to be illegally emitted each year.<sup>56</sup>**

### SO<sub>2</sub>

Condition 6.3.2 of the draft permit requires a BACT limit of 1.4 lb SO<sub>2</sub>/hr (0.0056 lb/MMBtu at 250 MMBtu/hr). However, the most recent BACT determinations for gaseous fuel boilers reveal that the BACT limits proposed by IDEQ are 56 times higher than that established for a boiler combusting biogas containing reduced sulfur compounds (0.0001 lb/MMBtu)<sup>57</sup>. Through its issuance of this draft permit, IDEQ intends to allow SIE to emit **56 times more SO<sub>2</sub> emissions than other similar processes, contributing to respiratory illness, acid rain formation, vegetation damage, and visibility impairment.<sup>58</sup>**

<sup>53</sup> Calculated based on permitted emission rates for boilers converted to parts per million by volume on a dry basis at 3% oxygen using 40 CFR 60 Appendix A, Test Method 19 and 20

<sup>54</sup> <http://www.4cleanair.org/documents/MASTERMACT6102008.xls>, National Association of Clean Air Agencies, "Our Projects", "Boiler Model Rule", Master Data Files, Accessed on 11/13/2008

<sup>55</sup> <http://www.epa.gov/air/urbanair/nox/chf.html>, United States Environmental Protection Agency: Nitrogen Oxides: Chief Causes of Concern, Accessed on 11/17/08

<sup>56</sup> <http://www.epa.gov/air/urbanair/co/chf1.html>, United States Environmental Protection Agency: Carbon Monoxide: Chief Causes of Concern, Accessed on 11/17/08

<sup>57</sup> <http://cfpub.epa.gov/rble/cfm/ProcDetl.cfm?faenum=26868&Procnum=106689>, US EPA, "RACT/BACT/LAER Clearing House Basic Search: Process Type: Gaseous Fuels and Gaseous Fuel Mixtures (>100 MMBtu/hr and ≤ 250 MMBtu/hr), Accessed 10/29/2008

<sup>58</sup> <http://www.epa.gov/air/urbanair/so2/chf1.html>, United States Environmental Protection Agency: Sulfur Dioxide: Chief Causes of Concern, Accessed on 11/17/08

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### Opacity

Condition No. 2.6, 6.5, and 6.4.3 allow opacity of **20%** from either emissions from the superheated steam boiler or combined emissions from the package boiler and superheated steam boiler. However, recent BACT determinations for “Gaseous Fuel Boilers” have required a **0%** opacity using controls similar those proposed by SIE, i.e. low-NO<sub>x</sub> burners and flue gas recirculation only<sup>59</sup>.

SIE and IDEQ must either lower the NO<sub>x</sub>, SO<sub>2</sub>, CO, and opacity limits consistent with other BACT determinations or SIE and IDEQ must justify through an economic, environmental, and/or energy impact analysis why a lower opacity requirement would adversely impact the project. Opacity is an “NSR-regulated pollutant” and is an indication of the concentration of particulate matter. Therefore, by issuance of this draft permit, IDEQ is allowing **20% more visibility impairment to occur as a result of the construction and operation of SIE thereby reducing the quality of life for the citizens of Power County and affected counties and states.**

#### **X. The draft permit should explicitly require that only one gasifier be operated for any duration.**

The permit documents are ambiguous as to how many gasifiers will be installed and/or operated. The modeling protocol submitted by SIE indicates a total of 3 gasifiers to be installed, 1 during Phase I and 2 during Phase II of construction. At the same time the application submitted by SIE received on April 29, 2008 indicates that SIE is only applying for Phase I of the application to install 1 gasifier for the production of fertilizer. Yet page 34 of the draft permit describes the installation of two gasifiers, one as backup.

Since applicability of BACT and BACT determinations are based on potential emissions which will vary according to process rate, the permit should explicitly indicate the number of operating gasifiers on which the BACT applicability and determination is based.

#### **XI. The permit is flawed because it does not establish BACT for emissions from the Gasifier Heaters.**

The Gasifier Heaters will only be operated during startup of the SIE facility. US EPA indicates that BACT must be applied to temporary or startup emissions, however, as well as steady-state operations.<sup>60</sup>

The PM limit for the combustion of Gasifier Heater Vents #1 and #2 are not the emission limitations associated with the application of Best Available Control Technology (BACT). On page 40 of Appendix E to SIE’s application, SIE acknowledges that the BACT limit for process-derived fuel combustion in a cooler at the Encoal Corporation’s North Rochelle facility in

<sup>59</sup> <http://cfpub.epa.gov/rblc/cfm/ProcDetl.cfm?facnum=26868&Procnum=106689>, US EPA, “RACT/BACT/LAER Clearing House Basic Search: Process Type: Gaseous Fuels and Gaseous Fuel Mixtures (>100 MMBtu/hr and ≤ 250 MMBtu/hr), Accessed 10/29/2008

<sup>60</sup> US EPA Memorandum from Edward E Reich to Anita Turpin, December 11, 1978  
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Wyoming is 0.01 grains per dry standard cubic feet (gr/dscf) requiring an add-on scrubber. However, IDEQ has required no add-on control device for the heaters and, **in Condition No. 2.11, IDEQ is only requiring a PM limit of 0.015 gr/dscf per heater** pursuant to IDAPA 58.01.01.676 and 677. Since BACT is more stringent than IDAPA 58.01.01.676 and 677, "Fuel Burning Equipment", IDEQ must establish a limit pursuant to BACT for PM.

Furthermore, since other sources at SIE have limits pursuant to BACT for PM<sub>10</sub>, NO<sub>x</sub>, SO<sub>2</sub>, CO and VOC, it is evident that potential emissions of these pollutants have been determined to be "significant" facility-wide. Yet, the permit contains no PM<sub>10</sub>, NO<sub>x</sub>, SO<sub>2</sub>, CO, or VOC limits for the Gasifier Heater Vents #1 or #2 pursuant to BACT or otherwise. Perhaps Condition No. 4.3.1 restricting operation to "good combustion practices" and "natural gas combustion, exclusively" could be construed as a work practice standard, in lieu of an emission limitation or BACT for PM<sub>10</sub>, NO<sub>x</sub>, SO<sub>2</sub>, CO and VOC from the heaters. However, the 1990 NSR Manual advises that work practice standards should only be used when "the Administrator determines that technological or economic limitations on the application of measurement methodology to a particular emissions unit would make the imposition of an emissions standard infeasible."<sup>61</sup> It can be seen from SIE's own application, Appendix E, that measurable emission limitations can and have been set for PM<sub>10</sub>, NO<sub>x</sub>, SO<sub>2</sub>, CO and VOC emissions from heaters. Therefore, the permit should contain PM, PM<sub>10</sub>, NO<sub>x</sub>, CO, and VOC emission limitations for the heaters pursuant to BACT.

