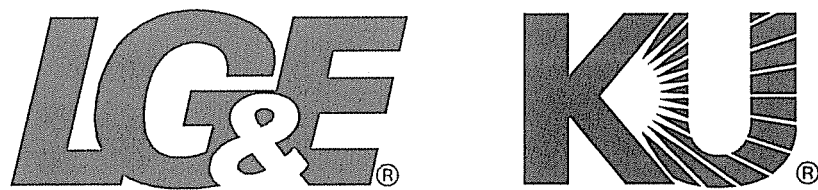


# 2011 Resource Assessment



**PPL companies**

**Generation Planning & Analysis  
September 2011**

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## List of Terms

Baghouse	Fabric filter baghouse
CATR	Clean Air Transport Rule
CCCT	Combined cycle combustion turbine
CCN	Certificates of Convenience and Necessity
CER	Capital Expenditure and Recovery
CERA	IHS CERA
CR7	Cane Run 7
CSAPR	Cross-State Air Pollution Rule
Companies	LG&E and KU
EPA	U.S. Environmental Protection Agency
NAAQS	National Ambient Air Quality Standards
O&M	Operating and maintenance
PIRA	PIRA Energy Group
PM	Particulate matter
PVRR	Present value of revenue requirements
RFP	Request for proposals
SAM	Sulfuric acid mist
SCCT	Simple-cycle combustion turbine
TC2	Trimble County 2
WFGD	Wet Flue Gas Desulfurization
2011 Compliance Plan	2011 Air Compliance Plan
2011 IRP	2011 Integrated Resource Plan
2012 Forecast	2012 load forecast

## 1 Executive Summary

The EPA is in the process of implementing an unprecedented number of air regulations over the next several years. These regulations will require the Companies to make significant investments in pollution control equipment, retire a number of its coal units, and invest in new generation capacity in order to reliably meet its customers' energy needs in the coming decades.

In March 2011, the EPA issued a proposed rule aimed at reducing hazardous air pollutants (such as mercury, other metals, acid gases, and organic air toxics, including dioxins) from new and existing coal- and oil-fired electric utility steam generating units ("HAPs Rule"). In August 2011, the EPA issued its final CSAPR that provides limited allowances for NO<sub>x</sub> and SO<sub>2</sub> emissions starting in 2012. In addition, the EPA's NAAQS will further restrict NO<sub>x</sub> and SO<sub>2</sub> emissions beginning in 2016 and 2017.

To comply with these regulations, the Companies must at all coal units (except Trimble County 2) either install additional emission controls or retire and replace the capacity. The Companies evaluated these decisions at each of its coal units and submitted its least-cost 2011 Compliance Plan to the Kentucky Public Service Commission in June 2011.<sup>1</sup> The least-cost compliance plan includes installing additional environmental controls on the Brown, Ghent, Mill Creek, and Trimble County 1 coal units. However, new controls were not least-cost for the Cane Run, Green River, and Tyrone coal units. The least-cost alternative for the six units at these plants is to retire and replace the capacity and energy.

In the 2011 Compliance Plan, the analyses of controls for the Cane Run and Green River coal units were based on preliminary cost estimates from Black & Veatch.<sup>2</sup> For the purposes of the analysis, since Tyrone 3 and Green River 3 are similar in size and vintage, the cost of controls for Tyrone 3 and Green River 3 was assumed to be equal. Given the operating characteristics, age, and size of the units as well as the controls needed to comply with pending environmental regulations, the cost of controls at Green River and Tyrone could not be justified. Since a significant reduction in the cost of controls for Cane Run could impact the Companies' ultimate decision regarding the Cane Run units, the Companies developed a revised estimate for the cost of controls at Cane Run based on the recently constructed common WFGD system which serves three coal-fired units at Brown and the more detailed 2011 Black & Veatch studies for Ghent, Mill Creek, and Brown. Based on these updated estimates, the Companies' analysis continues to show that retiring the Cane Run coal units and replacing them with new gas-fired capacity is the least-cost way to reliably meet its customers' future energy needs.

In April 2011, the Companies filed the 2011 IRP with the Kentucky Public Service Commission.<sup>3</sup> The 2011 IRP provides a detailed summary of the Companies' plan to meet future energy requirements at the lowest possible cost consistent with reliable supply. Like the 2011 Compliance Plan, the 2011 IRP found that the Cane Run, Green River, and Tyrone coal units should be retired at the end of 2015. The Companies' capacity needs through 2018, as identified in the 2011 IRP, are summarized in Table 1. With the retirements of the Cane Run, Green River, and Tyrone coal units, the Companies have a capacity shortfall in 2016 of 877 MWs.

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<sup>1</sup> See Case Nos. 2011-00161 and 2011-00162.

<sup>2</sup> For the units for which controls are recommended, the cost estimates for controls were based on more refined engineering estimates from Black & Veatch included in the Compliance Plan.

<sup>3</sup> See Case No. 2011-00140.

**Table 1 – LG&E/KU Resource Summary (MW)**

	2012	2013	2014	2015	2016	2017	2018
Forecasted Peak Load	7,210	7,356	7,477	7,603	7,654	7,760	7,897
Peak Reductions <sup>4</sup>	390	442	501	544	585	626	664
Total Demand	6,821	6,915	6,976	7,059	7,070	7,135	7,234
Existing Resources	8,002	8,006	8,001	7,996	7,969	7,970	7,970
Retirements					(797)	(797)	(797)
Firm Purchases (OVEC)	154	152	152	152	152	152	152
Total Supply	8,156	8,158	8,153	8,148	7,324	7,325	7,325
16% Reserve Requirements	1,091	1,106	1,116	1,129	1,131	1,142	1,157
Difference from Target	243	137	61	(40)	(877)	(952)	(1066)
Reserve Margin	19.6%	18.0%	16.9%	15.4%	3.6%	2.7%	1.3%

The least-cost expansion plan developed as part of the 2011 IRP selected a 907 MW 3X1 CCCT to meet future capacity and energy needs beginning in 2016. The IRP is a complete resource assessment and acquisition plan that considers all of the Companies' supply-side technologies and demand-side resource alternatives, but it does not consider resources that could be supplied by the marketplace. For this reason, the Companies issued an RFP in December 2010 for electric energy and capacity. Responses to the RFP included power purchase agreements and asset sale offers from gas, coal, nuclear, wind, biomass, and solar technologies.

The Companies' analysis of the RFP responses was completed in two phases. The Phase I Screening consisted of an initial screening of the responses through the use of a scoring system which evaluated attributes including cost, term, and site viability. The goal of the Phase I Screening process was to select the top candidates from each technology for further evaluation. Phase II of the analysis evaluated the top candidates (and various combinations of the top candidates) from the Phase I Screening in more detail. Phase II was completed in two parts and also included an analysis of the Companies' self-build alternatives developed independently from the analytical team evaluating the RFP responses.

Based on the RFP and self-build analysis, the least-cost alternative for meeting the future capacity and energy needs of the Companies is to build a 640 MW 2X1 CCCT at the Cane Run site ("Cane Run 7" or "CR7") and purchase the existing Bluegrass SCCT facility in La Grange, Kentucky from LS Power. To effectuate this plan, the Companies will need to make appropriate regulatory filings for these generating resources and any related transmission facilities. The resources are needed to replace capacity that will be retired prior to the end of 2015 as a result of the EPA regulations and to meet the anticipated load growth in the Companies' service territories. Specifically, the resources include:

- i. the construction of the Cane Run 640 MW 2X1 natural gas CCCT project (to be permitted as CR7) and any related electric and gas transmission facilities needed to deliver CR7 energy to load prior to January 1, 2016.

<sup>4</sup> Peak reductions include the impacts of interruptible loads and demand-side management programs.

- ii. the purchase from LS Power of the existing SCCTs at its Bluegrass facility in La Grange, Kentucky and any related transmission facilities needed to deliver the associated energy to load. The Bluegrass CTs would be available during 2012.

The timeline for constructing the CR7 unit is constrained by the need to have the unit operational prior to January 1, 2016, when the retirement of approximately 800 MW of coal-fired capacity at Cane Run, Tyrone, and Green River is planned due to impending EPA regulations. The January 2016 retirements assume a one year extension is granted for these units to meet the HAPs standards.

The purchase of the existing Bluegrass facility from LS Power is needed to meet the same January 1, 2016 need. The existing facilities at Bluegrass are already in operation. An agreement with LS Power will enable purchase in 2012. These assets will be available during the construction of the CR7 project to mitigate development risks as well as operational risks associated with the retiring coal units as their maintenance expenses are minimized ahead of retirement in the interest of prudently managing costs.

## 2 Summary of Environmental Regulations

The EPA's NAAQS, CSAPR, and HAPs Rule are precipitating the need for additional emissions reductions over the next several years. Each of these regulations is discussed in more detail in the following sections.

### 2.1 National Ambient Air Quality Standard

The EPA's NAAQS places further restrictions on SO<sub>2</sub> and NO<sub>x</sub> emissions beginning in 2016 and 2017. The SO<sub>2</sub> and NO<sub>2</sub> NAAQS are final. Compliance with NAAQS emission limits are established on a site-by-site basis by the permitting authority. Table 2 summarizes the Companies' current (2010) SO<sub>2</sub> and NO<sub>x</sub> emissions at the Cane Run, Green River, and Tyrone units, as well as the expected NAAQS emission limits for meeting the revised NAAQS emission requirements at those stations.

Table 2 – NAAQS SO<sub>2</sub> Emission Limits

Unit	SO <sub>2</sub> Rate (lb/mmBtu)		NO <sub>x</sub> Rate (lb/mmBtu)	
	Current Emissions (2010)	Expected NAAQS Limits	Current Emissions (2010)	Expected NAAQS Limits
Cane Run	0.55	0.06	0.34	0.07
Green River	4.08	0.15	0.40	0.56
Tyrone <sup>5</sup>	1.33	0.15	0.48	0.56

To comply with the expected NO<sub>2</sub> NAAQS, new NO<sub>x</sub> emission controls would need to be installed at the Cane Run station prior to 2016.<sup>6</sup> New SO<sub>2</sub> emission controls would need to be installed at the Cane Run, Green River, and Tyrone stations prior to 2017.<sup>7</sup> The Cane Run units have first generation FGDs built in the 1970s. In addition, the Cane Run units are not equipped with SCRs. Cane Run would require extensive improvements to the existing FGDs and the installation of new SCRs to control NO<sub>x</sub> to comply with expected emission limits from the revised NAAQS regulations.

### 2.2 Cross-State Air Pollution Rule

In July 2010, the EPA issued a proposed CATR which provides limited allowances for NO<sub>x</sub> and SO<sub>2</sub> emissions starting in January 2012. The final version of this rule, called the CSAPR, was issued in August 2011. Compliance with the CSAPR is measured on a system-wide basis. Table 3 summarizes the CATR and CSAPR allowance allocations as well as the Companies' current (2010) SO<sub>2</sub> and NO<sub>x</sub> emissions.

<sup>5</sup> A detailed NAAQS analysis was not performed for the Tyrone station. For the purposes of this analysis, the expected NAAQS limits for Tyrone and Green River were assumed to be equal.

<sup>6</sup> As of this time, Jefferson, Anderson and Muhlenburg Counties have been declared as "unclassified" by the State of Kentucky for the revised NO<sub>2</sub> NAAQS. The EPA could require the state to perform modeling to verify compliance and classification. It is expected that modeling could demonstrate that Jefferson County could be non-attainment for the revised NO<sub>2</sub> NAAQS. Additionally, Jefferson County has measured several exceedances of the existing ozone NAAQS during 2010 and 2011. Should there be further exceedances measured in 2012, Jefferson County could become non-attainment for the existing ozone NAAQS, triggering actions to be implemented for ozone attainment (historically, further NO<sub>x</sub> reductions from stationary sources have been implemented).

<sup>7</sup> As of July 2011, Kentucky declared Jefferson County "non-attainment" for SO<sub>2</sub> triggering agency actions to remedy the violations. While Anderson and Muhlenberg counties, where the Tyrone and Green River stations, respectively, are located, were declared "unclassified" (there are no monitors in these counties), the EPA may require the State to perform "modeling" to verify compliance and the classification.

**Table 3 – CATR and CSAPR Emission Allowances**

	Current Emissions	CATR Allowances		CSAPR Allowances	
	2010	2012	2014	2012	2014
SO <sub>2</sub> Emissions (Tons)	92,241	66,866	43,215	78,697	36,339
NO <sub>x</sub> Emissions (Tons)	31,826	23,718	23,718	29,500	26,831

Note: Values shown reflect Companies' share (75%) of Trimble County allowances.

CSAPR made significant changes in emission allowance allocations compared to the former CATR allocations. CSAPR NO<sub>x</sub> allowance allocations are higher than the proposed CATR allocations but still below the Companies 2010 emissions. CSAPR SO<sub>2</sub> allowance allocations are higher than CATR in 2012 and 2013 but lower in 2014 and beyond. To comply with the CSAPR, the Companies' SO<sub>2</sub> emissions will have to decrease by more than 60% by 2014 and NO<sub>x</sub> emissions will have to decrease by approximately 15%.

### 2.3 HAPs Rule

In March 2011, the EPA issued a proposed HAPs Rule aimed at reducing hazardous air pollutants (such as mercury, other metals, acid gases, and organic air toxics, including dioxins) from new and existing coal- and oil-fired electric utility steam generating units. Under a consent decree between the EPA and various states and environmental groups, the rule is to be issued as a final rule in November 2011 with compliance required around January 2016, assuming a 1-year compliance extension is granted by the permitting authority. The HAPs Rule limits mercury and PM (the surrogate for non-mercury metals), the latter including SAM (as a condensable particulate). The current mercury and particulate matter emissions for the Cane Run, Green River, and Tyrone coal units are summarized in Table 4 along with the proposed emission limits from the HAPs rule.

**Table 4 – Current HAPs Emissions**

Unit	Summer Capacity (MW)	Mercury Emissions (lb/TBtu)	PM <sub>Total</sub> Emissions (lb/mmBtu)
Cane Run 4	155	3.6	0.05
Cane Run 5	168	2.9	0.06
Cane Run 6	240	3.8	0.06
Green River 3	68	6.3	0.13*
Green River 4	95	5.4	0.12*
Tyrone 3	71	6.3 <sup>8</sup>	0.16*
<b>HAPs Rule Limits</b>		<b>1.2</b>	<b>0.03</b>

\*Condensable PM for the Green River and Tyrone units is based on estimated SO<sub>3</sub> concentration.

Based on the Black & Veatch engineering studies for the 2011 Compliance Plan, a baghouse is the most effective control technology for HAPs emissions. A baghouse is expected to reduce mercury emissions to 0.6 pounds per TBtu and particulate matter emissions to 0.0258 pounds per mmBtu. A baghouse will

<sup>8</sup> For the purposes of this analysis, since Tyrone 3 and Green River 3 are similar in size and vintage, mercury emissions for Tyrone 3 was assumed to equal that of Green River 3.



be required on each of the Cane Run, Green River, and Tyrone units to continue operation of these units under the HAPs rule.

### 3 Cane Run Cost of Controls

In the 2011 Compliance Plan, new environmental controls were not recommended for the Cane Run, Green River, and Tyrone coal units. Table 5 contains the results of the Compliance Plan analysis for these units as well as the total capital cost of controls needed to comply with EPA regulations<sup>9</sup>.

**Table 5 – NPVRR Differences and Capital Costs for Controls**

Unit(s)	NPVRR (\$Millions)			Capital (\$Millions)
	Install Controls (A)	Retire/Replace Capacity (B)	Difference (B)-(A)	Total Capital Cost of Controls – 2011 Compliance Plan
Tyrone 3	33,125	33,124	(1)	45
Green River 3	33,124	33,055	(69)	45
Green River 4	32,917	32,823	(94)	66
Cane Run 4	33,055	32,967	(88)	295
Cane Run 5	32,975	32,917	(58)	399
Cane Run 6	32,967	32,975	8	310

The analyses of controls for Cane Run and Green River were based on an initial round of cost estimates from Black & Veatch.<sup>10</sup> For the purposes of this analysis, since Tyrone 3 and Green River 3 are similar in size and vintage, the cost of controls for Tyrone 3 and Green River 3 was assumed to be equal.<sup>11</sup> Given the operating characteristics, age, and size of the units as well as the controls needed to comply with current environmental regulations, the cost of controls at Green River and Tyrone cannot be justified.

Since a significant reduction in the cost of controls for Cane Run could impact the Companies' ultimate decision regarding Cane Run, the Companies developed a revised estimate for the cost of controls at Cane Run based on the recently constructed common WFGD system which serves three coal-fired units at Brown and the more detailed 2011 Black & Veatch studies for Ghent, Mill Creek, and Brown. The revised estimate for controls at Cane Run included a common WFGD system and common limestone processing facilities. In addition, the costs of baghouses were escalated by 37%.<sup>12</sup> The original and revised estimates for the cost of controls at Cane Run are summarized in Table 6.

<sup>9</sup> Updated results for the Green River and Tyrone coal units were provided in Case No. 2011-00161 in response to the supplemental requests for information of Rick Clewett, Raymond Barry, Sierra Club and the Natural Resource Defense Council dated August 18, 2011, Question No. 8.

<sup>10</sup> For the units for which controls are recommended, the cost estimates for controls were based on additional engineering estimates from Black & Veatch included in the 2011 Compliance Plan.

<sup>11</sup> The Compliance Plan did not contemplate the cost of transmission upgrades associated with retiring units. Initial rough estimates for these costs were \$35 million for Green River, \$42 million for Cane Run, and \$0 for Tyrone. The Companies' recommendation to retire these units is not impacted by these costs.

<sup>12</sup> Compared to the initial round of cost estimates, the costs of baghouses in the more detailed estimates from Black & Veatch (in the Compliance filing for Ghent, Mill Creek, and Brown) were 37% higher on average.

**Table 6 – Total Capital Cost of Cane Run Controls (\$M)**

<b>Unit</b>	<b>Original Estimate: 2011 Compliance Plan</b>	<b>Revised Estimate<sup>13</sup></b>
Cane Run 4	295	133
Cane Run 5	310	144
Cane Run 6	399	180
Common	<u>N/A</u>	<u>532</u>
Total	1,004	990

Compared to the original estimate, the cost of controls in the revised estimate is \$14 million lower. This reduction in capital cost equates to approximately \$14 million reduction in PVRR. With the original cost estimates, the total PVRR for all of the Cane Run units is \$138 million (in favor of retirement – see Table 5). Clearly, the PVRR reduction associated with the lower capital cost does not offset this total.<sup>14</sup>

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<sup>13</sup> Values do not sum precisely to the total due to rounding.

<sup>14</sup> The common WFGD and limestone processing facilities in the revised estimate preclude the retirement of individual units at Cane Run.

## 4 Future Resource Needs

In June 2011, the Companies submitted the 2011 Compliance Plan, its least-cost plan for complying with proposed and existing environmental regulations, to the Kentucky Public Service Commission.<sup>15</sup> The 2011 Compliance Plan demonstrated the need for environmental controls and then – for the units for which controls are needed – compared the difference in PVRR between (a) installing controls and (b) retiring and replacing capacity. New controls were not recommended for the Cane Run, Green River, and Tyrone coal units because the PVRR analysis demonstrated that retiring and replacing the capacity and energy from these units was least-cost.

In April 2011, the Companies filed the 2011 IRP with the Kentucky Public Service Commission.<sup>16</sup> The 2011 IRP provides a detailed analysis of the Companies’ plan to meet future energy requirements at the lowest possible cost consistent with reliable supply. Like the 2011 Compliance Plan, the 2011 IRP found that the Cane Run, Green River, and Tyrone coal units should be retired not later than the end of 2015 to comply with the EPA regulations in a least-cost manner. The Companies’ capacity needs through 2016, as identified in the 2011 IRP, are summarized in Table 7. With the retirements of the Cane Run, Green River, and Tyrone coal units, the Companies have a capacity shortfall in 2016 of 877 MWs. The retirements will result in a 2016 reserve margin of approximately 4% versus a target reserve margin of 16%.

**Table 7 – LG&E/KU Resource Summary – 2011 IRP/ECR Filing (MW)**

	2012	2013	2014	2015	2016	2017	2018
Forecasted Peak Load	7,210	7,356	7,477	7,603	7,654	7,760	7,897
Peak Reductions <sup>17</sup>	390	442	501	544	585	626	664
Total Demand	6,821	6,915	6,976	7,059	7,070	7,135	7,234
Existing Resources	8,002	8,006	8,001	7,996	7,969	7,970	7,970
Retirements					(797)	(797)	(797)
Firm Purchases (OVEC)	154	152	152	152	152	152	152
Total Supply	8,156	8,158	8,153	8,148	7,324	7,325	7,325
16% Reserve Requirements	1,091	1,106	1,116	1,129	1,131	1,142	1,157
Difference from Target	243	137	61	(40)	(877)	(952)	(1066)
Reserve Margin	19.6%	18.0%	16.9%	15.4%	3.6%	2.7%	1.3%

In June 2011, the Companies developed a new load forecast as part of its annual planning process (“2012 Forecast”), which is still in progress. Even though the 2016 need for capacity is primarily driven by the need to retire existing coal capacity (and not load growth), the Companies evaluated the 2016 capacity need based on the new load forecast. Table 8 compares the new load forecast to the load forecast used in the 2011 IRP and ECR filings. Overall, the Companies’ need for capacity beginning in 2016 is unchanged. In the 2011 IRP, expansion plans for the high and low load scenarios both included

<sup>15</sup> See Case Nos. 2011-00161 and 2011-00162.

<sup>16</sup> See Case No. 2011-00140.

<sup>17</sup> Peak reductions include the impacts of interruptible loads and demand-side management programs.

CCCT capacity in 2016. This demonstrates that the sensitivity of the 2016 need for capacity to load growth is fairly low.

**Table 8 – Summer Peak Demand Forecasts – After Reductions for DSM and Curtailable Load**

	2012	2013	2014	2015	2016	2017	2018
2011 IRP/ECR/RFP	6,821	6,915	6,976	7,059	7,070	7,135	7,234
2012 Forecast	6,930	6,968	7,004	7,039	7,121	7,164	7,223
Difference	109	53	28	(20)	51	29	(11)

The retirement of the Cane Run and Green River coal units also have an impact on the Companies' energy needs. Table 9 summarizes the energy produced from these stations over the last five years.

**Table 9 – Cane Run and Green River Energy Production**

Generation (GWh)	2006	2007	2008	2009	2010
Cane Run	3,575	3,537	3,401	3,235	3,263
Green River	640	997	962	625	889
Total	4,215	4,533	4,364	3,861	4,153
Capacity Factor	2006	2007	2008	2009	2010
Cane Run	72%	72%	69%	66%	66%
Green River	45%	70%	63%	41%	60%

## 5 Analysis of Responses to Request for Proposal

The least-cost expansion plan developed as part of the 2011 IRP selected a 3X1 907 MW CCCT to meet the Companies' capacity shortfall beginning in 2016. The IRP is a complete resource assessment and acquisition plan that considers all of the Companies' supply-side and demand-side resource alternatives, but it does not consider alternatives that may be available from others. For this reason, the Companies issued an RFP in December 2010 for electric energy and capacity. Responses to the RFP included power purchase agreements and asset sale offers for gas, coal, nuclear, wind, biomass, and solar technologies.

The Companies' analysis of the RFP responses was completed in two phases. The Phase I Screening consisted of an initial screening of the responses through the use of a scoring system which evaluates attributes including cost, term, and site viability. The goal of the Phase I Screening process was to select the top candidates from each technology for further evaluation. Phase II of the analysis evaluated the top candidates (and various combinations of the top candidates) from the Phase I Screening in more detail. Phase II was completed in two parts and included the Companies' self-build alternatives.

### 5.1 Request for Proposals

On December 1, 2010, the Companies issued an RFP for capacity and energy to more than 116 potential energy suppliers. A copy of the RFP and its recipients is included as an attachment to this report. The Companies requested proposals from parties with resources that would qualify as a Designated Network Resource for transmission purposes. The RFP did not limit responses to a particular set of fuels or generating technologies. The specified capacity range for the responses was broad: the RFP encouraged offers for firm summer and winter capacity ranging between 1 MW and 700 MW with the caveat that the Companies may procure more or less than 700 MW and may aggregate capacity and energy from multiple parties to meet its needs. The RFP cited the Companies' preference for longer-term proposals but did not exclude shorter-term proposals.

In total, 18 parties responded to the RFP with 50 offers. Table 10 summarizes the responses to the RFP. Copies of the responses to the RFP are included as an attachment to this report.

**Table 10 – RFP Responses**

Response Number	Technology/ Offer Type	Respondent	Location
1A			
1B			
2A			
2B			
3			
4			
5A			
5B			
6A			
6B			
6C			
6D			
6E			

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Response Number	Technology/ Offer Type	Respondent	Location
6F			
7A			
7B			
7C			
7D			
8A			
8B			
8C			
9			
10			
11			
12			
13A			
13B			
13C			
13D			
13E			
13F			
13G			
13H			
13I			
13J			
14A			
14B			
15			
16A			
16B			
16C			
17			
18			
19A			
19B			
20A			
20B			
21A			
21B			
22			

**5.2 Phase I Screening Analysis**

In the Phase I screening analysis, RFP responses were grouped by source technology. The groupings were:

- Natural Gas CCCT

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- SCCT
- Nuclear
- Coal
- Wind
- Solar
- Landfill Gas
- Biomass

The responses were screened using a scoring system which evaluated attributes including cost, term, and site viability. One offer from [REDACTED] for [REDACTED] was overly vague and not considered in the Phase 1 Screening analysis. The goal of the Phase I Screening process was to select the top candidates across multiple technologies for further evaluation. While some technologies may score poorly on specific measures, the top candidate(s) from each technology were still retained for further analysis, since selecting combinations of proposals across technologies was possible.

The scoring system was developed as follows. First, responses with unacceptable terms or sites were eliminated. Two responses were eliminated because the term did not extend beyond 2015; no responses were eliminated because the site was considered unacceptable. Second, the responses were ranked based on two cost measures: (a) levelized revenue requirements per MWh and (b) levelized revenue requirements per firm capacity-year. 15% of wind capacity and 40% of solar capacity was assumed to be firm capacity under summer peak conditions. The responses considered for further review were the responses that ranked most favorably in both cost categories. The responses selected in the Phase I Screening analysis are summarized in Table 11. A complete summary of the Phase I Screening results are contained in Appendix A – Phase I Screening Results.



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**Table 11 – Phase I Screening Results**

Response Number	Technology	Respondent	Rank
13I			1
13H			2
13J			3
13G			4
4			5
12			6
9			7
13E			1
13D			2
13F			3
13B			4
13A			5
13C			6
5A			1
5B			2
14B			3
22			1
16A			1
16B			2
21A			1
21B			2
6A			1
14A			2
10			3

For each technology, the cutoff point for the number of responses considered for further evaluation was determined based on the levelized cost measures. For example, if the top five responses for a given technology were separated by a relatively large gap in the levelized cost measures, only five responses were considered for further evaluation. If no such gap existed, all responses for a given technology were considered for further evaluation. Because so many offers for CCCT capacity and energy were received, the offers were evaluated across multiple load factors to ensure that the same offers consistently ranked highest.

**5.3 Phase II Analysis**

The Phase II analysis evaluated the top responses from the Phase I Screening analysis in more detail. Strategist resource planning software was used to assess each option’s impact on future capacity needs and the PROSYM production costing model was used to evaluate the production cost revenue requirements associated with each option. The CER module of Strategist calculated revenue requirements associated with capital expenditures for RFP resources (where applicable – for asset sales and transmission capital) as well as future capacity needs. These capital revenue requirements were combined with the production cost revenue requirements from PROSYM as well as revenue requirements for any fixed O&M, gas transportation costs, and firm electric transmission costs to produce a total system revenue requirement for the study period.

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PROSYM is a chronological production costing model that is designed for performing planning and operational studies on an hourly basis. PROSYM simulates the Power Supply System Agreement's joint dispatch provisions and is able to simulate the utilization of the generation resources and purchased power alternatives considered in this analysis. Together, Strategist and PROSYM have formed the foundation of prior analyses involving certificates of public convenience and necessity for new generating plants, environmental cost recovery for pollution control equipment, and the fuel adjustment clause.

In the Phase II analysis, the evaluation of each option considered the following cost items:

- Capital and fixed O&M costs for RFP resources.
- Capital and fixed O&M costs for future capacity needs.
- Capital costs for necessary electric transmission upgrades.
- Where applicable, gas transportation costs and the cost of firm electric transmission capacity.
- Production costs (fuel, variable O&M including consumables, and emissions) for existing, RFP, and future resources.

The Phase II analysis was completed in two parts: 'preliminary' Phase II analysis and 'final' Phase II analysis. After the preliminary Phase II analysis, the Companies met with the leading respondents and asked them to update their proposals to their "best and final" offer. In the final Phase II analysis, the updated proposals were evaluated along with additional self-build alternatives developed independently from the analytical team performing the Phase II analysis. The following sections summarize the preliminary and final Phase II analyses. Key assumptions for the Phase II analysis are summarized in Appendix B – Key Assumptions.

### 5.3.1 Preliminary Phase II Analysis

The preliminary Phase II analysis evaluated each option from the Phase I Screening analysis in more detail. Based on the 2011 IRP, the Companies' need for capacity in 2016 is 877 MW (see Table 7). Because capacity additions of less than 600 MW do not defer the need for a 907 MW 3X1 CCCT in 2016, the Companies considered various RFP responses in combination.

Table 12 summarizes the options considered in the preliminary Phase II analysis. LS Power provided the option of purchasing or entering into a PPA for one, two, or three of its Bluegrass SCCTs. The Bluegrass SCCTs were considered in combination with other alternatives to defer the need for capacity beyond 2016. Because of concerns regarding the ability to purchase and the complexities of operating only a portion of the Bluegrass station, the Companies did not consider purchasing fewer than all three of the Bluegrass SCCTs. Furthermore, because one SCCT (in combination with other alternatives) does not defer the need for additional capacity beyond 2016, the Companies did not consider a PPA for one Bluegrass SCCT.

█ submitted two offers for █ from █. Because the offers were similarly priced, the Companies considered the option with the longer term (10 years) in the preliminary Phase II analysis. The landfill gas and biomass alternatives have similar operating characteristics, but the costs of the biomass alternatives were lower. As a result, only the biomass alternatives were considered in the preliminary Phase II analysis. Finally, since the top wind alternatives are similarly priced and only a small portion of wind capacity can be considered firm under peak conditions, only the wind alternative with the largest capacity was considered in the preliminary Phase II analysis.

**Table 12 – Options Considered in Preliminary Phase II Analysis**

Response Number(s)	Respondent	Description
13H		
13I		
13J		
4		
4		
13E		
5B		
5B		
13F		
5B		
13C		
5B		
13F		
16A		
9		
9		
13E		
12		
14B		
13F		
14B		
5B		
13E		
13E		
10		
13C		
5B		
13F		
22		
13F		

Strategist was used to develop a least-cost expansion plan for each alternative. In initial iterations of the preliminary Phase II analysis, future capacity additions through 2025 included only natural gas technologies (2X1 CCCT, 3X1 CCCT, and SCCT). Other technologies considered (but not selected) in the 2011 IRP – including supercritical coal, wind, landfill gas, and hydroelectric units – were never selected in the first fifteen years of the analysis period.

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Once the expansion plans were developed for each option, the RFP resource(s) and future capacity additions were modeled in PROSYM along with the Companies’ existing resources to compute production costs. The analysis considered each option’s impact on the Companies’ ability to serve native load only; off-system sales were not allowed. Each alternative was evaluated under two economy market purchase scenarios: (1) no economy purchases and (2) limited economy purchases. Furthermore, in addition to the base case scenario for natural gas and electricity prices, the alternatives were evaluated based on natural gas and electricity prices from CERA.

The results of the preliminary Phase II analysis are summarized in Appendix C – Preliminary Phase II Analysis Results. Production costs include fuel, variable O&M, start-up costs, and emissions costs for existing, RFP, and future resources. Capital costs include capital for RFP resources (where applicable, for asset sale offers) as well as capital for future capacity additions. Gas transportation costs include the cost of gas transportation for RFP resources and future capacity additions. Capacity costs include capacity payments for PPA alternatives. Electric transmission costs include capital for transmission upgrades and the cost of buying firm transmission capacity.<sup>18</sup>

The parties with the top responses from the preliminary Phase II analysis are summarized in Table 13. In the preliminary Phase II analysis, the [REDACTED] and [REDACTED] alternatives were considered in combination with the least-cost alternative to understand the incremental impact of these renewable options on the PVRR. In Appendix C, the [REDACTED] alternative has the third or fourth lowest PVRR, but the [REDACTED] alternative was not included in the short-list of RFP responses. The costs of all the wind alternatives are higher than the costs of the [REDACTED] biomass alternatives. Based on price and the fact that a fairly small portion of wind capacity can be considered firm under peak conditions, wind (in combination with another alternative) would not be lower-cost than biomass (in combination with another alternative).

Table 13 – Short-List of RFP Responses

Respondent	Technology	Capacity	Description
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

5.3.2 Final Phase II Analysis

After the preliminary Phase II analysis, the Companies met with each of the top respondents (see Table 13) and asked them to update their responses to “best and final” offers. The updated responses are included as an attachment to this report. The updated responses were evaluated in the final Phase II analysis along with additional self-build options. The options considered in the final Phase II analysis are listed in Table 14. A more detailed summary of these options is included in Appendix D – Summary of Final Phase II Alternatives.

<sup>18</sup> Transmission upgrades are required if generation at Cane Run is not replaced in 2016. In the preliminary Phase II analysis, alternatives that did not defer the need for additional capacity beyond 2016 were not assessed this cost.

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**Table 14 – Options Considered in Final Phase II Analysis**

Response Number	Respondent	Description
13C		
13F		
13C		
13C		
13E		
13E		
13E		
13C 5B		
4 13C		
12 13E		
13J		
12		
4 13E		

The [REDACTED] offer was not identified as a top response in the preliminary Phase II analysis. The location of the [REDACTED] assets, in [REDACTED], resulted in high electric transmission costs. However, it was retained in the final Phase II analysis because updated gas transportation costs for the [REDACTED] option were notably lower than what was assumed in the preliminary Phase II analysis.<sup>19</sup> Because combinations of the Bluegrass CTs and the Companies’ self-build 2X1 CCCT option were among the top options in the preliminary Phase II analysis, the Companies independently developed estimates for two alternative self-build 2X1 CCCT configurations. Whereas the 605 MW unit has 45 MW of duct firing capacity, the 640 and 690 MW units have 80 and 130 MW of duct firing capacity, respectively.

Like the preliminary Phase II analysis, the final Phase II analysis considered each option’s impact on the Companies’ ability to serve native load only; off-system sales were not allowed. Each alternative was evaluated under two economy market purchase scenarios: (1) no economy purchases and (2) limited

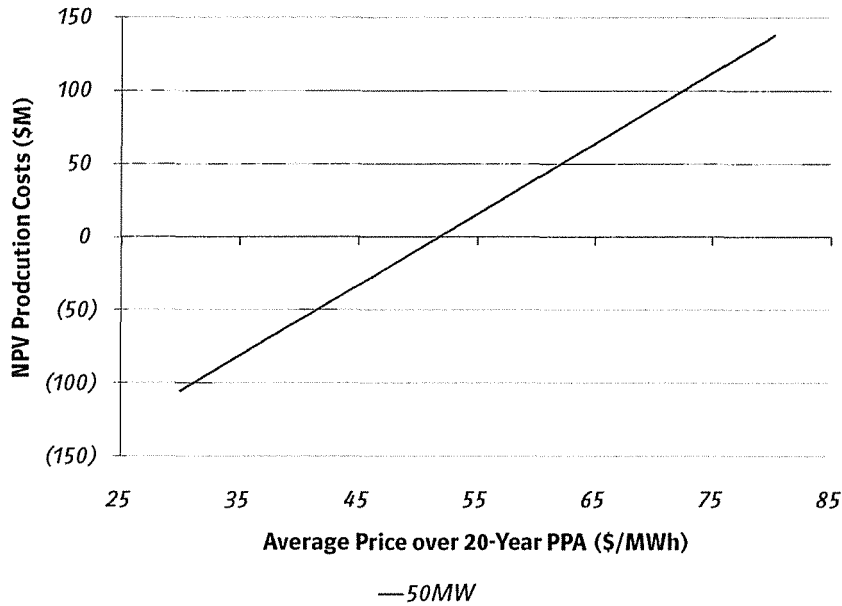
<sup>19</sup> Gas transportation costs and other assumptions were refined in each part of the analysis. Gas transportation costs for other options not considered in the final phase II analysis did not change significantly from what was assumed in the preliminary phase II analysis. Since this analysis was conducted, [REDACTED].

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economy purchases. The alternatives were evaluated initially under the Companies' base case coal, natural gas, and electricity price scenario.

The [REDACTED] PPA was ultimately eliminated from the final Phase II analysis because it was not least-cost. Figure 1 plots the impact of a 50 MW round-the-clock purchase on production costs at varying purchase prices. The average price of the [REDACTED] option over the life of the PPA is \$[REDACTED]/MWh. This option was eliminated from the final Phase II analysis because, based on Figure 1, round-the-clock power purchases with costs greater than \$50-55/MWh negatively impact production costs.

Figure 1 – Impact of 50 MW Round-the-Clock Purchase on Production Costs



The capital cost assumptions utilized in the analysis of RFP responses for electric transmission are summarized in Table 15. If no generation is added at the Cane Run site, the nominal cost of transmission upgrades was assumed to be \$41.9 million.<sup>20</sup> If the Cane Run coal units are replaced by a CCCT unit, the capital cost for transmission was assumed to be \$9.4-\$9.9 million, depending on the capacity of the CCCT unit. If the Companies enter into a PPA for two Bluegrass CTs, the cost of transmission was assumed to be \$3.3 million; the cost of transmission associated with purchasing or entering into a PPA for three Bluegrass CTs was assumed to be \$38.8 million. Since the [REDACTED] alternative does not include generation at the Cane Run site, the cost of transmission for this alternative (for example) was assumed to be \$80.7 million (\$41.9 million plus \$38.8 million).

<sup>20</sup> Because the cost of transmission upgrades associated with retiring the Green River coal units is the same for all alternatives, this cost was not considered in the analysis of RFP responses.

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**Table 15 – Electric Transmission Capital Cost Assumptions<sup>21</sup>**

Project	Cost (Nominal Dollars - Millions)
No Generation at Cane Run Site	41.9
605 MW CCCT at Cane Run Site	9.4
640 MW CCCT at Cane Run Site	9.7
690 MW CCCT at Cane Run Site	9.9
PPA for Two Bluegrass CTs	3.3
Purchase/PPA for Three Bluegrass CTs	38.8

Table 16 contains a high level summary of the final Phase II analysis results. A more detailed summary of the results are included in Appendix E – Final Phase II Analysis Results. The ‘SB 2X1 (640) + 3 CTs (Sale – 2012)’ alternative is the least-cost alternative for meeting the Companies’ future capacity and energy needs. The purchase price from LS Power for the Bluegrass CTs is very attractive; the cost of the Bluegrass CTs (approximately \$220/kW) is less than 30% of the cost of a new SCCT (approximately \$850/kW per the 2011 IRP). Furthermore, compared to the 640 MW CCCT, the production cost savings associated with the 690 MW CCCT do not outweigh the additional capital and gas transportation costs associated with the larger unit. The capital costs for the least-cost alternative are summarized in Table 17.

**Table 16 – Final Phase II Analysis Results (\$M)**

No Economy Purchases		Limited Economy Purchases	
Alternative	PVRR Difference from Best Option	Alternative	PVRR Difference from Best Option
[REDACTED]			

Note: ‘SB’ stands for self-build; ‘CTs’ refer to Bluegrass CTs.

<sup>21</sup> These assumptions were based on preliminary rough order of magnitude estimates of transmission capital requirements.

**Table 17 – Capital Costs for Least-Cost Alternative – Final Phase II Analysis**

<b>Item</b>	<b>Cost (Nominal Dollars - Millions)</b>
640 MW CCCT	662
3 Bluegrass CTs (Sale – 2012)	<u>120</u>
<b>Total Generation</b>	<b>782</b>
Cane Run Transmission	10
Bluegrass Transmission	<u>39</u>
<b>Total Transmission</b>	<b>49</b>
<b>Total Capital Cost</b>	<b>829</b>



## 6 Updates to Capital Costs

The least-cost alternative for meeting the Companies' future capacity and energy needs was identified in May 2011. After this decision was made, the Companies entered into negotiations with LS Power for purchasing the Bluegrass CTs and began refining cost estimates for its self-build CCCT options and the transmission facilities needed to deliver energy from these generating resources to load. Table 18 compares the updated capital costs for the least-cost alternative to the capital costs utilized in the final Phase II analysis.

**Table 18 – Updated Capital Costs for Least-Cost Alternative (Nominal Dollars – Millions)**

Item	Final Phase II Analysis (May 2011)	Updated Capital Costs (August 2011)
640 MW CCCT	662	583
3 Bluegrass CTs (Sale – 2012)	<u>120</u>	<u>110</u>
<b>Total Generation</b>	<b>782</b>	<b>693</b>
Cane Run Transmission	10	34
Bluegrass Transmission	<u>39</u>	<u>5</u>
<b>Total Transmission</b>	<b>49</b>	<b>39</b>
<b>Total Capital Cost</b>	<b>829</b>	<b>732</b>

During negotiations with LS Power, the purchase price of the Bluegrass CTs was reduced by \$10 million to \$110 million. This price is contingent on the Companies' ability to close the transaction with LS Power by June 30, 2012. The cost estimates for the 640 MW CCCT (CR7) and the necessary transmission facilities also decreased. In total, the cost of the least-cost alternative decreased by \$97 million.

To demonstrate the impact of these cost updates on the analysis of RFP responses, the Companies re-evaluated the final Phase II alternatives with updated capital costs for its self-build alternatives and transmission facilities. The 20-year PVRR associated with the updated costs of new transmission facilities is \$34.2 million. Because the impacts to the transmission system of CR7 and the Bluegrass CTs were evaluated together, it is difficult to allocate transmission costs to each generation source. For the purposes of this analysis, \$31.6 million of the total was allocated to CR7 and \$2.6 million was allocated to the Bluegrass CTs. Given the nature of the transmission upgrades, the capital cost for transmission does not vary based on the capacity of replacement generation at the Cane Run site. In addition, the cost of transmission associated with the Bluegrass CTs is not impacted by the number of CTs transacted.

Table 19 contains the updated final Phase II results. A more detailed summary of the results are included in Appendix F – Updated Final Phase II Analysis Results. Overall, the reduced costs of the Bluegrass CTs and the self-build options widen the gap between alternatives that include these options and the best and final offers for alternatives that do not include these options.

Table 19 – Updated Final Phase II Analysis Results

No Economy Purchases		Limited Economy Purchases	
Alternative	PVRR Difference from Best Option	Alternative	PVRR Difference from Best Option
[Redacted Content]			

## 7 Analysis of Key RFP Inputs

The analysis of RFP responses was based on multiple inputs having a range of potential values. The following sections assess the sensitivity of the analysis to changing commodity prices and load.

### 7.1 Commodity Prices

The analysis of RFP responses are based on forecasts of coal, natural gas, and electricity prices. These forecasts are summarized in Table 20. The coal prices in Table 20 are a blend of short-term prices based on market quotes and a long-term price forecast developed by Wood Mackenzie, an energy and mining research and consulting firm. Beyond the fourth forecast year, coal prices are based entirely on the Wood Mackenzie forecast. The natural gas forecast is also a blended forecast. The first three years of the forecast are based on market quotes. Gas prices beyond the third year were developed by PIRA, an energy consulting firm. Electricity prices are developed by the Companies using a software product called Aurora. Aurora simulates wholesale electricity prices in a competitive energy market. Aurora is a fundamental model that reflects the economics and physical characteristics of demand and supply. The coal prices were developed in 2010; the natural gas and electricity prices were developed in 2011.

**Table 20 – Coal and Natural Gas Prices (\$/mmBtu)<sup>22</sup>**

Year	Analysis of RFP Responses		
	High Sulfur Coal	Natural Gas	Electricity
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			

Table 21 and Table 22 contain four sets of more recently developed price forecasts. Each set of forecasts was developed in 2011. The ‘2011 Wood Mac/PIRA’ price forecasts are updated versions of the forecasts used in the 2011 Compliance Plan; the longer-term coal forecast was developed by Wood Mackenzie and the longer-term gas price forecast was developed by PIRA. Wood Mackenzie and PIRA, respectively, also produce natural gas and coal price forecasts. The ‘2011 Wood Mac’ forecasts reflect

<sup>22</sup> The Companies obtained the information redacted from Tables 20, 21, and 22 from CERA and PIRA under the subscription services. In connection with Kentucky PSC Case Nos. 2011-00161 and 2011-00162, the Companies requested from CERA and PIRA authorization to disclose the information provided to the Companies under the subscription services; however, neither CERA nor PIRA consented to the request.

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Wood Mackenzie’s outlook for high sulfur coal and natural gas prices; the ‘2011 PIRA’ forecasts reflect PIRA’s outlook for high sulfur coal and natural gas prices.

The differences between the 2011 Wood Mac coal forecast and the 2011 Wood Mac/PIRA coal forecast are explained by the fact that the Companies’ contracted position is not factored into the shorter-term portion of the 2011 Wood Mac coal forecast. Likewise, the differences between the 2011 PIRA gas forecast and the 2011 Wood Mac/PIRA gas prices are explained by the fact that the market forward gas prices are not factored into the shorter-term portion of the 2011 PIRA gas forecast. The ‘2011 CERA’ price forecasts were developed by CERA. The electricity prices for 2011 Wood Mac/PIRA and 2011 CERA forecasts were developed in Aurora.

**Table 21 – Alternative Commodity Price Forecasts (\$/mmBtu)**

Year	2011 Wood Mac/PIRA			2011 CERA		
	High Sulfur Coal	Natural Gas	Electricity	High Sulfur Coal	Natural Gas	Electricity
2012						
2013						
2014						
2015						
2016						
2017						
2018						
2019						
2020						
2021						
2022						
2023						
2024						
2025						

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Table 22 – Alternative Commodity Price Forecasts (\$/mmBtu)

Year	2011 Wood Mac		2011 PIRA	
	High Sulfur Coal	Natural Gas	High Sulfur Coal	Natural Gas
2012				
2013				
2014				
2015				
2016				
2017				
2018				
2019				
2020				
2021				
2022				
2023				
2024				
2025				

The coal forecasts from Wood Mackenzie and PIRA are very comparable. As a result, the relationships between coal and natural gas prices in the 2011 Wood Mac/PIRA and 2011 PIRA forecasts are consistent. Compared to the Compliance Plan prices, the average margin between coal and natural gas prices in these forecasts narrowed by approximately 15% (from \$5.90/mmBtu to \$5.00/mmBtu). This margin is 28% lower in the 2011 Wood Mac forecasts and 47% lower in the 2011 CERA forecasts (compared to the Compliance Plan prices). The 2011 CERA coal prices are consistent with the 2011 Wood Mackenzie and PIRA coal prices. However, the Wood Mackenzie and CERA gas forecasts are lower than the PIRA gas forecast.

The Companies evaluated the options considered in the final Phase II analysis using the 2011 Wood Mac/PIRA forecasts and the 2011 CERA forecasts.<sup>23</sup> The results of these analyses are summarized in Appendix G – Updated Final Phase II Analysis: Commodity Price Scenario Results. Based on the 2011 Wood Mac/PIRA price forecasts, the Companies’ findings are unchanged. The ‘SB 2X1 (640) + 3 CTs (Sale – 2012)’ alternative is the least-cost alternative in both the ‘no economy purchases’ and ‘limited economy purchases’ cases.

<sup>23</sup> The Companies evaluated the options under these price forecasts because – among the alternative price forecasts – the average margin between gas and coal prices is largest in the 2011 Wood Mac/PIRA forecasts and smallest in the 2011 CERA forecasts.

Based on the 2011 CERA prices, the PVRR difference between the top two alternatives (both of which include the same assets) narrows substantially. In the ‘no economy purchases’ case, the ‘SB 2X1 (640) + 3 CTs (Sale – 2012)’ alternative is still the least-cost alternative. In the ‘limited economy purchases’ scenario, the ‘SB 2X1 (640) + 3 CTs (Sale – 2012)’ alternative is only slightly below the ‘SB 2X1 (640 MW) + 3 CTs (PPA – 2015)’ alternative.

## 7.2 Load Forecast

In June 2011, the Companies developed the 2012 load forecast as part of its annual planning process (“2012 Forecast”). Table 23 compares the new load forecast to the load forecast used in the RFP analysis through 2025. Compared to the forecast used in the RFP analysis, the growth in peak demand in the new load forecast is lower (CAGR of 0.8% versus 1.4%).

**Table 23 – Load Forecasts – After Reductions for DSM and Curtailable Load**

Year	Summer Peak Demand (MW)			Annual Energy Requirements (GWh)		
	2011 IRP/ECR/RFP Forecast	2012 Forecast	Difference	2011 IRP/ECR/RFP Forecast	2012 Forecast	Difference
2012	6,821	6,930	109	36,271	35,898	(374)
2013	6,915	6,968	53	36,741	36,194	(547)
2014	6,976	7,004	28	37,057	36,299	(758)
2015	7,059	7,039	(20)	37,537	36,582	(955)
2016	7,070	7,121	51	37,985	36,961	(1,024)
2017	7,135	7,164	29	38,362	37,268	(1,094)
2018	7,234	7,223	(11)	38,872	37,625	(1,247)
2019	7,393	7,272	(121)	39,510	37,981	(1,529)
2020	7,546	7,372	(174)	40,162	38,411	(1,751)
2021	7,616	7,415	(201)	40,707	38,718	(1,989)
2022	7,704	7,533	(171)	41,344	39,066	(2,278)
2023	7,819	7,579	(240)	41,918	39,406	(2,511)
2024	8,008	7,629	(379)	42,646	39,845	(2,800)
2025	8,156	7,710	(446)	43,290	40,215	(3,075)

The Companies evaluated the options considered in the final Phase II analysis based on the 2012 Forecast and the 2011 Wood Mac/PIRA price forecasts. The results of this analysis are summarized in Appendix H – Updated Final Phase II Analysis: New Load Forecast Results. In this scenario, the ‘SB 2X1 (640) + 3 CTs (Sale – 2012)’ alternative is the least-cost alternative in both the ‘no economy purchases’ case and the ‘limited economy purchases’ case.

## 7.3 Least-Cost Alternative Conclusion

Based on the RFP and self-build analysis, the ‘SB 2X1 (640) + 3 CTs (Sale – 2012)’ alternative is the least-cost alternative for meeting the future capacity and energy needs of the Companies. This alternative is least cost in the base case scenarios as well as all but one of the alternative price scenarios.<sup>24</sup> In addition, the recommended option is the least-cost alternative in the updated load scenario as well.

<sup>24</sup> In the price scenario where this option is not least-cost, its PVRR is not significantly different from the least-cost option (\$2 million).

Acquiring the Bluegrass CTs in 2012 will help the Companies manage potential development risks for the Cane Run CCCT as well as potential reliability risks associated with prudently managing the cost of maintenance at the Cane Run, Green River, and Tyrone stations as these units approach retirement. Furthermore, the proposed time period between the issuance of the final HAPs rule and being in compliance is three years. The Companies have assumed that this period will be extended by one year at the request of the permitting authority. The Bluegrass units will help the Companies manage the risk of this extension being denied by the permitting authority.

For these reasons, the least-cost alternative for meeting the future capacity and energy needs of the Companies is to build a 640 MW 2X1 CCCT at the Cane Run site ("Cane Run 7" or "CR7") and purchase the existing Bluegrass SCCT facility in La Grange, Kentucky from LS Power.

## **8 Current Project Descriptions and Costs**

The following section summarizes the scope and cost of the proposed self-build 2X1 CCCT unit and the LS Power Bluegrass CTs.

### **8.1 Preferred Self-Build Option**

#### **8.1.1 Project Scope**

The project scope includes all work necessary to construct a 640 MW net summer rating CCCT at Cane Run prior to January 1, 2016, including an 8.1 mile gas pipeline from Texas Gas at Penile Road to the Cane Run Site. The scope and estimates are based on F-class gas turbine technology for the natural gas CCCT plant.

F-class gas turbine technology provided the basis of an air permit application filed on June 13, 2011, with the Louisville Metro Air Pollution Control District (APCD). By utilizing the emissions from the existing Cane Run 4-6 to be shut down, the new CCCT was able to “net out” of the Prevention of Significant Deterioration permitting requirements. Receipt of all environmental permits necessary for construction is anticipated prior to the 3<sup>rd</sup> quarter of 2012. Significant delays of the permits required to commence construction will delay commercial operation beyond the best case required date of January 1, 2016.

HDR has been selected as the Owner’s Engineer to support the engineering efforts throughout 2011 to optimize the design of the natural gas CCCT plant, including environmental permitting. HDR will assist the Utilities in their procurement efforts in 2012. Based on the current plans, purchase orders for long lead time equipment are scheduled to be issued upon receipt of required regulatory and environmental approvals, consistent with a construction schedule to meet the EPA-driven time requirements.

Energy Management and Services Company performed a route selection study for a gas pipeline to serve the Cane Run CCCT. They recommended an approximately eight mile route mostly along existing electric Rights of Way (ROW). EN Engineering surveyed the recommended route and confirmed construction feasibility. Additional archeological and geotechnical studies along the proposed ROW continue. Approximately 900 feet of new ROW parallel to Penile Road and an existing gas ROW will be required. Also, approximately two miles of gas pipeline ROW will be required within existing electric easements. Finally, a site for the Texas Gas delivery point at Penile Road will be required. The cost estimated for a 20” diameter line, adequate to serve the planned 640 MW CCCT is included in the \$583 million overall cost estimate. The Companies’ Gas Engineering staff will manage the pipeline construction for the project. Construction of the pipeline is scheduled in 2014.

Texas Gas will provide interstate gas transportation for the Cane Run CCCT. Texas Gas currently has firm transportation available in 2016 and has offered to provide service under their Summer No-Notice and Winter No-Notice tariff rate schedules. The optimal transportation volume has not yet been determined, but the annual fixed cost component of the transportation is expected to range from \$11 - \$16 million plus a variable cost of \$0.03/mmBtu and a fuel loss of 3.56%. The current offer by Texas Gas reflects an annual discount of 27.5% from the maximum tariff rate or approximately \$4 million annually. In addition, the offer includes:



- A minimum delivery pressure of 550 psig.
- Texas Gas' commitment to pay for the capital expenditures incurred in the installation of a new meter station (estimated value of \$2 million).
- An evergreen provision and contractual right of first refusal.

To ensure firm transportation service is available from Texas Gas to serve the Cane Run CCCT, execution of a contract is anticipated in the 3<sup>rd</sup> quarter of 2011 provided a satisfactory regulatory out provision can be included in the contract. Texas Gas is currently seeking a tariff revision to allow the inclusion of regulatory out provisions in contracts that will require a 10 year contractual obligation to qualify.

As required by the Companies' OATT, a Large Generator Interconnection Feasibility Study (Feasibility Study) was requested from Southwest Power Pool (SPP) on June 3, 2011. The Feasibility Study results should be available in September. While electric transmission upgrades are expected to be required, a Transmission CCN application is not anticipated. Once a Large Generator Interconnection Agreement (LGIA) is signed in 2012, the Transmission Owner will be responsible for developing and constructing any necessary transmission system upgrades. The Companies' Transmission staff conducted an analysis of upgrades necessary for delivering energy from the Cane Run CCCT to load. Transmission projects identified in the Companies' analysis include installation of a transformer, generator breakers, switches, re-conductoring, and relocation of some transmission structures and conductors. The analysis, including cost estimates, attempts to identify the transmission work expected from the required SPP studies. Key remaining project milestones for 2011 include:

- |  |           |
|--|-----------|
| • Option Gas Pipeline ROW                      | August    |
| • Execute Texas Gas Transportation Contract    | August    |
| • File Generation CCN Application              | September |
| • Qualify Equipment Suppliers and Constructors | December  |

### 8.1.2 Project Cost

The total project cost is expected to be \$583 million for generation and \$34 million for electric transmission upgrades to construct a 640 MW net summer rating CCCT at Cane Run for January 1, 2016, commercial operation. No costs of decommissioning Cane Run 4-6 are included in the estimate. This estimate includes contingency of approximately 10% of the expected EPC cost. The estimated project costs were determined in a site specific study dated March 15, 2011, assuming owner furnished major equipment assigned to an Engineer, Procure & Construction (EPC) contractor. The estimate includes \$12 million for capitalized spare parts. Table 24 summarizes the project capital costs by year.

**Table 24 – Cane Run CCCT Capital Costs (\$Millions)**

	2011	2012	2013	2014	2015	2016	Total
640 MW CCCT (Q4 2015 COD)	3	42.7	156.7	222.8	144.6	13.2	583
Cane Run Transmission	0	0	0	0	14.2	20.2	34
<b>Totals</b>	<b>3</b>	<b>42.7</b>	<b>156.7</b>	<b>222.8</b>	<b>158.8</b>	<b>33.4</b>	<b>617</b>

The capital cost estimate is based on major equipment budgetary quotations and HDR's project data base. Major equipment (gas turbine, heat recovery steam generator, and steam turbine) budgetary quotations from multiple suppliers were received in February of 2011. HDR evaluated the budgetary quotes and compiled a Level I Conceptual Cost Estimate in March 2011. The market for new domestic

power generation equipment is currently considered weak. EPA's regulatory changes such as Utility MACT will likely increase the demand for combined cycle equipment. The timeline for equipment demand is dependent on the rate of retirement for aged coal assets and gross domestic product growth. There has been a small up-tick in commodity pricing over the last six months consistent with the three to four percent escalation contained in the materials and construction estimates. The project also carries a ten percent contingency of the expected EPC costs. Major market shifts, such as a "dash to gas" or labor shortage due to environmental compliance projects, could cause the cost estimate to be exceeded.

## **8.2 Bluegrass CTs**

### **8.2.1 Bluegrass Plant Description**

The optimized expansion plan to meet the Companies' 2016 need includes the acquisition of the assets of the 495 MW BGC after regulatory approvals are obtained in 2012 and the construction of a 640 MW CCCT at the Cane Run Site.

The Bluegrass Plant entered service in June of 2002. It contains three Siemens-Westinghouse 501 FD2 combustion turbines in simple cycle. The combustion turbines provide 495 MW of summer capacity. Since commercial operation each unit has accumulated approximately 1000 operating hours and 340 starts.

The Bluegrass Plant and its 60 acre site are leased from Oldham County as a means to fix property taxes at a known value. The plant and the land can be purchased for \$1 at the end of the lease term in December 2025. LS plans to terminate the lease structure prior to closing.

The plant is electrically interconnected to the Utilities' transmission system at 345 kV. Additional studies will be required to determine the extent of upgrades that may be necessary to move the Bluegrass generation to the Utilities' load. The Companies' Transmission staff conducted analysis of adding the Bluegrass units as Designated Network Resources, in addition to the Cane Run natural gas CCCT. The analysis, including cost estimates, attempts to identify the transmission work expected from the required SPP studies.

The total estimated cost of all electric transmission projects which may be required by 2016 or earlier to support both the Cane Run CCCT and the three Bluegrass units is \$39 million. This \$39 million estimate includes projects totaling approximately \$5 million for the Bluegrass units and projects totaling approximately \$34 million as indicated above for the Cane Run CCCT.

Interstate gas transportation to the plant is provided by Texas Gas on an interruptible basis. Firm gas transportation for the plant is anticipated to be purchased from Texas Gas as Utility capacity needs require the continuous availability of the Bluegrass Plant.

The Bluegrass air permit limits NO<sub>x</sub> to 95 tons per year and CO to 245 tons per year. The plant should be able to operate approximately 1,000 hours per year under the permit limits which is significantly more than the anticipated operating hours for the peaking units. The expected maximum allowable operating hours will be confirmed during due diligence.

At the proposed purchase price of \$110 million, the resulting unit price for summer capacity is \$222/kW. This cost is less than 30% of the cost of a green field SCCT in the 2011 IRP.

## 9 Utility Ownership Allocation

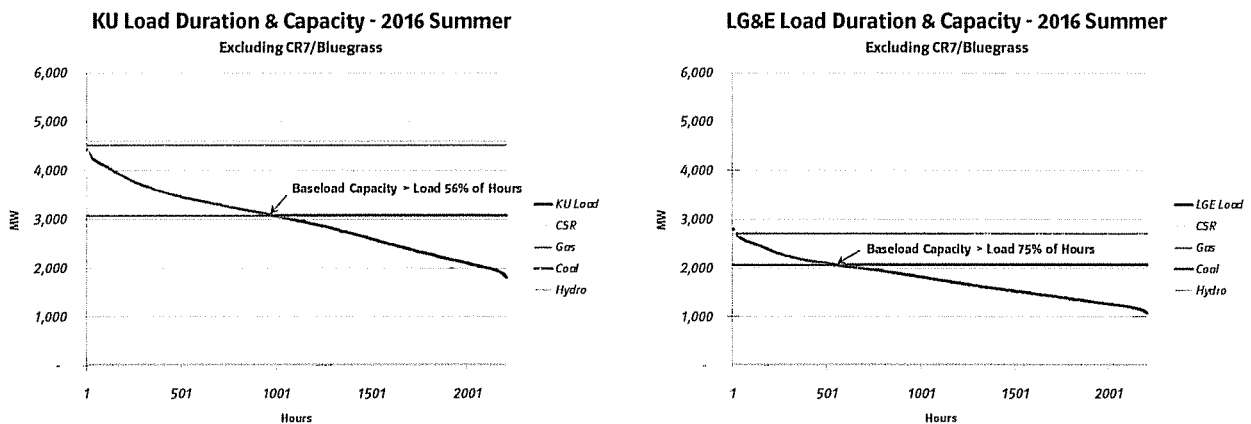
### 9.1 Background

Since the merger of LG&E and KU, the Companies have commissioned eleven jointly-owned units: ten CTs at the Trimble County, E. W. Brown, and Paddy’s Run stations and the Trimble County 2 coal unit (TC2). An ownership ratio for the jointly-owned CTs was determined so that each utility’s projected reserve margin was equalized in the in-service year. Since TC2 was expected to result in significant energy savings to the Companies, its ownership split was based on the expected energy benefits to each company. To determine these benefits, the production costs associated with the Companies’ existing generation portfolio and 30-year least-cost expansion plan (including TC2) were compared to the production costs associated with its generation portfolio and a 30-year expansion plan that included only CTs. This “all-CT” expansion plan represented the least-cost expansion plan when only considering capacity needs. The overall least-cost plan included TC2 and was expected to result in significant energy savings over the “all-CT” plan. Since each company was expected to benefit differently from constructing the TC2 plan due to each company’s unique load profile and existing generation mix, TC2’s ownership split was determined based on each company’s share of the net present value of production cost savings.

### 9.2 Energy and Capacity Needs

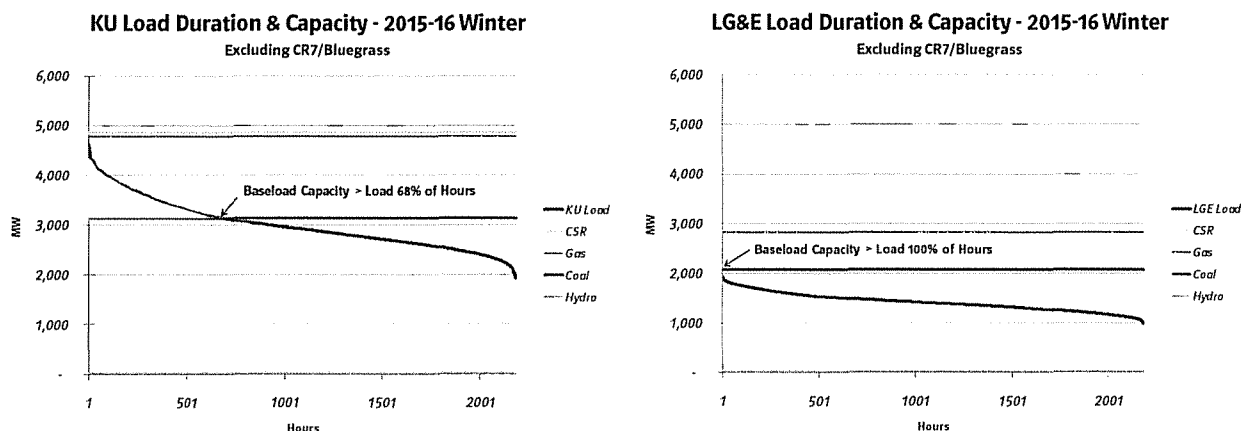
KU and LG&E have different load profiles and will have different levels of baseload capacity available to meet their individual energy needs. Figure 2 shows that KU’s baseload capacity is expected to be greater than its 2016 summer load 56% of the time, while LG&E is expected to have sufficient baseload capacity in 75% of the summer hours. This data demonstrates that KU has a greater summer energy need compared to LG&E.

Figure 2 – Summer Energy Needs



KU’s load peaks in both the summer and winter months, resulting in a winter energy need forecasted for KU, as shown in Figure 3. LG&E does not have a winter peak and therefore has sufficient baseload capacity to meet its load.

**Figure 3 – Winter Energy Needs**



After the proposed retirements in 2016, the Companies’ individual reserve margins will drop well below the target system reserve margin of 16%. Table 25 shows the individual company reserve margin needs at summer peak that would be expected without the addition of new capacity. This table demonstrates that KU’s reserve margin need is expected to quickly outpace that of LG&E.

**Table 25 - Individual Summer Reserve Margin Needs<sup>25</sup>**

MW	2016	2017	2018	2019	2020
KU	486	576	556	684	761
LG&E	503	469	552	488	527

KU’s greater energy and capacity needs suggest that KU requires a larger share of the more efficient 2X1 CCCT unit and a larger share of the total capacity addition.

### 9.3 Methodology

The combined cycle unit is expected to operate at approximately a 40% capacity factor generating significant amounts of energy, therefore the Companies calculated its ownership using a method similar to the method used for TC2 as described in Section 9.1 so that the CCCT’s energy benefits are matched to its ownership split. The Bluegrass CTs are expected to operate at capacity factors less than 5%. Therefore, their ownership split was calculated to balance each utility’s reserve margin, given the CCCT ownership share. The individual reserve margins were balanced by first identifying each company’s peak load in the five year period between 2016 and the next planned capacity addition in 2021. The ownership of the Bluegrass CTs was then calculated to balance the reserve margin at these individual utility peaks. Since the ownership splits of the CCCT and the Bluegrass CTs are interdependent with this method, an iterative process was used to find the appropriate combination of ownership allocations.

### 9.4 Optimal Ownership

The optimal ownership split of the Cane Run CCCT is KU owning 78% and LG&E owning 22%, while KU should own 31% and LG&E 69% of the Bluegrass CTs. This method balances the production cost savings of the CCCT and balances the company’s individual reserve margins through 2020.

<sup>25</sup> Load and capacity figures are based on data developed as part of the 2012 planning cycle.

## 10 Final Conclusions

Based on the RFP and self-build analysis, the least-cost alternative for meeting the future capacity and energy needs of the Companies is to build a 640 MW 2X1 CCCT at the Cane Run site CR7 and purchase the existing Bluegrass SCCT facility in La Grange, Kentucky from LS Power. To effectuate this plan, the Companies will need to make appropriate regulatory filings for these generating resources. While not anticipated based on the initial electric transmission upgrade assessments, should regulatory approvals be required for any related transmission facilities, appropriate and timely filings will be made. The resources are needed to replace capacity that will be retired at the end of 2015 and to meet the anticipated load growth in the Companies' service territories. Specifically, the resources include:

- i. the construction of the Cane Run 640 MW 2X1 natural gas CCCT project (to be permitted as Cane Run 7) and any related electric and gas transmission facilities needed to deliver CR7 energy to load prior to January 1, 2016.
- ii. the purchase from LS Power of the existing SCCTs at its Bluegrass facility in La Grange, Kentucky and any related transmission facilities needed to deliver the associated energy to load. The Bluegrass CTs would be available during 2012.

The timeline for constructing the CR7 unit is constrained by the need to have the unit operational prior to January 1, 2016, when the retirement of approximately 800 MW of coal-fired capacity at Cane Run, Tyrone, and Green River is planned due to impending EPA regulations.

The purchase of the existing Bluegrass facility from LS Power is needed to meet the same deadlines and need. The existing facilities at Bluegrass are already in operation. An agreement with LS Power will enable purchase in 2012. These assets will be available during the construction of the CR7 project to mitigate development risks as well as operational risks associated with the retiring coal units as their maintenance expenses are minimized ahead of retirement in the interest of prudently managing costs.

## 11 Appendices

### 11.1 Appendix A – Phase I Screening Results

Response Number	Technology	Respondent	Description	Transmission Interconnection Point	Summer Nominal Capacity	Start Date	Term (Years)	Transmission		Firm Summer Capacity	Levelized Costs		Rank
								Upgrades (\$/kW-yr)	Area (\$/kW-mth)		Outside Control	\$/Firm.kW-yr	
13J													1
13H													2
13I													3
13G													4
4													5
12													6
9													7
1A													8
1B													9
2B													10
2A													11
17													12
15													13
13E													1
13D													1
13F													3
13B													4
13A													4
13C													6
5A													1
5B													2
14B													3
22													1
20B													NA
20A													NA
6A													1
14A													2
10													3
11													4
6B													5
6D													6
7A													7
8A													8
7B													9
7C													10
7D													11
6C													12
6E													13
8B													14
8C													15
6F													15
18													1
21A													1
21B													2
16A													1
16B													2
16C													3
3													4

## 11.2 Appendix B – Key Assumptions

- Study Period:  
30-year period for Production Cost impacts (2011-2040)  
30-year period for Capital Costs impacts (2011-2040)
- The Companies continue as regulated entities subject to the oversight of the Kentucky Public Service Commission and the Commission continues to require the Companies to implement least-cost strategies to the benefit of the native load ratepayers.
- The capital costs, O&M costs, and the costs of increased emissions (both NO<sub>x</sub> and SO<sub>2</sub>) associated with the addition of new environmental projects will be subject to recovery through the Environmental Cost Recovery mechanism.
- Fuel Forecast (Base Assumptions)  
Any and all fuel cost savings associated with serving native load will be returned to the ratepayers through the Fuel Adjustment Clause mechanism.
- Load Forecast is taken from the 2011 Integrated Resource Plan.
- Financial Assumptions:

LG&E/KU Discount Rate (%)	6.71 %
Federal Income Tax Rate (%)	38.90 %
Insurance Rate (%)	0.07 %
Property Tax Rate (%)	0.15 %
Percentage of Debt in Capital Structure (%)	46.52 %
Weighted Cost of Debt (%)	3.84 %
Return on Equity (%)	10.5 %

### 11.3 Appendix C – Preliminary Phase II Analysis Results

#### Preliminary Phase II Analysis - Base Case Prices

	PVRR (\$M)							Difference from Best Option
	Production Costs	Capital	Gas Trans.	Fixed O&M	Capacity Charge	Elec Trans.	Grand Total	
No Economy Purchases								
Limited Economy Purchases								

Note: 'SB' stands for self-build; 'CTs' refer to Bluegrass CTs.



Preliminary Phase II Analysis - CERA Prices

	PVRR (\$M)							Difference from Best Option
	Production Costs	Capital	Gas Trans.	Fixed O&M	Capacity Charge	Elec Trans.	Grand Total	
No Economy Purchases								
Limited Economy Purchases								

Note: 'SB' stands for self-build; 'CTs' refer to Bluegrass CTs.

11.4 Appendix D – Summary of Final Phase II Alternatives

Summary of 2011 RFP Options

REP.#	Description	Start Date	Term (Years)	Firm/Net Delivered Capacity (MW)	Heat Rate (Btu/kWh)	Asset Sale/ Construction Cost (\$M)*	Fixed O&M (\$/MW-yr)	Firm Gas Transport (\$/MW-yr)	Capacity Charge	Energy Price	Variable O&M	Transmission		FOR	
									Fixed (\$000/MW-yr)	Energy Price (\$/MWh) Esc (%)	General (\$/MWh)	Start cost (\$000)	Fuel (mmBtu/start)		XM Capital (\$M)*
13C															
13F															
13C															
13C															
13E															
13E															
13E															
13C															
5B															
4															
13C															
12															
13E															
13J															
NA															
12															
4															
13E															

Note: Numbers in bold are in 2011 dollars; numbers not in bold are in start date year dollars.

\* Asset Sale / Construction Costs and XM Capital are the sum of nominal (as-spent) dollars.

11.5 Appendix E – Final Phase II Analysis Results

Final Phase II Analysis - Base Case Prices

	PVRR (\$M)						Grand Total	Difference from Best Option
	Production Costs	Capital	Gas Trans.	Fixed O&M	Capacity Charge	Elec Trans.		
No Economy Purchases								
Limited Economy Purchases								

Note: 'SB' stands for self-build; 'CTs' refer to Bluegrass CTs.

11.6 Appendix F – Updated Final Phase II Analysis Results

Updated Final Phase II Analysis - Base Case Prices

	PVRR (\$M)						Grand Total	Difference from Best Option
	Production Costs	Capital	Gas Trans.	Fixed O&M	Capacity Charge	Elec Trans.		
No Economy Purchases								
Limited Economy Purchases								

Note: 'SB' stands for self-build; 'CTs' refer to Bluegrass CTs.

11.7 Appendix G – Updated Final Phase II Analysis: Commodity Price Scenario Results

Updated Final Phase II Analysis - 2011 Wood Mac/PIRA Prices

	PVRR (\$M)							Difference from Best Option
	Production Costs	Capital	Gas Trans.	Fixed O&M	Capacity Charge	Elec Trans.	Grand Total	
No Economy Purchases	[REDACTED]							
Limited Economy Purchases								
	[REDACTED]							

Note: 'SB' stands for self-build; 'CTs' refer to Bluegrass CTs.

Updated Final Phase II Analysis - 2011 CERA Prices

	PVRR (\$M)							Difference from Best Option
	Production Costs	Capital	Gas Trans.	Fixed O&M	Capacity Charge	Elec Trans.	Grand Total	
No Economy Purchases								
Limited Economy Purchases								

Note: 'SB' stands for self-build; 'CTs' refer to Bluegrass CTs.

11.8 Appendix H – Updated Final Phase II Analysis: New Load Forecast Results

Updated Final Phase II Analysis - 2011 Wood Mac/PIRA Prices w/ 2012 Load Forecast

	NPVRR (\$M)						Grand Total	Difference from Best Option
	Production Costs	Capital	Gas Trans.	Fixed O&M	Capacity Charge	Elec Trans.		
No Economy Purchases								
Limited Economy Purchases								

Note: 'SB' stands for self-build; 'CTs' refer to Bluegrass CTs.

