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remarks where he says "It is not a combustion process."[15] KPE also plans to use an 80% MSW briquette after the 50% demonstration phase.[16]

The most obvious explanation for the strained language is that KPE needs to make these arguments in order to avoid the application of Kentucky law. If they are a Waste-to-Energy facility, then they are required to conform to the solid waste plan of Clark County Kentucky.

As of today in Clark County, the majority of the governing body, the County Attorney and the state Representative are publicly pursuing their county's right to require and enforce the permit. If KPE resorts to the courts to avoid the local permitting regulations, a significant delay is certain, and outright failure likely.

KPE has not applied for a permit from Clark County for their proposed facility. Their long standing denial of the need to get such a permit has turned public sentiment in the county against them.

Please see Appendix G, Kentucky Air Quality Permit. Further, under KRS 224, failure to get the required local permit disqualifies the state's right to permit the facility.

7/21
(cont)

Conflict With State Law

The following section is an excerpt from the Kentucky Resource Council's comments on the EPA's draft EIS for the Trapp site.

" The proposal to thermally treat and to combust the volatile fraction of one million tons or more per year of treated municipal solid waste falls squarely within the type of facility intended by the General Assembly to be scrutinized under the solid waste planning process.

KRS 224.40-315 mandates that:
No permit to construct or expand a municipal solid waste disposal facility shall be accepted for processing by the Cabinet unless the application contains a determination from the governing body for the solid waste management area in which the facility is or will be located concerning the consistency of the application with the area solid waste Management plan.

The scope of this statute and the requirement for a determination of consistency with the approved solid waste plan is defined by the term municipal solid waste disposal facility, which is defined in KRS 224.01-010(15)

8/21
(cont)

15 Op-Ed page, 7/23/2001, Lexington Herald-Leader, Lexington, KY
16Pers Comm: Dwight Lockwood, 12/10/01 c. 7 pm, manager of Regulatory Affairs, Global Energy Inc, Suite 2000, 312 Walnut St, Cincinatti OH 45202

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to include:

Any type of waste site or facility where the final deposition of any amount of municipal solid waste occurs, whether or not mixed with or including other waste allowed under subtitle D of the Federal Resource Conservation and Recovery Act of 1976, as amended, and includes, but is not limited to, incinerators and waste-to-energy facilities that burn municipal solid waste, . . .

Because the material is not a refuse derived fuel under KRS 224.01-010(23) in that it has not been subject to extensive separation of municipal solid waste including the extraction of recoverable materials for recycling the processing of the municipal solid waste stream to create the pelletized fuel does not make the material a recovered material under KRS 224.01-010(20). The proposed gasification step in the process and the cleaning of the volatile fraction of the waste for combustion does not make the facility a recovered material processing facility so as to exempt it from the definition of a municipal solid waste disposal facility or to avoid the obligation to be consistent with the local solid waste plan.

Even assuming that the partially processed waste fell within the ambit of refuse derived fuel and the 15%[17] limitation on RDF didn't limit the applicability of recovered material even as to RDF, the proposed facility is not a recovered material processing facility since it proposes to combust the gases created by the thermal and pressure treatment of the waste and is not storing and processing for resale or reuse.

Reuse, as that term is used by the General Assembly does not include use of wastes as a fuel with or without heat recovery. The latter concept is resource recovery and is a term distinct from reuse of solid waste. See: KRS 224.43-010 (3) which sets reuse of solid waste as a priority below reduction, and above recycling, composting, and resource recovery through mixed waste composting or incineration."

The resolution of the conflicting interpretations of KRS 224 will likely require adjudication. The Federal Government should immediately temper it's affinity for the Trapp facility and recognize that it is bankrolling a project that, at best, violates the spirit of Kentucky voters, and at worst will be killed by failing to get a local siting permit after an ugly court fight. Given the visible statutory issues, this project deserves a time-out, not Federal dollars. By funding the Trapp facility, DOE & EPA help undermine the basis for much of the recent

17 Under Kentucky law, only 15% of the material processed by the facility creating the pellets could be credited as RDF.

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8/21
(cont)

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solid waste planning & management in the state of Kentucky.

8/21 (cont.)

