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Sierra Club Cumberland Chapter

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January 20, 2002

DOE-National Energy Technology Laboratory
Attn.: Roy Spears
Kentucky Pioneer IGCC Demonstration Project EIS Document Manager
P.O. Box 880
Morgantown, WV 26507-0880

Re: Kentucky Pioneer IGCC Demonstration Project draft Environmental Impact Statement

Dear Mr. Spears:

I am writing on behalf of the 4500 members of the Cumberland (Kentucky) Chapter of the Sierra Club. Approximately a third of our members live within 30 miles from the proposed power plant in Trapp, Kentucky. We are extremely concerned about this experimental facility. We feel that the draft Environmental Impact Statement (DEIS) generated by the Department of Energy (DOE) is seriously lacking in specifics and underestimates or ignores potentially significant negative impacts of the proposed facility. The DOE has not ensured that a complete identification and analysis of direct, indirect, and cumulative impacts from the demonstration and full commercial operation of this plant has been evaluated in the DEIS. Also, not enough attention has been paid to the monitoring of this facility and the evaluation of this demonstration/experiment. In the following paragraphs, we discuss our concerns in detail.

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Vitrified Frit
Vitrified frit will be the major solid byproduct of the British Gas Lurgi gasification process that will be used in this plant[1]. Concerning this waste product, the DEIS states the following:

> The vitrified frit would undergo leach testing to determine if it is considered hazardous material. Should the leach testing indicate that the frit is not hazardous, KPE (Kentucky Pioneer Energy) would market the product for use in road paving and construction. If the frit is determined to be hazardous, KPE would have 90 days to manage the material (page 3-17)[2].

[1] *Kentucky Pioneer integrated gasification combined cycle demonstration project draft environmental impact statement.* U. S. Department of Energy (DOE/EIS-0318). Page 3-17.
[2] Ibid. Page 3-17.

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Comment No. 1 **Issue Code: 16**

DOE believes that the Kentucky Pioneer IGCC Demonstration Project EIS adequately analyzes the full scope of environmental impacts from the proposed project. Chapter 3 has been revised to provide more detail on the gasification process, including the production of the vitreous frit. KPE plant designs and engineering work are subject to international contractual secrecy agreements and are therefore confidential and not available.

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In other words, it is unclear as to whether this frit will be inert or hazardous. We feel that the absence of specific information about the nature of this waste makes the DEIS incomplete; it is impossible to judge the environmental impact of this project without this information. Given the fact that there are no proposed waste acceptance criteria for the refuse that is converted to the fuel used in this facility (see below), we are concerned that there may be residual contaminants in the frit that may exceed RCRA Toxicity Characteristic regulatory levels.

The DEIS further states that if the frit is found to be hazardous, KPE, the owner of this plant, will have 90 days to manage this material[3]. However, no information is provided about the environmental impacts of managing this material (storage for a number of months, transportation of this hazardous material across the countryside to a waste facility, and the disposal of this material). Once again, we feel that the lack of specific and complete information about the management of the frit makes the DEIS incomplete.

Further gaps in the DEIS concern the mechanics of the testing of the frit. When will the frit be tested and, given the potential for significant variability in the quality and composition of the fuel pellets, how will DOE and Pioneer ensure that sampling is representative? Who will conduct the tests? How often should these tests be conducted and under what conditions? Answers to questions of this nature are missing from the DEIS.

Refuse Derived Fuel

KPE proposes to gasify fuel pellets derived from municipal waste (RDF) in this facility. RDF will be obtained from one or more manufacturers from out of state. The DEIS does not specify the nature of this RDF. There are *no* proposed waste acceptance criteria or visual and/or chemical analytical analysis to ensure that hazardous waste, including household hazardous waste, nonhazardous industrial waste, and polychlorinated biphenyl waste is not accepted. The DEIS does not specify whether there is any kind of quality control involved in the manufacture of these pellets. It appears to rely solely upon KPE's assertion that these pellets are suitable for gasification.[4]