**RFP**





PPL companies

Company  
Attn: Director Marketing and Trading  
Address

December 17, 2010

**Subject: Request for Proposals to Sell Capacity and Energy (RFP)**

**LG&E and KU Energy LLC**  
Energy Services  
220 West Main Street  
Louisville, KY 40202  
www.lge-ku.com

Charles A. Freibert, Jr.  
Director Marketing  
T 502-6273673  
charlie.freibert@lge-ku.com

Dear Colleague in Development, Marketing and Trading of Electrical Power,

In order to meet pending environmental regulations and future load growth, Louisville Gas and Electric Company and Kentucky Utilities Company (the “Companies”) are evaluating alternatives means to provide least-cost firm generating capacity and energy to our customers. To this end, the Companies are requesting proposals from parties wishing to sell capacity and energy that will qualify as a Designated Network Resource (DNR) either as an owned asset by the Companies or a Power Purchase Agreement with the Companies. The Companies will consider offers that are reliable, feasible and represent the least-cost, including cost for transmission service and upgrades and voltage support, means of meeting our customers’ energy needs. The Seller should make its proposal as comprehensive as possible so that the Companies may make a definitive and final evaluation of the proposal’s benefits to its customers without further contact with the Seller. However, the Companies reserve the right to request additional information. Any failures to supply the information requested will be taken into consideration relative to the Companies’ internal evaluation of cost, risk, and value.

This inquiry is not a commitment to purchase and shall not bind the Companies or any subsidiaries of LG&E and KU Energy LLC in any manner. The Companies in their sole discretion will determine with which Respondent(s), if any, it wishes to engage in negotiations that may lead to a binding contract. The Companies shall not be liable for any expenses Respondents incur in connection with preparation of a response to this RFP. The Companies will not reimburse Respondents for their expenses under any circumstances, regardless of whether the RFP process proceeds to a successful conclusion or is abandoned by the Companies at their sole discretion.

1. **Background** - This RFP is being issued in order to evaluate alternatives for meeting existing and pending EPA regulations and to meet future load growth. All

alternatives (including any of the Companies' self-build options) will be evaluated in the context of meeting customers' load in a least-cost manner. If the Companies determine that a proposal is in the best interest of the Companies' customers, the Companies will enter into negotiations which may lead to the execution of definitive agreements. The Companies will consider all applicable factors including, but not limited to, the following to determine the lowest total reasonable cost: (i) the terms of the purchased power proposal or facility or asset sale; (ii) Seller's creditworthiness; (iii) if applicable, the development status of Seller's generation facility including, but not limited to, site chosen, permitting, and transmission; or the operating history of Seller's generation facility; (iv) the degree of risk as to the availability of the power in the timeframe required; (v) the anticipated reliability of the power, particularly at times of winter and summer peak; and (vi) all other factors such as the cost of interconnection or transmission that may affect the Companies or their customers. The Companies are committed to implementing the best overall long-term solution for their customers.

2. **Requirements** - The Companies are interested in Power Purchase Agreements ("PPA"), Tolling Agreements ("TA") or Build Own Transfer Agreements ("BOT"), or alternative power supplies (combined "Supply Agreements") for minimum quantities of 1 MW up to a total of 700 MW of firm summer and winter capacity and associated energy per facility or offer with preference given to offers of 50 MWs or greater. The power being proposed must be generated from a defined source, a specific unit(s) or system that will qualify as a DNR and supply capacity/energy during the peak demand of the Companies' customers (typical Midwest seasonal load characteristics). The delivery of capacity and energy should begin no earlier than January 1, 2014, but later start dates will be considered. While the Companies prefer longer term proposals, shorter terms will be considered. The Companies may procure more or less than 700 MW and may aggregate capacity and energy from multiple Sellers to meet its needs. A Seller offering power from a resource connected directly to the Companies' transmission system must conform to the Companies' Open Access Transmission Tariff (OATT) and must obtain in a timely manner an Interconnection Agreement for the facility.
3. **Key Terms and Conditions** - For a Supply Agreement, the Seller's proposal should include the proposed terms and conditions, which should include, where applicable to the Seller's proposal, among other things:
  - 3.1. Seller will guarantee all pricing and terms that affect pricing such as but not limited to heat rate, fuel cost, operation and maintenance cost, etc., for at least 120 days after the Proposal Due Date.
  - 3.2. Any Capacity Payments to the Seller will be based upon guaranteed capacity at the Summer Design Conditions. Unless the location of the Seller's facility justifies alternate conditions. Summer Design Conditions shall be the following.
    - 3.2.1. Dry Bulb: 89°F

3.2.2. Mean Coincident Wet Bulb: 79.33°F

3.2.3. Relative humidity: 66%

- 3.3. Seller will guarantee the annual and seasonal availability and describe required maintenance outage schedule.
- 3.4. Seller should address in their proposal its remedies for failure to meet availability guarantees.
- 3.5. Seller will be responsible for any and all compliance related cost and fines (environmental, NERC, FERC, etc) incurred due to the non-compliance of the assets designated to supply power to the Companies.
- 3.6. After the evaluation of proposals is completed, the Companies will enter into negotiations on a timely basis if the Companies determine that a proposal is in their customer's best interests. Any subsequent contracts will be contingent on obtaining the necessary regulatory approvals.
- 3.7. The Companies termination rights will include, but may not be limited to: (i) failure to post or maintain required financial credit requirements, (ii) failure to meet key development and implementation milestones, (iii) failure to meet reliability requirements, and (iv) failure to cure a material breach under the Supply Agreement.

4. **Dispatching and Scheduling** (Required Proposal Content) - The Companies prefer flexibility in the utilization of the generation resource being offered by the Seller. The Companies desire, at the Companies' expense, to install equipment at the generator site to facilitate real time control/dispatch of generation to follow load changes and respond to system frequency changes. The Seller should state its desire and willingness to allow and cooperate with the Companies in establishing real-time control of generation.
  
5. **Ancillary Services** (Required Proposal Content) - Under a Supply Agreement, the Companies desire to have the unrestricted right to utilize all ancillary services associated with generation being offered by the Seller. The Seller should describe the ancillary service capability of its proposal e.g., black start capability, voltage support, load following, energy imbalance, spinning reserve, and supplemental reserve. The ancillary services that would be available to the Companies should not be limited to those defined in this paragraph. The Companies desire to have the unrestricted rights to any future ancillary services defined by the industry and capable of being provided by the generation capacity being offered. In the case where the Companies purchase only part of the generation capacity from a unit, system or facility, then the Companies desire to have unrestricted rights to ancillary services on a prorated basis.
  
6. **Pricing** (Required Proposal Content) - The Seller's pricing must be a delivered price to the Companies' transmission system. The Companies will only be responsible for Network Integrated Transmission Service (NITS) on the Companies transmission system. Prices must be firm, representing best and final data and quoted in U.S. dollars. If pricing involves escalation or indexing, the details of such pricing, including the specific indices or escalation rates, must be included for evaluation.
  - 6.1. The Seller's proposal must provide the product and generation characteristics on the attached form. Pricing information can be provided on the form or separately in another format that is appropriate for the offer. The Seller is encouraged to provide as much information as possible to aid in the evaluation of the offer. These attached data forms may be utilized in any filings with regulatory agencies (such as the KPSC) related to this RFP.
  
7. **Delivery** (Required Proposal Content) - The Companies consider reliable power delivery at the time of the typical summer and winter peak demand of its customers to be of the utmost importance. The delivery point is the Companies' transmission system. Under a Supply Agreement, Sellers would be responsible for providing firm transmission to the Companies' transmission system. The Seller is responsible for all costs associated with transmission interconnections and shall provide all studies and Interconnection Agreements. The Seller is responsible for all transmission including system upgrades up to the delivery point and shall provide all studies and Transmission Reservations/Agreements. All costs associated with interconnections

and transmission up to the delivery point should be included in the Seller's pricing where appropriate under current FERC orders and rulings. Southwest Power Pool (SPP) is an Independent Transmission Operator that administers the Companies' OATT. Tennessee Valley Authority (TVA) serves as the Companies' Reliability Coordinator (RC). For purposes of the Companies' evaluation of the proposals, the Companies may estimate any transmission costs that are not supported by the appropriate studies including deliverability and the associated voltage support to the Designated Network Load ("DNL") of the Companies. If the Seller has not completed all required transmission studies, it is essential that the following information be provided in order for the Companies to evaluate the proposal:

- Size of the unit
- Point of interconnection to the grid
- Impedance of the generator step-up transformer
- Transient and sub transient characteristics of the generator

8. **Environmental** - For the sale of generation capacity and energy to the Companies under a Supply Agreement, the Seller would be responsible for obtaining all necessary permits and providing all credits and allowances needed to comply with the permit requirements for the life of the agreement, where permits, credits and allowances are applicable for the product being sold. Failure to obtain or comply with any environmental permit or governmental consent would not excuse nonperformance by Seller. The Companies require that Sellers provide the following information for evaluation:

- Unit heat rate, fuel specification, and control technologies employed.
- Emissions rates for NO<sub>x</sub>, SO<sub>x</sub>, CO, CO<sub>2</sub>, PM<sub>10</sub>, and Hg.
- Copy of air permit or permit application if available.
- Timing and status of all permit applications including water withdrawal, wastewater disposal, fuel byproducts handling and disposal, etc.

9. **Development Status** – Seller shall provide a comprehensive narrative of the status of the development of any generation project intended to be used to meet Seller's obligations to the Companies. Seller's narrative shall include the following.

- 9.1. A comprehensive development and construction schedule,
- 9.2. A listing of all required permits and governmental approvals and their status,
- 9.3. A listing of all required electric interconnection and or transmission agreements and their status,
- 9.4. A financing plan, and
- 9.5. A summary of key contracts (fuel, construction, major equipment) to the extent that they exist.

10. **Other Information Requirements** - Sellers shall provide a complete description of the generation facilities that would be used to fulfill the Seller's obligations to the Companies. The description should include the following:
- Seller's operating experience with similar technology.
  - Guaranteed capacity rating at Summer Design Conditions
  - Guaranteed annual and seasonal availabilities including EFOR values and planned maintenance schedules.
  - Technology employed (combined cycle, pulverized coal, CFB, super-critical, etc.)
  - Plant location along with proof or status of ownership or control of site.
  - Zoning status of plant site.
  - If the plant site is subject to site approval by a governmental authority, provide a description of the approval status including a copy of the application. If approval has been granted, provide a copy of the approval.
  - Status of engineering and design work.
  - Key project participants including owners, operators, engineer/contractors, fuel suppliers

The Seller should also provide any additional information the Seller deems necessary or useful to the Companies in making a definitive and final evaluation of the benefits of the Seller's proposal without further interaction between the Companies and Seller.

11. **Financial Capability** - Should the Companies elect to enter into an agreement with a Seller who fails to meet its obligations at any point in time, the Companies' customers may be exposed to the risk of higher costs. Therefore, the Sellers will be required to demonstrate, in a manner acceptable to the Companies, the Seller's ability to meet all financial obligations to the Companies throughout the applicable development, construction and operations phases for the term of the Supply Agreement. Under no circumstances, should the Companies' customers be exposed to increased costs relative to the cost defined in an agreement between the Seller and the Companies.

11.1. At all times, the Seller will be required to maintain an investment grade credit rating with either S&P or Moody's or have a parent guarantee from an investment grade entity that meets the approval of the Companies.

11.2. Upon execution of the Supply Agreement, Sellers will be required to post a letter of credit ("LOC") to protect the Companies' customers in the event of default by the Seller. The exact amount of a LOC will be subject to approval by the Companies based upon the Companies' models. This amount shall take into account the cost of replacement energy and associated environmental cost with the production of replacement energy and any byproducts of such replacement energy. If the Companies draw down the LOC amount at any time, the Seller must replace the LOC to the original value within five days.

12. **Alternate Power Supplies** - Alternate power supply arrangements may include the acquisition of generation assets, existing generation facilities, projects under development, system firm products, or other power supply arrangements that meet the Companies' requirements described in this RFP. The Seller must make all transmission arrangements for the delivery of alternate power supply arrangements to the delivery point and include the cost for transmission in the pricing. Sellers interested in proposing alternative power supplies must provide all information specified in this document and applicable to the alternate power supply needed for the Companies to fully evaluate the proposal. Those Sellers proposing the sale of generation facilities should include the following:

- Complete description of the facilities included in the sale.
- Firm offer price
- Term sheet which identifies key terms and conditions
- Latest condition report
- Projected operating data including output, heat rate, and forced outage rate as appropriate
- Projected operating expenses and capital expenditures
- For existing facilities, provide historical operating data, operating expenses, and capital expenditures for a minimum of the latest five years or since the start of commercial operation if in commercial operation for less than five years.

13. **RFP Schedule** - All proposals must be complete in all material respects and be received no later than 4 p.m. EST on Friday, January 28, 2011. Email proposals must be followed up with a signed original within two business days.

RFP Issued	Wednesday, December 1, 2010
Proposals Due	Friday, January 28, 2011
Evaluation Completed	Friday, March 18, 2011

Proposals will not be viewed until 4 p.m. EST on Friday, January 28, 2011. After the evaluation of proposals is completed, the Companies will enter into negotiations on a timely basis if the Companies determine that a proposal is in their customer's best interests. Any subsequent contracts will be contingent on obtaining the necessary regulatory approvals.

#### 14. **Treatment of Proposals**

14.1. The Companies reserve the right, without qualification, to select or reject any or all proposals and to waive any formality, technicality, requirement, or irregularity in the proposals received. The Companies also reserve the right to modify the RFP or request further information, as necessary, to complete its evaluation of the proposals received.

14.2. Sellers who submit proposals do so without recourse against the Companies for either rejection by the Companies or failure to execute an agreement for purchase of capacity and/or energy for any reason. Sellers are responsible for any and all costs incurred in the preparation and submission of a proposal and/or any subsequent negotiations regarding a proposal.

15. **Confidentiality** - As regulated utilities, it is expected that the Companies will be required to release proposal information to various government agencies and/or others as part of a regulatory review or legal proceeding. The Companies will use reasonable efforts to request confidential treatment for such information to the extent it is labeled in the proposal as "Confidential." Please note that confidential treatment is more likely to be granted if limited amounts of information are designated as confidential rather than large portions of the proposal. However, the Companies cannot guarantee that the receiving agency, court, or other party will afford confidential treatment to this information. Subject to applicable law and regulations, the Companies also reserve the right to disclose proposals to their officers, employees, agents, consultants, and the like (and those of its affiliates) for the purpose of evaluating proposals. Otherwise, the Companies will not disclose any information contained in the Seller's proposal that is marked "Confidential," to another party except to the extent that (i) such disclosures are required by law or by a court or governmental or regulatory agency having appropriate jurisdiction, or (ii) the Companies subsequently obtain the information free of any confidentiality obligations from an independent source, or (iii) the information enters the public domain through no fault of the Companies.

16. **Contacts** - All correspondence should be directed to:

Charles A. Freibert, Jr.  
Director Marketing  
LG&E and KU Energy LLC  
Energy Services  
220 West Main Street  
Louisville, KY 40202

E-mail: [charlie.freibert@lge-ku.com](mailto:charlie.freibert@lge-ku.com)  
Phone: 502-627-3673

In closing, I look forward to your response by 4 p.m. EST on Friday, January 28, 2011, and the possibility of doing business to meet the Companies' future power needs. Your interest in this request is greatly appreciated. Please contact me if you have any questions and would like to discuss further. For immediate concerns in my absence, please contact Donna LaFollette at 502-627-4765.

Sincerely,



*Charles A. Freibert, Jr.*

Charles A. Freibert, Jr.

## LG&E and KU RFP Data Form

Note to bidder: Provide a separate term sheet for each different "Term of Contract" or capacity offering

**Seller** \_\_\_\_\_

### **Product and Generation Characteristics:**

Proposal Description \_\_\_\_\_

\_\_\_\_\_

Generation Source Description \_\_\_\_\_

Transmission Interconnection Point of the Source \_\_\_\_\_

Point of interconnection to the grid \_\_\_\_\_

Fuel Price (if applicable) \_\_\_\_\_

Start Date and Term of Contract \_\_\_\_\_

Summer Firm Capacity Amount \_\_\_\_\_ MW

Summer Maximum Dispatch Capacity Amount (if applicable) \_\_\_\_\_ MW

Summer Minimum Dispatch Capacity Amount (if applicable) \_\_\_\_\_ MW

Guaranteed Heat Rate (or heat rate curve) (if applicable) \_\_\_\_\_ Btu/kwh

Winter Firm Capacity Amount \_\_\_\_\_ MW

Winter Maximum Dispatch Capacity Amount (if applicable) \_\_\_\_\_ MW

Winter Minimum Dispatch Capacity Amount (if applicable) \_\_\_\_\_ MW

Output in 10 minutes \_\_\_\_\_ MW

Ramp capability \_\_\_\_\_ MW/minute

Start-up time to minimum capability \_\_\_\_\_

Start-up time to maximum capability \_\_\_\_\_

Minimum run time \_\_\_\_\_

Minimum down time \_\_\_\_\_

Constraints on production time (if applicable) \_\_\_\_\_

Forced Outage Rate \_\_\_\_\_ %

Guaranteed Availability \_\_\_\_\_

Planned Outage Schedule \_\_\_\_\_

### **Pricing Information (provide a separate pricing form if applicable):**

Sale Price \_\_\_\_\_ or, Capacity Price \_\_\_\_\_ (\$/MW-yr)

Year of Capacity Price Quote \_\_\_\_\_

Capacity Price Escalation/Year \_\_\_\_\_

Energy Pricing (Provide energy pricing in one of the following formats)

1. Fixed Energy price over the term \_\_\_\_\_ (\$/MWh)
2. Escalating Price Over Term \_\_\_\_\_ (\$/MWh) escalating at \_\_\_\_\_ % per year
3. Production Cost: Variable O&M + Guaranteed Heat Rate \* Fuel Price over Term
  - a. Variable O&M \_\_\_\_\_ (\$/MWh)
  - b. Guaranteed Heat Rate \_\_\_\_\_ (Btu/kwh)
  - c. Fuel Price \_\_\_\_\_

Note: Energy pricing to include all ancillary service costs, taxes and other fees necessary for delivery of the energy to the Delivery Point.

**RFP**  
**RECIPIENTS**

REQUEST	COUNTERPARTYID	COUNTERPARTYNAME	CITY	STATE
1	Advance power	Advance Power	Boston	MA
2	AECI	Associated Electric Cooperative Inc.	Springfield	MO
3	AEP	American Electric Power Service Corporat	Columbus	OH
4	AES Wind	Alternative Energy Solutions	Arlington	VA
5	ALCOAGEN	Alcoa Power Generating Inc.	Knoxville	TN
6	ALLEGHENYENERG	Allegheny Energy Supply Company, LLC	Greensburg	PA
7	AMEM	Ameren Energy Marketing Company	St. Louis	MO
8	AMPO	American Municipal Power	Columbus	OH
9	ARCLIGHTENERGY	ArcLight Energy Marketing, LLC	Boston,	MA
10	BLACKOAKCAP	Black Oak Capital, LLC	New York,	NY
11	BNPPARIBAS	BNP Paribas Energy Trading GP	Houston,	TX
12	BPENERGYCO	BP Energy Company	Houston,	TX
13	BREC-ACES	Big Rivers Electric Corporation	Carmel	IN
14	BROOKFLDEN	Brookfield Energy Marketing Inc.	Gatineau	QC
15	Calpine	Calpine Corporation	Houston	TX
16	Carbon Solutions	Carbon Solutions Group	Chicago	IL
17	CARGILL	Cargill Power Markets, LLC	Hopkins,	MN
18	CITIGRPENERGY	Citigroup Energy Inc.	Houston	TX
19	Clean Solutions/mindspring	Clean Solutions Company	Ashland	OR
20	Clipper Wind Power	Clipper Windpower	Carpinteria	CA
21	COBBELECTRIC	Cobb Electric Membership Corporation	Marietta	GA
22	Cogentrix Energy	Cogentrix Energy	Charlotte	NC
23	CONECTIV	Conectiv Energy Supply, Inc.	Wilmington	DE
24	CONOCOPHILLIPS	ConocoPhillips Company	Houston	TX
25	CONSTELL	Constellation Energy Commodities Group	Baltimore	MD
26	CONSUMENERGY	Consumers Energy Company	Jackson	MI
27	CountryMark Energy Resources	CountryMark Energy Resources	Mt Vernon	IN
28	CPV	Competitive Power Ventures	Braintree	MA
29	CWLPS	City Water Light and Power, Springfield	Springfield	IL
30	DEMI	Dominion Energy Marketing, Inc.	Richmond	VA
31	Donica Wind	Donica Creek, LLC		KS
32	DTEENERGY	DTE Energy Trading inc.	Ann Arbor	MI
33	DUKECAROLINAS	Duke Energy Carolinas, LLC	Cincinnati	OH
34	DUKEENERGYOHIO	Duke Energy Ohio, Inc.	Cincinnati	OH
35	DYNEGY	Dynegy Marketing and Trade, LLC	Houston	TX

REQUEST	COUNTERPARTYID	COUNTERPARTYNAME	CITY	STATE
36	EDFTRADINGNA	EDF Trading North America, LLC	Houston,	TX
37	EKPC	East Kentucky Power Cooperative, Inc.	Winchester	KY
38	Element Power	Element Power	Portland	OR
39	ENDUREENERGY	Endure Energy, L.L.C	Overland Park,	KS
40	Energy Systems Group	Energy Systems Group	Newburgh	IN
41	Entergy	Entergy	Beaumont	TX
42	Enviropower	Enviro Power LLC	Lexington	KY
43	ERORA	The ERORA Group, LLC	Louisville	KY
44	ESI	Entergy Services, Inc.	The Woodlands	TX
45	Estill County Energy	Estill County Energy Partners LLC	Lexington	KY
46	Everpower	EverPower Wind Holdings, Inc	Bellefontaine	OH
47	EXELONGEN	Exelon Generation Company, LLC	Kennett Square	PA
48	Fellon and McCord	Fellon McCord	Louisville	KY
49	First Energy	First Energy Corp	Akron	OH
50	Fortis Wind Energy	Fortis Wind Energy US	Ithaca	NY
51	GDFSUEZENERGY	GDF SUEZ Energy Marketing NA, Inc.	Houston,	TX
52	Global Energy	Global Energy Inc.	Cincinnati	OH
53	HE	Hoosier Energy Rural Electric Cooperativ	Bloomington	IN
54	HMPL	Henderson Municipal Power and Light	Henderson	KY
55	Horizon Wind Energy	Horizon Wind Energy LLC	Houston	Tx
56	HQENERGY(US)	H.Q. Energy Services (U.S.) Inc.	Montreal	QC
57	IMEA	Illinois Municipal Electric Agency	Springfield,	IL
58	IMPA	Indiana Municipal Power Agency	Carmel	IN
59	Indeck	Indeck Energy Services, INC	Buffalo Grove	IL
60	INTEGRYS	Integrys Energy Services, Inc.	DePere,	WI
61	Intrinergy	Enviva LP	Bethesda	MD
62	Invenergy	Invenergy LLC	Chicago	IL
63	IPALCO	Indianapolis Power & Light Company	Indianapolis	IN
64	JEA	Jacksonville Electric Auth	Jacksonville	FL
65	KCPL	Kansas City Power & Light Company	Kansas City	MO
66	Kelson Energy	Magnolia Energy	Columbia	MD
67	LS Power Development LLC	LS Power Development LLC	New York,	NY
68	LUMINANTENERGY	Luminant Energy Company LLC	Dallas	TX
69	MERRILLCMMMD	Merrill Lynch Commodities, Inc.	Houston	TX
70	MIDAMERICAN	MidAmerican Energy Company	Urbandale	IA

REQUEST	COUNTERPARTYID	COUNTERPARTYNAME	CITY	STATE
71	MIDWESTISO	Midwest Independent Transmission System	Carmel	IN
72	Moore Ventures	Moore Ventures, LLC	Lexington	KY
73	MPPA	Michigan Public Power Agency	Lansing	MI
74	NextEra Energy	NextEra Energy Resources, LLC	Juno Beach	FL
75	NIPS	Northern Indiana Public Service Company	Merrillville	IN
76	OCCIDENPOWER	Occidental Power Services, Inc.	Houston	TX
77	OVEC	Ohio Valley Electric Corporation	Piketon	OH
78	OWENBOROMU	Owensboro Municipal Utilities	Owensboro	KY
79	Pace Global	Pace Global Energy Services, LLC	Fairfax	Va
80	Peabody	Peabody Energy	St. Louis	MO
81	PJM	PJM Interconnection, L.L.C	NORRISTOWN	PA
82	POWERSOUTH	PowerSouth Energy Cooperative	Andalusia	AL
83	PPLENERGYPLUS	PPL EnergyPlus, LLC	Allentown	PA
84	PROGRCAROLINA	Carolina Power & Light Company	Raleigh	NC
85	Progress Energy	Progress Energy	Raleigh	NC
86	PSC	Public Service Company of Colorado	Denver,	CO
87	PSEGENERGY	PSEG Energy Resources & Trade LLC	Newark	NJ
88	RAIN	Rainbow Energy Marketing Corporation	Bismarck	ND
89	Republic	Republic Energy, INC	Dallas	TX
90	SC	South Carolina Pub Serv Auth	Moncks Corner	SC
91	SCC	Southern Company Services, Inc.	Birmingham	AL
92	SCE&G	South Carolina Electric & Gas Company	Columbia	SC
93	SEMPRA	Sempra Energy Trading LLC	Stamford,	CT
94	SEPA	Southeastern Power Administration	Elberton	GA
95	SHELLENERGYNA	Shell Energy North America (US), L.P.	Houston	TX
96	SIGE	Southern Indiana Gas & Electric Company	Evansville	IN
97	SIPC	Southern Illinois Power Cooperative	Marion	IL
98	Solar Energy Development	Solar Energy Development, LLC	Lexington	KY
99	Solar Energy Solutions	Solar Energy Solutions	Lexington	KY
100	SOSINTL	System Operations Success Intl, LLC	Charlotte	NC
101	Space Energyu Terrestrial	Space Energyu Terrestrial , INC	Fort Lauderdale	FL
102	Summit Energy	Summit Power Group	Seattle	WA
103	TEA	The Energy Authority	Jacksonville,	FL
104	TENASKAPOWER	Tenaska Power Services Company	Arlington	TX
105	TRANSALTAUS	TransAlta Energy Marketing (U.S.) Inc.	Calgary	AB

REQUEST	COUNTERPARTYID	COUNTERPARTYNAME	CITY	STATE
106	TVA	Tennessee Valley Authority	Chattanooga	TN
107	UE	Union Electric Company	St. Louis	MO
108	UPC Wind	First Wind	Boston	MA
109	WESTARENERGY	Westar Energy, Inc.	Topeka	KS
110	WFEC	Western Farmers Electric Cooperative	Anadarko	OK
111	Whayne Supply (Catepillar)	Caterpillar Inc.	Mattoon	IL
112	Williams Power	Williams	Tulsa	OK
113	WM Renewable Energy	Waste Management Inc	Houston	TX
114	WVHYDRO	WV Hydro, Inc.	Aiken	SC
115	WVPA	Wabash Valley Power Association, Inc.	Indianapolis	IN
116	Zeropoint	ZeroPoint Clean Tech, Inc	Atlanta	GA

# **RFP RESPONSES**



This information is  
being filed pursuant to a  
Petition for Confidential Protection.

**ASSET PURCHASE AGREEMENT**

**BETWEEN**

**BLUEGRASS GENERATION COMPANY, L.L.C.**

**AND**

**KENTUCKY UTILITIES COMPANY**

**AND**

**LOUISVILLE GAS AND ELECTRIC COMPANY**

**DATED AS OF**

**SEPTEMBER 14, 2011**

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## ASSET PURCHASE AGREEMENT

This Asset Purchase Agreement (this "**Agreement**"), dated as of September 14, 2011, is entered into between Bluegrass Generation Company, L.L.C., a Delaware limited liability company ("**Seller**") and Kentucky Utilities Company, a Kentucky corporation, and Louisville Gas and Electric Company, a Kentucky corporation (collectively, the "**Buyer**") (Seller and Buyer each a "**Party**" and together the "**Parties**").

### RECITALS:

WHEREAS, Seller is engaged in the business of owning and operating three natural gas fired simple cycle power generation units (each a "**Unit**") located on the Real Property (as defined below) (the Units and all supporting infrastructure and other improvements on the Real Property, the "**Plant**") (the "**Business**");

WHEREAS, Seller operates the Business through a financing arrangement with Oldham County, Kentucky ("Oldham") such that Seller makes payments in lieu of property taxes ("**PILOT Payments**") and lease payments to Oldham under the terms of the In-Lieu of Tax Payments Agreement made and entered as of November 1, 2000, by and between Oldham and Seller (the "**PILOT Agreement**") and the lease dated as of November 1, 2000 between Seller as lessee and Oldham as lessor, as such lease has been amended pursuant to amendments dated December 27, 2001, December 27, 2002, and January 19, 2006 (the "**Lease**"); and

WHEREAS, Seller wishes to sell and assign to Buyer, and Buyer wishes to purchase and assume from Seller, substantially all the assets, and certain specified liabilities, of the Business, subject to the terms and conditions set forth herein; and

WHEREAS, as an inducement to Buyer entering into this Agreement, Seller Parent has executed simultaneously herewith a guarantee whereby Seller Parent guarantees Seller's performance of its obligations under this Agreement;

NOW, THEREFORE, in consideration of the mutual covenants and agreements hereinafter set forth and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

**ARTICLE I  
DEFINITIONS**

The following terms have the meanings specified or referred to in this **Article I**:

**"Acquisition Proposal"** has the meaning set forth in **Section 6.03(a)(i)**.

**"Action"** means any claim, action, cause of action, lawsuit, arbitration, audit, notice of violation, legal proceeding, litigation, citation, summons, or subpoena of any nature, whether civil, criminal, administrative, or regulatory, whether at law or in equity.

**"Actual Prorated Amount"** has the meaning set forth in **Section 2.06(c)**.

**"Affiliate"** of a Person means any other Person that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such Person. The term "control" (including the terms "controlled by" and "under common control with") means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by contract or otherwise.

**"Agreement"** has the meaning set forth in the preamble.

**"Allocation Schedule"** has the meaning set forth in **Section 2.07**.

**"Assigned Contracts"** has the meaning set forth in **Section 2.01(b)**.

**"Assigned Intellectual Property Assets"** has the meaning set forth in **Section 2.01(b)**.

**"Assignment and Assumption Agreement"** has the meaning set forth in **Section 3.02(a)(ii)** (*Closing Deliverables*).

**"Assumed Liabilities"** has the meaning set forth in **Section 2.03**.

**"Balance Sheet"** has the meaning set forth in **Section 4.04**.

**"Balance Sheet Date"** has the meaning set forth in **Section 4.04**.

**"Benefit Plan"** means each benefit, retirement, employment, compensation, incentive, stock option, restricted stock, stock appreciation right, phantom equity, change in control, severance, vacation, paid time off, fringe-benefit and other similar agreement, plan, policy, program and other arrangement (and any amendments thereto), whether or not reduced to writing, in effect and covering one or more Employees, former employees and the beneficiaries and dependents of any such Employee or former employee of the Business, and is maintained, sponsored, contributed to, or required to be contributed to by Seller, or under which Seller has or may have any liability for premiums or benefits.

"**Bill of Sale**" has the meaning set forth in **Section 3.02(a)(i)**.

"**Books and Records**" has the meaning set forth in **Section 2.01(j)**.

"**Business**" has the meaning set forth in the recitals.

"**Business Day**" means any day except Saturday, Sunday or any other day on which commercial banks located in Louisville, Kentucky are authorized or required by Law to be closed for business.

"**Buyer**" has the meaning set forth in the preamble.

"**Buyer Closing Certificate**" has the meaning set forth in **Section 7.03(e)**.

"**Buyer Indemnitees**" has the meaning set forth in **Section 8.02**.

"**Casualty Notice**" has the meaning set forth in **Section 6.17(a)(i)**.

"**Casualty Loss**" has the meaning set forth in **Section 6.17(a)(i)**.

"**Casualty Termination Notice**" has the meaning set forth in **Section 6.17(a)(ii)**.

"**CERCLA**" means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986, 42 U.S.C. §§ 9601 et seq.

"**Closing**" has the meaning set forth in **Section 3.01**.

"**Closing Date**" has the meaning set forth in **Section 3.01**.

"**Code**" means the Internal Revenue Code of 1986, as amended.

"**Condemnation Notice**" has the meaning set forth in **Section 6.17(c)(i)**.

"**Condemnation Termination Notice**" has the meaning set forth in **Section 6.17(c)(ii)**.

"**Condemnation Value**" has the meaning set forth in **Section 6.17(c)(iv)**.

"**Contracts**" means all legally binding contracts, leases, deeds, mortgages, licenses, instruments, notes, commitments, undertakings, indentures, joint ventures and all other legally binding arrangements, whether written or oral, but excluding Permits.

"**Deductible**" has the meaning set forth in **Section 8.04(b)(ii)**.

"**Deed**" has the meaning set forth in **Section 3.02(a)(iv)**.

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"**De Minimis Amount**" has the meaning set forth in **Section 8.04(b)(i)**.

"**De Minimis Claim**" has the meaning set forth in **Section 8.04(b)(i)**.

"**Direct Claim**" has the meaning set forth in **Section 8.07(c)**.

"**Disclosure Schedules**" means the Disclosure Schedules delivered by Seller and Buyer concurrently with the execution and delivery of this Agreement.

"**Dollars or \$**" means the lawful currency of the United States.

"**Employees**" means with respect to a Person, those individuals who are considered to be employees of that Person under applicable Law.

"**Encumbrance**" means any charge, claim, pledge, lien (statutory or other), condition set forth in recorded real estate documents, equitable interest, option, security interest, mortgage, easement, encroachment, right of way, right of first refusal or similar restriction.

"**Environmental Attributes**" means any emissions and renewable energy credits, energy conservation credits, benefits, offsets and allowances, emission reduction credits or words of similar import or regulatory effect (including emissions reduction credits or allowances under all applicable emission trading, compliance or budget programs, or any other federal, state or regional emission, renewable energy or energy conservation trading or budget program) that are held by Seller or are allocated on behalf of the Plant by Seller or allocated to Seller for the ownership, lease, operation, use or maintenance of the Business or the Purchased Assets as of: (i) the date of this Agreement; and (ii) future years for which such allocations have been established and which are in effect as of the date of this Agreement.

"**Environmental Claim**" means any Action, Governmental Order, lien, fine, penalty, or, as to each, any settlement or judgment arising therefrom, by or from any Person alleging liability of whatever kind or nature (including liability or responsibility for the costs of enforcement proceedings, investigations, cleanup, governmental response, removal or remediation, natural resources damages, property damages, personal injuries, medical monitoring, penalties, contribution, indemnification and injunctive relief) arising out of, based on or resulting from: (a) the presence, Release of, or exposure to, any Hazardous Materials; or (b) any actual or alleged non-compliance with any Environmental Law or term or condition of any Environmental Permit.

"**Environmental Law**" means any applicable Law, and any Governmental Order or binding agreement with any Governmental Authority: (a) concerning pollution (or the cleanup thereof) or the protection of natural resources, endangered or threatened species, human health or safety, or the environment (including ambient air, soil, surface water or groundwater, or subsurface strata); or (b) concerning the presence of, exposure to, or the

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management, manufacture, use, containment, storage, treatment, generation, discharge, transportation, processing, production, disposal or remediation of any Hazardous Materials. The term "Environmental Law" includes, without limitation, the following (including their implementing regulations and any state analogs): the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986, 42 U.S.C. §§ 9601 et seq.; the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. §§ 6901 et seq.; the Federal Water Pollution Control Act of 1972, as amended by the Clean Water Act of 1977, 33 U.S.C. § 1251 et seq.; the Toxic Substances Control Act of 1976, as amended, 15 U.S.C. §§ 2601 et seq.; the Emergency Planning and Community Right-to-Know Act of 1986, 42 U.S.C. §§ 11001 et seq.; the Clean Air Act of 1966, as amended by the Clean Air Act Amendments of 1990, 42 U.S.C. §§ 7401 et seq.; and the Occupational Safety and Health Act of 1970, as amended, 29 U.S.C. §§ 651 et seq.

"**Environmental Notice**" means any notice of violation or infraction, notice respecting any Environmental Claim, or notice of intent to file a citizens suit for an actual or alleged non-compliance with any Environmental Law or any term or condition of any Environmental Permit.

"**Environmental Permit**" means any Permit under Environmental Law.

"**EPA**" means the Environmental Protection Agency.

"**ERISA**" means the Employee Retirement Income Security Act of 1974, as amended, and the regulations promulgated thereunder.

"**Estimated Prorated Amount**" has the meaning set forth in **Section 2.06(b)**.

"**Estimated Proration Adjustment Amount**" has the meaning set forth in **Section 2.06(b)**.

"**Estimated Restoration Cost**" has the meaning set forth in **Section 6.17(b)**.

"**Excluded Assets**" has the meaning set forth in **Section 2.02**.

"**Excluded Contracts**" has the meaning set forth in **Section 2.02(a)**.

"**Excluded Liabilities**" has the meaning set forth in **Section 2.04**.

"**FERC**" means the Federal Energy Regulatory Commission.

"**Financial Statements**" has the meaning set forth in **Section 4.04**.

"**FIRPTA Certificate**" has the meaning set forth in **Section 7.02(m)**.



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"**FPA 203**" means Section 203 of the Federal Power Act, as amended, 18 U.S.C. §824b.

"**GAAP**" means United States generally accepted accounting principles in effect from time to time.

"**Governmental Authority**" means any federal, state, local or foreign government or political subdivision thereof, or any agency or instrumentality of such government or political subdivision, or any self-regulated organization or other non-governmental regulatory authority or quasi-governmental authority (to the extent that the rules, regulations or orders of such organization or authority have the force of Law), or any arbitrator, court or tribunal of competent jurisdiction.

"**Governmental Order**" means any order, writ, judgment, injunction, decree, stipulation, agreement, determination or award entered by or with any Governmental Authority.

"**Hazardous Materials**" means: (a) any material, substance, chemical, waste, product, derivative, compound, mixture, solid, liquid, mineral or gas, in each case, whether naturally occurring or manmade, that is designated as "hazardous", "acutely hazardous", "toxic", or words of similar import or regulatory effect under Environmental Laws; and (b) any petroleum or petroleum-derived products, radon, radioactive materials or wastes, asbestos in any form, lead or lead-containing materials, urea formaldehyde foam insulation and polychlorinated biphenyls.

"**HSR Act**" means the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended.

"**Indemnified Party**" has the meaning set forth in **Section 8.04(c)7**.

"**Indemnifying Party**" has the meaning set forth in **Section 8.04(c)7**.

"**Independent Accounting Firm**" has the meaning set forth in **Section 2.07**.

"**Insurance Policies**" has the meaning set forth in **Section 4.123**.

"**Intellectual Property**" means all intellectual property rights, however arising, whether pursuant to statutory or common Law, and whether or not registered, including: (a) trademarks, service marks, trade names, brand names, logos, trade dress and other, and all registrations and applications for registration of such trademarks, including intent-to-use applications, and all issuances, extensions and renewals of such registrations and applications; (b) internet domain names, whether or not trademarks, registered in any generic top level domain by any authorized private registrar or Governmental Authority; (c) all copyrights, registrations and applications for registration of such copyrights, and all issuances, extensions and renewals of such registrations and applications; (d) confidential information, designs, know-how, processes, and trade secrets, whether or not

patentable; and (e) patents and pending patent applications, reissues, extensions, reexaminations and renewals of such patents and applications.

**"Intellectual Property Assets"** means all Intellectual Property that is owned by Seller and used in or necessary for the conduct of the Business as currently conducted, and includes all Intellectual Property Registrations and Intellectual Property Licenses.

**"Intellectual Property Assignments"** has the meaning set forth in **Section 3.02(a)(iii)**.

**"Intellectual Property Licenses"** means all licenses, sublicenses and other Contracts by or through which other Persons, including Seller's Affiliates, grant Seller exclusive or non-exclusive rights or interests in or to any Intellectual Property that is used in or necessary for the conduct of the Business as currently conducted.

**"Intellectual Property Registrations"** means all Intellectual Property Assets that are subject to any issuance, registration, application or other filing by, to or with any Governmental Authority or authorized private registrar in any jurisdiction, including registered trademarks, domain names and copyrights, issued and reissued patents and pending applications for any of the foregoing.

**"Interim Balance Sheet"** has the meaning set forth in **Section 4.04**.

**"Interim Balance Sheet Date"** has the meaning set forth in **Section 4.04**.

**"Interim Financial Statements"** has the meaning set forth in **Section 4.04**.

**"Inventory"** has the meaning set forth in **Section 2.01(a)**.

**"KPSC"** means the Kentucky Public Service Commission.

**"Knowledge of Seller or Seller's Knowledge"** means the actual knowledge of the individuals listed on Section 1.01(k) of the Disclosure Schedules, after due inquiry, which includes the review of the Purchase and Sale Agreement, dated as of August 9, 2009 (along with its corresponding schedules and exhibits) as the same relates to Seller with respect to the change in control of Seller that occurred on November 30, 2009, and the inquiry as to Article IV hereof of Mark Yates.

**"Law"** means any applicable statute, law, ordinance, regulation, rule, code, order, constitution, treaty, common law, judgment, decree, other requirement or rule of law of any Governmental Authority.

**"Lease"** has the meaning set forth in the recital.

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"**Liabilities**" means liabilities, obligations or commitments of any nature whatsoever, asserted or unasserted, known or unknown, absolute or contingent, accrued or unaccrued, matured or unmatured or otherwise.

"**Losses**" means losses, damages, liabilities, deficiencies, Actions, judgments, interest, awards, penalties, fines, costs or expenses of whatever kind, including reasonable attorneys' fees and the cost of enforcing any right to indemnification hereunder and the cost of pursuing any insurance providers.

"**Material Adverse Effect**" means any event, occurrence, fact, condition or change that is, or would reasonably be expected to become, individually or in the aggregate, materially adverse to (a) the business, results of operations, condition (financial or otherwise) or assets of the Business, or (b) the ability of Seller to consummate the transactions contemplated hereby in accordance herewith; *provided, however*, that the following shall not be considered when determining whether a Material Adverse Effect has occurred: any change, event, effect or occurrence (or changes, events, effects or occurrences taken together) resulting from (a) any change generally affecting the international, national or regional electric generating, transmission or distribution industry; (b) any change generally affecting the international, national or regional wholesale or retail markets for electric power, including pricing; (c) any change generally affecting the international, national or regional wholesale or retail markets for the natural gas industry; (d) any change in markets for commodities or supplies, including electric power, natural gas or fuel and water, as applicable, used in connection with the Business; (e) any change in general regulatory or political conditions, including any engagements of hostilities, acts of war or terrorist activities or changes imposed by a Governmental Authority associated with additional security; (f) any change in the international, national or regional electric transmission or distribution systems or operations thereof; (g) any change in any Laws (including Environmental Laws) or industry standards; (h) any change in the financial condition or results of operation of the Business caused by the sale pursuant to this Agreement; (i) any change in the financial, banking, or securities markets (including any suspension of trading in, or limitation on prices for, securities on the New York Stock Exchange, American Stock Exchange, or Nasdaq Stock Market) or any change in the general national or regional economic or financial conditions; (j) any actions to be taken pursuant to or in accordance with this Agreement; (k) the announcement or pendency of the transactions contemplated hereby; (l) any change in the ability to further develop or expand the Business; (m) any changes to a regional transmission operator or capacity markets; (n) any new power plant entrants and their effect on pricing or transmission.

"**Material Contracts**" has the meaning set forth in **Section 4.06(a)**.

"**Material Suppliers**" has the meaning set forth in **Section 6.13**.

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"**MPPAA Plan**" means a multiemployer Plan, as described in Section 4001(a)(3) of ERISA.

"**Non-Reimbursable Damages**" has the meaning set forth in **Section 8.04(h)**.

"**Party**" has the meaning set forth in the recitals.

"**Permits**" means all permits, licenses, franchises, approvals, authorizations, registrations, certificates of authorization, variances and similar rights obtained, or required to be obtained, from Governmental Authorities.

"**Permitted Encumbrances**" has the meaning set forth in **Section 4.07(a)**.

"**Person**" means an individual, corporation, partnership, joint venture, limited liability company, Governmental Authority, unincorporated organization, trust, association or other entity.

"**PILOT Agreement**" has the meaning set forth in the recitals.

"**PILOT Payments**" has the meaning set forth in the recitals.

"**PILOT Program Termination**" has the meaning set forth in **Section 6.08(a)(ii)**.

"**Plant**" has the meaning set forth in the recitals.

"**Post-Closing Tax Period**" means any taxable period beginning after the Closing Date and, with respect to any taxable period beginning before and ending after the Closing Date, the portion of such taxable period beginning after the Closing Date.

"**Prepayments**" has the meaning set forth in **Section 2.01(h)**.

"**Pre-Closing Tax Period**" means any taxable period ending on or before the Closing Date and, with respect to any taxable period beginning before and ending after the Closing Date, the portion of such taxable period ending on and including the Closing Date.

"**Prorated Amount**" has the meaning set forth in **Section 2.06(f)**.

"**Prorated Difference**" has the meaning set forth in **Section 2.06(b)**.

"**Prorated Items**" has the meaning set forth in **Section 2.06(a)**.

"**Proration Adjustment Amount**" has the meaning set forth in **Section 2.06(c)**.

"**Proration Calculation**" has the meaning set forth in **Section 2.06(c)**.

"**Purchase Date**" means November 30, 2009.

"**Purchase Price**" has the meaning set forth in **Section 2.05**.

"**Purchased Assets**" has the meaning set forth in **Section 2.01**.

"**Qualified Benefit Plan**" means each Benefit Plan that is intended to be qualified under Section 401(a) of the Code.

"**Real Property**" has the meaning set forth in **Section 4.09(a)**.

"**Release**" means, with respect to Hazardous Materials, any actual release, spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, abandonment, disposing or allowing to escape or migrate into or through the environment (including, without limitation, ambient air (indoor or outdoor), surface water, groundwater, land surface or subsurface strata or within any building, structure, facility or fixture), that is punishable (by fines or otherwise) or requires remediation under applicable Environmental Laws.

"**Representative**" means, with respect to any Person and its Affiliates, any and all directors, officers, employees, limited and general partners, consultants, financial advisors, counsel, accountants and other agents of such Person.

"**Request Date**" has the meaning set forth in **Section 2.06(b)**.

"**Restoration Cost**" has the meaning set forth in **Section 6.17(a)(i)**.

"**Restore**" has the meaning set forth in **Section 6.17(a)(i)**.

"**Seller**" has the meaning set forth in the preamble.

"**Seller Closing Certificate**" has the meaning set forth in **Section 7.02(i)**.

"**Seller Indemnitees**" has the meaning set forth in **Section 8.03**.

"**Seller Parent**" means Port River, LLC, a Delaware limited liability company.

"**Schedule Update**" has the meaning set forth in **Section 6.18**.

"**Tangible Personal Property**" has the meaning set forth in **Section 2.01(d)**.

"**Taxes**" means all federal, state, local, foreign and other income, gross receipts, sales, use, production, ad valorem, transfer, documentary, franchise, registration, profits, license, lease, service, service use, withholding, payroll, employment, unemployment, excise, severance, environmental, stamp, occupation, premium, property (real or personal), real property gains, windfall profits, customs, duties or other taxes, fees,

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assessments or charges of any kind whatsoever, together with any interest, additions or penalties with respect thereto and any interest in respect of such additions or penalties.

"**Tax Return**" means any return, declaration, report, claim for refund, information return or statement or other document relating to Taxes, including any schedule or attachment thereto, and including any amendment thereof.

"**Third Party Claim**" has the meaning set forth in **Section 8.07(a)**.

"**Transaction Documents**" means this Agreement, the Bill of Sale, the Assignment and Assumption Agreement, Intellectual Property Assignments, Deeds, Parent Guaranty and all other agreements, instruments and documents contemplated by this Agreement, including those that are required to be delivered at the Closing.

"**Unaudited Financial Statements**" has the meaning set forth in **Section 4.04**.

"**Unit**" has the meaning set forth in the recitals.

"**VASCC**" means the Virginia State Corporation Commission.

"**WARN Act**" means the federal Worker Adjustment and Retraining Notification Act of 1988, and similar state, local and foreign laws related to plant closings, relocations, mass layoffs and employment losses.

## ARTICLE II PURCHASE AND SALE

**Section 2.01 Purchase and Sale of Assets.** Subject to the terms and conditions set forth herein, at the Closing, Seller shall sell, assign, transfer, convey and deliver to Buyer, and Buyer shall purchase from Seller, free and clear of any Encumbrances other than Permitted Encumbrances, all right, title and interest in, to and under all of the Purchased Assets owned or leased by Seller. For purposes of this Agreement, the term "**Purchased Assets**" means all of the assets, properties and rights of every kind and nature, whether real, personal or mixed, tangible or intangible, and whether now existing or hereafter acquired (other than the Excluded Assets), which are used or held for use in connection with, the Business, including, without limitation, the following:

(a) all inventory, raw materials, supplies, parts and other inventories used or useful in the ownership, maintenance or operation of the Business and the Plant (except for those items listed on **Section 2.01(a)** of the Disclosure Schedules, "**Inventory**").

(b) all Contracts, including Intellectual Property Licenses, set forth on **Section 2.01(b)** of the Disclosure Schedules (the "**Assigned Contracts**");

(c) all Intellectual Property Assets (the "**Assigned Intellectual Property Assets**");

(d) all furniture, fixtures, equipment, machinery, tools, vehicles, office equipment, supplies, computers, telephones and other tangible personal property (the "**Tangible Personal Property**");

(e) all Real Property;

(f) the Permits, including Environmental Permits, which are held by Seller and required for the conduct of the Business as currently conducted or for the ownership and use of the Purchased Assets, including, without limitation, those listed on **Section 4.15(b)** (*Compliance with Law; Permits*) and **Section 4.16(b)** (*Environmental Matters*) of the Disclosure Schedules;

(g) all rights to any Actions of any nature available to or being pursued by Seller to the extent directly arising from the Business, the Purchased Assets or the Assumed Liabilities, whether arising by way of counterclaim or otherwise, but only to the extent that such Actions are with respect to the title to, or to the preservation or restoration of, the Purchased Assets or the Assumed Liabilities following Closing;

(h) all prepaid expenses, credits, claims, security, refunds, rights of recovery, rights of set-off, rights of recoupment, deposits, charges, sums, fees (including any such item relating to the payment of Taxes) and advance payments relating to the ownership of the Business and the Purchased Assets following Closing, but not including any such items attributable to the period prior to Closing or the Excluded Assets, as set forth on **Section 2.01(h)** of the Disclosure Schedules (the "**Prepayments**");

(i) all of Seller's rights under warranties, indemnities and all similar rights against third parties to the extent such rights are with respect to maintaining title to or preserving or restoring the Purchased Assets following Closing;

(j) originals, or where not practicable, copies, of books and records of the Seller which are directly related to the Business, and which include the following: trial balances, general and subsidiary ledgers and other accounting records, machinery and equipment maintenance files, production data, quality control records and procedures, customer complaints and inquiry files, research and development files, records and data (including material correspondence with any Governmental Authority other than any such correspondence concerning the PILOT Project Termination, sales material and records (including pricing history, total sales, terms and conditions of sale, sales and pricing policies and practices), strategic plans, internal financial statements, marketing and promotional surveys, intellectual property files relating to the Intellectual Property Assets and the Intellectual Property Licenses, if any ("**Books and Records**"); and

(k) all of Seller's rights to any Environmental Attributes with respect to the Business or the Plant.

**Section 2.02 Excluded Assets.** Notwithstanding the foregoing, the Purchased Assets shall not include the following assets (collectively, the "**Excluded Assets**");

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(a) Contracts, including Intellectual Property Licenses, that are not Assigned Contracts (the "**Excluded Contracts**");

(b) the seals, organizational documents, minute books, Tax Returns, books of account or other records having to do with the organization and ownership of Seller;

(c) the assets, properties and rights specifically set forth on **Section 2.02(a)** of the Disclosure Schedules;

(d) the rights which accrue or will accrue to Seller under the Transaction Documents;

(e) except as provided in Section 6.17(a)(v), any insurance benefit or claim, including rights and proceeds, arising out of and relating to events or periods prior to the Closing or which is not related to the Business;

(f) all of Seller's rights under warranties, indemnities and all similar rights against third parties to the extent not explicitly included in the Purchased Assets pursuant to Section 2.01(i).

(g) except for Prepayments, any cash, cash equivalents, certificates of deposit, bank deposits, bank accounts, advance payments to the operator under the operations and maintenance agreement, commercial paper, securities, rights to payment, accounts receivable, rights to refunds, credits, offsets, in-kind or exchange arrangements, income, sales, payroll or other Tax receivables, and any similar rights arising from or relating to the ownership or operation of the Business with respect to any period of time prior to the Closing;

(h) to the extent not Purchased Assets as provided in Section 2.01(g), all claims, causes of action, rights of recovery, rights of set-off, rights to refunds and similar rights of any kind in favor of Seller or any other Person arising from or relating to the ownership or operation of the Business with respect to any period of time prior to the Closing, including any refund of Taxes paid prior to the Closing (including refunds of such Taxes received after the Closing) and described in **Section 2.02(i)** below, except for any of the foregoing to the extent arising from or relating to Assumed Liabilities;

(i) any refund, deposit, credit, payment, adjustment or reconciliation (i) related to real property Taxes, personal property Taxes or other Taxes attributable to any Pre-Closing Tax Period in respect of the Purchased Assets or relating to the Business, whether such refund, adjustment or reconciliation is received as a payment or as a credit against future Taxes payable, or (ii) arising under the Assigned Contracts, Permits or Environmental Permits and relating to any period or portion thereof before the Closing Date, except for any of the foregoing to the extent arising from or relating to Assumed Liabilities;

(j) (A) duplicate copies of all records transferred to Buyer pursuant to this Agreement, (B) all records prepared in connection with the sale of the Business



(including bids received from third parties and analyses relating to the Business, or (C) any other records of Seller other than the Books and Records;

(k) any assets disposed of by Seller after the date of this Agreement to the extent such dispositions are consistent with Seller's obligations under this Agreement; and

(l) all of the issued and outstanding membership interests of Seller.

**Section 2.03 Assumed Liabilities.** Subject to the terms and conditions set forth herein, Buyer shall assume and agree to pay, perform and discharge only the following Liabilities of Seller (collectively, the "**Assumed Liabilities**"), and no other Liabilities:

(a) all Liabilities in respect of the Assigned Contracts but only to the extent that (i) such Liabilities thereunder are required to be performed or relate to the period after the Closing, and (ii) are not Liabilities arising out of any failure to perform, improper performance, warranty or other breach, default or violation by Seller prior to the Closing; and

(b) Taxes arising from Buyer's acquisition of Purchased Assets for which Buyer is responsible pursuant to Section 6.14 to the extent such Taxes are a Liability of Seller.

**Section 2.04 Excluded Liabilities.** Buyer shall not assume and shall not be responsible to pay, perform or discharge any Liabilities of Seller or any of its Affiliates of any kind or nature whatsoever other than the Assumed Liabilities (the "**Excluded Liabilities**"). Seller shall, and shall cause each of its Affiliates to, pay and satisfy in due course all Excluded Liabilities which they are obligated to pay and satisfy. The Excluded Liabilities include, but are not limited to, the following:

(a) any Liabilities of Seller arising or incurred in connection with the negotiation, preparation, investigation and performance of this Agreement, the other Transaction Documents and the transactions contemplated hereby and thereby, including, without limitation, fees and expenses of counsel, accountants, consultants, advisers and others;

(b) any Liability for (i) Taxes of Seller (or any stockholder or Affiliate of Seller) or relating to the Business, the Purchased Assets or the Assumed Liabilities for any Pre-Closing Tax Period; (ii) Taxes that arise out of the consummation of the transactions contemplated hereby or that are the responsibility of Seller pursuant to **Section 6.14**; or (iii) other Taxes of Seller (or any stockholder or Affiliate of Seller) of any kind or description (including any Liability for Taxes of Seller (or any stockholder or Affiliate of Seller) that becomes a Liability of Buyer under any common law doctrine of de facto merger or transferee or successor liability or otherwise by operation of contract or Law); *provided, however*, that Buyer shall be responsible for all sales Tax arising from Buyer's acquisition of the Purchased Assets pursuant to Section 6.14;

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- (c) any Liabilities relating to or arising out of the Excluded Assets;
- (d) any Liabilities in respect of any pending or threatened Action arising out of, relating to or otherwise in respect of the operation of the Business or the Purchased Assets to the extent such Action relates to such operation prior to the Closing;
- (e) any product Liability or similar claim for injury to a Person or property which arises out of or is based upon any express or implied representation, warranty, agreement or guaranty made by Seller, or by reason of the breach of performance or malfunctioning of a product, improper design or manufacture, failure to adequately package, label or warn of hazards or other related product defects of any products at any time manufactured or sold or any service performed by Seller;
- (f) any claims or liabilities arising from Seller's failure to meet applicable standards related to the production and sale of electricity prior to Closing;
- (g) any Liabilities of Seller arising under or in connection with any Benefit Plan providing benefits to any present or former Employee of Seller;
- (h) any Liabilities of Seller for any present or former employees, agents or independent contractors of Seller, including, without limitation, any Liabilities associated with any claims for wages or other benefits, workers' compensation, severance, retention, termination or other payments;
- (i) any trade accounts payable of Seller;
- (j) any Environmental Claims, or Liabilities under Environmental Laws, to the extent arising out of or relating to facts, circumstances or conditions existing on or prior to the Closing or otherwise to the extent arising out of any actions or omissions of Seller;
- (k) any Liabilities of the Business relating or arising from unfulfilled commitments, quotations, purchase orders, customer orders or work orders that (i) do not constitute part of the Purchased Assets issued by the Business' customers to Seller on or before the Closing; (ii) did not arise in the ordinary course of business; or (iii) are not validly and effectively assigned to Buyer pursuant to this Agreement;
- (l) any Liabilities to indemnify, reimburse or advance amounts to any present or former officer, director, employee or agent of Seller (including with respect to any breach of fiduciary obligations by same);
- (m) any Liabilities under the Excluded Contracts or any other Contracts, including Intellectual Property Licenses, but not under any Assigned Contracts (i) which are not validly and effectively assigned to Buyer pursuant to this Agreement; (ii) which do not conform to the representations and warranties with respect thereto contained in this Agreement; or (iii) to the extent such Liabilities arise out of or relate to a breach by Seller of such Contracts prior to Closing;

(n) any Liabilities associated with debt, loans or credit facilities of Seller and/or the Business owing to financial institutions incurred prior to the Closing Date and which are not assumed by Buyer; and

(o) any Liabilities arising out of, in respect of or in connection with the failure by Seller or any of its Affiliates to comply with any Law or Governmental Order.

**Section 2.05 Purchase Price.** The aggregate purchase price for the Purchased Assets shall be \$109,500,000, subject to adjustment pursuant to **Section 2.06** hereof (the "**Purchase Price**"), plus the assumption of the Assumed Liabilities. The Purchase Price shall be paid on the Closing Date by wire transfer of immediately available funds to an account designated in writing by Seller to Buyer on the Closing Date.

**Section 2.06 Purchase Price Adjustment.** The Purchase Price shall be adjusted at the Closing as follows: (i) to provide for the proration between Buyer and Seller of any property Taxes, real or personal (but excluding any PILOT Payments), on the Purchased Assets (and any other items listed on Section 2.06(a) of the Disclosure Schedules) each determined for the calendar year in which the Closing occurs on the basis of no discount, (ii) pursuant to **Section 6.17** (*Casualty and Condemnation*) and (iii) pursuant to **Section 6.04(c)** (*Notice of Certain Events; Removal of Excluded Assets*). Any payments, credits or debits made pursuant to this **Section 2.06** shall be treated as an adjustment to the Purchase Price by the parties for all purposes, unless otherwise required by Law. For avoidance of doubt, the parties agree that the responsibility for Transfer Taxes is set forth in Section 6.14 and are not subject to proration pursuant to this **Section 2.06**.

(a) Buyer and Seller agree that, except as otherwise set forth in this Agreement, with respect to the sale of the Purchased Assets, the items set forth in Section 2.06(i) and all of the items listed on **Section 2.06(a)** of the Disclosure Schedules (including any Prepayments with respect to such items) (collectively, the "**Prorated Items**") relating to the Business and the Purchased Assets shall be prorated as of the Closing in accordance with this **Section 2.06**.

(b) As of the date at least three Business Days prior to the Closing Date, Seller will deliver to Buyer a worksheet setting forth (i) Seller's good faith reasonable estimate of the Prorated Amount (as defined in **Section 2.06(f)**) for each Prorated Item (with respect to each Prorated Item, the "**Estimated Prorated Amount**"), as well as, in each case, a computation thereof, and (ii) an amount equal to the sum of the Estimated Prorated Amounts (the "**Estimated Proration Adjustment Amount**"). In the event that, with respect to any Prorated Item, actual figures are not available as of the time of the calculation of the Estimated Prorated Amount, the Estimated Prorated Amount for such Prorated Item shall be an estimate in good faith. If the Estimated Proration Adjustment Amount is a positive number, the Purchase Price payable at Closing will be increased by an amount equal to such Estimated Proration Adjustment Amount. If the Estimated

Proration Adjustment Amount is a negative number, the Purchase Price payable at Closing will be decreased by an amount equal to the absolute value of such Estimated Adjustment Amount.

(c) On or prior to the date that is 60 days after the Closing Date (the “**Request Date**”), Buyer will deliver to Seller a worksheet (“**Proration Calculation**”) setting forth in reasonable detail and explanation (i) the Prorated Amount for each Prorated Item using the actual available amounts (the “**Actual Prorated Amount**”), (ii) the absolute value of the difference between the Estimated Prorated Amount and the Actual Prorated Amount for each such Prorated Item (the “**Prorated Difference**”), and (iii) an amount equal to the sum of the **Prorated Differences** (the “**Proration Adjustment Amount**”). If the Proration Adjustment Amount (whether a positive or a negative number) is greater than the Estimated Prorated Adjustment Amount (whether a positive or a negative number), Buyer shall pay an amount equal to the Proration Adjustment Amount to Seller within 10 days of the Request Date. If the Estimated Prorated Amount (whether a positive or a negative number) is greater than the Proration Adjustment Amount (whether a positive or a negative number), Seller shall pay an amount equal to the Prorated Adjustment Amount to Buyer within 10 days of the Request Date.

(d) If within 60 days following delivery of the Proration Calculation Seller does not object in writing thereto to Buyer, then the Proration Adjustment Amount shall be as reflected on the Proration Calculation as delivered by Buyer. If within such 60 day period Seller delivers to Buyer a written objection to the computation of the Actual Prorated Amount for any Prorated Item to be determined under this **Section 2.06**, then Buyer and Seller shall negotiate in good faith and attempt to resolve such disagreement. Should such negotiations not result in an agreement within 20 days after delivery of such notice of disagreement, then the matter shall be submitted to the Independent Accounting Firm. The Independent Accounting Firm will deliver to Buyer and Seller a written determination of the Actual Prorated Amount and the Prorated Difference with respect to the disputed item (such determination to include a worksheet setting forth all material calculations used in arriving at such determination and to be based solely on information provided to the Independent Accounting Firm by Buyer and Seller) within 30 days of the submission of the dispute to the Independent Accounting Firm, which determination will be final, binding and conclusive on the parties. In resolving any disagreement, the Independent Accounting Firm may not assign any value to a disputed item greater than the greatest value claimed for such disputed item by any party or lesser than the lowest value claimed for such disputed item by any party. All fees and expenses relating to the work, if any, to be performed by the Independent Accounting Firm pursuant to this **Section 2.06** will be allocated between Seller and Buyer in inverse proportion as each shall prevail in respect of the dollar amount of disputed items so submitted (as finally determined by the Independent Accounting Firm).

(e) If, after the Closing, Seller or any of its Affiliates receives any payment with respect to the Purchased Assets relating to periods on or after the Closing Date, Seller shall pay to Buyer within three Business Days after such receipt an amount equal

to the amount received with respect to periods on or after the Closing Date. If, after the Closing, Buyer or any of its Affiliates receives any payment with respect to the Business relating to periods before the Closing Date, Buyer shall pay to Seller within three Business Days after such receipt an amount equal to the amount received with respect to periods before the Closing Date.

(f) For purposes of this **Section 2.06: "Prorated Amount"** means, (i) with respect to any Prorated Item that is a Prepayment, the amount allocable to the period on or after the Closing Date that was paid by Seller prior to the Closing Date, and (ii) with respect to any other Prorated Item, the amount (expressed as a negative number) allocable to the period prior to the Closing Date, whether or not then due and payable, which was not paid by Seller prior to the Closing Date and which represents an Assumed Liability, excluding, for the avoidance of doubt, any amount paid by Seller after the Closing Date directly to the applicable third party.

**Section 2.07 Allocation of Purchase Price.** Seller and Buyer agree that the Purchase Price and the Assumed Liabilities (plus other relevant items) shall be allocated among the Purchased Assets for all purposes (including Tax, regulatory and financial accounting) as shown on the allocation schedule (the "**Allocation Schedule**"). A draft of the Allocation Schedule shall be prepared by Buyer and delivered to Seller within ninety (90) days following the Closing Date. If Seller notifies Buyer in writing that Seller objects to one or more items reflected in the Allocation Schedule, Seller and Buyer shall negotiate in good faith to resolve such dispute; *provided, however*, that if Seller and Buyer are unable to resolve any dispute with respect to the Allocation Schedule within sixty (60) days following the Closing Date, such dispute shall be resolved by PricewaterhouseCoopers LLP (the "**Independent Accounting Firm**"). The fees and expenses of such accounting firm shall be borne equally by Seller and Buyer. Buyer and Seller shall file all Tax Returns (including amended returns and claims for refund) and information reports in a manner consistent with the Allocation Schedule. Any adjustments to the Purchase Price pursuant to **Section 2.06 (Purchase Price Adjustment)** herein shall be allocated in a manner consistent with the Allocation Schedule.

**Section 2.08 Withholding Tax.** Buyer shall be entitled to deduct and withhold from the Purchase Price all Taxes that Buyer is required to deduct and withhold under any provision of Tax Law. All such withheld amounts shall be treated as delivered to Seller.

**Section 2.09 Third Party Consents.** To the extent that Seller's rights under any Contract or Permit constituting a Purchased Asset, or any other Purchased Asset, may not be assigned to Buyer without the consent of another Person which has not been obtained, this Agreement shall not constitute an agreement to assign the same if an attempted assignment would constitute a breach thereof or be unlawful, and Seller, at its expense,

shall use its commercially reasonable efforts to obtain any such required consent(s) as promptly as possible. If any such consent shall not be obtained or if any attempted assignment would be ineffective or would impair Buyer's rights under the Purchased Asset in question so that Buyer would not in effect acquire the benefit of all such rights, Seller shall use commercially reasonable efforts to act after the Closing for a period of one year to obtain for Buyer the benefits thereunder and shall cooperate with Buyer during such period in any other reasonable arrangement designed to provide such benefits to Buyer. Notwithstanding any provision in this **Section 2.09** to the contrary, Buyer shall not be deemed to have waived its rights under **Section 7.02(d)** hereof unless and until Buyer either provides written waivers thereof or elects to proceed to consummate the transactions contemplated by this Agreement at Closing.

**ARTICLE III**  
**CLOSING**

**Section 3.01 Closing.** Subject to the terms and conditions of this Agreement, the consummation of the transactions contemplated by this Agreement (the "**Closing**") shall take place at the offices of Frost Brown Todd LLC, 400 West Market Street, Suite 3200, Louisville, Kentucky 40202, at 10:00 AM Eastern Time, on the tenth Business Day after all of the conditions to Closing set forth in **Article VII** (*Conditions to Closing*) are either satisfied or waived (other than conditions which, by their nature, are to be satisfied on the Closing Date), or at such other time, date or place as Seller and Buyer may mutually agree upon in writing. The date on which the Closing occurs is herein referred to as the "**Closing Date**". The Closing shall be deemed effective as of 5:00 P.M. (Eastern Time) on the Closing Date.

**Section 3.02 Closing Deliverables.**

- (a) At the Closing, Seller shall deliver to Buyer the following:
- (i) a bill of sale in the form of **Exhibit A** hereto (the "**Bill of Sale**") and duly executed by Seller, transferring the tangible personal property included in the Purchased Assets to Buyer;
  - (ii) an assignment and assumption agreement in the form of **Exhibit B** hereto (the "**Assignment and Assumption Agreement**") and duly executed by Seller, effecting the assignment to and assumption by Buyer of the Purchased Assets and the Assumed Liabilities;
  - (iii) assignments in the form of **Exhibit C** hereto (the "**Intellectual Property Assignments**") and duly executed by Seller, transferring all of Seller's right, title and interest in and to the Intellectual Property Assets and the Intellectual Property Licenses to Buyer, if any;

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(iv) with respect to each parcel of Real Property, a deed in form and substance substantially in the form attached as **Exhibit D** (each, a "Deed") and duly executed and notarized by Seller;

(v) the Seller Closing Certificate;

(vi) the FIRPTA Certificate;

(vii) the certificates of the officer, Secretary or Assistant Secretary of Seller, as applicable, required by **Section 7.02(k)** (*Conditions to Obligations of Buyer*), **Section 7.02(l)** (*Conditions to Obligations of Buyer*) and **Section 7.02 (l)** (*Conditions to Obligations of Buyer*); and

(viii) such other customary instruments of transfer, assumption, filings or documents, in form and substance reasonably satisfactory to Buyer, as may be required to give effect to this Agreement.

(b) At the Closing, Buyer shall deliver to Seller the following:

(i) the Purchase Price, as adjusted in accordance with **Section 2.06** (*Purchase Price Adjustment*);

(ii) the Assignment and Assumption Agreement duly executed by Buyer;

(iii) the Intellectual Property Assignments duly executed by Buyer;

(iv) the Buyer Closing Certificate;

(v) the certificates of the Secretary or Assistant Secretary of Buyer required by **Section 7.03(f)** (*Conditions to Obligations of Seller*) and **Section 7.03(g)** (*Conditions to Obligations of Seller*); and

(vi) such other customary instruments of transfer, assumption, filings or documents, in form and substance reasonably satisfactory to Seller, as may be required to give effect to this Agreement.

## ARTICLE IV

### REPRESENTATIONS AND WARRANTIES OF SELLER

Except as set forth in the correspondingly numbered Section of the Disclosure Schedules, Seller represents and warrants to Buyer as set forth below.

**Section 4.01 Organization and Qualification of Seller.** Seller is a limited liability company duly organized, validly existing and in good standing under the Laws of the state of Delaware and has full limited liability company power and authority to own, operate or lease the properties and assets now owned, operated or leased by it and to carry on the Business as currently conducted. **Section 4.01** of the Disclosure Schedules sets forth each jurisdiction in which Seller is licensed or qualified to do business, and

Seller is duly licensed or qualified to do business and is in good standing in each jurisdiction in which the ownership of the Purchased Assets or the operation of the Business as currently conducted makes such licensing or qualification necessary, except in those jurisdictions where the failure to be so duly licensed or qualified would not reasonably be expected to have a Material Adverse Effect. Seller is a wholly-owned subsidiary of Seller Parent and no other Person owns, or holds an option to purchase, any equity or capital interest in Seller.

**Section 4.02 Authority of Seller.** Seller has full limited liability company power and authority to enter into this Agreement and the other Transaction Documents to which it is a party, to carry out its obligations hereunder and thereunder and to consummate the transactions contemplated hereby and thereby. The execution and delivery by Seller of this Agreement and any other Transaction Document to which it is a party, the performance by Seller of its obligations hereunder and thereunder and the consummation by Seller of the transactions contemplated hereby and thereby have been duly authorized by all requisite limited liability company action on the part of Seller. This Agreement has been duly executed and delivered by Seller, and (assuming due authorization, execution and delivery by Buyer) this Agreement constitutes a legal, valid and binding obligation of Seller enforceable against Seller in accordance with its terms. When each other Transaction Document to which Seller is or will be a party has been duly executed and delivered by Seller (assuming due authorization, execution and delivery by each other party thereto), such Transaction Document will constitute a legal and binding obligation of Seller, enforceable against it in accordance with its terms, except as the same may be limited by bankruptcy, insolvency, reorganization, fraudulent conveyance, arrangement, moratorium or other similar Laws relating to or affecting the rights of creditors generally or by general equitable principles.

**Section 4.03 No Conflicts; Consents.** The execution, delivery and performance by Seller of this Agreement and the other Transaction Documents to which it is a party, and the consummation of the transactions contemplated hereby and thereby, do not and will not: (a) conflict with or result in a violation or breach of, or default under, any provision of the certificate of formation, by-laws, limited liability company agreement, or other organizational documents of Seller; (b) assuming all of the consents set forth on **Section 4.03(b)** of the Disclosure Schedules have been obtained and other notifications provided in the ordinary course of business have been made, conflict with, or result in, a material violation or breach of any provision of any Law or Governmental Order applicable to Seller, the Business or the Purchased Assets; (c) assuming all of the consents set forth in **Section 4.03(c)** of the Disclosure Schedules have been obtained, require the consent, notice or other action by any Person under, conflict with, or result in, a material violation or breach of, constitute a default or an event that, with or without notice or lapse of time or both, would constitute a default under, result in the acceleration of or create in any party the right to accelerate, terminate, modify or cancel any Material



Contract or Permit to which Seller is a party or by which Seller or the Business is bound or to which any of the Purchased Assets are subject; or (d) result in the creation or imposition of any Encumbrance on the Purchased Assets other than Permitted Encumbrances. No consent, approval, Governmental Order, declaration or filing with, or notice to, any Governmental Authority is required by or with respect to Seller in connection with the execution and delivery of this Agreement or any of the other Transaction Documents and the consummation of the transactions contemplated hereby and thereby, except (A) as may be required under the HSR Act or by FERC, (B) as are set forth on **Section 4.03(b)** of the Disclosure Schedules and (C) those which, if not obtained or given by Seller, would not reasonably be expected to result in a Material Adverse Effect.