Furthermore, since BACT includes a "visible emissions standard" by definition, opacity from the heaters should be limited, pursuant to BACT, to 0%, as was required for Greater Des Moines Energy Center in Iowa and Charter Steel in Wisconsin, **not 20%**. If IDEQ will not require a BACT limits of 0.01 gr/dscf and 0% opacity for each heater, this determination must be justified by an economic, energy, or environmental impact analysis.

**XII. The permit is flawed because it does not establish BACT for startup/shutdown emissions associated with the Gasifier Flare.**

IDEQ established BACT limitations for SO<sub>2</sub> and CO during startup, shutdown, and malfunctions for the Syngas Cleanup Train, and required the operation of the Amine Scrubber and Gasifier Flare during startup as BACT in Condition No. 7.5.1. However, IDEQ failed to establish BACT limits for PM, PM<sub>10</sub>, Opacity, VOC, and NO<sub>x</sub> from the flare during startup, shutdown, and malfunction. A recent determination for startup/shutdown flares fired on natural gas or syngas from a gasification process in Iowa set BACT limits of 0% Opacity, 0.200 lb/MMBtu for NO<sub>x</sub>, and 0.0060 VOC on a 25 MMBtu/hr throughput, **the same rated heat input capacity as the flare proposed at SIE.**

<sup>61</sup> Draft New Source Review Workshop Manual: Prevention of Significant Deterioration and Nonattainment Permitting, United States Environmental Protection Agency, October 1990, pg. B.1  
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Table 1. Comparison of BACT Limits at SIE and Homeland Energy

BACT-regulated Pollutant	Homeland Energy (All Flares) Only Operated for Startup <sup>62</sup>	SIE
Opacity	0%	20%
NO <sub>x</sub>	0.200 lb/MMBtu	None Specified
VOC	0.0060 lb/MMBtu	None Specified

IDEQ required no limit for NO<sub>x</sub> or VOC during startup/shutdown of the Syngas Cleanup Train. Since BACT is applicable to NO<sub>x</sub> and CO from other sources at SIE, IDEQ must include BACT emission limits for NO<sub>x</sub> and VOC from all sources with the potential to emit NO<sub>x</sub> and CO at SIE, including the SynGas Cleanup-to-flare(s) system.

Even though the “Statement of Basis” describes the gasifier flare as “smokeless” (0% opacity), this is merely descriptive and the draft permit contains no requirement for 0% opacity from the gasifier flare as does the permit from Iowa. Therefore, one could conclude that by default the opacity limits in Condition No. 2.6 apply to the flare during startup, shutdown, and malfunction. SIE and IDEQ must justify, based on economic, environmental, or energy impacts, why the gasifier flare cannot meet the PM, PM<sub>10</sub>, NO<sub>x</sub>, opacity, and VOC standards required of similar facilities.

**XIII. The permit is flawed because the control efficiency associated with BACT is at least a 95% control efficiency for H<sub>2</sub>S, CO, SO<sub>2</sub>, NO<sub>x</sub>, and VOCs venting from the Solexol® Acid Gas Removal System to the thermal oxidizer (Gasification Flare) and not 90% as indicated in the permit.**

Appendix D of the application submitted by SIE indicates that CSM provided a quote for 90% efficiency because that is what their prospective client, SIE, requested based on its review of the RACT/BACT/LAER Clearinghouse (RBLC). SIE’s review of the clearinghouse is provided in Appendix E and does not indicate any review of the RBLC for BACT on “50.006: Petroleum Refining Treating Processes (Hydrotreating, Acid Gas Removal, SRUs, etc.)”.

A review of these entries in the RBLC reveals control efficiencies as high as 99.8% for tail gas incineration. For instance, Navajo Refining Company, LLC’s Artesia Refinery in New Mexico is required to maintain 99.8% control efficiency for the thermal incineration of tail gases containing H<sub>2</sub>S, CO, SO<sub>2</sub>, NO<sub>x</sub>, and hydrocarbons.<sup>63</sup> Sonoco, Inc.’s Toledo Refinery is expected

<sup>62</sup> <http://cfpub.epa.gov/rblc/cfm/ProcDetl.cfm?facnum=26711&Procnum=106236>, US EPA, “RACT/BACT/LAER Clearing House Basic Search: Process Type: Miscellaneous Combustion: Flares”, Accessed 07/16/2008

<sup>63</sup> <http://cfpub.epa.gov/rblc/cfm/ProcDetl.cfm?facnum=26747&Procnum=106363&pollnum=146024>, US Environmental protection Agency RACT/BACT/LAER Clearinghouse, Accessed 10/14/08

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to control tailgas pollutants by **97% in their older SRU Incinerator<sup>64</sup>** and by **99% in their newer SRU incinerator<sup>65</sup>**. Furthermore, several vendors such as Orloff Engineers, LTD and SIE's own vendor, CSM, offer thermal oxidation units that provide a control efficiency of 95% or better for tail gases.<sup>66</sup> Even SIE acknowledges a control of efficiency of at least 95% is feasible on page 4-92 of the application.

SIE and IDEQ must revise the control efficiency to reflect BACT or justify, based on economic, environmental, or energy impacts, why the gasifier flare cannot meet the standards for H<sub>2</sub>S, CO, SO<sub>2</sub>, NO<sub>x</sub>, and VOCs required of similar facilities.

**XIV. The permit is flawed because it does not establish BACT for NO<sub>x</sub> emissions from Nitric Acid Production.**

The permit allows combined NO<sub>x</sub> emissions from nitric acid production, ammonium nitrate production, and urea ammonium nitrate production on the order of 15.1 lb/hr. Using the nitric acid production rate of 500 TPD prescribed on page 46 of SIE's application, this equates to **0.734 lb NO<sub>x</sub>/ton of nitric acid production** following the proposed selective catalytic reduction (SCR) system. However, in 2008 Washington Department of Ecology determined that BACT for the SCR system at Agrium was no more than **0.524 lb/ton of acid produced<sup>67</sup>**.

**XV. SIE and IDEQ must consider N<sub>2</sub>O, a greenhouse gas and the most likely form of NO<sub>x</sub> emissions, in the required environmental impact analysis even if the top control option is selected for NO<sub>x</sub> in a top down analysis.**

It is well established that in the production of nitric acid, nitrous oxide (N<sub>2</sub>O), is also produced, dissolved in solution of nitric acid, and may be liberated if the acid is heated to a temperature above 0°C<sup>68</sup>. N<sub>2</sub>O is a greenhouse gas<sup>69</sup> that has a **global warming effect up to 310 times higher than that of CO<sub>2</sub><sup>70</sup>**. As of August 2008, the US EPA reports that Idaho has a state advisory board for greenhouse gas emissions and is "in the process of preparing a greenhouse gas inventory and state climate change action plan<sup>71</sup>". **Yet, neither SIE nor its consultant**

<sup>64</sup> <http://cfpub.epa.gov/rblc/cfm/Poltdetl.cfm?facnum=26655&Procnum=106079&poltnum=145148>,  
<http://cfpub.epa.gov/rblc/cfm/Poltdetl.cfm?facnum=26655&Procnum=106079&poltnum=145148>