Moreover, the DEIS assumes that variability in the composition of the RDF will not have an impact on the resulting syngas and byproducts, even though there is no independent evidence provided to support this assumption.[5] This lack of information about the nature of RDF is especially troubling because KPE has indicated that even waste from *industrial facilities* might be included in the manufacture of these pellets.[6]

Another major gap in the DEIS concerns the ratio of high-sulfur coal to RDF used as raw material. During the 1-year demonstration period of the project, it is assumed that the ratio of coal to RDF will be 1:1 and the draft EIS bases its analyses on this assumption. However, KPE has indicated that proportionally more RDF might be used in the future. Will this change the nature of the waste produced by this plant? If so, what are the environmental consequences?

[3] Ibid. Page 5-41.
[4] Ibid. Page 3-21.
[5] Ibid. Page 3-22.
[6] Kentucky Pioneer Energy's written responses to questions raised at the Subpart Eb Siting Analysis public meeting on June 28, 2001. Page 8.

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Comment No. 2 **Issue Code: 12**

Chapter 3 of the EIS has been revised to include a more detailed description of the frit. As discussed in Chapter 3, vitrified frit, produced from the gasification process, is nonhazardous and would be sold as a marketable product for use as road aggregate. The vitrified frit consists primarily of ash (99.2 percent by weight) composed of oxides of the following elements silicon (SiO_2), aluminum (Al_20_3), titanium (TiO_2), iron (Fe_20_3), calcium (CaO), magnesium (MgO), potassium (K_2O) and sodium (Na_2O). The frit also contains chloride, fluoride, antimony, arsenic, beryllium, boron, cadmium, chromium, cobalt, copper, lead, manganese, mercury, molybdenum, nickel, silver, thallium, vanadium and zinc. Analysis of the gasification process has shown that frit is nonhazardous and rarely fails the TCLP for metals. The vitrified frit is nonleachable by EPA standards and is expected to pass the more stringent Universal Treatment Standards criteria of the EPA-TCLP analytical method.

Variability in the RDF content is dependent on the MSW supply. However, RDF production methods inherently yield fairly uniform and homogeneous RDF. Due to the vitreous nature of the frit, there would be no particular variability when a leaching test is conducted regardless of the composition of the feed.

Any hazardous waste stored onsite would be stored in accordance with state and RCRA regulations. Once a waste has been tested or is determined to be hazardous, it would be stored in proper containers (e.g., 55 gallon drums) and labeled as "hazardous waste" with applicable hazardous waste codes and the date the accumulation period began. Based on generator status, the facility would have a maximum of 90 or 180 days for onsite storage of hazardous waste prior to disposal. During that time, the facility would be required to keep containers with hazardous waste in good condition and closed; inspect

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Transmission Line
A 27-kilometer transmission line, with a 40 to 45 meter wide right of way, will be built in conjunction with this plant. Therefore, this element of the project does not have utility independent of the power plant and must be included in the DOE's NEPA analysis. Otherwise, DOE is impermissibly segmenting its NEPA analysis. The draft EIS alludes to the possibility that this transmission line might impact a designated wild river in this area and therefore might be required to obtain a permit form the Kentucky Division of Water.[7] However, not enough information is provided to assess the exact nature of this impact.

Visual Pollution
The gasification facility stacks and plumes will be visible from the city of Winchester and from the Pilot Knob State Nature Preserve.[8] The view from Pilot Knob is of special significance not only in the present day context, but also because Daniel Boone is thought to have gazed at the bluegrass region for the first time ever from its heights. Thus, from both recreational and historical perspectives, the visual pollution by the gasification stacks will be of great significance. Yet, the draft EIS dismisses this impact as insignificant. The DOE is responsible under Section 106 of the National Historic Preservation Act (NHPA) to ensure that this project's impact on eligible and listed historic properties and sites are considered. At minimum, indirect impacts to potentially historic viewsheds are an adverse effect from this project that is subject to the NHPA process.