**Section 4.04 Financial Statements.** Copies of Seller's unaudited financial statements consisting of the balance sheet of the Business as of December 31 in each of the years 2010 and 2009 and the related statement of income for the periods then ended (the "**Unaudited Financial Statements**"), and Seller's unaudited financial statements consisting of the balance sheet of the Business as of June 30, 2011 and the related statement of income for the 6 month period then ended (the "**Interim Financial Statements**" and together with Unaudited Financial Statements, the "**Financial Statements**") have been provided to Buyer. Except as set forth on **Schedule 4.04** of the Disclosure Schedules, the Financial Statements have been prepared in accordance with GAAP applied on a consistent basis throughout the period involved, subject, to normal and recurring year-end adjustments (the effect of which will not be materially adverse), audit adjustments and the absence of footnotes. The Financial Statements are based on the books and records of the Business, and fairly present the financial condition of the Business as of the respective dates they were prepared and the results of the operations of the Business for the periods indicated. The balance sheet of the Business as of December 31, 2010 is referred to herein as the "**Balance Sheet**" and the date thereof as the "**Balance Sheet Date**" and the balance sheet of the Business as of June 30, 2011 is referred to herein as the "**Interim Balance Sheet**" and the date thereof as the "**Interim Balance Sheet Date**". Seller maintains a standard system of accounting for the Business established and administered in accordance with GAAP.

**Section 4.05 Undisclosed Liabilities.** Seller has no Liabilities with respect to the Business, except (a) those which are adequately reflected or reserved against in the Balance Sheet as of the Balance Sheet Date, (b) those which have been incurred in the ordinary course of business consistent with past practice since the Balance Sheet Date and which are not, individually or in the aggregate, material in amount, (c) those disclosed on **Section 4.05** of the Disclosure Schedules, and (d) Excluded Liabilities.

**Section 4.06 Material Contracts.**

(a) **Section 4.06(a)** of the Disclosure Schedules sets forth a list as of the date of this Agreement of the following Contracts (x) by which any of the Purchased Assets are bound or (y) to which Seller is a party or by which it is bound in connection with the Business or the Purchased Assets (such Contracts listed on **Section 4.09(a)** of the Disclosure Schedules that meet the descriptions in this **Section 4.06** being collectively, the "**Material Contracts**"):

(i) Contracts for future receipt of assets or services other than Contracts with a nominal value of (or under which there has been paid in the last 12 months) less than \$50,000 individually;

(ii) all interconnection Contracts;

(iii) all Contracts for the transportation of natural gas;

(iv) all Contracts that require Seller to purchase or sell a stated portion of the requirements or outputs of the Business or that contain "take or pay" provisions;

(v) all Contracts that provide for the material indemnification of any Person or the assumption of any Tax or environmental Liability of any Person by Seller;

(vi) all Contracts that relate to the acquisition or disposition of any business, a material amount of stock or assets of any other Person or any real property (whether by merger, sale of stock, sale of assets or otherwise);

(vii) all broker, distributor, dealer, manufacturer's representative, franchise, agency, sales promotion, market research, marketing consulting and advertising Contracts;

(viii) all employment agreements and Contracts with independent contractors or consultants (or similar arrangements) and which are not cancellable without material penalty or without more than 30 days' notice;

(ix) except for Contracts relating to trade receivables, all Contracts relating to indebtedness for borrowed money (including, without limitation, guarantees);

(x) all Contracts with any Governmental Authority;

(xi) all Contracts that limit or purport to limit the ability of Seller to compete in any line of business or with any Person or in any geographic area or during any period of time;

(xii) all joint venture, partnership or similar Contracts;

(xiii) all Contracts for the sale of any of the Purchased Assets or for the grant to any Person of any option, right of first refusal or preferential or similar right to purchase any of the Purchased Assets;

(xiv) all powers of attorney with respect to the Business or any Purchased Asset;

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(xv) all collective bargaining agreements or Contracts with any labor organization, union or association; and

(xvi) all other Contracts that are material to the Purchased Assets or the operation of the Business and not previously disclosed pursuant to this **Section 4.06**.

(b) Each Material Contract is valid and binding in all material respects on Seller in accordance with its terms and is in full force and effect in all material respects. None of Seller or, to Seller's Knowledge, any other party thereto is in material breach of or material default under (or is alleged to be in material breach of or default under), or has provided or received any notice of any intention to terminate, any Material Contract. No event or circumstance has occurred that, with notice or lapse of time or both, would constitute an event of default under any Material Contract or result in a termination thereof or would cause or permit the acceleration or other changes of any right or obligation or the loss of any benefit thereunder. Complete and correct copies of each Material Contract (including all modifications, amendments and supplements thereto and waivers thereunder) have been made available to Buyer. There are no material disputes pending or, to Seller's Knowledge, threatened under any Material Contract included in the Purchased Assets.

**Section 4.07 Title to Purchased Assets.** Subject to Permitted Encumbrances (as defined below), Seller has good and valid title to all of the Purchased Assets that Seller currently owns and will have at the Closing good and valid title to all of the remaining Purchased Assets. All such Purchased Assets are, or will be at the Closing, free and clear of Encumbrances except for the following (collectively referred to as "**Permitted Encumbrances**"):

(a) those items set forth in **Section 4.07** of the Disclosure Schedules;

(b) liens for Taxes not yet due or delinquent and payable or being contested in good faith by appropriate procedures and for which there are adequate accruals or reserves reflected on the Balance Sheet;

(c) all matters that are disclosed (whether or not subsequently deleted or endorsed over) on any survey, in the title policies insuring the Purchased Assets or any commitments therefor, or in any title reports, to the extent such surveys, title policies, commitments or title reports are listed on and attached to **Section 4.09(a)(i)** of the Disclosure Schedules;

(d) imperfections or irregularities of title and other Liens and Encumbrances that would not, individually or in the aggregate, materially detract from the value of the affected property or materially impair the use of the affected property in the Business;

(e) the terms and conditions of (i) the Assigned Contracts and (ii) the Permits listed on **Section 4.15(b)** (*Compliance with Laws; Permits*) of the Disclosure Schedules; and

(f) easements, rights of way and other similar encumbrances affecting Real Property which would not, individually or in the aggregate, materially detract from the value of the affected property.

**Section 4.08 Condition of Assets.** To Seller's Knowledge, the Purchased Assets are adequate for the uses to which they are being currently put, and, except as set forth on Section 4.08 of the Disclosure Schedules, none of such Purchased Assets are in need of non-routine maintenance or repair, the failure to perform which would reasonably be expected to cause a Material Adverse Effect.

**Section 4.09 Real Property**

(a) **Section 4.09(a)** of the Disclosure Schedules sets forth a description of each parcel of real property used in or necessary for the conduct of the Business by Seller as currently conducted (all such parcels, together with all buildings, fixtures, structures and improvements situated thereon and all easements, rights-of-way and other rights and privileges appurtenant thereto, collectively, the "**Real Property**"). Seller has delivered to Buyer copies of (i) the deeds and other instruments (as recorded) for each parcel of Real Property and (ii) all title insurance policies, opinions, abstracts and surveys with respect to such Real Property, that are in the possession of Seller. With respect to each parcel of Real Property:

(i) Seller has good and marketable fee simple title or good and marketable leasehold title, free and clear of all Encumbrances, and with respect to such properties to which Seller holds leasehold title, has the contractual right to acquire good and marketable fee simple title, free and clear of all Encumbrances, except for (A) Permitted Encumbrances; and (B) those Encumbrances set forth on **Section 4.09(a)(i)** of the Disclosure Schedules.

(ii) except for Permitted Encumbrances and items set forth on **Section 4.09(a)(ii)** of the Disclosure Schedules, Seller has not leased (as lessor) or otherwise granted to any Person the right to use or occupy such Real Property or any portion thereof;

(iii) Seller has not granted, and to Seller's Knowledge, there are no unrecorded outstanding options, rights of first offer or rights of first refusal to purchase such Real Property or any portion thereof or interest therein, other than pursuant to the Lease or as set forth on **Section 4.09(a)(iii)** of the Disclosure Schedules;

(iv) Seller has delivered to Buyer a true and complete copy of each lease respecting any parcel of Real Property, and each such lease as with respect to Seller is valid, binding, enforceable and in full force and effect, and Seller is not in material breach or default under such lease, and Seller has paid all rent due and payable under such lease.

(b) The Real Property is sufficient for the conduct of the Business as presently conducted and constitutes all of the real property necessary to conduct the Business as currently conducted.

**Section 4.10 Intellectual Property.**

(a) **Section 4.10(a)** of the Disclosure Schedules lists all Intellectual Property Assets, whether or not registered, which are material to the operation of the Business and owned, licensed or otherwise used by Seller, including Seller's formal name and all derivations thereof. All required filings and fees related to material Intellectual Property Assets have been timely filed with and paid to the relevant Governmental Authorities and authorized registrars, and all Intellectual Property Assets are otherwise in good standing, except where the failure to be in good standing would not reasonably be expected to materially impair the value of the applicable Intellectual Property Asset. Seller has provided Buyer with true and complete copies of all file histories, documents, certificates, office actions, correspondence, licenses and other agreements, instruments and materials in its possession related to Intellectual Property Assets. All material Intellectual Property Licenses are valid, binding and enforceable between Seller and the other parties thereto, and Seller is in material compliance with the terms and conditions of such Intellectual Property Licenses. The Intellectual Property Assets currently owned, licensed or used by Seller, and the conduct of the Business as currently conducted by Seller have not, do not and will not infringe, violate or misappropriate the Intellectual Property of any Person. Seller has not received any communication, and no Action has been settled or, to Seller's Knowledge, instituted or threatened that alleges any such infringement, violation or misappropriation, and, to Seller's Knowledge, none of the Intellectual Property Assets are subject to any outstanding Governmental Order. Seller has not granted, licensed, or authorized to any Person any right or authority with respect to any Intellectual Property Asset. To Seller's Knowledge, no Person has infringed, violated or misappropriated, or is infringing, violating or misappropriating, any Intellectual Property Assets.

(b) Except as set forth in **Section 4.10(b)** of the Disclosure Schedules, Seller owns, exclusively or jointly with other Persons, all right, title and interest in and to the Intellectual Property Assets, free and clear of Encumbrances. Seller is in material compliance with all legal requirements applicable to the Intellectual Property Assets and Seller's ownership and use thereof.

**Section 4.11 Inventory.** All Inventory is owned by Seller free and clear of all Encumbrances other than Permitted Encumbrances, and no Inventory is held on a

consignment basis. All Inventory as of the date of this Agreement is listed in **Section 4.11** of the Disclosure Schedules.

**Section 4.12 Intentionally Omitted.**

**Section 4.13 Insurance.** Seller has provided to Buyer (a) a true and complete list of all insurance policies that are maintained by Seller or its Affiliates for and are material to the Business or the Purchased Assets (collectively, the "**Insurance Policies**"); and (b) with respect to the Business, the Purchased Assets or the Assumed Liabilities, a list of all pending claims and the claims history for Seller since the Purchase Date. Except as set forth on **Section 4.12(b)** of the Disclosure Schedules, to Seller's Knowledge there are no claims related to the Business, the Purchased Assets or the Assumed Liabilities pending under any such Insurance Policies as to which coverage has been questioned, denied or disputed or in respect of which there is an outstanding reservation of rights. Neither Seller nor any of its Affiliates has received any written notice of cancellation of, premium increase with respect to, or alteration of coverage under, any of such Insurance Policies. All premiums due on such Insurance Policies have either been paid or, if not yet due, accrued. All such Insurance Policies (a) are in full force and effect and enforceable in accordance with their terms; (b) are provided by carriers who are not generally known to be financially insolvent; and (c) have not been subject to any lapse in coverage. None of Seller or any of its Affiliates is in default under, or has otherwise failed to comply with, in any material respect, any provision contained in any such Insurance Policy.

**Section 4.14 Legal Proceedings; Governmental Orders.**

(a) Except as set forth in **Section 4.14(a)** of the Disclosure Schedules, there are no Actions pending or, to Seller's Knowledge, threatened against or by Seller (i) affecting the Business, the Purchased Assets or the Assumed Liabilities; or (ii) that challenge or seek to prevent, enjoin or otherwise delay the transactions contemplated by this Agreement. To Seller's Knowledge, as of the date hereof, no specific event has occurred or specific circumstances exist that would reasonably be expected to give rise to, or serve as a basis for, any such Action.

(b) Except as set forth in **Section 4.14(b)** of the Disclosure Schedules, there are no outstanding Governmental Orders and no unsatisfied judgments, penalties or awards against or affecting the Business. Seller is in material compliance with the terms of each Governmental Order set forth in **Section 4.14(b)** of the Disclosure Schedules. To Seller's Knowledge, no specific event has occurred or specific circumstance exists that reasonably is expected to constitute or result in (with or without notice or lapse of time) a violation of any such material Governmental Order as set forth in Section 4.14(b) of the Disclosure Schedules.

**Section 4.15 Compliance With Laws; Permits.**

(a) Except as set forth in **Section 4.15(a)** of the Disclosure Schedules, Seller is in material compliance with all Laws applicable to the conduct of the Business as currently conducted or the ownership and use of the Purchased Assets.

(b) All Permits required for Seller to conduct the Business as currently conducted or for the ownership and use of the Purchased Assets as currently owned and used have been obtained by Seller and are valid and in full force and effect. All material fees and charges with respect to such Permits as of the date hereof have been paid in full. **Section 4.15(b)** of the Disclosure Schedules lists all current Permits issued to Seller which are material to the conduct of the Business as currently conducted or the ownership and use of the Purchased Assets, including the names of the Permits and their respective dates of issuance and expiration. No event has occurred that, with or without notice or lapse of time or both, would reasonably be expected to result in the revocation, suspension, lapse or limitation of any Permit set forth in **Section 4.15(b)** of the Disclosure Schedules.

**Section 4.16 Environmental Matters.**

(a) Except as set forth on in **Section 4.16(b)(i)** of the Disclosure Schedules, the operations of Seller with respect to the Business and the Purchased Assets are currently and have been since the Purchase Date, in material compliance with all Environmental Laws. Except as set forth on in **Section 4.16(b)(ii)** of the Disclosure Schedules, since the Purchase Date, Seller has not received from any Person, with respect to the Business or the Purchased Assets, any: (i) Environmental Notice or Environmental Claim or (ii) written request for information pursuant to Environmental Law, which, in each case, is in respect of a violation or a reasonably probable violation of Environmental Law and remains pending or unresolved.

(b) Seller has obtained and is in material compliance with all Environmental Permits (each of which is disclosed in **Section 4.16(b)(i)** of the Disclosure Schedules) necessary for the conduct of the Business as currently conducted or the ownership, lease, operation or use of the Purchased Assets. Except as set forth on **Section 4.16(b)(ii)** of the Disclosure Schedules, all such Environmental Permits are in full force and effect in all material respects. To Seller's Knowledge, no specific condition, event or circumstance has occurred with respect to such Environmental Permits that might reasonably be expected to materially prevent or impede, after the Closing Date, the conduct of the Business as currently conducted or the ownership, lease, operation or use of the Purchased Assets as currently conducted. Seller has not, since the Purchase Date, received any Environmental Notice or written communication regarding any material adverse change in the status or terms and conditions of the same.

(c) None of the Business or the Purchased Assets in connection with the Business is listed on, or has been proposed for listing on, the National Priorities List (or CERCLIS) under CERCLA, or any similar state list.

(d) Since the Purchase Date, there has been no Release of Hazardous Materials in material violation of Environmental Law with respect to the Business or the Purchased Assets in connection with the Business, and Seller has not received an Environmental Notice that any of the Business or the Purchased Assets in connection with the Business (including soils, groundwater, surface water, buildings and other structure located thereon) has been contaminated with any Hazardous Material which would reasonably be expected to result in a material Environmental Claim against, or a material violation of Environmental Law or term of any Environmental Permit by, Seller.

(e) **Section 4.16(e)** of the Disclosure Schedules contains a complete and accurate list, to Seller's Knowledge, of all active or abandoned aboveground or underground storage tanks owned or operated by Seller since the Purchase Date in connection with the Business or the Purchased Assets.

(f) **Section 4.16(e)** of the Disclosure Schedules contains a complete and accurate list of all off-site Hazardous Materials storage or disposal facilities or locations used by Seller since the Purchase Date in connection with the Business or the Purchased Assets, and to Seller's Knowledge, none of these facilities or locations has been placed or proposed for placement on the National Priorities List (or CERCLIS) under CERCLA or any similar state list, and Seller has not received any Environmental Notice regarding material liabilities with respect to such off-site Hazardous Materials treatment, storage, or disposal facilities or locations used by Seller since the Purchase Date.

(g) Since the Purchase Date, Seller has not retained or assumed, by contract or operation of Law, any liabilities or obligations of third parties under Environmental Law.

(h) Seller has provided or otherwise made available to Buyer any and all environmental reports, studies, audits, records, sampling data, site assessments, risk assessments, economic models and other similar documents with respect to the Business or the Purchased Assets or any real property currently or formerly owned, leased or operated by Seller in connection with the Business which are in the possession or control of Seller with respect to compliance with Environmental Laws, Environmental Claims or an Environmental Notice or the Release of Hazardous Materials.

(i) Seller owns and controls all Environmental Attributes set forth in **Section 4.16(g)** of the Disclosure Schedules and has not entered into any Contract to transfer, lease, license, guarantee, sell, mortgage, pledge or otherwise dispose of or encumber any such Environmental Attributes as of the date hereof.

**Section 4.17 Employee Benefit and Employment Matters.** Since the Purchase Date, Seller has not (a) had any Employees; (b) sponsored any Benefit Plans; (c) sponsored any Qualified Benefit Plans; (d) sponsored any MPPAA Plans; (e) been a party to any employment, collective bargaining or any other type of employee agreement with any employee of Seller; or (f) committed or been subject to any violations, claims,



liabilities, inquiries or Governmental Authority investigations under any applicable employment or labor Laws, including without limitation the WARN Act.

**Section 4.18 Intentionally Omitted.**

**Section 4.19 Taxes.** Except as set forth in **Section 4.19** of the Disclosure Schedules:

(a) All Tax Returns required to be filed by Seller for any Pre-Closing Tax Period have been, or will be, timely filed. Such Tax Returns are, or will be, true, complete and correct in all material respects. All Taxes due and owing by Seller (whether or not shown on any Tax Return) have been, or will be, timely paid.

(b) Seller has withheld and paid each Tax required to have been withheld and paid in connection with amounts paid or owing to any Employee, independent contractor, creditor, customer, shareholder or other party, and complied with all information reporting and backup withholding provisions of applicable Law.

(c) No extensions or waivers of statutes of limitations have been given or requested with respect to any Taxes of Seller since the Purchase Date.

(d) All deficiencies asserted, or assessments made, against Seller as a result of any examinations by any taxing authority have been fully paid.

(e) Seller is not a party to any Action by any taxing authority. There are no pending or, to Seller's Knowledge, threatened Actions by any taxing authority against Seller.

(f) To Seller's Knowledge, there are no Encumbrances (other than Permitted Encumbrances) for Taxes upon any of the Purchased Assets nor, to Seller's Knowledge, is any taxing authority in the process of imposing any Encumbrances for Taxes on any of the Purchased Assets (other than for current Taxes not yet due and payable).

(g) the entity that is treated as the owner of Seller's assets for federal income tax purposes, is not a "foreign person" as that term is used in Treasury Regulations Section 1.1445-2.

**Section 4.20 Absence of Certain Changes, Events and Conditions.** Since the Balance Sheet Date until the date hereof, and other than in the ordinary course of business consistent with past practice, there has not been any:

(a) events, occurrences or developments that have had, individually or in the aggregate, a Material Adverse Effect;

(b) material change in any method of accounting or accounting practice for the Business, except as required by GAAP or as disclosed in the notes to the Financial Statements;

- (c) material change in policies, practices and procedures with respect to inventory control;
- (d) entry into any Contract that would constitute a Material Contract other than with respect to the PILOT Program Termination;
- (e) incurrence, assumption or guarantee of any indebtedness for borrowed money in connection with the Business except unsecured current obligations and Liabilities incurred in the ordinary course of business consistent with past practice;
- (f) transfer, assignment, sale or other disposition of any of the Purchased Assets shown or reflected in the Balance Sheet other than the Excluded Assets;
- (g) cancellation of any debts or claims or amendment, termination or waiver of any rights constituting Purchased Assets;
- (h) transfer, assignment or grant of any license or sublicense of any material rights under or with respect to any Intellectual Property Assets or Intellectual Property Licenses;
- (i) material damage, destruction or loss, or any material interruption in use, of any Purchased Assets, whether or not covered by insurance;
- (j) acceleration, termination, material modification to or cancellation of any Assigned Contract or Permit;
- (k) material capital expenditures which would constitute an Assumed Liability;
- (l) imposition of any Encumbrance upon any of the Purchased Assets;
- (m) grant of any bonuses, whether monetary or otherwise, or any general wage or salary increases in respect of any Employees, other than as provided for in any written agreements or consistent with past practice, or change in the terms of employment for any Employee;
- (n) hiring of any Employees or entry into a collective bargaining agreement covering any Employee;
- (o) adoption of any plan of merger, consolidation, reorganization, liquidation or dissolution or filing of a petition in bankruptcy under any provisions of federal or state bankruptcy Law or consent to the filing of any bankruptcy petition against it under any similar Law;
- (p) lease of any property or assets in connection with the Business;
- (q) adoption, amendment, modification or termination of any bonus, profit sharing, incentive, severance, or other plan, Contract or commitment for the benefit of any Employees (or any such action taken with respect to any other Benefit Plan); or
- (r) any Contract to do any of the foregoing, or any action or omission that would result in any of the foregoing.

**Section 4.21 Brokers.** Except as set forth in **Section 4.21** of the Disclosure Schedules, no broker, finder or investment banker is entitled to any brokerage, finder's or other fee or commission in connection with the transactions contemplated by this Agreement or any other Transaction Document based upon arrangements made by or on behalf of Seller.

**ARTICLE V**  
**REPRESENTATIONS AND WARRANTIES OF BUYER**

Buyer represents and warrants to Seller as set forth below.

**Section 5.01 Organization of Buyer.** Buyer is a corporation duly organized, validly existing and in good standing under the Laws of the Commonwealth of Kentucky. Buyer is duly licensed or qualified to do business and is in good standing in each jurisdiction where the actions to be performed by it hereunder makes such qualification or licensing necessary, except in those jurisdictions where the failure to be so duly licensed or qualified would not reasonably be expected to have a Material Adverse Effect.

**Section 5.02 Authority of Buyer.** Buyer has full corporate power and authority to enter into this Agreement and the other Transaction Documents to which Buyer is a party, to carry out its obligations hereunder and thereunder and to consummate the transactions contemplated hereby and thereby. The execution and delivery by Buyer of this Agreement and all other Transaction Documents to which Buyer is a party, the performance by Buyer of its obligations hereunder and thereunder and the consummation by Buyer of the transactions contemplated hereby and thereby have been duly authorized by all requisite corporate action on the part of Buyer. This Agreement has been duly executed and delivered by Buyer, and (assuming due authorization, execution and delivery by Seller) this Agreement constitutes a legal, valid and binding obligation of Buyer enforceable against Buyer in accordance with its terms. When each other Transaction Document to which Buyer is or will be a party has been duly executed and delivered by Buyer (assuming due authorization, execution and delivery by each other party thereto), such Transaction Document will constitute a legal and binding obligation of Buyer enforceable against it in accordance with its terms, except as the same may be limited by bankruptcy, insolvency, reorganization, fraudulent conveyance, arrangement, moratorium or other similar Laws relating to or affecting the rights of creditors generally or by general equitable principles.

**Section 5.03 No Conflicts; Consents.** The execution, delivery and performance by Buyer of this Agreement and the other Transaction Documents to which it is a party, and the consummation of the transactions contemplated hereby and thereby, do not and will not: (a) conflict with or result in a violation or breach of, or default under, any

provision of the certificate of incorporation, by-laws or other organizational documents of Buyer; (b) assuming all of the consents set forth on **Section 5.03(b)** of the Disclosure Schedules have been obtained and other notifications provided in the ordinary course of business have been made, conflict with or result in a material violation or breach of any provision of any Law or Governmental Order applicable to Buyer or any of its Assets; or (c) assuming all of the consents set forth on **Section 5.03(c)** of the Disclosure Schedules have been obtained, require the consent, notice or other action by any Person under any Contract to which Buyer is a party. No consent, of or notice to, any Governmental Authority is required by or with respect to Buyer in connection with the execution and delivery of this Agreement or any of the other Transaction Documents and the consummation of the transactions contemplated hereby and thereby, except (A) as may be required under the HSR Act or by FERC, (B) as are set forth on **Section 5.03(b)** of the Disclosure Schedules and (C) those which, if not obtained or given by Buyer, would not reasonably be expected to result in a Material Adverse Effect.

**Section 5.04 Brokers.** No broker, finder or investment banker is entitled to any brokerage, finder's or other fee or commission in connection with the transactions contemplated by this Agreement or any other Transaction Document based upon arrangements made by or on behalf of Buyer.

**Section 5.05 Sufficiency of Funds.** Buyer has and will have at the Closing, access to sufficient cash or other sources of immediately available funds to enable it to make payment of the Purchase Price and consummate the transactions contemplated by this Agreement. Buyer knows of no circumstances or condition that could reasonably be expected to prevent the availability at Closing of such cash.

**Section 5.06 Legal Proceedings.** There are no Actions pending or, to Buyer's knowledge, threatened against or by Buyer or any Affiliate of Buyer that challenge or seek to prevent, enjoin or otherwise delay the transactions contemplated by this Agreement, except to the extent that any such Actions would not reasonably be expected to have a Material Adverse Effect.

**Section 5.07 Compliance with Laws and Orders.** Except as set forth on **Section 5.07** of the Disclosure Schedules, there are no outstanding Governmental Orders and no unsatisfied judgments, penalties or awards against, relating to or affecting Buyer or its Assets that would reasonably be expected to have a Material Adverse Effect.

ARTICLE VI  
COVENANTS

**Section 6.01 Conduct of Business Prior to the Closing.** Subject to this **Section 6.01** and **Section 6.07** (*Interim Operation of the Units*), from the date hereof until the Closing, except as otherwise provided in this Agreement or consented to in writing by Buyer (which consent shall not be unreasonably withheld or delayed), Seller shall (a) conduct the Business in the ordinary course of business consistent with past practice and its obligations under **Section 6.07** (*Interim Operation of the Units*); (b) use commercially reasonable efforts to maintain and preserve in all material respects consistent with its obligations under **Section 6.07** (*Interim Operation of the Units*) the Purchased Assets and its current Business organization, operations and franchise and to preserve the rights, franchises, goodwill and relationships of its, suppliers, regulators and others having relationships with the Business; (c) continue (and, as applicable, renew) without material modification all Insurance Policies, except as undertaken by Seller in connection with the Closing and as required by applicable Law; (d) utilize the Inventory solely in connection with the operation of the Plant and replenish the Inventory in the ordinary course of business consistent with past practice and its obligations under **Section 6.07** (*Interim Operation of the Units*); (e) preserve and maintain all Permits required for the conduct of the Business as currently conducted or the ownership and use of the Purchased Assets; (f) pay the debts, Taxes and other obligations of the Business when due (subject to good faith disputes); (g) defend and protect the properties and assets included in the Purchased Assets from infringement or usurpation; (h) perform all of its obligations under all Assigned Contracts; (i) comply in all material respects with all Laws applicable to the conduct of the Business or the ownership and use of the Purchased Assets; and (j) perform all of its obligations under all Assigned Contracts and not amend or grant a waiver under the Assigned Contracts. Each of Buyer and Seller understands and agrees that the agreement set forth in **Section 6.07** (*Interim Operation of the Units*) is not an ordinary course of business arrangement for Seller and that, in order to comply with the provisions of **Section 6.07** (*Interim Operation of the Units*), Seller's ordinary course of business from the date hereof through the date of Closing is therefore subject to deviation from Seller's ordinary course of business prior to the date hereof to the extent required by **Section 6.07**.

**Section 6.02 Access to Information.** From the date hereof until the Closing, Seller shall (a) afford Buyer and its Representatives reasonable and non-invasive access to inspect all of the Purchased Assets, Books and Records and Assigned Contracts of the Business; (b) furnish Buyer and its Representatives with access to the Books and Records as Buyer or any of its Representatives may reasonably request; (c) instruct the Representatives of Seller to cooperate with Buyer with the foregoing; and (d) provide Buyer with advance notice of any major or non-routine maintenance or major service to be performed on the Purchased Assets and permit Buyer and a reasonable number of its

Representatives to attend and witness such maintenance or service; provided, however that Seller shall have the right to have a Representative present and impose reasonable restrictions and requirements for safety purposes. Any access pursuant to this **Section 6.01** shall be scheduled with Seller a reasonable time period in advance of such access (considering the matter to be reviewed or witnessed by Buyer), shall be conducted during normal business hours, shall be conducted in such manner as not to interfere unreasonably with the conduct of the Business or any other businesses of Seller, shall be in compliance with applicable Laws and any Contracts or Permits to which Seller or any of its Affiliates is a party and shall be non-invasive in nature. No investigation by Buyer or other information received by Buyer shall operate as a waiver of any express representation, warranty or agreement given or made by Seller under Article IV in this Agreement. Buyer agrees to indemnify and hold harmless Seller for any and all Liability to the extent arising out of Buyer's or its Representatives' negligence relating to the access rights under this **Section 6.02**, including any claims by any of Buyer's Representatives for any injuries or property damage while present on the Real Property.

**Section 6.03 No Solicitation of Other Bids.**

(a) Seller shall not, and shall not authorize or permit any of its Affiliates or any of its or their Representatives to, directly or indirectly, (i) encourage, solicit, initiate, or continue inquiries regarding an Acquisition Proposal; (ii) initiate or continue (except in the case of Buyer) discussions or negotiations with, or provide any information to, any Person concerning a possible Acquisition Proposal; or (iii) enter into any agreements or other instruments (whether or not binding) regarding an Acquisition Proposal. Seller shall immediately cease and cause to be terminated, directly or indirectly, all existing discussions or negotiations with any Persons conducted heretofore with respect to an Acquisition Proposal. For purposes hereof, "**Acquisition Proposal**" means any proposal or offer from any Person (other than Buyer or any of its Affiliates) relating to the direct or indirect disposition, whether by sale, merger or otherwise, of all or any substantial portion of the Business or the Purchased Assets.

(b) Seller agrees that the rights and remedies for noncompliance with this **Section 6.03** shall include having such provision specifically enforced by any court having equity jurisdiction, it being acknowledged and agreed that any such breach or threatened breach may cause irreparable injury to Buyer and that money damages may not provide an adequate remedy to Buyer therefor.

**Section 6.04 Notice of Certain Events; Removal of Excluded Assets.**

(a) From the date hereof until the Closing, Seller shall provide to Buyer monthly operating reports consistent with those currently prepared by Seller. From the date hereof until the Closing, each Party shall promptly notify the other Party in writing of:

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(i) any fact, circumstance, or event, the existence or occurrence of which (A) has had, or would reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect, (B) has resulted in, or would reasonably be expected to result in, any representation or warranty made by Seller in **Article IV** or by Buyer in **Article V** hereunder not being true and correct or which has resulted in a breach of any representation, warranty or covenant set forth in this Agreement or (C) has resulted in, or would reasonably be expected to result in, the failure of any of the conditions set forth in **Section 7.02** or **Section 7.03**, as applicable, to be satisfied;

(ii) material mechanical break-down or other operational or mechanical malfunction or damage that to Seller's Knowledge or to Buyer's knowledge, as applicable, occurs with respect to a Purchased Asset, including the Units, prior to the Closing;

(iii) any written notice or other communication from any Person received by Seller or Buyer, as applicable, alleging that the consent of such Person is or may be required in connection with the transactions contemplated by this Agreement

(iv) any written notice or other communication from any Governmental Authority that relates to any of the conditions set forth in **Section 7.02** or **Section 7.03**, as applicable, or otherwise calls into question the consummation of the transactions contemplated by this Agreement; and

(v) any Actions commenced or, to Seller's Knowledge, or to Buyer's knowledge, as applicable, threatened against, relating to or involving or otherwise affecting the Business, the Purchased Assets or the Assumed Liabilities that, if pending on the date of this Agreement, would have been required to have been disclosed pursuant to **Section 4.14** (*Legal Proceedings; Governmental Orders*).

(b) Neither Buyer's receipt of information pursuant to this Section 6.04 nor its failure to act thereon shall (i) operate as a waiver of any representation, warranty or agreement given or made by Seller in this Agreement (including **Section 8.02** and **Section 9.01(b)**) or (ii) be deemed to amend or supplement the Disclosure Schedules.

(c) On or before the Closing, Seller shall remove all Excluded Assets from the Plant and the Real Property to be occupied by Buyer. Such obligation for removal shall be done in such manner as to avoid damage to the Purchased Assets and the Plant and any disruption of the business operations to be conducted by Buyer after the Closing. Any damage to the Purchased Assets resulting from such removal shall be treated by Buyer as an adjustment (deduction) to the Purchase Price and addressed in accordance with the procedures set forth in **Section 2.06** (*Purchase Price Adjustment*). If the cost to repair such damage is not known at the Closing, for purposes of Closing, the amount of the Purchase Price shall be reduced by an estimate (to be conducted by a qualified firm reasonably acceptable to Buyer and Seller and selected by Buyer and Seller in good faith) of the cost reasonably determined by Buyer. Promptly after the damage has been repaired and the cost is known, Buyer will pay to Seller any amount by which the

estimate exceeds the cost and Seller will pay to Buyer any amount by which the cost exceeds the estimate. Buyer will provide Seller all invoices or other documentation necessary to establish the amount of the cost.

**Section 6.05 Employees and Employee Benefits.** From and after the date hereof, Seller shall not hire any Employee or adopt or agree to the adoption of any Benefit Plan, and Buyer shall have no obligation for any compensation or other amounts payable to, or to hire, contract or retain, any Employee, independent contractor, agent or consultant of Seller or the Business.

**Section 6.06 Confidentiality.** From and after the Closing, Seller shall, and shall cause its Affiliates to, hold, and shall use their commercially reasonable efforts to cause its or their respective Representatives to hold, in confidence any and all information, whether written or oral, concerning the Business, except to the extent that such party can show that such information (a) is generally available to and known by the public through no fault of Seller, any of its Affiliates or Representatives; or (b) is lawfully acquired by Seller, any of its Affiliates or Representatives from and after the Closing from sources which are not prohibited from disclosing such information by a legal, contractual or fiduciary obligation. If Seller or any of its Affiliates or their respective Representatives are compelled to disclose any information by judicial or administrative process or by other requirements of Law, Seller shall promptly notify Buyer in writing and shall disclose only that portion of such information which Seller is advised by its counsel is legally required to be disclosed, *provided that* Seller shall use commercially reasonable efforts to obtain an appropriate protective order or other reasonable assurance that confidential treatment will be accorded such information.

**Section 6.07 Interim Operation of the Units.**

(a) From the date hereof until the Closing, if Seller operates any of the Units, then Buyer shall have the inspection right described in Section 6.07(b) below with respect to the Unit or Units that so operated; *provided, however*, that Buyer shall have no right to inspect any Unit with respect to any operation of such Unit if the operation was primarily for one or more of the following purposes:

(i) Seller is requested to run one or more of the Units at the direction of the regional transmission operator, in its capacity as such, or by a Governmental Authority;

(ii) to perform repairs or preventative maintenance procedures on a Unit;

(iii) at the call of Buyer or any of its Affiliates to produce, transmit or otherwise sell electricity, but only if agreed to by Seller upon mutually acceptable terms and conditions to be arranged at such time; or



(iv) to comply with applicable Laws and Permits.

(b) The inspection right under this Section 6.07 shall: (i) be permitted one time prior to Closing with respect to each Unit; and (ii) include the right to inspect the equipment, the right to request borescope inspections, the right to request Seller to perform non-destructive electrical and chemical tests on the equipment, and the right to make such other inspections and request Seller perform such other non-destructive tests as Buyer reasonably determines are necessary to determine the status of the equipment. Upon any request of Seller pursuant to the preceding sentence, Seller shall promptly cause to be performed the inspections and tests so requested and shall provide to Buyer all reports and information resulting from such inspections and tests. Any inspections performed under this Section 6.07 shall be performed solely through the use of Persons well experienced in performing such work and reasonably acceptable to Seller. Any repairs or corrections to the Units that such inspection indicates are necessary or appropriate to perform shall be treated as a Casualty Loss under Section 6.17 of this Agreement. Buyer shall be responsible for the cost of any such inspections and any damage to the Units caused by such an inspection. Buyer and Seller will use commercially reasonable efforts to cause the inspection to be completed as close to the Closing as practicable and in all cases prior to the Closing. If Seller operates a Unit after such an inspection, Buyer shall have another right to inspect such Unit prior to the Closing under the terms of this Section 6.07 (including the terms related to repairs or corrections).

#### **Section 6.08 Governmental Approvals and Consents**

(a) (i) Except with respect to the PILOT Program Termination, which is set forth below in **Section 6.08(a)(ii)**, each party hereto shall proceed diligently and in good faith to make, or cause to be made, all filings and submissions listed on **Sections 4.03(b) and 5.03(b)** of the Disclosure Schedules and to make all required filings to be made by it with and to give all required notices to Governmental Authorities that are necessary for such party's (A) execution and delivery of this Agreement and the performance of its obligations pursuant to this Agreement and the other Transaction Documents and (B) the transfer of all Permits listed on **Section 4.15(b)** of the Disclosure Schedules and Environmental Permits listed on **Section 4.16(b)** of the Disclosure Schedules. Each party shall reasonably cooperate with the other party and its Affiliates in promptly seeking to make all such required filings and submissions. In furtherance of the foregoing covenants, Buyer and Seller shall submit, in no event later than 60 days (subject to extension by mutual agreement) after the execution hereof, application(s) for HSR Act approval. With respect to HSR Act filings, Buyer and Seller shall request expedited treatment, shall promptly furnish each other with copies of any notices, correspondence or other written communication from the relevant Governmental Authority, shall promptly make any appropriate or necessary subsequent or supplemental filings and shall cooperate in the preparation of such filings as is reasonably necessary and appropriate.

(ii) Seller will use commercially reasonable efforts to terminate the PILOT Agreement and the Lease and to obtain a release (reasonably satisfactory to Seller and Buyer) from any further liability (to the Seller, the Buyer, or that would attach to and run with the land) under the PILOT Agreement and the Lease (the “**PILOT Program Termination**”).

(b) Except with respect to the PILOT Program Termination, described in Section **6.08(a)(ii)** above, Seller shall use commercially reasonable efforts to give all notices to, and obtain all consents from, all third parties that are described in **Section 4.03(b)** and **4.03(c)** of the Disclosure Schedules. Buyer shall use commercially reasonable efforts to give all notices to, and obtain all consents from, all third parties that are described in **Section 4.03** of the Disclosure Schedules. For the avoidance of doubt, neither Buyer nor Seller shall be obligated to pay, reimburse or provide or cause any of its Affiliates to pay, reimburse or provide any compensation or consideration to obtain the written consent of any counterparty to the assignment of any Assigned Contract.

(c) Without limiting the generality of the parties' undertakings pursuant to subsections (a) and (b) above, each of the parties hereto shall use commercially reasonable efforts as follows:

(i) Buyer shall (A) make all required filings with the KPSC within 30 days of the signing of this Agreement and (B) make all required filings with the VASCC, and in each case, shall seek to obtain the timely approval of the transaction by the KPSC and the VASCC (but in any event, the filing with the KPSC shall request approval of the transactions contemplated by this Agreement no later than April 30, 2012). Buyer shall promptly furnish Seller with copies of any notices, correspondence or other written communications from KPSC and VASCC and the status of KPSC and VASCC approvals.

(ii) Buyer shall make all required filings with FERC, including FPA 203 filings, within 60 days of the signing of this Agreement, and shall request expedited treatment of such filings and promptly make any appropriate or necessary subsequent or supplemental filings.

(iii) each party shall use commercially reasonable efforts to obtain all consents, authorizations, orders and approvals as described in this **Section 6.08** in sufficient time to allow a Closing by or before April 30, 2012, including, without limitation, Buyer making its required filings with the VASCC at least 90 days prior to April 30, 2012;

(iv) each party shall respond to any inquiries by any Governmental Authority regarding antitrust or other matters with respect to the transactions contemplated by this Agreement or any other Transaction Document; and

(v) each party shall use commercially reasonable efforts to prevent the imposition of any Governmental Order or the taking of any action by any Governmental

Authority that would restrain, alter or enjoin the transactions contemplated by this Agreement or any other Transaction Document.

(d) Except with respect to the PILOT Program Termination, promptly after either Party makes any written submission to a Governmental Authority in connection with this Section 6.08, that Party shall provide a copy of such submission to the other Party; provided, that such copy may have redacted from it such information for which the submitting Party has made a credible claim to the Governmental Authority of exemption from any applicable open records, freedom of information, or similar Law. Each party shall give the other advance written notice of any public hearing or similar proceeding with any Governmental Authority or regulators of any Governmental Authority, with such notice being sufficient to provide the other with the opportunity to attend such hearing. With respect to the PILOT Program Termination, Seller shall keep Buyer reasonably and promptly apprised of the status of the negotiations regarding the PILOT Program Termination.

(e) Notwithstanding the foregoing, except with respect to the PILOT Program Termination, nothing in this **Section 6.08** shall require, or be construed to require, Buyer or Seller or any of their Affiliates to agree to (i) sell, hold, divest, discontinue or limit, before or after the Closing Date, any assets, businesses or interests of Buyer or Seller or any of their Affiliates (other than pursuant to this Agreement); (ii) waive their respective conditions set forth in **Article VII** (*Conditions to Closing*); or (iii) any modification or waiver of the terms and conditions of this Agreement.

**Section 6.09 Books and Records.**

(a) In order to facilitate the resolution of any claims made against or incurred by Seller prior to the Closing, or for any other reasonable purpose, for a period of 7 years after the Closing, Buyer shall:

(i) retain the Books and Records (including personnel files) relating to periods prior to the Closing in a manner reasonably consistent with the prior practices of Seller; and

(ii) upon reasonable notice, afford the Seller's Representatives reasonable access (including the right to make, at Seller's expense, photocopies), during normal business hours, to such Books and Records.

(b) In order to facilitate the resolution of any claims made by or against or incurred by Buyer after the Closing, or for any other reasonable purpose, for a period of 7 years following the Closing, Seller shall:

(i) retain any Books and Records that do not constitute Purchased Assets; and

(ii) upon reasonable notice, afford the Buyer's Representatives reasonable access (including the right to make, at Buyer's expense, photocopies), during normal business hours, to such Books and Records.

(c) Neither Buyer nor Seller shall be obligated to provide the other party with access to any Books and Records pursuant to this **Section 6.09** where such access would violate any Law.

**Section 6.10 Closing Conditions** From the date hereof until the Closing, each party hereto shall use commercially reasonable efforts to take such actions as are necessary to expeditiously satisfy the closing conditions set forth in **Article VII (Conditions to Closing)** hereof before April 30, 2012.

**Section 6.11 Public Announcements.** Unless otherwise required by applicable Law (based upon the reasonable advice of its counsel), neither party to this Agreement shall make any public announcements in respect of this Agreement or the transactions contemplated hereby or otherwise communicate with any news media without the prior written consent of the other party (which consent shall not be unreasonably withheld or delayed), and the parties shall cooperate as to the timing and contents of any such announcement.

**Section 6.12 Bulk Sales Laws.** The parties hereby waive compliance with the provisions of any bulk sales, bulk transfer or similar Laws of any jurisdiction that may otherwise be applicable with respect to the sale of any or all of the Purchased Assets to Buyer; it being understood that any Liabilities arising out of the failure of Seller to comply with the requirements and provisions of any bulk sales, bulk transfer or similar Laws of any jurisdiction which would not otherwise constitute Assumed Liabilities shall be treated as Excluded Liabilities.

**Section 6.13** Seller shall reasonably cooperate with Buyer to provide Buyer with information of the Business, including providing information regarding each supplier to whom Seller has paid consideration for goods or services rendered in an amount greater than or equal to \$10,000 for each of the two most recent fiscal years (collectively, the "**Material Suppliers**").

**Section 6.14 Transfer Taxes.** All transfer, documentary, sales, use, stamp, registration, value added and other such Taxes and fees (including any penalties and interest) incurred in connection with this Agreement and the other Transaction Documents (including any real property transfer Tax and any other similar Tax) shall be borne and paid by Seller when due; *provided, however*, that Buyer shall be responsible for and pay the Kentucky Sales Tax due in connection with the consummation of the transactions contemplated by this Agreement as follows:

(a) Buyer has determined that certain items of equipment comprising the Purchased Assets will be exempt from Kentucky sales Tax. Buyer shall be responsible for notifying Seller in a timely manner as to the items of equipment which are exempt from Kentucky Sales Tax and, Buyer will promptly provide Seller with a validly executed tax exemption certificate at least 5 days prior to Closing. With regard to Purchased Assets upon which Kentucky Sales Tax is due, if any, Buyer shall provide the Seller a direct pay certificate, and no Kentucky sales Tax shall be collected by Seller from Buyer.

**Section 6.15 Tax Matters.** If any taxing authority asserts that Buyer is liable for any Tax that is the responsibility of the Seller pursuant this Agreement, Seller shall pay any and all such amounts and shall provide evidence to the Buyer that such liabilities have been paid in full or otherwise satisfied. If any taxing authority asserts that Seller is liable for any Tax that is the responsibility of the Buyer pursuant to this Agreement, Buyer shall pay any and all such amounts and shall provide evidence to the Seller that such liabilities have been paid in full or otherwise satisfied.

**Section 6.16 Further Assurances; Change of Name.** Following the Closing, each of the parties hereto shall, and shall cause their respective Affiliates to, execute and deliver such additional documents, instruments, conveyances and assurances and take such further actions as may be reasonably required to carry out the provisions hereof and give effect to the transactions contemplated by this Agreement and the other Transaction Documents. Within 10 days after the Closing Date, Seller shall amend its organizational documents and take all other actions necessary to change its name to one sufficiently dissimilar to Seller's present name to avoid confusion.

**Section 6.17 Casualty and Condemnation.**

(a) Casualty.

(i) If any Purchased Asset is actually damaged or destroyed by casualty loss after the date hereof and prior to the Closing (a "**Casualty Loss**"), Seller shall provide Buyer prompt written notice of such Casualty Loss and the details thereof (a "**Casualty Notice**"). If the cost (the "**Restoration Cost**") to restore such damaged or destroyed Purchased Asset to a condition reasonably comparable to its condition prior to such Casualty Loss ("**Restore**") is greater than \$100,000 but does not exceed 35% of the Purchase Price, Seller shall within 30 days after the date of such Casualty Loss (but in any event prior to the Closing) elect to either Restore such damaged or destroyed Purchased Asset or reduce the amount of the Purchase Price by the Restoration Cost, by notice to Buyer, and such Casualty Loss shall not affect the Closing. If Seller does not make any such election within the periods required in the previous sentence, Buyer may elect to either terminate this Agreement or reduce the amount of the Purchase Price by the Restoration Cost by written notice to Seller.

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(ii) If the Restoration Cost is in excess of 35% of the Purchase Price, Buyer may, by written notice to Seller within 30 days (a "**Casualty Termination Notice**") after Buyer receives the Casualty Notice, elect to terminate this Agreement. If Buyer does not terminate this Agreement pursuant to the immediately preceding sentence within such 30 day period, then Seller shall, by written notice to Buyer within 30 days after the Casualty Loss, elect to (a) Restore such damaged or destroyed Purchased Asset, (b) reduce the Purchase Price by the Restoration Cost, or (c) terminate this Agreement. If Seller does not make any such election within such 30-day period, Buyer may, by written notice to Seller, elect to either terminate this Agreement or reduce the amount of the Purchase Price by the Restoration Cost.

(iii) If the Restoration Cost is \$100,000 or less, (x) neither Buyer nor Seller shall have the right or option to terminate this Agreement and (y) there shall be no reduction in the amount of the Purchase Price.

(iv) To the extent Seller elects to reduce the amount of the Purchase Price by the Restoration Cost pursuant to this Section 6.17(a), Buyer will, at Seller's election, (i) use commercially reasonable efforts to assign to Seller any rights to any indemnification and contribution available under or any rights to insurance claims or recoveries available under insurance policies covering Seller or its properties or assets, or (ii) at Seller's sole cost and expense, use commercially reasonable efforts to pursue such available indemnification and contribution on Seller's behalf for the benefit of Seller.

(v) If, after the date hereof, (i) damage to the Purchased Assets that does not constitute a Casualty Loss is discovered (e.g., damage that occurred prior to the date hereof), (ii) such damage is not restored prior to the Closing, and (iii) such damage is or may be insured against under one or more insurance policies covering Seller or its properties or assets, Seller will, at Buyer's election, (y) use commercially reasonable efforts to assign to Buyer any rights to any indemnification and contribution available under or any rights to insurance claims or recoveries available under such insurance policies, or (z) at Buyer's sole cost and expense, use commercially reasonable efforts to pursue such available indemnification and contribution on Buyer's behalf for the benefit of Buyer.

(b) Post-Closing Adjustment for Casualty Loss. If, pursuant to this Section 6.17, the Purchase Price is to be reduced by the Restoration Cost, for purposes of Closing, the amount of the Purchase Price shall be reduced by an estimate (to be conducted by a qualified firm reasonably acceptable to Buyer and Seller and selected by Buyer and Seller in good faith and promptly after the election is made to reduce the Purchase Price) of the Restoration Cost (the "**Estimated Restoration Cost**"). Promptly after the Purchased Assets have been Restored and the Restoration Cost is known, Buyer will pay to Seller any amount by which the Estimated Restoration Cost exceeds the Restoration Cost and Seller will pay to Buyer any amount by which the Restoration Cost exceeds the Estimated Restoration Cost. Buyer or Seller, as appropriate, will provide to the other party all

invoices or other documentation necessary to establish the amount of the Restoration Cost.

(c) Condemnation.

(i) If any Purchased Asset is taken by condemnation after the date hereof and prior to the Closing, Seller shall provide Buyer prompt written notice of such condemnation and the details thereof (a "**Condemnation Notice**"). If the Purchased Assets condemned have a Condemnation Value (as defined below) which is greater than \$100,000 but which does not exceed 35% of the Purchase Price, the Purchase Price shall be reduced by such Condemnation Value and such condemnation shall not affect the Closing.

(ii) If the Condemnation Value is in excess of 35% of the Purchase Price, Buyer may, by written notice to Seller within 30 days (a "**Condemnation Termination Notice**") after Buyer receives the Condemnation Notice, elect to terminate this Agreement. If Buyer does not terminate this Agreement pursuant to the immediately preceding sentence, Seller shall, by written notice to Buyer within 30 days after the Condemnation elect, by written notice to Buyer (but in any event at least 10 days prior to the Closing Date) to either, (a) reduce the Purchase Price by such Condemnation Value and such condemnation shall not affect the Closing or (b) terminate this Agreement. If Seller does not make any such election within such 30 day period, Buyer may elect to, by written notice to Seller, (a) reduce the Purchase Price by such Condemnation Value and such condemnation shall not affect the Closing or (b) terminate this Agreement.

(iii) If the Condemnation Value is \$100,000 or less, (x) neither Buyer nor Seller shall have the right or option to terminate this Agreement, (y) there shall be no reduction in the amount of the Purchase Price and (c) any such award shall remain with the Business.

(iv) As used in this **Section 6.17**, "**Condemnation Value**" means, with respect to any Asset, the condemnation award proceeds actually received for any Asset of the Business that is taken by condemnation after the date hereof and prior to the Closing. If the Condemnation Value is not known at the Closing and it has been elected to reduce the Purchase Price in connection with a condemnation, for purposes of Closing, the amount of Purchase Price shall be as stated herein and the reduction in Purchase Price will be effected by the assignment from the Seller to the Buyer of all rights to the Condemnation Value (including all legal rights to contest the amount of the Condemnation Value and to collect the condemnation award).

**Section 6.18 Schedule Update.** From time to time prior to the Closing Date, Seller may at its option supplement or amend and deliver updates to the Schedules (each a "**Schedule Update**") that are necessary to complete or correct any information in such Schedules or in any representation or warranty of Seller that has been rendered inaccurate since the date of this Agreement because of events or circumstances occurring after the

date of this Agreement (and such Schedule Update shall be clearly identified as a Schedule Update delivered pursuant to Section 6.19 of this Agreement). If (a) the economic impact of such Schedule Update is immediately determinable, (b) Buyer has the right to terminate the Agreement pursuant to Section 9.01(b)(i) and does not exercise such right as a result of such Schedule Update within 60 days of such Schedule Update and (c) the Schedule Update pursuant to this Section 6.19 relates to events occurring or conditions arising after the date of this Agreement, then such Schedule Update shall be deemed to have amended the appropriate Schedule or Schedules solely for purposes of Section 7.02(a) of this Agreement. If Seller provides more than one Schedule Update, then all Schedule Updates shall be deemed dated as of, and delivered, on the date of delivery of the last Schedule Update, and all such previous Schedule Updates shall be deemed for all purposes under this Section 6.19 not to have been delivered prior to date of delivery of the last Schedule Update.

**Section 6.19 Title Policy.** At or prior to Closing, Seller shall act in good faith to execute such certificates or affidavits as may be reasonably required by Buyer's title insurance company (and in such form reasonably acceptable to Seller) in issuing a title policy.

**Section 6.20 Obligations.** Buyer hereby agrees to comply with the obligations set forth on **Section 6.20** of the Disclosure Schedules until the tenth anniversary of the Closing Date.

## ARTICLE VII CONDITIONS TO CLOSING

**Section 7.01 Conditions to Obligations of All Parties.** The obligations of each party to consummate the transactions contemplated by this Agreement shall be subject to the fulfillment, at or prior to the Closing, of each of the following conditions:

(a) The filings of Buyer and Seller listed on **Section 7.01(a)** of the Disclosure Schedules have been made and the applicable waiting period and any extensions thereof shall have expired or been terminated.

(b) No Governmental Authority shall have enacted, issued, promulgated, enforced or entered any Governmental Order which is in effect and has the effect of making the transactions contemplated by this Agreement illegal, otherwise restraining or prohibiting consummation of such transactions or causing any of the transactions contemplated hereunder to be rescinded following completion thereof.

(c) Seller and Buyer shall have received all final, non-appealable consents, authorizations, orders and approvals from Governmental Authorities set forth on **Sections 4.03(b)** (to the extent marked with an asterisk) **and 5.03(b)** of the Disclosure Schedules,



in form and substance reasonably satisfactory to Buyer and Seller, necessary for (i) the consummation of the transactions contemplated by this Agreement and the other Transaction Documents, (ii) the transfer of all Permits set forth on **Section 4.15(b)** of the Disclosure Schedules and Environmental Permits set forth on **Section 4.16(b)** of the Disclosure Schedules, and (iii) the transfer of all permits and licenses required to operate the Business and use the Purchased Assets after the Closing in substantially the same manner as Seller has done prior to the Closing to the extent different from **Section 7.01(c)(ii)**.

**Section 7.02 Conditions to Obligations of Buyer.** The obligations of Buyer to consummate the transactions contemplated by this Agreement shall be subject to the fulfillment or Buyer's waiver, at or prior to the Closing, of each of the following conditions:

(a) Other than the representations and warranties of Seller contained in **Section 4.01**, **Section 4.02** and **Section 4.21**, the representations and warranties of Seller contained in this Agreement, the other Transaction Documents and any certificate delivered pursuant hereto shall be true and correct in all respects (in the case of any representation or warranty qualified by materiality or Material Adverse Effect) or in all material respects (in the case of any representation or warranty not qualified by materiality or Material Adverse Effect) on and as of the date hereof and on and as of the Closing Date with the same effect as though made at and as of such date (except those representations and warranties that address matters only as of a specified date, the accuracy of which shall be determined as of that specified date in all respects). The representations and warranties of Seller contained in **Section 4.01**, **Section 4.02**, and **Section 4.21** shall be true and correct in all respects on and as of the date hereof and on and as of the Closing Date with the same effect as though made at and as of such date (except those representations and warranties that address matters only as of a specified date, the accuracy of which shall be determined as of that specified date in all respects).

(b) Seller shall have duly performed and complied in all material respects with all agreements, covenants and conditions required by this Agreement and each of the other Transaction Documents to be performed or complied with by it prior to or on the Closing Date.

(c) No Action shall have been commenced against Buyer or Seller, which would prevent the Closing. No injunction or restraining order shall have been issued by any Governmental Authority, and be in effect, which restrains or prohibits any transaction contemplated hereby.

(d) Seller shall have completed the PILOT Program Termination.

(e) From the date of this Agreement, there shall not have occurred any Material Adverse Effect, nor shall any event or events have occurred that, individually or

in the aggregate, with or without the lapse of time, would reasonably be expected to result in a Material Adverse Effect.

(f) Seller shall have delivered to Buyer duly executed counterparts to the Transaction Documents (other than this Agreement) and such other documents and deliveries set forth in **Section 3.02(a)** (*Closing Deliverables*).

(g) Buyer shall have received all Permits set forth on **Section 4.15(b)** of the Disclosure Schedules and all Environmental Permits set forth on **Section 4.16(b)** of the Disclosure Schedules.

(h) Buyer shall, at its sole cost, have received an owner's title insurance policy reasonably acceptable to Buyer with respect to each parcel of Real Property, issued by a nationally recognized title insurance company, written as of the Closing Date, insuring Buyer in such amounts and together with such endorsements, and otherwise in such form, as Buyer shall reasonably require. Such title insurance policy shall insure fee simple title to each parcel of Real Property, free and clear of all Encumbrances other than Permitted Encumbrances. Buyer shall, at its sole cost, have received an appropriately certified ALTA/ACSM Land Title Survey showing no Encumbrances other than the Permitted Encumbrances, and otherwise in form and substance reasonably satisfactory to Buyer, for each parcel of Real Property. Notwithstanding the foregoing, to the extent Buyer receives (i) a title insurance policy in the form and from a similar-quality title insurance company set forth in **Schedule XX** in an amount up to the Purchase Price and (ii) a certified ALTA/ACSM Land Title Survey in the form as set forth on **Schedule YY** taking into account the changes relating to the PILOT Program Termination, the condition in this Section 7.02(h) shall be deemed satisfied.

(i) All Encumbrances relating to the Purchased Assets shall have been released in full, other than Permitted Encumbrances, and Seller shall have delivered to Buyer written evidence, in a form reasonably satisfactory to Buyer, of the release of such Encumbrances.

(j) Buyer shall have received a certificate, dated the Closing Date and signed by a duly authorized officer of Seller, that each of the conditions set forth in **Section 7.02(a)** (*Conditions to Obligations of Buyer*) and **Section 7.02(b)** (*Conditions to Obligations of Buyer*) have been satisfied (the "**Seller Closing Certificate**").

(k) Buyer shall have received a certificate of the Secretary or an Assistant Secretary (or equivalent officer) of Seller certifying that attached thereto are true and complete copies of all resolutions adopted by the board of directors of Seller authorizing the execution, delivery and performance of this Agreement and the other Transaction Documents and the consummation of the transactions contemplated hereby and thereby, and that all such resolutions are in full force and effect and are all the resolutions adopted in connection with the transactions contemplated hereby and thereby.

(l) Buyer shall have received a certificate of the Secretary or an Assistant Secretary (or equivalent officer) of Seller certifying the names and signatures of the

officers of Seller authorized to sign this Agreement, the Transaction Documents and the other documents to be delivered hereunder and thereunder.

(m) Buyer shall have received a certificate pursuant to Treasury Regulations Section 1.1445-2(b) under the Foreign Investment in Real Property Tax Act of 1980 (the "**FIRPTA Certificate**") that the entity that is treated as the owner of Seller's assets is not a foreign person within the meaning of Section 1445 of the Code, duly executed by Seller.

(n) Buyer shall have received an opinion of counsel to Seller and Seller Parent in the form of **Exhibit E** hereto.

(o) Seller shall have delivered to Buyer such other documents or instruments as Buyer reasonably requests and are reasonably necessary to consummate the transactions contemplated by this Agreement.

**Section 7.03 Conditions to Obligations of Seller.** The obligations of Seller to consummate the transactions contemplated by this Agreement shall be subject to the fulfillment or Seller's waiver, at or prior to the Closing, of each of the following conditions:

(a) Other than the representations and warranties of Buyer contained in **Section 5.01**, **Section 5.02** and **Section 5.04**, the representations and warranties of Buyer contained in this Agreement, the other Transaction Documents and any certificate delivered pursuant hereto shall be true and correct in all respects (in the case of any representation or warranty qualified by materiality or Material Adverse Effect) or in all material respects (in the case of any representation or warranty not qualified by materiality or Material Adverse Effect) on and as of the date hereof and on and as of the Closing Date with the same effect as though made at and as of such date (except those representations and warranties that address matters only as of a specified date, the accuracy of which shall be determined as of that specified date in all respects). The representations and warranties of Buyer contained in **Section 5.01**, **Section 5.02** and **Section 5.04** shall be true and correct in all respects on and as of the date hereof and on and as of the Closing Date with the same effect as though made at and as of such date.

(b) Buyer shall have duly performed and complied in all material respects with all agreements, covenants and conditions required by this Agreement and each of the other Transaction Documents to be performed or complied with by it prior to or on the Closing Date.

(c) No Action shall have been commenced against Buyer or Seller, which would prevent the Closing. No injunction or restraining order shall have been issued by any Governmental Authority, and be in effect, which restrains or prohibits any material transaction contemplated hereby.

(d) Buyer shall have delivered to Seller duly executed counterparts to the Transaction Documents (other than this Agreement) and such other documents and deliveries set forth in **Section 3.02(b)** (*Closing Deliverables*).

(e) Seller shall have received a certificate, dated the Closing Date and signed by a duly authorized officer of Buyer, that each of the conditions set forth in **Section 7.03(a)** (*Conditions to Obligations of Seller*) and **Section 7.03(b)** (*Conditions to Obligations of Seller*) have been satisfied (the "**Buyer Closing Certificate**").

(f) Seller shall have received a certificate of the Secretary or an Assistant Secretary (or equivalent officer) of Buyer certifying that attached thereto are true and complete copies of all resolutions adopted by the board of directors of Buyer authorizing the execution, delivery and performance of this Agreement and the other Transaction Documents and the consummation of the transactions contemplated hereby and thereby, and that all such resolutions are in full force and effect and are all the resolutions adopted in connection with the transactions contemplated hereby and thereby.

(g) Seller shall have received a certificate of the Secretary or an Assistant Secretary (or equivalent officer) of Buyer certifying the names and signatures of the officers of Buyer authorized to sign this Agreement, the Transaction Documents and the other documents to be delivered hereunder and thereunder.

(h) Seller shall have completed the PILOT Program Termination.

(i) Buyer shall have delivered to Seller such other documents or instruments as Seller reasonably requests and are reasonably necessary to consummate the transactions contemplated by this Agreement.

## ARTICLE VIII INDEMNIFICATION

**Section 8.01 Survival.** Subject to the limitations and other provisions of this Agreement, the representations and warranties contained herein shall survive the Closing and shall remain in full force and effect until the date that is 1 year from the Closing Date; *provided, that* the representations and warranties in **Section 4.01** (*Organization and Qualification of Seller*), **Section 4.02** (*Authority of Seller*), **Section 4.07** (*Title to Purchased Assets*), **Section 5.01** (*Organization of Buyer*) and **Section 5.02** (*Authority of Buyer*) shall survive for a period of 5 years from the Closing Date and the representations and warranties in **Section 4.19** and **Section 4.21** shall survive for the full period of all applicable statutes of limitations (giving effect to any waiver or extension by the appropriate Governmental Authority thereof) plus 60 days. All covenants and agreements of the parties contained herein shall survive the Closing indefinitely or for the period explicitly specified therein. Notwithstanding the foregoing, any claims asserted in accordance with the terms of this Article 8, in good faith, with reasonable specificity (to the extent known at such time), and in writing, by notice from the non-breaching party to

the breaching party prior to the expiration date of the applicable survival period, shall not thereafter be barred by the expiration of the relevant representation or warranty and such claims shall survive until finally resolved.

**Section 8.02 Indemnification By Seller.** Subject to the other terms and conditions of this **Article VIII**, from and after the Closing, Seller shall indemnify and defend Buyer and its Affiliates and their respective Representatives (collectively, the "**Buyer Indemnitees**") against, and shall hold each of them harmless from and against, and shall pay and reimburse each of them for, any and all Losses incurred or sustained by, or imposed upon, the Buyer Indemnitees to the extent resulting from:

(a) any inaccuracy in or breach of any of the representations or warranties of Seller contained in this Agreement, the other Transaction Documents or in any certificate delivered by or on behalf of Seller pursuant to this Agreement, as of the date such representation or warranty was made or as if such representation or warranty was made on and as of the Closing Date (except for representations and warranties that expressly relate to a specified date, the inaccuracy in or breach of which will be determined with reference to such specified date);

(b) any breach or non-fulfillment of any covenant, agreement or obligation to be performed by Seller pursuant to this Agreement, the other Transaction Documents or any certificate delivered by or on behalf of Seller pursuant to this Agreement; or

(c) any Excluded Asset or any Excluded Liability; or

(d) any Third Party Claim based upon, resulting from or arising out of the business, operations, properties, assets or obligations of Seller or any of its Affiliates (other than the Assumed Liabilities) conducted, existing or arising on or prior to the Closing Date; provided that such Third Party Claim does not arise from facts or circumstances that would constitute a breach of a representation, warranty, or covenant of Buyer under this Agreement.

**Section 8.03 Indemnification By Buyer.** Subject to the other terms and conditions of this **Article VIII**, from and after the Closing, Buyer shall indemnify and defend each of Seller and its Affiliates (to the extent any such Affiliate is a permitted assignee under **Section 10.07** (*Successors and Assigns*)) and their respective Representatives (collectively, the "**Seller Indemnitees**") against, and shall hold each of them harmless from and against, and shall pay and reimburse each of them for, any and all Losses incurred or sustained by, or imposed upon, the Seller Indemnitees resulting from:

(a) any inaccuracy in or breach as of the Closing Date of any of the representations or warranties of Buyer contained in this Agreement, the other Transaction Documents or in any certificate delivered by or on behalf of Buyer pursuant to this Agreement, as of the date such representation or warranty was made or as if such

representation or warranty was made on and as of the Closing Date (except for representations and warranties that expressly relate to a specified date, the inaccuracy in or breach of which will be determined with reference to such specified date);

(b) any breach or non-fulfillment of any covenant, agreement or obligation to be performed by Buyer pursuant to this Agreement, the other Transaction Documents or any certificate delivered by or on behalf of Buyer pursuant to this Agreement;

(c) any Assumed Liability;

(d) the Taxes that are the obligation of Buyer set forth in **Section 6.14** (*Transfer Taxes*); or

(e) any Third Party Claim based upon, resulting from, or arising out of the Buyer's ownership and use of the Purchased Assets after the Closing; provided, that such Third Party Claim does not arise from facts or circumstances that would constitute a breach of a representation, warranty, or covenant of Seller under this Agreement.

**Section 8.04 Certain Limitations.** The indemnification provided for in **Section 8.02** (*Indemnification by Seller*) and **Section 8.03** (*Indemnification by Buyer*) shall be subject to the following limitations:

(a) Seller shall not be liable to the Buyer Indemnitees for indemnification under **Section 8.02(a)** (*Indemnification by Seller*) and, with respect to a breach of **Section 6.04(a)(i)** (*Notice of Certain Events; Removal of Excluded Assets*), under **Section 8.02(b)** (*Indemnification by Seller*) (or certificate with respect thereto) (other than with respect to a claim for indemnification based upon, arising out of, with respect to or by reason of fraud) in excess of \$16,425,000; provided, however, that with respect to a breach of any representation or warranty in **Section 4.01** (*Organization and Qualification of Seller*), **Section 4.02** (*Authority of Seller*), **Section 4.07** (*Title to Purchased Assets*), **Section 4.19** (*Taxes*) and **Section 4.21** (*Brokers*), Seller's liability shall not exceed the Purchase Price; and provided further that, in no event shall Buyer Indemnitees be entitled to aggregate indemnification under this Agreement, the Transaction Documents or in any certificate in excess of the Purchase Price.

(b) Notwithstanding anything to the contrary contained in this **Section 8.04**, Buyer Indemnitees and Seller Indemnitees shall be entitled to indemnification with respect to any claim for indemnification under this Agreement, the other Transaction Documents or in any certificate:

(i) only if the amount of Losses with respect to such claim exceeds the amount of \$50,000 (the "**De Minimis Amount**") (any claim involving Losses equal to or less than such amount being referred to as a "**De Minimis Claim**") (provided that, in the case of Buyer Indemnitees, claims for Losses with respect to Excluded Liabilities shall not be subject to the De Minimis Amount and, in the case of Seller Indemnitees, claims for Losses with respect to Assumed Liabilities shall not be subject to the De Minimis Amount);

(ii) only if the aggregate Losses for breach of this Agreement to all Buyer Indemnitees or Seller Indemnitees, as applicable, (other than De Minimis Claims), exceed the amount of one percent (1.0%) of the Purchase Price (the “**Deductible**”), whereupon (subject to the provisions of clause (iii) below) Seller or Buyer, as the case may be, shall be obligated to pay in full all such amounts exceeding the amount of the Deductible (provided that, in the case of Buyer Indemnitees, claims for Losses with respect to Excluded Liabilities shall not be subject to the Deductible and in the case of Seller Indemnitees, claims for Losses with respect to Assumed Liabilities shall not be subject to the Deductible); and

(iii) only with respect to claims for indemnification made on or before the expiration of the survival period pursuant to **Section 8.01** (*Survival*) for the applicable representation or warranty.

(c) Buyer shall not be liable to the Seller Indemnitees for indemnification under **Section 8.02(a)** (*Indemnification by Buyer*) (other than with respect to a claim for indemnification based upon, arising out of, with respect to or by reason of fraud) in excess of \$16,425,000; provided, however, that with respect to a breach of any representation or warranty in **Section 4.01** (*Organization of Buyer*), **Section 4.02** (*Authority of Buyer*), and **Section 4.074** (*Brokers*), Buyer’s liability shall not exceed the Purchase Price; and provided further that, in no event shall Seller Indemnitees be entitled to aggregate indemnification under this Agreement, the Transaction Documents or in any certificate in excess of the Purchase Price.

(d) For purposes of this **Article VIII**, the amount of Loss arising out of any inaccuracy in or breach of any representation or warranty shall be determined without regard to any materiality, Material Adverse Effect or other similar qualification contained in or otherwise applicable to such representation or warranty.

(e) No party shall have any liability for any Loss which would not have arisen but for any alteration or repeal or enactment of any Law after the date of this Agreement;

(f) The Losses suffered by any indemnified party shall be calculated after giving effect to any amounts available from third parties, including insurance proceeds, in each case net of the reasonable out of pocket costs and expenses associated with such recoveries from third parties (it being understood and agreed that the Indemnified Parties shall use their commercially reasonable efforts to seek insurance recoveries in respect of Losses to be indemnified hereunder). If any insurance proceeds or other recoveries from third parties are actually realized (in each case calculated net of the reasonable out of pocket costs and expenses associated with such recoveries from third parties) by an Indemnified Party subsequent to the receipt by such Indemnified Party of an indemnification payment hereunder in respect of the claims to which such insurance proceedings or third party recoveries relate, appropriate refunds shall be made promptly to the Indemnifying Party regarding the amount of such indemnification payment;

(g) Seller shall have no liability for any breach of or inaccuracy in this Agreement, the other Transaction Documents or in any certificate or instrument delivered by or on behalf of Seller pursuant to this Agreement to the extent Buyer has actual knowledge as of the date of this Agreement of such breach or inaccuracy; and

(h) NOTWITHSTANDING ANYTHING IN THIS AGREEMENT TO THE CONTRARY, NO PARTY SHALL BE LIABLE FOR SPECIAL, PUNITIVE, EXEMPLARY, INCIDENTAL, CONSEQUENTIAL OR INDIRECT DAMAGES OR LOST PROFITS, WHETHER BASED ON CONTRACT, TORT, STRICT LIABILITY, OTHER LAW OR OTHERWISE AND WHETHER OR NOT ARISING FROM THE OTHER PARTY'S SOLE, JOINT OR CONCURRENT NEGLIGENCE, STRICT LIABILITY OR OTHER FAULT ("**NON-REIMBURSABLE DAMAGES**"); *PROVIDED, HOWEVER*, THAT A PARTY SHALL BE LIABLE FOR, AND NON-REIMBURSABLE DAMAGES SHALL NOT INCLUDE, ALL SUCH DAMAGES ARISING FROM THIRD PARTY CLAIMS FOR WHICH AN INDEMNIFIED PARTY SEEKS INDEMNIFICATION.

**Section 8.05** Indirect Claims. Notwithstanding anything in this Agreement to the contrary, except for fraud or willful misconduct, no Representative or Affiliate of a Party shall have any personal liability to the other Party or any other Person as a result of the breach of any representation, warranty, covenant, agreement or obligation of such Party in this Agreement.

**Section 8.06** EXCEPT FOR ANY REPRESENTATIONS AND WARRANTIES SET FORTH IN **ARTICLE IV** OR IN ANY CERTIFICATE OR THE DEED DELIVERED HEREUNDER, THE PURCHASED ASSETS ARE "AS IS, WHERE IS," AND SELLER EXPRESSLY DISCLAIMS ANY REPRESENTATIONS OR WARRANTIES OF ANY KIND OR NATURE, EXPRESS OR IMPLIED, AS TO LIABILITIES, OPERATIONS, TITLE, CONDITION, VALUE OR QUALITY OR THE PROSPECTS OF THE BUSINESS (FINANCIAL AND OTHERWISE), RISKS AND OTHER INCIDENTS OF THE BUSINESS, AND SELLER SPECIFICALLY DISCLAIMS ANY REPRESENTATION OR WARRANTY OF MERCHANTABILITY, USAGE, OR SUITABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE WITH RESPECT TO THE PURCHASED ASSETS OR ANY PART THEREOF, OR AS TO THE WORKMANSHIP THEREOF, OR THE ABSENCE OF ANY DEFECTS THEREIN, WHETHER LATENT OR PATENT, OR COMPLIANCE WITH ENVIRONMENTAL REQUIREMENTS, OR AS TO THE CONDITION OF THE BUSINESS, INCLUDING, WITHOUT LIMITATION, WHETHER THE BUSINESS POSSESSES SUFFICIENT REAL PROPERTY OR PERSONAL PROPERTY TO OPERATE, IN EACH CASE EXCEPT AS SET FORTH HEREIN OR IN ANY CERTIFICATE DELIVERED HEREUNDER. EXCEPT AS OTHERWISE EXPRESSLY PROVIDED HEREIN



OR IN ANY CERTIFICATE DELIVERED HEREUNDER, SELLER FURTHER SPECIFICALLY DISCLAIMS ANY REPRESENTATION OR WARRANTY REGARDING THE ABSENCE OF HAZARDOUS MATERIALS OR LIABILITY OR POTENTIAL LIABILITY ARISING UNDER ENVIRONMENTAL LAWS. WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, EXCEPT AS EXPRESSLY PROVIDED HEREIN OR IN ANY CERTIFICATE DELIVERED HEREUNDER, SELLER EXPRESSLY DISCLAIMS ANY REPRESENTATION OR WARRANTY OF ANY KIND REGARDING THE CONDITION OF THE PURCHASED ASSETS OR THE SUITABILITY FOR OPERATION AS A POWER PLANT OR AS SITES FOR THE DEVELOPMENT OF ADDITIONAL OR REPLACEMENT GENERATION CAPACITY AND NO MATERIAL OR INFORMATION PROVIDED BY OR COMMUNICATIONS MADE BY SELLER, OR ANY OTHER PARTY, INFORMATION PROVIDED DURING DUE DILIGENCE, AND ANY ORAL, WRITTEN OR ELECTRONIC RESPONSE TO ANY INFORMATION REQUEST PROVIDED TO BUYER, WILL CAUSE OR CREATE ANY WARRANTY, EXPRESS OR IMPLIED, AS TO THE TITLE, CONDITION, VALUE OR QUALITY OF THE PURCHASED ASSETS THAT IS NOT SET FORTH HEREIN.