<sup>65</sup> <http://cfpub.epa.gov/rblc/cfm/Poltdetl.cfm?facnum=26655&Procnum=106083&poltnum=145164>, Environmental protection Agency RACT/BACT/LAER Clearinghouse, Accessed 10/14/08

<sup>66</sup> <http://www.ortloff.com/sulfur/therm-oxidizer.htm>, Orloff Engineers, LTD., "Thermal Oxidation", Accessed on 10/14/08; [http://www.csmworldwide.com/catalytic\\_oxidizers.html](http://www.csmworldwide.com/catalytic_oxidizers.html), CSM Worldwide "Catalytic Oxidizer System", Accessed on 10/14/08

<sup>67</sup> [http://www.ecy.wa.gov/programs/air/psd/psd\\_pdfs/PSD0401\\_final1stAmend.pdf](http://www.ecy.wa.gov/programs/air/psd/psd_pdfs/PSD0401_final1stAmend.pdf), PSD Permit Final Amendment, PSD-04-01, Issued to Agrium U.S Inc., Kennewick Fertilizer Operations by Washington Department of Ecology, Air Quality Program on July 10, 2008, Accessed on 11/05/08

<sup>68</sup> [http://en.wikipedia.org/wiki/Nitric\\_acid](http://en.wikipedia.org/wiki/Nitric_acid), Wikipedia Online Free Encyclopedia, Nitric Acid, Accessed 11/04/2008

<sup>69</sup> International Non-CO<sub>2</sub> Greenhouse Gas Marginal Abatement Report: Draft Methane and Nitrous from Non-Agricultural Sources: Chapter 6, US Environmental Protection Agency Office of Air and Radiation, Climate Change Division, April 2005

<sup>70</sup> <http://www.epa.gov/nitrousoxide/scientific.html>, US Environmental Protection Agency, Climate Change, Nitrous Oxide, Accessed 11/05/2008

<sup>71</sup> [http://epa.gov/climatechange/wyecd/stateandlocalgov/state\\_planning.html#three](http://epa.gov/climatechange/wyecd/stateandlocalgov/state_planning.html#three), US Environmental Protection Agency, Climate Change, State and Local Governments, Accessed 11/05/2008

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**(Weatherly) has identified N<sub>2</sub>O as a pollutant or quantified emissions of N<sub>2</sub>O in the application for this draft permit.** Emission factors for N<sub>2</sub>O range from 2 to 19.5 kg/metric ton of HNO<sub>3</sub><sup>72</sup> (4.1 to 40.2 pounds per short ton). Using the recommended 9.5 kg/metric ton (19.6 lb/ton), SIE's nitric acid production has the potential to emit as much as **408 lb/hr and 1789 tons per year of greenhouse gas, N<sub>2</sub>O**<sup>73</sup>. This quantity does not include N<sub>2</sub>O from gasification and combustion.

The RBLC provides two examples of N<sub>2</sub>O limits established in a permit in Texas pursuant to BACT<sup>74</sup>.

SIE has proposed to install SCR for the control of NO<sub>x</sub> from nitric acid production. However, SIE did not perform a top-down analysis of other NO<sub>x</sub> reducing technologies such as NSCR (non-selective catalytic reduction), NSCR in combination with SCR, and SCR with extended absorption<sup>75</sup>. While it is true that NSCR can be more costly than SCR, in presumably eliminating NSCR and combinations of NSCR and SCR, SIE did not demonstrate a consideration of the collateral benefits of NSCR's ability to control N<sub>2</sub>O, whereas SCR alone has **no affinity for controlling N<sub>2</sub>O**<sup>76</sup>. SIE did not consider technologies that can reduce NO<sub>x</sub> and N<sub>2</sub>O, such as N<sub>2</sub>O decomposition developed by CRI Catalyst.<sup>77</sup> Page B.47 of the 1990 NSR Manual requires that an environmental impact analysis be performed to consider significant releases of greenhouse gases even if the top control option is selected for NO<sub>x</sub> in a top down analysis. **Therefore, the permit is based on an incomplete top-down analysis and BACT for NO<sub>x</sub> emissions in its most likely form, N<sub>2</sub>O from nitric acid production has not been ensured.**

#### **XVI. An add-on control device is needed to meet BACT for PM<sub>10</sub> from the AN Neutralizer Vent.**

According to Figure 2-11, the emission source identified in Appendix D of the SIE's application as "AN Neutralizer Vent" (SRC 29) includes the neutralizer/scrubber and the condensate tank or condenser. SIE estimated uncontrolled potential PM<sub>10</sub> emissions from the AN Neutralizer Vent on the order of **1.5 lb/hr (0.06 lb/ton)**. **IDEQ accepted these values as**

<sup>72</sup> International Non-CO<sub>2</sub> Greenhouse Gas Marginal Abatement Report: Draft Methane and Nitrous from Non-Agricultural Sources: Chapter 6, US Environmental Protection Agency Office of Air and Radiation, Climate Change Division, April 2005; [http://www.cricatalyst.com/products/environmental/N2O\\_nitric\\_acid\\_plants.aspx](http://www.cricatalyst.com/products/environmental/N2O_nitric_acid_plants.aspx), CRI Catalyst: **N<sub>2</sub>O Decomposition: Nitric Acid Plants, Accessed 11/04/2008**

<sup>73</sup> Based on a 500 ton per day (assumed short) nitric acid production as indicated on page 2-46 of the April 2008 PSD application submitted by SIE to IDEQ.

<sup>74</sup> <http://cfpub.epa.gov/rblc/cfm/basicSearchResult.cfm?RequestTimeout=500&CFID=331830&CFTOKEN=14876019&jsessionid=2030b9007abef098a933244a2f183154532eTR2030>, US EPA, "RACT/BACT/LAER Clearing House Basic Search: Process Type: Any, Pollutant: N<sub>2</sub>O, Accessed 11/04/2008"

<sup>75</sup> <http://cfpub.epa.gov/rblc/cfm/PolDetl.cfm?facnum=26528&Procnum=105116&pollnum=141959>, US EPA, "RACT/BACT/LAER Clearing House Basic Search: Process Type: Fertilizer Production, Accessed 11/04/2008"

<sup>76</sup> International Non-CO<sub>2</sub> Greenhouse Gas Marginal Abatement Report: Draft Methane and Nitrous from Non-Agricultural Sources: Chapter 6, US Environmental Protection Agency Office of Air and Radiation, Climate Change Division, April 2005

<sup>77</sup> [http://www.cricatalyst.com/products/environmental/n2o\\_Decomposition.aspx](http://www.cricatalyst.com/products/environmental/n2o_Decomposition.aspx), "N<sub>2</sub>O Decomposition", CRI Catalyst Company, Accessed 11/20/08

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**BACT for PM<sub>10</sub> without SIE providing any basis for their calculation**<sup>78</sup>. In fact, the US EPA's AP 42, Volume 5, Chapter 8, Section 8.3 "Ammonium Nitrate", Table 8.3-2 provides uncontrolled PM emission factors for evaporation/concentration operations that are rated "A" or "excellent". These factors indicate that uncontrolled PM (PM<sub>10</sub>) emissions from this type of process are approximately **12.5 lb/hr (0.52 lb/ton)** at a 575 TPD production rate of ammonium nitrate<sup>79</sup>. While the emission limit established in the permit is low enough to meet BACT, **it is doubtful, based on AP-42, that the applicant can meet such a limit without add-on controls.** Recent BACT determinations have required a wet, packed tower with 90% efficiency to reduce PM emissions from AN condensers to 13.6 lb/hr (**0.08 lb/ton**)<sup>80</sup>. Based on AP-42 factors, SIE would need to install a control device with at least an 85% control efficiency to meet the most recent applicable BACT determination.

