

**COMMONWEALTH OF KENTUCKY**  
**BEFORE THE PUBLIC SERVICE COMMISSION**

**In the Matter of:**

**JOINT APPLICATION OF LOUISVILLE GAS )**  
**AND ELECTRIC COMPANY AND KENTUCKY )**  
**UTILITIES COMPANY FOR A CERTIFICATE )**  
**OF PUBLIC CONVENIENCE AND NECESSITY, )** **CASE NO: 2004-\_\_\_\_\_**  
**AND A SITE COMPATIBILITY CERTIFICATE, )**  
**FOR THE EXPANSION OF THE TRIMBLE )**  
**COUNTY GENERATING STATION )**

**DIRECT TESTIMONY OF**  
**SHARON L. DODSON**  
**DIRECTOR, ENVIRONMENTAL AFFAIRS**  
**LG&E ENERGY SERVICES INC.**

**Filed: December 9, 2004**

1 **Q. Please state your name, position, and business address.**

2 A. My name is Sharon L. Dodson. I am the Director of Environmental Affairs for LG&E  
3 Energy Services Inc., on behalf of Louisville Gas and Electric Company (“LG&E”) and  
4 Kentucky Utilities Company (“KU”) (collectively the “Companies”). My business  
5 address is 220 West Main Street, Louisville, Kentucky 40202. A statement of my  
6 qualifications is attached as Appendix A.

7 **Q. Are you sponsoring any exhibits?**

8 A. Yes. I will be sponsoring the following exhibits:

9 Exhibit SLD-1, Emissions Comparison: Coal-Fired Generating Units in Kentucky

10 Exhibit SLD-2, Emissions Comparison: Existing IGCC Units

11 Exhibit SLD-3, Environmental Permitting Requirements – Trimble County Unit 2

12 Exhibit SLD-4, Site Assessment Report

13 **Q. What is the purpose of your testimony?**

14 A. The purpose of my testimony is to address the environmental issues arising from the  
15 construction and operation of the proposed 750 MW nominal net super-critical pulverized  
16 coal-fired base load generating unit (“TC2”) that is the subject of this proceeding at the  
17 Trimble County Generating Station (“Trimble Station”).

18 **Q. What is the environmental benefit of the super-critical technology chosen by the**  
19 **Companies?**

20 A. TC2 will employ state of the art air pollution control equipment to ensure environmental  
21 compliance. As proposed, the air pollution control equipment will consist of a  
22 combination of pollution control devices comprised of Selective Catalytic Reduction  
23 (“SCR”) technology, Baghouse, Wet Flue Gas Desulphurization (“WFGD”), and Wet-  
24 Electrostatic Precipitator (“WESP”), with provisions for additional controls for acid mist

1 and mercury should future modifications to existing air regulations require even more of  
2 those pollutants.

3 **Q. How do the environmental benefits of the super-critical technology compare to those**  
4 **of other coal-combustion technologies?**

5 A. As shown in Exhibit SLD-1, Emissions Comparison: Coal-Fired Generating Units in  
6 Kentucky and SLD-2, Emissions Comparison: Existing Integrated Gasification  
7 Combined Cycle (“IGCC”) Units, TC2 will employ the most modern air pollution control  
8 equipment available resulting in lower SO<sub>2</sub> and NO<sub>x</sub> emissions on a lb/mmBtu basis as  
9 compared with other recently submitted permit applications for pulverized coal and  
10 circulating fluidized bed units in Kentucky as well as two coal-fueled IGCC systems in  
11 the U.S.

12 On January 30, 2004, the U.S. Environmental Protection Agency (“EPA”)  
13 published a proposed rule entitled “Proposed National Emission Standards for Hazardous  
14 Air Pollutants for Coal- and Oil-Fired Electric Utility Steam Generating Units,” known as  
15 the Utility Mercury Reductions rule. This proposal would permanently cap and reduce  
16 mercury emissions from coal-fired power plants. New units will be subject to either a  
17 National Emission Standards for Hazardous Air Pollutants (“NESHAP”) or New Source  
18 Performance Standards (“NSPS”) for mercury. The proposed rule establishes very  
19 stringent performance standards for mercury emission from new sources and is  
20 subcategorized by coal type. For example, the proposed rule would require bituminous  
21 coal-fired units to meet a limit over three times lower than what is currently proposed for  
22 IGCC units. TC2 will be designed and constructed to meet these stringent proposed  
23 mercury limitations.