**Section 8.07 Indemnification Procedures.** The party making a claim under this **Article VIII** is referred to as the "**Indemnified Party**," and the party against whom such claims are asserted under this **Article VIII** is referred to as the "**Indemnifying Party**".

(a) **Third Party Claims.** If any Indemnified Party receives notice of the assertion or commencement of any Action made or brought by any Person who is not a party to this Agreement or an Affiliate of a party to this Agreement or a Representative of the foregoing (a "**Third Party Claim**") against such Indemnified Party with respect to which the Indemnifying Party is obligated to provide indemnification under this Agreement, the Indemnified Party shall give the Indemnifying Party reasonably prompt written notice thereof, but in any event not later than 30 calendar days after receipt of such notice of such Third Party Claim (and in any event within the applicable survival period set forth in **Section 8.01 (Survival)**). The failure to give such prompt written notice shall not, however, relieve the Indemnifying Party of its indemnification obligations (unless outside of the survival periods set forth in **Section 8.01 (Survival)**), except and only to the extent that the Indemnifying Party is prejudiced by the failure to give such notice or forfeits rights or defense by reason of such failure. Such notice by the Indemnified Party shall describe the Third Party Claim in reasonable detail, shall include copies of all material written evidence thereof and shall indicate the estimated amount, if reasonably practicable, of the Loss that has been or may be sustained by the Indemnified Party. The Indemnifying Party shall have the right to participate in, or by giving written notice to the Indemnified Party, to assume the defense of any Third Party Claim at the Indemnifying Party's expense and by the Indemnifying Party's own counsel, and the Indemnified Party shall cooperate in good faith in such defense; *provided, that* if the

Indemnifying Party is Seller, such Indemnifying Party shall not have the right to defend or direct the defense of any such Third Party Claim that (x) is asserted directly by or on behalf of a Person that is a significant supplier of the Business, or (y) seeks an injunction or other equitable relief against the Indemnified Party. In the event that the Indemnifying Party assumes the defense of any Third Party Claim, subject to **Section 8.07(b)** (*Settlement of Third Party Claims*), it shall have the right to take such action as it deems necessary to avoid, dispute, defend, appeal or make counterclaims pertaining to any such Third Party Claim in the name and on behalf of the Indemnified Party. The Indemnified Party shall have the right to participate in the defense of any Third Party Claim with counsel selected by it subject to the Indemnifying Party's right to control the defense thereof. The fees and disbursements of such counsel shall be at the expense of the Indemnified Party, *provided, that* if in the reasonable opinion of counsel to the Indemnified Party, (A) there are legal defenses available to an Indemnified Party that are different from or additional to those available to the Indemnifying Party; or (B) there exists a conflict of interest between the Indemnifying Party and the Indemnified Party that cannot be waived, the Indemnifying Party shall be liable for the reasonable fees and expenses of counsel to the Indemnified Party in each jurisdiction for which the Indemnified Party determines counsel is required. If the Indemnifying Party elects not to compromise or defend such Third Party Claim, fails to promptly notify the Indemnified Party in writing of its election to defend as provided in this Agreement, or fails to diligently prosecute the defense of such Third Party Claim, the Indemnified Party may, subject to **Section 8.07(b)** (*Settlement of Third Party Claims*), pay, compromise, defend such Third Party Claim and seek indemnification for any and all Losses based upon, arising from or relating to such Third Party Claim. Seller and Buyer shall cooperate with each other in all reasonable respects in connection with the defense of any Third Party Claim, including making available (subject to the provisions of **Section 6.06** (*Confidentiality*)) records relating to such Third Party Claim and furnishing, without expense (other than reimbursement of actual out-of-pocket expenses) to the defending party, management employees of the non-defending party as may be reasonably necessary for the preparation of the defense of such Third Party Claim.

(b) **Settlement of Third Party Claims.** Notwithstanding any other provision of this Agreement, the Indemnifying Party shall not enter into settlement of any Third Party Claim without the prior written consent of the Indemnified Party, except as provided in this **Section 8.07(b)** (*Settlement of Third Party Claims*). If a firm offer is made to settle a Third Party Claim without leading to liability or the creation of a financial or other obligation on the part of the Indemnified Party and provides, in customary form, for the unconditional release of each Indemnified Party from all liabilities and obligations in connection with such Third Party Claim and the Indemnifying Party desires to accept and agree to such offer, the Indemnifying Party shall give written notice to that effect to the Indemnified Party. If the Indemnified Party fails to consent to such firm offer within ten days after its receipt of such notice, the Indemnified Party may continue to contest or defend such Third Party Claim and in such event, the

maximum liability of the Indemnifying Party as to such Third Party Claim shall not exceed the amount of such settlement offer. If the Indemnified Party fails to consent to such firm offer and also fails to assume defense of such Third Party Claim, the Indemnifying Party may settle the Third Party Claim upon the terms set forth in such firm offer to settle such Third Party Claim. If the Indemnifying Party has assumed the defense pursuant to **Section 8.07(a)** (*Third Party Claims*), it shall not agree to any settlement without the written consent of the Indemnified Party (which consent shall not be unreasonably withheld or delayed).

(c) **Direct Claims.** Any Action by an Indemnified Party on account of a Loss which does not result from a Third Party Claim (a "**Direct Claim**") shall be asserted by the Indemnified Party giving the Indemnifying Party reasonably prompt written notice thereof, but in any event not later than 30 days after the Indemnified Party becomes aware of such Direct Claim (and in any event within the applicable survival period set forth in **Section 8.01** (*Survival*)). The failure to give such prompt written notice shall not, however, relieve the Indemnifying Party of its indemnification obligations (unless outside of the survival periods set forth in **Section 8.01** (*Survival*)), except and only to the extent that the Indemnifying Party forfeits rights or defenses by reason of such failure. Such notice by the Indemnified Party shall describe the Direct Claim in reasonable detail, shall include copies of all material written evidence thereof and shall indicate the estimated amount, if reasonably practicable, of the Loss that has been or may be sustained by the Indemnified Party. The Indemnifying Party shall have 30 days after its receipt of such notice to respond in writing to such Direct Claim. The Indemnified Party shall allow the Indemnifying Party and its professional advisors to investigate the matter or circumstance alleged to give rise to the Direct Claim, and whether and to what extent any amount is payable in respect of the Direct Claim and the Indemnified Party shall assist the Indemnifying Party's investigation by giving such information and assistance (including access to the Indemnified Party's premises and personnel and the right to examine and copy any accounts, documents or records) as the Indemnifying Party or any of its professional advisors may reasonably request. If the Indemnifying Party does not so respond within such 30 day period, the Indemnifying Party shall be deemed to have rejected such claim, in which case the Indemnified Party shall be free to pursue such remedies as may be available to the Indemnified Party on the terms and subject to the provisions of this Agreement.

(d) **Cooperation.** Any party that becomes aware of a Loss for which it may seek indemnification under this Article VIII shall be required to use commercially reasonable efforts to mitigate (including not taking actions to exacerbate) the Loss including taking any actions reasonably requested by the Indemnifying Party. An Indemnifying Party shall not be liable for any Loss to the extent that it is attributable to the Indemnified Party's breach of its obligation set forth in the preceding sentence.

**Section 8.08 Payments.** Once a Loss is agreed to by the Indemnifying Party or finally adjudicated to be payable pursuant to this **Article VIII**, the Indemnifying Party

shall satisfy its obligations within 15 Business Days of such final, non-appealable adjudication by wire transfer of immediately available funds. The parties hereto agree that should an Indemnifying Party not make full payment of any such obligations within such 15 Business Day period, any amount payable shall accrue interest from and including the date of agreement of the Indemnifying Party or final, non-appealable adjudication to and including the date such payment has been made at a rate per annum equal to the "prime rate" as published in the *Wall Street Journal* from time to time plus 300 basis points. Such interest shall be calculated daily on the basis of a 365 day year and the actual number of days elapsed.

**Section 8.09 Tax Treatment of Indemnification Payments.** All indemnification payments made under this Agreement shall be treated by the parties as an adjustment to the Purchase Price for Tax purposes, unless otherwise required by Law.

**Section 8.10 Exclusive Remedies.** Subject to **Section 10.11** (*Specific Performance*) and **Article IX** (*Termination*), the parties acknowledge and agree that their sole and exclusive remedy with respect to any and all claims arising after the Closing (other than claims arising under **Article 2** and **Article 6** related to Purchase Price Adjustments and claims from fraud, criminal activity or willful misconduct on the part of a party hereto in connection with the transactions contemplated by this Agreement) for any breach of any representation, warranty, covenant, agreement or obligation set forth herein or otherwise relating to the subject matter of this Agreement, shall be pursuant to the indemnification provisions set forth in this **Article VIII**. Nothing in this **Section 8.11** shall limit any Person's right to seek and obtain any equitable relief to which any Person shall be entitled or to seek any remedy on account of any Person's fraudulent, criminal or intentional misconduct, or any Person's right to seek and obtain equitable or monetary relief prior to the Closing.

## ARTICLE IX TERMINATION

**Section 9.01 Termination.** This Agreement may be terminated at any time prior to the Closing:

- (a) by the mutual written consent of Seller and Buyer;
- (b) by Buyer by written notice to Seller if:

- (i) Buyer is not then in material breach of any provision of this Agreement and there has been a breach, inaccuracy in or failure to perform any representation, warranty, covenant or agreement made by Seller pursuant to this Agreement that would give rise to the failure of any of the conditions specified in **Section 7.02(a)** (*Conditions to Obligations of Buyer*) or **Section 7.02(b)** (*Conditions to*

## EXECUTION COPY

*Obligations of Buyer*) and such breach, inaccuracy or failure has not been cured by Seller within thirty (30) days of Seller's receipt of written notice of such breach from Buyer; provided, however, that if, during such thirty (30) day period Seller has endeavored in good faith and proceeded diligently to cure such breach, such thirty (30) day period may be extended for up to an additional thirty (30) days, but only so long as (y) Seller continues to endeavor in good faith and proceeds diligently to cure such breach and (z) such breach is reasonably likely to be cured during such additional period, provided further that in no event shall such thirty (30) day period extend past June 30, 2012;

(ii) any of the conditions set forth in Section 7.01 or Section 7.02 shall not have been, or if it becomes reasonably apparent that the condition in Section 7.01(c) will not be, fulfilled by June 30, 2012, unless such failure shall be due to the failure of Buyer to perform or comply with any of the covenants, agreements or conditions hereof to be performed or complied with by it prior to the Closing; or

(iii) Buyer is electing to terminate this Agreement pursuant to Section 6.18;

(c) by Seller by written notice to Buyer if:

(i) Buyer has breached its obligation to pay the Purchase Price;

(ii) any of the conditions set forth in **Section 7.01** (*Conditions to Obligations of All Parties*) or **Section 7.03** (*Conditions to Obligations of Seller*) shall not have been fulfilled by June 30, 2012, unless such failure shall be due to the failure of Seller to perform or comply with any of the covenants, agreements or conditions hereof to be performed or complied with by it prior to Closing; or

(iii) Seller is not then in material breach of any provision of this Agreement and there has been a breach, inaccuracy in or failure to perform any representation, warranty, covenant or agreement made by Buyer pursuant to this Agreement that would give rise to the failure of any of the conditions specified in **Section 7.03(a)** (*Conditions to Obligations of Seller*) or **Section 7.03(b)** (*Conditions to Obligations of Seller*) and such breach, inaccuracy or failure, in the case of **9.01(c)(ii)** only, has not been cured by Buyer within thirty (30) days of Buyer's receipt of written notice of such breach from Seller; provided, however, that if, during such thirty (30) day period Buyer has endeavored in good faith and proceeded diligently to cure such breach, such thirty (30) day period may be extended for up to an additional thirty (30) days, but only so long as (y) Buyer continues to endeavor in good faith and proceeds diligently to cure such breach and (z) such breach is reasonably likely to be cured during such additional period, provided further that in no event shall such thirty (30) day period extend past June 30, 2012; or

(iv) Seller is electing to terminate this Agreement pursuant to Section 6.18;

(d) by Buyer or Seller in the event that (i) there shall be any Law that makes consummation of the transactions contemplated by this Agreement illegal or otherwise

prohibited or (ii) any Governmental Authority shall have issued a Governmental Order restraining or enjoining the transactions contemplated by this Agreement, and such Governmental Order shall have become final and non appealable.

**Section 9.02 Effect of Termination.** In the event of termination of this Agreement in accordance with this Agreement, each party shall have available to it all remedies available at law or in equity, including without limitation the ability to specifically enforce the terms of this Agreement or to obtain temporary or permanent injunctive relief.

**ARTICLE X**  
**MISCELLANEOUS**

**Section 10.01 Expenses.** Except as otherwise expressly provided herein, all costs and expenses, including, without limitation, fees and disbursements of counsel, financial advisors and accountants, incurred in connection with this Agreement and the transactions contemplated hereby shall be paid by the party incurring such costs and expenses, whether or not the Closing shall have occurred; *provided, however*, Buyer and Seller shall be equally responsible for all filing and other similar fees payable in connection with any filings or submissions under the HSR Act.

**Section 10.02 Notices.** All notices, requests, consents, claims, demands, waivers and other communications hereunder shall be in writing and shall be deemed to have been given (a) when delivered by hand (with written confirmation of receipt); (b) when received by the addressee if sent by a nationally recognized overnight courier (receipt requested); (c) on the date sent by facsimile or e-mail of a PDF document (with confirmation of transmission) if sent during normal business hours of the recipient, and on the next Business Day if sent after normal business hours of the recipient or (d) on the third Business Day after the date mailed, by certified or registered mail, return receipt requested, postage prepaid. Such communications must be sent to the respective parties at the following addresses (or at such other address for a party as shall be specified in a notice given in accordance with this **Section 10.02**):

If to Seller:	c/o LS Power Development, LLC Two Tower Center, 11 <sup>th</sup> Floor East Brunswick, NJ 08816
	Facsimile: 732-249-7290
	Attention: General Counsel

**EXECUTION COPY**

with a copy to:

Latham & Watkins LLP  
53<sup>rd</sup> at Third  
885 Third Avenue  
New York, NY 10022-4834

Facsimile: 212-751-4864

Attention: David Kurzweil

If to Buyer:

Louisville Gas and Electric Company  
Kentucky Utilities Company  
220 West Main Street  
Louisville, KY 40202

Facsimile: (502) 627-3950

Attention: Dir Energy Services  
Project Development,  
Mr. Douglas Schetzel

Telephone: (502) 627-4838

Facsimile: (502) 217-2794

with a copy to:

Louisville Gas and Electric Company  
Kentucky Utilities Company  
220 West Main Street  
Louisville, KY 40202

Telephone: (502) 627-3665

Facsimile: (502) 627-4622

Attention: General Counsel

**Section 10.03 Interpretation.** For purposes of this Agreement, (a) the words "include," "includes" and "including" shall be deemed to be followed by the words "without limitation"; (b) the word "or" is not exclusive; and (c) the words "herein," "hereof," "hereby," "hereto" and "hereunder" refer to this Agreement as a whole. Unless the context otherwise requires, references herein: (x) to Articles, Sections, Disclosure Schedules and Exhibits mean the Articles and Sections of, and Disclosure Schedules and Exhibits attached to, this Agreement; (y) to an agreement, instrument or other document means such agreement, instrument or other document as amended, supplemented and modified from time to time to the extent permitted by the provisions thereof and (z) to a

statute means such statute as amended from time to time and includes any successor legislation thereto and any regulations promulgated thereunder. This Agreement shall be construed without regard to any presumption or rule requiring construction or interpretation against the party drafting an instrument or causing any instrument to be drafted. The Disclosure Schedules and Exhibits referred to herein shall be construed with, and as an integral part of, this Agreement to the same extent as if they were set forth verbatim herein.

**Section 10.04 Headings.** The headings in this Agreement are for reference only and shall not affect the interpretation of this Agreement.

**Section 10.05 Severability.** If any term or provision of this Agreement is declared by a final judgment or order by a court of competent jurisdiction to be invalid, illegal or unenforceable in any jurisdiction, such invalidity, illegality or unenforceability shall not affect any other term or provision of this Agreement or invalidate or render unenforceable such term or provision in any other jurisdiction. It is hereby stipulated and declared to be the intention of the parties that they would have executed the remaining terms, provisions, covenants and restrictions without including any of such which may be hereafter declared invalid, void or unenforceable. Upon such determination that any term or other provision is invalid, illegal or incapable of being enforced, such term or provision shall be judicially modified by a court of competent jurisdiction so as to make such term or provision legal, valid and enforceability and to effect the original intent of the parties as closely as possible in an acceptable manner to the end that the transactions contemplated hereby are fulfilled to the fullest extent possible.

**Section 10.06 Entire Agreement.** This Agreement and the other Transaction Documents constitute the sole and entire agreement of the parties to this Agreement with respect to the subject matter contained herein and therein, and supersede all prior and contemporaneous understandings and agreements, both written and oral, with respect to such subject matter. In the event of any inconsistency between the statements in the body of this Agreement and those in the other Transaction Documents, the Exhibits and Disclosure Schedules (other than an exception expressly set forth as such in the Disclosure Schedules), the statements in the body of this Agreement will control.

**Section 10.07 Successors and Assigns.** This Agreement shall be binding upon and shall inure to the benefit of the parties hereto and their respective successors and permitted assigns. Neither party may assign its rights or obligations hereunder without the prior written consent of the other party, which consent shall not be unreasonably withheld or delayed; *provided, however*, that prior to the Closing Date, Buyer may, without the prior written consent of Seller, assign all or any portion of its rights under this Agreement



to one or more of its direct or indirect wholly-owned subsidiaries or an Affiliate of Buyer. No assignment shall relieve the assigning party of any of its obligations hereunder.

**Section 10.08 No Third-party Beneficiaries.** Except as expressly provided in **Article VIII**, this Agreement is for the sole benefit of the parties hereto and their respective successors and permitted assigns and nothing herein, express or implied, is intended to or shall confer upon any other Person or entity any legal or equitable right, benefit or remedy of any nature whatsoever under or by reason of this Agreement.

**Section 10.09 Amendment and Modification; Waiver.** This Agreement may only be amended, modified or supplemented by an agreement in writing signed by each party hereto. No waiver by any party of any of the provisions hereof shall be effective unless explicitly set forth in writing and signed by the party so waiving. No waiver by any party shall operate or be construed as a waiver in respect of any failure, breach or default not expressly identified by such written waiver, whether of a similar or different character, and whether occurring before or after that waiver. No failure to exercise, or delay in exercising (other than delays that result in an exercise of rights hereunder outside the relevant time periods prescribed hereunder), any right, remedy, power or privilege arising from this Agreement shall operate or be construed as a waiver thereof; nor shall any single or partial exercise of any right, remedy, power or privilege hereunder preclude any other or further exercise thereof or the exercise of any other right, remedy, power or privilege.

**Section 10.10 Governing Law; Submission to Jurisdiction; Waiver of Jury Trial.**

(a) This Agreement shall be governed by and construed in accordance with the internal laws of the Commonwealth of Kentucky without giving effect to any choice or conflict of law provision or rule (whether of the Commonwealth of Kentucky or any other jurisdiction) that would cause the application of Laws of any jurisdiction other than those of the Commonwealth of Kentucky.

(b) ANY LEGAL SUIT, ACTION OR PROCEEDING ARISING OUT OF OR BASED UPON THIS AGREEMENT, THE OTHER TRANSACTION DOCUMENTS OR THE TRANSACTIONS CONTEMPLATED HEREBY OR THEREBY MAY BE INSTITUTED IN THE FEDERAL COURTS OF THE UNITED STATES OF AMERICA OR THE COURTS OF THE COMMONWEALTH OF KENTUCKY IN EACH CASE LOCATED IN THE CITY OF LOUISVILLE AND COUNTY OF JEFFERSON, AND EACH PARTY IRREVOCABLY SUBMITS TO THE EXCLUSIVE JURISDICTION OF SUCH COURTS IN ANY SUCH SUIT, ACTION OR PROCEEDING. SERVICE OF PROCESS, SUMMONS, NOTICE OR OTHER DOCUMENT BY MAIL TO SUCH PARTY'S ADDRESS SET FORTH HEREIN SHALL BE EFFECTIVE SERVICE OF PROCESS FOR ANY SUIT,

ACTION OR OTHER PROCEEDING BROUGHT IN ANY SUCH COURT. THE PARTIES IRREVOCABLY AND UNCONDITIONALLY WAIVE ANY OBJECTION TO THE LAYING OF VENUE OF ANY SUIT, ACTION OR ANY PROCEEDING IN SUCH COURTS AND IRREVOCABLY WAIVE AND AGREE NOT TO PLEAD OR CLAIM IN ANY SUCH COURT THAT ANY SUCH SUIT, ACTION OR PROCEEDING BROUGHT IN ANY SUCH COURT HAS BEEN BROUGHT IN AN INCONVENIENT FORUM.

(c) EACH PARTY ACKNOWLEDGES AND AGREES THAT ANY CONTROVERSY WHICH MAY ARISE UNDER THIS AGREEMENT OR THE OTHER TRANSACTION DOCUMENTS IS LIKELY TO INVOLVE COMPLICATED AND DIFFICULT ISSUES AND, THEREFORE, EACH SUCH PARTY IRREVOCABLY AND UNCONDITIONALLY WAIVES ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY LEGAL ACTION ARISING OUT OF OR RELATING TO THIS AGREEMENT, THE OTHER TRANSACTION DOCUMENTS OR THE TRANSACTIONS CONTEMPLATED HEREBY OR THEREBY. EACH PARTY TO THIS AGREEMENT CERTIFIES AND ACKNOWLEDGES THAT (A) NO REPRESENTATIVE OF ANY OTHER PARTY HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PARTY WOULD NOT SEEK TO ENFORCE THE FOREGOING WAIVER IN THE EVENT OF A LEGAL ACTION, (B) SUCH PARTY HAS CONSIDERED THE IMPLICATIONS OF THIS WAIVER, (C) SUCH PARTY MAKES THIS WAIVER VOLUNTARILY, AND (D) SUCH PARTY HAS BEEN INDUCED TO ENTER INTO THIS AGREEMENT BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS SECTION 10.10(c).

**Section 10.11 Specific Performance.** The parties agree that irreparable damage would occur if any provision of this Agreement were not performed in accordance with the terms hereof and that the parties shall be entitled to specific performance of the terms hereof, in addition to any other remedy to which they are entitled at law or in equity.

**Section 10.12 Counterparts.** This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together shall be deemed to be one and the same agreement. A signed copy of this Agreement delivered by facsimile, e-mail or other means of electronic transmission shall be deemed to have the same legal effect as delivery of an original signed copy of this Agreement.

[SIGNATURE PAGE FOLLOWS]

**EXECUTION COPY**

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the date first written above by their respective officers thereunto duly authorized.

BLUEGRASS GENERATION COMPANY,  
L.L.C.

By \_\_\_\_\_  
Name:  
Title:

KENTUCKY UTILITIES COMPANY

By \_\_\_\_\_  
Name:  
Title:

LOUISVILLE GAS AND ELECTRIC  
COMPANY

By \_\_\_\_\_  
Name:  
Title:

**EXHIBIT A**

**BILL OF SALE**

This Bill of Sale (this "**Bill of Sale**") dated as of \_\_\_\_\_, 2011, from Bluegrass Generation Company, L.L.C., a Delaware limited liability company ("**Seller**"), to Kentucky Utilities Company, a Kentucky corporation, and Louisville Gas and Electric Company, a Kentucky corporation (collectively, the "**Buyers**"), is being delivered pursuant to that certain Asset Purchase Agreement (the "**Purchase Agreement**") dated \_\_\_\_\_, 2011 between Seller and Buyers. Capitalized terms used in this Bill of Sale but not defined herein shall have the meanings assigned to them in the Purchase Agreement.

1. In consideration of the covenants, agreements, terms and provisions contained in the Purchase Agreement and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Seller does hereby grant, sell, assign, convey, transfer and deliver to the Buyers, as tenants in common [% to be determined by Buyers prior to closing] and their successors and assigns, free and clear of all Encumbrances other than Permitted Encumbrances, all of Seller's right, title, and interest in and to the Tangible Personal Property included in the Purchased Assets.

2. Any conflict between the terms of this Bill of Sale and the Purchase Agreement are to be resolved in favor of the terms of the Purchase Agreement.

3. Seller will execute and deliver any further instruments of sale, conveyance, transfer, and assignment and take any other actions reasonably requested by Buyers in order to more effectively sell, assign, transfer, and convey to and vest in Buyers all of Seller's right, title, and interest in and to the Tangible Personal Property included in the Purchased Assets as specified in the Purchase Agreement.

4. This Bill of Sale shall be governed by and construed and enforced under the laws of the Commonwealth of Kentucky, without regard to its conflicts-of-laws principles.

IN WITNESS WHEREOF, Seller has caused this Bill of Sale to be executed and delivered by its duly authorized agent on the date first set forth above.

Bluegrass Generation Company, L.L.C.,  
a Delaware limited liability company

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

## EXHIBIT B

### ASSIGNMENT AND ASSUMPTION AGREEMENT

THIS ASSIGNMENT AND ASSUMPTION AGREEMENT (this "Assignment and Assumption Agreement") is dated as of \_\_\_\_\_ 2011, between Bluegrass Generation Company, L.L.C., a Delaware limited liability company ("Seller"), and Kentucky Utilities Company, a Kentucky corporation, and Louisville Gas and Electric Company, a Kentucky corporation (collectively, the "Buyers").

#### Recitals

A. This Assignment and Assumption Agreement is delivered pursuant to Section 3.02(a)(ii) of that certain Asset Purchase Agreement (the "*Purchase Agreement*"), dated as of \_\_\_\_\_, 2011, between Buyer and Seller.

B. Capitalized terms not defined in this Assignment and Assumption Agreement shall have the meanings assigned to them in the Purchase Agreement.

#### Agreement

In consideration of the agreements and covenants contained in the Purchase Agreement and this Assignment and Assumption Agreement, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Buyers and Seller, intending to be legally bound, agree as follows:

1. **Assignment.** Seller hereby assigns to Buyers, as tenants in common [% to be determined by Buyer prior to closing], and Buyers hereby assumes all of the Purchased Assets that may not be transferred in the Bill of Sale, including without limitation the Assigned Contracts included in the Purchased Assets.

2. **Assumed Liabilities.** Effective as of the Effective Time, Buyers hereby accept the foregoing assignment and assume and agree to discharge the Assumed Liabilities.

3. **No Other Liabilities Assumed.** Notwithstanding anything in this Assignment and Assumption Agreement to the contrary, Buyers shall not assume, and in no event shall be deemed to have assumed, any of the Excluded Liabilities, and Buyers and Seller agree that all such Excluded Liabilities shall remain the sole responsibility of Seller and shall be retained, paid, performed and discharged solely by Seller.

4. **Terms of the Asset Purchase Agreement.** The terms of the Purchase Agreement are incorporated herein by this reference. Buyers and Seller acknowledge and agree that the representations, warranties, covenants, agreements and indemnities contained in the Purchase Agreement shall not be superseded but shall remain in full force and effect to the full extent provided therein. In the event of any conflict or inconsistency between the terms of the Purchase Agreement and the terms hereof, the terms of the Purchase Agreement shall govern.

5. **Further Actions.** Each of the parties covenants and agrees, at its own expense, to execute and deliver, at the request of the other party, such further instruments of transfer and

assignment and to take such other action as such other party may reasonably request to more effectively consummate the assignments and assumptions contemplated by this Assignment and Assumption Agreement.

6. **Governing Law.** This Assignment and Assumption Agreement shall be governed by and construed and enforced under the laws of the Commonwealth of Kentucky, without regard to its conflicts-of-laws principles.

7. **Execution in Counterparts.** This Assignment and Assumption Agreement may be executed in any number of counterparts with the same effect as if the signatures thereto were upon one instrument.

8. **Severability.** If any part, terms or provision of this Assignment and Assumption Agreement is held by any court to be unenforceable or prohibited by any law applicable to this Assignment and Assumption Agreement, the rights and obligations of the parties shall be construed and enforced with that part, term or provision limited so as to make it enforceable to the greatest extent allowed by law, or, if it is totally unenforceable as if this Assignment and Assumption Agreement did not contain that particular part, term or provision.

9. **Successors.** This Agreement shall inure to the benefit of Assignees and their successors and assigns and shall be binding upon Assignor and its successors and assigns.

**IN WITNESS WHEREOF**, the parties have executed this Assignment and Assumption Agreement as of the date first above written.

BLUEGRASS GENERATION COMPANY,  
L.L.C.

By \_\_\_\_\_  
Name:  
Title:

KENTUCKY UTILITIES COMPANY

By \_\_\_\_\_  
Name:  
Title:

LOUISVILLE GAS AND ELECTRIC  
COMPANY

By \_\_\_\_\_  
Name:  
Title:

## EXHIBIT C

### INTELLECTUAL PROPERTY ASSIGNMENT AGREEMENT

This is an Intellectual Property Assignment Agreement (this “**Agreement**”), dated as of \_\_\_\_\_, 2011, between Bluegrass Generation Company, L.L.C., a Delaware limited liability company (“**Assignor**”), and Kentucky Utilities Company, a Kentucky corporation, and Louisville Gas and Electric Company, a Kentucky corporation (collectively, the “**Assignees**”). Capitalized terms used in this Agreement but not defined herein shall have the meanings assigned to them in that certain Asset Purchase Agreement, dated as of \_\_\_\_\_, 2011, between Assignee and Assignor (the “**Purchase Agreement**”).

WHEREAS, in connection with the consummation of the transactions contemplated by the Purchase Agreement, Assignor desires to transfer and assign its right, title and interest in and to the Assigned Intellectual Property Assets;

NOW, THEREFORE, Assignor and Assignee agree as follows:

1. Assignment of Property. Assignor hereby sells, transfers, conveys, assigns and delivers to Assignees, as tenants in common [% to be determined by Buyer prior to closing] and Assignees accept all right, title and interest of Assignor in and to the Assigned Intellectual Property Assets (the “Assigned Assets”).
2. Further Assurances. Assignor hereby undertakes to give to Assignees all assistance reasonably necessary to the end of transferring and assigning the Assigned Assets and finalizing any reasonably necessary endorsements for the transfer thereof in favor of Assignee.
3. Successors. This Agreement shall inure to the benefit of Assignees and their successors and assigns and shall be binding upon Assignor and its successors and assigns.
4. Governing Law. This Agreement and all questions relating to its validity, interpretation, performance and enforcement shall be governed by and construed in accordance with the laws of the Commonwealth of Kentucky, without giving effect to the conflict of laws rules thereof.
5. Severability. If any part, terms or provision of this Agreement is held by any court to be unenforceable or prohibited by any law applicable to this Agreement, the rights and obligations of the parties shall be construed and enforced with that part, term or provision limited so as to make it enforceable to the greatest extent allowed by law, or, if it is totally unenforceable as if this Agreement did not contain that particular part, term or provision.
6. Execution in Counterparts. This Agreement may be executed in any number of counterparts with the same effect as if the signatures thereto were upon one instrument.

IN WITNESS WHEREOF, Assignor and Assignees have caused this Agreement to be duly executed as of the date first written above.

BLUEGRASS GENERATION COMPANY,  
L.L.C.

By \_\_\_\_\_  
Name:  
Title:

KENTUCKY UTILITIES COMPANY

By \_\_\_\_\_  
Name:  
Title:

LOUISVILLE GAS AND ELECTRIC  
COMPANY

By \_\_\_\_\_  
Name:  
Title:



**EXHIBIT D**

**SPECIAL WARRANTY DEED**

This DEED is made and entered into as of \_\_\_\_\_, 2012, from

**BLUEGRASS GENERATION COMPANY, L.L.C.**

a Delaware limited liability company  
2 Tower Center  
11th Floor  
East Brunswick, NJ 08816

("Grantor").

to

**KENTUCKY UTILITIES COMPANY,**

a Kentucky corporation  
820 West Broadway  
Louisville, Kentucky 40202

And

**LOUISVILLE GAS AND ELECTRIC COMPANY**

A Kentucky corporation  
820 West Broadway  
Louisville, Kentucky 40202

("Grantees").

**WITNESSETH:**

THAT, for and in consideration of the sum of [**One Hundred Nine Million Five Hundred Thousand and 00/100 Dollars – Amount Allocated to Other Assets**] (\$XXXXXXX), the receipt of which is hereby acknowledged by Grantor, Grantor has this day BARGAINED and SOLD and does hereby GRANT and CONVEY unto Grantees, as tenants in common [% to be determined by Buyer prior to Closing], their successors and assigns forever, the following described property located in Oldham County, Kentucky, which is more fully described as follows, to-wit:

**[LEGAL DESCRIPTION TO BE INSERTED]**

BEING the same property conveyed to Grantor, by Special Warranty Deed dated \_\_\_\_\_, 2012, of record in Deed Book \_\_\_\_\_, Page \_\_\_\_\_, in the Office of the Clerk of Oldham County, Kentucky.

TO HAVE AND TO HOLD the above-described property, together with all appurtenances and common elements thereunto belonging, unto Grantees, their successors and assigns forever.

Grantor does hereby release and relinquish unto Grantees, their successors and assigns forever, all of its right, title and interest in and to the above-described property (the "Property"), including dower, curtesy and homestead exemption and all other exemptions allowed by law, and hereby covenants to and with Grantees, their successors and assigns, that it has a good and lawful right to convey the same as herein done, and that it will WARRANT SPECIALLY the title to the Property and will forever defend the Property and every part thereof unto Grantees and their successors and assigns, against the claims of all persons claiming by, through or under Grantor.

Provided, however, that there is excepted from the foregoing warranty and covenants, and this conveyance is made subject to, the following:

1. The restrictions and covenants of record in the Oldham County Clerk's office.
2. All conditions, restrictions and/or notes affecting the property herein conveyed and contained on any plat of record in the aforesaid clerk's office.
3. Easements and rights-of-way of whatsoever nature and kind reserved and recorded in the aforesaid clerk's office.
4. Governmental laws, ordinances and regulations affecting the Property

This conveyance is made subject to and Grantees shall pay the 2011 and all subsequent years ad valorem property taxes assessed against the property herein conveyed.

For purposes of KRS 382.135 the in-care-of address to which the property tax bill for 2011 may be sent to: Kentucky Utilities Company, 820 West Broadway, Louisville, Kentucky 40202, and Louisville Gas and Electric Company, 820 West Broadway, Louisville, Kentucky 40202.

#### CONSIDERATION CERTIFICATE

For purposes of compliance with KRS 382.135, and first being duly sworn, Grantor and Grantees certify that the consideration reflected herein is the full consideration paid for the above-described real property. Grantees join in the execution of this Deed for the sole purpose of certifying the amount of the consideration.

[Remainder of page left intentionally blank. Signature pages to follow.]

**IN WITNESS WHEREOF**, the parties hereto have hereunto set their hands as of the day and year first above written.

**GRANTOR:**

**BLUEGRASS GENERATION COMPANY, L.L.C.**  
a Delaware limited liability company

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

STATE OF \_\_\_\_\_ )

COUNTY OF \_\_\_\_\_ )

The foregoing deed, including the consideration certificate contained therein, was subscribed, sworn to and acknowledged before me on this the \_\_\_\_ day of \_\_\_\_\_, 2012, by \_\_\_\_\_, as \_\_\_\_\_ of Bluegrass Generation Company, L.L.C., a Delaware limited liability company, for and on behalf of said company.

\_\_\_\_\_  
NOTARY PUBLIC  
My commission expires: \_\_\_\_\_

[Remainder of page left intentionally blank. Signature pages continue on next page.]

**GRANTEES:**

**KENTUCKY UTILITIES COMPANY,**  
a Kentucky corporation

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

COMMONWEALTH OF KENTUCKY )

COUNTY OF JEFFERSON )

The foregoing deed, including the consideration certificate contained therein, was subscribed, sworn to and acknowledged before me on this the \_\_\_\_ day of \_\_\_\_\_, 2012, by \_\_\_\_\_, as \_\_\_\_\_ of Kentucky Utilities Company, a Kentucky corporation, for and on behalf of said corporation.

\_\_\_\_\_  
NOTARY PUBLIC  
My commission expires: \_\_\_\_\_

**LOUISVILLE GAS AND ELECTRIC COMPANY,**  
a Kentucky corporation

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

COMMONWEALTH OF KENTUCKY )

COUNTY OF JEFFERSON )

The foregoing deed, including the consideration certificate contained therein, was subscribed, sworn to and acknowledged before me on this the \_\_\_\_ day of \_\_\_\_\_, 2012, by \_\_\_\_\_, as \_\_\_\_\_ of Kentucky Utilities Company, a Kentucky corporation, for and on behalf of said corporation.

\_\_\_\_\_  
NOTARY PUBLIC  
My commission expires: \_\_\_\_\_

THIS INSTRUMENT PREPARED BY:

FROST BROWN TODD  
400 West Market Street, Suite 3200  
Louisville, Kentucky 40202  
(502) 589-5400

By: \_\_\_\_\_  
Erik C. Lattig

## EXHIBIT E

### OPINIONS OF SELLER'S COUNSEL

1. Each of Seller and Seller Parent is a limited liability company validly existing and in good standing under the laws of the State of Delaware.

2. Seller has the requisite corporate power and authority to enter into the Agreement and to perform its obligations thereunder. Seller Parent has the requisite corporate power and authority to enter into the Parent Guaranty and to perform its obligations thereunder.

3. The execution and delivery of the Agreement by Seller, and the consummation by Seller of the transactions provided for therein, have been duly authorized by all requisite entity action on the part of Seller. The execution and delivery of the Parent Guaranty by Seller Parent, and its obligations provided for therein, have been duly authorized by all requisite entity action on the part of Seller Parent.

4. The Agreement constitutes the legal, valid and binding obligations of Seller, enforceable against Seller in accordance with its terms, subject to bankruptcy, reorganization, insolvency and other similar laws affecting the enforcement of creditors' rights in general and to general principles of equity (regardless of whether considered in a proceeding in equity or an action at law). The Parent Guaranty constitutes the legal, valid and binding obligations of Seller Parent, enforceable against Seller Parent in accordance with its terms, subject to bankruptcy, reorganization, insolvency and other similar laws affecting the enforcement of creditors' rights in general and to general principles of equity (regardless of whether considered in a proceeding in equity or an action at law).

5. Neither the execution and delivery of the Agreement by Seller, nor the consummation by Seller of any or all of the transactions contemplated by the Agreement, conflicts with or violates any provision of Seller's certificate of formation, limited liability company agreement or other governing documents. Neither the execution and delivery of the Parent Guaranty by Seller Parent, nor the performance by Seller Parent of any or all of its obligations thereunder, conflicts with or violates any provision of Seller Parent's certificate of formation, limited liability company agreement or other governing documents.

6. No consent or approval, and no registration or filing with, any governmental agency, authority or other governmental unit is required, under any law applicable to Seller, other than such consents and approvals as have been obtained and registrations and filings as have been made, for Seller to consummate the transactions provided for in the Agreement.

**Disclosure Schedules**  
**to the**  
**Asset Purchase Agreement**  
**dated September 14, 2011**  
**Among**  
**KENTUCKY UTILITIES COMPANY**  
**and**  
**LOUISVILLE GAS AND ELECTRIC COMPANY**  
**as Buyer**  
**and**  
**BLUEGRASS GENERATION COMPANY, L.L.C.**  
**as Seller**

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## General Terms

Any terms used in these Disclosure Schedules but not defined herein shall have the same meanings ascribed thereto in the Asset Purchase Agreement (the “**Agreement**”), dated September 14, 2011, by and among Kentucky Utilities Company, a Kentucky corporation, Louisville Gas and Electric Company, a Kentucky corporation (collectively, “**Buyer**”), and Bluegrass Generation Company, L.L.C., a Delaware limited liability company (“**Seller**” and collectively with Buyer, the “**Parties**”), of which these Disclosure Schedules are a part. These Disclosure Schedules are qualified in their entirety by reference to specific provisions of the Agreement, subject to the limitations set forth in such specific provision, and are not intended to constitute, and shall not be construed as constituting, any representations or warranties of the Parties. These Disclosure Schedules may include items or information that the Parties are not required to disclose under the Agreement; disclosure of such items or information shall not affect (directly or indirectly) the interpretation of the Agreement or the scope of the disclosure obligation under the Agreement. Inclusion of information herein shall not be construed as an admission that such information is material to the Business or the business, assets, liabilities, financial condition, or operations of the Parties. The disclosure of any fact or item in any Disclosure Schedule referenced by a particular section of the Agreement shall be deemed to have been disclosed with respect to every other section in the Agreement to the extent it is reasonably apparent on the face of such disclosure the relevance to such other section. The headings contained in these Disclosure Schedules are for reference only and shall not affect in any way the meaning or interpretation of these Disclosure Schedules.

**Schedule 1.01(k)**

**Seller's Knowledge**

1. David Nanus
2. Ernest Kim
3. Carolyne Wass
4. Woody Saylor

**Schedule 2.01(a)**

**Excluded Inventory**

1. See Appendix 2.01(a).

**Schedule 2.01(b)**

**Assigned Contracts**

1. Interconnection and Operating Agreement by and among Louisville Gas & Electric Company and Kentucky Utilities Company and Bluegrass Generation Company, L.L.C., dated February 13, 2001. <sup>(1)</sup>
2. Switchyard Sub-Lease Agreement by and between Bluegrass Generation Company, L.L.C., and Louisville Gas and Electric and Kentucky Utilities Company, dated January 1, 2002. <sup>(2)</sup>
3. Facilities Agreement between Texas Gas Transmission Corporation and Bluegrass Generation Company, L.L.C., dated April 9, 2001.
4. Water Purchase Agreement by and between Bluegrass Generation Company, L.L.C. and Oldham County Sewer District, dated February 8, 2001, to include related Access Easement, dated as February 9, 2006, and Amendment to Access Easement, as of February 2006.
5. Oldham County Sanitation District Wastewater Collection and Transport Facilities extension contract between Bluegrass Generation Company, L.L.C. and Oldham County Sanitation District dated June 19, 2001. <sup>(3)</sup>
6. Permanent Access Road Agreement by and between Bluegrass Generation Company, L.L.C. and Texas Gas Transmission Corporation, dated as of February 27, 2001.
7. Conveyance of Right of Way by and between Bluegrass Generation Company, L.L.C., and Louisville Gas and Electric and Kentucky Utilities Company, dated January 3, 2001. <sup>(4)</sup>

---

(1) Failure of Louisville Gas and Electric Company (“LG&E”) to consent to assignment of this contract shall not result in a Seller’s failure of a condition required for closing.

(2) Failure of LG&E to consent to assignment of this contract shall not result in a Seller’s failure of a condition required for closing.

(3) Buyer and Seller may mutually agree that amended KPDES may eliminate need for this agreement to be assigned.

(4) Failure of LG&E to consent to assignment of this contract shall not result in a Seller’s failure of a condition required for closing.

**Schedule 2.01(h)**

**Prepayments**

1. As of the date hereof, none.

**Schedule 2.02(c)**

**Excluded Assets**

1. Any and all software rights and licenses, including those set forth on Schedule 4.01(b), but not including (i) such all software necessary to operate and control the Units (including, Teleperm XP (AS 620) – T-2000 / Version 7.0.26) and all firmware installed on the Purchased Assets.
2. Any and all items listed as Excluded Inventory in Schedule 2.01(a).
3. Rights under any and all Contracts and agreements that are not Assigned Contracts.

**Schedule 2.06(a)**

**Prorated Items**

1. Liabilities accrued prior to Closing in the ordinary course of business under the contracts actually assigned and listed on Schedule 2.01(b).



**Schedule 4.01**

**Qualified Jurisdictions**

1. Delaware
2. Kentucky

### **Schedule 4.03(b)**

#### **Consents under Law or Governmental Order**

*Note: The following consents, approvals and notices are being provided as required under Section 4.03(b) of the Agreement, and only those consents or approvals designated with an asterisk (“\*”) shall be a condition to closing under Section 7.01(c).*

#### **Pre-Closing Consents/Approvals:**

1. \* Notification filed with the Federal Trade Commission and the United States Department of Justice under the HSR Act and the rules and regulations promulgated thereunder with respect to the transactions contemplated by the Agreement, response to any requests for additional information made by either of such agencies, and termination or expiration of the waiting periods under the HSR Act.
2. \* FERC– Filing of joint application under section 203 of the Federal Power Act for the sale of FERC jurisdictional facilities.
3. \* Kentucky’s Division of Water as required for KPDES Permit. <sup>(1)</sup>
4. \* Kentucky’s Public Service Commission.

#### **Post-Closing Notices (not required as conditions to closing):**

1. FERC–Within thirty (30) calendar days after the Closing Date, Buyer must submit Notices of Change of Status to FERC or a Notice of Self Certification of QF status, advising of the change of ownership of the Plant in accordance with FERC’s regulations.
2. As of the Closing Date, Seller will no longer be responsible for compliance with North American Electric Reliability Corporation (“NERC”) Reliability Standards at the Plant. Within thirty (30) calendar days after the Closing Date, Seller will provide written notification to NERC that it is no longer the “Generator Owner and Operator” for the Plant. It is the Buyer's obligation to inform NERC of their new obligations for purposes of ongoing compliance at the Plant.
3. EPA Clean Air Markets Division, where Buyer must submit change of ownership information to EPA Clean Air Markets Division within thirty (30) days after the Closing Date, as required for the following permits:

---

(1) Only to the extent that the KPDES Permit has been issued. Seller has filed KPDES application and is currently awaiting issuance of the permit from Kentucky’s Division of Water.

- a. Phase II Acid Rain Permit (Section J of Air Quality Permit No. V-05-080), issued by Kentucky Department of Environmental Protection to Bluegrass Generation Company, L.L.C., dated (issued) July 27, 2011; expires July 27, 2016;
  - b. CAIR Permit (Section K of Air Quality Permit No. V-05-080), issued by Kentucky Department of Environmental Protection to Bluegrass Generation Company, L.L.C., dated (issued) July 27, 2011; expires July 27, 2016; and
  - c. Certificate of Representation, Designated Representative (Carolyn Wass, LS Power) / Alternate Designated Representative (Kathy French, LS Power), Acid Rain Program, CAIR NOx Annual Program, CAIR NOx Ozone Season Program, CAIR SO2 Program, filed with U.S. Environmental Protection Agency, Clean Air Markets Division, sent December 2, 2009.
4. Kentucky's Division for Air Quality as required for Air Quality Permit, No. V-05-080, issued by Kentucky Department of Environmental Protection to Bluegrass Generation Company, L.L.C., dated (issued) July 27, 2011; expires July 27, 2016 (presently at EPA for its 45 day review). Notice must be provided to the Division of Air Quality within ten (10) days after the Closing Date. Notice must include a "signed written agreement specifying the date of transfer of permit responsibility, coverage, and liability."
  5. Kentucky's Division of Waste Management as required for Hazardous Waste Generator ID #KYR000032409, issued by Kentucky Department of Environmental Protection to Bluegrass Generation Co., LLC, dated May 10, 2002. Seller must notify the Division of Waste Management within thirty (30) days after the generation of hazardous waste ceases using Form DEP 7086. Buyer must submit registration form and receive EPA ID number prior to treating, storing, disposing, transporting, or offering to transport hazardous waste using form DEP 7037.
  6. FCC radio license for station WQEP319 is held in the name of Bluegrass Generation Company, L.L.C; FRN: 0019071422, Expiration Date: March 16, 2016.

**Schedule 4.03(c)**

**Consents under Material Contracts**

1. Any consent in connection with PILOT Program Termination and collapse of Lease and Bond structure.
2. Interconnection and Operating Agreement by and among Louisville Gas & Electric Company and Kentucky Utilities Company and Bluegrass Generation Company, L.L.C., dated February 13, 2001. <sup>(1)</sup>
3. Switchyard Sub-Lease Agreement by and between Bluegrass Generation Company, L.L.C., and Louisville Gas and Electric and Kentucky Utilities Company, dated January 1, 2002. <sup>(2)</sup>
4. Oldham County Sanitation District Wastewater Collection and Transport Facilities extension contract between Bluegrass Generation Company, L.L.C. and Oldham County Sanitation District, dated June 19, 2001. <sup>(3)</sup>
5. Permanent Access Road Agreement by and between Bluegrass Generation Company, L.L.C. and Texas Gas Transmission Corporation, dated as of February 27, 2001.

---

(1) Failure of Louisville Gas and Electric Company (“LG&E”) to consent to assignment of this contract shall not result in a Seller’s failure of a condition required for closing.

(2) Failure of LG&E to consent to assignment of this contract shall not result in a Seller’s failure of a condition required for closing.

(3) Buyer and Seller may mutually agree that amended KPDES may eliminate need for this agreement to be assigned.

**Schedule 4.04**

**Financial Statements**

1. Financial Statements do not include any allocation of liabilities and expenses for Affiliate personnel, general and administrative and overhead costs incurred in the ordinary course of business.

The aggregate amount of such liabilities and expenses does not exceed \$\_\_\_\_\_.

**Schedule 4.05**

**Undisclosed Liabilities**

1. Financial Statements do not include any allocation of liabilities and expenses for Affiliate personnel, general and administrative and overhead costs.
2. Liabilities accrued prior to Closing in the ordinary course of business under the Assigned Contracts.

**Schedule 4.06(a)**

**Material Contracts**

**All documents relating to Lease and Bond Structure, including without limitation:**

1. County of Oldham, Kentucky Industrial Building Revenue Bonds, Series 2000A.
2. County of Oldham, Kentucky Industrial Building Revenue Bonds, Series 2001A.
3. County of Oldham, Kentucky Industrial Building Revenue Bonds, Series 2002A.
4. Master Trust Indenture between County of Oldham, Kentucky and Bank One Trust Company, National Association, dated as of November 1, 2000.
5. Supplement No. 1 to Master Trust Indenture between the County of Oldham, Kentucky and Bank One Trust Company, National Association, dated as of November 1, 2000.
6. Supplement No. 2 to Master Trust Indenture between the County of Oldham, Kentucky and Bank One Trust Company, National Association, dated as of December 27, 2001.
7. Supplement No. 3 to Master Trust Indenture between the County of Oldham, Kentucky and Bank One Trust Company, National Association, dated as of December 27, 2002.
8. Home Office Payment Agreement between Bluegrass Generation, Inc., Bluegrass Generation Company, L.L.C., Bank One Trust Company, National Association, and County of Oldham, Kentucky, dated November 1, 2000.
9. Home Office Payment Agreement between Bluegrass Generation, Inc., Bluegrass Generation Company, L.L.C., Bank One Trust Company, National Association, and County of Oldham, Kentucky, dated December 27, 2001.
10. Home Office Payment Agreement between Bluegrass Generation, Inc., Bluegrass Generation Company, L.L.C., Bank One Trust Company, National Association, and County of Oldham, Kentucky, dated December 27, 2002.
11. In-Lieu of Tax Payments Agreement by and between Bluegrass Generation Company, L.L.C. and County of Oldham, Kentucky, dated November 1, 2000
12. Letter Agreement by and between Bluegrass Generation Company, L.L.C. and Oldham County, Kentucky Fiscal Court, executed on August 28, 2000.
13. Lease Agreement by and between County of Oldham, Kentucky and Bluegrass Generation Company, L.L.C. (Industrial Building Revenue Bonds), dated November 1, 2000.

14. First Amendment to Lease Agreement by and between County of Oldham, Kentucky and Bluegrass Generation Company, L.L.C. (Series 2001A Bonds), dated December 27, 2001.
15. Second Amendment to Lease Agreement by and between County of Oldham, Kentucky and Bluegrass Generation Company, L.L.C. (Series 2002A Bonds), dated December 27, 2002.
16. Third Amendment to Lease Agreement by and between County of Oldham, Kentucky and Bluegrass Generation Company, L.L.C., dated January 19, 2006.
17. Bill of Sale by and between Bluegrass Generation, Inc. and County of Oldham, Kentucky, dated December 27, 2001.
18. Bill of Sale by and between Bluegrass Generation, Inc. and County of Oldham, Kentucky, dated December 27, 2002.
19. Bond Purchase Agreement by and among County of Oldham, Kentucky, as Issuer, and Bluegrass Generation Company, L.L.C., as Lessee, and Bluegrass Generation, Inc., as Original Purchase, dated as of November 1, 2000.
20. First Amendment to Bond Purchase Agreement by and among County of Oldham, Kentucky, as Issuer, and Bluegrass Generation Company, L.L.C., as Lessee, and Bluegrass Generation, Inc., as Original Purchase, dated as of December 27, 2001.
21. Second Amendment to Bond Purchase Agreement by and among County of Oldham, Kentucky, as Issuer, and Bluegrass Generation Company, L.L.C., as Lessee, and Bluegrass Generation, Inc., as Original Purchase, dated as of December 27, 2002.

**Other Material Contracts:**

1. Amended and Restated Limited Liability Company Agreement of Bluegrass Generating Company, L.L.C., by Port River, LLC, dated as of November 30, 2009.
2. Assignment and Assumption Agreement between Bluegrass Generation, Inc. and Bluegrass Generation, L.L.C., dated as of November 24, 2009.
3. Interconnection and Operating Agreement by and among Louisville Gas & Electric Company and Kentucky Utilities Company and Bluegrass Generation Company, L.L.C., dated February 13, 2001.
4. Switchyard Sub-Lease Agreement by and between Bluegrass Generation Company, L.L.C., and Louisville Gas and Electric and Kentucky Utilities Company, dated January 1, 2002.
5. Water Purchase Agreement by and between Bluegrass Generation Company, L.L.C. and Oldham County Sewer District, dated February 8, 2001, to include related Access Easement, dated as February 9, 2006, and Amendment to Access Easement, as of February 2006.



6. Facilities Agreement between Texas Gas Transmission Corporation and Bluegrass Generation Company, L.L.C., dated April 9, 2001.
7. Leasehold Interest in the land described on Schedule XX.
8. All matters and encumbrances disclosed on Schedule XX.
9. All matters and encumbrances disclosed on Schedule YY.
10. Permanent Access Road Agreement by and between Bluegrass Generation Company, L.L.C. and Texas Gas Transmission Corporation, dated as of February 27, 2001.
11. Conveyance of Right of Way by and between Bluegrass Generation Company, L.L.C., and Louisville Gas and Electric and Kentucky Utilities Company, dated January 3, 2001.
12. Oldham County Sanitation District Wastewater Collection and Transport Facilities Extension Contract between Bluegrass Generation Company, L.L.C. and Oldham County Sanitation District, dated June 19, 2001.
13. Conveyance of Wastewater and Collection Facilities between Bluegrass Generation Company, L.L.C. and the Oldham County Sanitation District, delivered January 16, 2002.
14. LG&E/KU System Impact Study Agreement for PTP for Bluegrass 501 MW Project, System Impact Study Agreement Number: LGE-2011-014, by and between Independent Transmission Organization and BGCP, dated as of June 28, 2011.
15. LG&E/KU System Impact Study Report for PTP for Bluegrass 501 MW Project, System Impact Study Agreement Number: LGE-2011-014, by Independent Transmission Organization, dated as of September 7, 2011.
16. Application for Membership Agreement, by and between PJM Interconnection, L.L.C. and Bluegrass Generation Company, L.L.C., dated June 24, 2011.
17. Notice of Approval for PJM Membership, delivered by PJM Interconnection, L.L.C. to Bluegrass Generation Company, L.L.C., dated August 12, 2011 (to include Membership Kit).
18. Interconnection Feasibility Study Agreement (LGE-GIS-2011-001), by and between Southwest Power Pool and Bluegrass Generation Company, L.L.C., dated April 6, 2011.
19. Letter of Notice of Receipt of Interconnection Feasibility Study Agreement (LGE-GIS-2011-001), from Southwest Power Pool to Bluegrass Generating Company, L.L.C., dated April 15, 2011.
20. PJM Interconnection Transmission Request, by and between Bluegrass Generating Company, L.L.C. and PJM Interconnection, L.L.C., dated August 26, 2011.

21. Confirmation Letter, by PJM Interconnection, L.L.C., dated as of September 1, 2011, and PJM Long-Term Firm Network Transmission Service Application and Initial Study Agreement, by and between Bluegrass Generating Company, L.L.C. and PJM Interconnection, L.L.C., dated as of September 13, 2011.
22. Operations and Maintenance Agreement for the Bluegrass Facility, between Port River, LLC and NAES Corporation, dated as of September 15, 2009.
23. Energy Management Agreement, between EDF Trading North America, LLC, Port River, LLC and Bluegrass Generation Company, L.L.C., dated as of October 15, 2009.
24. ISDA Master Agreement, between EDF Trading North America, LLC, Bluegrass Generation Company, L.L.C. and Port River, LLC, dated as of October 15, 2009.
25. ISDA Credit Support Annex, between EDF Trading North America, LLC, Bluegrass Generation Company, L.L.C. and Port River, LLC, dated as of October 15, 2009.
26. First Amendment to Energy Management Agreement, between EDF Trading North America, LLC, Port River, LLC and Bluegrass Generation Company, L.L.C., dated as of January 21, 2010.

**Schedule 4.07**

**Permitted Encumbrances**

None.

## Schedule 4.08

### Condition of Assets

*Note: The content of the reports and documents referenced herein are incorporated by reference.*

Item	Document / Condition	Category	Dataroom Folder
1	CT-2 Row 9 Compressor Blade Tip	—	—
2	CT-3 Cracked Row 4 Diaphragm	—	—
3	CT-3 Compressor FOD	—	—
4	Bluegrass Capital Expenditure Plan	Financials	1.1
5	BG Monthly Operations Report 2009-11	Monthly Operating Reports	4.2.1
6	BG Monthly Operations Report 2009-12	Monthly Operating Reports	4.2.1
7	BG Monthly Operations Report 2010-01	Monthly Operating Reports	4.2.2
8	BG Monthly Operations Report 2010-02	Monthly Operating Reports	4.2.2
9	BG Monthly Operations Report 2010-03	Monthly Operating Reports	4.2.2
10	BG Monthly Operations Report 2010-04	Monthly Operating Reports	4.2.2
11	BG Monthly Operations Report 2010-05	Monthly Operating Reports	4.2.2
12	BG Monthly Operations Report 2010-06	Monthly Operating Reports	4.2.2
13	BG Monthly Operations Report 2010-07	Monthly Operating Reports	4.2.2
14	BG Monthly Operations Report 2010-08	Monthly Operating Reports	4.2.2
15	BG Monthly Operations Report 2010-09	Monthly Operating Reports	4.2.2
16	BG Monthly Operations Report 2010-10	Monthly Operating Reports	4.2.2
17	BG Monthly Operations Report 2010-11	Monthly Operating Reports	4.2.2
18	BG Monthly Operations Report 2010-12	Monthly Operating Reports	4.2.2
19	BG Monthly Operations Report 2011-01	Monthly Operating Reports	4.2.3
20	BG Monthly Operations Report 2011-02	Monthly Operating Reports	4.2.3
21	BG Monthly Operations Report 2011-03	Monthly Operating Reports	4.2.3
22	BG Monthly Operations Report 2011-04	Monthly Operating Reports	4.2.3
23	BG Monthly Operations Report 2011-05	Monthly Operating Reports	4.2.3
24	BG Monthly Operations Report 2011-06	Monthly Operating Reports	4.2.3
25	BG Monthly Operations Report 2011-07	Monthly Operating Reports	4.2.3
26	2007 Unit 1 Bulletin 6 Inspection	Inspection Reports	4.3.1
27	2009 Unit 1 Bulletin 6 Inspection	Inspection Reports	4.3.1
28	2010 Unit 1 Borescope Inspection from Spring CI	Inspection Reports	4.3.1
29	2010 Unit 1 Row 2 Turbine Blade NDE Inspection	Inspection Reports	4.3.1
30	2011 Unit 1 Borescope Inspection	Inspection Reports	4.3.1
31	GT - Air intake and exhaust photos (August 2011) (Unit 1)	Inspection Reports	4.3.1.5
32	Unit 1 Inlet Filter Test Report	Inspection Reports	4.3.1.5
33	2005 Unit 2 NDE Inspection	Inspection Reports	4.3.2
34	2007 Unit 2 Bulletin 6 Inspection	Inspection Reports	4.3.2
35	2009 Unit 2 Bulletin 6 Inspection	Inspection Reports	4.3.2
36	2010 Unit 2 Row 2 Turbine Blade NDE Inspection	Inspection Reports	4.3.2
37	2011 Unit 2 Borescope Inspection	Inspection Reports	4.3.2
38	GT - Air intake and exhaust photos (August 2011) (Unit 2)	Inspection Reports	4.3.2.6
39	2005 Unit 3 NDE Inspection	Inspection Reports	4.3.3

40	2007 Unit 3 Bulletin 6 Inspection	Inspection Reports	4.3.3
41	2007 Unit 3 UT Thickness Measurement of Compressor Case	Inspection Reports	4.3.3
42	2009 Unit 3 Bulletin 6 Inspection	Inspection Reports	4.3.3
43	2010 Unit 3 Row 2 Turbine Blade NDE Inspection with Bulletin 6 Inspection	Inspection Reports	4.3.3
44	2011 Unit 3 Borescope Inspection	Inspection Reports	4.3.3
45	GT - Air intake and exhaust photos (August 2011) (Unit 3)	Inspection Reports	4.3.3.7
46	PRC-005 Supporting Documentation - Relay testing	Relay Calibration	4.6.2
47	Oil test report	Trans. Oil Analysis & Maint.	4.6.4
48	SD Myers Test Result of GSU's 2010	Trans. Oil Analysis & Maint.	4.6.4
49	SD Myers Test Results for GSUs 2011	Trans. Oil Analysis & Maint.	4.6.4
50	Bluegrass -- 7 2KV Test 0 Fire Pump Motor Starter	MV & LV Breaker Testing	4.6.6
51	Bluegrass -- 7 2KV Test 1 APE Bldg. Unit 3	MV & LV Breaker Testing	4.6.6
52	Bluegrass -- 7 2KV Test 2 Main Tie Breaker CB52-BT	MV & LV Breaker Testing	4.6.6
53	Bluegrass -- 7 2KV Test 3 Main Incoming Breaker CB52-AT2	MV & LV Breaker Testing	4.6.6
54	Bluegrass -- 7 2KV Test 4 4160V Switchgear 2 Equipped Space	MV & LV Breaker Testing	4.6.6
55	Bluegrass -- 7 2KV Test 5 4160V Switchgear 2 CBBA10GS002	MV & LV Breaker Testing	4.6.6
56	Bluegrass -- 7 2KV Test 6 SUS Transformer No. 1 Feeder	MV & LV Breaker Testing	4.6.6
57	Bluegrass -- 7 2KV Test 7 Equipped Space	MV & LV Breaker Testing	4.6.6
58	Bluegrass Digitrips	MV & LV Breaker Testing	4.6.6
59	MV Motor Testing	MV & LV Motor Testing	4.6.7
60	Ohmmeter Readings 102007	Generator Breaker testing	4.6.8
61	Bluegrass 1 10696 102007	Generator Breaker testing	4.6.8
62	Bluegrass 2 10697 102007	Generator Breaker testing	4.6.8
63	Bluegrass 3 10698 102007	Generator Breaker testing	4.6.8
64	ABB Generator Circuit Breaker Repairs	Generator Breaker testing	4.6.8
65	Bluegrass - GSU Doble Readings (Aug. 3, 2011)	GSU Doble Readings	4.6.12
66	Natural Gas Sampling	Natural Gas Sampling	4.8
67	Bluegrass - R2 Blades Pedigree & Inspection Info (Sept. 2, 2011)	Bulletins Summary	4.16

**Schedule 4.09(a)**

**Real Property**

**TRACT "A"**

Being a tract of land located in Oldham County Kentucky, being the same property conveyed to County of Oldham, Kentucky by Deed as recorded in Deed Book 663, Page 015. All Deed Books, Plot Books and Will Books referenced herein are recorded in the office of the Oldham County Court Clerk. Unless otherwise stated herein, any monument referred to as an "I. R. with cap" is a ½" diameter steel number 4 bar, 18" long with yellow plastic cap stamped "Prop. Cor. LS 1771". All bearings herein are referenced from the state plane coordinate system. Said Tract "A" being located at 3095 Commerce Parkway, LaGrange, Kentucky 40031 and being more particularly described as follows:

Beginning at an I. R. with cap set in the South line of the CSX railroad property, being 33.00 feet from the center of the main track, being a common corner with the Northeast corner of Tract #3 as conveyed to the County of Oldham, Kentucky as recorded in Deed Book 700, Page 133; thence, leaving said County of Oldham, Kentucky and following said South line of the CSX railroad North 45°09'19" East, 282.24 feet to an I. R. with cap found; thence, North 31°51'08" West, 10.26 feet to a ½" diameter iron pipe found, being 23 feet South of the main track; thence, North 44°58'07" East, 972.39 feet to an I. R. with cap found, being 24.6 feet South of the main track; thence North 59°23'00" East, 82.46 feet to an I. R. with cap found, being 45.0 feet South of the main track; thence, North 44°47'30" East, 161.84 feet to on I. R. with cap found, being 45.0 feet South of the main track; thence, North 21°02'56" West passing a ½" diameter iron rod at 3.1 feet, 21.92 feet in all to an I. R. with cap found, being 25.0 feet from the main track; thence, North 44°56'46" East, 700.62 feet to an I. R. with cap found, being in the east line of the Louisville Gas & Electric Company easement and being a common corner with James C Carpenter & Frank Otte as recorded in Deed Book 321, Page 203 and Deed Book 321, Page 255; thence, leaving said CSX Railroad and following the east edge of sold easement and said James C. Carpenter & Frank Otte South 06°35'56" West, 2929.38 feet to on I. R. with cap found, being in the north line of Business Parkway; thence, leaving the east line of said easement and said James C. Carpenter & Frank Otte and following the North line of said Business Parkway South 55°52'28" West, 329.88 feet to an I. R. with cap found being a common corner with said James C. Carpenter & Frank Otte; thence, leaving said Business Parkway and following said James C. Carpenter & Frank Otte North 30°44'03" West, 509.10 feet to on I. R. with cap found, said point being a common corner with said county of Oldham, Kentucky Tract #3; thence, leaving said James C. Carpenter & Frank Otte and following said County of Oldham, Kentucky North 49°44'29" West, 158.99 feet to a railroad spike in a fence post found; thence, North 35°36'26" West, 376.37 feet to a ½" diameter iron rod found; thence, North 31°26'04" West, 278.85 feet to a railroad spike found in a walnut tree at the corner of a fence; thence, North 37°08'04" East, 121.41 feet to a ½" diameter iron rod set; thence, North 38°11'22" West 439.08 feet to the POINT OF BEGINNING.

Said property being located in Oldham County, Kentucky containing 53.33 acres, more or less.

TOGETHER WITH temporary construction easement rights and rights of ingress and egress as set forth in Construction Easement recorded in Deed Book 633, page 184, said records, over and across the property more specifically described therein.

TRACT "A" being the same property conveyed to County of Oldham, Kentucky by Deed dated November 1, 2000, recorded in Deed Book 663, Page 015.

TOGETHER WITH non-exclusive rights of access as described in Temporary Construction Access Agreement between County of Oldham, Kentucky and Bluegrass Generation Company, L.L.C. recorded in Deed Book 666, page 516, said records, over and across a portion of a proposed Business Parkway designated as the "393 Corridor" described therein.

#### **TRACT "B"**

Being the tract of land as recorded as Tract #1 in Deed Book 700, Page 133 in the office of the Oldham County Court Clerk as conveyed to the County of Oldham, Kentucky. Said Tract #1 being located at 3210 West Highway 146, LaGrange, Kentucky and being more particularly described as follows:

BEGINNING at a found ½ inch by 18 inch iron rod with #1771 survey cap in the south line of the CSX Railroad (originally Louisville and Nashville Railroad) and being a common corner with Wallace C. and Pamela A. Wilson as recorded in Deed Book 353, Page 287 and Deed Book 571, Page 312; thence, leaving the common corner with Wallace C. and Pamela A. Wilson and following the common line of the CSX Railroad on a curve to the left with a radius of 1942.86 feet, the chord being N 53°19'01" E, 491.34 feet, to a found ½ inch by 18 inch iron rod with #1771 survey cap being a common corner with the County of Oldham, Kentucky as recorded in Deed Book 700, Page 133, Tract #3 (6.05 Acres); thence, leaving the common line of the CSX Railroad and following said Tract #3, S 19°33'28" E, 638.26 feet to a found ½ inch diameter iron rod, being a common corner with Wallace C. and Pamela A. Wilson; thence, leaving said Tract #3 and following the common line of Wallace C. and Pamela A. Wilson as follows: N 80°19'25" W, 508.51 feet to a found ½ inch by 18 inch Iron rod with #1771 survey cap set at a wood fence post; thence N 25°34'03" W, 246.59 feet, to the POINT OF BEGINNING.

SAID PROPERTY being located in Oldham County, Kentucky, containing 4.50 acres, more or less.

#### **TRACT "C"**

Being the tract of land as recorded as Tract #2 in Deed Book 700, Page 133 in the office of the Oldham County Court Clerk as conveyed to the County of Oldham, Kentucky. Said Tract 2 Being located at 3210 West Highway 146, LaGrange, Kentucky and being more particularly described as follows:

BEGINNING at a found ½ inch by 18 inch iron rod with #1771 survey cap in the south line of the CSX Railroad (originally Louisville and Nashville Railroad) and being a corner of Wallace C. and Pamela A. Wilson as recorded in Deed Book 353, Page 287 and Deed Book 571, Page 312, and a corner with Tract #1 as conveyed to said County of Oldham, Kentucky, thence, leaving the corner of Wallace C. and Pamela A. Wilson and Tract #1 and crossing the CSX Railroad N 25°34'03" W, 66.15 feet to a found mag. nail being the TRUE POINT OF BEGINNING and being the north line of the CSX Railroad as described in Deed Book 37, Page 333 and being a point in a private road as shown at station 59 + 57 on the Right-of-Way and Track Map, Louisville and Nashville R.R. Co. Cincinnati Division, said point being in the south line of the remaining lands located between the CSX Railroad and the right-of-way of Kentucky Highway 146; thence, leaving the common line of the CSX Railroad and following the private road N 25°34'03" W, 20.05 feet, to a found mag. nail in the private road, being in the south right-of-way line of Kentucky Highway 146 as described in Deed Book 50, Page 91; thence, leaving the private road and following the south right-of-way line of Kentucky Highway 146 on a curve to the left with a radius of 1856.86 feet, the chord being N 55°48'18" E, 297.68 feet, to a found ½ inch by 18 inch iron rod with #1771 survey cap; thence, leaving the south right-of-way of Kentucky Highway 146 and following the remaining lands between the north line of the CSX Railroad and the south right-of-way line of Kentucky 146, S 38°47'33" E, 20.00 feet, to a found ½ inch by 18 inch iron rod with #1771 survey cap, being in the north line of the CSX Railroad; thence, leaving the remaining lands between the CSX Railroad and the right-of-way of Kentucky Highway 146 and following the north line of the CSX Railroad on a curve to the right with a radius of 1876.86 feet, the chord being S 55°49'36" W, 302.29 feet, to the TRUE POINT OF BEGINNING.

SAID PROPERTY being located in Oldham County, Kentucky, containing 0.14 acres, more or less.

#### **TRACT "D"**

Being the tract of land as recorded as Tract #3 in Deed Book 700, Page 133 in the office of the Oldham County Court Clerk as conveyed to the County of Oldham, Kentucky. Said Tract #3 being located at 3210 West Highway 146, LaGrange, Kentucky and being more particularly described as follows:

BEGINNING at a found ½ inch by 18 inch iron rod with #1771 survey cap in the south line of the CSX Railroad (originally Louisville and Nashville Railroad) and being a corner of Wallace C. and Pamela A. Wilson as recorded in Deed Book 353, Page 287 and Deed Book 571, Page 321 and a corner with Tract #1 as conveyed to said County of Oldham, Kentucky thence, leaving said Wallace and Pamela A. Wilson and following said Tract #1 and the CSX Railroad with a curve to the left with a radius of 1942.86 feet, the chord being N 53°19'01" E, 491.34 feet to a found ½ inch by 18 inch iron rod with #1777 survey cop being the TRUE POINT OF BEGINNING thence, leaving said Tract #1



and following the common line of the CSX Railroad as follows: with a curve to the left with a radius of 1942.86 feet, the chord being N 45°29'20" E, 38.23 feet, to a found ½ inch by 18 inch iron rod with #1771 survey cap; thence, N 44°55'31" E, 41.56 feet, to a set ½ inch by 18 inch iron rod with #1771 survey cap, being a common corner with the County of Oldham, Kentucky as recorded in Deed Book 663, Page 015; thence, leaving the common line of the CSX Railroad and following the common line of said County of Oldham, Kentucky as follows: S 38°11'22" E, 439.08 feet, to a set ½ inch by 18 inch iron rod with #1771 survey cap; thence, S 37°08'04" W, 121.41 feet, to a found railroad spike in a 30 inch walnut tree in a fence line; thence, S 31°26'04" E, 278.85 feet, to a found ½ inch iron rod; thence, S 35°36'26" E, 376.37 feet to a found railroad spike in a wood fence post; thence, S 49°44'29" E, 158.99 feet, to a found ½ inch by 18 inch iron rod with #1771 survey cap, being a common corner with James C. Carpenter and Frank Otte as described in Deed Book 321, Page 203; thence, leaving the common corner of said County of Oldham, Kentucky and following the common line of James C. Carpenter and Frank Otte as follows: S 14°14'50" W, 135.74 feet, to a found ½ inch by 18 inch iron rod with #1771 survey cap; thence, S 38°46'50' W, 104.16 feet, to a found railroad spike in a wood fence post: thence, N 72°34'58" W, 232.00 feet, to a found ½ inch by 18 inch iron rod with #1771 survey cap in a fence line, being in a common line with Wallace C. and Pamela A. Wilson as recorded in Deed Book 353, Page 287 and Deed Book 571, Page 312; thence, leaving the common corner with James C. Carpenter and Frank Otte and following the common line with Wallace C. and Pamela A. Wilson N 19°49'26" W, 610.38 feet, to a found ½ inch Iron rod at a fence intersection being a common corner with said Tract #1 of said County of Oldham, Kentucky, thence, leaving the common corner with said County of Oldham, Kentucky and following the common line of said Tract #1 N 19°33'28" W, 638.28 feet, to the TRUE POINT OF BEGINNING.