Intent to Disregard the Research Results

The DEIS, on page 3-24, Section 3.4.2 'Proposed Actions' states at the end of the second paragraph, 'Data generated during the first-year demonstration would be used to determine if the coal and RDF pellet co-feed would continue after the first year of operation.'

KPE president Musulin has publicly rejected that premise and stated the KPE intends to operate the plant without a new round of permit reviews based on the outcome of the DOE funded research[18].

In regards to the review, who will make the determination to continue the RDF/coal co-feed? The DEIS is sorely inadequate in this area. Absent of any details of the review, no estimation can be made of the quality of environmental protection afforded by the review. The details of the review need to be developed and presented to the public immediately. The state of Kentucky has already issued an Air Quality permit for five years. If the proposed action described in the DEIS to review the data is to occur, then DOE and EPA will have to be the ones to require it.

9/21 (cont.)

Given KPE's clear intent, it is reasonable to require DOE to contractually obligate the review, publish it's full details, seek a bond to secure the agreement, and require Occurance class insurance to assure the intended levels of safety. In the face of evidence to the contrary, the cooperation of KPE cannot be presumed, and must be contractually required. Trusting KPE to volunteer for review and abide by the results can no longer be an option. This contract should also be part of the DEIS, and deserves public comment and review.

DOE's notice of intent to prepare the EIS states clearly that the project is "designed for at least 20 years of commercial operation...", and that "Upon completion of the demonstration, the facility **could** (my emphasis) continue commercial operation."[19] KPE has said "Kentucky Pioneer Energy will furnish Kentucky residents with low-cost power, high-quality jobs, and a cleaner environment for years to come."[20]

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18 pers comm, Mike Musulin, President KPE, 12/11/01 9 pm, just after the close of the formal EPA EIS hearing "If we did that, nothing would ever get built." This comment was made to me, the Lee County Solid Waste Co-ordinator Ms. Neely Back, to Clark County resident, John Maruskin, and others.

19 DOE's Notice of Intent to Prepare an Environmetal Impact Statement for the Kentucky Pioneer IGCC Demonstration Project, Trapp KY

20 Op-Ed page, 7/23/2001, Lexington Herald-Leader, Lexington, KY

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One of two things can be drawn from these facts: either there should be a mandated public review and re-permit at the end of the demonstration because the outcome of the research and the safety of the waste product are uncertain, or that the outcome is certain and does not deserve Federal research monies.

In the event that DOE does fund the R&D facility, it should require, by contract and bond, a new round of public review and a new round of state permits predicated on the results of the test period. The absence of details about the how the data from the first year would be used to determine the continued use of coal/MSW/RDF is a significant omission in the DEIS.

9/21 (cont.)

Unreliable Partners, Private Funding Delays, Inadequate Planning and Uncertainties

KPE & EKPC are having trouble already (see Appendix D, the PSC September 11th hearing). The public pronouncement by KPE that they intend to run the facility without regard to the outcome of the first year flies in the face of the text of the DEIS and challenges the notion that they are a good partner for DOE, EPA, and the public. As well, the determined effort to avoid the local permitting requirements calls into question their commitment to public partnership.

Many of the features of the KP IGCC DEIS are founded on the DOE's partnership with Global Energy, KPE & EKPC. The failure to consider other sites, the inclusion of MSW derived fuels instead of coal, and the reliance on old studies from EKPC's prior EIS's are among those features. The appropriateness of DOE's relaxed efforts is predicated on the quality of their choice of partners. There is evidence that these partners have failed to measure up and casts doubt on their ability or willingness to deliver.

KPE missed it's financial closing deadline of June 30th, 2001. In testimony before the Kentucky Public Service Commission, KPE's partner EKP stated "However, due to the delay in KPE's financing, East Kentucky (EKP) decided that it cannot reasonably rely on that project (Trapp) to satisfy its future power needs."[21]

The Trapp facility had originally been planned as a Duke Energy subsidiary (Ameren) project in southern Illinois, but that encountered siting difficulties and was canceled.[22]

10/22 (cont.)