24 **Q. What will be the impact of TC2 on air quality levels?**

1 A. The TC2 Prevention of Significant Deterioration (“PSD”) Construction Permit  
2 Application and Title V Operating Permit Application are based on no significant net  
3 increase in emissions of NO<sub>x</sub> and SO<sub>2</sub> at the Trimble Station. This is defined in long-  
4 standing Federal and State PSD regulations as less than 40 tons per year. In other words  
5 even though the Trimble Station generating capacity will be increased by 750 MW, the  
6 increase in emission levels for these pollutants is considered insignificant, due to TC2’s  
7 low emissions and accompanying decreases at Trimble County Unit 1.

8 **Q. Are there environmental permits which will be required before construction of**  
9 **TC2?**

10 A. Yes. The Companies will be required to obtain new or amended permits as described in  
11 Exhibit SLD-3. For example, on December 1, 2004, the Companies filed a PSD permit  
12 application and an application for a permit to construct and operate an air contaminant  
13 source (Title V) with the Kentucky Division for Air Quality (“KYDAQ”) for TC2. The  
14 review process for a coal-fired generating unit is rigorous, involving the KYDAQ, the  
15 EPA, the National Park Service, environmental agencies in neighboring states, and the  
16 public. The permit application documents the Companies’ plan to reduce emissions of  
17 NO<sub>x</sub> and SO<sub>2</sub> at the existing Unit 1 at the Trimble Station through enforceable permit  
18 limitations so that there will be no significant net emissions increase of those pollutants.  
19 The application also includes determinations of the Best Available Control Technology  
20 (“BACT”) for four other criteria pollutants (carbon monoxide, ozone (volatile organic  
21 compounds), particulate matter and lead) and MACT (“Maximum Available Control  
22 Technology”) for hazardous air pollutants such as mercury. Detailed air quality impact  
23 analyses were performed for the new boiler and existing materials handling equipment  
24 demonstrating that all air quality standards will be met. An assessment of the impact on

1 Air Quality Related Values at Mammoth Cave National Park and other required  
2 information and assessments have been submitted for various Agency review.

3 The Companies will also comply with the KRS 224.10-280 requirement to  
4 complete a cumulative environmental assessment before construction of the facility for  
5 generating electricity. This cumulative environmental assessment will contain a  
6 description of project impacts to environmental resources with appropriate analytical  
7 support.

8 Storm water discharges associated with construction activities on the site are  
9 controlled through best management practices and plans for erosion and sediment control  
10 as approved by the Kentucky Division of Water ("KYDOW") under a Kentucky Pollutant  
11 Discharge Elimination System ("KPDES") General Permit for Storm Water Discharges  
12 Associated with Construction Activity. This permit will be obtained just prior to  
13 construction activities.

14 The current KPDES Permit KY0041971 for the entire Trimble Station site was  
15 issued by the KYDOW on April 23, 2002 with an expiration date of September 30, 2007.  
16 Flow revisions and the additional non-contact cooling water outfall that will result from  
17 the operation of the new generating unit in 2010 will be addressed during the application  
18 process for a permit renewal in 2007. In addition, the Trimble County site will remain a  
19 process wastewater "zero discharge" facility by recycling all contaminated process flows  
20 through the existing ash pond basin.

21 The Trimble Station already meets the EPA Clean Water Act's new 316(b) Phase  
22 II regulations for withdrawing cooling water. The current intake structure was designed  
23 for additional pump capacity and will continue to meet the 316(b) regulations upon the  
24 addition of TC2.

1           The Companies will also revise the existing Spill Prevention, Control and  
2 Countermeasure Oil Plan and the Groundwater Protection Plan for the facility as needed  
3 during the construction phase for implementation during unit start-up and operation.