**XVII. The limits for the Ammonia, Nitric Acid, Ammonium Nitrate, and the Urea Ammonium Nitrate Plants in Table 9.2 are not federally enforceable because the draft permit does not contain the conditions necessary to make the limits in Table 9.2 "practically enforceable".**

In order to demonstrate compliance with the pound-per-hour limits for the Ammonia, Nitric Acid, Ammonium Nitrate, and the Urea Ammonium Nitrate Plants, the applicant will need more monitoring data than what is required by the draft permit. In order to determine compliance with these limits, the permittee will need flow and heat input data. Yet the permit contains no requirement to monitor flow or heat input. Therefore, the emission limitations in Table 9.2 are not practically enforceable, and are therefore not federally enforceable.

**XVIII. The permit does not contain limits or practically enforceable conditions to comply with BACT for PM as Sulfuric Acid Mist ("SAM"), nor does it contain PSD avoidance for SAM, or a toxic impact assessment for sulfuric acid. The application and the statement of basis also underestimate the potential emissions of SAM and the impact of toxic air pollutants must be re-evaluated.**

During the production of sulfuric acid, sulfuric acid mist can be released into the atmosphere as particulate matter less than or equal to 10 µm (PM<sub>2.5</sub>) and less than or equal to 2.5 µm (PM<sub>2.5</sub>). PM, PM<sub>10</sub>, and PM<sub>2.5</sub>, as well as Sulfuric Acid Mist (SAM) are each PSD-regulated pollutants. The "significant" emission threshold for SAM is 7 TPY.

**The permit must contain a BACT limit PM, PM<sub>10</sub> and PM<sub>2.5</sub> as SAM.**

<sup>78</sup> Page 5 of Appendix D to the April 2008 application from SIE indicates no basis for their calculation under the column entitled "Notes" in the Table entitled "Emission Characterization- Steady State Operations: Summary of Emissions – Point Sources"

<sup>79</sup> Calculated based on a factor for Uncontrolled PM of 0.52 lb/ton of AN produced as indicated at <http://www.epa.gov/ttn/chieff/ap42/ch08/final/c08s03.pdf>, AP-42, Volume I, Fifth Edition, Chapter 8, Table 8.3-2. Accessed 11/05/2008 and based on a production rate of 575 TPD of AN produced

<sup>80</sup> <http://cfpub.epa.gov/rblc/cfm/PolitDetl.cfm?facnum=25977&Procnum=103615&pollnum=137861>, "RACT/BACT/LAER Clearing House Basic Search: Process Type: Fertilizer Production, Accessed 11/05/2008  
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The proposed facility must apply BACT to all emissions of PM since SAM is considered to be part of the condensable portion of particulate matter<sup>81</sup>. Table 7.1 of the draft permit should identify the mist filter as the control device for SAM. Additionally, the table should identify the mist filter as the control device for PM, PM<sub>10</sub> and PM<sub>2.5</sub> as SAM. The BACT limit for PM (PM<sub>10</sub> and PM<sub>2.5</sub>) should be associated with an 99% control efficiency, not “TBD”, consistent with determinations for Rhodia Inc.<sup>82</sup> and EI Dupont De Nemours Co.<sup>83</sup> **Also, Table 7.2 of the permit should contain BACT emission limits for PM, PM<sub>10</sub>, and PM<sub>2.5</sub> (as sulfuric acid mist).**

**The permit must contain an avoidance limit for SAM.** The mist filter is necessary to avoid BACT requirements for SAM. If one assumes a 98% H<sub>2</sub>SO<sub>4</sub> control efficiency for the mist filter, the potential uncontrolled emissions of sulfuric acid are **244 TPY, which far exceeds the 7 TPY “significant emission increase” threshold for SAM. This is in addition to the 1.36 tons of H<sub>2</sub>SO<sub>4</sub> from “other sources”.**<sup>84</sup> **Because the mist filter is necessary to avoid BACT requirements for SAM, the permit should contain a PSD avoidance condition requiring sulfuric acid mist emissions be less than 7 TPY.**

**The permit should contain practically-enforceable conditions to demonstrate compliance with BACT for PM (PM<sub>10</sub> and PM<sub>2.5</sub> as SAM), to avoid PSD for SAM, and to comply with the toxic impact assessment for sulfuric acid.**

The permit should contain practically enforceable conditions for the proper maintenance and operation of the mist filter to ensure that the emissions remain under the “significant emission increase” threshold for SAM; to comply with BACT limits for PM, PM<sub>10</sub>, and PM<sub>2.5</sub>; to comply with the maximum Ambient Allowable Concentration of sulfuric acid; and to avoid the requirements of 40 CFR Part 63. To make the avoidance limit practically enforceable, and since published emission factors in AP-42 for sulfuric acid are unreliable, and potential emissions of SAM are so close to the “significant emission increase” threshold, at minimum an initial test for SAM from the “Sulfuric Acid Vent” must be performed.

**The impact of toxic air pollutants must be re-evaluated because the application and the statement of basis underestimate the potential emissions of SAM.**

SIE erred in calculating the molecular weight of sulfuric acid and underestimated emissions of sulfuric acid from the “Sulfuric Acid Vent” on page 14 of Appendix D to the April

<sup>81</sup> IDAPA 58.01.01.70. **Noncondensibles.** Gases and vapors from processes that are not condensed at standard temperature and pressure unless otherwise specified. IDAPA 58.01.01.75 **Particulate Matter.** Any material, except water in uncombined form, that exists as a liquid or a solid at standard conditions. IDAPA 58.01.01.80 **PM-10 Emissions.** All particulate matter, including condensible particulates, with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers emitted to the ambient air as measured by an applicable reference method, or an equivalent or alternative method in accordance with Section 157.