Air Pollution
The draft EIS concludes that the increase in air pollution caused by the proposed plant is insignificant and well within "applicable standards."[9] However, the 1100 tons/year of Nox, 800 tons/year of CO, 500 tons/year of Sox and 9.07 tons/year of hazardous air pollutants generated by this plant will lead to increases in acid rain and adverse human health effects. Indeed, a recent report by the Kentucky Natural Resources and Environmental Protection Cabinet indicates that if this KPE facility and another power plant that has already been proposed to be built in close proximity go into operation, levels of Arsenic and Nickel will exceed risk-based screening values for human inhalation exposure.[10] Moreover, the pollution generated by this power plant will displace the ability of less polluting and more economically beneficial industries from locating in the region because of its use of pollution credits.

Water Use and Pollution
The proposed plant will withdraw 15.1 million liters/day from the Kentucky River.[11] In recent years, Kentucky has experienced recurring droughts. Consequently, water supply for the residents of this region, including those in Lexington, has been affected by the low flow in the Kentucky River. The withdrawal of additional water from the system will significantly intensify the problems when the flow is low in the river. Although the DEIS indicates that the water intake by this plant

[7] *Kentucky Pioneer integrated gasification combined cycle demonstration project draft environmental impact statement*. U. S. Department of Energy (DOE/EIS-0318). Page 6-4.
[8] Ibid. Page 3-27.
[9] Ibid. Page S-18.
[10] *A cumulative assessment of the environmental impacts caused by Kentucky electric generating units*. Report published by the Kentucky Natural Resources and Environmental Protection Cabinet in response to Executive Order 2001-771. December, 2001. Page 36.
[11] *Kentucky Pioneer integrated gasification combined cycle demonstration project draft environmental impact statement*. U. S. Department of Energy (DOE/EIS-0318). Page 5-24.

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Comment No. 2 (cont.) **Issue Code: 12**
them on a weekly basis and keep a log of inspection. Regulations also require that facilities generating hazardous waste have spill contingency and Emergency Response Plans, which include procedures to notify state regulators and the public in the event of a spill. KPE waste management activities would be in accordance with applicable state and RCRA regulations. Compliance with regulations significantly reduces the risk of leakage of hazardous waste.

Comment No. 3 **Issue Code: 16**
Chapter 3, Section 3.2.2.2, discusses the production and composition of the RDF pellets using all available and relevant data. KPE intends to supply all RDF pellets for this project from the same manufacturer. Variation in RDF pellet composition due to different manufacturing processes should not be an issue for this project. The gasification technology used produces a very consistent syngas product, regardless of the variability of the feed.

Comment No. 4 **Issue Code: 16**
The Cooperative Agreement between DOE and KPE requires the fuel feed to contain a minimum of 50 percent coal. The EIS provides analysis and impacts based on the fuel feed used for the 1-year demonstration.

The impacts presented in this EIS are based on the full 20-year timeframe that the plant is expected to be operating. Changes in the ratio of RDF to coal in the fuel feed after the demonstration period would not significantly alter the impacts discussed in the EIS.

Comment No. 5 **Issue Code: 21**
Pursuant to RUS NEPA regulations, a NEPA document would be prepared that would address the impacts from the transmission line. Information in the NEPA document will be used to assure impacts are

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will amount to 4% of the water flow during the 7-day low flow *average* measure, it fails to address the impact of water withdrawal when the water flow is at its *lowest*.

Also, measures of average flow in this area of the river used by the draft EIS are based on a study from 20 years ago[12] and it is unclear as to whether there has been a significant change in the quantity of water in the river at this point.