21 Appendix D. Commonwealth of Kentucky Public Service Commision case 2001-053, report on the hearing of 8/18/01, "Application of East Kentucky Power cooperative, Inc for a certificate of public convenience..."
22 Robert W. Gee,Assistant Secretary for Fossil Energy,

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EKPC failed to send representatives to either of the December 2001 DEIS public comment meetings in Kentucky. KPE has neglected to apply for a critical permit from Clark County. They failed to apply due diligence in the review of applicable law and instead maintain that they are not operating a waste-to-energy facility, preferring a court battle over accommodating the local public.

The Federal Government should not risk public dollars on a project that, by DOE's own admission, may be poorly located, has a track record for last minute siting problems, and is anticipated to fail by it's own corporate partners. The quality of the partnership itself has become suspect in light of facts presented in these comments and appendices.

Disregard for Social Justice and Environmental Issues

Unlike New York, Kentucky has addressed our solid waste disposal problems. 4000 tons a day is a lot of trash. It is nearly half of what Kentucky produces each day. If folks in Trapp Kentucky can afford proper garbage disposal, New Yorkers can too. We have 23 other power plants awaiting permits. None of them want to incinerate 4000 tons of trash a day.

KPE has not offered any incentives to Kentucky. From Kentucky's view it's a clear loss. KPE is an Ohio company. Most jobs and all the profits leave the state. KPE will act to the advantage of it's parent, Global Energy, not EKPC or the Commonwealth. Since no local permit has been sought, there has been no discussion in Clark County of a 'Host Agreement', the contract of mutual benefits imposed on permit holders. Hence, there are no local benefits to offset any undesirable impacts from the facility. The Commonwealth's air quality is more excessively burdened by the metals and other contaminants in the imported MSW/RDF than if KPE burned Kentucky coal. From the Commonwealth's point of view KPE should be demonstrating 100% Kentucky coal. Kentucky already has the lowest energy costs in the nation: there is little demonstrated need for the power generated at Trapp.[23] A facility would be better located nearer it's feedstocks and high rate energy markets than at the proposed Trapp site.

If the Federal Government choses to fund the Trapp facility, many public bads (as opposed to public goods) will occur: Kentucky will see an escalation of landfill costs; elimination of new business opportunities due to increased scarcity of clean air and water; significant,

U.S. Department of Energy, before the Subcommittee on Interior and Related Agencies Committee on Appropriations, on March 14, 2000.
23 http://www.kentuckyconnect.com/heraldleader/news/121601/statedocs/16electricity-plants.htm

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9/22 (cont.)

11/13 (cont.)

13/02

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20/02

Comment No. 13 **Issue Code: 02**

Economic benefits from the project are presented in Section 5.3, Socioeconomics, of the EIS. The majority of the revenue and income generated by the project would remain within the three-county Region of Influence (ROI) of Clark, Fayette, and Madison Counties. All 120 jobs would be created onsite, with none in Cincinnati. The region would also benefit from the indirect jobs created in other sectors and increases in tax revenue from the project.

Comment No. 14 **Issue Code: 21**

Comment noted. KPE will pursue all required state and local permits after financial closure on the project has been completed. KPE would be required to abide by all state and local regulations, including alerting the public during the public review process throughout the permit acquisition process.

Comment No. 15 **Issue Code: 06**

Comment noted. The metals content of RDF pellets may be higher than that of coal for some heavy metals, but not necessarily for all metals. Some heavy metals (such as beryllium, cobalt, and selenium) may not be present in detectable levels in RDF pellets. EPA's AP-42 emission rate documents do not provide a convenient comparison of uncontrolled heavy metal emission rates for coal versus RDF pellet combustion. Tables 1.1-18 and 2.1-8 in the AP-42 document provide a comparison of emission rates for facilities equipped with similar particulate matter emission controls. The data in those tables are presented as emission rates per ton of fuel. Bituminous coal has a typical heating value slightly more than twice as high as the heating value of RDF pellets (roughly 12,000 British Thermal Units [BTU] per pound for bituminous coal versus 5,500 BTU per pound for RDF pellets). When converted into emission rates on a fuel heat content basis (emission rates per million BTU), using RDF pellets as fuel would appear to produce higher emission rates than coal

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yet avoidable, public health issues due to metals, carcinogens, CO, CO2, NOx, and other pollutants in the air, soil and water; abuse of the will of Kentuckians and our laws. All this for a tiny handful of jobs. All this just to demonstrate cheap energy in the state with the cheapest energy, and a solid waste disposal solution in a state that solved that problem 10 years ago.