4 **Q. Will other environmental permits be required before TC2 becomes operational?**

5 A. Exhibit SLD-3, Potential Environmental Requirements – Trimble County Project,  
6 provides a summary of the major environmental permitting requirements for development  
7 of TC2. The purpose of this Exhibit is to provide a review of the regulatory requirements  
8 governing construction and operation of a new coal-fired unit in Kentucky and at an  
9 existing industrial location.

10 **Q. What discussions have been held with environmental agencies regarding this  
11 project?**

12 A. In the process of developing the current application to construct TC2, the Companies  
13 have held numerous discussions and/or received comments from the KYDAQ, KYDOW,  
14 the National Park Service, and U.S. EPA pertaining to air permitting requirements,  
15 procedures and timing issues.

16 **Q. What is the expected timeline for completion of the air permitting process?**

17 A. Obtaining environmental permits involves a lengthy process, and the Companies believe  
18 that they need to coordinate that process with a ruling on the CCN being sought in this  
19 proceeding. Once the KYDAQ issues a permit to begin construction, actual construction  
20 must begin within 18 months. Similarly, the Companies will have 12 months to begin  
21 construction on TC2 once a CCN is granted by this Commission. Thus, the Companies  
22 are following parallel paths so that construction can begin within the time frames allowed  
23 by both the CCN and the pre-construction air permit. It is difficult to predict the exact  
24 timeline of the permitting process due to the possibility of additional information being

1 requested by reviewing agencies, the opportunity for public comment, and the  
2 requirement that the KYDAQ respond to comments. However, the Companies anticipate  
3 that the process should be complete, with an air permit issued, approximately 12 months  
4 after submittal of the permit application to KYDAQ.

5 **Q. Are the Companies requesting the Commission to issue a Site Compatibility**  
6 **Certificate for TC2?**

7 A. Yes. KRS Chapter 278 requires that any utility proposing to construct an electric  
8 generating facility file a Site Assessment Report with the Commission. In compliance  
9 with KRS 278.216 and KRS 278.708, a Site Assessment Report is attached as Exhibit  
10 SLD-4. The Site Assessment Report demonstrates that the Companies' plans for TC2  
11 satisfy the requirements for the Site Compatibility Certificate. Specifically, the addition  
12 of a second coal-fired generating unit to the site will not cause a negative impact to local  
13 property values, unduly increase traffic or noise, nor change the visual impacts of the  
14 facility from current conditions.


15 **Q. Does this conclude your testimony?**

16 A. Yes it does.

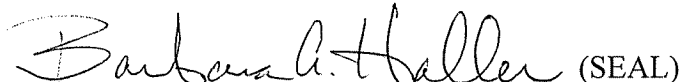
VERIFICATION

COMMONWEALTH OF KENTUCKY )  
 ) SS:  
COUNTY OF JEFFERSON )

The undersigned, **Sharon L. Dodson**, being duly sworn, deposes and says she is Director of Environmental Affairs for LG&E Energy Services Inc., and that she has personal knowledge of the matters set forth in the foregoing testimony, and the answers contained therein are true and correct to the best of her information, knowledge and belief.

  
Sharon L. Dodson

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 3 day of December 2004.

 (SEAL)  
Notary Public

My Commission Expires:

MARCH 18, 2008

**Barbara A. Haller**  
**Notary Public**  
**State at Large**  
**Kentucky**  
**My Commission Expires March 18, 2008**



## Appendix A

### **Sharon L. Dodson**

Director – Environmental Affairs  
LG&E Energy Service Inc.  
220 West Main Street  
P.O. Box 32010  
Louisville, Kentucky 40202  
(502) 627-2940