Moreover, according to the draft EIS, withdrawal of water from the Kentucky River for thermoelectric production constitutes over 60% of all water withdrawn from the river (133 of the 203 million gallons withdrawn from the river/day).[13] The proposal to withdraw even more water from the river and to discharge treated warm water back into the river will have significant cumulative impacts, especially given that there are many mussel beds downstream of the proposed project.[14]

Monitoring

Most importantly, the draft EIS fails to address issues concerning the monitoring of the operations of the proposed plant. Ostensibly, this project will be a demonstration project for a year. What will be the nature of monitoring during this period? What are the criteria that will be used to judge whether this project is a success? What input will be public have on the evaluation of this project? How long will it take to evaluate the project? If the evaluation takes some time, will the plant be shut down during this period of evaluation? We understand that the DOE typically requires an Environmental Monitoring Plan (EMP) and Program for its recipients of innovative gasification funding, which includes all regulatorily-required monitoring and DOE-required monitoring. The EMP should be made a part of the DEIS and included for public comment, particularly given the tremendous variability possible in the feed to the gasification system, which could impact the quality of the effluent, air emissions, and frit composition.

Conclusion

According to a recent study, Kentucky leads the nation in per capita premature deaths due to air pollution.[15] This study indicates that the mortality rate is 44.1 per 100,000 adults in Kentucky, which is over 30 times the rate in California. In this context, we are extremely concerned about a new experimental facility that is classified as a Municipal Waste Combuster facility [16], which will be located within a mile from a school,[17] and which proposes to utilize municipal and possibly industrial waste as fuel.

As residents of this area, we will be the guinea pigs in this experiment. Too many questions remain to be answered before this project can go forward. We need more specific, complete, and unbiased

[12] *Kentucky Pioneer integrated gasification combined cycle demonstration project draft environmental impact statement*. U. S. Department of Energy (DOE/EIS-0318). Page 4-27.
[13] Ibid. Page 4-31.
[14] Letter from Lee Barkley, Field Supervisor, Fish and Wildlife Service, U.S. Department of the Interior, regarding the EIS. *Kentucky Pioneer integrated gasification combined cycle demonstration project draft environmental impact statement*. U. S. Department of Energy (DOE/EIS-0318). Page A-3.
[15] Clear the Air Organization. *Death, disease, and dirty power: Mortality and health damage due to air pollution from power plants*. November, 2000.
[16] *Kentucky Pioneer integrated gasification combined cycle demonstration project draft environmental impact statement*. U. S. Department of Energy (DOE/EIS-0318). Page 3-21.
[17] Ibid. Page S-10.

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Comment No. 5 (cont.) **Issue Code: 21**

avoided and solutions integrated to avoid adverse public and environmental impacts. DOE believes that this is not a segmentation of the NEPA analysis as the transmission line is a related action and bounding estimates of impacts have been included in the relevant sections and chapters of the EIS.

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Comment No. 6 **Issue Code: 07**

Impacts from the transmission line would be addressed in the NEPA document being prepared subject to RUS NEPA regulations. All impacts, including those to the Wild and Scenic Red River, would be addressed in this NEPA document. It is unlikely, however, that any impacts would occur since the transmission line would run northeast from the project site into Montgomery County, and the Red River lies to the south and east of the project site.

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Comment No. 7 **Issue Code: 04**

Comment noted. Impacts to the visual setting of the project area are presented in Section 5.5, Aesthetic and Scenic Resources, of the EIS.

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Comment No. 8 **Issue Code: 03**

1/16 (cont.)

As discussed in Section 5.5, Aesthetic and Visual Resources, the gasifier stacks may be visible from Pilot Knob. This has been addressed in consultations with the Kentucky Heritage Council. The criteria of adverse effect, as described in Section 5.4, Cultural Resources, has been applied to determine whether the undertaking would diminish the integrity of the resource. The Section 106 Review process has been completed and the Kentucky SHPO has issued a finding of no effect on historic properties from this project.

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information. We request that the DIES be reissued for public comment with a full identification and explanation of impacts, in accordance with NEPA. 19/21

Sincerely,

Ramesh Bhatt, Ph.D.
Sierra Club

cc: Heinz Mueller, Chief, Environmental Accountability Division, EPA, Region 4 (61 Forsyth St., S.W., Atlanta, GA 30303-8960.)