SAID PROPERTY being located in Oldham County, Kentucky, containing 6.05 acres, more or less.

#### **TRACT "E"**

TOGETHER WITH the right, along with others, to use the existing passway over the right of way of the L & N Railroad for ingress and egress to and from the above described Tracts 1 and 3 and Kentucky Highway 146, as described in Right of Passway recorded in Deed Book 77, page 450, said records.

TRACTS "B", "C", "D", and "E" being the same property conveyed to County of Oldham, Kentucky by Deed dated December 27, 2001, recorded in Deed Book 700, Page 133, said records.

#### **LESS AND EXCEPT THE FOLLOWING PROPERTY:**

A certain tract of land located in Oldham County, Kentucky, on the south side of Ky. Hwy. 146, southwest of Town of LaGrange and further described as:

Beginning at an existing iron pin, in the south Right-of Way line of the CSX Railroad, being the northeast corner of Parts Unlimited Inc., (DB 818, Pg. 28); thence, with said Right-of-Way line, with a curve turning to the left, with a radius of 1942.86 feet, with a chord bearing of North 56°28'22" East, with a chord length of 275.00 feet, to an iron pin and cap, set this survey, in a New Division Line of the County of Oldham, Kentucky (DB 700 Pg. 133 Tract 1); thence, with New Division Lines, the following (2) two calls: South 25°54'08" East 320.00 feet, to an iron pin and cap, set this survey; thence, South 61°54'33" West 210.10 feet, to an iron pin and cap, set this survey, in the line of Parts Unlimited Inc.; thence, with Parts Unlimited Inc., the following (2) two calls: North 80°18'38" West 80.00 feet, to an existing iron; thence, North 25°20'08" West 245.08 feet, to a point of beginning, containing 1.874 Acres per survey performed by Neal W. Roberts, PLS #3 159, on September 12, 2005.

Being the property conveyed to Oldham County Water District by Deed dated February 9, 2006, recorded in Deed Book 859, page 91, said records.

**Schedule 4.09(a)(i)**

**Encumbrances to Real Estate**

1. Switchyard Sub-Lease Agreement by and between Bluegrass Generation Company, L.L.C., and Louisville Gas and Electric and Kentucky Utilities Company, dated January 1, 2002.
2. All matters and encumbrances disclosed on Schedule YY.
3. All matters and encumbrances disclosed on Schedule XX.

**Schedule 4.09(a)(ii)**

**Leases and Other Exceptions to Title**

1. Lease Agreement by and between County of Oldham, Kentucky and Bluegrass Generation Company, L.L.C. (Industrial Building Revenue Bonds), dated November 1, 2000.
2. First Amendment to Lease Agreement by and between County of Oldham, Kentucky and Bluegrass Generation Company, L.L.C. (Series 2001A Bonds), dated December 27, 2001.
3. Second Amendment to Lease Agreement by and between County of Oldham, Kentucky and Bluegrass Generation Company, L.L.C. (Series 2002A Bonds), dated December 27, 2002.
4. Third Amendment to Lease Agreement by and between County of Oldham, Kentucky and Bluegrass Generation Company, L.L.C., dated January 19, 2006.
5. Switchyard Sub-Lease Agreement by and between Bluegrass Generation Company, L.L.C., and Louisville Gas and Electric and Kentucky Utilities Company, dated January 1, 2002.

**Schedule 4.09(a)(iii)**

**Unrecorded Real Estate Options, Rights of Offer or Rights of Refusal**

None.

**Schedule 4.10(a)**

**Intellectual Property Assets**

1. Teleperm XP (AS 620) – T-2000 / Version 7.0.26 and all firmware installed on the Purchased Assets.

**Schedule 4.10(b)**

**Leased or Encumbered Intellectual Property**

1. Red Tag Pro
2. Microsoft OfficeProPlus 2007 SNGL OLP NL
3. Microsoft VisioPro 2007 SNGL OLP NL
4. Microsoft ProjectPro 2007 SNGL OLP NL w1PrjctSvrCAL
5. Microsoft WinSvrCAL 2008 SNGL OLP NL UsrCAL
6. Symantec SYMC Backup/ Protection
7. Cisco Systems ASA 5500 CSC-SSM-10 50-User
8. Enigma HP Management Tools
9. OSISoft Reliance Program (PI System)
10. Navigant GADS
11. Maximo
12. Versify

## **Schedule 4.11**

### **Inventory**

*Note: Inventory has not been audited or verified. The description of Inventory set forth in Appendix 4.11 is Seller's reasonable estimate of Inventory.*

1. See Appendix 4.11.



**Schedule 4.13(b)**

**Insurance: Pending Material Claims**

None.

**Schedule 4.14(a)**

**Legal Proceedings**

None.

**Schedule 4.14(b)**

**Government Orders / Judgments / Penalties Outstanding**

Schedule 4.15(b) is hereby incorporated by reference.

**Schedule 4.15(a)**

**Compliance with Laws**

None.

**Schedule 4.15(b)**

**Permits**

1. AED/First Aid and fork lift certifications. Certifications valid for three (3) years.
2. Certificates of Operation, State Nos. KY055143-KY055149, KY055150, KY055151, KY055153, KY055154, KY072505-KY072507, KY072509-KY072521, KY072523-KY072532, KY053543, KY053545, KY071882-KY071884, issued by Kentucky Environmental and Public Protection Cabinet, Office of Housing, Buildings and Construction, to Bluegrass Generation, dated (date inspected) April 18, 2011; expires April 18, 2012 and December 31, 2011.
3. FCC radio license for station WQEP319 is held in the name of Bluegrass Generation Company, L.L.C; FRN: 0019071422, Expiration Date: March 16, 2016.
4. Schedule 4.16(b)(i) is hereby incorporated by reference.

**Schedule 4.16(a)(i)**

**Compliance with Environmental Laws**

None.

**Schedule 4.16(a)(ii)**

**Environmental Notices, Claims or Requests**

1. On January 26, 2011 a Notice of Deficiency (NOD) for an application to renew a Title V Permit was received by the facility. The NOD requested hazardous air pollutant (HAPS) emissions rates for the combustion turbines, fire water pump and emergency generator. A response was sent to Ben Markin on February 18, 2011.
2. On February 21, 2011 a Second Notice of Deficiency (NOD) was received by the facility requesting additional HAPS emissions. A response was sent to Ben Markin on March 8, 2011. Further communications were with Esmail Hassanpour. On April 8, 2011 all KYDAQ requests for information pursuant to the Title V application were answered to the satisfaction of the KYDAQ and the application was deemed complete.
3. On September 13, 2011 a Technical notice of deficiency was received by the facility stating that the Form SDAA submitted was considered inadequate for undisclosed reasons. The permit engineer was contacted and a plant visit was scheduled for September 21, 2011.

**Schedule 4.16(b)(i)**

**Environmental Permits**

1. Application for KPDES Permit, submitted by Bluegrass Generation Company, L.L.C., as of March 2011. Letter updating status of Application for KPDES Permit, as of April 22, 2011. Awaiting further information / KPDES Permit pending as of August 12, 2011.
2. Air Quality Permit, No. V-05-080, issued by Kentucky Department of Environmental Protection to Bluegrass Generation Company, L.L.C., dated (issued) July 11, 2006; expires July 11, 2011. Application for renewal was received by the Commonwealth of Kentucky Division for Air Quality January 10, 2011 and deemed complete April 8, 2011. The Air Quality Permit is presently in draft and at EPA for its 45 day review and either (i) will be issued in final form without material changes prior to the Closing or (ii) the draft permit without material changes will still be pending at Closing and Seller will have no Knowledge at the Closing of any issues that would reasonably raise concerns whether it will subsequently be issued in final form without material changes.
3. Phase II Acid Rain Permit (Section J of Air Quality Permit No. V-05-080), issued by Kentucky Department of Environmental Protection to Bluegrass Generation Company, L.L.C., dated (issued) July 11, 2006; expires July 11, 2011. Application for renewal was received by the Commonwealth of Kentucky Division for Air Quality January 10, 2011 and deemed complete April 8, 2011. The Phase II Acid Rain Permit is presently in draft and at EPA for its 45 day review and either (i) will be issued in final form without material changes prior to the Closing or (ii) the draft permit without material changes will still be pending at Closing and Seller will have no Knowledge at the Closing of any issues that would reasonably raise concerns whether it will subsequently be issued in final form without material changes.
4. CAIR Permit (Section K of Air Quality Permit No. V-05-080), issued by Kentucky Department of Environmental Protection to Bluegrass Generation Company, L.L.C., dated (issued) July 11, 2006; expires July 11, 2011. Application for renewal was received by the Commonwealth of Kentucky Division for Air Quality January 10, 2011 and deemed complete April 8, 2011. The CAIR Permit is presently in draft and at EPA for its 45 day review and either (i) will be issued in final form without material changes prior to the Closing or (ii) the draft permit without material changes will still be pending at Closing and Seller will have no Knowledge at the Closing of any issues that would reasonably raise concerns whether it will subsequently be issued in final form without material changes.
5. 40 CFR Part 75 certification of NO<sub>x</sub> and O<sub>2</sub> CEMS approved in accordance with 40 CFR 75.20(a)(4) by Kentucky Department of Environmental Protection for Bluegrass Generation Co., LLC, certification submitted July 22, 2002 for CT1 and CT3, and submitted July 1, 2002 for CT2.



6. Hazardous Waste Generator ID #KYR000032409, issued by Kentucky Department of Environmental Protection to Bluegrass Generation Co., LLC, dated May 10, 2002.

**Schedule 4.16(b)(ii)**

**Non-Compliance with Environmental Permits**

1. In 2009 the Oldham County Sewer District (OCSD) approached the facility applying for a KPDES permit for discharge of wastewater. The OCSD stated that the WWTP was having difficulties handling the plant's waste water during periods of high rainfall. As found on Schedule 4.16(b)(i) an application for a KPDES permit was submitted March 2011.

**Schedule 4.16(e)**

**Storage Tanks**

1. 450,000 gallon Service Water AST
2. 300,000 gallon Demineralized Water AST
3. 300 gallon Emergency Generator AST
4. 300 gallon Emergency Fire Pump Fuel AST
5. 3,000 gallon Oil/Water Separator UST
6. 30,000 gallon Ammonia AST x 2

**Schedule 4.16(f)**

**Hazardous Materials**

**1. Safety-Kleen Systems, Inc.**

261 Eiler Ave.

Louisville KY 40214

**2. Safety-Kleen Systems, Inc.**

3700 Lagrange Rd.

Smithfield, KY 40068

**3. Safety-Kleen Systems, Inc.**

1722 Cooper Creek Rd.

Denton, TX 76208

## **Schedule 4.16(i)**

### **Environmental Attributes**

*Note: Seller shall have the right to use Environmental Attributes in the ordinary course of operations; furthermore, Seller shall retain the right to use Environmental Attributes as required or necessary to cover emissions related to pre-Closing operations of the Business.*

#### **1. CAIR NO<sub>x</sub> Annual Allowances**

<b>Year:</b>	<b>Allowances:</b>
2011 and prior -	22
2012 -	20
2013 -	20
2014 -	20

#### **2. CAIR NO<sub>x</sub> Ozone Allowances**

<b>Year:</b>	<b>Allowances:</b>
2011 and prior -	59
2012 -	18
2013 -	18
2014 -	18

#### **3. SO<sub>2</sub> Acid Rain / CAIR SO<sub>2</sub> Allowances**

<b>Year:</b>	<b>Allowances:</b>
2011 and prior -	3

**Schedule 4.19**

**Taxes**

None.

**Schedule 4.21**

**Brokers**

None.

**Schedule 5.03(b)**

**Consents under Law or Governmental Order**

1. Approval under FPA 203 and any other required approvals required from FERC.
2. Approval by KPSC of applicable CCN filing pursuant to Kentucky Revised Statutes Chapter 278 generally and, more specifically, KRS 278.020.
3. Approval of the transaction by the VSCC - Virginia State Corporation Commission approval of the affiliated transaction that results from the Buyer joint purchase/ownership of the Purchased Assets under Virginia Code Title 56 generally and, more specifically, Chapter 4 of Title 56.
4. Approvals to transfer and/or grant replacements of all items listed in Sections 4.15(b), 4.16(b)(i) and 4.16(i) of the Disclosure Schedules.



**Schedule 5.03(c)**

**Consents under Material Contracts**

None.

**Schedule 5.07**

**Compliance with Laws and Orders**

None.

## Schedule 6.20

### **Certain Covenants of Buyer**

1. Buyer will comply with all applicable current and future Laws.
2. Buyer will cooperate with the County on the continued implementation of the existing landscaping plan that retains existing mature trees wherever possible, and provides for the planting of additional trees in an attempt to create a buffer to soften the Facility's appearance to surrounding properties and provide for an attractive setting within the Business Park.
3. Bluegrass will provide for the detention and acceptable discharge rate of stormwater generated from all impervious surfaces including but not limited to buildings, parking lots, driveways, and equipment/machinery pads in the same manner as currently conducted. Stormwater detention shall be operated to maintain the current stormwater runoff discharge rate.
4. Buyer shall operate the Facility so as not to generate noise that exceeds 68 db(A), 400 feet from the fenced perimeter of the plant footprint.
5. Simple cycle operation, shall be allowed to discharge all wastewater (including sanitation, washdown wastewater and evaporative cooler discharge water) to the Buckner sewage treatment plant as permitted and agreed to by the Oldham County Sanitation District. Any combined cycle operation, shall discharge only sanitary wastewater and washdown wastewater to the Buckner sewage treatment plant as permitted and agreed to by the Oldham County Sanitation District. Water generated from the condensing or cooling towers shall not be discharged to the Buckner sewage treatment plant unless it is otherwise permitted and agreed to by the Oldham County Sanitation District.
6. Buyer will encourage its management and employees located at, or dedicated primarily to the Plant to participate in Oldham County community events.
7. Buyer will use good operating practices in the maintenance of the facility and site.
8. Buyer acknowledges and agrees that the construction of the natural gas fired power plant was locally approved and supported. Operation of the Facility on any alternate fuel or the conversion of the Facility to a fuel other than natural gas is not approved by the County.
9. Buyer shall operate, maintain and as appropriate, engineer and/or install all exterior lighting so as not to create a spillover lighting nuisance for adjoining properties.
10. Buyer shall not install any lighting on the turbine exhaust stacks unless required by state or federal regulatory agencies for public or worker safety purposes.
11. Buyer shall maintain the neutral paint color applied to the turbine exhaust stacks as previously agreed upon by the County and the Plant. The County's mutual agreement of the neutral paint color shall be administered by staff in the Oldham County Planning and Zoning Commission Office.

12. Buyer shall utilize the planned Business Park roadway as its primary point of vehicular access. Highway 146 may be utilized as the primary point of vehicular access only until completion of the planned Business Park Roadway.

**Schedule 7.01(a)**

**Filings with Governmental Authorities**

1. Notification filed with the Federal Trade Commission and the United States Department of Justice under the HSR Act and the rules and regulations promulgated thereunder with respect to the transactions contemplated by the Agreement, response to any requests for additional information made by either of such agencies, and termination or expiration of the waiting periods under the HSR Act.

**Schedule XX**

**Title Insurance Policy**

**COMMITMENT**

**Issued by**

**CHICAGO TITLE INSURANCE COMPANY**

**Schedule A**

RE: BLUEGRASS GENERATION COMPANY, L.L.C.

County: Oldham

**COMMITMENT [\_\_\_\_\_]**

**1. Effective Date: [\_\_\_\_\_]**

**2. Policy or Policies to be issued:**

**ALTA Owner's Policy - 6/17/06**

**Proposed Insured: TO BE DETERMINED**

**Amount: TO BE DETERMINED**

**3. The estate or interest in the land described or referred to in this Commitment is:**

FEE SIMPLE

**4. Title to the estate or interest in the land is at the effective date hereof vested in:**

Fee Simple: County of Oldham, Kentucky

Leasehold: Bluegrass Generation Company, L.L.C.

**5. The land referred to in this Commitment is described as follows:**

SEE BELOW LEGAL DESCRIPTION

## LEGAL DESCRIPTION

### TRACT "A"

Being a tract of land located in Oldham County Kentucky, being the same property conveyed to County of Oldham, Kentucky by Deed as recorded in Deed Book 663, Page 015. All Deed Books, Plot Books and Will Books referenced herein are recorded in the office of the Oldham County Court Clerk. Unless otherwise stated herein, any monument referred to as an "I. R. with cap" is a ½" diameter steel number 4 bar, 18" long with yellow plastic cap stamped "Prop. Cor. LS 1771". All bearings herein are referenced from the state plane coordinate system. Said Tract "A" being located at 3095 Commerce Parkway, LaGrange, Kentucky 40031 and being more particularly described as follows:

Beginning at an I. R. with cap set in the South line of the CSX railroad property, being 33.00 feet from the center of the main track, being a common corner with the Northeast corner of Tract #3 as conveyed to the County of Oldham, Kentucky as recorded in Deed Book 700, Page 133; thence, leaving said County of Oldham, Kentucky and following said South line of the CSX railroad North 45°09'19" East, 282.24 feet to an I. R. with cap found; thence, North 31°51'08" West, 10.26 feet to a ½" diameter iron pipe found, being 23 feet South of the main track; thence, North 44°58'07" East, 972.39 feet to an I. R. with cap found, being 24.6 feet South of the main track; thence North 59°23'00" East, 82.46 feet to an I. R. with cap found, being 45.0 feet South of the main track; thence, North 44°47'30" East, 161.84 feet to on I. R with cap found, being 45.0 feet South of the main track; thence, North 21°02'56" West passing a ½" diameter iron rod at 3.1 feet, 21.92 feet in all to an I. R. with cap found, being 25.0 feet from the main track; thence, North 44°56'46" East, 700.62 feet to an I. R. with cap found, being in the east line of the Louisville Gas & Electric Company easement and being a common corner with James C Carpenter & Frank Otte as recorded in Deed Book 321, Page 203 and Deed Book 321, Page 255; thence, leaving said CSX Railroad and following the east edge of sold easement and said James C. Carpenter & Frank Otte South 06°35'56" West, 2929.38 feet to on I. R. with cap found, being in the north line of Business Parkway; thence, leaving the east line of said easement and said James C. Carpenter & Frank Otte and following the North line of said Business Parkway South 55°52'28" West, 329.88 feet to an I. R. with cap found being a common corner with said James C. Carpenter & Frank Otte; thence, leaving said Business Parkway and following said James C. Carpenter & Frank Otte North 30°44'03" West, 509.10 feet to on I. R. with cap found, said point being a common corner with said county of Oldham, Kentucky Tract #3; thence, leaving said James C. Carpenter & Frank Otte and following said County of Oldham, Kentucky North 49°44'29" West, 158.99 feet to a railroad spike in a fence post found; thence, North 35°36'26" West, 376.37 feet to a ½" diameter iron rod found; thence, North 31°26'04" West, 278.85 feet to a railroad spike found in a walnut tree at the corner of a fence; thence, North 37°08'04" East, 121.41 feet to a ½" diameter iron rod set; thence, North 38°11'22" West 439.08 feet to the POINT OF BEGINNING.

Said property being located in Oldham County, Kentucky containing 53.33 acres, more or less.

TOGETHER WITH temporary construction easement rights and rights of ingress and egress as set forth in Construction Easement recorded in Deed Book 633, page 184, said records, over and across the property more specifically described therein.

TRACT "A" being the same property conveyed to County of Oldham, Kentucky by Deed dated November 1, 2000, recorded in Deed Book 663, Page 015.

TOGETHER WITH non-exclusive rights of access as described in Temporary Construction Access Agreement between County of Oldham, Kentucky and Bluegrass Generation Company, L.L.C. recorded in Deed Book 666, page 516, said records, over and across a portion of a proposed Business Parkway designated as the "393 Corridor" described therein.

#### **TRACT "B"**

Being the tract of land as recorded as Tract #1 in Deed Book 700, Page 133 in the office of the Oldham County Court Clerk as conveyed to the County of Oldham, Kentucky. Said Tract #1 being located at 3210 West Highway 146, LaGrange, Kentucky and being more particularly described as follows:

BEGINNING at a found ½ inch by 18 inch iron rod with #1771 survey cap in the south line of the CSX Railroad (originally Louisville and Nashville Railroad) and being a common corner with Wallace C. and Pamela A. Wilson as recorded in Deed Book 353, Page 287 and Deed Book 571, Page 312; thence, leaving the common corner with Wallace C. and Pamela A. Wilson and following the common line of the CSX Railroad on a curve to the left with a radius of 1942.86 feet, the chord being N 53°19'01" E, 491.34 feet, to a found ½ inch by 18 inch iron rod with #1771 survey cap being a common corner with the County of Oldham, Kentucky as recorded in Deed Book 700, Page 133, Tract #3 (6.05 Acres); thence, leaving the common line of the CSX Railroad and following said Tract #3, S 19°33'28" E, 638.26 feet to a found ½ inch diameter iron rod, being a common corner with Wallace C. and Pamela A. Wilson; thence, leaving said Tract #3 and following the common line of Wallace C. and Pamela A, Wilson as follows: N 80°19'25" W, 508.51 feet to a found ½ inch by 18 inch Iron rod with #1771 survey cap set at a wood fence post; thence N 25°34'03" W, 246.59 feet, to the POINT OF BEGINNING.

SAID PROPERTY being located in Oldham County, Kentucky, containing 4.50 acres, more or less.

#### **TRACT "C"**

Being the tract of land as recorded as Tract #2 in Deed Book 700, Page 133 in the office of the



Oldham County Court Clerk as conveyed to the County of Oldham, Kentucky. Said Tract 2 Being located at 3210 West Highway 146, LaGrange, Kentucky and being more particularly described as follows:

BEGINNING at a found ½ inch by 18 inch iron rod with #1771 survey cap in the south line of the CSX Railroad (originally Louisville and Nashville Railroad) and being a corner of Wallace C. and Pamela A. Wilson as recorded in Deed Book 353, Page 287 and Deed Book 571, Page 312, and a corner with Tract #1 as conveyed to said County of Oldham, Kentucky, thence, leaving the corner of Wallace C. and Pamela A. Wilson and Tract #1 and crossing the CSX Railroad N 25°34'03" W, 66.15 feet to a found mag. nail being the TRUE POINT OF BEGINNING and being the north line of the CSX Railroad as described in Deed Book 37, Page 333 and being a point in a private road as shown at station 59 + 57 on the Right-of-Way and Track Map, Louisville and Nashville R.R. Co. Cincinnati Division, said point being in the south line of the remaining lands located between the CSX Railroad and the right-of-way of Kentucky Highway 146; thence, leaving the common line of the CSX Railroad and following the private road N 25°34'03" W, 20.05 feet, to a found mag. nail in the private road, being in the south right-of-way line of Kentucky Highway 146 as described in Deed Book 50, Page 91; thence, leaving the private road and following the south right-of-way line of Kentucky Highway 146 on a curve to the left with a radius of 1856.86 feet, the chord being N 55°48'18" E, 297.68 feet, to a found ½ inch by 18 inch iron rod with #1771 survey cap; thence, leaving the south right-of-way of Kentucky Highway 146 and following the remaining lands between the north line of the CSX Railroad and the south right-of-way line of Kentucky 146, S 38°47'33" E, 20.00 feet, to a found ½ inch by 18 inch iron rod with #1771 survey cap, being in the north line of the CSX Railroad; thence, leaving the remaining lands between the CSX Railroad and the right-of-way of Kentucky Highway 146 and following the north line of the CSX Railroad on a curve to the right with a radius of 1876.86 feet, the chord being S 55°49'36" W, 302.29 feet, to the TRUE POINT OF BEGINNING.

SAID PROPERTY being located in Oldham County, Kentucky, containing 0.14 acres, more or less.

#### **TRACT "D"**

Being the tract of land as recorded as Tract #3 in Deed Book 700, Page 133 in the office of the Oldham County Court Clerk as conveyed to the County of Oldham, Kentucky. Said Tract #3 being located at 3210 West Highway 146, LaGrange, Kentucky and being more particularly described as follows:

BEGINNING at a found ½ inch by 18 inch iron rod with #1771 survey cap in the south line of the CSX Railroad (originally Louisville and Nashville Railroad) and being a corner of Wallace C. and Pamela A. Wilson as recorded in Deed Book 353, Page 287 and Deed Book 571, Page 321 and a corner with Tract #1 as conveyed to said County of Oldham, Kentucky thence, leaving said Wallace and Pamela A. Wilson and following said Tract #1 and the CSX Railroad with a curve to

the left with a radius of 1942.86 feet, the chord being N 53°19'01" E, 491.34 feet to a found ½ inch by 18 inch iron rod with #1777 survey cap being the TRUE POINT OF BEGINNING thence, leaving said Tract #1 and following the common line of the CSX Railroad as follows: with a curve to the left with a radius of 1942.86 feet, the chord being N 45°29'20" E, 38.23 feet, to a found ½ inch by 18 inch iron rod with #1771 survey cap; thence, N 44°55'31" E, 41.56 feet, to a set ½ inch by 18 inch iron rod with #1771 survey cap, being a common corner with the County of Oldham, Kentucky as recorded in Deed Book 663, Page 015; thence, leaving the common line of the CSX Railroad and following the common line of said County of Oldham, Kentucky as follows: S 38°11'22" E, 439.08 feet, to a set ½ inch by 18 inch iron rod with #1771 survey cap; thence, S 37°08'04" W, 121.41 feet, to a found railroad spike in a 30 inch walnut tree in a fence line; thence, S 31°26'04" E, 278.85 feet, to a found ½ inch iron rod; thence, S 35°36'26" E, 376.37 feet to a found railroad spike in a wood fence post; thence, S 49°44'29" E, 158.99 feet, to a found ½ inch by 18 inch iron rod with #1771 survey cap, being a common corner with James C. Carpenter and Frank Otte as described in Deed Book 321, Page 203; thence, leaving the common corner of said County of Oldham, Kentucky and following the common line of James C. Carpenter and Frank Otte as follows: S 14°14'50" W, 135.74 feet, to a found ½ inch by 18 inch iron rod with #1771 survey cap; thence, S 38°46'50" W, 104.16 feet, to a found railroad spike in a wood fence post; thence, N 72°34'58" W, 232.00 feet, to a found ½ inch by 18 inch iron rod with #1771 survey cap in a fence line, being in a common line with Wallace C. and Pamela A. Wilson as recorded in Deed Book 353, Page 287 and Deed Book 571, Page 312; thence, leaving the common corner with James C. Carpenter and Frank Otte and following the common line with Wallace C. and Pamela A. Wilson N 19°49'26" W, 610.38 feet, to a found ½ inch Iron rod at a fence intersection being a common corner with said Tract #1 of said County of Oldham, Kentucky, thence, leaving the common corner with said County of Oldham, Kentucky and following the common line of said Tract #1 N 19°33'28" W, 638.28 feet, to the TRUE POINT OF BEGINNING.

SAID PROPERTY being located in Oldham County, Kentucky, containing 6.05 acres, more or less.

#### **TRACT "E"**

TOGETHER WITH the right, along with others, to use the existing passway over the right of way of the L & N Railroad for ingress and egress to and from the above described Tracts 1 and 3 and Kentucky Highway 146, as described in Right of Passway recorded in Deed Book 77, page 450, said records.

TRACTS "B", "C", "D", and "E" being the same property conveyed to County of Oldham, Kentucky by Deed dated December 27, 2001, recorded in Deed Book 700, Page 133, said records.

**LESS AND EXCEPT THE FOLLOWING PROPERTY:**

A certain tract of land located in Oldham County, Kentucky, on the south side of Ky. Hwy. 146, southwest of Town of LaGrange and further described as:

Beginning at an existing iron pin, in the south Right-of Way line of the CSX Railroad, being the northeast corner of Parts Unlimited Inc., (DB 818, Pg. 28); thence, with said Right-of-Way line, with a curve turning to the left, with a radius of 1942.86 feet, with a chord bearing of North 56°28'22" East, with a chord length of 275.00 feet, to an iron pin and cap, set this survey, in a New Division Line of the County of Oldham, Kentucky (DB 700 Pg. 133 Tract 1); thence, with New Division Lines, the following (2) two calls: South 25°54'08" East 320.00 feet, to an iron pin and cap, set this survey; thence, South 61°54'33" West 210.10 feet, to an iron pin and cap, set this survey, in the line of Parts Unlimited Inc.; thence, with Parts Unlimited Inc., the following (2) two calls: North 80°18'38" West 80.00 feet, to an existing iron; thence, North 25°20'08" West 245.08 feet, to a point of beginning, containing 1.874 Acres per survey performed by Neal W. Roberts, PLS #3 159, on September 12, 2005.

Being the property conveyed to Oldham County Water District by Deed dated February 9, 2006, recorded in Deed Book 859, page 91, said records.

## SCHEDULE B -- SECTION 1

### REQUIREMENTS:

1. Instruments creating the estate or interest to be insured must be executed and filed for record, to-wit:
  - (a) Special Warranty Deed from COUNTY OF OLDHAM, to BLUEGRASS GENERATION COMPANY, L.L.C., conveying the premises described in Schedule A hereof in fee simple, free and unencumbered.
  - (b) Special Warranty Deed from BLUEGRASS GENERATION COMPANY, L.L.C. to purchaser to be determined conveying the premises described in Schedule A hereof in fee simple, free and unencumbered.
2. Pay the full consideration to, or for the account of, the grantors or mortgagors.
3. Pay all taxes, charges and assessments levied against subject premises, which are due and payable.
4. Satisfactory evidence should be had that improvements and/or repairs or alterations thereto are completed; that contractor, sub-contractors, labor and materialmen are all paid; and have released of record all liens or notice of intent to perfect a lien for labor or material.
5. We must be furnished with satisfactory evidenced of the authorization for the County of Oldham to complete the proposed transaction.
6. We must be furnished with corporate resolutions from Bluegrass Generation Company, L.L.C. authorizing the proposed transaction and Certificate of Good Standing.
7. Satisfaction of indebtedness and termination of record of Lease Agreement by and between County of Oldham, Kentucky, as Issuer, to Bluegrass Generation Company, L.L.C., as Lessee, regarding issuance of Industrial Revenue Bonds, Series 2000A, 2000B, 2001A and 2001B, in the amount of \$200,000,000 by Master Trust Indenture between Issuer and Bank One Trust Company, National Association, recorded in Deed Book 663, page 23; as amended by First Amendment to Lease Agreement dated December 27, 2001, in connection with \$157,498,252 Industrial Revenue Bonds, Series 2001A, recorded in Deed Book 700, page 139; and further amended by Second Amendment to Lease Agreement dated December 27, 2002, in connection with \$33,719,511 Industrial Revenue Bonds, Series 2002A, recorded in Deed Book 739, page 44, and Third Amendment to Lease Agreement dated January 19, 2006, recorded in Deed Book 857, page 613, said records.

NOTE: This Commitment for Title Insurance does NOT constitute a report of title and is not to be relied upon by the proposed insured(s) or any other party as a title report or representation of the status

of title. Any title search and examination conducted by or for the Company in connection with the issuance of this Commitment for Title Insurance, if any, is solely for the benefit of the Company. The sole liability of the Company and / or its issuing agent hereunder shall be as set forth in the Conditions and Stipulations of this Commitment for Title Insurance. Neither the Company nor its issuing agent shall be liable to the proposed insured(s) or any other party for any claim of alleged negligence, negligent misrepresentation, or any other cause of action in tort in connection with this Commitment for Title Insurance.

## **SCHEDULE B -- Section 2**

### **EXCEPTIONS**

**Schedule B of the policy or policies to be issued will contain exceptions to the following matters unless the same are disposed of to the satisfaction of the Company:**

**Defects, liens, encumbrances, adverse claims or other matters, if any, created, first appearing in the public records or attaching subsequent to the Effective Date but prior to the date the proposed Insured acquires for value of record the estate or interest or mortgage thereon covered by this Commitment.**

1. Terms and conditions of unrecorded real estate contract surviving closing as referred to in deed recorded in Deed Book 633, page 179, said records.
2. Rights of others and terms and conditions of right of passway described in Deed Book 77, page 450, said records, and shown on the Survey.
3. Rights of way or easements to Louisville Gas and Electric Company recorded in Deed Book 57, pages 461 and 469; Deed Book 58, page 86; Deed Book 87, pages 266 and 528; Deed Book 90, page 34; Deed Book 140, page 456; Deed Book 345, page 448; and Deed Book 662, page 117, said records. The Survey shows 150-foot easement, 70-foot easements, 25-foot and 30-foot easements located on the property with numerous electric lines, poles and towers.
4. Rights of way for pipeline easement to Texas Gas Transmission Corporation recorded in Deed Book 70, pages 330 and 332 and Agreements recorded in Deed Book 88, pages 294 and 346, said records. The Survey shows gas easement of unspecified width with gas pipelines crossing the land.
5. Agreement for Dedication of Public Right of way between James C. Carpenter and Frank G. Otte and Oldham County Fiscal Court recorded in Deed Book 612, page 103, said records. The survey shows 15-foot wide utility easements and 10-foot wide construction easements adjacent to 100-foot right of way crossing the land.
6. Terms and conditions of Construction Easement from James C. Carpenter, et al. to Bluegrass Generation Company, L.L.C. recorded in Deed Book 633, page 184, said records.
7. Certificates of Land Use Restriction recorded in Permit Book 3, pages 425, 426, 427, 433 and 434 and Permit Book 4, page 1, said records.
8. Rights of others and terms and conditions of Temporary Construction Access Agreement recorded in Deed Book 666, page 516, said records, as shown on the Survey; right of access insured by this policy is limited to the access provided by said agreement.

9. Rights of way to Louisville Gas and Electric Company recorded in Deed Book 667, page 167 and Deed Book 670, page 311, said records, 25-foot easement with electric lines and poles shown on the Survey.
10. Permanent Access Road Agreement between Bluegrass Generation Company, L.L.C. and Texas Gas Transmission Corporation dated February 27, 2001, recorded in Deed Book 671, page 391, said records.
11. Easement to Texas Gas Transmission Company dated June 28, 2001, recorded in Deed Book 682, page 181, said records, 100-foot right of way with gas pipelines and valves crossing the property as shown on the Survey.
12. Easement to Louisville Gas and Electric Company recorded in Deed Book 808, page 479, said records.
13. Access Easement from Oldham County Water District recorded in Deed Book 859, page 103, as amended by Amendment to Access Easement recorded in Deed Book 860, page 157, said records.
14. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title, or easements or claims of easements not shown by the public records that would be disclosed by an accurate and complete land survey of the Land occurring subsequent to March 21, 2003, date of survey of Jeffrey K. Meyer, R.S. (“the Survey”).
15. State, County, and School taxes for the year 2011, not yet due and payable.  
NOTE: The property is not presently taxed by the county. The property may be subject to franchise taxes paid to the State of Kentucky.





**Cane Run Generating Station  
Environmental Permitting and Regulatory Submittal Requirements for Natural Gas Combine-Cycle Plant (Unit 7)**

Permit	Regulatory Agency	Regulated Activity	Authority	Status
Louisville Metro Air Pollution Control District (LMAPCD)	LMAPCD	Construction of a major or minor source of air pollution and air pollution control equipment.	Regulation 2.03	Permit application submitted on 6/13/2011
Title V Operating Permit	LMAPCD	Operation of a major source of air pollution and pollution control equipment.	Regulation 2.16	Permit application submitted on a 5 year cycle. Next application due date is May 3, 2012.
Acid Rain Permit	LMAPCD	Acid rain permit is required for >25MW combustion unit.	Regulation 6.47	Permit application to be submitted no later than 24 months prior to commencing operations.
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.
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.

**Agency Abbreviations:**

USEPA: United States Environmental Protection Agency  
LMAPCD: Louisville Metro Air Pollution Control District  
KYDAQ: Kentucky Division for Air Quality  
KYDOW: Kentucky Division of Water  
KYPSC: Kentucky Public Service Commission  
KYEEC: Kentucky Energy and Environment Cabinet

<b>Permit</b>	<b>Regulatory Agency</b>	<b>Regulated Activity</b>	<b>Authority</b>	<b>Status</b>
Above Ground Storage Tank (AST) Permit	State Fire Marshall	Flammable, Combustible and Hazardous material storage vessel installations	815 KAR 10:060	To be submitted
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  KRS 278.708	Submitted on 9/15/2011.
Cumulative Environmental Assessment	KYEEC	Required before construction of a facility for the generation of electricity. This assessment will contain a description of project impact to environmental resources.	KRS 224.10-280	Submitted on 9/15/2011.

**Agency Abbreviations:**

USEPA: United States Environmental Protection Agency  
 LMAPCD: Louisville Metro Air Pollution Control District  
 KYDAQ: Kentucky Division for Air Quality  
 KYDOW: Kentucky Division of Water  
 KYPSC: Kentucky Public Service Commission  
 KYEEC: Kentucky Energy and Environment Cabinet

# **SITE ASSESSMENT REPORT**

## **Proposed Natural Gas Combined-Cycle Electric Generating Unit**

**Louisville Gas & Electric Company  
5252 Cane Run Road  
Louisville, Kentucky 40216**

*Prepared for*

**LG&E and KU Services Company  
820 West Broadway  
Louisville, Kentucky 40202**

*For Submittal to*

**Kentucky Public Service Commission  
211 Sower Boulevard  
Frankfort, Kentucky 40602**

**Pursuant to KRS 278.216**

*Prepared by*



**AMEC E & I, Inc.  
13425 Eastpoint Centre Drive, Suite 122  
Louisville, Kentucky 40223**

**August 25, 2011**

# CUMULATIVE ENVIRONMENTAL ASSESSMENT

## Proposed Natural Gas Combined-Cycle Electric Generating Unit

Louisville Gas & Electric Company  
5252 Cane Run Road  
Louisville, Kentucky 40216

*Prepared for*

LG&E and KU Services Company  
820 West Broadway  
Louisville, Kentucky 40202

*Prepared by*



AMEC E & I, Inc.  
13425 Eastpoint Centre Drive, Suite 122  
Louisville, Kentucky 40223

A handwritten signature in black ink, appearing to read "N. Schmitt", written over a horizontal line.

Nicholas Schmitt, PE  
Senior Principal Engineer

A handwritten signature in black ink, appearing to read "M. Edmonson", written over a horizontal line.

Mark S. Edmonson, PE  
Principal Engineer

August 25, 2011

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**LIST OF ACRONYMS and ABBREVIATIONS**

ADT	Average daily traffic
BLM	US Bureau of Land Management
CCR	Coal Combustion Residues
CTG	Combustion Turbine Generator
dB	Decibels
dBA	A-weighted Decibels
EZ-1	Enterprise Zone
FEMA	Federal Emergency Management Agency
HRSG	Heat Recovery Steam Generator
Hz	Hertz
KOP	Key Observation Points
KPDES	Kentucky Pollution Discharge Elimination System
KRS	Kentucky Revised Statutes
KYTC	Kentucky Transportation Cabinet
L <sub>10</sub>	Sound level exceeded 10% of sampling period (often referred to as intrusive sound level)
L <sub>50</sub>	Sound level exceeded 50 percent of sampling period
L <sub>90</sub>	Sound level exceeded 90 percent of sampling period (often referred to as residual or background sound level)
L <sub>eq</sub>	Average sound level for a specific time period
Ldn	Day-Night sound level
LG&E	Louisville Gas & Electric Company
L <sub>w</sub>	Sound power level
MSD	Louisville and Jefferson County Metropolitan Sewer District
msl	Mean sea level
MW	Megawatts
NGCC	Natural Gas Combined-Cycle
NRCS	Natural Resources Conservation Service
PVA	Jefferson County Property Valuation Administrator
R4	Single family zoning district
R5	Single family zoning district
R5A	Multifamily zoning district
R6	Multifamily zoning district
SAR	Site Assessment Report
STG	Steam Turbine Generator
TGT	Texas Gas Transmission, LLC
USDA	U.S. Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Services
USGS	United States Geological Survey
UTM	Universal Transverse Mercator
VRM	Visual Resource Management

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## 1.0 INTRODUCTION

The proposed project is for development, construction, and operation of a 731 megawatt (MW) winter net natural gas combined-cycle (NGCC) electric generating unit at an existing coal-fired electric generating station. Upon attainment of commercialization of the proposed NGCC unit the existing coal-fired steam electric generating plant will shut-down and cease coal-fired electric generation operations at the site. This shutdown will more than off-set air emissions associated with the proposed NGCC unit.

As shown in Figure 1, the proposed NGCC unit is located in extreme western Jefferson County, Kentucky along the Ohio River, near River Mile 616.6. Figure 2 depicts the proposed site on a portion of the U.S.G.S. 7.5' Topographic Quadrangle Map for Lanesville, IN-KY. The facility occurs at geographic coordinates of 38° 10' 49" North latitude and 85° 53' 00" West longitude, corresponding to Universal Transverse Mercator (UTM) coordinates of 597,792 meters Easting, 4,226,416 meters Northing, in Zone 16S (horizontal datum WGS84). The site lies at an elevation of 451 feet above Mean Sea Level (msl) compared to the normal pool elevation of the Ohio River adjacent to the site at 383 feet msl, controlled by the Cannelton Locks & Dam.

As shown in Figure 3, the proposed site is located on property currently owned by Louisville Gas & Electric Company (LG&E) and occupied by an existing LG&E facility – the Cane Run coal-fired steam electric generating station, with a reported capacity of 563 MW. Note that in order to meet setback requirements; the proposed project may require acquisition of additional land from Jefferson County or a request for deviation from applicable setback requirements.

Pursuant to KRS 278.216:

*“Except for a utility as defined under KRS 278.010(9) that has been granted a certificate of public convenience and necessity prior to April 15, 2002, no utility shall begin the construction of a facility for the generation of electricity capable of generating in aggregate more than ten megawatts (10MW) without having first obtained a site compatibility certificate from the commission.” [KRS 278.216(1)]*

*“An application for a site compatibility certificate shall include the submission of a site assessment report as prescribed in KRS 278.708(3) and (4), except that a utility which proposes to construct a facility on a site that already contains facilities capable of generating ten megawatts (10MW) or more of electricity shall not be required to comply with setback requirements established pursuant to KRS 278.704(3). A utility may submit and the commission may accept documentation of compliance with the National*

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*Environmental Policy Act (NEPA) rather than a site assessment report.” [KRS 278.216(2)]*

The required contents of the site assessment report as outlined in KRS 278.708(3)-(4) are:

- (3) *A completed site assessment report shall include:*
- a. *A description of the proposed facility that shall include a proposed site development plan that describes:*
    - 1. *Surrounding land uses for residential, commercial, agricultural, and recreational purposes;*
    - 2. *The legal boundaries of the proposed site;*
    - 3. *Proposed access control to the site;*
    - 4. *The location of facility buildings, transmission lines, and other structures;*
    - 5. *Location and use of access ways, internal roads, and railways;*
    - 6. *Existing or proposed utilities to service the facility;*
    - 7. *Compliance with applicable setback requirements as provided under KRS 278.704(2), (3), or (5); and*
    - 8. *Evaluation of the noise levels expected to be produced by the facility;*
  - b. *An evaluation of the compatibility of the facility with scenic surroundings;*
  - c. *The potential changes in property values resulting from the siting, construction, and operation of the proposed facility for property owners adjacent to the facility;*
  - d. *Evaluation of anticipated peak and average noise levels associated with the facility's construction and operation at the property boundary; and*
  - e. *The impact of the facility's operation on road and rail traffic to and within the facility, including anticipated levels of fugitive dust created by the traffic and any anticipated degradation of roads and lands in the vicinity of the facility.*
- (4) *The site assessment report shall also suggest any mitigating measures to be implemented by the applicant including planting trees, changing outside lighting, erecting noise barriers, and suppressing fugitive dust.*

This Site Assessment Report (SAR) for the proposed LG&E NGCC unit at 5252 Cane Run Road Louisville, Kentucky 40216 has been prepared to meet the requirements of KRS 278.

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## 2.0 PROJECT DESCRIPTION

The proposed project includes development, construction, and operation of a 731 MW winter net NGCC electric generating unit. The proposed NGCC unit will replace the existing 563 MW coal-fired steam electric generating station. As noted, the proposed project facility will be constructed on the 510 acre plant site owned by LG&E. More specifically, it will be located immediately east-southeast of the existing Cane Run Road coal-fired steam electric generating station. As such, considerable required infrastructure is already present or immediately adjacent to the proposed facility.

The proposed NGCC unit will include the following major structures as shown on Figure 4:

- Combustion Turbines
- Heat Recovery Steam Generators
- Steam Turbine Building
- Electrical Equipment Building
- Heat Recovery Steam Generator Exhaust Stacks
- Administration / Control Building
- Boiler Feed Pump
- Heat Recovery Steam Generator Elevator
- Water Treatment Building
- Cooling Tower
- Gas Handling Equipment
- Auxiliary Boiler Building
- Emergency Diesel Generator
- Service Water Tank
- Demineralized Water Storage Tank
- Hydrogen Storage Area
- Heat Recovery Steam Generator Power Distribution Center
- Generator Step-Up Transformers
- Unit Auxiliary Transformer
- Continuous Emissions Monitoring Shelter Enclosure
- Switchyard Control Building

In addition, the proposed NGCC electric generating unit will be served by the following infrastructure:

- 
- Access Road (the existing road from Cane Run Road to coal-fired facility operations will be used to access proposed site and a new driveway is to be constructed surrounding proposed facility)
  - Electric Power Transmission Lines (connection to existing overhead electric power transmission lines)
  - Potable Water Supply Line (connection to existing potable water supply line)
  - Wastewater Discharge Collection System [new connection to existing Louisville and Jefferson County Metropolitan Sewer District (MSD) sanitary sewer]
  - Stormwater Collection / Retention System (connection to existing system)
  - Natural Gas Supply Line [an eight mile long 20 inch diameter high-pressure natural gas pipeline will be extended primarily along existing utility right-of-way belonging to LG&E from a Texas Gas Transmission, LLC (TGT) valve station to a new meter and pressure regulating station at the proposed facility].
  - Railroad Siding (existing)

## **2.1 Site Setting**

### **2.1.1 Physiographic Setting**

The site lies in western Jefferson County, Kentucky within the Outer Bluegrass sub-region of the Bluegrass physiographic region. The Bluegrass Region is characterized by gently rolling lowlands formed on limestone and shale. The Outer Bluegrass, which lies adjacent to the Knobs and Hills of the Bluegrass (Eden Shale), features rich soils and is drained by the Salt River which empties into the Ohio River, and smaller tributary streams flowing directly into the Ohio River. Caves and sinking springs may be found throughout the region. Areas of glacial outwash deposits from at least two glacial advances are found along the Ohio River.

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### 2.1.2 Topographic Setting

The tableland area which comprises most of Jefferson County slopes gently to the southwest from a 790 foot msl topographic highpoint in the eastern part of the county, to around 500 feet msl along the front of the Knobs area. The site lies within an area of the lowest elevations in the county along the Ohio River. Elevations in the vicinity of the site area range from roughly 435 feet msl to 450 feet msl, some 60 feet to 70 feet above the normal pool elevation of the Ohio River.

### 2.1.3 Geologic Setting

As shown in Figure 5, Geologic Vicinity Map, the uppermost geologic material in the area surrounding the proposed NGCC unit is glacial outwash deposits (map symbol – Qo) of Quaternary age. The area immediately south of the proposed site is identified as containing artificial fill materials (map symbol – af), presumably associated with construction of facilities and infrastructure associated with LG&E’s existing coal-fired electric generating station. Areas west of the proposed site along the Ohio River and north along Mill Creek Cutoff are identified as Alluvium (map symbol – Qal).

Glacial outwash deposits in this area are heterogeneous mixtures of clay, silt, sand, and gravel that typically grade from fine-to-coarse with depth and extend to bedrock at depths approaching 100 feet below ground surface.

### 2.1.4 Soils

A Custom Soil Resource Report was developed for the proposed NGCC unit site using the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey tool at:

<http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>.

Figure 6, Soils Map, was developed from the Web Soil Survey and included in the Custom Soil Resource Report for the site. As shown in Figure 6, the following soils are present at the site

JEFFERSON COUNTY, KENTUCKY (KY111)			
Map Unit Symbol	Map Unit Name	Acres In AOI	Percent of AOI
Dp	Dumps, ash	0.7	2.3%
OtB	Otwood silt loam, two to six percent slopes	3.2	10.0%
UahC	Urban land-Udorthents complex, 0 to 12 percent slopes	2.7	8.4%
UyC	Urban land-Alfic Udarents-Wheeling complex, zero to 12 percent slopes	8.4	25.8%
WeA	Weinbach silt loam, zero to two percent slopes	2.5	7.6%
WhA	Wheeling silt loam, zero to two percent slopes	14.9	45.9%
Totals for Area of Interest.....		32.4	100.0%

Descriptions of these soil mapping units are included in the USDA-NRCS Custom Soil Resource Report provided in Appendix A.

## 2.1.5 Water Resources

### 2.1.5.1 Surface Water

The most prominent water feature in the area is the Ohio River which lies 2,500 feet west of the proposed site. The Ohio River is 0.3 miles wide in the vicinity of the site. According to data developed by the USGS, flow rates in the Ohio River near Louisville range from around 36,000 cubic feet per second during periods of low-flow to approximately 390,000 cubic feet per second during high-flow.

The Mill Creek Cutoff lies just east of the site and separates the upper and lower Mill Creek watersheds. Drainage from the site flows north-northeast into either Garrison Ditch or Mill Creek Cutoff. Garrison Ditch empties into Mill Creek Cutoff which flows northwest to the MSD Upper Mill Creek Pumping Station, where it is discharged into the Ohio River. Lower Mill Creek flows to the west and south of the project site, ultimately discharging into the Ohio River via MSD's Mill Creek Pump Station near River Mile 625. A flood control levee is located west of the proposed site on the opposite side of the Ash Treatment Basin.

The existing coal-fired steam electric generating plant uses surface water ponds/control structures to manage various coal combustion byproducts and stormwater runoff, as follows:

- Ash Treatment Basin / Emergency Sludge Pond
- Basin Pond

- Dead Storage Pond
- Clearwater Pond
- Coal Pile Run-Off Pond

The current LG&E Cane Run Power Plant discharges treated effluent to the Ohio River pursuant to Kentucky Pollution Discharge Elimination System (KPDES) Permit No. KY0002062 issued by the Kentucky Department for Environmental Protection - Division of Water.

The existing LG&E Cane Run Power Station utilizes water from the Ohio River for steam generation, cooling/quenching, scrubber lime-slurry formulation, and flue-gas desulfurization make-up water. An estimated 350 MGD is withdrawn in accordance with the facility's KPDES permit.

#### **2.1.5.2 Floodplain**

Figure 7, was obtained from the Federal Emergency Management Agency (FEMA) website at:

<http://msc.fema.gov/webapp/wcs/stores/servlet/CategoryDisplay?catalogId=10001&storeId=10001&categoryId=12001&langId=-1&userType=G&type=1&dfirmCatId=12009&future=false>

Figure 7, FEMA Firmette – Flood Insurance Rate Map (Map No. 21111C0070E, Panel 70 of 144), depicts the site and surrounding floodplain information. As shown, the site lies within an area designated as Zone X, indicating that it lies outside the 100-year and 500-year floodplains.

#### **2.1.5.3 Wetlands**

Figure 8, Wetlands Map, was obtained from the United States Fish and Wildlife Services (USFWS) web-site using the “Wetlands Mapper” tool at:

[www.fws.gov/wetlands/Data/Mapper.html](http://www.fws.gov/wetlands/Data/Mapper.html).

As shown, this map identifies a Freshwater Emergent Wetland area of 0.25 acres within the vicinity of the proposed project site. Note that the appearance of an apparent wetlands area on the National Wetlands Inventory Map is not necessarily definitive. NWI maps are prepared primarily by stereoscopic analysis of high altitude aerial photographs; therefore, it is



recommended that any jurisdictional waters, including wetlands, identified on an NWI map should be field verified.

According to investigations completed by Stantec for LG&E in 2008, the 0.25 acre Freshwater Emergent Wetland noted above is not a jurisdictional wetland due to isolation from other waters of the United States / Commonwealth of Kentucky. Therefore, there are no wetlands or jurisdictional waters identified in relation to construction and/or operation of the proposed NGCC unit.

#### 2.1.5.4 Groundwater

As previously noted, the site lies adjacent to the alluvial flood plain and terrace deposits in glacial outwash along the Ohio River. According to **Carey, Daniel I., and John F. Stickney, *Groundwater Resources of Jefferson County, KY, County Report 56, Series XII, ISSN 0075-5567, Kentucky Geologic Survey, (2005)***, these sediments yield 200 to 500 gallons per minute to most wells penetrating the full thickness of alluvium in the Ohio Valley. Yields from large diameter wells installed in alluvial deposits can be expected to yield more than 1,000 gallons per minute. Water from the alluvial aquifer is typically hard, and may contain high concentrations of iron near the Ohio River valley walls.

## 2.2 Surrounding Land Use

LG&E's Cane Run Station is located in extreme western Jefferson County, Kentucky along the Ohio River, near River Mile 616.6. The site is located 8.25 miles southwest of downtown Louisville, KY and roughly 3.7 miles from the approximate center of Shively, Kentucky. The Lee's Lane Landfill Superfund Site (EPA ID: KYD980557052) is located 0.36 miles to the north.

The proposed site and immediately surrounding area occur within the zoning district designated as Enterprise Zone (EZ-1) by the Louisville Metro Government Land Use Code. EZ-1 is intended as a specialized district for the location of commercial and industrial uses with tax and/or other incentives available for companies who locate within the area. The site lies within a stretch along the Ohio River transitioning from heavy industrial use in the "Rubbertown" area to medium and light industrial and commercial users in the Jefferson Riverport industrial park. Land use in the vicinity of the proposed site conforms to the zoning designations presented on Figure 9 and is comprised of mixed industrial/commercial properties with zoning designations of M3 and EZ1. As shown in Figure 9, residential properties occur in the area surrounding the proposed NGCC electric generating unit at the following distances:

- 0.48 miles northeast (zoned R5, Single Family District);
- 0.41 miles east-southeast (zone R5 Single Family District and R5A Multifamily District);
- 0.43 miles southeast (zoned R4 Single Family District); and
- 0.4 miles south (zoned R4 Single Family District and R6 Multifamily District).

The Ohio River lies 0.45 miles west-northwest of the proposed NGCC unit. Land use in southern Indiana across the Ohio River to the west is mostly agricultural with some residences interspersed along the river. The Horseshoe Hotel and Casino is located 0.85 miles west-southwest of the site.

As noted previously, construction of an eight mile long natural gas pipeline is proposed to supply the NGCC electric generating unit. The projected route of this pipeline is mostly along existing utility right-of-way belonging to LG&E as shown on Figure 10. As shown, the pipeline crosses various zoning districts, but is almost completely contained within existing right-of-way easements for these utilities. Additional easements will be obtained as necessary for areas of the proposed pipeline construction which are outside existing utility right-of-way corridors. The completed pipeline will be below ground surface.

### **2.3 Legal Boundaries**

As shown in Figure 11, Property Boundaries, the proposed project site is located within three parcels of land currently owned by LG&E. According to information obtained from the Jefferson County Property Valuation Administrator's (PVA) Office, Parcel ID No. 101700190000, upon which LG&E's coal-fired steam electric generating station is located, is 158.47 acres zoned as EZ-1, with a Property Class of 820 – Utility Industrial. The adjacent Parcel ID No. 101700030000 is 80.34 acres with zoning and property class identical to the other parcel. The third, Parcel ID No. 101700030000, lies to the northeast of the other two parcels and is identified by the PVA as being 55.02 acres zoned as EZ-1 with a Property Class of 820 – Utility Industrial. Additional parcels owned by LG&E are located adjacent to these properties to the southwest, but will not be utilized as part of the proposed NGCC unit operations.

According to the PVA, these properties were acquired in 1951. These parcels are described in the following Deed Books and Pages:

- Parcel ID No. 101700190000 – Deed Book 2749, Page 0458
- Parcel ID No. 101700030000 – Deed Book 2750, Page 0203
- Parcel ID No. 101700290000 – Deed Book 2847, Page 0233

Complete legal descriptions of these properties are provided in Appendix B.

As noted previously, additional land acquisition may be required to satisfy setback requirements.

## 2.4 Access Control

Access to the site is currently controlled with security fencing around the perimeter of the Station site and a manned security gate controlling entry into the site. The existing access control facilities will be modified and extended as necessary to control access to this site during construction and operation of the proposed NGCC unit.

## 2.5 Location of Buildings

The proposed site layout, including existing structures, is shown in Figure 3. A conceptual site plan for the proposed NGCC unit is provided in Figure 4. These figures depict the relative locations of buildings, power transmission lines, and related structures at the site.

## 2.6 Transportation Infrastructure

As shown on Figure 12, Facility Transportation Infrastructure Map, the existing coal-fired plant and proposed NGCC unit facilities are currently served by rail and vehicular access. The facility is serviced by a Norfolk and Southern rail line which runs along the southeast portion of the property and enters the site near its southwest corner. The main rail feeds a siding up to eight tracks wide along the southwest side of the site. The facility receives an estimated 300 rail cars of coal each week.

Direct vehicular access to the facility is available from an access road along the southeast side of the property off Cane Run Road (KY1230) 600 feet east of Lower Hunters Trace. Cane Run Road can be accessed from the west via Lower Hunters Trace and Logistics Drive, and from the east via Dover Avenue. All of these roads connect to the four-lane divided Greenbelt Highway (KY1934). As noted previously, vehicular access to the existing coal-fired power plant is controlled by fencing and a manned security gate.

Greenbelt Highway (which connects to Cane Run Road north of Terry Road) is a major north-south roadway in southwest Louisville connecting to I-264 to the north and Gene Snyder Freeway (KY 841/I-265) to the south. I-264 and Gene Snyder Freeway are loop freeways in Louisville connecting to I-65, I-64, and I-71. It is anticipated that traffic associated with the proposed facility will utilize Greenbelt Highway to access the site.

According to the Kentucky Transportation Cabinet (KYTC), existing 2010 traffic on Cane Run Road east of Lower Hunters Trace is 1,100 vehicles per day with 11.7 percent trucks. Hourly peak volume was not available; therefore, based on the American Association of State Highway and Transportation Officials *A Policy on Geometric Design of Highways and Streets (2004)*, a typical factor of 15 percent of the average daily traffic (ADT) was used for this assessment. As such, the estimated peak hour volume is 165 vehicles per hour. Based on the Transportation Research Board *Highway Capacity Manual (2010)*, the typical capacity of a two-lane roadway is 3,200 vehicles per hour.

Based on the capacity of the roads (the capacity of Cane Run Road is 3,200 vehicles per hour for two-way traffic, and 2,700 vehicles per hour for one-way traffic) used to access the site and the anticipated increase in traffic during the construction period for the NGCC unit (yielding peak traffic volumes of 205 vehicles per hour for two-way traffic and 123 vehicles per hour for one-way traffic), it is concluded that existing roads will adequately accommodate both construction and plant traffic. Following completion of construction and attainment of commercialization for the NGCC unit, traffic volumes will diminish to levels below those associated with the current coal-fired facility. Additional analysis of traffic conditions is provided in Section 6.0 of this document.

## 2.7 Utilities

To the extent practicable, the proposed project will utilize existing utilities for its operations. With the exception of minor rerouting and establishment of new connections, the following existing utilities will be utilized by the proposed NGCC unit:

- Potable water supply from the Louisville Water Company;
- Raw process water supply from Ohio River via existing intake structure (screen house);
- Process wastewater to be discharged via existing facility outfalls permitted under KPDES permit;
- Telephone service; and
- Electrical service.

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The proposed NGCC unit will require a new sanitary sewer connection to handle non-process wastewater flows. The new facility will connect to the MSD sanitary sewer main located along the south side of Cane Run Road. Note that during construction it will be the contractor's responsibility to provide its own potable and construction water as well as sewage treatment and treated water discharge. It is anticipated that contractors will be able to source most of these services from the existing facility.

## **2.8 Compliance with Setback Requirements**

The proposed facility will utilize two 180 feet high stacks for Heat Recovery Steam Generator (HRSG) exhaust emissions. As shown in Figure 13, Setback Radii Map, in accordance with the setback requirements described in KRS 278.704, both stacks are located more than 1,000 feet from the nearest property boundary and more than 2,000 feet from the nearest residential property boundary.

A single 40 foot high stack will be used to exhaust the Auxiliary Boiler. As shown in Figure 13, the required setback radii requirements will also be met for this stack, assuming the planned land acquisition is completed.

No additional setback requirements are identified for the proposed project.

## 3.0 SCENIC COMPATIBILITY

### 3.1 Introduction

A scenic compatibility evaluation is required under KRS 278.708 (3)(b). The purpose of this section is to describe the methodology used and to provide an evaluation of the compatibility of the proposed facility with the scenic surroundings as required.

The scenic compatibility assessment evaluates potential visual impacts associated with the proposed NGCC unit on adjacent environments used by local citizens and visitors. The following sections describe the current visual setting based on existing structures at the LG&E Cane Run site, local terrain, and surrounding environmental features and evaluate potential effects on scenic compatibility associated with the proposed NGCC unit structures.

#### 3.1.1 Project Description

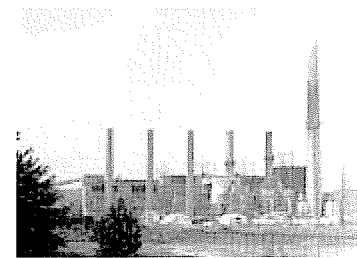
As previously discussed, LG&E proposes to build a 731 MW winter net NGCC electric generating unit to be located at the LG&E site at 5252 Cane Run Road in southwestern Louisville, Jefferson County, Kentucky, as shown in Figure 14, Project Location Map.

The proposed site for the NGCC unit is a 510 acre location on the Ohio River at LG&E's existing Cane Run power plant location. An existing coal-fired plant covers the western portion of the site and is adjacent to the Ohio River. The new NGCC unit will be located on the existing property and will not increase the land area of the site. It is proposed to be located on the eastern portion of the 510 acre LG&E site. See Figure 3, Site Map.

#### 3.1.2 Key Existing Structural Features

The existing LG&E Plant site is located on a 510 acre site along the Ohio River in Southwestern Louisville, Kentucky. The power plant is located at an elevation of 450 feet msl.

The existing coal-fired plant uses roughly 20 acres of the site adjacent to the Ohio River. Three of its six units are now retired. Active units 4, 5 and 6 have a net generating capacity of 563 MW. The plant burns roughly 1.6 million tons of coal per year, all of which is transported by rail. An on-site landfill stores coal combustion residues (CCR) and related materials from ash, lime and scrubber by-products from the existing utility plant. LG&E will maintain the existing ash ponds and/or landfill operations for CCR, although the new plant will not be producing these wastes.



Existing Coal-fired Facility

The tallest and visually dominant existing structures on the site are the existing unit's six stacks. The top of stack elevation for the plant's existing stacks 1 through 5 is 700 feet msl; with the base of these units at an elevation of roughly 461 feet msl (total height of each stack is 239 feet). The stack 6 height is 500 feet, corresponding to a top of stack elevation of 960 feet msl. The height of the other power plant buildings massed on site ranges between 120 to 150 feet depending on location with top elevations ranging from of 520 to 550 feet msl. The screen house is around 45 ft high with a top elevation of 508 feet msl.

In addition to the existing power plant and its stacks are the railroad tracks, coal storage, electric power transmission stacks and lines, fly ash material storage, site roads and parking, administrative buildings, material handling equipment, equipment buildings and storage ponds.

### 3.1.3 Proposed Modifications to the Site

The proposed NGCC unit is located to the east of the existing coal-fired plant site and is proposed not to extend above the existing structures. The NGCC unit's major facilities for the visual assessment include:

- combustion turbines,
- two HRSGs,
- two HRSG exhaust stacks – 180 feet tall and 20 feet in diameter,
- 10 cooling tower cells – 58 feet tall and 32 feet in diameter.
- one auxiliary boiler with stack – 40 feet tall and 42 inches in diameter

The conceptual site layout plan shows the location and layout of the proposed unit, the existing plant, the relocated electric power transmission towers and lines, the entrance drive changes, and a potential Phase I landfill that may be necessary to store CCR.

Other peripheral and lower in height structures include:

- Combustion Turbines
- Heat Recovery Steam Generators
- Steam Turbine Building
- Electrical Equipment Building
- Administration / Control Building
- Boiler Feed Pump
- Heat Recovery Steam Generator Elevator
- Water Treatment Building
- Gas Handling Equipment
- Auxiliary Boiler Building
- Emergency Diesel Generator
- Service Water Tank
- Demineralized Water Storage Tank
- Hydrogen Storage Area
- Heat Recovery Steam Generator Power Distribution Center
- Generator Step-Up Transformers
- Unit Auxiliary Transformer
- Continuous Emissions Monitoring Shelter Enclosure
- Switchyard Control Building

For the purposes of this visual assessment the HRSG exhaust stacks and the cooling stack are the dominant structures to be assessed. The existing stacks will not be in use after the proposed NGCC unit attains commercialization. The railroad tracks will be used significantly less. The existing electric power transmission towers and lines will be relocated roughly 300 feet to the south of their current position. An eight mile gas pipeline, all underground, will be built to supply the proposed facility. The only above ground structures associated with the gas line will be the metering stations located near the NGCC unit structure and along Penile Road.

### **3.1.4 Local Roadways and Land Use**

Cane Run Road is a two lane, non-divided highway and provides direct access to the site. Traffic access to Cane Run Road is via Greenbelt Highway, a primary divided state highway. Surrounding the Cane Run site to the north is roughly one-half mile of vegetation including a bicycle trail and Riverview Garden subdivision further to the north. The area to the east is residential, with the closest residential properties to the site to the south on Cane Run Road, Bossier Lane and Arid Lane. Further south the predominant land use is residential and industrial (Jefferson Riverport Industrial Park). The Ohio River lies west of the site and a hotel and

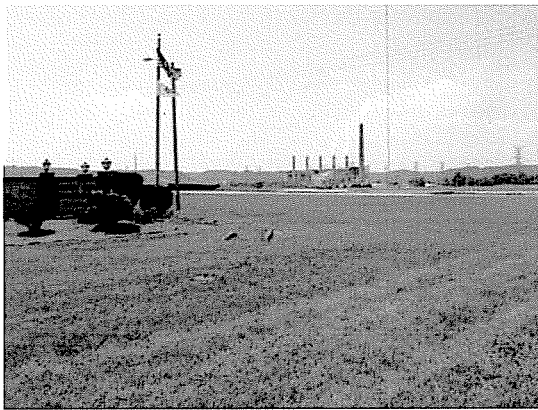


gambling casino is located across the river within site of the existing stacks. A more detailed description of the roadways and land can be found in Section 6 of this report.

### 3.1.5 Surrounding Terrain

The surrounding terrain and landscape on the Kentucky side of the Ohio River to the northeast, east and south of the Cane Run Site is rolling but level. Significant elevation change does not occur until three and half miles to the east.

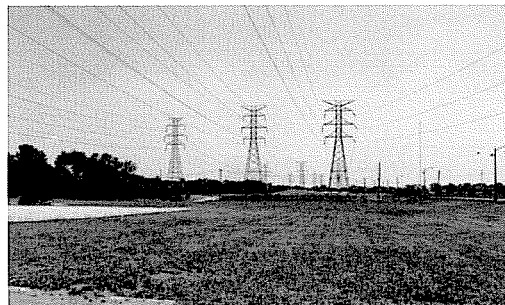
Across the Ohio River there is significant elevation change almost immediately adjacent to the water’s edge along a bluff covered by deciduous forest. See Figure 15 – USGS 2001 Land Cover and Figure 16 - Elevation Mapping.



View of Existing Plant from Cane Run Road



Exiting Plant from employee parking lot



Picture looking east to proposed plant site taken from existing employee parking lot.  
Towers and lines are proposed to be moved approximately 300 feet south.

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## 3.2 Visual Assessment Methods

This assessment uses established methods derived from various Federal agency methodologies. The process to assess the visual impacts was developed for the size and complexity of this site area topography and the proposed site modifications of this project. The Kentucky Revised Statutes do not recommend a specific methodology.

The visual assessment was conducted to determine if the proposed action would:

- be seen from critical scenic locations or views
- have any negative impacts to the existing view shed
- create any compromises or improvements to the surrounding environment
- lessen the intrinsic values of the surrounding landscape.

The methods used in the visual impact analysis included:

- development of a terrain model of visible areas
- selection of key observation points and line of sight profiles
- visual impact assessment
- key assumptions

### 3.2.1 Terrain Model and Land Cover

A terrain model was developed to show areas from which the stacks were visible. A study area limited to a ten mile radius was chosen because it covered to the Louisville downtown, the other developed areas to the east of Louisville, an extensive length of the Ohio River area and the adjacent Indiana area.

Ten miles is the visibility limit used at airports for weather condition reporting. This was also a contributing factor supporting its use in Visual Impact surveys.

Elevation data were downloaded from the USGS National Elevation Dataset (Figure 16). The USGS utilizes contours from a 1:24,000 topographic map as a base for the digital terrain raster and includes new data as it become available. A digital raster dataset is a grid of pixels used to store data values (elevation, land cover). The raster file used in this study was a combination of a 10 meter elevation grid for the Louisville area and a 30 meter grid for non-urban areas. The elevation grid was merged with a USGS (2006) 30 meter land cover raster (Figure 15) to account for the effects of vegetation on the view shed. It was assumed that forested tree canopy had a 50 foot height, high density urban development had a 30 foot height, and mid to low density urban

development had a 20 foot height. A simulated visibility map of the proposed stacks was generated based on the merged elevation-land cover file. The locations of historic properties available from the National Park Service record were also added to the data set.

The majority of the 10 mile study area was determined to be intermittently visible or not visible (Figure 17 - Visible Areas within 10 miles of Proposed Stack Location and Sheet Index). More detailed views of the visibility results as well as locations of historic properties can be found on the eighteen enlarged maps contained in Appendix C. The summary of historic property names and addresses following the figures correspond to the locations shown on the maps.

Based on the terrain modeling and visibility mapping, site visits of the area, key observation points (KOP) were chosen to develop Line-of-Sight profiles. The KOP locations, shown on Figure 18 were selected from the area to assess the visual impacts of the project. Typical population areas, transportation routes, vicinity and visibility to site and sensitive environment within the area were selected as KOPs to be reviewed for impacts due to the project.

### **3.2.2 Line-of-Site Profiles**

The terrain model was used to develop straight line profiles between the project and the KOPs. A line of sight to the proposed project stacks was superimposed above a topographic profile line. Any obstruction of the line-of-sight would show the lack of visibility to the site from the KOP and thus negate visual impacts. The elevation of the proposed HRSG exhaust stacks was used for the line-of sight-profiles. These structures were used because they will be the tallest structure of the proposed NGCC unit.

An existing vegetation profile at an assumed height of 50 feet was shown above the terrain profile. Vegetation and structures, depending on their location, may visually obstruct the KOP from the project. However the line-of sight profiles were taken in areas where trees or structures do not obscure the site of the project stacks. Photographs from some of KOPs were taken in the direction of the existing project for use in assessing existing visual conditions and for project related visual impacts.

### **3.2.3 Visual Impact Assessment Methodology**

The size and viewer's awareness of the visual impact and degree of contrast was considered at each KOP. Modifications in the landscape which repeat the landscapes basic elements of form, line, color, and texture are said to be in harmony with their surroundings. Modifications that do not harmonize often look out of place and are said to contrast in unpleasing ways. This understanding underpins the US Bureau of Land Management's (BLM) visual assessment tools

for determining the degree of contrast and rating of visual impacts. The following general criteria and factors were used when rating the degree of contrast:

<u>Degree of Contrast</u>	<u>Criteria</u>
None	The element contrast is not visible or perceived.
Weak	The element contrast can be seen but does not attract attention
Moderate	The element contrast begins to attract attention and begins to dominate the characteristic landscape
Strong	The element contrast demands attention, will not be overlooked, and is dominant in the landscape.

Factors to be considered when applying the criteria:

- Distance - The contrast created by a project usually is less as viewing distance increases.
- Angle of Observation - The apparent size of a project is directly related to the angle between the viewer's line-of-sight and the slope upon which the project is to take place. As this angle nears 90 degrees (vertical and horizontal), the maximum area is viewable.
- Length of Time the Project is in View - If the viewer has only a brief glimpse of the project, the contrast may not be of great concern. If, however, the project is subject to view for a long period, as from an overlook, the contrast may be very significant.
- Relative Size or Scale - The contrast created by the project is directly related to its size and scale as compared to the surroundings in which it is placed
- Season of Use - Contrast ratings should consider the physical conditions that exist during the heaviest or most critical visitor use season, such as snow cover and tree defoliation during the winter, leaf color in the fall, and lush vegetation and flowering in the spring.
- Light Conditions - The amount of contrast can be substantially affected by light conditions. The direction and angle of lighting can affect color intensity, reflection, shadow, form, texture, and many other visual aspects of the landscape. Light conditions during heavy viewing periods must be a consideration in contrast ratings.
- Recovery Time - The amount of time required for successful revegetation should be considered. Few projects meet the Visual Resource Management (VRM) objectives during construction activities. Recovery usually takes several years and goes through several phases (e.g., bare ground to grasses, to shrubs, to trees, etc.). It may be necessary to conduct contrast ratings for each of the phases that extend over long time periods. Those conducting contrast rating should verify the probability and timing of vegetative recovery.
- Spatial Relationships - The spatial relationship within a landscape is a major factor in determining the degree of contrast

- Atmospheric Conditions - The visibility of projects due to atmospheric conditions such as air pollution or natural haze should be considered.
- Motion - Movement such as waterfalls, vehicles, or plumes draw attention to a project.

#### General Guidance for Assessing Contrast:

- Form - Contrast in form results from changes in the shape and mass of landforms or structures. The degree of change depends on how dissimilar the introduced forms are to those continuing to exist in the landscape.
- Line - Contrasts in line results from changes in edge types and interruption or introduction of edges, bands, and silhouette lines. New lines may differ in their sub-elements (boldness, complexity, and orientation) from existing lines.
- Color - Changes in value and hue tend to create the greatest contrast. Other factors such as chroma, reflectivity, color temperature, also increase the contrast.
- Texture - Noticeable contrast in texture usually stems from differences in the grain, density, and internal contrast. Other factors such as irregularity and directional patterns of texture may affect the rating.