<sup>82</sup> <http://cfpub.epa.gov/rblc/cfm/PolDetl.cfm?facnum=26792&Procnum=106486&pollnum=146346>,

“RACT/BACT/LAER Clearing House Basic Search: Process Type: Sulfuric Acid Production, Accessed 11/11/08

<sup>83</sup> <http://cfpub.epa.gov/rblc/cfm/PolDetl.cfm?facnum=26692&Procnum=106167&pollnum=145352>,

“RACT/BACT/LAER Clearing House Basic Search: Process Type: Sulfuric Acid Production, Accessed 11/11/08

<sup>84</sup> The contribution of H<sub>2</sub>SO<sub>4</sub> from “Other Sources” is assumed to be the 5.10 TPY provided in Table 6 of Appendix D minus the 3.74 TPY estimated by SIE on page 14 of Appendix D to the April 2008 application from SIE

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2008 application. Due to the underestimation of total sulfuric acid emissions, the toxic impact assessment should be re-evaluated to ensure that emissions of sulfuric acid (including sulfuric acid mist) will not exceed the Ambient Allowable Concentration (AAC) for sulfuric acid.

**XIX. The draft permit is flawed because it does not contain BACT emission limitations on fugitive sources of carbon monoxide.**

By IDEQ's and SIE's own admission, the proposed facility is a major source that is one of the listed source categories under 40 CFR 52.21(b)(iii) and IDAPA 58.01.01.205.01 for which fugitive emissions must be included in the PSD applicability determination, BACT determination, and in the ambient impact analysis. 40 CFR 52.21 and IDAPA 58.01.01.205.01 Furthermore, SIE is subject to BACT for carbon monoxide (CO) emissions. However, the permit contains no emission limitations or work practice standards for fugitive emissions of carbon monoxide pursuant to BACT.

IDEQ must enforce emission limitations for fugitive emissions of CO like those enforced in other states for similar processes such as Air Products Baytown II in Texas<sup>85</sup>. These limits should be expressed in units that can be quantified (ppmv), and should be enforceable in a practical manner, such as the use of portable concentration monitors.

**XX. IDEQ issued a draft permit without demonstration of compliance with the Allowable Ambient Concentration (AAC) for each of the "mercaptans".**

"Mercaptans" consisting of "methyl mercaptan" and "ethyl mercaptan" are all identified as toxic air pollutants – non-carcinogenic under IDAP 58.01.01.585. Each have its own screening level beyond which a full toxic impact analysis is required. Yet neither SIE nor IDEQ performed an analysis for "mercaptans", "ethyl mercaptan, or "methyl mercaptan". Each of these pollutants has screening levels **even lower** than that of H<sub>2</sub>S.

**XXI. IDEQ is violating IDAPA 58.01.01.776.01, by allowing SIE to emit H<sub>2</sub>S in quantities known to be odorous and irritating to neighboring communities.**

IDAPA 58.01.01.776.01 requires the control of odors and IDAPA 58.01.01.006.05 identifies "odor" as an "air pollutant/air contaminant", yet SIE is permitted to emit H<sub>2</sub>S and other reduced sulfurs in amounts that exceed odor thresholds.

The odor threshold for H<sub>2</sub>S is 0.5 to 30 parts per billion (volumetric) for 83% of the population. The geometric mean odor threshold for H<sub>2</sub>S is 0.029 parts per million (volumetric) ranging from 0.012 to 0.069 parts per million by volume (ppmv). Untreated, or "sour", gas such as that proposed to be processed by SIE contains **at least 4 ppm H<sub>2</sub>S by volume** by definition.<sup>86</sup>

<sup>85</sup> <http://cfpub.epa.gov/rble/cfm/PolIDetl.cfm?faenum=26444&Proenum=105372&poltrnum=142690>, "RACT/BACT/LAER Clearing House Basic Search: Process Type: Petroleum Refining Equipment Leaks/Fugitive Emissions, Accessed 11/17/08"

<sup>86</sup> [http://en.wikipedia.org/wiki/Sour\\_gas](http://en.wikipedia.org/wiki/Sour_gas), Wikipedia Free Online Encyclopedia Article "Sour Gas", accessed on October 27, 2008

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Furthermore, pages 13 and 14 of Appendix D to SIE's application indicates that the concentration of H<sub>2</sub>S from equipment leaks between the Solexol and Sulfuric Acid processes could be at least **1 ppm by volume (based on concentrations at a similar or reference plant)**.

IDEQ has proposed Condition No. 2.9, which requires recordkeeping and corrective action **upon receipt of an odor complaint**. However, by the time an odor complaint is received, SIE would already be in violation of IDAPA 58.01.01.776. To ensure compliance with 58.01.01.776, the IDEQ should not rely on detection of odors such as H<sub>2</sub>S from laypersons but should require periodic monitoring of H<sub>2</sub>S leaks using portable monitors. Portable monitors can be set to detect H<sub>2</sub>S concentrations as low as 0.05 ppmv<sup>87</sup>.

**XXII. SIE and IDEQ must analyze coal dust and crystalline silica for compliance with the toxic impact assessment.**

SIE estimates emissions from coal dust on page 2-31 and identifies sand as a possible fluxant in the gasifiers, however it ignores coal dust and crystalline and amorphous silica in the analysis of toxic air pollutants, in both the PSD application and the IDEQ statement of basis.

"Coal dust" and crystalline and amorphous forms of silica are identified as a "toxic air pollutants – non carcinogenic" under IDAPA 58.01.01.585 with a screening emission level. However, no screening analysis for either of these pollutants is performed in the PSD application or in the Statement of Basis.

Coal dust will be generated during the handling, screening, crushing, washing, and/or drying processes for coal at SIE Power County. Table 3-2 indicates that potential emissions of "coal dust" from these sources will exceed the screening level in IDAPA 58.01.01.585 of 0.133 lb/hr. Therefore, equipment involved in the handling, screening, crushing, washing, or drying of coal should be analyzed for compliance with IDAP 58.01.01.585.

Sand is largely comprised of crystalline silica or cristobalite. The PSD application indicates that fluxant, such as crystalline silica, will be unloaded from a railcar, delivered to a silo via a hopper, and stored in a silo with a vent. Emissions of crystalline silica will be realized during the offloading of the railcar, the filling of the silo by the hopper, breathing losses during storage in the silo, and the emptying of that silo for feed to the gasifier. According to Table 3-2 of SIE's application, total emissions from these activities result in a potential PM (PM<sub>10</sub>) emission rate of 0.3068 lb/hr, which exceeds the IDEQ's screening emission level of 0.0033 lb/hr. Furthermore, the California Environmental Protection Agency (Cal EPA), the Occupational Safety and Health and Administration (OSHA), the American Conference for Governmental Industrial Hygienist (ACGIH), and the National Institute of Occupational Safety and Health (NIOSH) all consider crystalline silica to be a probable human carcinogen. Therefore, the IDEQ should also ensure that the risk of exposure to emissions of crystalline silica do not exceed the standards based on cancer risk, or the standards in IDAPA 58.01.01.585, (Toxic Air Pollutants – Non-carcinogenic Increments).