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Comment No. 9 **Issue Code: 06**

As detailed in Table 5.7-3 of the EIS, maximum air quality impacts from the proposed project would be less than 1 percent of the relevant federal air quality standards for gaseous pollutants such as NO_x, SO_2 and CO. Maximum impacts of the proposed project on PM_{10} concentrations would be less than 4 percent of the federal 24-hour PM_{10} standard and less than 1.5 percent of the federal annual average PM_{10} standard.

A screening analysis of acid deposition issues has been made by using the following very conservative assumptions: that wind directions would blow continuously into a single 45 degree compass sector for the entire year, and that all sulfur compound emissions would be converted into sulfuric acid and deposited within 96 kilometers (60 miles) of the project site. Since the annual average wind speed for the Lexington region is 14.6 kilometers (9.1 miles per hour) (NCDC 2001), this represents less than 7 hours of transport time as an annual average. The resulting sulfur deposition rate would be an average of 1.9 kilograms per hectare (1.7 pounds per acre) of sulfuric acid per year. If this were dissolved in the annual average precipitation (113.16 centimeters [44.55 inches] per year), the resulting rainfall would have a pH increment of 5.47 attributable to the project's sulfur emissions. This is only slightly more acidic than the pH of precipitation through clean air in balance with existing atmospheric carbon dioxide concentrations. Even under unrealistically conservative assumptions, the proposed project would not have any significant impacts on acid deposition patterns in areas downwind from the facility.

The Kentucky Natural Resources and Environmental Protection Cabinet report on cumulative impacts from electric generating plants does not separate emissions from the KPE facility from those of the existing and proposed EKPC units at the J.K. Smith Site. Nevertheless, the analysis presented in the Kentucky Natural Resources and Environment Protection Cabinet report is consistent with the cancer

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Comment No. 9 (cont.) **Issue Code: 06**

risk evaluation presented in Table 5.7-4 of the EIS. However, the EIS presents a more conservative analysis based on 5 years of site data and the use of the official ISCST3 model as opposed to the 1 year of data and newer ISC model, which is not yet officially specified for permit applications, used for the Kentucky Natural Resources and Environmental Protection Cabinet report. The hazardous air pollutant risk evaluation in the Kentucky Natural Resources and Environmental Protection Cabinet report uses a lifetime cancer risk of 1 in a million as a conservative screening threshold. Table 5.7-4 of the EIS identifies five hazardous air pollutants that would exceed that screening threshold: arsenic, cadmium, chromium, nickel, and dioxins/furans.

The sulfur emission allowances that will have to be obtained by KPE for this facility apply only to electric generating plants. Since such emission allowances can be transferred on a national level, KPE's acquisition of these allowances will not significantly diminish the availability of such emission allowances. The PSD increment consumption by the proposed project also is small, and would not affect any proposed industrial facility that has emissions lower than the relevant major source thresholds. Thus, it is unlikely that the proposed project would affect the ability of "less polluting and more economically beneficial" industries to locate in the region.

Additional discussion of acid deposition and metal deposition issues has been added to Section 5.7.4 of the Final EIS.

Comment No. 10 **Issue Code: 20**

The *Cumulative Assessment of the Environmental Impacts Caused by Kentucky Electric Generating Units* report issued by the Kentucky Natural Resources and Environmental Protection Cabinet on December 17, 2001, has been reviewed and relevant sections of the EIS, including Section 5.14, Cumulative Impacts, have been updated to reflect issues presented by the report. The report raises concerns about arsenic and

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Comment No. 10 (cont.) **Issue Code: 20**
nickel levels exceeding risk-based screening values in the area should both the Kentucky Pioneer IGCC Demonstration Project and proposed peaker units operated by EKPC begin operation. These concerns have been added to Section 5.14, Cumulative Impacts; however, it should be noted that the Kentucky Natural Resources and Environmental Protection Cabinet report states that the majority of the arsenic and nickel emissions would be produced by EKPC's peaker units. The emission estimates determined in that report are based on continuous firing of a 90 percent natural gas and 10 percent fuel oil feed. These units would only operate during times of peak electrical demand, which translates to roughly 500 hours per year. EKPC intends to run the units using a 100 percent natural gas feed. They would only use fuel oil, the source of the hazardous air pollutants of concern, as a back-up fuel.