*[Source: United States Department of Interior, Bureau of Land Management, Visual Resource Management Manual 8431, Section II Steps in the Contrast Rating Process.]*

### **3.2.4 Key Assumptions**

For the purpose of this assessment, the following key assumptions were made in the process of assessing the visual impacts of the project:

- The new HRGS exhaust stacks and cooling towers, although shorter than the existing plants stacks, were the dominant feature and most visible feature of the project.
- The other facilities of the site were all shorter in height on average and blended in with the existing power plant.
- Any additional lighting on the new unit would be of the same nature as the existing plant. Only warning or caution lights and other lights deemed necessary for safety will remain when the proposed NGCC unit attains commercialization.
- It is assumed that the existing plant has a neutral effect and is a part of the existing landscape.
- Forested vegetation is almost nonexistent within the boundaries of the proposed NGCC unit.

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### 3.3 Visual Impact Assessment Results

#### 3.3.1 Line of Site Profiles

Representative KOPs that could be potentially impacted by the project were selected for an assessment review. The KOPS represented a radial view shed from the proposed project site (See Figure 18 – Line of Sight Profile Locations). Line of Sight profiles were developed for the following locations and are provided in Appendix C;

- The view directly across the Ohio River from the Horseshoe Casino Southern Indiana to the LG&E existing plant site
- The Greenwood/Westbrook Intersection from suburban site an estimated 2.5 miles south of the site
- The hilltop location in Iroquois Park, a major park in Louisville’s Park system designed by Frederick Olmstead which is six miles east of the site
- The parking area for the Churchill Downs Facility

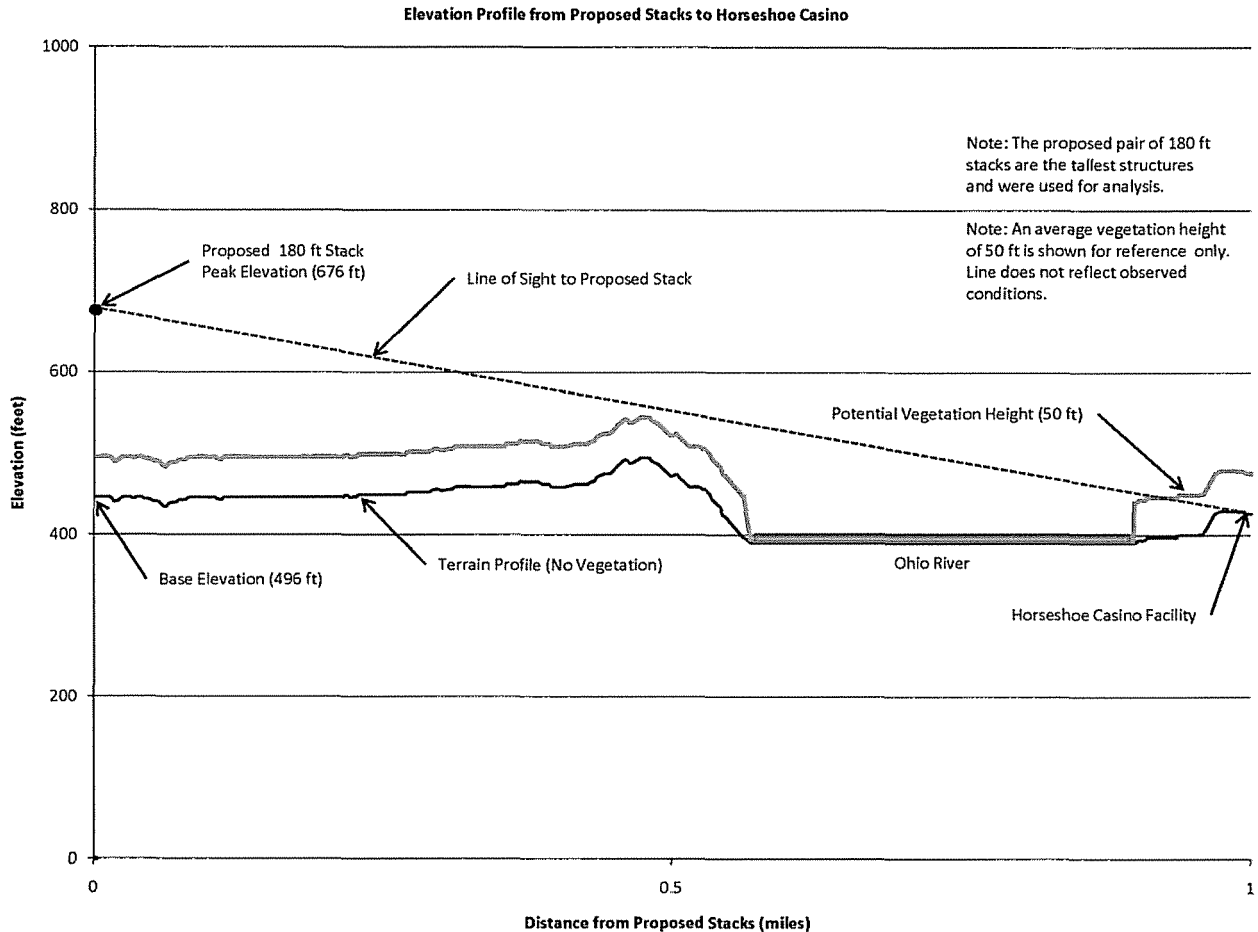
No profile was developed for the near north side Riverside Garden area because of tree cover negating any view of the site.

#### 3.3.2 Key Observation Points Assessments

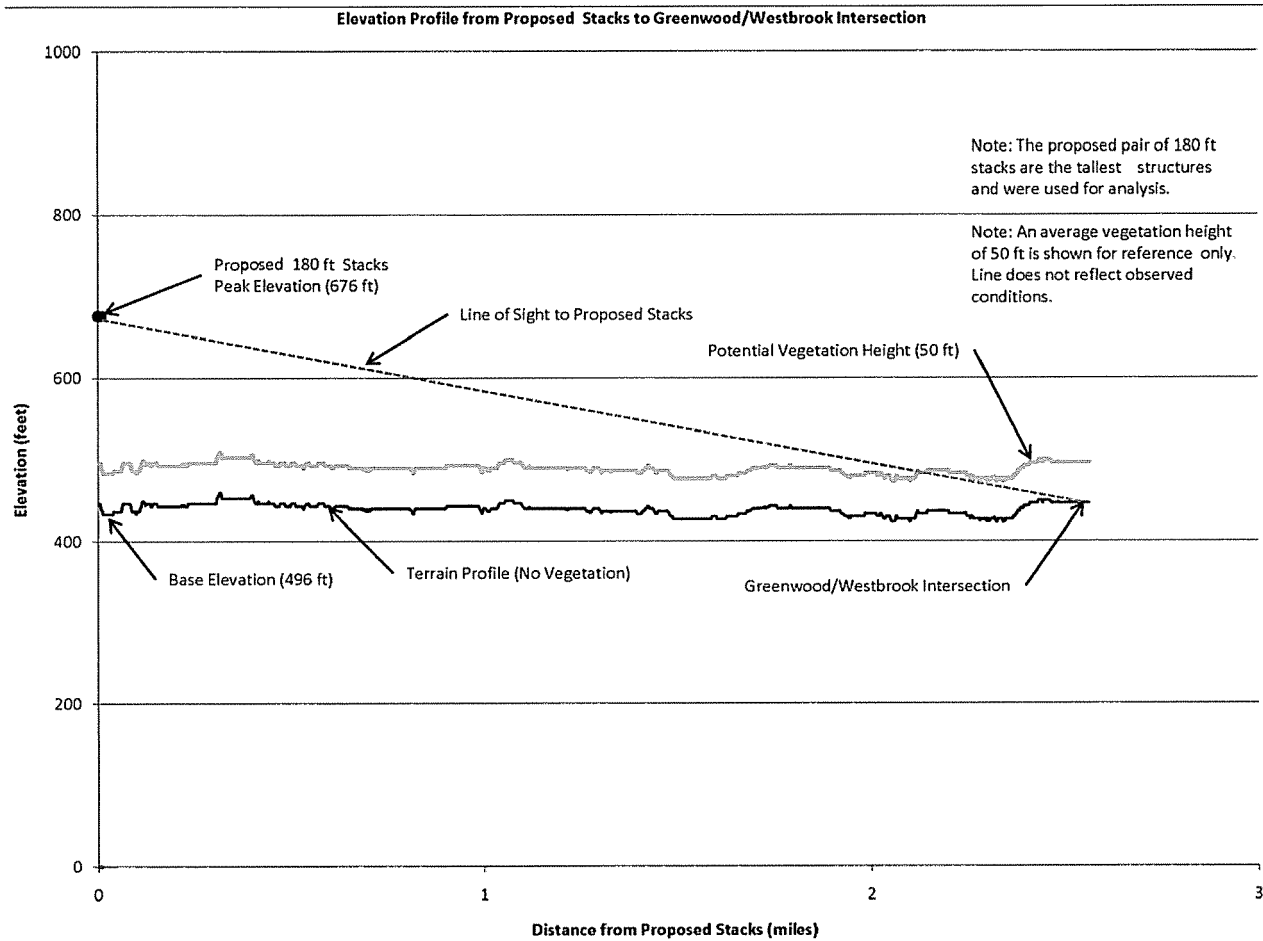
The following paragraphs describe the visual effects of the project at each of the KOPs and assign a degree of contrast rating.

**Horseshoe Casino Southern Indiana less than one mile west of project at 11999 Casino Drive, SE, Elizabeth, Indiana.** The complex is located on the Ohio River within a mile of the existing LG&E Cane Run power plant at the Harrison County, Indiana line. This is the closest gambling location to Louisville and the large Southern Indiana cities because casino gambling is not allowed in neighboring Floyd County, Indiana. The complex includes the four-deck riverboat which houses the gaming area. Other amenities include a 500 room hotel, a pavilion, seven restaurants and a showroom, two parking decks, and a golf course. There is a thin line of vegetation on both sides of the river. Partial views of the existing power plant do occur. The NGCC unit will be obstructed from view with the exception of the tops of the exhaust stacks and the cooling towers that are mostly hidden by the existing plant. The existing plant has a strong

contrast rating to the Horseshoe Casino however it is part of the existing landscape. The element contrast rating is weak because it blends in with the existing plant. **Contrast Rating – “Weak”.**



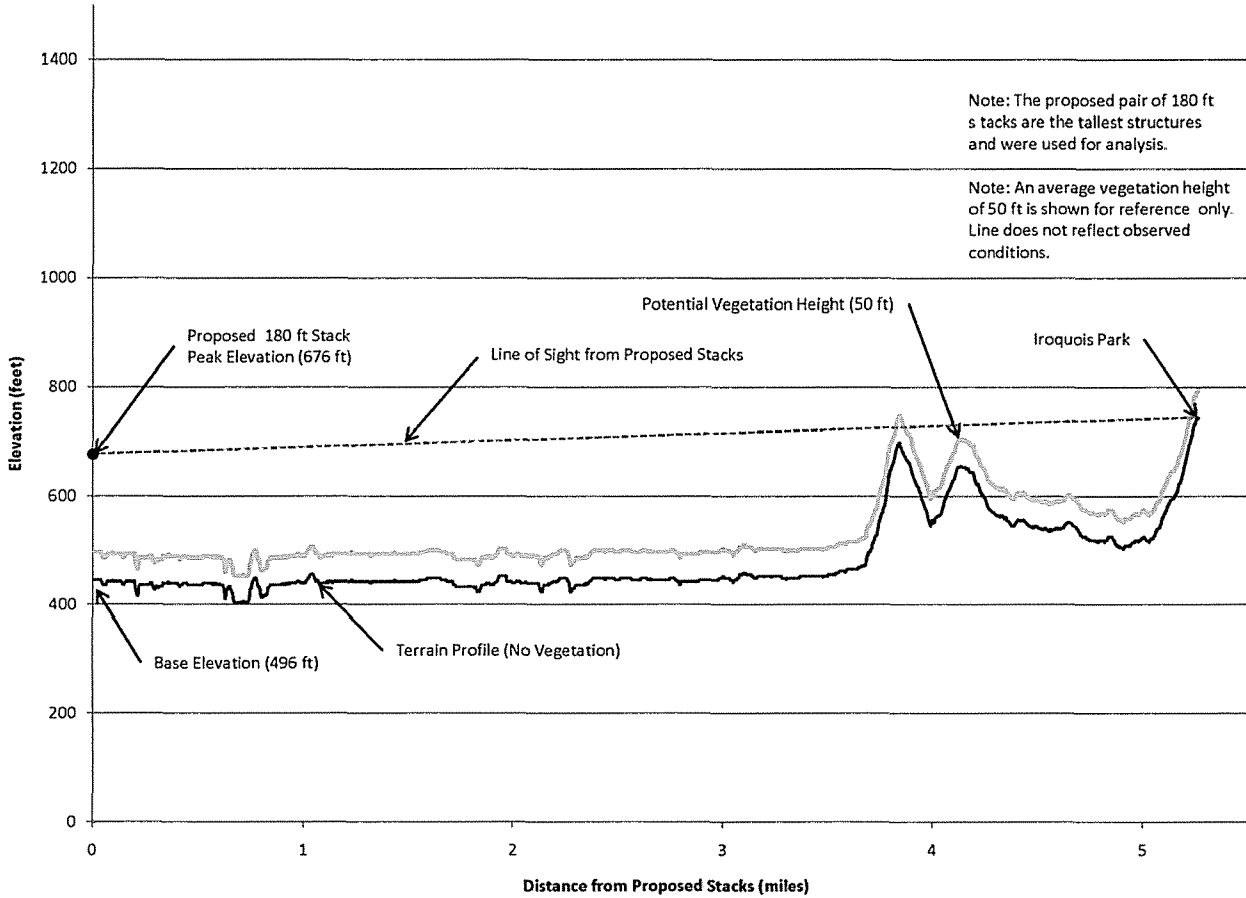
**Residential Community, Greenwood/Westbrook Intersection located three miles south of the project.** The intersection of Greenwood and Westbrook intersection is in a residential area off of Route 1934 Greenbelt Highway. The highway is a north south running four lane roadway that has numerous locations for viewing the project facilities. The residential structures, vegetation and utility poles compete strongly for dominance with what will be the tops of the exhaust stacks and cooling towers. Only the tallest existing stack is in view at this location. **Contrast Rating – “Weak”.**



**Iroquois Park located five miles east of the project.** Iroquois Park is a 739 acre municipal park located five miles east of the project site in the southern area of Louisville. It was designed by Frederick Law Olmsted, who also designed a number of the city’s park and parkway system. Located south of downtown, Iroquois Park is built on a large knob covered with old growth forest, and its most prominent features are the scenic viewpoints atop the hill. The summit of Iroquois Park presents an all-at-once vista of the city of Louisville, as seen from the south. Depending on tree clearances from the scenic viewpoints, the project site may be obscured for part of the year. Distant views of other “utility” facilities are part of the view shed. Only the top of the existing Cane Run facility can currently be seen. Only the tops of the proposed NGCC unit exhaust stacks and cooling towers would be seen from Iroquois Park, and these will have the existing power plant as a background. **Contrast Rating – “Weak”.**

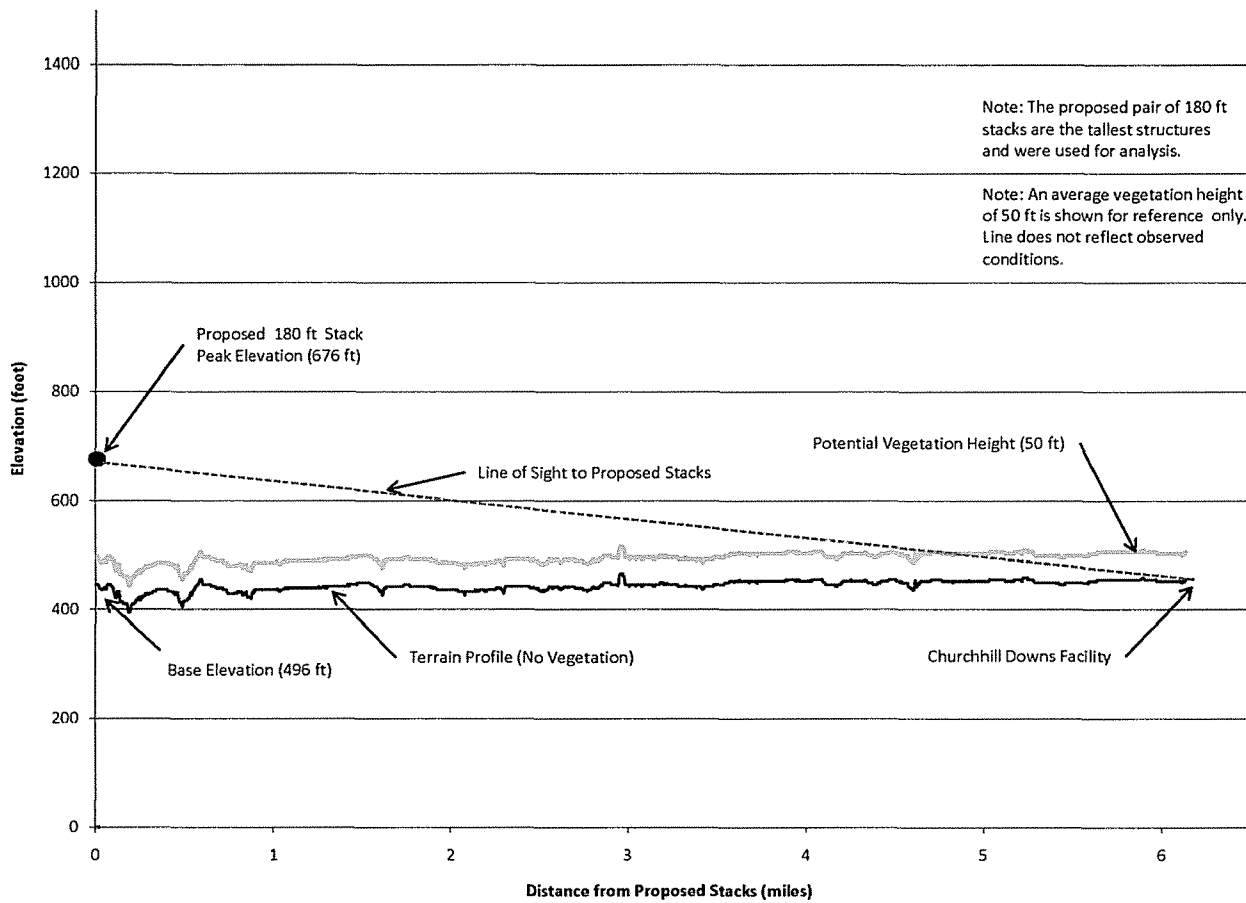


Elevation Profile from Proposed Stacks to Iroquois Park



**Churchill Downs Facilities located six miles northeast of project.** Churchill Downs, located on Central Avenue in south Louisville, Kentucky is a Thoroughbred racetrack most famous for hosting the Kentucky Derby annually. The twin spires atop the grandstands are the most recognizable architectural feature of Churchill Downs and are used as a symbol of the track and the Derby. Churchill Downs covers 147 acres. Attendance at Churchill Downs has reached over 150,000 on Derby day. Seating at Churchill Downs faces to the southeast, away from LG&E’s proposed NGCC unit. Given the elevation and angle of the seating in the stands, if one looked to the west, the tops of the existing plant’s stacks would be visible but not dominant in the skyline. **Contrast Rating – Weak”.**

Elevation Profile from Proposed Stacks to Churchill Downs



### 3.3.3 Visual Impact Assessment Summary

The analyses conducted as part of the visual assessment indicated that the scenic quality of the area will not be compromised because of the project. The conclusion is based on the following factors:

- The existing plant structures are an accepted part of the landscape and the addition of the proposed NGCC unit will not be perceived as a significant visual change. With the addition of the NGCC unit the characteristics of the view of the facilities will not change.
- In many cases, the exposure to a view of the proposed NGCC unit will be brief.
- The distant views will likely be obstructed due to physical or atmospheric conditions.
- The line of-sight profiles and photographs illustrate minimal to no difference in visual impact due to the proposed NGCC unit. The proposed NGCC unit is obstructed by vegetation landscapes and CCR landfills from various baseline points of scenic reference close to the site.

### 3.4 Mitigation

The analyses conducted as part of the visual assessment indicated that the scenic qualities of the area will not be compromised because of the addition of the NGCC unit. Consequently, no mitigation regarding visual impacts is required or proposed.

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## 4.0 PROPERTY VALUE ASSESSMENT

Pursuant to KRS 278.708 (3)(c), this section of the Site Assessment Report provides an evaluation of the potential changes in property values resulting from the siting, construction, and operation of the proposed facility for property owners adjacent to the facility. The criteria typically employed in evaluating potential effects on property values for similar projects include assessment of land use compatibility and findings from empirical comparison of property values.

### 4.1 Land Use Compatibility

As previously discussed and shown in Figure 9, Land Use and Zoning Map, the proposed site and immediately surrounding area occurs within the zoning district designated as EZ-1 by the Louisville Metro Government Land Use Code. Although public utility service facilities operating under the jurisdiction of the Public Services Commission are exempted from jurisdiction of local planning bodies pursuant to KRS 100.324, the zoning designation of EZ-1 is compatible with operations associated with the proposed NGCC unit. That is to say, EZ-1 is intended as a specialized district for the location of commercial and industrial uses. A Property Details Report obtained on-line from the Jefferson County PVA identifies the parcels containing the proposed project as Property Class 820 - Utility Industrial.

The site lies within a stretch along the Ohio River transitioning from heavy industrial use in the Rubbertown area to medium and light industrial and commercial users in the Jefferson Riverport industrial park.

The area to the northeast, referred to as Rubbertown, has been used by industrial facilities since 1918, and is currently home to several large chemical plants, including:

- Michelin
- ATOFINA Chemicals Inc.
- Borden Chemical, Inc
- Carbide Industries LLC
- E. I. du Pont de Nemours and Company
- Noveon, Inc
- OxyVinyls, LP
- PolyOne
- Dow Chemicals
- Zeon Chemicals LP

The Lees Lane Landfill Superfund site lies in an area along the Ohio River between Rubbertown and LG&E's Cane Run Station. According to the USEPA, the 112 acre landfill site has been substantially remediated and was removed from the National Priorities List in 1996. On July 16, 1991, the EPA issued an Administrative Order of Consent under which MSD agreed to perform operations and maintenance activities at the site for 29 years with oversight from the Commonwealth of Kentucky.

As previously noted, the property containing the proposed NGCC unit is currently the site of an existing coal-fired steam electric generating station and related facilities which started commercial operation in 1954. Adjacent properties southwest of the coal-fire steam electric generating station area are operated by LG&E for management and disposal of coal combustion wastes.

Companies located to the southwest in the Riverport industrial park include over 100 facilities. These companies are engaged in light to medium industrial manufacturing such as plastics molding and fabrication; steel processing; manufacturing liquid filtration systems and specialty pipe; acrylic resin and polymer emulsion production; stamping and assembly; manufacturing custom fiberglass products; clothing manufacturing; steel stamping and slitting; tool and die manufacturing/repair; design, production and installation of fiber optic cable support systems. The Riverport also contains a variety of distribution-related activities, including nine national distribution centers.

Land use in the vicinity of the proposed site conforms to the zoning designations comprised of mixed industrial/commercial properties with zoning designations of M3 and EZ1. Residential properties occur in the area surrounding the proposed NGCC unit at distances greater than 0.4 miles.

Based on the site zoning designation and surrounding land use and the historical use of the property for power generation, it is clear that the site property is compatible with the proposed NGCC unit operations.

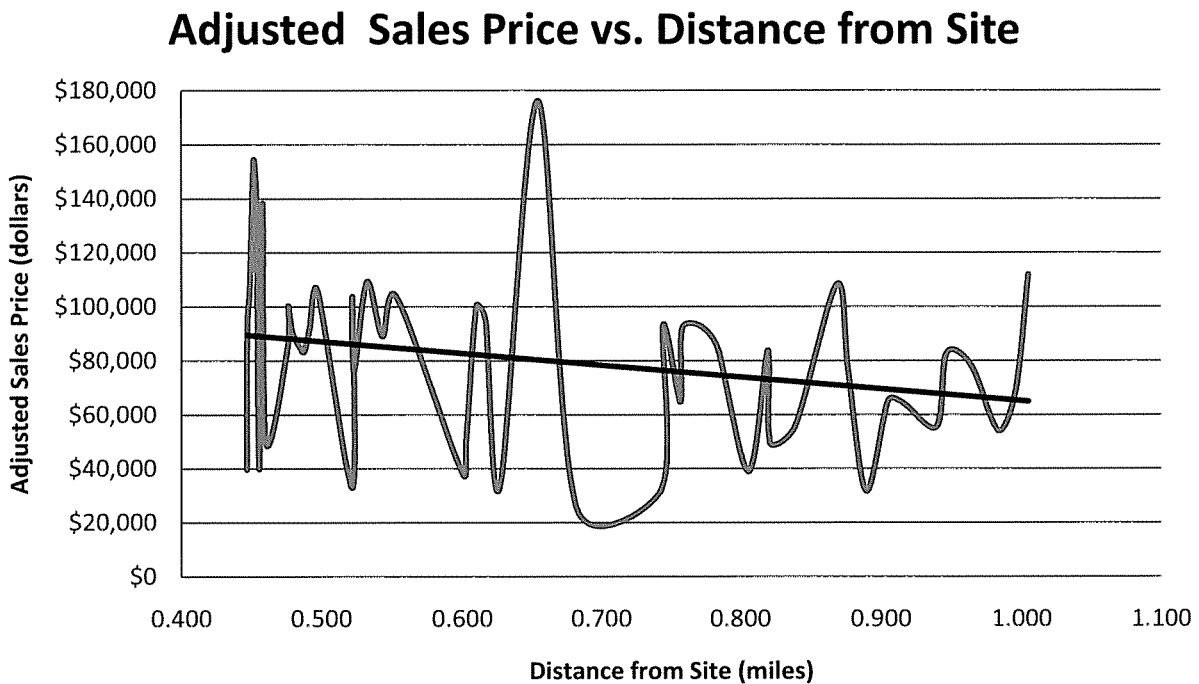
## 4.2 Property Value Assessment

This section evaluates the potential for change in property values as a result of construction and operation of the NGCC unit. The approach utilized was developed based on readily available information obtained from the Jefferson County PVA regarding assessment and sales values for properties in the vicinity of the NGCC unit.



Chart 4.2 displays a plot of the time adjusted sales value of each property versus its distance from the proposed NGCC unit. The trend line developed from linear regression shown on this chart indicates diminishing time adjusted sales value with distance from the site.

**Chart 4.2 – Adjusted Sales Price vs. Distance from Site**



### 4.3 Property Value Assessment Findings

AMEC E & I, Inc. (AMEC) worked with a local real estate appraisal firm, Tamplin & Co., in reviewing the above information and developing findings regarding property value impacts. Tamplin & Co. are familiar with the proposed NGCC unit and surrounding area and have completed similar studies in the area of LG&E’s Mill Creek Station.

Considering that the proposed NGCC unit is being located on an existing power plant site, it is completely compatible with the current land use at the site. Furthermore, based on observation of the site and surrounding properties in conjunction with review of the land use and zoning designations for the area, the proposed NGCC unit is compatible with surrounding land use.

Given the highly mixed nature of land uses in the area of the site and the presence of some properties with probable negative influences on surrounding property value (e.g., Lee’s Lane

Landfill Superfund Site, industrial developments within Rubbertown, etc.) it is difficult to discretely evaluate the influence of a single facility. However, considering that the existing coal-fired plant began operation in the mid-1950s and that a significant amount of the surrounding development has occurred within that time frame, it does not appear that there have been any negative impacts on property values in the area.

In addition, analysis of property values based on both assessment and sales data indicate a trend of decreased value with distance from the site in the surrounding area. Thus, there is no empirical evidence suggesting that the existing facility has been detrimental to nearby property values.

Considering that the existing coal-fired facility will not be operated after commercialization of the proposed NGCC unit, significant improvements over conditions related to the existing facility will be realized, including:

- reduction in air emissions,
- reduction (to near elimination) in rail traffic shipments to the site,
- reduction in landfill operations, and
- a smaller footprint and lower profile for the power station facility.

Considering that the existing coal-fired steam electric generating plant has not negatively impacted area property values, it is reasonable to conclude that the proposed NGCC unit with the above improvements will not have a negative impact on local property values.

#### **4.4 High-Pressure Natural Gas Line**

As noted in Section 2.0, an eight mile long high-pressure gas line is being constructed to supply the proposed NGCC unit. To the extent practicable, the proposed gas line is to be constructed within existing gas line and/or overhead power transmission line easements. Roughly 900 feet of additional easements will be obtained as necessary for areas of the proposed pipeline construction which is outside existing utility right-of-way corridors. In addition, a one acre area is to be acquired for a measuring station along Penile Road immediately adjacent to the existing measuring station as shown on Figure 10. Property owners from which easements are obtained will be appropriately compensated for rights to construct the high-pressure gas line. There are no impacts on property values identified for installation and operation of the high-pressure natural gas pipeline.



## 5.0 NOISE ASSESSMENT

This section provides an assessment of potential impacts due to noise emissions from the proposed NGCC unit. The section contains a brief overview of acoustics, a description of the existing acoustical environment based on monitoring, an estimate of proposed NGCC unit noise emissions during construction and operation, an assessment of potential impact, and discussion of mitigative measures.

LG&E commissioned two noise monitoring studies encompassing the existing Cane Run Generating Station facility and surrounding area. These studies were conducted by two independent firms, Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) and REM Safety Consulting Inc. (REM). These firms produced the following reports, copies of which are provided in Appendices D and E, respectively:

- ***Ambient Sound Level Survey for the Cane Run Generating Station. Burns & McDonnell Engineering Company, Inc., Kansas City, Missouri Project No. 59211 (December 2010)***
- ***Community Noise Monitoring Report, Louisville Gas and Electric Company Cane Run Generating Station, Louisville, Kentucky, REM Safety Consulting Inc., Sand Springs, Oklahoma (June 2010)***

### 5.1 Acoustical Terminology

Environmental sound levels are quantified by a variety of parameters and metrics. This section, excerpted from the report ***Ambient Sound Level Survey for the Cane Run Generating Station. Burns & McDonnell Engineering Company, Inc., Kansas City, Missouri Project No. 59211 (December 2010)***, introduces general concepts and terminology related to acoustics and environmental noise.

The term “sound” is often used to describe two different sound characteristics called sound power and sound pressure. Every source that produces sound has a sound power level ( $L_w$ ). The sound power level is the acoustical energy emitted by a sound source and is an absolute number that is not affected by the environment. The acoustical energy produced by a source propagates with air pressure fluctuations. These pressure fluctuations, also called sound pressure ( $L_p$ ), are what human ears hear and microphones measure. Sound energy is physically characterized by amplitude and frequency. Sound amplitude is measured in decibels (dB) as the logarithmic ratio of a sound pressure to a reference sound pressure (20 MicroPascals). The reference sound pressure corresponds to the typical threshold of human hearing. A 3 dB change in a continuous broadband sound is generally considered “just barely perceptible” to the average listener. A 6 dB change is generally considered “clearly noticeable,” and a 10 dB change is generally considered a doubling (or halving) of the apparent loudness. Frequency is measured in hertz (Hz), which is the number of cycles per second. The typical human ear can hear frequencies ranging from

approximately 20 to 20,000 Hz. Normally, the human ear is most sensitive to sounds in the middle frequencies (1,000 to 8,000 Hz) and is less sensitive to sounds in the low and high frequencies.

As such, the A-weighting scale was developed to simulate the frequency response of the human ear to sounds at typical environmental levels. The A-weighting scale emphasizes sounds in the middle frequencies and de-emphasizes sounds in the low and high frequencies. Any sound level to which the A-weighting scale has been applied is expressed in A-weighted decibels, or dBA. For reference, the A-weighted sound pressure level and subjective loudness associated with some common noise sources are tabulated below.

### Typical Sound Pressure Levels Associated with Common Noise Sources

Sound Pressure Level (dBA)	Subjective Evaluation	Environment	
		Outdoor	Indoor
140	Deafening	Jet aircraft at 75 ft	
130	Threshold of pain	Jet aircraft during takeoff at a distance of 300 ft	
120	Threshold of feeling	Elevated Train	Hard rock band
110		Jet flyover at 1,000 ft	Inside propeller plane
100	Very Loud	Power mower, motorcycle at 25 ft, auto horn at 10 ft, crowd noise at football game	
90		Propeller plane flyover at 1,000 ft, noisy urban street	Full symphony or band, food blender, noisy factory
80	Moderately Loud	Diesel truck (40 mph) at 50 ft	Inside auto at high speed, garbage disposal, dishwasher
70	Loud	B-757 cabin during flight	Close conversation, vacuum cleaner, electric typewriter
60	Moderate	Air-conditioner condenser at 15 ft, near highway traffic	General office
50	Quiet		Private office
40		Farm field with light breeze, birdcalls	Soft stereo music in residence
30	Very Quiet	Quiet residential neighborhood	Bedroom, average residence (without TV and stereo)
20		Rustling leaves	Quiet theater, whisper
10	Just Audible		Human breathing
0	Threshold of hearing		

*Source: Adapted from Architectural Acoustics, M. David Egan, 1988 and Architectural Graphic Standards, Ramsey and Sleeper, 1994*

Sound in the environment is constantly fluctuating. Examples of this include a passing car, a barking dog, or a plane flying overhead. Therefore, sound metrics have been developed to numerically describe fluctuating environmental sound levels. These metrics include the exceedance sound levels.

The exceedance sound level,  $L_x$ , is the sound level exceeded “x” percent of the sampling period and is referred to as a statistical sound level. The most common  $L_x$  values are  $L_{eq}$ ,  $L_{90}$ ,  $L_{50}$ , and  $L_{10}$ . The  $L_{90}$  is the sound level exceeded 90 percent of the sampling period. The  $L_{90}$  represents the sound level without the influence of loud, transient sound sources and is often referred to as the residual or background sound level. The  $L_{50}$  is the sound level exceeded 50 percent of the sampling period. The  $L_{10}$  represents the occasional louder sounds and is often referred to as the intrusive sound level. The variation between the  $L_{90}$ ,  $L_{50}$ , and  $L_{10}$  sound levels can provide an indication of the variability of the acoustical environment. If the acoustical environment is perfectly steady, all values are identical. A large variation between the values indicates highly fluctuating sound levels. For instance, measurements near a roadway with passing vehicles may cause a large variation in the statistical sound levels. The average sound level for a specific time period is called the  $L_{eq}$ .

## 5.2 Human Response to Noise

Noise is often considered unwanted sound. However, human response to noise is complex and is influenced by a variety of acoustic and non-acoustic factors. Acoustic factors generally include the sound's amplitude, duration, spectral content, and fluctuations. Non-acoustic factors typically include the listener's ability to become used to the noise, the listener's attitude towards the noise and the noise source, the listener's view of the necessity of the noise, and the predictability of the noise. As such, response to noise is highly individualized.

## 5.3 Applicable Noise Regulations

Burns & McDonnell reviewed applicable federal, state, county, and local sound regulations for the Facility site. The Commonwealth of Kentucky Revised Statutes 224. 30-050 contains a qualitative noise law. Similarly, Louisville-Metro Government Title IX Chapter 99 contains a qualitative noise ordinance. Neither of these has any enforceable, numerical limits associated with them. Therefore, there were no identified, enforceable sound level limits that would be applicable to this facility.

However, the following guidelines issued by the United States Environmental Protection Agency (USEPA) are useful in evaluating potential noise impacts:

- ***Public Health and Welfare Criteria for Noise. United States Environmental Protection Agency, EPA 550/9-73-002 (July 1973)***
- ***Protective Noise Levels. United States Environmental Protection Agency, EPA 550/9-79-100 (1978)***

Note that the USEPA guidance documents are not enforceable, but rather contain recommendations for evaluation of potential noise impacts. Below is a summary of the recommendations from USEPA:

According to USEPA, yearly levels are sufficient to protect public health and welfare if they do not exceed an  $L_{dn}$  of 55 dBA outdoors in sensitive areas such as residences, schools, and hospitals. The day-night sound level,  $L_{dn}$ , is the 24-hour average sound level with a 10 dB penalty applied to the nighttime sound levels (10:00 p.m. to 7:00 a.m.) to account for increased sensitivity to noise during nighttime hours. As such, this equates to a constant sound level of 55 dBA during daytime hours and 45 dBA during nighttime hours. USEPA emphasizes that since the protective sound levels were derived without concern for technical or economic feasibility, and contain a margin of safety to ensure their protective value, they must not be viewed as standards, criteria, regulations, or goals. Rather, they should be viewed as a level below which there is no reason to suspect that the general population will be at risk from any of the identified effects of noise.

## 5.4 Existing Acoustical Environment

In order to characterize the existing acoustical environment surrounding the Cane Run Station, two ambient sound level surveys were conducted as described above. This section describes the results of the surveys and the nature of the existing acoustical environment surrounding the project site.

### 5.4.1 General Community Noise

The existing acoustical environment around the project site is typical for this area of mixed land use and zoning which transitions from heavy industrial development to residential suburban communities. The primary sources of noise include natural sounds and traffic. The primary sources of natural noise include insects, birds, and dogs. Areas immediately surrounding the existing station experience noise associated with its continuous operation. In general, noise from the existing station ranges from inaudible to noticeable at residences in the surrounding area.

### 5.4.2 Survey Procedure and Conditions

#### 5.4.2.1 Burns & McDonnell Study

An ambient sound level survey was conducted for the area near the facility. Measurements were taken during four time periods near representative sound receivers to determine the existing sound levels in the area. Burns & McDonnell personnel obtained background sound level measurements between the hours of 1:00 a.m. and 3:00 a.m.; 5:30 a.m. and 7:30 a.m.; 11:30 a.m. and 1:30 p.m.; and 3:30 p.m. and 5:30 p.m. on both November 19 and 20, 2010.

Weather conditions were mostly favorable for conducting ambient sound measurements during all survey periods. Nearly all wind speeds were lower than those ANSI recommends as acceptable levels for taking sound level measurements, and average wind speeds were below recommended speeds requiring corrective measures. Ambient meteorological conditions measured during the sound survey are tabulated below.

**Meteorological Conditions During Sound Measurements (Burns & McDonnell Study)**

Date	Time Period	Temperature (°F)	Relative Humidity (%)	Wind Speed (mph)	Sky Cover
11/19/10	1:00-3:00 am	44-47	58-68	0-2	Cloudy
11/19/10	5:30-7:30 am	44-47	66-71	Calm	Cloudy
11/19/10	11:30 am - 1:30 pm	48-55	47-61	3-8	Cloudy
11/19/10	3:30-5:30 pm.	54	50	2-4	Cloudy
11/20/10	1:00 - 3:00 am	37-43	58-80	Calm	Clear/Foggy
11/20/10	5:30 - 7:30 am	37-42	67-83	Calm	Foggy
11/20/10	11:30 am - 1:30 pm	53-62	51-64	3-6	Clear
11/20/10	3:30 - 5:30 pm	51.9-62	49-71	0-4	Clear

Measurements were made using a Larson-Davis Model 824 sound level meter (Type I sound level meters as specified in American National Standards Institute S1.4). The sound level meter was calibrated before and after each set of measurements. None of the calibration level changes exceeded  $\pm 0.4$  dB. A windscreen was used at all times on the meter, and the meter was mounted on a tripod, five feet above the ground. The  $L_{eq}$ ,  $L_{90}$ ,  $L_{50}$ , and  $L_{10}$  sound levels were recorded at each location. Samples covering fifteen-minute measurement periods were taken during each of the eight time periods.

**5.4.2.2 REM Study**

Noise monitoring was accomplished with three Quest Technologies SoundPro Model DL Integrating Sound Level meters. All instruments received annual factory calibration within the twelve months preceding the study. Additionally, the sound level meters were field calibrated prior to and immediately after noise monitoring activity with a Quest Model QC-10 calibrator. The following additional instruments were utilized in this study:

- Two Sony Model PX 820 digital voice recorders
- One Magellan Model GPS 315 12-channel GPS Navigator
- One Bushnell Model 400 laser rangefinder
- One Kestrel Model 1000 wind meter
- One Panasonic Model DMC-LS75 digital camera

**5.4.3 Noise Measurement Locations**

A total of 13 locations were used for sound level measurements during the two studies. Seven of these were monitored by Burns & McDonnell with the remaining six locations being monitored by REM.

The 13 sound level monitoring locations are shown on Figure 19, Sound Level Measurement Location Map:

- MP1 (Burns & McDonnell) Short-Term Monitoring;
- MP2 (Burns & McDonnell) Short-Term Monitoring;
- MP3 (Burns & McDonnell) Short-Term Monitoring;
- MP4 & 4A (Burns & McDonnell) Short-Term Monitoring;
- MP5 (Burns & McDonnell) Short-Term Monitoring;
- MP6 (Burns & McDonnell) Short-Term Monitoring;
- MP7 (Burns & McDonnell) Short-Term Monitoring;
- A-1 (REM) Continuous Monitoring;
- B-2 (REM) Continuous Monitoring;
- C-3 (REM) Short-Term Monitoring;
- D-4 (REM) Short-Term Monitoring;
- E-5 (REM) Short-Term Monitoring; and
- F-6 (REM) Short-Term Monitoring

#### 5.4.4 Continuous Monitoring

Continuous monitoring was conducted as a part of the study completed by REM. Continuous monitoring was conducted at two locations by REM as follows:

Location A-1: Near 6788 Flagler Avenue on LG&E Utility Pole No. 39305-85755

Location B-2: Near 6612 Melrose Avenue on LG&E Utility Pole No. 39167-85852

Integrating sound level meters and digital voice recorders were installed at both of these locations on LG&E utility poles at a height of roughly 12 feet above ground surface. The instruments installed at these locations operated continuously (except for brief interruptions for replacement of batteries) throughout the monitoring period. Wind speeds were measured at these locations with the Kestrel Model 1000 wind meter, and were mostly completely still with occasional slight wind movements of less than two miles per hour from variable directions.

These noise monitoring stations ran from around 2:45 p.m. on June 16, 2010 until roughly 8:30 am. on June 17, 2010.

The average continuous noise levels measured at locations A-1 and B-1 over the continuous monitoring period as reported by REM were 48.54 dBA and 49.50 dBA, respectively.

#### 5.4.5 Short-Term Measurements

In addition to continuous monitoring conducted by REM, short-term noise measurements were conducted at the remaining 11 monitoring locations (seven locations by Burns & McDonnell and four locations by REM) as described below:

**5.4.5.1 Burns & McDonnell Study**

As noted, Burns & McDonnell personnel obtained eight background sound level measurements at each of the study’s seven monitoring locations over a two day period, as follows:

November 19, 2010

- 1:00 a.m. – 3:00 a.m.,
- 5:30 a.m. – 7:30 a.m.,
- 11:30 a.m. – 1:30 p.m., and
- 3:30 p.m. – 5:30 p.m.

November 20, 2010

- 1:00 a.m. – 3:00 a.m.,
- 5:30 a.m. – 7:30 a.m.,
- 11:30 a.m. – 1:30 p.m., and
- 3:30 p.m. – 5:30 p.m.

The readings from this study are tabulated in the report provided in Appendix D, and summarized on Charts 5.1 through 5.7 below.

**Chart 5.1 – Existing Ambient Sound Levels – MP1**

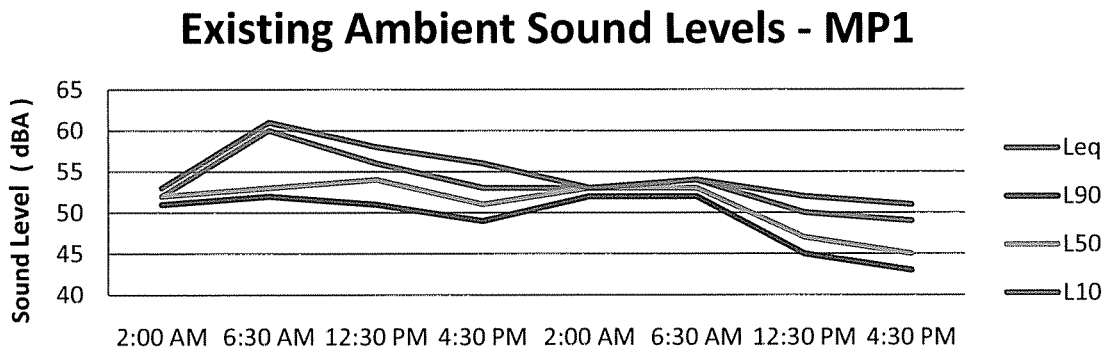


Chart 5.2 – Existing Ambient Sound Levels – MP2

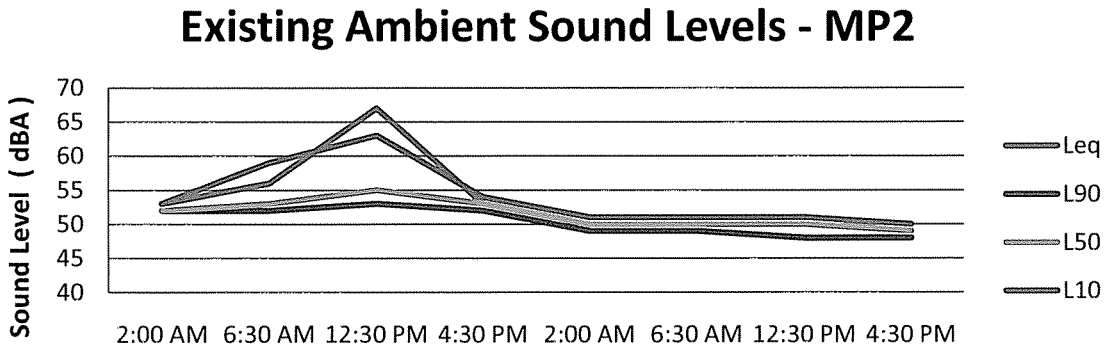


Chart 5.3 – Existing Ambient Sound Levels – MP3

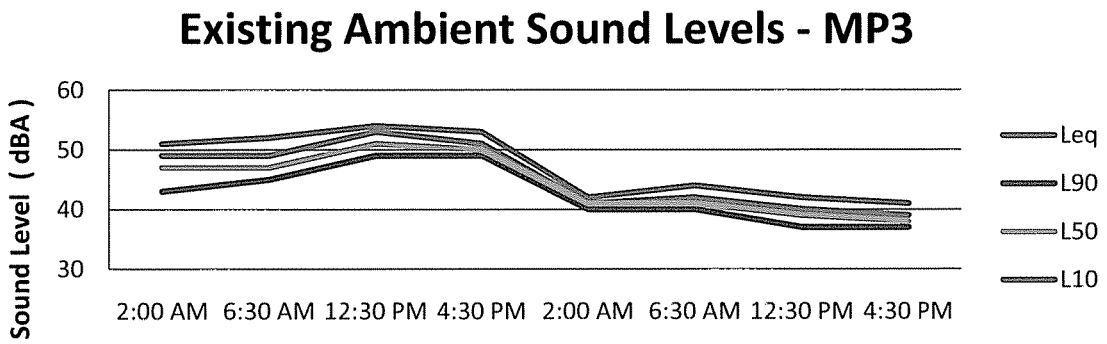
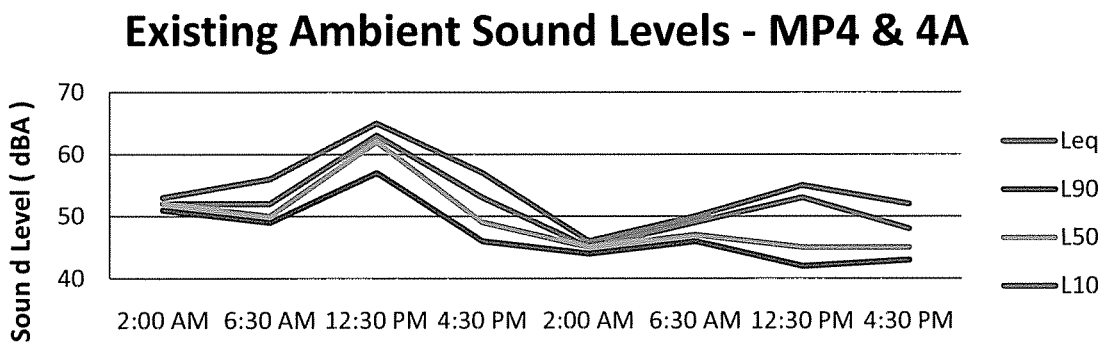
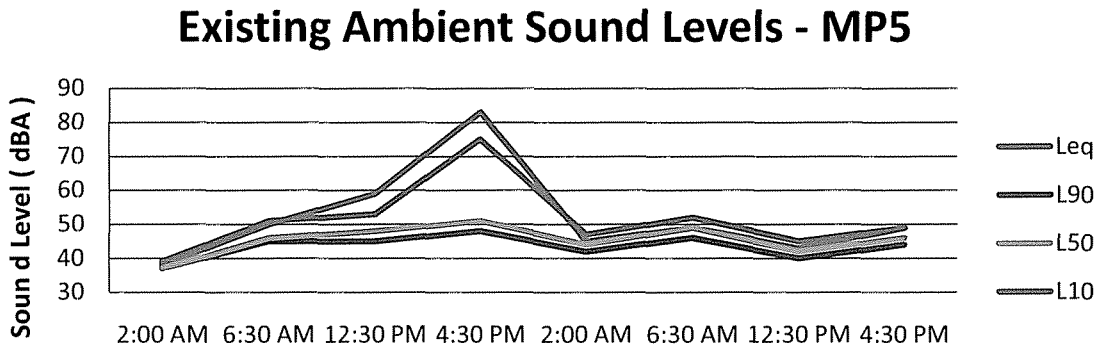


Chart 5.4 – Existing Ambient Sound Levels – MP4 & 4A

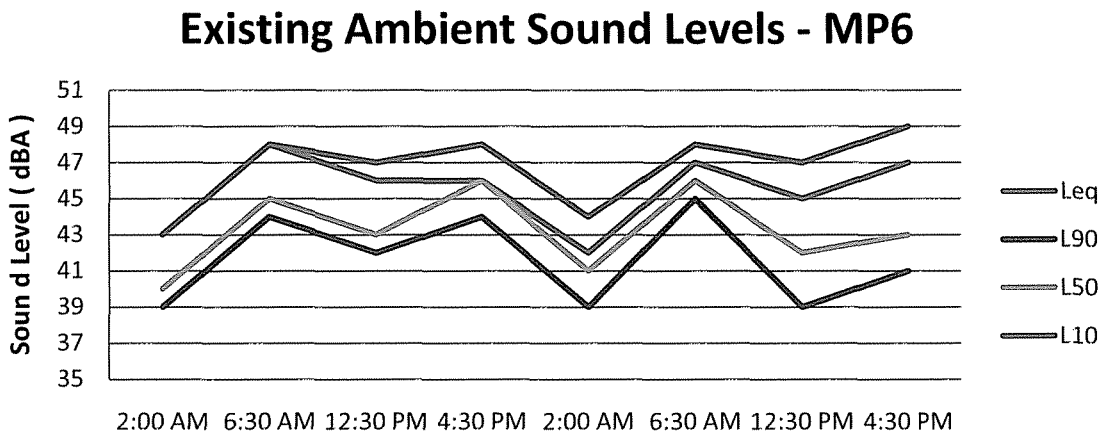




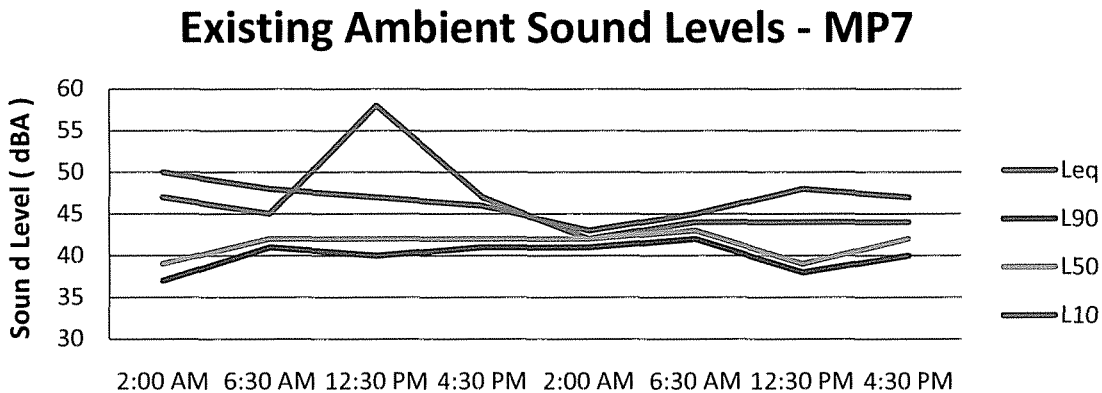
**Chart 5.5 – Existing Ambient Sound Levels – MP5**



**Chart 5.6 – Existing Ambient Sound Levels – MP6**



**Chart 5.7 – Existing Ambient Sound Levels – MP7**



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#### 5.4.5.2 REM Study

REM conducted short term sound level monitoring at four previously identified locations. An integrating sound level meter was mounted on a tripod and used to collect short term readings at each of these locations as follows:

- C-3 – various times between 7:27 p.m. on June 16, 2010 and 3:54 a.m. on June 17, 2010.
- D-4 – various times between 7:38 p.m. on June 16, 2010 and 7:57 a.m. on June 17, 2010.
- E-5 – 1:36 a.m. – 1:39 a.m. on June 17, 2010.
- F-6 – 1:45 a.m. – 1:48 a.m. on June 17, 2010.

The average sound levels measured by REM at these locations were:

C-3 – 51.55 dBA	D-4 – 57.78 dBA
E-5 – 50.39 dBA	F-6 – 47.70 dBA

### 5.5 Environmental Noise Emissions

The environmental noise emissions include the noise emitted by the facility to the surrounding community.

#### 5.5.1 Equipment Noise Sources

According to a feasibility study commissioned by LG&E, the NGCC unit's cycle design consists of a 2 x 1 F class combustion turbine arrangement. The 2 x 1 arrangement consists of two combustion turbine/HRSG combinations feeding one reheat, fully condensing steam turbine generator (STG).

The NGCC unit will consist of two combustion turbine generators (CTGs) with evaporative cooling and fuel heating. Each combustion turbine will exhaust to a HRSG. High-pressure steam generated by the HRSG will supply high-pressure steam to the steam turbine throttle of a single STG. Steam exhausted from the high-pressure section of the STG will mix with intermediate pressure steam within the HRSG to be reheated via the HRSG before entering back into the STG. Lastly, a low pressure steam induction on the STG will be supplied by the low-pressure boiler of the HRSG.

The unit will be designed as an outdoor unit with the steam turbine located indoors. Each CTG will be located outdoors within enclosures provided by the CTG manufacturer. The facility will also include a natural gas fired auxiliary boiler. Each CTG and the STG will have a main generator step-up transformer with a nominal output voltage of 138 kV.

According to preliminary design documents, noise levels at the operational limits of the proposed NGCC unit will be 85 dBA, and will not exceed 55 dBA at the facility property boundaries.

### **5.5.2 Facility Noise Emissions**

The stated facility noise emissions are less than or equal to 55 dBA at the facility property boundaries. Given that pursuant to setback requirements the closest distances to facility property boundaries exceed 1,000 feet even unmitigated source sound emissions from the NGCC unit would be at or below the 55 dBA value based on reductions from distance alone. Actual reductions in sound levels from the NGCC unit at the property boundaries would be greater due to attenuation from the ground and foliage.

In order to evaluate potential noise impacts on surrounding noise sensitive receptors, the predicted facility sound levels were compared to the measured background sound levels from the Burns & McDonnell and REM studies. Based on the measurements and conclusions noted in these reports, the existing background sound level is not anticipated to experience an unacceptable increase due to the operation of the proposed NGCC unit facility.

It is important to note that conservative assumptions regarding factors associated with prediction of future noise levels (e.g., wind conditions, ground attenuation, equipment sound level assumptions, etc.) and the impracticality of exactly mimicking “real-life” conditions (e.g., terrain, vegetation, meteorology, etc.), it is expected that the noise emissions from the NGCC unit could be quieter than predicted, and very similar to the noise emissions from the existing coal-fired plant. As noted previously, the existing coal-fired plant and the proposed NGCC unit will not operate simultaneously once commercial operation of the NGCC unit is attained, thus only one source of noise emissions from power production will be in operation at any given time. Furthermore, once the NGCC unit achieves commercialization, noise associated with rail operations will be significantly reduced.

Environmental factors and natural conditions (e.g., wind direction and speed), may give rise to noise emissions from the NGCC unit to be audible at the nearest receptors at certain times. However, the proposed NGCC unit’s overall impact to background sound levels at the nearest receptors is generally anticipated to be insignificant.

### **5.5.3 Emergency and Upset Operating Conditions**

During intermittent operations such as start-up, shutdown, and upset conditions (e.g., emergency steam release), environmental noise emissions from the facility may exceed the sound pressure levels experienced during normal operation. Facility noise emissions will vary depending on the upset condition but will be relatively short in duration.

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## 5.6 Construction Noise Emissions

Major construction phases will consist of mobilization/site preparation, foundation construction, equipment installation, building structure erection, and site cleanup/demobilization. Noise emissions will vary with each phase of construction depending on the construction activity and the associated equipment. Project construction will require the use of internal combustion engine powered equipment. This equipment will include backhoes, scrapers, dump trucks, graders, cranes, front end loaders, etc. Noise emissions during this construction phase will be dominated by the engine noise.

Construction activities will be scheduled during daytime and evening periods (7:00 a.m. to 10:00 p.m.) to the fullest extent possible. Some activities may require extended hours of operation due to scheduling constraints. Any nighttime construction will be limited to low noise activities to the extent practicable.

## 5.7 Mitigation

Since no significant impacts are expected to result from the construction or operation of the proposed NGCC unit, no significant mitigation is anticipated to be required. Construction noise will be limited by use of properly maintained equipment with engine mufflers and limiting construction activity to daytime hours, as practicable.

By design, operational noise will be limited to a near-field level of 85 dBA and a far-field level of 55 dBA at the facility property boundaries.

## 6.0 TRAFFIC ASSESSMENT

This section describes the local roadways in the project vicinity and the potential impacts that could result from the construction and operation of the project.

### 6.1 Local Roadways

The proposed NGCC unit is adjacent to the existing coal-fired facility off of Cane Rune Road and along the Ohio River in southwest Louisville, Kentucky. The existing and proposed facilities have rail and vehicular access. Direct vehicular access to the facilities is from a facility access road on Cane Run Road 600 feet east of Lower Hunters Trace. Indirect access is provided through a facility access road on Cane Run Road 2,500 feet west of Lower Hunters Trace. All traffic associated with the proposed NGCC unit is planned to utilize the existing facility access road east of Lower Hunters Trace.

Cane Run Road (KY 1230) is a two-lane undivided roadway that provides access to the site in addition to residential and industrial areas. Vehicular access to the proposed facility is primarily from Greenbelt Highway (KY 1934) via Lower Hunters Trace and Dover Avenue. Greenbelt Highway is a four-lane divided road and Lower Hunters Trace and Dover Avenue are two-lane undivided roads. The intersection at Greenbelt Highway and Lower Hunters Trace is controlled by a traffic signal. Figure 12, Facility Transportation Infrastructure Map, shows the roadways surrounding the project site.

Greenbelt Highway (which connects to Cane Run Road north of Terry Road) is a major north-south roadway in southwest Louisville connecting to I-264 to the north and Gene Snyder Freeway (KY 841/I-265) to the south. I-264 and Gene Snyder Freeway are loop freeways in Louisville connecting to I-65 and I-64. It is anticipated that traffic associated with the proposed facility will utilize Greenbelt Highway to access the site.

According to the KYTC, existing 2010 traffic on Cane Run Road east of Lower Hunters Trace is 1,100 vehicles per day with 11.7 percent trucks. Hourly peak volume was not available; therefore, based on the *American Association of State Highway and Transportation Officials Policy on Geometric Design of Highways and Streets (2004)*, a typical factor of 15 percent of the average daily traffic (ADT) was used for this assessment. As such, the estimated peak hour volume is 165 vehicles per hour. Based on the *Transportation Research Board Highway Capacity Manual (2010)*, the typical capacity of a two-lane roadway is 3,200 vehicles per hour.

Traffic on Greenbelt Highway is 23,400 and 20,900 vehicles per day northeast and southwest of Lower Hunters Trace, respectively. The estimated peak hour volume is 3,510 and 3,135 per hour and the typical capacity for a four-lane highway with free-flow speed of 55 miles per hour is 8,400 vehicles per hour. Free-flow speed data was not available; therefore, the posted speed limit of 55 miles per hour was assumed for this assessment.

### 6.1.1 Potential Impacts from Construction Activities

For the construction of the proposed NGCC unit, site labor is estimated to peak at less than 1,000 construction personnel in Month 21 of the project. It is assumed that 70 percent of the construction personnel will drive their vehicle to the site and the remaining 30 percent will carpool resulting in an estimated 670 vehicles entering and leaving the site on a daily basis. The standard work week will include five 10-hour days and the site-generated peak traffic will occur during typical morning (7-9 a.m.) and evening (4-6 p.m.) workday peak periods.

Construction personnel will access onsite parking from the facility access road on Cane Run Road east of Lower Hunters Trace. Variations in the number of construction personnel and work schedule may occur; however, these variations may only be expected for a small portion of the total construction personnel.

Construction craft traffic is also expected to peak in Month 21 of the project. Truck traffic is expected to be 510 trucks for the peak month resulting in 24 trucks per day. These deliveries will include typical construction materials such as mechanical and electrical equipment, construction supplies, concrete and steel. Large equipment may be delivered by rail. Barge deliveries directly to the site are not expected.

Various service and support vendors will be accessing the construction site. These included portable restrooms, communications and other support services. It is expected that vendors will generate 30 site visits per day during the peak construction period.

During the peak construction period, there will be an estimated 724 construction related vehicles (670 personnel + 24 trucks + 30 vendors) entering and leaving the site on a daily basis. It is expected that half of the construction traffic will come from the north on Greenbelt Highway via Dover Avenue to Cane Run Road and the other half from the south via Lower Hunters Trace. As such, the total traffic volume on Cane Run Road east and west of the facility access road will be an estimated 1,824 vehicles per day (362 morning + 362 evening + 1,100 existing). The total traffic volume on Greenbelt Highway northeast of Dover Avenue will be 24,124 vehicles per day (362 morning + 362 evening + 23,400 existing) and southeast of Lower Hunters Trace will be 21,624 vehicles per day (362 morning + 362 evening + 20,900 existing).

Morning and evening peak hour volumes are assumed to be 15 percent of the ADT. For Cane Run Road, the peak hour volume is assumed to be 165 vehicles per hour. Assuming a typical 60/40 directional split of existing traffic, the existing peak hour one-way traffic volume is 99 vehicles per hour. Assuming a 90/10 directional split of construction traffic, the construction peak hour one-way traffic volume will be 326 vehicles per hour. The total peak hour one-way traffic on Cane Run Road during construction is estimated to be 425 vehicles per hour. The one-way capacity on Cane Run Road is 1,700 vehicles per hour.

Similarly, for Greenbelt Highway northeast of Dover Avenue, the existing peak hour one-way traffic volume is 2,106 vehicles per hour and the construction peak hour one-way traffic volume will be 326 vehicles per hour. The total peak hour one-way traffic during construction is estimated to be 2,432 vehicles per hour. For Greenbelt Highway southwest of Lower Hunters Trace, the existing peak hour one-way traffic volume is 1,881 vehicles per hour and the construction peak hour one-way traffic volume will be 326 vehicles per hour. The total peak hour one-way traffic during construction is estimated to be 2,207 vehicles per hour. The one-way capacity of Greenbelt Highway is 4,200 vehicles per hour.

### **6.1.2 Fugitive Dust**

The risk of increased fugitive dust emissions will be greatest during construction operations. During construction sources of dust will include ground excavation, cut-and-fill operations, on-site transport of materials and equipment, operation of heavy equipment, etc. The amount of dust will vary from day to day, depending on the level of activity and the weather. Best management practices will be employed during construction to limit fugitive dust emissions. These may include watering of traffic ways, limiting the area of open excavation/grading areas, providing temporary cover for soil stockpiles, etc.

Access throughout the plant site will be by use of existing paved roads. These roads provide direct access to locations of construction activities and therefore fugitive dust emissions should be minimized from onsite traffic.

Access to the site will be via existing paved roads. These roads provide direct access to the site and fugitive dust emissions should be minimal.

### **6.1.3 Roadway Degradation**

Heavy equipment such as the turbines, generators, and larger sections of the heat recovery steam generator may be delivered via various transportation modes; e.g., rail delivery to the site, barge delivery to Jefferson Riverport with roadway transport to the site; rail delivery to Jefferson Riverport with roadway transport to the site, etc. As such, equipment and supplies delivered by trucks using the local roadways are not expected to include a significant number of oversized

loads and most (if not all) oversized loads will travel only a short distance from Jefferson Riverport to the site. Oversized truck loads will conform to weight capacity limitations on the roadways traversed, and necessary permits will be obtained from the KYTC for all such shipments. Therefore, damage to the local roadways due to overloading is not expected.

As previously noted, the anticipated construction traffic volume is within the capacity of the local roadways and road degradation is not expected as a result of the construction activities.

## **6.2 Potential Impacts from Facility Operation**

There are two conditions to consider for potential traffic impacts from facility operations. The first occurs over a brief period following completion of construction of the NGCC unit (referred to as commissioning) during which both the existing coal-fired facility and the NGCC unit will operate concurrently. The second (permanent) period will begin once the NGCC unit attains commercialization and the coal-fired units will be shutdown. These conditions are described below.

### **6.2.1 Operations During Commissioning of NGCC Unit**

After completing construction of the proposed NGCC unit, the main traffic contributors at the site are expected to be personnel for the existing and proposed facilities during startup. A minor contributor will include service and contract vendors. The existing coal-fired facility employs 169 personnel and the proposed NCGG unit is expected to employ an additional 35 personnel. Total personnel for both facilities are expected to be 205. For this assessment, it assumed that all additional personnel will drive their vehicle to the site thus adding 35 vehicles to existing traffic in the morning and evening peak periods.

The existing coal-fired facility receives 65-85 trucks per week delivering quick lime, fixation lime, soda ash and emulsified sulfur. The proposed NCGG unit is expected to have an additional five truck deliveries per week under normal operations. These deliveries include diesel for the emergency generator, garbage disposal, water treatment chemicals and maintenance activity. The additional deliveries are not anticipated to be daily; however, a conservative value of five daily truck deliveries will be added to existing traffic in the morning and evening peak periods for this assessment.

Conservatively assuming that all facility traffic occurs concurrent with existing peak periods, the results of operating the facility will yield two way peak hour traffic volume of 205 vehicles per hour (165 existing + 35 proposed personnel + five proposed deliveries) on Cane Run Road. Assuming a 60/40 directional split, the one-way peak hour traffic volume is estimated to be 123



vehicles per hour (99 existing + 21 proposed personnel + three proposed deliveries). As noted above, the capacity of Cane Run Road is 3,200 and 1,700 vehicles per hour for two-way and one-way operations, respectively. No significant impacts to roadway capacity are anticipated on Cane Run Road due to the additional traffic generated during commissioning of the proposed NGCC unit.

### **6.2.2 Operations After Commercialization of NGCC Unit**

As noted above, once the NGCC unit attains commercialization, the coal-fired units will be shut down and all traffic volume associated with the coal-fired units will be eliminated. Therefore, permanent operation of the NGCC unit is anticipated to require 35 personnel and five deliveries per day, yielding a total two way peak hour traffic volume of 40 vehicles per hour on Cane Run Road.

Assuming a 60/40 directional split, the one-way peak hour traffic volume is estimated to be 24 vehicles per hour (21 proposed personnel + three proposed deliveries). As noted above, the capacity of Cane Run Road is 3,200 and 1,700 vehicles per hour for two-way and one-way operations, respectively. No significant impacts to roadway capacity are anticipated on Cane Run Road due to the additional traffic generated operation of the proposed NGCC unit after attainment of commercialization.

The proposed NGCC unit is anticipated to add an estimated 40 vehicles per hour (35 personnel + five deliveries) to Greenbelt Highway during the peak periods. Existing two-way peak hour traffic on Greenbelt Highway is between 3,135 and 3,510 vehicles per hour with a roadway capacity of 8,400 vehicles per hour. No significant impacts to roadway capacity are anticipated on Greenbelt Highway due to the additional traffic generated by operation of the proposed NGCC unit.

Overall, following commercialization of the NGCC unit, there will be a net reduction in traffic volumes due to elimination of personnel transport and deliveries associated with the Cane Run Station's existing coal-fired units.

## **6.3 Barge and Rail Traffic**

There are no construction related barge deliveries directly to the Cane Run site anticipated for this project; however, some equipment items may be delivered via barge to the nearby Jefferson Riverport for off-loading and transshipment to the site via truck. Rail construction deliveries are likely to include large equipment such as the turbine, generator, and larger sections of the heat recovery steam generator, as well as large commodity orders that are not prefabricated such as

gas pipe. The existing facility receives 300 rail cars per week. The projected volume of rail deliveries for construction materials will be small compared to the rail deliveries to the existing plant.

Following completion of construction and after the NGCC unit attains commercialization, deliveries to the site via rail will essentially cease. Although no rail deliveries or shipments are associated with normal operations of the NGCC unit, rail facilities will be maintained indefinitely to accommodate potential future rail transport needs at the site.

## 6.4 Mitigation

### 6.4.1 Roadways

The most significant increase in traffic volume will occur during construction of the proposed NGCC unit. Traffic volumes are expected to increase by 724 vehicle trips per day on Cane Run Road and Greenbelt Highway. This increase is expected to be divided to the north and south direction resulting in an increase of an estimated 326 vehicles per hour during the morning and evening peak periods. Traffic volumes during transitional facility operations (i.e., simultaneous operation of existing coal-fired units and the NGCC unit) are expected to increase by 40 vehicle trips per day. Following attainment of commercialization and permanent operation of the NGCC unit, traffic volumes associated with facility operations are anticipated to drop by 169 vehicles per day associated with personnel and 65 to 85 vehicles per day associated with truck deliveries.

Cane Run Road and Greenbelt Highway have sufficient roadway capacity to handle the traffic generated by the construction and operation of the proposed NGCC unit. No significant impacts to roadway capacity are anticipated due to the additional traffic generated by the proposed NGCC unit during construction and commissioning. Once commercialization of the NGCC unit is attained, traffic volumes will decrease in comparison to current operations.

A portion of the construction traffic will traverse through the existing traffic signal at Greenbelt Highway and Lower Hunters Trace. A mitigation measure should include monitoring the traffic signal operations during the peak construction period and making any necessary adjustments for safe and efficient traffic flow through the intersection.

Although the roadway capacities on Cane Run Road and Greenbelt Highway are sufficient to handle the traffic related to the construction and operation of the proposed NGCC unit, carpooling and reducing trips in the area will be encouraged.

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#### 6.4.2 Barge and Rail

No barge deliveries are anticipated with the construction and operation of the proposed NGCC unit. Rail construction deliveries are likely to include large equipment deliveries but these deliveries are expected to be minimal compared to existing rail operations. As such, no mitigation is expected to be required for barge and rail operation associated with construction or operation of the proposed NGCC unit.

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## 7.0 REFERENCES

Ambient Sound Level Survey for the Cane Run Generating Station. Burns & McDonnell Engineering Company, Inc., Kansas City, Missouri Project No. 59211 (December 2010)

American Association of State Highway and Transportation Officials A Policy on Geometric Design of Highways and Streets (2004)

Combined Cycle Feasibility Study - Cane Run Station, HDR|C&B Project No. 140423 (August 16, 2010)

Community Noise Monitoring Report, Louisville Gas and Electric Company Cane Run Generating Station, Louisville, Kentucky, REM Safety Consulting Inc., Sand Springs, Oklahoma (June 2010)

Flood Insurance Rate Map of Louisville and Jefferson County, Kentucky (FIRM), Number 21111CO070E, Panel 70 of 144 (December 5, 2006)

Jefferson County Property Value Administrator – Property Information (<http://jeffersonpva.ky.gov/>)

Kentucky Revised Statutes. 100.324 Public utility facilities excepted -- Review of proposed acquisition, disposition, or change by commission. (Amended 2002 Ky. Acts ch. 89, sec. 3, effective July 15, 2002; ch. 343, sec. 1, effective April 23, 2002; and ch 346, sec. 151, effective July 15, 2002).

Kentucky Revised Statutes. 224.30-050 Noise emission prohibitions.(Created 1972 - 1st Extra. Sess.- Ky. Acts ch. 3, sec. 19. Formerly codified as KRS 224.065).

Kentucky Revised Statutes. 278.216 Site compatibility certificate – Site assessment report – Commission action on application. (Enact. Acts 2002, ch. 365, sec. 13, effective April 24, 2002; 2003, ch. 150 sec. 3, effective June 24, 2003.)

Kentucky Revised Statutes. 278.706 Application for certificate to construct merchant electric generating facility -- Fees -- Replacement or repair does not constitute construction. (Created 2002 Ky. Acts ch. 365, sec. 4, effective April 24, 2002).

Kentucky Revised Statues. 278.708 Site assessment report -- Consultant -- Mitigation measures. (Created 2002 Ky. Acts ch. 365, sec. 5, effective April 24, 2002).

Kentucky Transportation Cabinet-Department of Highways, Traffic Data, Frankfort, Kentucky.

Kepferle, Roy C., Geologic Map of Parts of the Louisville West and Lanesville Quadrangles, Jefferson County, USGS Geologic Map (GQ-452), 1974

Louisville/Jefferson County Information Consortium – Graphic Information Systems and Mapping Data (<http://www.lojic.org/>)

Louisville-Jefferson County Metro Government. Title IX: General Regulations, Chapter 99: Noise. (1994 Jeff. Code, § 98.04) (Jeff. Ord. 14-1993, adopted and effective 6-22-1993; Jeff. Am. Ord. 1-1995, adopted and effective 1-11-1995; Lou. Metro Am. Ord. No. 212-2003, approved 12-1-2003; Lou. Metro Am. Ord. No. 37-2005, approved 3-16-2005)

Louisville Metro Department Of Planning And Design Services - Louisville Metro Planning Commission. Land Development Code for all of Louisville – Jefferson County Kentucky (March 2006).