### **Education**

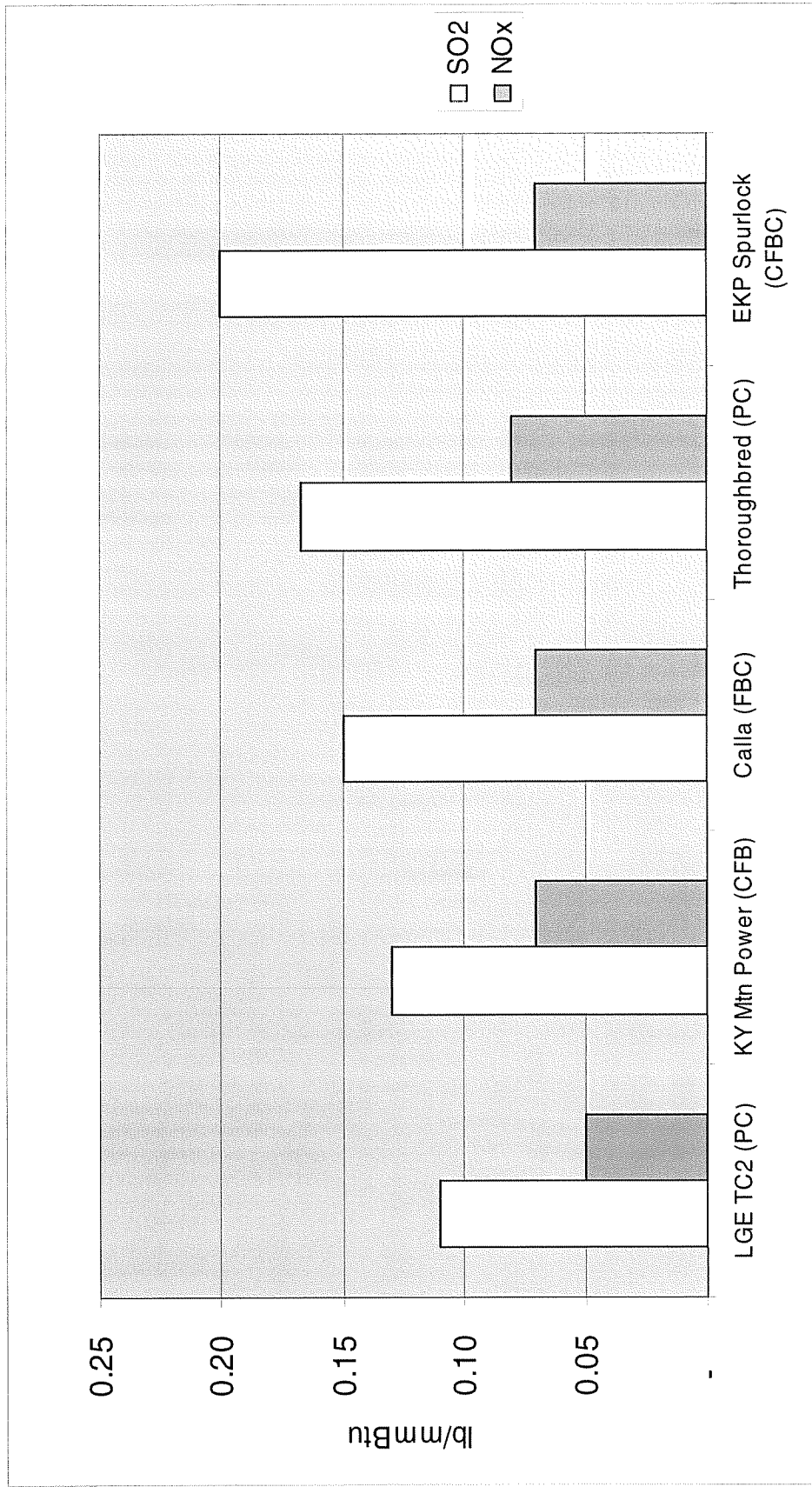
- The School of Conservation, Georgia, The Professional Forestry and Wildlife Conservation Program, Diploma – 1998
- Saint Francis College, Pennsylvania, Business Administration (24 credits) – 1986
- Grove City College, Pennsylvania, B.S. in Chemical Engineering – 1984

### **Previous Positions**

Edison International, Rosemead, California  
1999-2003 – Manager, Environmental, Health and Safety  
Midwest Generation, LLC, Homer City Generating Station  
Homer City, Pennsylvania