Comment No. 11 **Issue Code: 22**
All waste streams (air, water, and solid) generated by the project would be in compliance with federal, state, and local guidelines and ordinances. The presence of the facility should have no impact on future siting decisions for other businesses or industries in Clark County or Kentucky. No burdens to the economic health of the region as a result of this project have been identified. According to the *Cumulative Assessment of the Environmental Impacts Caused by Kentucky Electric Generating Units* prepared by the Kentucky Natural Resources and Environmental Protection Cabinet, further electric generation capacity often facilitates the development of the area economy.

Comment No. 12 **Issue Code: 07**
The cumulative effects of withdrawals from the Kentucky River by power plants have been discussed by the Kentucky Natural Resources and Environmental Protection Cabinet in their cumulative assessment report (KNREPC 2001), addressed in Section 5.14, Cumulative Impacts. The Cabinet acknowledges that because many of Kentucky's

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Comment No. 12 (cont.) **Issue Code: 07**
power plants are exempt from water withdrawal requirements, the Cabinet does not have an accurate inventory of the volume of water being removed each day by the existing power plants. However, the KDEP is able to limit withdrawals from permitted sources during periods of abnormally low flow. Although the proposed plant would not be a permitted withdrawal source, KPE has stated that they would cease water withdrawals if requested to by the state.

Comment No. 13 **Issue Code: 07**
Data provided in Section 4.8, Water Resources and Water Quality, on the mean flow of the Kentucky River at Lock 10 is from the U.S. Geological Survey from 1961 to 1999. This timeframe is inclusive of the timeframe used in the J.K. Smith EA (1961 to 1977). Therefore, the average annual flow estimated at the proposed site during that study is still assumed to be valid.

Comment No. 14 **Issue Code: 20**
In light of the projected population growth and associated industries in the affected area, the EIS acknowledges the cumulative effects of water withdrawal. It is a potential problem in all regions of the country, especially in those locations with declining water quality, including thermal pollution. The Kentucky River Authority website indicates that the annual average river flow at Lock and Dam 10 (Lexington) is 12.9 BLD (3.4 BGD). KPE's use, at 15.1 MLD (4 MGD), is about 0.1 percent of that flow. As discussed in Section 4.8, Water Resources and Water Quality, the 7-day low flow with a recurrence interval of 10 years is 371.5 MLD (98.2 MGD). Under these conditions, the plant withdrawals would be equivalent to about 4.0 percent of the low flow average. Thermal plumes have the potential to kill mobile aquatic and benthic organisms and shift aquatic populations. This effect can be cumulative and a statement to this effect has been added to Section 5.14, Cumulative Impacts, of the Final EIS.

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Comment No. 14 (cont.) **Issue Code: 20**

The Kentucky Natural Resources and Environmental Protection Cabinet has established regulatory limits relative to the Kentucky River, which explicitly provide them with a mechanism to establish thermal impact parameters. Kentucky regulations (401 KAR 5:031) contain specific seasonal (generally month to month) temperature limits, and on which permitted effluent limits are based. Project specific information will not be available until an application for a KPDES permit is submitted approximately 1 year (minimum time is 180 days) before plant operation. This will occur after the project is financed and the plant designed. However, effluent temperature will be limited, and will be established to avoid impacting the monthly Kentucky River receiving stream limits. Should low flow or drought conditions require the cessation of water withdrawal from the Kentucky River, an event that has not yet occurred, the plant would be shut down for that period of time.