Protective Noise Levels. United States Environmental Protection Agency, EPA 550/9-79-100 (1978)

Public Service Commission of Wisconsin, Brochure - Environmental Impacts of Power Plants (June 2009)

Public Health and Welfare Criteria for Noise. United States Environmental Protection Agency, EPA 550/9-73-002 (July 1973)

Taylor and Francis, Landscape Institute, Institute of Environmental Management and Assessment, Guidelines for Landscape and Visual Impact Assessment, Second Edition (2002)

Transportation Research Board, Highway Capacity Manual (2010)

United States Bureau of Land Management, Visual Resource Inventory, BLM Handbook H-8410-1 (April 5, 1984)

U.S. Fish and Wildlife Service, Division of Habitat and Resource Conservation. Branch of Resource and Mapping Support - National Wetlands Inventory (NWI) Wetlands Mapper - Map of Jefferson County, Kentucky (2011)

United States Geological Survey (USGS) Topographic Map, Lanesville, IN-KY Quadrangle, 7.5-Minute Series, 1949, photo-revised 1987, minor revision 1993.

## TABLES

Table 4.1 - Surrounding Property Assessed Value Information

Proposed Natural Gas Combined-Cycle Electric Generating Unit  
 Louisville Gas & Electric Company  
 2 Cane Run Road  
 Louisville, Kentucky 40216

Street Name	Address	Lot Size (Acres)	Assessed Value ( \$ )			Distance from Site (miles)
			Land	Improvement	Total	
Putman St	6711	0.03		\$2,810	\$2,810	0.6597
Putman St	6719	0.06		\$17,900	\$17,900	0.6496
Putman St	6715	0.06		\$1,810	\$1,810	0.6583
Putman St	6707	0.06		\$14,806	\$14,806	0.6699
Putman St	6705	0.06		\$5,810	\$5,810	0.6701
Lucerne Ave	6605	0.06	\$9,000	\$26,770	\$35,770	0.7750
Putman St	6603	0.06	\$9,000	\$62,870	\$71,870	0.7756
Lucerne Ave	6519	0.06	\$15,000	\$27,960	\$42,960	0.8165
Essex Ave	6519	0.06	\$9,000	\$54,190	\$63,190	0.8515
Essex Ave	6519	0.06	\$9,000	\$74,950	\$83,950	0.8555
Essex Ave	6512	0.06	\$1,000	\$38,000	\$39,000	0.8822
Essex Ave	6507	0.06	\$7,000	\$9,870	\$16,870	0.9155
Flagler Ave	6521	0.07	\$9,000	\$59,400	\$68,400	0.8788
Daytona Ave	6605	0.09	\$9,000	\$28,210	\$37,210	0.8201
Putman St	6312	0.1	\$9,000	\$42,000	\$51,000	1.0576
Lucerne Ave	6708	0.11	\$9,000	\$43,070	\$52,070	0.6271
Putman St	6627	0.11	\$9,000	\$36,910	\$45,910	0.6864
Western Ave	4120	0.11	\$9,000	\$103,840	\$112,840	0.7002
Daytona Ave	6617	0.11	\$430	\$1,270	\$1,700	0.7563
Lucerne Ave	6516	0.11	\$9,000	\$48,040	\$57,040	0.8322
Lucerne Ave	6513	0.11	\$9,000	\$32,560	\$41,560	0.8587
Flagler Ave	6504	0.11	\$9,000	\$37,420	\$46,420	0.9492
Lucerne Ave	6703	0.12	\$9,000	\$35,790	\$44,790	0.6648
Putman St	6619	0.12	\$9,000	\$30,460	\$39,460	0.6991
Glenbrook Ave	6615	0.12	\$9,000	\$59,440	\$68,440	0.7568
Lucerne Ave	6515	0.12	\$9,000	\$48,440	\$57,440	0.8477
Lucerne Ave	6509	0.12	\$9,000	\$38,300	\$47,300	0.8701
Putman St	6505	0.12	\$9,000	\$26,000	\$35,000	0.8803
Daytona Ave	6506	0.12	\$15,000	\$76,880	\$91,880	0.9203
Flagler Ave	6517	0.13	\$15,000	\$2,150	\$17,150	0.9110
Putman St	6613	0.14	\$9,000	\$62,740	\$71,740	0.7369
Essex Ave	6514	0.16	\$9,000	\$37,140	\$46,140	0.8714
Flagler Ave	6518	0.16	\$9,000	\$6,600	\$15,600	0.8892
Lucerne Ave	6709	0.17	\$9,000	\$51,370	\$60,370	0.6290
Lucerne Ave	6706	0.17	\$9,000	\$44,000	\$53,000	0.6426
Lucerne Ave	6704	0.17	\$9,000	\$51,480	\$60,480	0.6517



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Street Name	Address	Lot Size (Acres)	Assessed Value ( \$ )			Distance from Site (miles)
			Land	Improvement	Total	
Putman St	6717	0.17		\$18,000	\$18,000	0.6536
Putman St	6709	0.17		\$1,830	\$1,830	0.6657
Putman St	6703	0.17		\$2,580	\$2,580	0.6744
Glenbrook Ave	6614	0.17	\$480	\$3,100	\$3,580	0.7331
Lucerne Ave	6608	0.17	\$9,000	\$29,340	\$38,340	0.7430
Lucerne Ave	6609	0.17	\$9,000	\$28,770	\$37,770	0.7619
Essex Ave	6600	0.17	\$9,000	\$36,590	\$45,590	0.8199
Essex Ave	6601	0.17	\$15,000	\$84,750	\$99,750	0.8292
Lucerne Ave	6517	0.17	\$9,000	\$46,510	\$55,510	0.8381
Lucerne Ave	6512	0.17	\$9,000	\$45,940	\$54,940	0.8515
Lucerne Ave	6510	0.17	\$9,000	\$45,940	\$54,940	0.8580
Lucerne Ave	6508	0.17	\$15,000	\$31,900	\$46,900	0.8758
Daytona Ave	6519	0.17	\$9,000	\$51,030	\$60,030	0.8761
Lucerne Ave	6506	0.17	\$9,000	\$53,230	\$62,230	0.8922
Daytona Ave	6511	0.17	\$15,000	\$48,000	\$63,000	0.9008
Essex Ave	6506	0.17	\$9,000	\$58,500	\$67,500	0.9051
Daytona Ave	6509	0.17	\$9,000	\$34,170	\$43,170	0.9155
Glenbrook Ave	6503	0.17	\$9,000	\$50,000	\$59,000	0.9159
Daytona Ave	6507	0.17	\$9,000	\$30,630	\$39,630	0.9271
Arid Ln	5515	0.18	\$18,000	\$71,180	\$89,180	0.5108
Flagler Ave	6619	0.18	\$9,000	\$120,740	\$129,740	0.7873
Lucerne Ave	6518	0.18	\$9,000	\$37,000	\$46,000	0.8210
Glenbrook Ave	6520	0.18	\$9,000	\$81,170	\$90,170	0.8239
Daytona Ave	6504	0.18	\$9,000	\$41,420	\$50,420	0.9313
Daytona Ave	6505	0.18	\$9,000	\$47,000	\$56,000	0.9398
Putman St	6600	0.19	\$15,000	\$4,170	\$19,170	0.7873
Daytona Ave	6515	0.19	\$9,000	\$33,010	\$42,010	0.8955
Flagler Ave	6516	0.19	\$9,000	\$49,840	\$58,840	0.9002
Cane Run Road	5305	0.2	\$18,000	\$92,990	\$110,990	0.4470
Cane Run Road	5307	0.2	\$18,000	\$69,850	\$87,850	0.4470
Cane Run Road	5315	0.2	\$18,000	\$86,910	\$104,910	0.4481
Mariemont Rd	5507	0.2	\$18,000	\$73,540	\$91,540	0.5341
Mariemont Rd	5524	0.2	\$20,000	\$85,500	\$105,500	0.5508
Mariemont Rd	5528	0.2	\$18,000	\$80,310	\$98,310	0.5676
Denver Ln	7126	0.2	\$18,000	\$82,650	\$100,650	0.5754

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Street Name	Address	Lot Size (Acres)	Assessed Value ( \$ )			Distance from Site (miles)
			Land	Improvement	Total	
Denver Ln	7124	0.2	\$20,000	\$90,660	\$110,660	0.5811
Mariemont Rd	5525	0.2	\$18,000	\$83,600	\$101,600	0.5854
Denver Ln	7118	0.2	\$20,000	\$100,500	\$120,500	0.5998
Putman St	6706	0.2		\$20,250	\$20,250	0.6570
Putman St	6618	0.2	\$9,000	\$52,460	\$61,460	0.7047
Cane Run Road	5313	0.21	\$18,000	\$81,940	\$99,940	0.4458
Cane Run Road	5311	0.21	\$18,000	\$85,590	\$103,590	0.4472
Cane Run Road	5303	0.21	\$20,000	\$101,350	\$121,350	0.4523
Cane Run Road	5309	0.21	\$20,000	\$90,000	\$110,000	0.4523
Cane Run Road	5321	0.21	\$18,000	\$65,500	\$83,500	0.4538
Cane Run Road	5323	0.21	\$18,000	\$65,550	\$83,550	0.4557
Cane Run Road	5325	0.21	\$18,000	\$66,220	\$84,220	0.4583
Cane Run Road	5327	0.21	\$18,000	\$66,220	\$84,220	0.4604
Cane Run Road	5329	0.21	\$18,000	\$66,220	\$84,220	0.4625
Cane Run Road	5331	0.21	\$18,000	\$66,220	\$84,220	0.4669
Arid Ln	5512	0.21	\$18,000	\$76,850	\$94,850	0.4746
Bossier Ln	5510	0.21	\$18,000	\$67,140	\$85,140	0.4813
Mariemont Rd	5502	0.21	\$18,000	\$68,500	\$86,500	0.4856
Arid Ln	5522	0.21	\$18,000	\$94,470	\$112,470	0.4879
Bossier Ln	5507	0.21	\$18,000	\$83,130	\$101,130	0.4886
Bossier Ln	5509	0.21	\$20,000	\$99,000	\$119,000	0.4966
Arid Ln	5526	0.21	\$18,000	\$70,690	\$88,690	0.5057
Arid Ln	5517	0.21	\$18,000	\$71,180	\$89,180	0.5116
Arid Ln	5528	0.21	\$18,000	\$75,660	\$93,660	0.5146
Mariemont Rd	5514	0.21	\$18,000	\$94,180	\$112,180	0.5178
Bossier Ln	5515	0.21	\$18,000	\$71,550	\$89,550	0.5189
Arid Ln	5530	0.21	\$18,000	\$78,760	\$96,760	0.5222
Mariemont Rd	5505	0.21	\$18,000	\$86,530	\$104,530	0.5237
Arid Ln	5532	0.21	\$18,000	\$75,960	\$93,960	0.5356
Mariemont Rd	5518	0.21	\$20,000	\$82,650	\$102,650	0.5356
Mariemont Rd	5509	0.21	\$18,000	\$89,570	\$107,570	0.5379
Mariemont Rd	5511	0.21	\$18,000	\$82,590	\$100,590	0.5403
Mariemont Rd	5522	0.21	\$18,000	\$91,030	\$109,030	0.5456
Mariemont Rd	5513	0.21	\$18,000	\$71,880	\$89,880	0.5464
Mariemont Rd	5515	0.21	\$18,000	\$85,280	\$103,280	0.5511

**Table 4.1 - Surrounding Property Assessed Value Information**

**Proposed Natural Gas Combined-Cycle Electric Generating Unit**  
**Louisville Gas & Electric Company**  
**2 Cane Run Road**  
**Louisville, Kentucky 40216**

Street Name	Address	Lot Size (Acres)	Assessed Value ( \$ )			Distance from Site (miles)
			Land	Improvement	Total	
Mariemont Rd	5517	0.21	\$18,000	\$73,200	\$91,200	0.5604
Mariemont Rd	5526	0.21	\$18,000	\$72,180	\$90,180	0.5608
Mariemont Rd	5519	0.21	\$18,000	\$85,790	\$103,790	0.5701
Mariemont Rd	5521	0.21	\$18,000	\$90,250	\$108,250	0.5750
Mariemont Rd	5523	0.21	\$18,000	\$77,410	\$95,410	0.5788
Denver Ln	7122	0.21	\$20,000	\$88,220	\$108,220	0.5864
Denver Ln	7120	0.21	\$18,000	\$68,760	\$86,760	0.5928
Denver Ln	7114	0.21	\$18,000	\$79,710	\$97,710	0.6102
Denver Ln	7112	0.21	\$18,000	\$81,420	\$99,420	0.6169
Denver Ln	7110	0.21	\$20,000	\$106,450	\$126,450	0.6231
Putman St	6614	0.21	\$9,000	\$32,460	\$41,460	0.7398
Putman St	6602	0.21	\$9,000	\$30,590	\$39,590	0.7756
Huff Ln	6619	0.21	\$25,000	\$112,460	\$137,460	0.7936
Huff Ln	6617	0.21	\$25,000	\$107,100	\$132,100	0.8030
Huff Ln	6615	0.21	\$25,000	\$98,960	\$123,960	0.8195
Putman St	6508	0.21	\$9,000	\$42,000	\$51,000	0.8595
Putman St	6506	0.21	\$9,000	\$33,950	\$42,950	0.8737
Putman St	6502	0.21	\$9,000	\$25,000	\$34,000	0.8894
Cane Run Road	5301	0.22	\$18,000	\$94,610	\$112,610	0.4557
Arid Ln	5520	0.22	\$18,000	\$85,550	\$103,550	0.4756
Arid Ln	5514	0.22	\$18,000	\$72,520	\$90,520	0.4759
Mariemont Rd	5506	0.22	\$20,000	\$85,410	\$105,410	0.4975
Arid Ln	5524	0.22	\$18,000	\$73,820	\$91,820	0.5002
Bossier Ln	5511	0.22	\$18,000	\$68,760	\$86,760	0.5083
Mariemont Rd	5512	0.22	\$18,000	\$76,610	\$94,610	0.5172
Mariemont Rd	5516	0.22	\$18,000	\$89,920	\$107,920	0.5178
Mariemont Rd	5503	0.22	\$18,000	\$79,580	\$97,580	0.5197
Arid Ln	5529	0.22	\$18,000	\$80,750	\$98,750	0.5536
Mariemont Rd	5527	0.22	\$18,000	\$89,470	\$107,470	0.5938
Woodland Dr	3308	0.22	\$19,380	\$41,210	\$60,590	0.6638
Lucerne Ave	6631	0.22	\$9,000	\$114,270	\$123,270	0.6930
Huff Ln	6510	0.22	\$18,000	\$84,500	\$102,500	0.9299
Huff Ln	6505	0.22	\$18,000	\$37,000	\$55,000	0.9833
Cane Run Road	5317	0.23	\$20,000	\$83,920	\$103,920	0.4491
Arid Ln	5518	0.23	\$18,000	\$74,630	\$92,630	0.4733

Table 4.1 - Surrounding Property Assessed Value Information

Proposed Natural Gas Combined-Cycle Electric Generating Unit  
 Louisville Gas & Electric Company  
 Cane Run Road  
 Louisville, Kentucky 40216

Street Name	Address	Lot Size (Acres)	Assessed Value ( \$ )			Distance from Site (miles)
			Land	Improvement	Total	
Arid Ln	5508	0.23	\$18,000	\$74,300	\$92,300	0.4845
Mariemont Rd	5504	0.23	\$18,000	\$70,420	\$88,420	0.4917
Arid Ln	5510	0.23	\$18,000	\$68,760	\$86,760	0.4992
Bossier Ln	5513	0.23	\$18,000	\$67,140	\$85,140	0.5144
Arid Ln	5525	0.23	\$18,000	\$67,140	\$85,140	0.5360
Lucerne Ave	6707	0.23	\$9,000	\$44,670	\$53,670	0.6445
Woodland Dr	3310	0.23	\$19,380	\$48,300	\$67,680	0.6547
Lucerne Ave	6703	0.23	\$9,000	\$62,700	\$71,700	0.6587
Woodland Dr	3305	0.23	\$19,380	\$40,980	\$60,360	0.6822
Daytona Ave	6618	0.23	\$9,000	\$40,070	\$49,070	0.7521
Essex Ave	6608	0.23	\$9,000	\$48,590	\$57,590	0.7835
Daytona Ave	6608	0.23	\$15,000	\$110,000	\$125,000	0.8093
Glenbrook Ave	6515	0.23	\$9,000	\$68,780	\$77,780	0.8411
Lucerne Ave	6507	0.23	\$9,000	\$28,590	\$37,590	0.8790
Lucerne Ave	6515	0.23	\$9,000	\$38,600	\$47,600	0.9350
Arid Ln	5513	0.24	\$18,000	\$68,760	\$86,760	0.5068
Cane Run Road	5345	0.24	\$18,000	\$39,550	\$57,550	0.5220
Denver Ln	7128	0.24	\$18,000	\$64,340	\$82,340	0.5701
Denver Ln	7116	0.24	\$18,000	\$69,120	\$87,120	0.6042
Glenbrook Ave	6511	0.24	\$9,000	\$39,470	\$48,470	0.8538
Huff Ln	6603	0.24	\$19,380	\$48,740	\$68,120	0.8731
Huff Ln	6508	0.24	\$19,380	\$66,400	\$85,780	0.9422
Bossier Ln	5500	0.25	\$18,000	\$77,010	\$95,010	0.4489
Arid Ln	5519	0.25	\$18,000	\$77,670	\$95,670	0.5193
Arid Ln	5523	0.25	\$20,000	\$85,050	\$105,050	0.5259
Arid Ln	5527	0.25	\$18,000	\$73,540	\$91,540	0.5455
Huff Ln	6517	0.25	\$19,380	\$48,240	\$67,620	0.9152
Bossier Ln	5512	0.26	\$18,000	\$86,540	\$104,540	0.4913
Denver Ln	7130	0.26	\$18,000	\$78,550	\$96,550	0.5663
Daytona Ave	6516	0.26	\$9,000	\$33,950	\$42,950	0.8617
Huff Ln	6515	0.26	\$19,380	\$55,480	\$74,860	0.9248
Mariemont Rd	5500	0.27	\$18,000	\$70,560	\$88,560	0.4792
Lucerne Ln	7119	0.27	\$18,000	\$89,580	\$107,580	0.5436
Woodland Dr	3307	0.27	\$19,380	\$83,360	\$102,740	0.6727
Bossier Ln	5505	0.28	\$18,000	\$86,610	\$104,610	0.4765

Table 4.1 - Surrounding Property Assessed Value Information

Proposed Natural Gas Combined-Cycle Electric Generating Unit  
 Louisville Gas & Electric Company  
 2 Cane Run Road  
 Louisville, Kentucky 40216

Street Name	Address	Lot Size (Acres)	Assessed Value ( \$ )			Distance from Site (miles)
			Land	Improvement	Total	
Bossier Ln	5506	0.28	\$18,000	\$74,720	\$92,720	0.4769
Lucerne Ave	6614	0.28	\$9,000	\$52,160	\$61,160	0.7261
Essex Ave	6516	0.28	\$9,000	\$39,950	\$48,950	0.8483
Huff Ln	6507	0.28	\$19,380	\$52,430	\$71,810	0.9678
Bossier Ln	5517	0.29	\$18,000	\$88,750	\$106,750	0.5347
Denver Ln	7108	0.29	\$18,000	\$75,110	\$93,110	0.6104
Flagler Ave	6610	0.29	\$9,000	\$36,670	\$45,670	0.7835
Huff Ln	6606	0.29	\$19,380	\$68,370	\$87,750	0.8326
Huff Ln	6519	0.29	\$19,380	\$61,580	\$80,960	0.9074
Lovin Ct	3914	0.29	\$19,380	\$65,480	\$84,860	0.9583
Flagler Ave	6713	0.3	\$15,000	\$51,900	\$66,900	0.7316
Woodland Dr	3333	0.31	\$19,380	\$73,590	\$92,970	0.5989
Lovin Ct	3918	0.31	\$19,380	\$57,110	\$76,490	0.9466
Lovin Ct	3916	0.31	\$19,380	\$67,100	\$86,480	0.9528
Lovin Ct	3912	0.31	\$19,380	\$71,570	\$90,950	0.9629
Putman St	6708	0.32		\$20,250	\$20,250	0.6540
Huff Ln	6604	0.32	\$19,380	\$51,870	\$71,250	0.8436
Huff Ln	6509	0.32	\$19,380	\$29,960	\$49,340	0.9566
Lovin Ct	3913	0.32	\$19,380	\$67,100	\$86,480	0.9960
Mariemont Rd	5501	0.33	\$18,000	\$74,630	\$92,630	0.5131
Cane Run Road	5349	0.33	\$18,000	\$47,760	\$65,760	0.5292
Bossier Ln	5522	0.33	\$18,000	\$71,180	\$89,180	0.5595
Arid Ln	5533	0.33	\$18,000	\$94,730	\$112,730	0.5616
Woodland Dr	3331	0.33	\$19,380	\$35,510	\$54,890	0.5973
Huff Ln	6611	0.33	\$19,000	\$90,810	\$109,810	0.8362
Huff Ln	6600	0.33	\$19,380	\$67,010	\$86,390	0.8684
Huff Ln	6601	0.33	\$19,380	\$54,300	\$73,680	0.8860
Huff Ln	6512	0.33	\$19,380	\$54,650	\$74,030	0.9161
Huff Ln	6504	0.33	\$19,380	\$63,560	\$82,940	0.9642
Lovin Ct	3917	0.33	\$19,380	\$94,710	\$114,090	0.9794
Lovin Ct	3915	0.33	\$19,380	\$69,980	\$89,360	0.9867
Denver Ln	7111	0.34	\$20,000	\$113,270	\$133,270	0.5786
Flagler Ave	6519	0.34	\$9,000	\$88,880	\$97,880	0.8896
Lovin Ct	3919	0.34	\$19,380	\$65,120	\$84,500	0.9716
Huff Ln	6618	0.35	\$19,380	\$73,190	\$92,570	0.7697

Table 4.1 - Surrounding Property Assessed Value Information

Proposed Natural Gas Combined-Cycle Electric Generating Unit  
 Louisville Gas & Electric Company  
 5000 Cane Run Road  
 Louisville, Kentucky 40216

Street Name	Address	Lot Size (Acres)	Assessed Value ( \$ )			Distance from Site (miles)
			Land	Improvement	Total	
Huff Ln	6612	0.35	\$19,380	\$53,390	\$72,770	0.8057
Huff Ln	6608	0.35	\$19,380	\$57,860	\$77,240	0.8195
Huff Ln	6602	0.35	\$19,380	\$63,420	\$82,800	0.8540
Daytona Ave	6514	0.35	\$9,000	\$87,100	\$96,100	0.9049
Huff Ln	6506	0.35	\$19,380	\$80,430	\$99,810	0.9513
Cane Run Road	5347	0.36	\$18,000	\$57,220	\$75,220	0.5233
Mariemont Rd	5529	0.36	\$18,000	\$75,670	\$93,670	0.6036
Huff Ln	6620	0.36	\$19,380	\$79,250	\$98,630	0.7580
Huff Ln	6520	0.36	\$19,380	\$54,720	\$74,100	0.8706
Bossier Ln	5518	0.37	\$18,000	\$67,930	\$85,930	0.5362
Huff Ln	6513	0.37	\$19,380	\$46,310	\$65,690	0.9402
Woodland Dr	3312	0.38	\$19,380	\$82,270	\$101,650	0.6449
Huff Ln	6622	0.39	\$19,380	\$77,720	\$97,100	0.7443
Huff Ln	6609	0.39	\$19,380	\$106,510	\$125,890	0.8585
W...rne Ave	6613	0.4	\$9,000	\$42,530	\$51,530	0.7360
Huff Ln	6616	0.41	\$19,380	\$74,150	\$93,530	0.7818
Huff Ln	6610	0.41	\$19,380	\$51,870	\$71,250	0.8110
Putman St	6514	0.41	\$9,000	\$58,890	\$67,890	0.8831
Huff Ln	6514	0.41	\$19,380	\$58,370	\$77,750	0.9023
Woodland Dr	3321	0.42	\$25,200	\$19,600	\$44,800	0.6089
Putman St	6616	0.42	\$9,000	\$68,620	\$77,620	0.7239
Flagler Ave	6605	0.42	\$9,000	\$38,000	\$47,000	0.8388
Huff Ln	6624	0.44	\$19,380	\$65,970	\$85,350	0.7269
Flagler Ave	6609	0.45	\$9,000	\$34,900	\$43,900	0.8231
Huff Ln	6605	0.45	\$19,380	\$66,000	\$85,380	0.8688
Bossier Ln	5520	0.46	\$18,000	\$84,480	\$102,480	0.5519
Lovin Ct	3911	0.46	\$18,000	\$88,200	\$106,200	1.0049
Cane Run Road	5319	0.48	\$18,000	\$88,790	\$106,790	0.4519
Huff Ln	6518	0.48	\$19,380	\$59,020	\$78,400	0.8767
Woodland Dr	3330	0.5	\$19,380	\$79,900	\$99,280	0.5994
Huff Ln	6626	0.51	\$19,380	\$77,720	\$97,100	0.7146
Huff Ln	6516	0.52	\$19,380	\$56,340	\$75,720	0.8911
C... Run Road	5255	0.53	\$20,000	\$97,120	\$117,120	0.4763
C... Run Road	5253	0.55	\$18,000	\$62,670	\$80,670	0.4824
Glenbrook Ave	6504	0.57	\$9,000	\$59,040	\$68,040	0.8932

Table 4.1 - Surrounding Property Assessed Value Information

Proposed Natural Gas Combined-Cycle Electric Generating Unit

Louisville Gas & Electric Company

2 Cane Run Road

Louisville, Kentucky 40216

Street Name	Address	Lot Size (Acres)	Assessed Value ( \$ )			Distance from Site (miles)
			Land	Improvement	Total	
Cane Run Road	5251	0.58	\$18,000	\$68,480	\$86,480	0.4920
Flagler Ave	6717	0.62	\$9,000	\$32,290	\$41,290	0.7061
Flagler Ave	6611	0.63	\$9,000	\$47,540	\$56,540	0.8104
Western Ave	4111	0.69	\$12,000	\$163,000	\$175,000	0.7258
Huff Ln	6628	0.72	\$19,380	\$91,730	\$111,110	0.7000
Cane Run Road	5335	0.93	\$5,000	\$89,470	\$94,470	0.4981
Western Ave	4200	0.93	\$9,000	\$94,160	\$103,160	0.7025
Huff Ln	6614	0.93	\$19,380	\$84,790	\$104,170	0.7951
Cane Run Road	5333	0.94	\$18,000	\$61,280	\$79,280	0.4913
Cane Run Road	5339	0.94	\$5,000	\$90,360	\$95,360	0.5138
Woodland Dr	3226	0.98	\$20,200	\$70,580	\$90,780	0.6068
Woodland Dr	3229	0.99	\$19,690	\$47,040	\$66,730	0.6000
Woodland Dr	3228	1.01	\$19,690	\$84,180	\$103,870	0.6006
Woodland Dr	3322	1.03	\$19,380	\$62,280	\$81,660	0.6098
Cane Run Road	5300	1.06	\$63,600	\$58,300	\$121,900	0.4117
Cane Run Road	5237	1.15	\$20,240	\$121,210	\$141,450	0.5326
Woodland Dr	3325	1.24	\$24,480	\$47,620	\$72,100	0.6028
Cane Run Road	5337	1.42	\$24,720	\$72,030	\$96,750	0.5131
Cane Run Road	5231	1.9	\$17,000	\$139,000	\$156,000	0.5574
Cane Run Road	5225	11.09	\$181,100	\$87,250	\$268,350	0.5725
MOR / 06/22/2011 MSE / 06/23/2011						

**Table 4.2 - Surrounding Property Sales Information**

**Proposed Natural Gas Combined-Cycle Electric Generating Unit  
 Louisville Gas & Electric Company  
 5252 Cane Run Road  
 Louisville, Kentucky 40216**

Address	Lot Size Acres	Distance from Site (miles)	Last Sale		Time Adjusted Sale Price
			Price	Date	
5305 Cane Run Road	0.2	0.447	\$81,000	06/27/06	\$78,440
5307 Cane Run Road	0.2	0.447	\$33,500	02/11/00	\$39,783
5311 Cane Run Road	0.21	0.447	\$75,000	06/23/99	\$91,679
5317 Cane Run Road	0.23	0.449	\$104,500	10/08/03	\$105,861
5319 Cane Run Road	0.48	0.452	\$106,000	06/01/95	\$154,154
5321 Cane Run Road	0.21	0.454	\$140,000	03/31/10	\$138,428
5323 Cane Run Road	0.21	0.456	\$40,000	12/23/10	\$39,813
5325 Cane Run Road	0.21	0.458	\$140,000	03/31/10	\$138,428
5327 Cane Run Road	0.21	0.460	\$34,000	03/14/95	\$49,815
5255 Cane Run Road	0.53	0.476	\$86,000	09/15/04	\$85,775
5505 Bossier Ln	0.28	0.477	\$99,000	09/17/03	\$100,385
5500 Mariemont Rd	0.27	0.479	\$92,270	10/23/09	\$90,875
5508 Arid Ln	0.23	0.484	\$87,000	10/26/05	\$85,188
5522 Arid Ln	0.21	0.488	\$83,740	02/18/11	\$83,467
5504 Mariemont Rd	0.23	0.492	\$39,900	01/22/82	\$91,895
5506 Mariemont Rd	0.22	0.498	\$109,900	12/05/06	\$105,652
5345 Cane Run Road	0.24	0.522	\$27,500	07/21/99	\$32,844
5530 Arid Ln	0.21	0.522	\$100,900	05/28/03	\$102,833
5347 Cane Run Road	0.36	0.523	\$78,230	03/08/06	\$76,140
5237 Cane Run Road	1.15	0.533	\$104,500	08/20/02	\$109,225
7119 Denver Ln	0.27	0.544	\$90,350	11/20/09	\$89,046
5529 Arid Ln	0.22	0.554	\$103,000	03/08/04	\$103,625
3329 Woodland Dr	0.99	0.600	\$39,000	10/29/09	\$38,416
3325 Woodland Dr	1.24	0.603	\$51,250	01/31/06	\$49,962
7114 Denver Ln	0.21	0.610	\$101,900	07/06/05	\$100,286
7112 Denver Ln	0.21	0.617	\$56,900	05/17/91	\$95,099
6708 Lucerne Ave	0.11	0.627	\$34,600	08/21/06	\$33,423



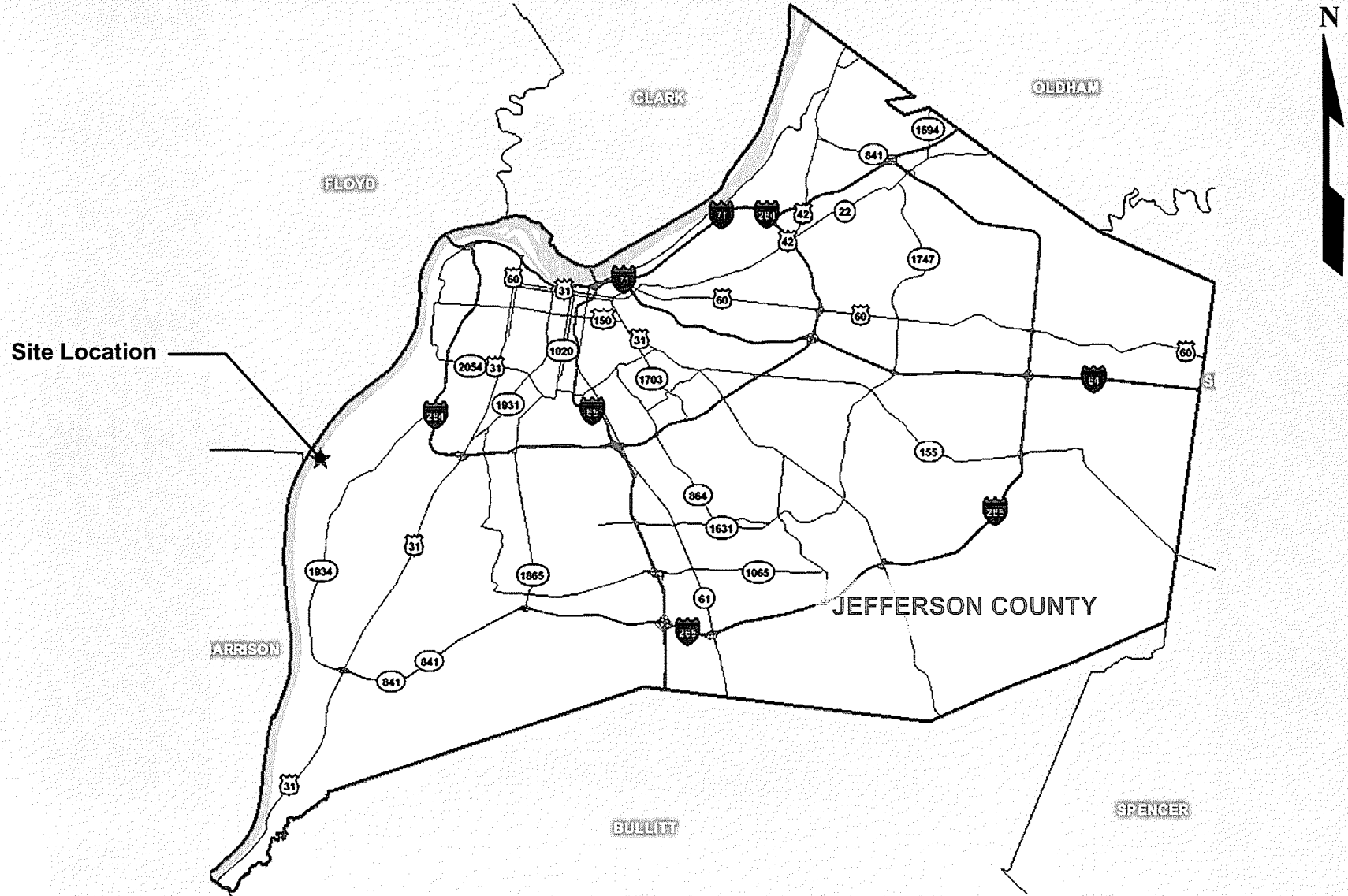
**Table 4.2 - Surrounding Property Sales Information**

**Proposed Natural Gas Combined-Cycle Electric Generating Unit  
 Louisville Gas & Electric Company  
 5252 Cane Run Road  
 Louisville, Kentucky 40216**

Address	Lot Size Acres	Distance from Site (miles)	Last Sale		Time Adjusted Sale Price
			Price	Date	
3310 Woodland Dr	0.23	0.655	\$42,100	09/16/64	\$176,193
3305 Woodland Dr	0.23	0.682	\$22,500	03/06/01	\$25,317
6608 Lucerne Ave	0.17	0.743	\$19,500	11/04/91	\$32,070
6622 Huff Ln	0.39	0.744	\$80,000	07/17/00	\$92,959
6615 Glenbrook Ave	0.12	0.757	\$66,870	10/24/07	\$64,679
6620 Huff Ln	0.36	0.758	\$91,000	02/17/04	\$91,635
6618 Huff Ln	0.35	0.770	\$95,000	08/10/05	\$93,347
6608 Essex Ave	0.23	0.784	\$60,000	02/15/96	\$85,050
6612 Huff Ln	0.35	0.806	\$28,000	07/28/96	\$38,910
6608 Huff Ln	0.35	0.820	\$55,000	01/27/94	\$83,766
6518 Lucerne Ave	0.18	0.821	\$46,000	01/25/02	\$49,480
6605 Flagler Ave	0.42	0.839	\$47,000	02/24/00	\$55,715
6605 Huff Ln	0.45	0.869	\$87,000	01/27/99	\$108,256
6518 Huff Ln	0.48	0.877	\$48,900	05/18/93	\$76,280
6502 Putman St	0.21	0.889	\$34,000	10/24/03	\$31,717
6506 Essex Ave	0.17	0.905	\$67,500	06/22/07	\$65,088
6503 Glenbrook Ave	0.17	0.916	\$37,000	03/29/90	\$64,300
6505 Daytona Ave	0.18	0.940	\$56,000	12/31/04	\$55,583
3918 Lovin Ct	0.31	0.947	\$83,830	03/12/10	\$82,849
6504 Huff Ln	0.33	0.964	\$65,500	04/27/97	\$78,228
6505 Huff Ln	0.22	0.983	\$55,000	09/23/09	\$54,128
3913 Lovin Ct	0.32	0.996	\$44,000	02/08/93	\$69,280
3911 Lovin Ct	0.46	1.005	\$116,000	09/20/06	\$111,901
Prepared / Date: MOR / 06/22/2011 Checked / Date: MSE / 06/23/2011					

## FIGURES

Source: Louisville Jefferson County Information Consortium (LOJIC)



Not to Scale

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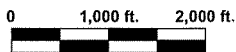
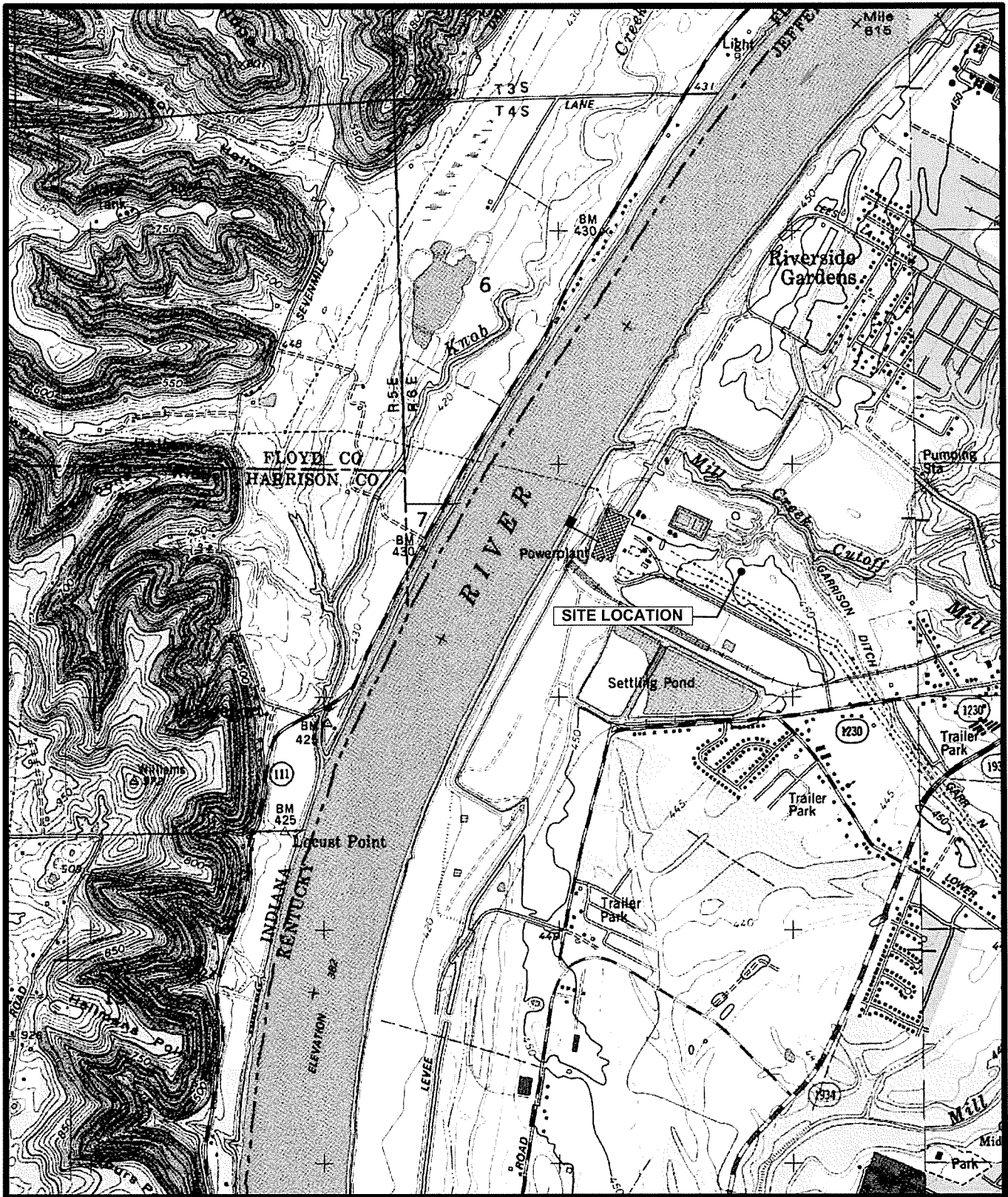
LOUISVILLE GAS & ELECTRIC COMPANY  
5252 CANE RUN ROAD  
LOUISVILLE, KENTUCKY



JEFFERSON COUNTY MAP

Project No. 3142-11-1377

FIGURE 1



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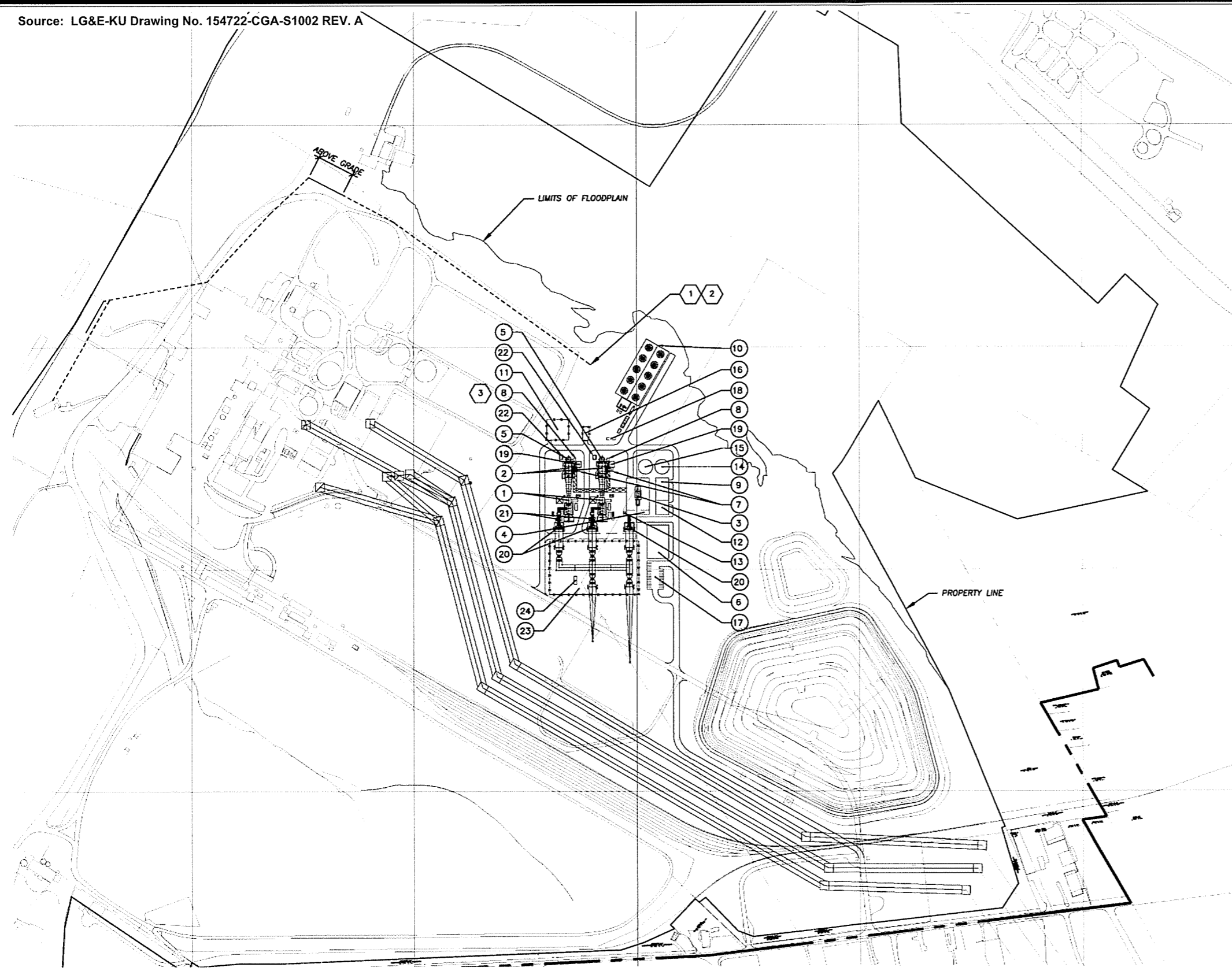
LOUISVILLE GAS & ELECTRIC CO.  
5252 CANE RUN ROAD  
LOUISVILLE, KENTUCKY



VICINITY MAP

Project No. 3142-11-1377

FIGURE 2



### FACILITY LEGEND

- 1 COMBUSTION TURBINE
- 2 HEAT RECOVERY STEAM GENERATOR
- 3 STEAM TURBINE BUILDING
- 4 ELECTRICAL EQUIPMENT ROOM
- 5 HRSG EXHAUST STACK
- 6 ADMINISTRATION/CONTROL BUILDING
- 7 BOILER FEED PUMP WITH ENCLOSURE
- 8 HRSG ELEVATOR
- 9 WATER TREATMENT BUILDING
- 10 COOLING TOWER
- 11 GAS HANDLING EQUIPMENT
- 12 AUXILIARY BOILER BUILDING
- 13 EMERGENCY DIESEL GENERATOR (660 GAL)
- 14 SERVICE WATER TANK
- 15 DEMIN WATER STORAGE TANK
- 16 HYDROGEN STORAGE AREA
- 17 PARKING
- 18 OIL/WATER SEPARATOR
- 19 HRSG AREA POWER DISTRIBUTION CENTER
- 20 GSU TRANSFORMER
- 21 UNIT AUXILIARY TRANSFORMER
- 22 CEMS ENCLOSURE
- 23 SWITCHYARD
- 24 SWITCHYARD CONTROL BUILDING

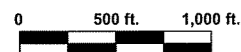


### SURVEY LEGEND

- E21 ENTERPRISE ZONE DISTRICT
- M2 INDUSTRIAL DISTRICT
- R1 RESIDENTIAL SINGLE FAMILY DISTRICT
- LIMITS OF RESIDENTIAL PROPERTY
- - - OVERALL BOUNDARY
- - - ADJOINER/TRACT LINE

### TERMINAL POINTS

- 1 WATER SUPPLY
- 2 WASTE WATER DISCHARGE
- 3 NATURAL GAS



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SITE MAP

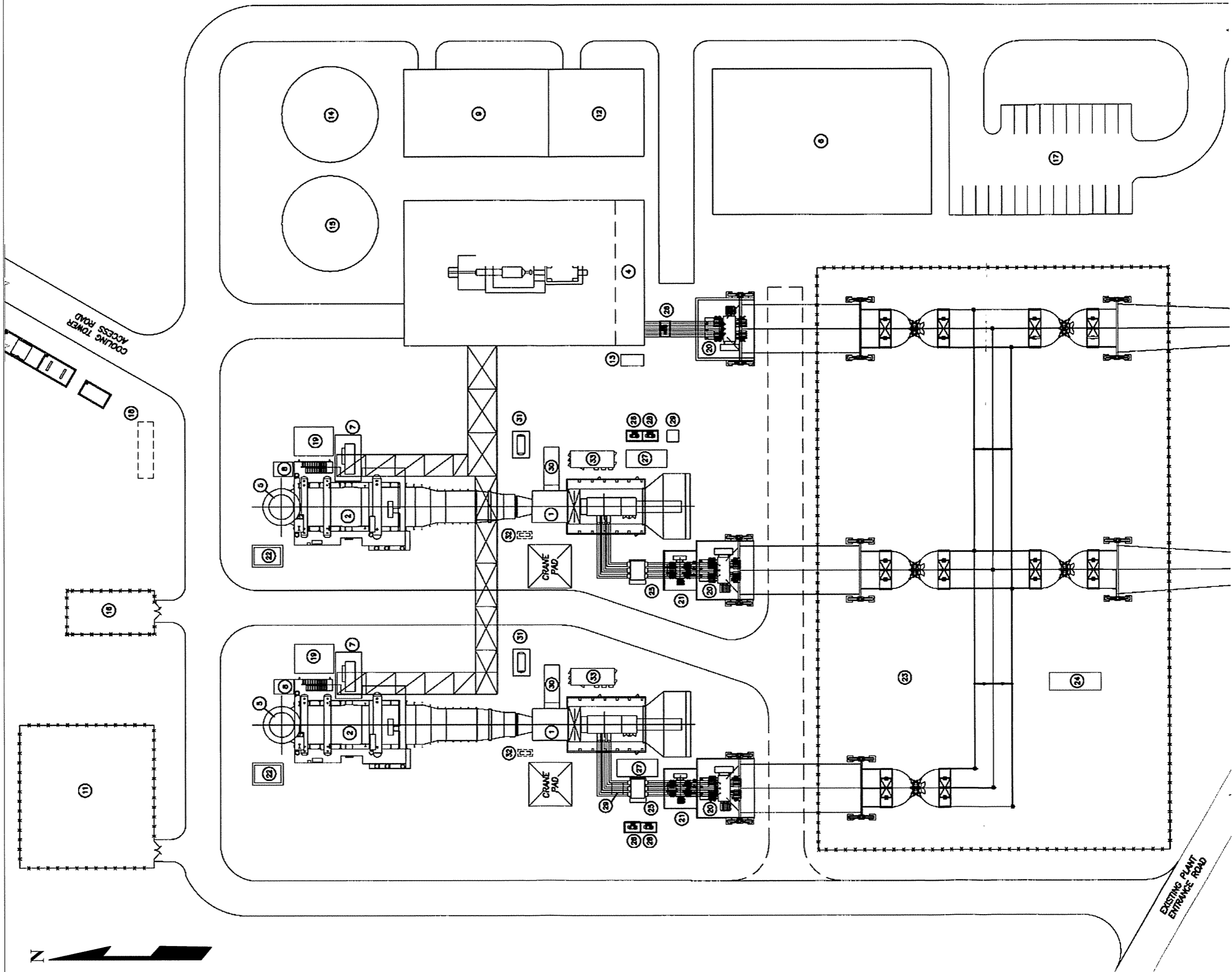
Project No. 3142-11-1377

FIGURE 3

Source: LG&E-KU Drawing No. 154722-CGA-M1001-Rev C

**FACILITY LEGEND**

- |                                     |   |  |                                |            |
|-------------------------------------|---|--|--------------------------------|------------|
| 1 COMBUSTION TURBINE                | 9 WATER TREATMENT BUILDING              | 17 PARKING                             | 25 GENERATOR BREAKER           | 32 CT PECC |
| 2 HEAT RECOVERY STEAM REGENERATOR   | 10 COOLING TOWER (NOT SHOWN)            | 18 OIL / WATER SEPARATOR               | 26 EXCITATION TRANSFORMER      |            |
| 3 STEAM TURBINE BUILDING            | 11 GAS HANDLING EQUIPMENT               | 19 HRSG AREA POWER DISTRIBUTION CENTER | 27 CT STATIC START ENCLOSURE   |            |
| 4 ELECTRICAL EQUIPMENT ROOM         | 12 AUXILIARY BOILER BUILDING            | 20 GSU TRANSFORMER                     | 28 CT STATIC START TRANSFORMER |            |
| 5 HRSG EXHAUST STACK                | 13 ENERGEBCT DUESEK GENERATOR (660 GAL) | 21 UNIT AUXILIARY TRANSFORMER          | 29 CT STATIC START REACTOR     |            |
| 6 ADMINISTRATION / CONTROL BUILDING | 14 SERVICE WATER TANK                   | 22 CEMS ENCLOSURE                      | 30 CT LUBE OIL SKID            |            |
| 7 BOILER FEED PUMP WITH ENCLOSURE   | 15 DEMINERALIZED WATER STORAGE TANK     | 23 SWITCHYARD                          | 31 CT FIRE PROTECTION SKID     |            |
| 8 HRSG ELEVATOR                     | 16 HYDROGEN STORAGE AREA                | 24 SWITCHYARD CONTROL BUILDING         | 32 CT DRAIN TANK               |            |



0 35 ft. 70 ft.

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 LOUISVILLE, KENTUCKY

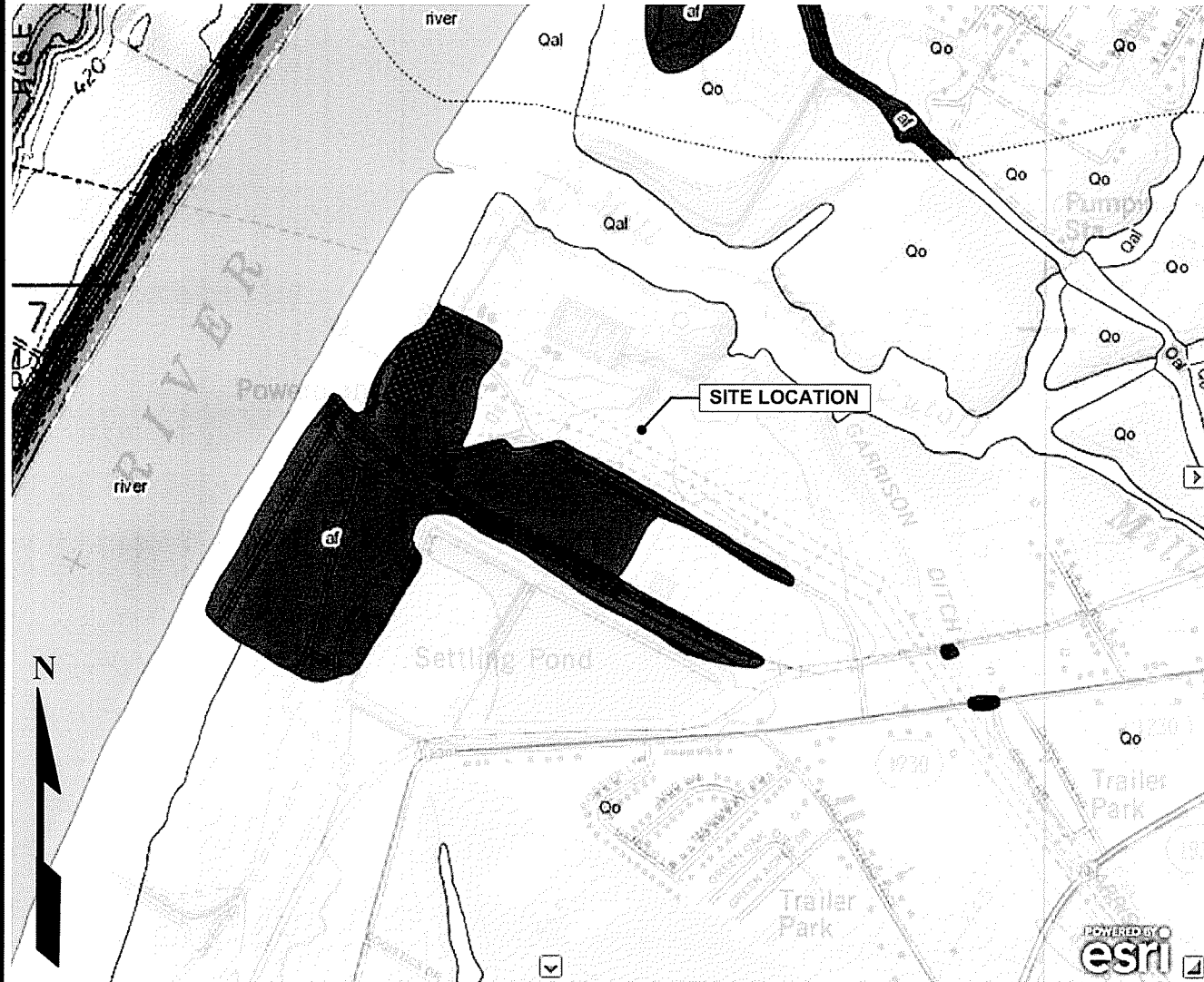


NGCC LAYOUT

Project No. 3142-11-1377

FIGURE 4

Source: Kepferle, R.C. GQ 1202 - Geologic Map of Parts of the Louisville West and Lanesville Quadrangles, Jefferson County, Kentucky (1974)



**Geologic Units**

map unit colors

1:24,000 scale data (detailed geology)

This legend includes all units from the 1:24,000 quadrangles in the current view. Some units on the legend may not appear on the map.

Qal	<b>Alluvium</b> (Quaternary - Quaternary)
Qt	<b>Terrace deposits</b> (Tertiary - Quaternary)
Qwo	<b>Glacial outwash (Wisconsinan)</b> (Quaternary - Quaternary)
Ql	<b>Loess</b> (Quaternary - Quaternary)
Mb	<b>Borden Formation</b> (Lower Mississippian - Lower Mississippian)
MbK	<b>Kenwood Siltstone Member</b> (Lower Mississippian - Lower Mississippian)
Mrk	<b>Rockford Limestone</b> (Lower Mississippian - Lower Mississippian)
MDna	<b>New Albany Shale</b> (Middle Devonian - Lower Mississippian)

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5252 CANE RUN ROAD  
LOUISVILLE, KENTUCKY



GEOLOGIC VICINITY MAP

Project No. 3142-11-1377

FIGURE 5

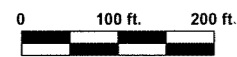


### MAP LEGEND

- |                        |                              |
|------------------------|------------------------------|
| Area of Interest (AOI) | Very Stony Spot              |
| Soil Map Units         | Wet Spot                     |
| Blowout                | Other                        |
| Borrow Pit             | <b>Special Line Features</b> |
| Clay Spot              | Gully                        |
| Closed Depression      | Short Steep Slope            |
| Gravel Pit             | Other                        |
| Gravelly Spot          | <b>Political Features</b>    |
| Landfill               | Cities                       |
| Lava Flow              | <b>Water Features</b>        |
| Marsh or swamp         | Oceans                       |
| Mine or Quarry         | Streams and Canals           |
| Miscellaneous Water    | <b>Transportation</b>        |
| Perennial Water        | Rails                        |
| Rock Outcrop           | Interstate Highways          |
| Saline Spot            | US Routes                    |
| Sandy Spot             | Major Roads                  |
| Severely Eroded Spot   | Local Roads                  |
| Sinkhole               |                              |
| Slide or Slip          |                              |
| Sodic Spot             |                              |
| Spoil Area             |                              |
| Stony Spot             |                              |

#### **OtB** Soil Map Unit Symbols

See Section 2.1.4 Soils, of **SITE ASSESSMENT REPORT, Proposed Natural Gas Combined-Cycle Electric Generating Unit, Louisville Gas & Electric Company, 5252 Cane Run Road, Louisville, Kentucky 40216**



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5252 CANE RUN ROAD  
LOUISVILLE, KENTUCKY



Project No. 3142-11-1377

SOILS MAP

FIGURE 6





NFIP  
 NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0070E

**FIRM**  
**FLOOD INSURANCE RATE MAP**  
 METROPOLITAN GOVERNMENT OF  
**LOUISVILLE AND**  
**JEFFERSON COUNTY,**  
**KENTUCKY**  
 AND INCORPORATED AREAS

**PANEL 70 OF 144**  
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
LOUISVILLE-JEFFERSON COUNTY METRO GOVERNMENT	210120	0070	E

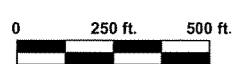
Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



**MAP NUMBER**  
**21111C0070E**

**MAP REVISED**  
**DECEMBER 5, 2006**

Federal Emergency Management Agency



This is an official copy of a portion of the above referenced flood map. It was extracted using FIRM On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov.

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 5252 CANE RUN ROAD  
 LOUISVILLE, KENTUCKY



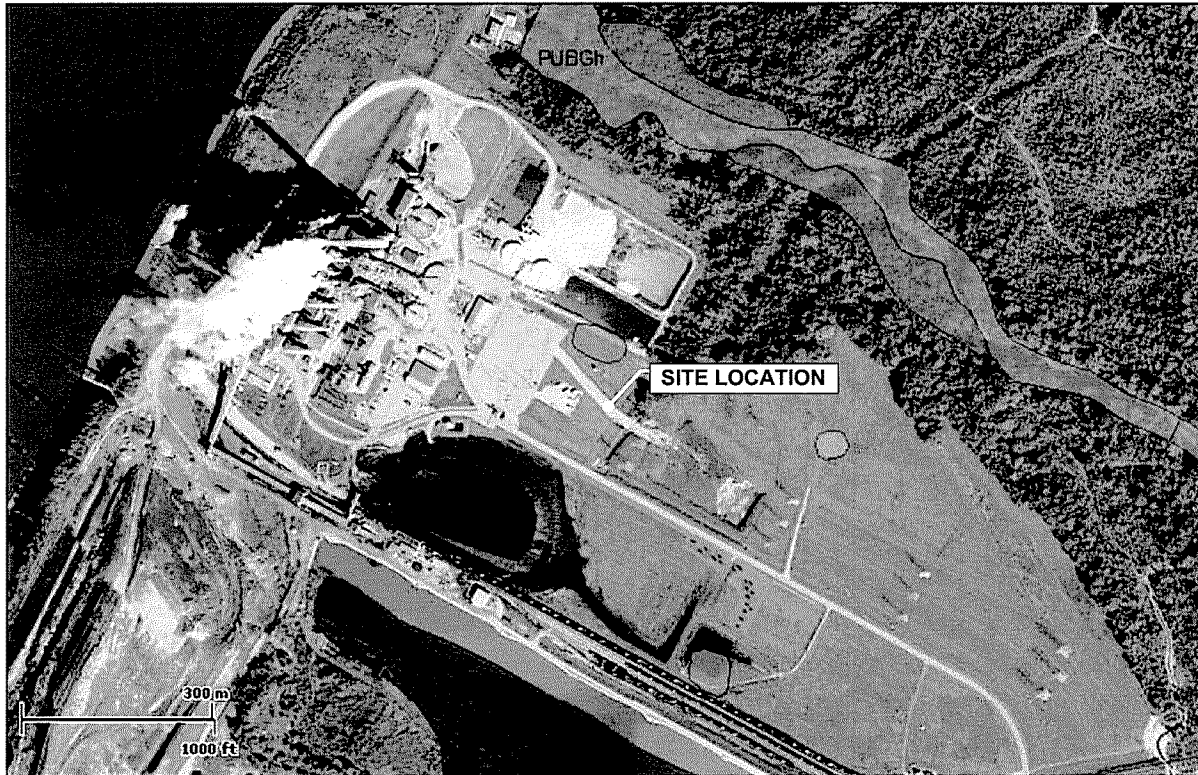
**FEMA FIRMETTE**  
**FLOOD RATE INSURANCE MAP**

Project No. 3142-11-1377

FIGURE 7











# U.S. Fish and Wildlife Service National Wetlands Inventory





Cane Run

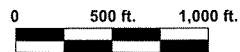
May 6, 2011

## Wetlands

-  Freshwater Emergent
-  Freshwater Forested/Shrub
-  Estuarine and Marine Deepwater
-  Estuarine and Marine
-  Freshwater Pond
-  Lake
-  Riverine
-  Other

## Riparian

-  Herbaceous
-  Forested/Shrub



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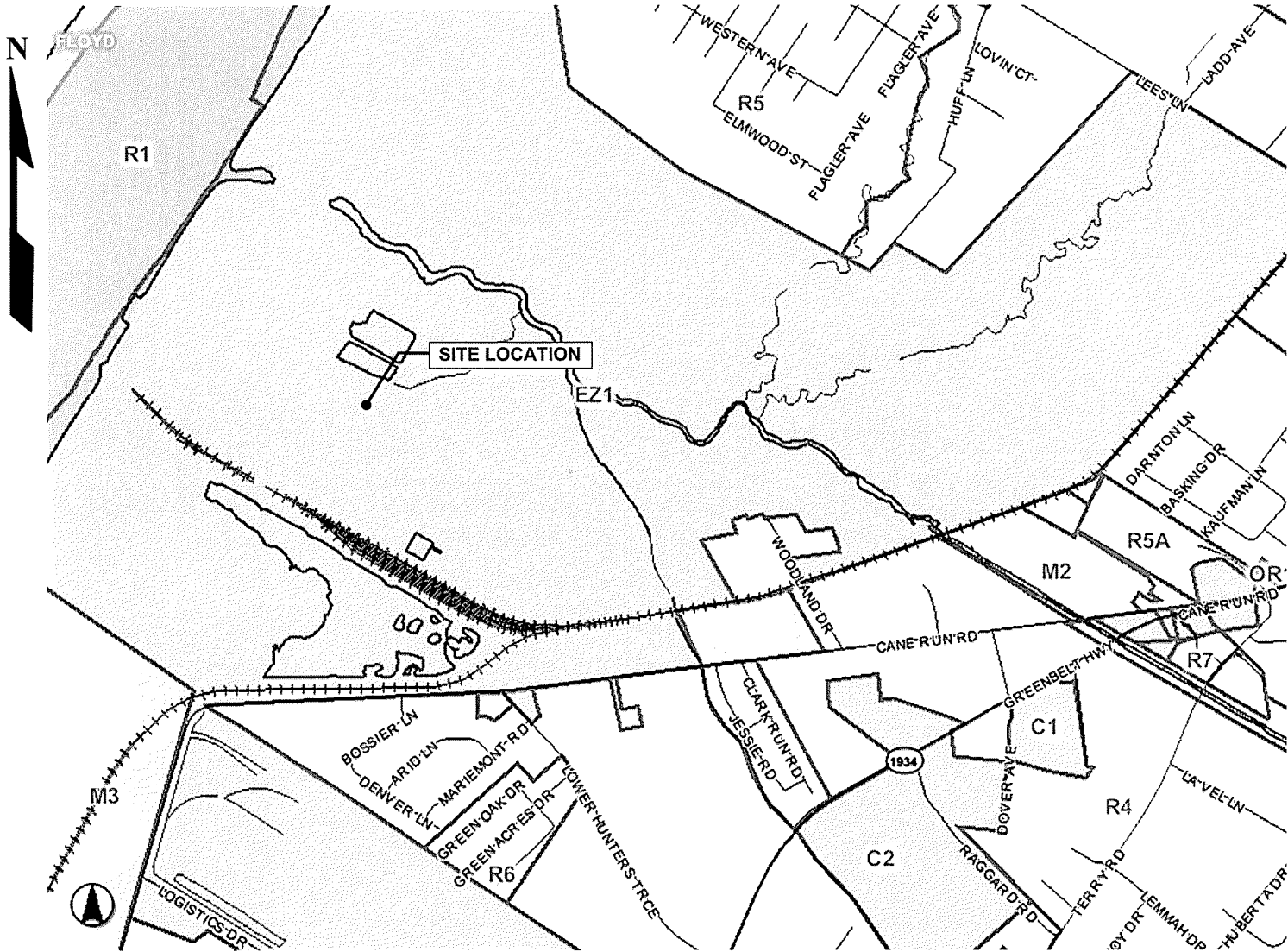


WETLANDS MAP

Project No. 3142-11-1377

FIGURE 8

Source: Jefferson County Property Valuation Administrator & Louisville Jefferson County Information Consortium (LOJIC)



### LEGEND

Zoning

- Commercial - Industrial
- Industrial
- Office
- Residential
- Special

--- Railroad

□ Parcel

□ Road

▣ Zoning Boundary

■ Ohio River

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5252 CANE RUN ROAD  
LOUISVILLE, KENTUCKY



LAND USE AND ZONING MAP  
Project No. 3142-11-1377  
FIGURE 9



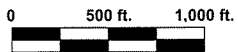
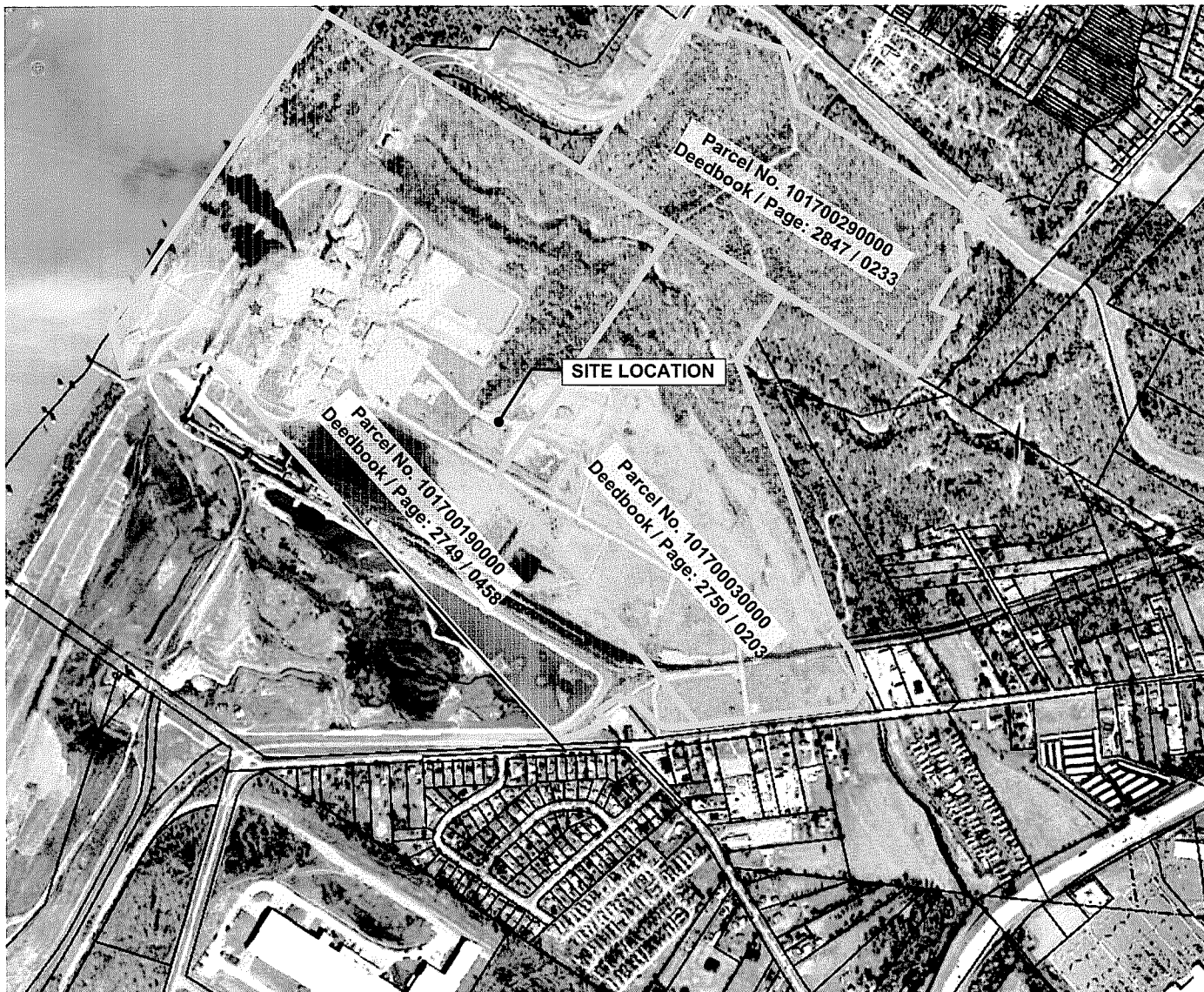
LOUISVILLE GAS & ELECTRIC COMPANY  
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LOUISVILLE, KENTUCKY




PROPOSED PIPELINE ROUTE MAP  
Project No. 3142-11-1377  
FIGURE 10

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Checked By / Date: NGS / 06/28/2011

Source: Jefferson County Property Valuation Administrator & Louisville Jefferson County Information Consortium (LOJIC)



**LEGEND**



LG&E-KU PROPOSED NGCC  
PROJECT SITE PROPERTY  
BOUNDARIES

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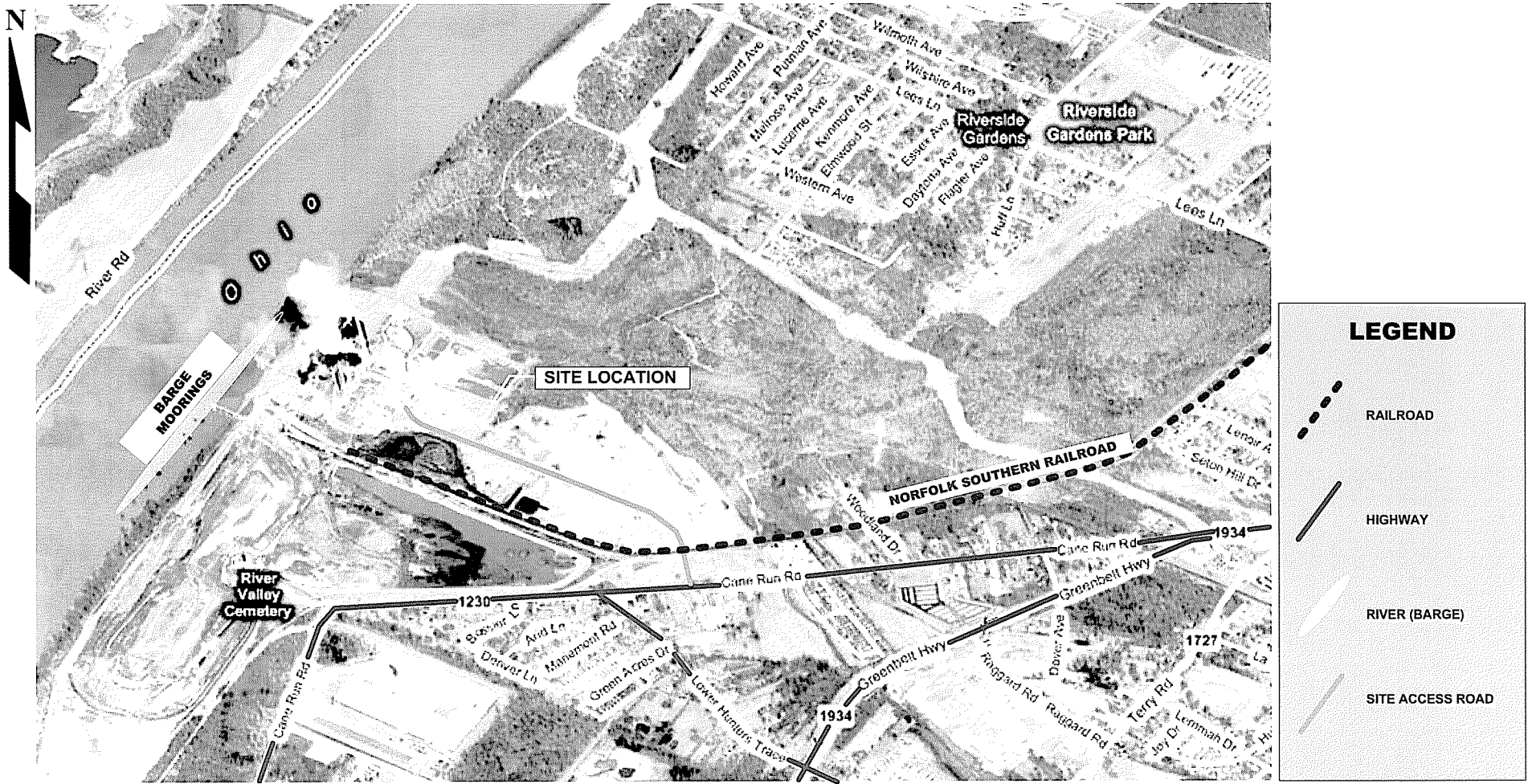