The environmental virtues of IGCC are offset by the MSW costs: massive chronic train loads of trash, importing hazardous metals and organic compounds as garbage, failing to recycle paper and plastics from 4000 tons/day of MSW, using local landfill space for 500 tons/day of heavy metal laced waste, competition with one of Kentucky's largest cites for scarce water, and burdening the air with a wide array of degrading elements.

Inadequate Design Data

Critical plant design components are missing from the DEIS. The fate of Mercury is a good example-some will be captured as particulates just after the gasifier, and some in the de-sulfurization step, but without the design data, no-one can more than guess what the capture rates are. Congress has mandated the reduction of Mercury, yet there is no visible effort or data in the DEIS to that end. The same can be said for other toxic metals.

Water use is not well documented. A typo in Figure 3.1.1-1 on page 3-14 of the DEIS shows untreated steam being piped to the turbines. The technologies for cleaning the gasification products are ambiguous, and the fate of water used to clean and cool the gases is not clear. The nature and degree of contamination of the 'aqueous effluent' is not detailed. The margin of additional risk to water quality and quantity from the transportation and use of MSW/RDF vs coal cannot be reasonably measured by information in the DEIS. The Trapp site is immediately upstream from the primary water source for the second largest city in the state.

In the absence of information like that shown below, no analysis can be made about the fate of constituents. It is bordering on travesty that DOE published a DEIS absent of the essential design information needed to make any estimate of environmental impact.

The environmental impact of an IGCC plant is a function of the thermal and chemical character of the facility. Section 3.1.2 should address the temperature profile of the pyrolytic products. Examples of the types of information missing are offered below:[24]

24 P. 51 www.nrel.gov/docs/fyosti/29952.pdf and British Gas/Lurgi Gasifier IGCC Base Cases PED-IGCC-98-004 Rev June 2000. pp3-4 URL: www.doe.gov/coalpower/gasification/system/bgl3x_20.pdf

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23/22

12/16 (cont.)

24/06

25/07

12/16 (cont.)

Comment No. 15 (cont.) **Issue Code: 06**

for metals such as cadmium, chromium, mercury, nickel, and lead. Coal would appear to produce higher emission rates than RDF pellets for arsenic, beryllium, cobalt, and selenium.

The hazardous air pollutant emission estimates presented in Table 5.7-2 of the EIS are taken from the permit application for the proposed facility. Except for the hydrogen sulfide emission estimate, these underlying emission rates are based on test results for a comparable gas turbine unit fueled with syngas produced from a 100 percent coal feedstock. Those emission rates were used in setting the emission limits in the air quality permit for the proposed project. Those emission limits must be met regardless of whether the fuel feed to the gasification units is coal, RDF pellets, or a mix of coal and RDF pellets. It should be noted that the air quality permit for the project requires annual emissions testing for cadmium, lead, mercury, hydrogen chloride, and dioxins/furans.

Comment No. 16 **Issue Code: 22**

Comment noted. The process to be demonstrated by the Kentucky Pioneer IGCC Demonstration Project and approved for further study under the CCT Program is a new technology that uses a 50-50 ratio co-feed of coal and RDF pellets. All coal for the project will be supplied from within Kentucky. The purpose of the CCT Program is to provide a cleaner and more efficient source of energy from coal resources.

Comment No. 17 **Issue Code: 14**

Chapter 2 of the EIS discusses EKPC's 1998 Power Requirements Study which indicates that the electrical load for the region is expected to increase by 3.0 percent per year through 2017. Net winter peak demand is expected to increase by 3.3 percent per year and net summer peak demand is projected to increase by 3.0 percent per year. Peak demand is projected to increase from 2,031 MW in 1998

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Example process diagrams:

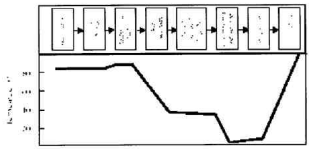

Figure 4.4 Temperature Profile of ARBRE Gasification System

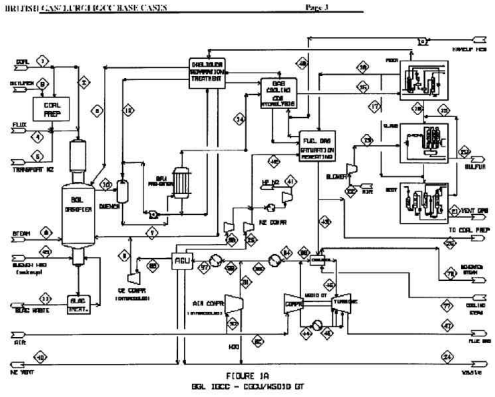

FIGURE 1A

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Comment No. 17 (cont.) **Issue Code: 14**
to 2,394 MW in 2003 and 3,478 MW in 2015. Based on this load growth, EKPC will need additional power supply resources of 625 MW in 2003. The need is further shown by EKPC's plans to construct four new CT electric generating units to provide peaking service alongside their three existing peaker CTs at the J.K. Smith Site.

Comment No. 18 **Issue Code: 22**
Comment noted. Because of DOE's limited role of providing cost-shared funding for the proposed Kentucky Pioneer IGCC Demonstration Project, alternative sites were not considered. KPE selected the existing J.K. Smith Site because the costs would be much higher and the environmental impacts would likely be greater if an undisturbed area was chosen.

Comment No. 19 **Issue Code: 12**
The project produces primarily vitrified frit which is considered a commercial product, not a waste stream. The frit from gasifiers operating on a 100 percent coal feed has consistently proven to be nonhazardous under RCRA. Since this project will be using a different feed stream, the first batch of frit should be tested to ensure that it meets all TCLP criteria and would therefore be nonhazardous. The waste generated at the proposed facility that would be landfilled in the State of Kentucky would be solid waste. It is difficult to determine whether waste from this project would drive up the cost of landfilling. Landfill cost increases are dependent on a number of factors, not just the waste generated from this proposed facility.

Comment No. 20 **Issue Code: 02**
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 business opportunities in Clark County or Kentucky. No burdens to the economic health of the region as a result of this project

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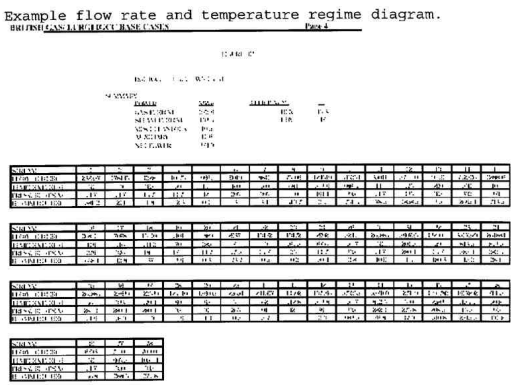
Example flow rate and temperature regime diagram.



Significant research is needed to characterize the effluents from a coal fired IGCC facility compromised with low ratios of coal to MSW/RDF. Kentucky will bear the risk of insufficient research.

Please find attached a (very) preliminary bibliography (Appendix A) that suggests both a paucity of peer-reviewed research specific to our case and confounding results.

The titles in that list suggest that nearly all the available literature is on MSW and Incineration technologies. The Trapp feedstock is a relatively heterogeneous coal and MSW/RDF mix, and the IGCC facility is not an incinerator, hence little of the available literature is necessarily applicable.

Largely absent from the list are independent peer reviewed assessments of ICGG produced fritted slag from mixed coal MSW/RDF feedstocks. There is little in the literature to reassure the public that BG/L IGCC facilities & frit are unfailingly environmentally benign, or that all the heavy metals in the feedstock are effectively sequestered.

The DEIS has not adequately addressed the short & long-term character of the fritted slag. There is some question as to the efficacy of metal sequestration in the

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12/16 (cont.)

26/12

Comment No. 20 (cont.) **Issue Code: 02**

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. 21 **Issue Code: 11**

No impacts to the general public's health and safety would be expected from the RDF because the gasification process has no air emissions; only minor amounts of wastewater would be generated from this process. All facility wastewater would be treated and discharged to the Kentucky River in accordance with their KPDES permit. Incremental increases in air emissions from operation of the CTs and cooling tower 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 NO_x, SO_2, and CO; and less than 4 percent of the federal 24-hour PM_{10} standard). There would be no significant short- or long-term air quality impacts and the health risks are expected to be minor.