Comment No. 15 **Issue Code: 21**

The Final PSD/Title V Air Permit, issued by the Kentucky Division for Air Quality on June 7, 2001, requires continuous emissions monitors for NO_x, SO_x, CO, O_2, and PM_{10}. Annual stack tests for all pollutants with emission limits established by the permit are also required. The KPDES permit, which will be obtained at least 180 days prior to commencing of construction, will also have effluent limits and monitoring requirements established by state regulations. Along with the required monitoring under the permit, KPE would monitor the levels of biological and chemical oxygen demand, pH, and temperature in any wastewater generated by the facility. Any monitoring and measurements would be based on usage limits and flows associated with natural gas-fired plants.

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Comment No. 16 **Issue Code: 21**

KPE has a contract in place with EKPC to provide power continuously for a 20-year period. The facility would not shut down after the 1-year demonstration period, but would continue to operate to honor the commitment to EKPC. As discussed in Chapters 1 and 2 of the EIS, the performance, technical, and economic data would be used to determine the commercial viability of the BGL gasifier at other new and existing facilities. Should the facility prove commercially viable, the demonstration would be considered a success. There would not be a new round of permitting following the end of the 1-year demonstration period. The PSD/Title V Air Permit issued by the Kentucky Division of Air Quality is final and does not require renewal following the demonstration. At the close of the demonstration period, the KPDES permit for water usage would also be final and not require renewal. Any required fuel feed component changes following the 1-year demonstration period would likely require modification of the air and water permits.

Comment No. 17 **Issue Code: 21**

An Environmental Management Plan will be required for the KPE project and must be approved by DOE before operation of the plant begins. Because the Plan would not be prepared until detailed design is complete, it was not available for inclusion in the Draft EIS. The Plan will be posted on DOE's Clean Coal Technology Compendium Website when complete (http://www.lanl.gov/projects/cctc/).

Comment No. 18 **Issue Code: 11**

There are distinct differences between gasification and incineration. Incineration occurs at atmospheric pressures and temperatures and mineral matter or ash in the waste is not completely fused. With incineration, there is increased production and emission of criteria pollutants. In contrast, gasification occurs at high temperatures and pressures which significantly reduces the formation of oxidative

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Comment No. 18 (cont) **Issue Code: 11**

species such as SO_x and NO_x. Incineration produces semi-volatile and volatile organic compounds and dioxin/furan compounds. Ash from hazardous waste incinerators is considered hazardous waste under RCRA. Analysis of vetrified frit produced from gasification processes has consistently been proven to be nonhazardous as defined by RCRA. In gasification, nonvolatile trace metals concentrate in the vitrified frit and are effectively immobilized eliminating or reducing their leachability.

The proposed project is not a conventional power plant burning coal or RDF. Instead of burning such fuels in a boiler system, the proposed project would use gasification technologies to chemically convert the coal and RDF mix into a syngas fuel consisting primarily of CO and H_2. The gasifier operates as a completely enclosed pressurized system. Gasification occurs at high temperatures which ensures complete destruction of toxic organic compounds and incorporation of heavy metals in molten slag. The molten slag is recovered by quenching as a nonleachable glassy frit. Gasification occurs in a carefully controlled environment. The process produces no air emissions. Furthermore, the high temperatures achieved during gasification prevent the formation of dioxins furans. A description of the gasification process can be found in Section 3.1.2.2 of the EIS.

The gasification of RFD and coal occurs at high temperatures and pressures and produces no air emissions. Incremental ambient air quality impacts from the proposed project (CTs and cooling towers) would be a very small fraction of the relevant federal and state ambient air quality standards (less than 1 percent for gaseous pollutants such as SO_2, NO_x, and CO and less than 4 percent of the federal 24-hour PM_{10} standard). The maximum air pollutant increments associated with emissions from the proposed project indicate that no significant short- or long-term air quality impacts would occur and health risks are expected to be minor.

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Comment No. 19 **Issue Code: 21**

DOE believes that the EIS fully addresses all impacts of the Proposed Action and No Action Alternative, as required by NEPA. The public comment period was extended through January 25, 2002. DOE will consider all public comments before issuing the ROD. The ROD will be issued no sooner than 30 days after the Final EIS is distributed and a notice of its availability is issued.