<sup>87</sup> Per a telephone conversation with RKI Instruments representative on October 23, 2008  
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**XXIII. The draft permit and statement of basis are contradictory as to the applicability of New Source Performance Standard Subpart J.**

Condition 2.19 of the draft permit makes reference to New Source Performance Standard (NSPS) Subpart J, whereas page 35 and Appendix D, Control Document # 9600093 of the "Statement of Basis" indicate that neither the Claus Recovery Process nor the Haldor Topsoe processes are subject to the provisions of NSPS Subpart J. The draft permit and statement of basis should be clarified as to the applicability of NSPS Subpart J.

**XXIV. If processes at SIE meet the definition of "petroleum refinery", they would be subject to Subpart Ja instead of J.**

Condition 2.19 of the draft permit makes reference to New Source Performance Standard (NSPS) Subpart J.

Subpart J is applicable to all Claus sulfur recovery plants for petroleum refineries with a design capacity for sulfur feed of more than 20 long tons per day (LTD) that commences construction, reconstruction, or modification **after October 4, 1976, and on or before May 14, 2007.**

"Commence" is defined in Subpart Ja as it is defined in 60.15 of Subpart A, "General provisions" to 40 CFR Part 60 as follows:

*Commenced* means, with respect to the definition of *new source* in section 111(a)(2) of the Act, that an owner or operator has undertaken a continuous program of construction or modification or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or modification.

*Construction* means fabrication, erection, or installation of an affected facility.

Based on information provided by the April 2008 application regarding funding, SIE cannot demonstrate that they have entered into a "a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or modification" and therefore SIE cannot be grandfathered out of the requirements of NSPS Subpart Ja should they construct equipment for processes that meets the definition of "petroleum refinery".

**XXV. Comments on the Air Quality and Visibility Impact Analyses of the PSD Permit Application for the Power County Advanced Energy Center**

The project's surrounding area is classified as PSD Class II. The closest PSD Class I is Craters of the Moon National Monument. This PSD Class I area is about 74 km from the proposed project.

## **A. COMMENTS ON NEAR-FIELD MODELING FOR PSD CLASS II AREAS**

### **Comment #1: Project impacts have been underestimated by using unrealistically high stack velocity resulting in very high plume rise**

The AERMOD modeling of the Center's impacts has used very high stack velocities. For some, a velocity of 91.4 m/s was used, while the urea granulation vent (SRC19) and the urea melt plant vent were modeled with a stack velocity of 53.3 m/s. These high stack velocities will result in unrealistically high plume rise for these sources and, hence, lower their ground-level impacts.

### **Comment #2: Project impacts have not been compared against national ambient standards**

Both the PSD Application and the DEQ SOB did not perform a comparison of the Center's impacts against applicable national ambient air quality standards (NAAQS) for criteria pollutants such as PM10, SO2, NO2 and CO. As required by the NSR Workshop Manual, the modeled Center impacts should be added to the background concentrations recorded at a monitoring station located in Power County, and total concentrations compared against applicable NAAQS.

### **Comment #3: Project impacts will exacerbate recent exceedances of the PM10 24-hour national ambient standard**

Monitoring data from the US EPA Air Now website indicate that the PM-10 NAAQS of 150 ug/m3 has been exceeded in Power County in recent years: in 2006 with a maximum measurement of 161 ug/m3 and in 2005 with a maximum measurement of 182 ug/m3. These exceedances occurred at the monitoring station that is located south of Highway 30 and east of Weaver Rd (US EPA, 2008). With a maximum modeled 24-hour concentration of 4.92 ug/m3, the Center will exacerbate these standard exceedances.

### **Comment #4: Project SO2 impacts have been understated due the omission of flare emissions**

The AERMOD modeling in the PSD Permit Application has used a SO2 emission rate of 0.0083 lb/hr for the gasifier flare (Table 4 of DEQ SOB). The PSD Application has shown that flaring of the gasifier unit can produce very high SO2 emissions rates of 816.33 lb/hr (Table 3-20 for upstream event) and 571.43 lb/hr (Table 3-21 for downstream event). These flares can emit large SO2 emissions and short-term impacts (3-hour and 24-hour) should be modeled with the AERMOD model. Flaring emissions during emergency releases will result in higher air quality impacts in PSD Class II areas than those presented in the PSD Permit Application.

**Comment #5: Project impacts on ozone air quality have not been addressed.**

The proposed Center will emit large amounts of NO<sub>x</sub> (127 tpy) and VOC (5 tpy). Known to be ozone precursors, these pollutants react under sunlight to form ozone. The Center's PSD Application has not addressed their impacts against the 8-hour ozone standard. US EPA has recently lowered the 8-hour standard from 0.08 ppm to 0.075 ppm. Ozone modeling should be performed to assess the impacts of project emissions on ozone air quality in Power County and other nearby areas.

**Comment #6: Project cancer risks have been underestimated by omitting non-inhalation risks**

The Center will emit several toxic chemicals that are known to be carcinogens. A screening level analysis has been performed for selected toxics such as arsenic, benzene, cadmium, formaldehyde, nickel and PAH. This analysis compares the maximum annual concentrations of these carcinogens against acceptable ambient concentrations. Thus, it only focuses on inhalation risk and, hence, understates potential health effects by ignoring non-inhalation risks such as ingestion of soil, drinking water and food. Non-inhalation risks from multipathway pollutants such as arsenic and PAH are several times larger than inhalation risks. In its screening risk assessment guidelines, California's South Coast Air Quality Management District has recommended multiplying factors of 4.78 and 29.76 to account for non-inhalation risks for arsenic and PAH, respectively (SCAQMD, 2008).

Thus, the screening analysis in the PSD Application severely underestimates the Center's impact on cancer risks by not considering the non-inhalation health risks. A full health risk assessment will need to be conducted to assess potential health effects of the toxic chemicals emitted by the Center as part of public health and environmental justice concerns. AMI has developed a model named ACEHWCF (Assessment of Chemical Exposure for Hazardous Waste Facilities) that can evaluate both inhalation and non-inhalation risks using the multipathway exposure algorithms recommended by the U.S. EPA (*Human Health Risk Assessment Protocol for Hazardous Waste Facilities, Final, EPA530-R-05-006, September 2005*). The ACEHWCF model has been described in a technical paper (Tran, 2001) that is available from AMI's website.

**Comment #7: Project noncancer acute and chronic health effects have not been quantified**

The Center will emit several toxic chemicals that are known to cause noncancer acute and chronic health effects. The screening analysis performed as part of the PSD Application only considers the health risks from inhalation alone. This analysis compares the maximum 24-hour and annual concentrations of emitted toxics against acceptable ambient concentrations. Toxics such as ammonia, benzene and formaldehyde are known to cause noncancer health effects due to acute 1-hour exposure that is shorter than the modeled 24-hour exposure. Thus, noncancer health effects should be quantified by calculating hazard quotients for acute and chronic exposure. Chronic health effects should also include non-inhalation risks such as ingestion of

soil, drinking water and food. As described above, the ACEHWCF model developed by AMI can be used to estimate the noncancer health effects of toxics emitted by the Center.