Heavy metals in the RDF would be sequestered in the vitrified frit, a glassy matrix material created during the gasification process, making the potential of metals leaching from the frit into the soil and water extremely low. The frit from gasifiers operating on a 100 percent coal feed has consistently proven to not leach. Since this project will be using a different feed stream, the first batch of frit should be subjected to TCLP testing to ensure that it does not leach. Heavy metals emissions from the gas turbine operation would be less than 28.3 grams (1 ounce) per year. Total heavy metal deposition in areas downwind of the project would be much less than 1.1 kilogram per hectare (1 pound per acre) accumulated over 20 years. The maximum air pollutant increase associated with emissions from the proposed

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frit. MSW/RDF has a highly variable metal and energy content compared to coal. It is possible that the metal concentrations in the vitreous waste will also be more variable, making the specific character and safety of the 500 ton/day of solid effluent harder to characterize. The DEIS should detail how & by whom the frit will be assessed.

The public cannot measure the risk created by the Trapp facility without additional review and research. In the face of such uncertainty, it is reasonable to require an Occurance class insurance policy sufficient to remediate potential long term damages. Unless DOE and the EPA bind KPE & EKPC to a new round of permits to review the results of the one year demonstration, or a long term occurance insurance policy that can cover any damages, the facility should not be funded.

In Conclusion

There are significant flaws and omissions in the Trapp facility DEIS. These demand repair and a new round of public review.

While it is not the Federal Government's job to enforce Kentucky law, the Feds should not facilitate the avoidance of Kentucky law nor reward the good environmental management efforts of Kentucky by dumping New York's trash on us.

The determination that there are no significant environmental or social justice issues is not supported by the facts. Many genuine environmental questions remain about the use of MSW/RDF. It is clear that Kentucky would be better off using 100% coal at Trapp.

It is patently unfair to reward a poor state that has afforded itself a safe means of disposal of its own MSW with almost a volume half again it's own, just to lower the cost in a far more affluent state. It is an injustice to unecessarily risk the physical and economic health of that poorer state for the sake of experimentation when there are no local benefits.

Kentucky doesn't have a waste disposal problem, so we cannot benefit there. Our costs will inevitably rise to compensate for the demand on our landfill space for the frit and other waste from East Coast waste. Our costs for health care will inevitably rise to repair the damage from heavy metals that could be avoided. The quality and quantity of water available to the second largest city in the state is unecessarily threatened, risking it's economic growth. Using MSW/RDF denies a long term market for Kentucky coal.

The decision to not consider other sites is not supported: partners already have IGCC facilities to demonstrate the fuel cell component. Failing to include the Lima, Ohio plant is a clear sign of the inadequacy of

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26/12 (cont.)

9/21 (cont.)

2/21 (cont.)

8/21 (cont.)

11/13 (cont.)

27/16

16/22 (cont.)

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29/12

30/11

25/07 (cont.)

31/02

33/21

Comment No. 21 (cont.) **Issue Code: 11**

project would produce no significant short- or long-term air quality impacts. Air and water emissions from the proposed project would be regulated by the State of Kentucky. The air quality permit for the proposed project requires continuous emission monitoring for criteria pollutants and annual emissions testing for cadmium, lead, mercury, hydrogen chloride, and dioxins/furans. Noncompliance with permitted emission levels would result in a plant shutdown.

Comment No. 22 **Issue Code: 22**

Comment noted.

Comment No. 23 **Issue Code: 22**

The EIS is designed to present all of the potential environmental impacts of the various alternatives relating to the proposed federal action, both beneficial and detrimental. The benefits associated with the project are not intended to be used as justification for the environmental costs. The RDF will be used to generate the syngas fuel. The paper and plastics are retained in the RDF to add heat value to the feed material. The Kentucky Natural Resources and Environmental Protection Cabinet has advised KPE that the RDF is a recovered material, not a waste. The Kentucky Pioneer IGCC Demonstration Project facility will be considered a recovered material processing facility and the gasification process will not require a waste permit as long as the RDF conforms to the statutory definition. An Emergency Response Plan and Spill Prevention, Control, and Countermeasure (SPCC) Plan, which document procedures for providing emergency response and cleanup for any project related spills, including those during materials transport, have not yet been developed by KPE. The plans will be developed during the engineering and construction phase of the project and would adhere to local, state, and federal regulations.