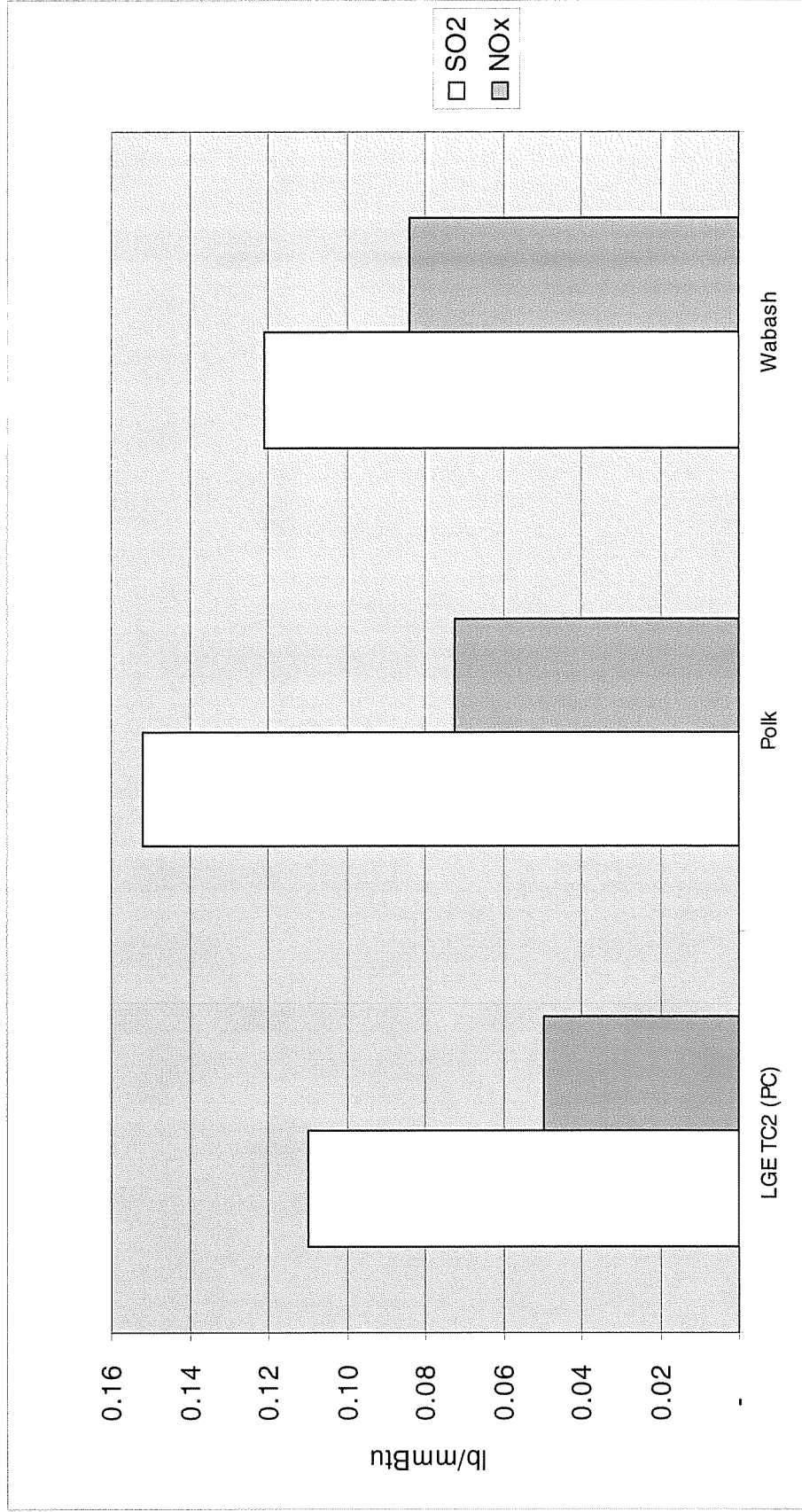
GPU Generation Inc., Morristown, New Jersey  
1995-1999 – Environmental Engineer Sr. 1, Environmental Affairs  
Johnstown, Pennsylvania  
1994-1995 – Team Leader, Conemaugh Generating Station Water Team  
New Florence, Pennsylvania  
1993-1994 – Station Engineer Sr.1, Chemical, Conemaugh Generating Station  
New Florence, Pennsylvania  
1989-1993 – Station Engineer III, Conemaugh Generating Station  
New Florence, Pennsylvania  
1986-1989 – Station Engineer II, Conemaugh Generating Station  
New Florence, Pennsylvania  
1984-1986 – Production Engineer I  
Johnstown, Pennsylvania