**Comment #8: Project impacts of SO<sub>2</sub>, ozone and trace elements emissions on sensitive crops and plants have not been analyzed**

The PSD Permit Application has not presented an impact analysis of project emissions of SO<sub>2</sub>, ozone and trace elements on soils, crops and vegetation in Power County as recommended by the US EPA NSR Workshop Manual (1990). US EPA (1980) has recommended SO<sub>2</sub> screening levels of 917 ug/m<sup>3</sup> (1-hour) and 786 ug/m<sup>3</sup> (3-hour). The 1-hour and 3-hour concentrations modeled with flaring emissions under upset conditions (e.g. 816.33 lb/hr for the gasifier flare in Table 3-20 of the PSD Application) should be compared against these screening levels. It should be noted that these screening levels were based on studies in the 1970s and may not be protective.

**B. COMMENT ON FAR-FIELD MODELING FOR PSD CLASS I AREAS**

**Comment #9: Air quality modeling of high SO<sub>2</sub> emissions from flaring should be performed**

A modeling analysis of air quality impacts at the closest mandatory PSD Class I area (Craters of the Moon National Monument) was not performed in the PSD Permit Application. The PSD Application has stated that the National Park Service (NPS) has waived a Class I impact analysis based on a Q/D screening analysis. As described on pages 5-162 and 5-163 of the PSD Application, Q is the sum of annual emissions of PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>. D is the distance from the Center to the Class I area (74 km). The PSD Application shows a ratio Q/D of 3.6. Since it is less than 10, NPS has waived a detailed Class I impact analysis. However, the Q/D screening analysis is based on annual-averaged emissions and does not take into consideration the high SO<sub>2</sub> emissions resulting from flaring under upset conditions. The PSD Application has shown that flaring of the gasifier unit can produce very high SO<sub>2</sub> emissions rates of 816.33 lb/hr (Table 3-20 for upstream event) and 571.43 lb/hr (Table 3-21 for downstream event). These high SO<sub>2</sub> emissions should be modeled by the Calpuff model and the resulting 3-hour and 24-hour concentrations compared against the applicable significant impact levels (SIL) and PSD Class I increments.

**Comment #10: Visibility impacts have been improperly analyzed**

Plume blight impacts at the Craters of the Moon National Monument have been analyzed with a Level 1 screening analysis using the Viscreen model. This model has been recommended by National Park Service (NPS) in the FLAG guidance for PSD Class I areas that are located within 50 km of the project (FLAG, 2000). Since the Craters of the Moon NM is located about 74 km from the Center, the Viscreen should not be used. The model Calpuff should be used as recommended by the NPS FLAG guidance document.

**Comment #11: Screening visibility analysis has severely underestimated plume blight impacts**

Notwithstanding the misapplication of the Viscreen model as presented in Comment #14 above, plume blight impacts at the Craters of the Moon National Monument have also been severely underestimated. Table 1 of Appendix I of the PSD Application shows that the Viscreen analysis used a total NO<sub>x</sub> emission rate of 68.78 lb/hr and a NO<sub>2</sub> emission rate of 0.94 lb/hr. The Viscreen model has a default of 10% of NO<sub>x</sub> as NO<sub>2</sub>. With a total NO<sub>x</sub> emission rate of 68.78 lb/hr, the NO<sub>2</sub> emission rate of 6.878 lb/hr should be inputted to Viscreen. Furthermore, an emission rate of 0.84 lb/hr was used for sulfates (SO<sub>4</sub>). This SO<sub>4</sub> emission rate represents about 11% of the annual-averaged total emissions of 32 tpy (7.31 lb/hr) under normal operating conditions. It is very low since normally all SO<sub>2</sub> emissions are assumed to be converted to SO<sub>4</sub> in a screening analysis. Emissions inputs to Viscreen should also represent a worst day and, for SO<sub>2</sub>, they should include flaring emissions under upset conditions. As shown in Comment #12 above, the PSD Application has calculated very high SO<sub>2</sub> emissions rates for the gasifier unit: 816.33 lb/hr (Table 3-20 for upstream event) and 571.43 lb/hr (Table 3-21 for downstream event). For screening analysis, all these SO<sub>2</sub> emissions should be assumed to be SO<sub>4</sub>. Thus, with grossly underestimated emissions of NO<sub>2</sub> and SO<sub>4</sub>, the Viscreen analysis has severely underestimated the plume blight impacts of PCAEC.

**C. CITED REFERENCES IN MODELING COMMENTS**

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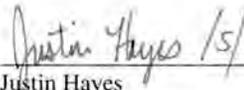
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Dated this 24th day of November, 2008.



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Table 3. NACAA Master Data for Gaseous-fueled Industrial Boilers

Unit ID	Capacity	CO	CO limit
CtJVE1	13.2	0.0823	
CtJVE2	10.2	0.11	
CtJVE3	10.2	0.11	
CtPFH400	25.2	0.34	
CtSA1	50	0.0343	
CtSA2	50	0.0343	
CtSA3	50	0.0343	
CtSA4	50	0.0343	
CtSA5	50	0.0343	
CtSJ7660	18.72	0.084	0.084
<b>FLPB005(14)</b>	<b>211</b>	<b>0.011</b>	<b>0.1</b>
GaRPF31	205,000lb/hr	0.0819	
GaRPF31A	220,000lb/hr	0.058	
HICHEV	99		0.073
IDFOODSB1		0.04	
IDFOODSB3		1.4	
MeMPIB7	117	0.17	
MtCHSB10	77.96	0.11	0.09
MtCHSB10A	69.65	0.092	0.09
MtCHSB11	131	0.00092	
MtCHSB11A	164	0.0091	0.084
MtCHSBW	96.4	0.025	
MtCHSH1001	161.56	0.00023	
MtCHSH101	123.2	0.0126	
MtCHSH101A	123.2	0.0008	0.1
MtCHSH201	37.7	0.0009	0.1
MtCHSH201A	37.7	0.0012	
MtCHSH202	27.2	0.0018	
MtCHSH202A	27.2	0.0058	
MtCHSH901	17.29	0.0012	
MtCHSH902	35.94	0.014	
MtCHSH902A	35.94	0.0003	
MtCPB5		0.001	
MtCPH9501	25	0.02	
MtCPH9701	121.3	0.0024	
MtCPNB5	183	0.003	
MtCPNB6	183	0.009	0.082
MtMRCH1701	6.4	0.008	
MtMRCHPH		0.003	0.091
<b>MtRFPB1</b>	<b>210</b>	<b>0.04</b>	
NHBUDB1	137	0.001	
NHBUDB2	137	0.001	
NHBUDB2	137	0.001	
NHBUDB3	137	0.001	
NHBUDB3	137	0.001	

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Table 3. NACAA Master Data for Gaseous-fueled Industrial Boilers