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the DEIS site selection effort. Electricity demand and price are higher anywhere else in the country. Trapp may be one of the worst sites available. Given the long distances from the MSW source material, sites to the north and east deserve consideration.

EKPC should have attended the December DOE/EPA hearing at Trapp. KPE has proven unreliable at acquiring funding. EKPC has interjected a PSC decision into their commitment to DOE. EKPC & KPE relations are visibly suffering. The current partners are not working well with the public or each other. DOE should not use them as the basis to deviate from a full site review.

The Federal Government should not invest in a project at such risk of foundering in a permit fight.

The Federal Government should not invest in a project that cannot acquire timely and reliable private funding.

DOE & EPA need to justify the use of research dollars on a facility that intends to ignore the research outcome.

The DOE CCT program should not divert scarce Federal funds to research that is outside the realm of Clean Coal. Using CCT monies for research on MSW/RDF diverts those dollars from their intended purpose. DOE CCT's mandate is to make coal clean to use, not to remove coal from the energy production cycle.

The Lima, Ohio Global Energy facility undercuts the basis for Federal investment. The goals of DOE & CCT can be met without Federal funding.

The Mason County Spurlock plant now seeking permit from the Kentucky PSC by EKPE addresses the base electrical needs stated in the DEIS without Federal funding.

The lack of design information in the DEIS makes it a dysfunctional document-one cannot estimate the environmental impact of the proposal from what is included in the DEIS.

There is overwhelming evidence that the DEIS needs repair. The document does not detail the environmental impacts of the Trapp facility, nor defend the need for agency action. The DEIS, as presented, is more a dogmatic tract asking for the public's faith than a fact-filled document presenting the environmental impact of the proposed facility. Please mend the document and offer it again for public review.

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33/21 (cont.)

34/21

7/21 (cont.)

10/22 (cont.)

9/21 (cont.)

4/14 (cont.)

3/14 (cont.)

12/16 (cont.)

2/21 (cont.)

Comment No. 23 (cont.) **Issue Code: 22**

The 454 to 635 metric tons (500 to 700 tons) per day of frit generated by the facility would be sold as road aggregate and would not be deposited in a landfill. KPE has indicated that they would be willing to work with Kentucky Department for Environmental Protection (KDEP), Division of Water, during low-flow conditions in the Kentucky River and would cease plant operations and water withdrawals if required. All air emissions from the facility would comply with the limits established by the PSD/Title V Air Permit.

Comment No. 24 **Issue Code: 06**

Comment noted. Readily available information does not allow a mass balance analysis for the partitioning of toxic metals among vitrified frit, air emissions, and wastewater; however, it is expected that almost all of the mercury and other heavy metals contained in the feed stocks would partition out into the frit. Nevertheless, the emission estimates presented in the EIS for heavy metals are based on data from a similar IGCC facility using coal as the feedstock for the gasification facilities. Those emission rates were considered in setting the emission limits specified in the air quality permit for the proposed project. It should be noted that the air quality permit for the project requires annual emissions testing for cadmium, lead, mercury, hydrogen chloride, and dioxins/furans.

Comment No. 25 **Issue Code: 07**

The process diagram included as Figure 3.1.1-1 in the EIS was not intended to be a detailed construction drawing, but to represent a general depiction of the overall process. KPE states that the specific details of the nature and degree of aqueous effluent cannot be identified until the plant design is in more advanced stages. Prior to treatment, this waste stream may include pollutants such as metals, tars, and oils. However, as stated in Section 5.8, Water Resources and Water Quality, treated wastewater is expected to contain conventional pollutants such as nitrogen, phosphorus, total dissolved solids, and biological and chemical oxygen demand. Pollutant discharge

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Appendix A-IGCC Frit & MSW Title Search Results

The Dialog © search terms used here are : LURGI OR BG/L OR IGCC OR INTEGRATED()GASIFICATION OR FRIT OR SLAG)(S)(MSW OR GARBAGE OR RDF OR REFUSE)

As is evident from the titles below, nearly all the available literature is on MSW and Incineration technologies. The Trapp feedstock is a relatively heterogeneous coal & MSW/RDF mix.