**Exhibit SLD-1**  
**Emissions Comparison: Coal-Fired Generating Units in Kentucky**



Source: U.S. EPA, Technology Transfer Network, National Coal Utility Project

**Exhibit SLD-2  
Emissions Comparison: Existing IGCC Units**



**Sources:** Tampa Electric Integrated Gasification Combined Cycle Project, June 2004, US DOE  
 Wabash River Coal Gasification Repowering Project Overview, June 8-9, 2004

Trimble County Generating Station  
Environmental Permitting Requirements for Unit 2

Permit	Regulatory Agency	Regulated Activity	Authority	Status
Prevention of Significant Deterioration	KYDAQ	Construction of a major source of air pollution and air pollution control equipment. Required in attainment areas or unclassifiable areas. Trimble County is an attainment area.	401 KAR 51:017	Permit application submitted on 12/01/04
Title V Operating Permit	KYDAQ	Construction and operation of a major source of air pollution and pollution control equipment.	401 KAR 52:020	Permit application submitted on 12/01/04
Acid Rain Permit	KYDAQ	Acid rain permit is required for >25MW combustion unit.	401 KAR 52:060	Permit application to be submitted no later than 24 months prior to commencing operations
NO <sub>x</sub> Budget Permit	KYDAQ	Source of NO <sub>x</sub> emissions during the ozone season.	401 KAR 51:160	Permit application to be submitted prior to May 1, 2007
Risk Management Plan (RMP)	USEPA	Potential accidental releases of hazardous chemicals that are used or stored onsite in greater than threshold quantities.	40 CFR 68	Amendment to existing RMP to be submitted
Kentucky Pollutant Discharge Elimination System (KPDES) Permit	KYDOW	Discharge of process wastewater from an industrial point source.	401 KAR 5:055 401 KAR 5:060	Amendment to existing permit to be submitted during permit renewal in 2007
KPDES General Permit for Storm Water Discharges During Construction	KYDOW	Discharge of storm water from a point source during construction activities	401 KAR 5:055	To be submitted prior to construction activities

Agency Abbreviations:

USEPA: United States Environmental Protection Agency  
 KYDAQ: Kentucky Division for Air Quality  
 KYDOW: Kentucky Division of Water  
 KYPSC: Kentucky Public Service Commission  
 KYEPPC: Kentucky Environmental and Public Protection Cabinet

Trimble County Generating Station  
Environmental Permitting Requirements for Unit 2

Permit	Regulatory Agency	Regulated Activity	Authority	Status
Above Ground Storage Tank (AST) Permit	State Fire Marshall	All AST systems	814 KAR 10:060	To be submitted
Spill Prevention, Control and Countermeasures (SPCC) Plan	KYDOW	Requirements to prevent the discharge of oil from non-transportation-related onshore and offshore facilities into or upon the navigable waters of the U.S. or adjoining shorelines.	40 CFR 112	Existing plan will be updated as needed during construction, unit start-up & operation
Groundwater Protection Plan	KYDOW	Activities with the potential to contaminate groundwater.	401 KAR 5:037	Existing plan will be updated as needed during construction, unit start-up & operation
Certificate of Public Convenience and Necessity for Construction of Utilities	KYPSC	Required for construction of utilities. A site compatibility certificate also must be obtained prior to commencing construction of facilities for electric generation capable of generating (in the aggregate) more than 10 MW. The site compatibility certificate requires submission of a site assessment report.	KRS 278.020 KRS 278.216	Submitted on 12/06/04
Cumulative Environmental Assessment	KYEPPC	Required before construction of a facility for the generation of electricity. This assessment will contain a description of project impact to environmental resources.	KRS 278.708  KRS 224.10-280	To be submitted prior to construction activities

Agency Abbreviations:

USEPA: United States Environmental Protection Agency  
 KYDAQ: Kentucky Division for Air Quality  
 KYDOW: Kentucky Division of Water  
 KYPSC: Kentucky Public Service Commission  
 KYEPPC: Kentucky Environmental and Public Protection Cabinet