Unit ID	Capacity	CO	CO limit
NHKAL	87.3kgal	0.0007	
NHKAL	.0012mmcf	0.082	
NHNASB1	60	0.082	
NHNASB2	60	0.082	
NHNASCOAT		0.082	
NHNASHOB	9	0.82	
NHSMA		0.0007	
NHWMB1	2.475	0.033	
NJ305AMWE4	62	0.005	0.06
<b>NjAnh-BE3003</b>	<b>200.7</b>	<b>0.006</b>	0.09
<b>NjAnh-BE3004</b>	<b>200.7</b>	<b>0.023</b>	0.09
NjBIE101	79	0.006	0.09
NjBIE101A	79	0.014	0.09
NjB-MSE16	63.3	0.0008	0.05
NjB-MSE17	63.3	0.0008	0.05
NjCARE1305	25.1	0.017	0.033
NjCNJE1	52	0.0007	0.05
NjCNJE2	52	0.001	0.05
NjCPLLCAuxB	176.9	0.0003	0.038
NjEHE501	49.9	0.013	0.05
NjFIE3	160	0.025	0.14
NjFIE3	160	0.05	0.09
NjFIE4	120	0.0008	0.09
NjHCE5	106	0.012	0.04
NjHCE6	106	0.034	0.04
NjHCoE18	49.5	0.016	0.05
NjHIE700	33.5	0.011	0.05
NjHIE701	33.5	0.042	0.05
NjMCoE750003	99.5	0.0017	0.037
NjMCoE750005	99.5	0.0008	0.036
NjMCoE750009	99.5	0.0008	0.037
<b>NjMCoE750010</b>	<b>249</b>	<b>0.003</b>	0.009
<b>NjMCoE750011</b>	<b>249</b>	<b>0.0007</b>	0.009
<b>NjMCoE750012</b>	<b>249</b>	<b>0.004</b>	0.009
NjMSUE3	65	0.001	0.05
NjMWCE42	60.5	0.007	0.05
NjMWCE73	55.9	0.003	0.05
NjMWCoCbo	21	0.003	0.082
NjNAESE125	61.37	0.007	0.1
NjNAESE23	98.5	0.06	0.1
NjNGCIE1	85	0.017	0.05
NjNGCIE2	85	0.0086	0.05
NjNUSAE29	158.08	0.0011	0.05
NjNUSAE30	157.7	0.002	0.05
NjPAE1901	62.5	0.0008	
<b>NjPSEGE1</b>	<b>1550</b>	<b>0.068</b>	0.095

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Table 3. NACAA Master Data for Gaseous-fueled Industrial Boilers

Unit ID	Capacity	CO	CO limit
<b>NjPSEGE2</b>	<b>1725</b>	<b>0.077</b>	0.095
<b>NjPSEGE3</b>	<b>1600</b>	<b>0.0042</b>	0.095
<b>NjPSEGE4</b>	<b>1700</b>	<b>0.014</b>	0.09
NjPUB1	189	0.003	0.04
NjPUB2	189	0.002	0.04
NjPVSE29	67.1	0.006	0.05
NjPVSE30	67.1	0.006	0.05
NjPVSE31	67.1	0.026	0.05
NjPVSE32	67.1	0.026	0.05
NjRUE8	122.5	0.011	0.04
NjRUE9	122.5	0.004	0.04
NjSPCoE3	62	0.006	0.08
NjSPCoE4	86.6	0.0125	0.07
NjSSE7001	60	0.001	0.022
NjSSE7001	60	0.026	0.027
NjSSE7002	60	0.002	0.027
NjSSE7002	60	0.015	0.022
NjTTE#1	92.4	0.00032	0.036
NjTTE#2	92.4	0.0014	0.036
NjUCCE35001	56.91	0.00072	0.05
NjUCCE35101	70	0.0015	0.05
NjUMDNJN	112	0.007	
NjUSAA#4	50	0.0086	0.02
NjUSAAE9301	99	0.013	
NjUSAAE9301	99	0.033	
NjUSAAE9303	99	0.018	
NjUSGCE1	60	0.0009	0.075
NjUSGCE2	60	0.0009	0.075
NjUSGCE3	60	0.0009	0.075
NjVDCE3	60	0.0003	0.0004
NjVRCoE36	484	0.001	0.039
NjVRCoE37	485	0.017	0.039
NjVRCoE38	484	0.0079	0.039
OHRDCS505	54.4	0.09	0.073
OHRDCS506	54.4	0.06	0.073
OHR TLC02	77.24	0.12	
OHR TLC04	72	0.06	
OHR TLC01	77.24	0.14	
OrBC1	56	0.0017	0.035
OrCP7	54	0.0557	
<b>OrGPCoPB</b>	<b>330</b>	<b>0.0001</b>	
OrJ-WN	53	0.0039	0.152
OrSP	55	0.046	
<b>OrWCPow</b>	<b>611</b>	<b>0.292</b>	
PAACASHB001	113	0.076	
PAACASHP002	9	0.027	

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Table 3. NACAA Master Data for Gaseous-fueled Industrial Boilers

Unit ID	Capacity	CO	CO limit
PAACBELB07	188	0.004	
PAACLU2091	25	0.0007	
PAACLU051	35	0.0007	
<b>PAACLU084</b>	<b>360</b>	<b>0.01</b>	
PAACLU085	126	0.01	
PAACSHENPB1	96.8	0.021	
PAACSHENPB2	96.8	0.022	0.075
PAACSHENPB3	96.8	0.006	
PAACSHENPB4	96.8	0.011	0.075
PAACSHENPB4	96.8	0.043	0.086
WANWBP101	225		
WANWBP103	225		
WANWBP104	216		
WANWBP105	363		0.05
WANWBP106	13		0.0715
WANWBP11	77	0.0823	
WANWBP12	122		0.02
WANWBP40	190		29lb/mmscf
WANWBP41	190		29lb/mmscf
WANWBP50	71		0.068
WANWBP51	53		0.0715
WANWBP52	35		0.08
<b>WANWCOB</b>	<b>264</b>		<b>0.5109</b>
WANWCP14F-1	72		
WANWCP17F-1	106		
WANWCP1F-1	191		
WANWCP1F-1A	98		
WANWCP22F-1	164	0.00525	0.0175
WANWCP4F-10	70	0.0001	0.0824
WANWCP4F-2	189		
WANWTRF-104	60	0.1235	0.125
<b>WANWTRF-302</b>	<b>293</b>	<b>0.0013</b>	<b>0.125</b>
WAORGH9	65.3	0.0002	
WAOROPSB	31.5	0.008	0.0824
<b>WICOS25</b>	<b>249</b>	<b>0.024</b>	
WIFPS20	97.5	0.011	0.084
WIFPS23	176.4	0.0071	
WIKSOA		0.0007	0.28
<b>WIPBS14</b>	<b>330</b>	<b>0.0089</b>	<b>0.12</b>
WIPCAS14	140	0.03	0.13
<b>WIPCAS16</b>	<b>249</b>	<b>0.07</b>	<b>0.09</b>

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