As DOE's partner, KPE, has repeatedly informed us, the IGCC facility is not an incinerator, and RDF mixed with coal is not MSW, hence little of the available literature is necessarily applicable.

While a case by case review seems neccessary to determine whether the available publications are germane and their impact on the goals of the DEIS, what is largely absent is independent peer reviewed assessments of ICGG produced fritted slag from mixed coal MSW/RDF feedstocks. There is little in the literature to reassure the public that BG/L IGCC frit is unfailingly environmentally benign and that all the heavy metals in the feedstock are effectively sequestered there.

The first citation below is not part of the Dialog search.

Bibliography

5. "Destruction of Toxic Organic Substances in a Slagging Gasifier Including Determination of Heavy Metals in the Slag" Distefano, R. P., Eberle, D.J. et al., Columbia University Account Number 5-20270, Final Report for U.S. EPA Office of Research and Development July 15,1983.

2/6/1 (Item 1 from file: 10)
Application of refuse slag in concrete for agriculture (Cinders). 18092
Onderzoek naar de toepassing van afvalverbrandingsslakken-beton
1980
AGRICOLA 70-2001/Dec (c) format only 2001 The Dialog Corporation

2/6/2 (Item 2 from file: 10)
472238 739228213
Einfluss steigender Gaben an Mullschlacke auf die Ertragsbildung und den Gehalt an Spurenelementen im Weizen; Influence of increasing amounts of refuse slag on yield of wheat and its content of trace elements
1973
AGRICOLA 70-2001/Dec (c) format only 2001 The Dialog Corporation

2/6/3 (Item 3 from file: 10)
429320 739188394
Die Verwertung von Mullschlacke fur landwirtschaftliche Zwwcke; Use of garbage slag for agricultural purposes [Fertilizing]
1972
AGRICOLA 70-2001/Dec (c) format only 2001 The Dialog Corporation

2/6/4 (Item 1 from file: 5)
09173740 BIOSIS NO.: 199497182110
PCDD/PCDF formation and destruction during co-firing of coal and RDF in a slag forming combustor.
1994
Biosis Previews (R) 1969-2001/DEC W4 (c) 2001 BIOSIS

2/6/5 (Item 2 from file: 5)
08124468 BIOSIS NO.: 000042105091
FIXATION OF RESIDUES FROM SPECIAL HAZARDOUS WASTE INCINERATORS FOR SHALLOW LAND DISPOSAL
1992
Biosis Previews (R) 1969-2001/DEC W4 (c) 2001 BIOSIS

2/6/7 (Item 2 from file: 50)

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limitations would be set by the Kentucky Natural Resources and Environmental Protection Cabinet, Division of Water's Water Resources Branch and would be identified in the KPDES permit. These limitations would be established based on site-specific computer modeling of the expected effect on water quality of the Kentucky River at the proposed discharge point and in the mixing zone immediately downgradient. The limits specified in the permit would protect existing water quality.

The Water Resources Branch pays particular attention to the proximity of wastewater discharges to drinking water intakes. New sources of wastewater are prohibited within 8 kilometers (5 miles) of a water treatment plant intake. This 8-kilometer (5-mile) limit was established to provide an additional layer of protection for the water quality found at drinking water intakes over treatment alone and is referred to as Zone 1. Zone 2 extends from 8 to 16 kilometers (5 to 10 miles), while Zone 3 is the area from 16 to 40 kilometers (10 to 25 miles) from a water treatment plant intake. The proposed outfall is located in Zone 3 for the Winchester Water Treatment Plant. Water collected at the treatment plant is tested and treated to meet all federal and state requirements concerning drinking water quality. Therefore, no impacts to drinking water are expected.

All materials transported on land would be enclosed in vehicles and would not be released to the environment under normal circumstances. In the event of an accident, some materials could be released to the environment. KPE would develop an Emergency Response Plan and an SPCC Plan during the project engineering and construction phase. These plans would detail KPE's planned response and clean-up methods for any spills or emergencies that occur on the J.K. Smith Site. In addition, the Kentucky Division of Water's Emergency Response Team should be called ([502] 564-2380 or 1-800-928-2380) in the event of an "environmental emergency." The spill or