PROPERTY BOUNDARY MAP

Project No. 3142-11-1377

FIGURE 11

Source: BING Maps



NOT TO SCALE

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LOUISVILLE, KENTUCKY

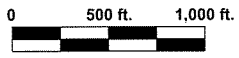
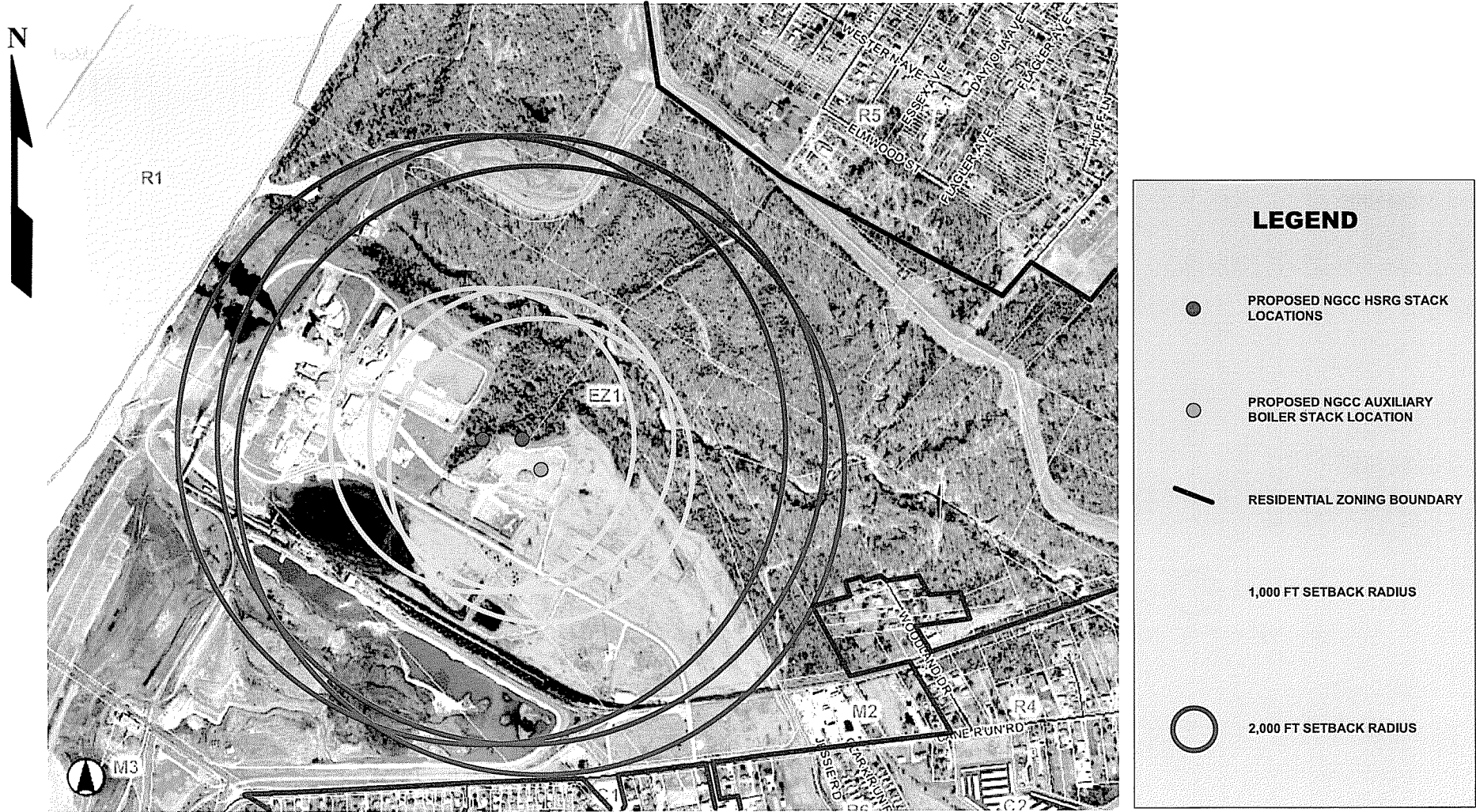


TRANSPORTATION INFRASTRUCTURE MAP

Project No. 3142-11-1377

FIGURE 12

Source: Jefferson County Property Valuation Administrator & Louisville Jefferson County Information Consortium (LOJIC)



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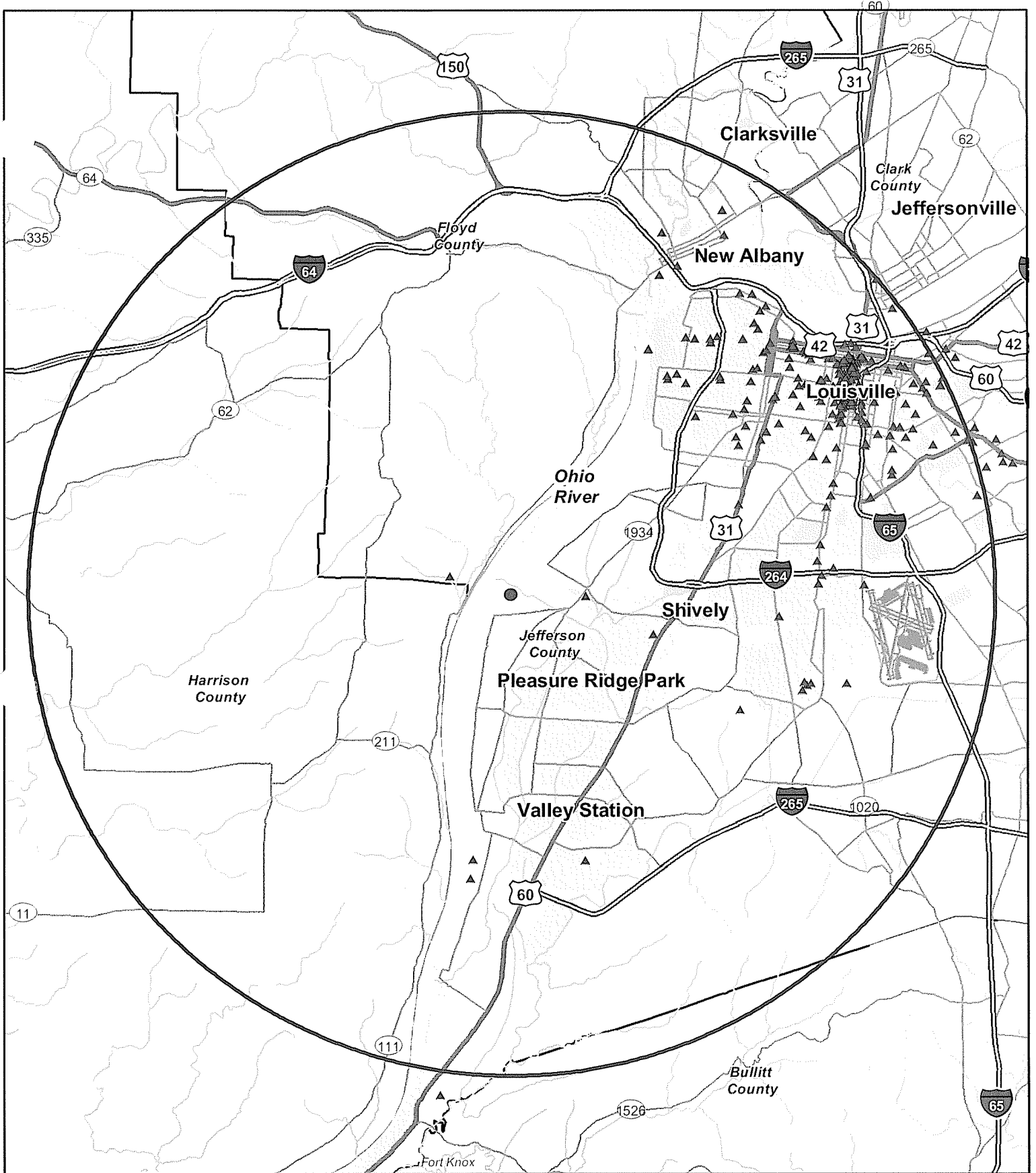
LOUISVILLE GAS & ELECTRIC COMPANY  
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LOUISVILLE, KENTUCKY






SETBACK RADII MAP

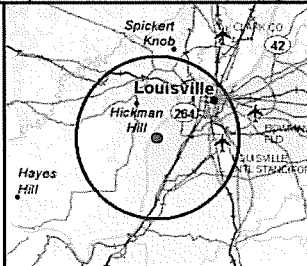
Project No. 3142-11-1377

FIGURE 13



**Legend**

-  Historic Property
-  Proposed Stack Location
-  Study Area (10 Mile Radius)



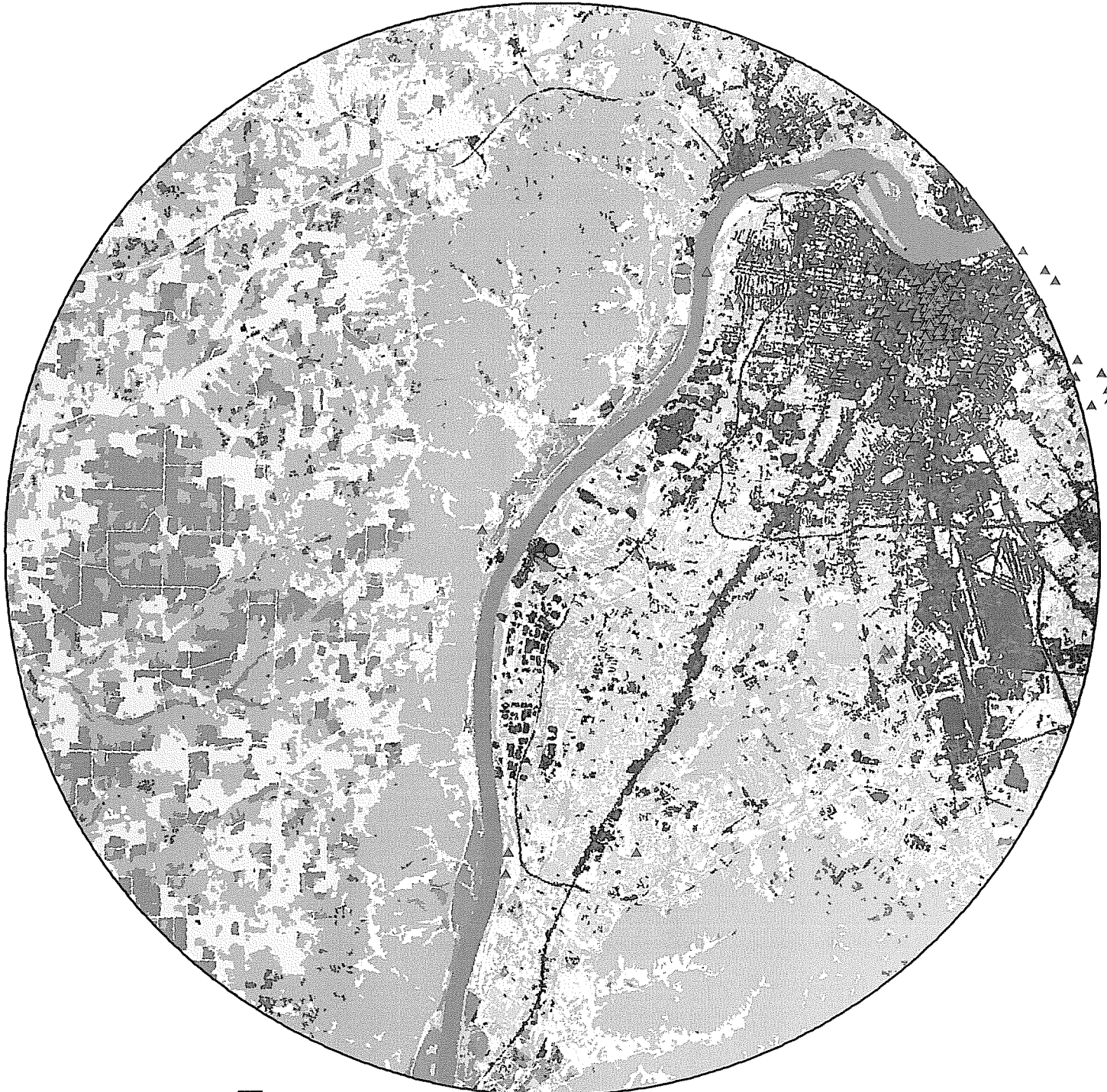
Created by: CGS  
 Checked by: VLH  
 Date: 5/24/2011  
 Project: 3142111377



Louisville Gas & Electric Company  
 Cane Run Generating Station

Figure 14  
 Proposed NGCC Unit



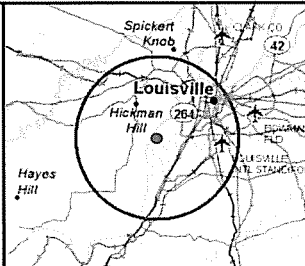


**USGS Land Cover (2001)**

- |                              |                              |
|------------------------------|------------------------------|
| Open Water                   | Evergreen Forest             |
| Developed - Open Space       | Mixed Forest                 |
| Developed - Low Intensity    | Shrub/Scrub                  |
| Developed - Medium Intensity | Grassland                    |
| Developed - High Intensity   | Pasture Hay                  |
| Barren Land                  | Cultivated Crops             |
| Deciduous Forest             | Woody Wetlands               |
|                              | Emergent Herbaceous Wetlands |

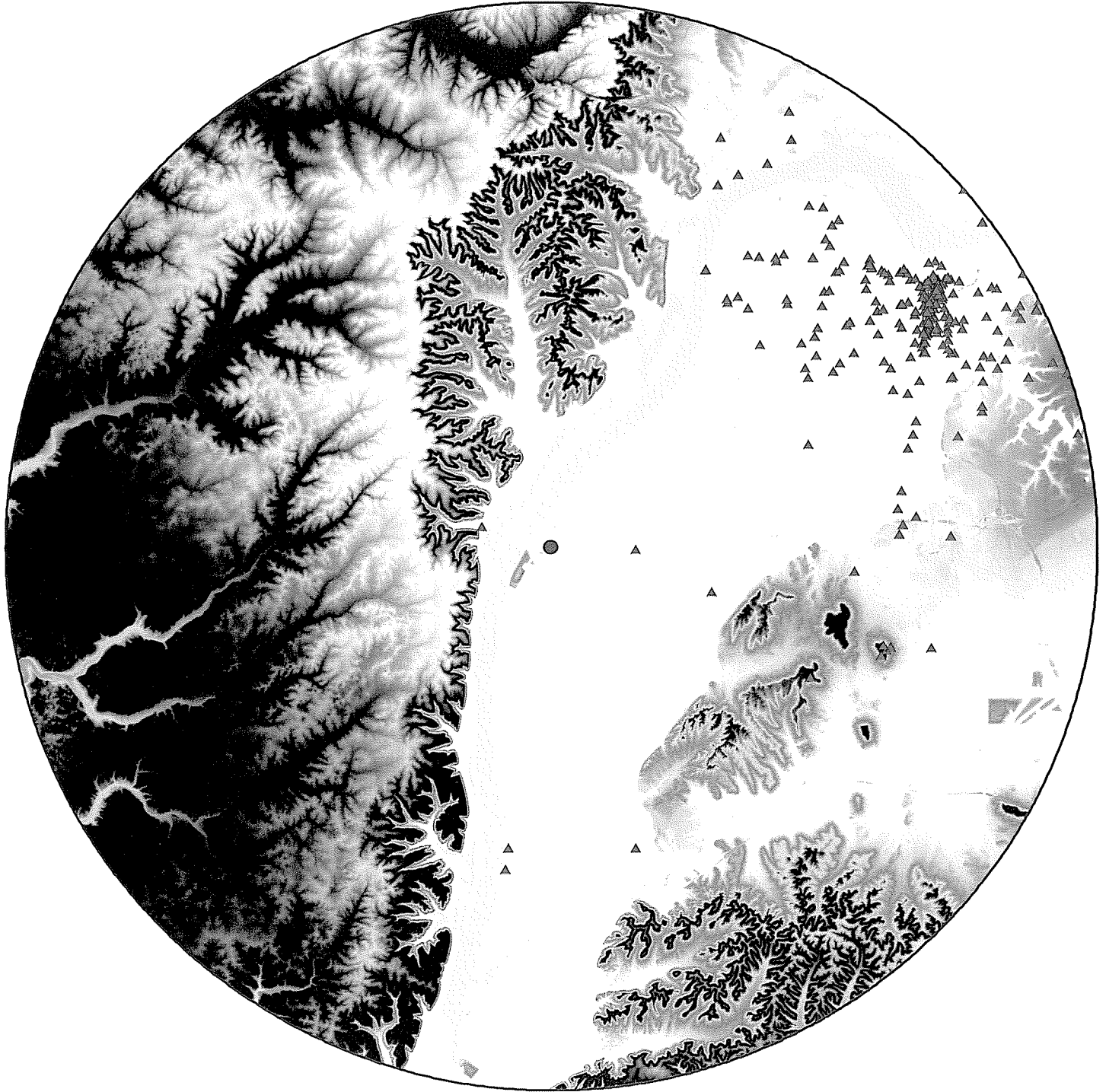
**Legend**

- Historic Property
- Proposed Stack Location
- Study Area (10 Mile Radius)








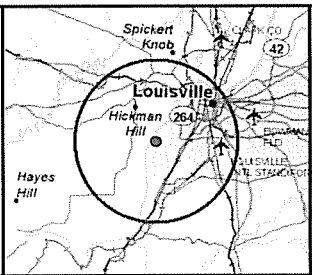
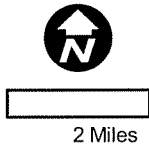
Created by: CGS  
 Checked by: VLH  
 Date: 5/24/2011  
 Project: 3142111377





**Legend**

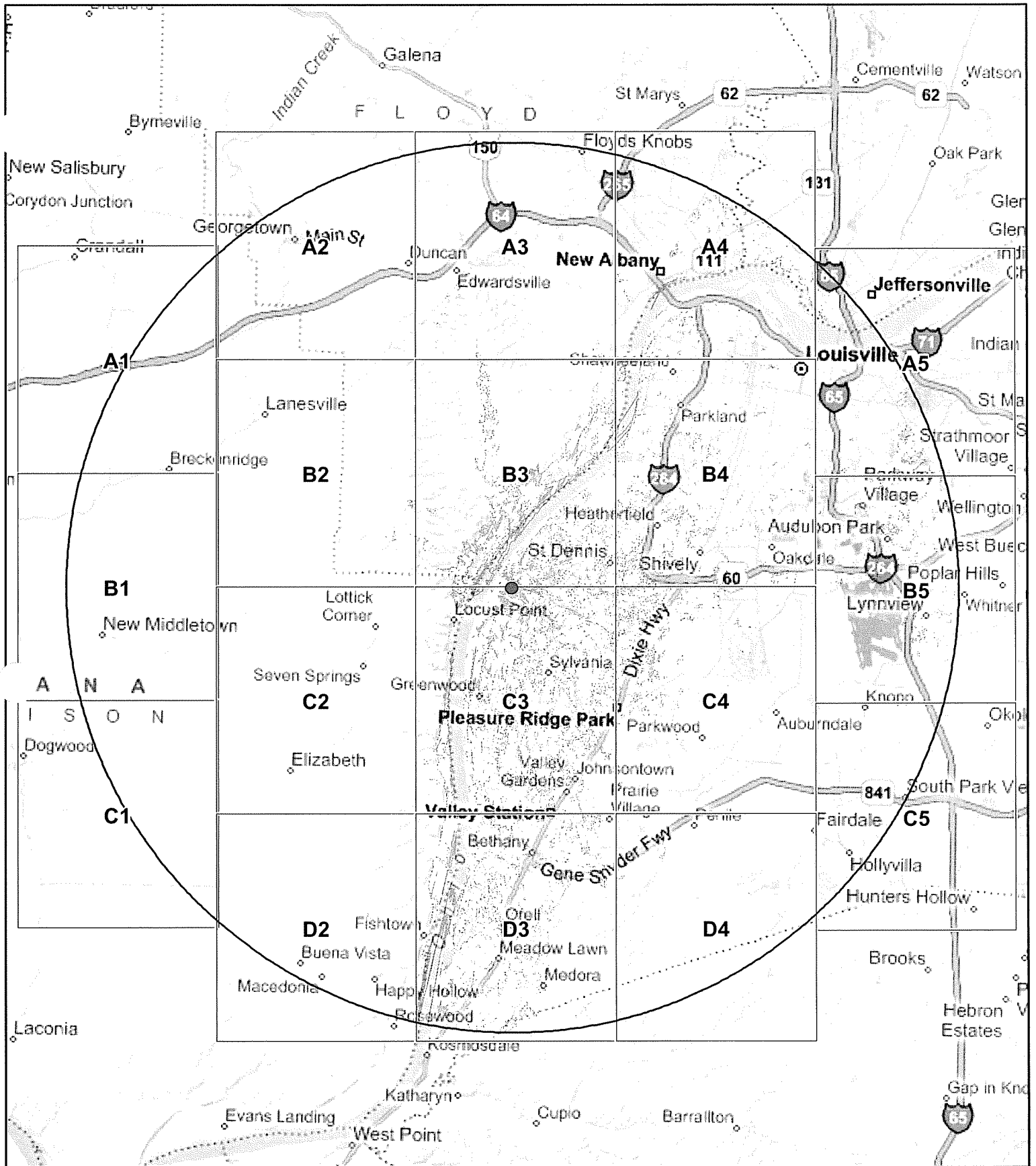
-  Historic Property
-  Proposed Stack Location
-  Study Area (10 Mile Radius)
- Elevation (ft)**
-  High : 1004
-  Low : 374



Created by: CGS  
 Checked by: VLH  
 Date: 5/24/2011  
 Project: 3142111377



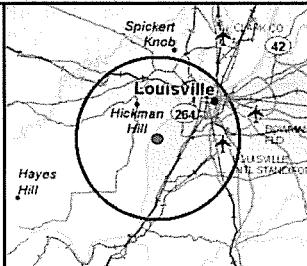
Louisville Gas & Electric Company  
 Cane Run Generating Station  
 Figure 16  
 USGS Elevation Within  
 10 Miles of Proposed NGCC  
 Stacks



**Legend**

- Proposed Stack Location
- Visible Area
- Study Area (10 Mile Radius)
- Sheet #

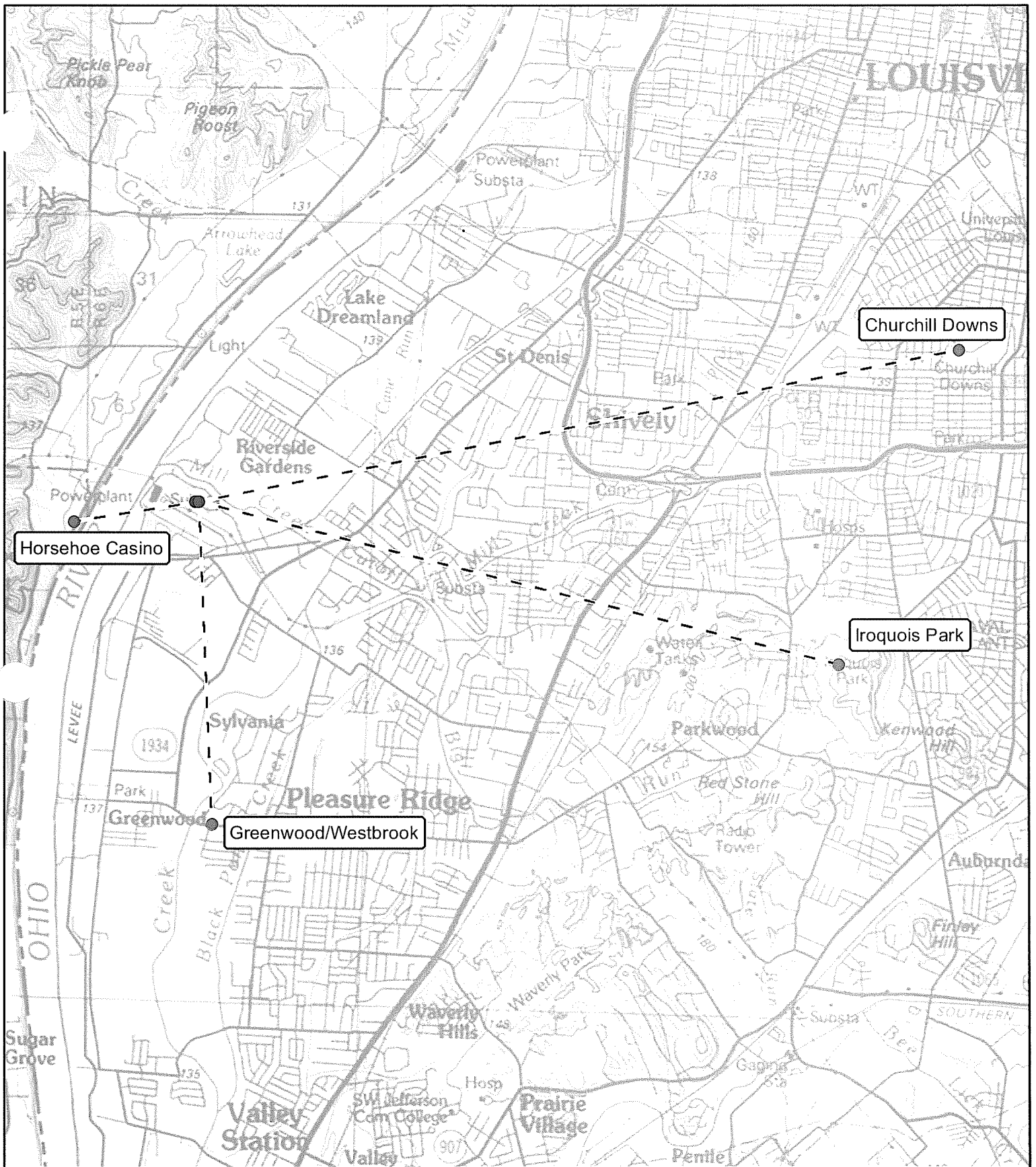
Background Image:  
Microsoft Road Map



Created by: CGS  
Checked by: VLH  
Date: 5/24/2011  
Project: 3142111377



Louisville Gas & Electric Company  
Cane Run Generating Station  
  
Figure 17  
Visible Areas Within  
10 Miles of Proposed NGCC  
Stacks  
Sheet Index



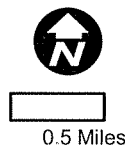
**Legend**

- Proposed Stack Location
- Observer Location
- - - Line of Sight Profile

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 Checked by: VLH  
 Date: 6/29/2011  
 Project: 3142111377

Louisville Gas & Electric Company  
 Cane Run Generating Station

Figure 18  
 Line-of-Sight Profile Locations

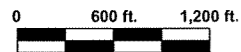




**LEGEND**

● BURNS & McDONNELL STUDY: SOUND MEASUREMENT LOCATION

○ REM STUDY: SOUND MEASUREMENT LOCATION



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Checked By / Date: NGS / 06/28/2011

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SOUND LEVEL MEASUREMENT LOCATION MAP

Project No. 3142-11-1377

FIGURE 19

## **APPENDIX A**

### **USDA-NRCS Custom Soil Resources Report**



A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

# Custom Soil Resource Report for Jefferson County, Kentucky

LG&E Cane Run #7 - NGCC



# Preface

---

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://soils.usda.gov/sqi/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<http://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://soils.usda.gov/contact/state\\_offices/](http://soils.usda.gov/contact/state_offices/)).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Soil Data Mart Web site or the NRCS Web Soil Survey. The Soil Data Mart is the data storage site for the official soil survey information.

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<b>Soil Map</b> .....	7
Soil Map.....	8
Legend.....	9
Map Unit Legend.....	10
Map Unit Descriptions.....	10
Jefferson County, Kentucky.....	12
Dp—Dumps, ash.....	12
OtB—Otwood silt loam, 2 to 6 percent slopes.....	12
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# How Soil Surveys Are Made

---

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the

## Custom Soil Resource Report

individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique *combination of soil components and/or miscellaneous areas in predictable proportions*. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. *Values for some properties are estimated from combinations of other properties.*

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the *field-observed characteristics* and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

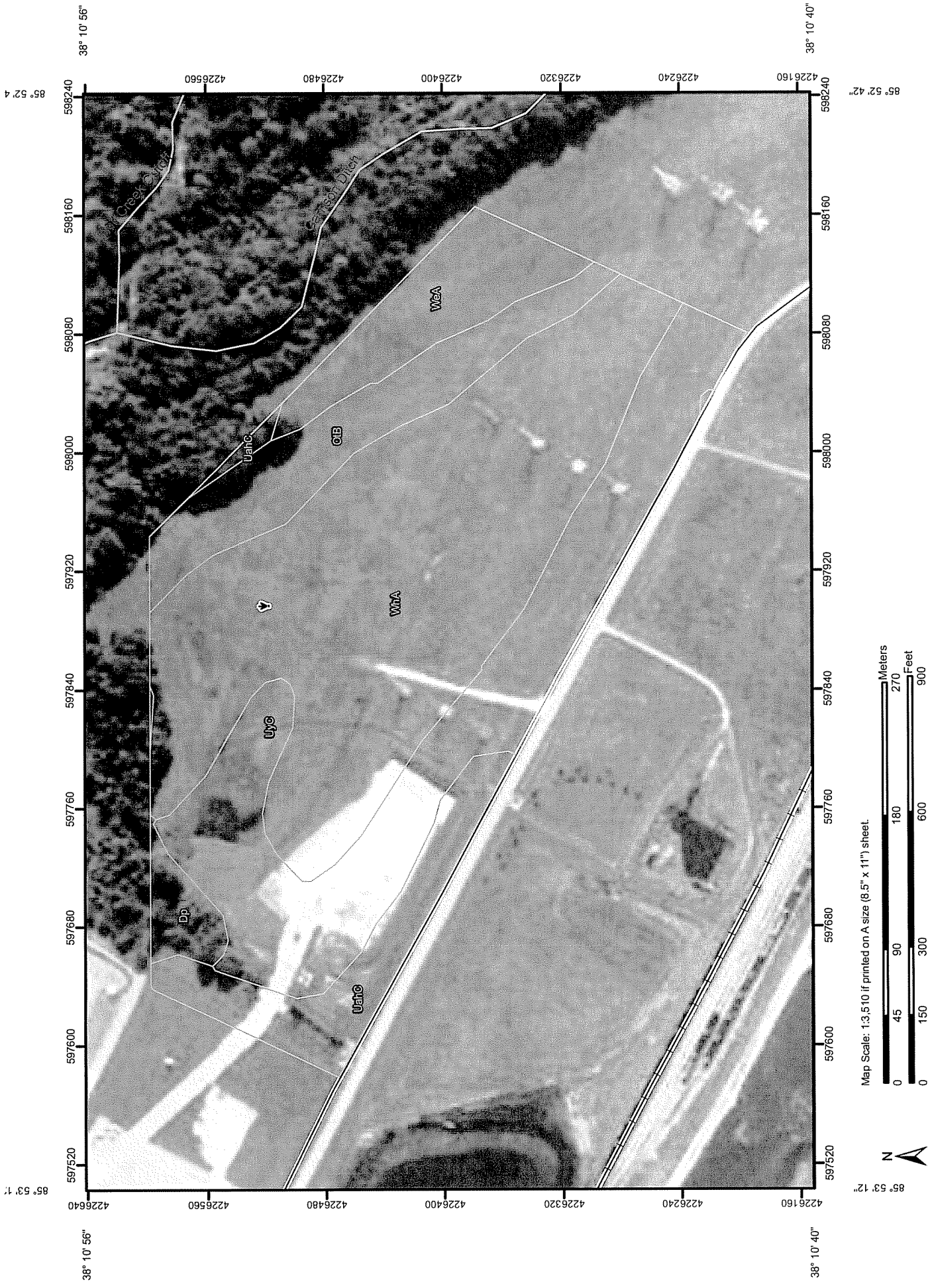
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

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The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Source Report  
Map




Map Scale: 1:3,510 if printed on A size (8.5" x 11") sheet.




# Custom Soil Resource Report

## MAP LEGEND














### Area of Interest (AOI)


 Area of Interest (AOI)


### Soils

 Soil Map Units

### Special Point Features




-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot
-  Spoil Area
-  Stony Spot

 Very Stony Spot

 Wet Spot

 Other



### Special Line Features

-  Gully
-  Short Steep Slope
-  Other






### Political Features

 Cities

### Water Features

-  Oceans
-  Streams and Canals

### Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

## MAP INFORMATION

Map Scale: 1:3,510 if printed on A size (8.5" x 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>  
 Coordinate System: UTM Zone 16N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Jefferson County, Kentucky  
 Survey Area Data: Version 10, Sep 21, 2009

Date(s) aerial images were photographed: 8/16/2004

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Jefferson County, Kentucky (KY111)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Dp	Dumps, ash	0.7	2.3%
OtB	Otwood silt loam, 2 to 6 percent slopes	3.2	10.0%
UahC	Urban land-Udorthents complex, 0 to 12 percent slopes	2.7	8.4%
UyC	Urban land-Alfic Udarents-Wheeling complex, 0 to 12 percent slopes	8.4	25.8%
WeA	Weinbach silt loam, 0 to 2 percent slopes	2.5	7.6%
WhA	Wheeling loam, 0 to 2 percent slopes	14.9	45.9%
<b>Totals for Area of Interest</b>		<b>32.4</b>	<b>100.0%</b>

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.



## Custom Soil Resource Report

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

## Jefferson County, Kentucky

### Dp—Dumps, ash

#### Map Unit Setting

*Mean annual precipitation:* 40 to 46 inches

*Mean annual air temperature:* 52 to 57 degrees F

*Frost-free period:* 172 to 204 days

#### Map Unit Composition

*Dumps, ash:* 100 percent

#### Description of Dumps, Ash

##### Interpretive groups

*Land capability (nonirrigated):* 8s

### OtB—Otwood silt loam, 2 to 6 percent slopes

#### Map Unit Setting

*Elevation:* 410 to 700 feet

*Mean annual precipitation:* 40 to 46 inches

*Mean annual air temperature:* 52 to 57 degrees F

*Frost-free period:* 172 to 204 days

#### Map Unit Composition

*Otwood and similar soils:* 90 percent

*Minor components:* 10 percent

#### Description of Otwood

##### Setting

*Landform:* Stream terraces

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Parent material:* Mixed fine-silty alluvium over mixed loamy alluvium

##### Properties and qualities

*Slope:* 2 to 6 percent

*Depth to restrictive feature:* 20 to 36 inches to fragipan

*Drainage class:* Moderately well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.01 in/hr)

*Depth to water table:* About 15 to 30 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 20 percent

*Available water capacity:* Low (about 5.7 inches)

## Custom Soil Resource Report

### Interpretive groups

*Land capability (nonirrigated): 2e*

### Typical profile

*0 to 10 inches: Silt loam*

*10 to 27 inches: Silt loam*

*27 to 46 inches: Silt loam*

*46 to 83 inches: Silt loam*

*83 to 91 inches: Stratified sandy loam to loam*

### Minor Components

#### Lawrence

*Percent of map unit: 4 percent*

#### Elk

*Percent of map unit: 3 percent*

#### Nolin

*Percent of map unit: 3 percent*

## UahC—Urban land-Udorthents complex, 0 to 12 percent slopes

### Map Unit Setting

*Elevation: 380 to 600 feet*

*Mean annual precipitation: 40 to 46 inches*

*Mean annual air temperature: 52 to 57 degrees F*

*Frost-free period: 172 to 204 days*

### Map Unit Composition

*Urban land: 60 percent*

*Udorthents and similar soils: 40 percent*

### Description of Udorthents

#### Properties and qualities

*Slope: 0 to 12 percent*

*Depth to restrictive feature: More than 80 inches*

*Depth to water table: About 12 to 48 inches*

*Frequency of flooding: None*

*Frequency of ponding: None*

## UyC—Urban land-Alfic Udarents-Wheeling complex, 0 to 12 percent slopes

### Map Unit Setting

*Elevation: 400 to 600 feet*

## Custom Soil Resource Report

*Mean annual precipitation:* 40 to 46 inches  
*Mean annual air temperature:* 52 to 57 degrees F  
*Frost-free period:* 172 to 204 days

### Map Unit Composition

*Urban land:* 50 percent  
*Alfic udarents and similar soils:* 25 percent  
*Wheeling and similar soils:* 25 percent

### Description of Wheeling

#### Setting

*Landform:* Stream terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Mixed fine-loamy alluvium

#### Properties and qualities

*Slope:* 0 to 12 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.60 to 5.95 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water capacity:* Moderate (about 6.7 inches)

#### Interpretive groups

*Land capability (nonirrigated):* 3e

#### Typical profile

*0 to 6 inches:* Loam  
*6 to 49 inches:* Loam  
*49 to 85 inches:* Stratified sandy loam

### Description of Alfic Udarents

#### Setting

*Landform:* Stream terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Mixed fine-loamy alluvium

#### Properties and qualities

*Slope:* 0 to 12 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to high (0.00 to 5.95 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water capacity:* Moderate (about 6.5 inches)

## Custom Soil Resource Report

### Typical profile

*0 to 49 inches:* Loam

*49 to 85 inches:* Stratified sandy loam

## WeA—Weinbach silt loam, 0 to 2 percent slopes

### Map Unit Setting

*Elevation:* 400 to 550 feet

*Mean annual precipitation:* 40 to 46 inches

*Mean annual air temperature:* 52 to 57 degrees F

*Frost-free period:* 172 to 204 days

### Map Unit Composition

*Weinbach and similar soils:* 90 percent

*Minor components:* 10 percent

### Description of Weinbach

#### Setting

*Landform:* Stream terraces

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Mixed fine-silty alluvium over mixed loamy alluvium

#### Properties and qualities

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* 20 to 36 inches to fragipan

*Drainage class:* Somewhat poorly drained

*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.01 in/hr)

*Depth to water table:* About 12 to 20 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water capacity:* Low (about 4.3 inches)

#### Interpretive groups

*Land capability (nonirrigated):* 2w

#### Typical profile

*0 to 12 inches:* Silt loam

*12 to 20 inches:* Silt loam

*20 to 41 inches:* Silt loam

*41 to 52 inches:* Silty clay loam

*52 to 82 inches:* Stratified loam to silty clay loam

### Minor Components

#### Otwood

*Percent of map unit:* 3 percent

## Custom Soil Resource Report

### **Sciotoville**

*Percent of map unit: 3 percent*

### **Elk**

*Percent of map unit: 2 percent*

### **Robertsville**

*Percent of map unit: 2 percent*

*Landform: Stream terraces*

*Landform position (three-dimensional): Tread*

*Down-slope shape: Concave*

*Across-slope shape: Concave*

## **WhA—Wheeling loam, 0 to 2 percent slopes**

### **Map Unit Setting**

*Elevation: 400 to 600 feet*

*Mean annual precipitation: 40 to 46 inches*

*Mean annual air temperature: 52 to 57 degrees F*

*Frost-free period: 172 to 204 days*

### **Map Unit Composition**

*Wheeling and similar soils: 90 percent*

*Minor components: 10 percent*

### **Description of Wheeling**

#### **Setting**

*Landform: Stream terraces*

*Landform position (three-dimensional): Tread*

*Down-slope shape: Linear*

*Across-slope shape: Linear*

*Parent material: Mixed fine-loamy alluvium*

#### **Properties and qualities**

*Slope: 0 to 2 percent*

*Depth to restrictive feature: More than 80 inches*

*Drainage class: Well drained*

*Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high  
(0.60 to 5.95 in/hr)*

*Depth to water table: More than 80 inches*

*Frequency of flooding: None*

*Frequency of ponding: None*

*Available water capacity: Moderate (about 6.7 inches)*

#### **Interpretive groups**

*Land capability (nonirrigated): 1*

#### **Typical profile**

*0 to 6 inches: Loam*

*6 to 49 inches: Loam*

## Custom Soil Resource Report

*49 to 85 inches: Stratified sandy loam*

### **Minor Components**

#### **Elk**

*Percent of map unit: 4 percent*

#### **Otwood**

*Percent of map unit: 3 percent*

#### **Nolin**

*Percent of map unit: 3 percent*

# References

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American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. <http://soils.usda.gov/>

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. <http://soils.usda.gov/>

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. <http://soils.usda.gov/>

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. <http://soils.usda.gov/>

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.glti.nrcs.usda.gov/>

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. <http://soils.usda.gov/>

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. <http://soils.usda.gov/>



## Custom Soil Resource Report

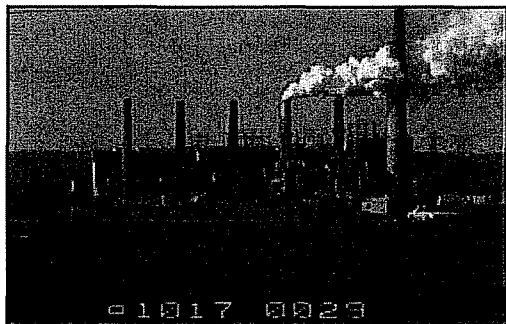
United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210.

## **APPENDIX B**

**Legal Descriptions for Parcels 101700190000;  
101700030000; and 101700290000**

Jefferson County PVA Property Valuation Administrator

# Address Unknown



MAILING ADDRESS Address Unknown  
 Franchise, KY  
 FRANCHISE

OWNER LOUISVILLE GAS &  
 ELECTRIC CO

PARCEL ID 101700290000

ASSESSED VALUE \$0

APPROXIMATE ACREAGE 55.02

PROPERTY CLASS 820 Utility Industrial

DEED BOOK/PAGE 2847 0233 (N/A Online)

DISTRICT NUMBER 500008

OLD DISTRICT 25

FIRE DISTRICT Lake Dreamland

SCHOOL DISTRICT Jefferson County

NEIGHBORHOOD 42 / COMMERCIAL

SATELLITE CITY Jefferson County

SHERIFF'S TAX INFO View Tax Information

## Property Details

TYPE 1 : Single family

YEAR BUILT 1900

EXTERIOR WALL

ROOFING STRUCTURE

BASEMENT FOUNDATION Full Crawl

CONDITION normal for age

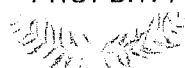
BUILDING TYPE 99 Condominium

STORIES 1.00

FULL BATHROOMS 0

HALF BATHROOMS 1

SKETCH  
 NOT  
 AVAILABLE  
 FOR THIS  
 PROPERTY



Standard Information Map

To print map, use the print button on the map toolbar.

Standard Information Map

## Sales History

DEED BOOK/PAGE	SALE PRICE	SALE DATE	PREVIOUS OWNER
2847 0233 (N/A Online)	\$0	01/01/1952	OWNER UNKNOWN

Property is assessed per KRS 132.20 on January 1st of each year. The current year assessments are updated and posted on the website in mid April. Information deemed reliable but not guaranteed. Data last updated: 07/13/2011

Jefferson County PVA Property Valuation Administrator

# 5252 Cane Run Rd



## Property Details

- TYPE :
- YEAR BUILT
- EXTERIOR WALL
- ROOFING STRUCTURE
- BASEMENT FOUNDATION
- CONDITION
- BUILDING TYPE
- STORIES
- FULL BATHROOMS
- HALF BATHROOMS

MAILING ADDRESS Address Unknown  
Franchise, KY  
FRANCHISE

OWNER LOUISVILLE GAS &  
ELECTRIC CO

PARCEL ID 101700030000

LAND VALUE \$3,099,540

ASSESSED VALUE \$3,099,540

APPROXIMATE ACREAGE 80.34

PROPERTY CLASS 820 Utility Industrial

DEED BOOK/PAGE 2750 0203 (N/A Online)

DISTRICT NUMBER 500009

OLD DISTRICT 25

FIRE DISTRICT Pleasure Ridge Park

SCHOOL DISTRICT Jefferson County

NEIGHBORHOOD 42 / COMMERCIAL

SATELLITE CITY Jefferson County

SHERIFF'S TAX INFO [View Tax Information](#)

SKETCH  
NOT  
AVAILABLE  
FOR THIS  
PROPERTY

Standard Information Map  
To print map, use the print button on the map toolbar.  
Standard Information Map

## Sales History

DEED BOOK/PAGE	SALE PRICE	SALE DATE	PREVIOUS OWNER
2750 0203 (N/A Online)	\$0	01/01/1951	OWNER UNKNOWN

## Assessment History

EXEMPTION	DATE	LAND	IMPROVEMENTS	TOTAL	REASON
none	03/11/2003	\$3,099,540	\$0	\$3,099,540	R - Reassessment

Property is assessed per KRS 132.20 on January 1st of each year. The current year assessments are updated and posted on the website in mid April. Information deemed reliable but not guaranteed. Data last updated: 07/13/2011

THIS DEED between ANNA L. HAWES, unmarried, party of the first part, and  
 LOUISVILLE GAS AND ELECTRIC COMPANY, a Kentucky corporation,  
 party of the second part;

WITNESSETH:- That for a VALUABLE CONSIDERATION paid, the receipt of which is hereby acknowledged, the party of the first part hereby conveys with covenant of GENERAL WARRANTY, unto the party of the second part, in fee simple, the following described real estate situated in Jefferson County, Kentucky, a short distance South of Lee's Lane, more particularly bounded and described as follows:-

BEGINNING at a point in the center of Cane Run Creek, in the Northeast line of the 9.75 acre tract conveyed to Louisville Gas and Electric Company, a corporation, by deed dated April 19, 1951, of record in Deed Book 2750 Page 208 in the office of the Clerk of the County Court of Jefferson County, Kentucky, said point also being a corner to the 96 acre tract conveyed to Anna L. Hawes by deed dated November 1, 1938, of record in Deed Book 1688 Page 592 in the office of the Clerk aforesaid; thence with the Southeasterly lines of the tract conveyed to Anna Hawes aforesaid, North 30 degrees 57 minutes East, 321.75 feet to a stake; North 53 degrees 33 minutes West, 165 feet to a stake; North 23 degrees 57 minutes East, 396 feet to a stake; thence North 37 degrees 57 minutes East, 11.5 feet to a stake in the Southwest line of the tract of land condemned for Flood Protection purposes in Action No. 323-721, Jefferson Circuit Court, and conveyed by John O. Arnold, Commissioner, to Jefferson County Fiscal Court, by deed dated August 22, 1951, of record in Deed Book 2819 Page 146 in the aforesaid office; thence with the Southwest line of said Flood Protection Structure, the following courses and distances: North 47 degrees 54 minutes 26 seconds West, 202.53 feet to a stake, said stake being 280 feet from the center line of the Flood Protection Structure on file in the U. S. Engineer's Office; thence South 42 degrees 5 minutes 34 seconds West, 180 feet to a stake; thence North 47 degrees 54 minutes 26 seconds West, 347.95 feet to a stake; thence North 59 degrees 52 minutes 47 seconds West, 351.32 feet to a stake; thence South 30 degrees 07 minutes 13 seconds West, 50 feet to a stake; thence North 59 degrees 52 minutes 47 seconds West, 235.6 feet to a stake in the Northwest line of the 96 acre tract conveyed to Anna L. Hawes and the Southeast line of the tract conveyed to Frederick Schlatter by deed dated April 6, 1906, of record in Deed Book 636 Page 574 in the aforesaid office; thence with the said Hawes and Schlatter line, South 32 degrees 56 minutes 43 seconds West, passing a stone at 1062.37 feet, in all 1064.56 feet to the corner common to the Schlatter and Hawes tracts, and in the Northeast line of the tract of land conveyed to the Louisville Gas and Electric Company by deed dated April 19, 1951, of record in Deed Book 2749 Page 458 in the aforesaid Clerk's office; thence with the Southwesterly line of the tract of land conveyed to Anna Hawes aforesaid and the line of the Louisville Gas and Electric Company property last mentioned, South 58 degrees 51 minutes 30 seconds East, 622.33 feet to a stone; thence continuing with the Southwest line of the Anna L. Hawes tract, mentioned aforesaid, and with the Northeast line of the tract of lands conveyed to Louisville Gas and Electric Company by deeds dated April 19, 1951, of record in Deed Books 2750 Page 203 and 2750 Page 208, both of record in the aforesaid Clerk's office, South 59 degrees 03 minutes East, passing a stone at 763.52 feet, and a stake at 1784.44 feet, in all 1817.03 feet to the point of beginning, containing 44.9238 acres, as shown on survey made December 20, 1951, by Stonestreet and Ford, Surveyors.

BEING a part of the same property conveyed to the party of the first part by deed dated November 1, 1938 recorded in Deed Book 1688 Page 592 in the office of the Clerk of the County Court of Jefferson County, Kentucky.

As a FURTHER CONSIDERATION, the party of the first part hereby grants and conveys unto the party of the second part, its successors and assigns, an easement for the purpose of ingress and egress, said easement to extend from Elmwood Street at the Southwesterly line of Riverside Gardens Subdivision as shown on plat of same recorded in Plat and Subdivision Book 6 Pages 30 and 31 in the office of the Clerk of the County Court of Jefferson County, Kentucky, in a Northwestwardly direction along the Northeasterly line of the Hawes tract to a point opposite the ramp of the flood wall, and thence in a Southwesterly direction to the ramp which has been constructed over the flood wall, said ramp having been provided for in Judgment entered in Action 323-721 Jefferson Circuit Court and in instrument dated August 22, 1951 recorded in Deed Book 2819 Page 146 in Jefferson County Court Clerk's office, and over said ramp to the real estate hereinabove described and conveyed, said easement to be 25 feet wide, in so far as it affects the remaining property of first party.

BEING a part of the same property conveyed to the party of the first part by deed dated November 1, 1938 recorded in Deed Book 1688 Page 592 in the office of the Clerk aforesaid.

The party of the first part further covenants that she is lawfully seized of the estate hereby conveyed, has full right and power to convey the same, and that said estate is free from all encumbrances except State, County and School taxes assessed and payable in the year 1951, and all subsequent taxes, which the party of the second part hereby assumes and agrees to pay.

IN TESTIMONY WHEREOF, witness the signature of the party of the first part, this 14th day of February, 1952.

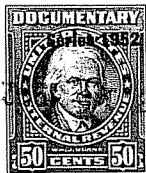
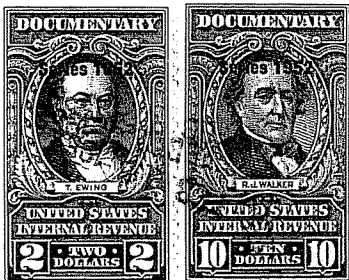


Anna L. Hawes  
Anna L. Hawes

STATE OF KENTUCKY  
SS  
COUNTY OF JEFFERSON

I, the undersigned Notary Public, within and for the State and County aforesaid, do hereby certify that the foregoing deed was produced to me in said State and County and was acknowledged by ANNA L. HAWES, unmarried, party thereto, to be her act and deed.

My commission expires July 19, 1954  
WITNESS my hand this 14th day of February, 1952.



John M. Robison Jr.  
Notary Public, Jefferson County, Kentucky.



THIS DEED between BRUCE HOBLITZELL, SR. and IRENE F. HOBLITZELL,  
 his wife, parties of the first part; and  
 LOUISVILLE GAS AND ELECTRIC COMPANY, a Kentucky Corporation, party  
 of the second part;

WITNESSETH:—That for a VALUABLE CONSIDERATION paid, the receipt of which is hereby acknowledged, the parties of the first part hereby convey unto the party of the second part, in fee simple, with covenant of GENERAL WARRANTY, the following described real estate situated in Jefferson County, Kentucky, viz:

BEGINNING at an iron pin in the center line of Cane Run Road at the Southwest corner of the tract of 73.4 acres conveyed to Albert Miller by deed dated May 12, 1930 of record in Deed Book 1444 Page 89 in the office of the Clerk of the County Court of Jefferson County, Kentucky; thence with the Southwest line of said tract North 33 degrees 50 minutes West 1908.4 feet to a post corner to said tract; thence with another line of said tract North 27 degrees 44 minutes East 1675.47 feet to a stone in what was formerly Meriwether or Allsmiller's line; thence with said line South 60 degrees East 762.30 feet to a stone corner to the aforesaid tract of 73.4 acres; thence with lines of same South 31 degrees 18 minutes West 285.45 feet to a stone; South 29 degrees 10 minutes West 318.45 feet and South  $36\frac{3}{4}$  degrees West 70.12 feet to another corner of said 73.4 acre tract; thence with Northeast lines of said tract South  $30\frac{1}{4}$  degrees East 1105.5 feet and South  $24\frac{1}{4}$  degrees East 1085.7 feet to an iron pin in the center line of Cane Run Road; thence with centerline of said road South 81 degrees 10 minutes West 1073.98 feet to the beginning.

Bruce Hoblitzell, Sr. of the first part having acquired title to said property by deed dated April 19, 1951 of record in Deed Book 2742 Page 44 in the aforesaid Clerk's office.

TOGETHER with all of first parties right, title and interest in and to the property abutting thereon.

(see over)





EX. 92739

Robertson

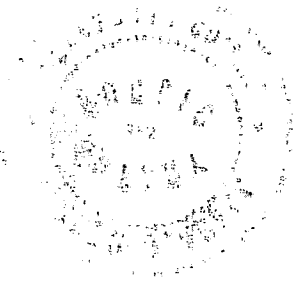
To } DEED (Fee Simple)  
(Without Lien)

Samuel Lee

Electric Co.

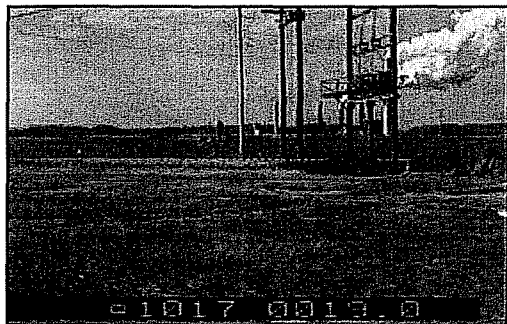
C

DELIVER TO -  
Louisiana Title Insurance Co.



Jefferson County PVA Property Valuation Administrator

# 5252 Cane Run Rd



MAILING ADDRESS Address Unknown  
Franchise, KY  
FRANCHISE

OWNER LOUISVILLE GAS &  
ELECTRIC CO

PARCEL ID 101700190000

LAND VALUE \$6,113,750

ASSESSED VALUE \$6,113,750

APPROXIMATE ACREAGE 158.47

PROPERTY CLASS 820 Utility Industrial

DEED BOOK/PAGE 2749 0458 (N/A Online)

DISTRICT NUMBER 500009

OLD DISTRICT 25

FIRE DISTRICT Pleasure Ridge Park

SCHOOL DISTRICT Jefferson County

NEIGHBORHOOD 42 / COMMERCIAL

SATELLITE CITY Jefferson County

SHERIFF'S TAX INFO [View Tax Information](#)

## Property Details

TYPE :  
YEAR BUILT  
EXTERIOR WALL  
ROOFING STRUCTURE  
BASEMENT FOUNDATION  
CONDITION  
BUILDING TYPE  
STORIES  
FULL BATHROOMS  
HALF BATHROOMS

SKETCH  
NOT  
AVAILABLE  
FOR THIS  
PROPERTY

[Standard Information Map](#)

To print map, use the print button on the map toolbar.

[Standard Information Map](#)

## Sales History

DEED BOOK/PAGE	SALE PRICE	SALE DATE	PREVIOUS OWNER
2749 0458 (N/A Online)	\$0	01/01/1951	OWNER UNKNOWN

## Assessment History

EXEMPTION	DATE	LAND	IMPROVEMENTS	TOTAL	REASON
none	03/11/2003	\$6,113,750	\$0	\$6,113,750	R - Reassessment

Property is assessed per KRS 132.20 on January 1st of each year. The current year assessments are updated and posted on the website in mid April. Information deemed reliable but not guaranteed. Data last updated: 07/13/2011

THIS DEED between BRUCE HOBLITZELL, SR. and IRENE F. HOBLITZELL, his wife, parties of the first part, and

LOUISVILLE GAS AND ELECTRIC COMPANY, a Kentucky Corporation, party of the second part;

WITNESSETH:—That for a VALUABLE CONSIDERATION paid, the receipt of which is hereby acknowledged, the parties of the first part hereby convey unto the party of the second part, in fee simple, with covenant of GENERAL WARRANTY, the following described real estate situated in Jefferson County, Kentucky, to-wit:—

BEGINNING at an iron pin in the center line of Cane Run Road at the Southwest corner of the tract of 73.4 acres described in deed to Albert Miller dated May 12, 1930, and recorded in Deed Book 1444 Page 89 in the office of the Clerk of the County Court of Jefferson County, Kentucky; thence with the center line of Cane Run Road, South 80 degrees 48 minutes West, 248.26 feet to an iron pin, corner to the one acre tract conveyed to Julius and Beatrice Buchlohd by deed dated February 15, 1924, recorded in Deed Book 1088 Page 344 in said Clerk's office; thence with the Northeast line of said tract, North 48 degrees 22 minutes West, 335.29 feet to an iron pipe, corner to said tract; thence with another line of said tract, South 41 degrees 28 minutes West, 161.92 feet to an iron pipe, another corner to said tract; thence with the Southwest line of said tract, South 48 degrees 22 minutes East, 200 feet to an iron pin in the center line of Cane Run Road; thence with the center line of said road, South 85 degrees 5 minutes West, 382 feet to an iron pin, corner to the tract of 90 acres, more or less, conveyed to William Miller by deed dated January 18, 1917, recorded in Deed Book 866 Page 547 in the aforesaid Clerk's office; thence with the Northeast line of said tract, North 48 degrees 8 minutes West, 3059.92 feet to a stake, another corner to said tract; thence continuing with the line of said tract, North 59 degrees 5 minutes West, passing a stone at 448.78 feet at high bank of the Ohio River, in all 613.84 feet to low water mark of the Ohio River; thence with said low water mark, the following courses and distances:—North 32 degrees 29 minutes East, 487.59 feet; North 27 degrees 28 minutes East, 868.63 feet; North 24 degrees 41 minutes East, 549.61 feet; and North 31 degrees 09 minutes East, 459.56 feet to a corner to Fred Schlatter; thence with his line, South 60 degrees 48 minutes East, passing high bank at 165.10 feet, in all 1322.29 feet to a stake; thence South 60 degrees 9 minutes East, 1238.50 feet to a stone, corner to the aforesaid tract of 73.4 acres conveyed to Albert Miller by deed aforesaid; thence with a line of said tract, South 27 degrees 44 minutes West, 1675.47 feet to a post, corner to said last mentioned tract; thence with another line of same, South 33 degrees 50 minutes East, 1908.4 feet to the beginning, containing 178.642 acres, which includes 8.969 acres lying between high bank and low water mark of the Ohio River.

Bruce Hoblitzell, Sr. one of the PARTIES OF THE FIRST PART having acquired title to said property by deed dated April 19, 1951, of record in Deed Book 2741 Page 573 in said Clerk's office.

TOGETHER WITH all of first parties right, title and interest in and to the property abutting thereon.

(see over)

The parties of the first part further covenant that they are lawfully seized of the estate hereby conveyed, have full right and power to convey the same, and that said estate is free from all encumbrances except State, County and School Taxes assessed and payable in the year 1951, and all subsequent taxes, which the party of the second part hereby assumes and agrees to pay.

PROVIDED HOWEVER, this conveyance is made subject to the easements affecting said property of record in Deed Book 783 Page 477 and Deed Book 1468 Page 267, both in the office of the Clerk aforesaid.

IN TESTIMONY WHEREOF, witness the signatures of the parties of the first part, this 19th day of April, 1951.

Bruce Hoblitzell Sr  
Bruce Hoblitzell, Sr.

Irene F. Hoblitzell  
Irene F. Hoblitzell

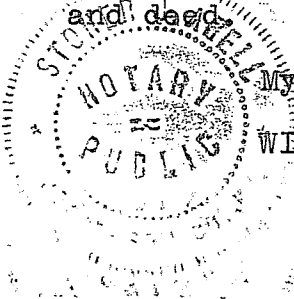
STATE OF KENTUCKY  
SS:  
COUNTY OF JEFFERSON

I, the undersigned Notary Public, within and for the State and County aforesaid, do hereby certify that the foregoing deed was produced to me in said State and County and was acknowledged by BRUCE HOBLITZELL, SR. and IRENE F. HOBLITZELL, his wife, parties thereto, to be their act and deed.

My commission expires:

June 21 - 1953

WITNESS my hand this 19th day of April, 1951.



Stone D. Shell  
Notary Public, Jefferson County, Kentucky

No stamps required.

Stone D. Shell

PAID \$ 3.00 INC TAX  
JAMES F. QUEENAN, J. & O.  
BY James F. Queenan D.F.

1951 MAY 11 AM 10 23

LOUISVILLE TITLE INS. CO.  
LOGGED BY \_\_\_\_\_  
AND RECORDED

17.

7  
7  
EX. 92739

Hollitzell

To } DEED  
(Fee Simple)  
(Without Lien)

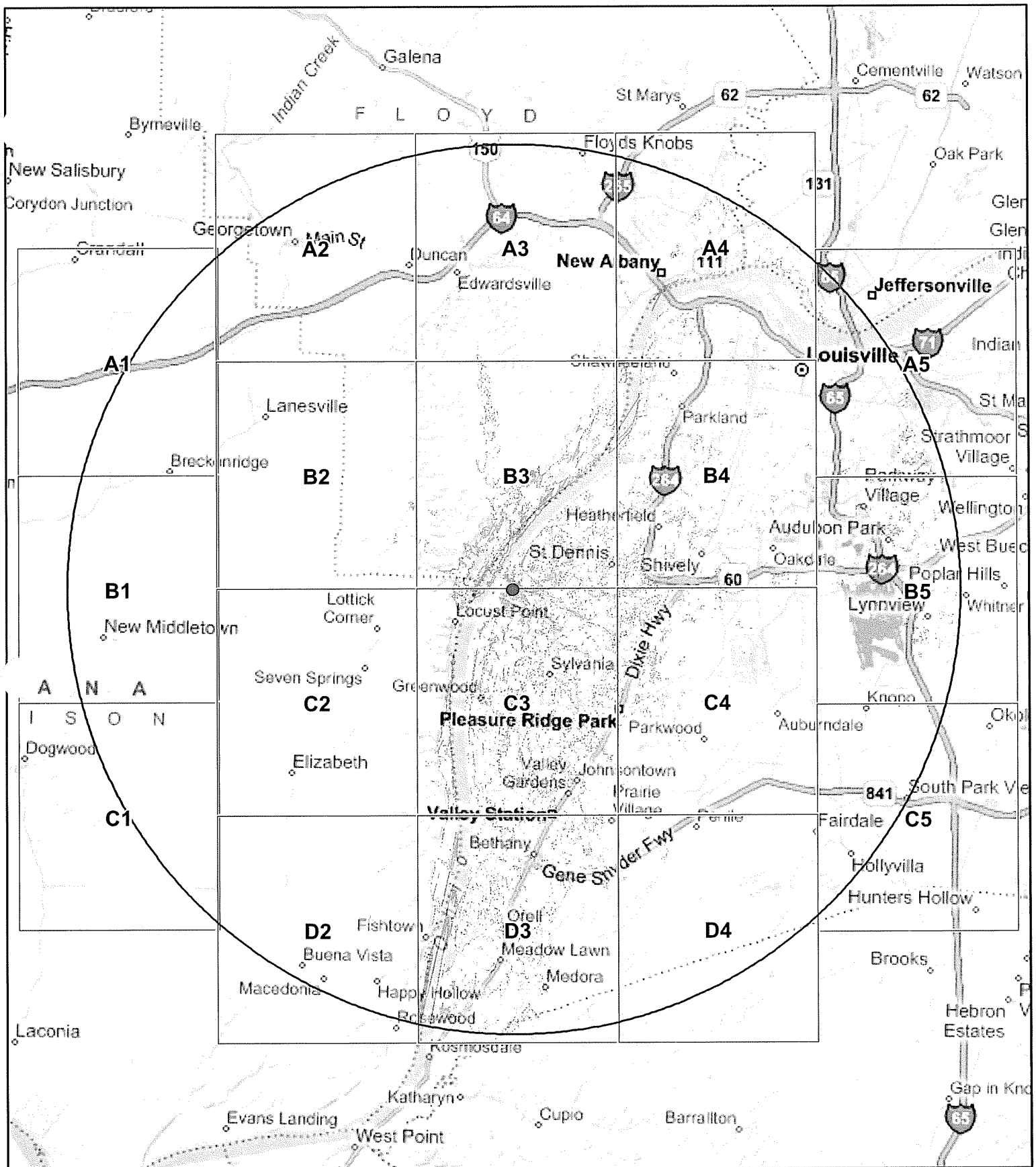
Gen. Gas and Electric Co.

*(Handwritten mark)*

DELIVER TO -  
Louisville Title Insurance Co.

## **APPENDIX C**

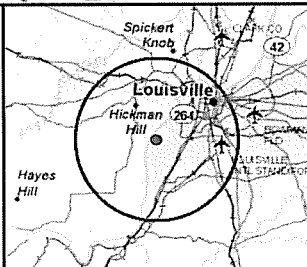
### **18 Enlarged Visibility Maps**



**Legend**

- Proposed Tower Location
- Visible Area
- Study Area (10 Mile Radius)
- Sheet #

Background Image:  
Microsoft Road Map



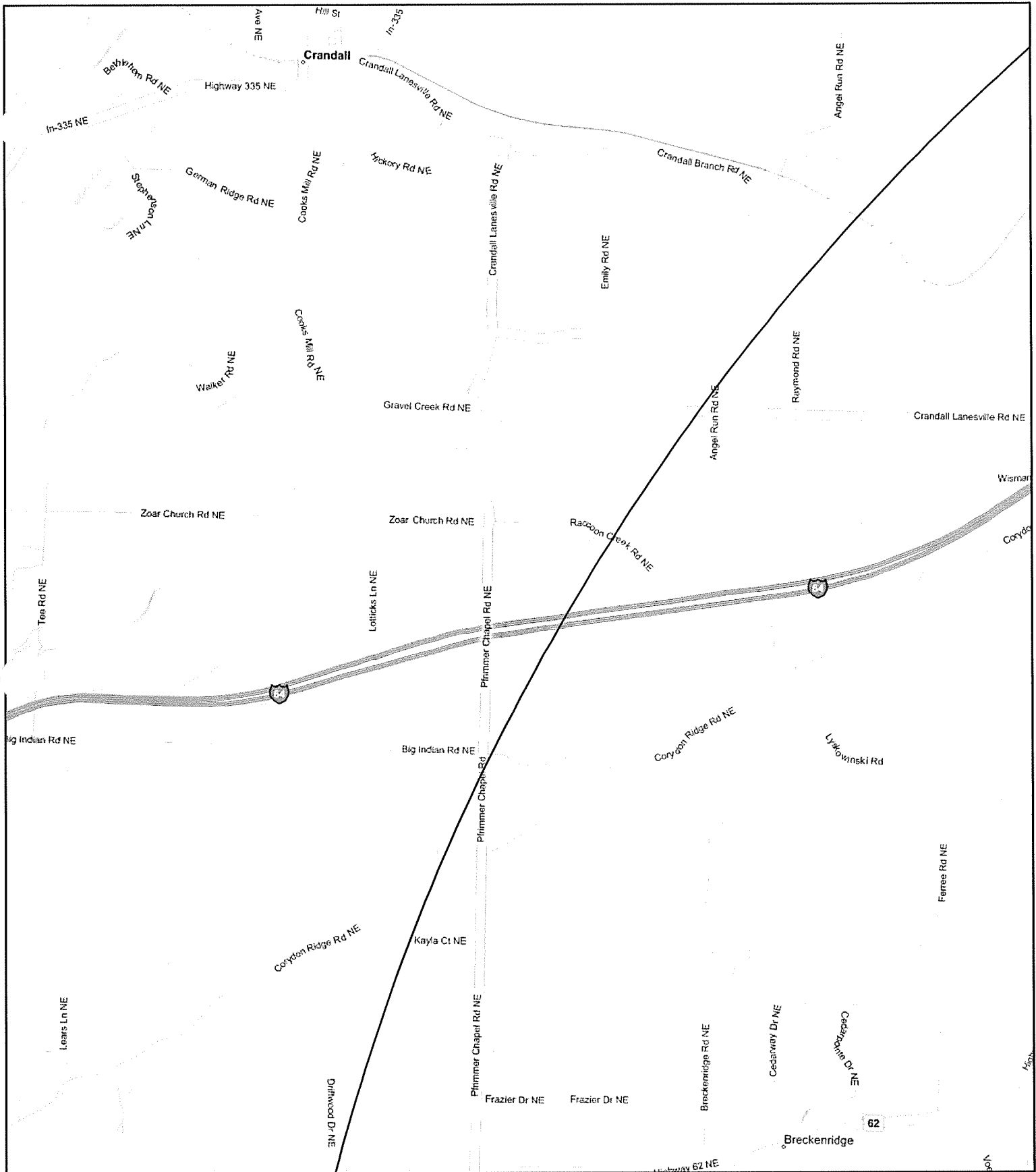
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Checked by: VLH  
Date: 5/24/2011  
Project: 3142111377



Visible Areas  
Within 10 miles of  
Proposed Stack Location

Sheet Index  
Louisville Gas & Electric Company  
Cane Run Generating Station

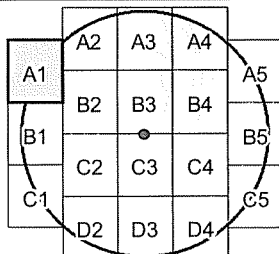
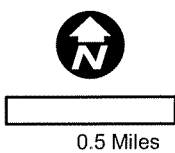




**Legend**

- Historic Property
- Proposed Tower Location
- Visible Area
- Study Area (10 Mile Radius)

Background Image:  
Microsoft Road Map

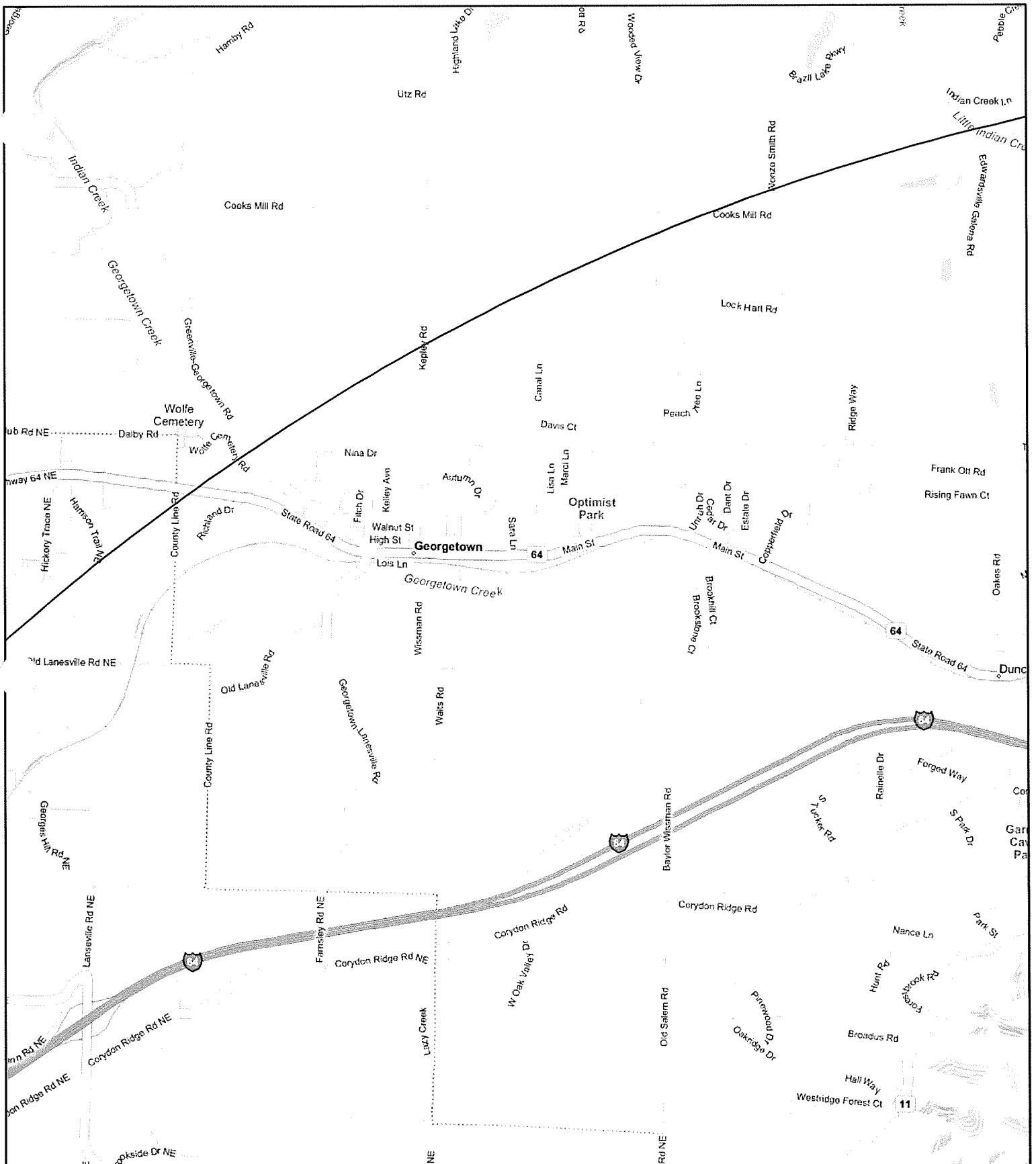


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Date: 5/24/2011  
Project: 3142111377



Visible Areas  
Within 10 miles of  
Proposed Stack Location

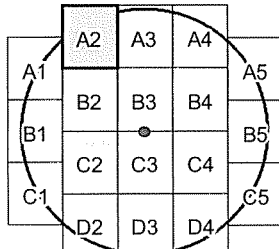
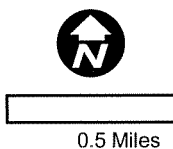
Sheet: A1  
Louisville Gas & Electric Company  
Cane Run Generating Station



**Legend**

- Historic Property
- Proposed Tower Location
- Visible Area
- Study Area (10 Mile Radius)

Background Image:  
Microsoft Road Map



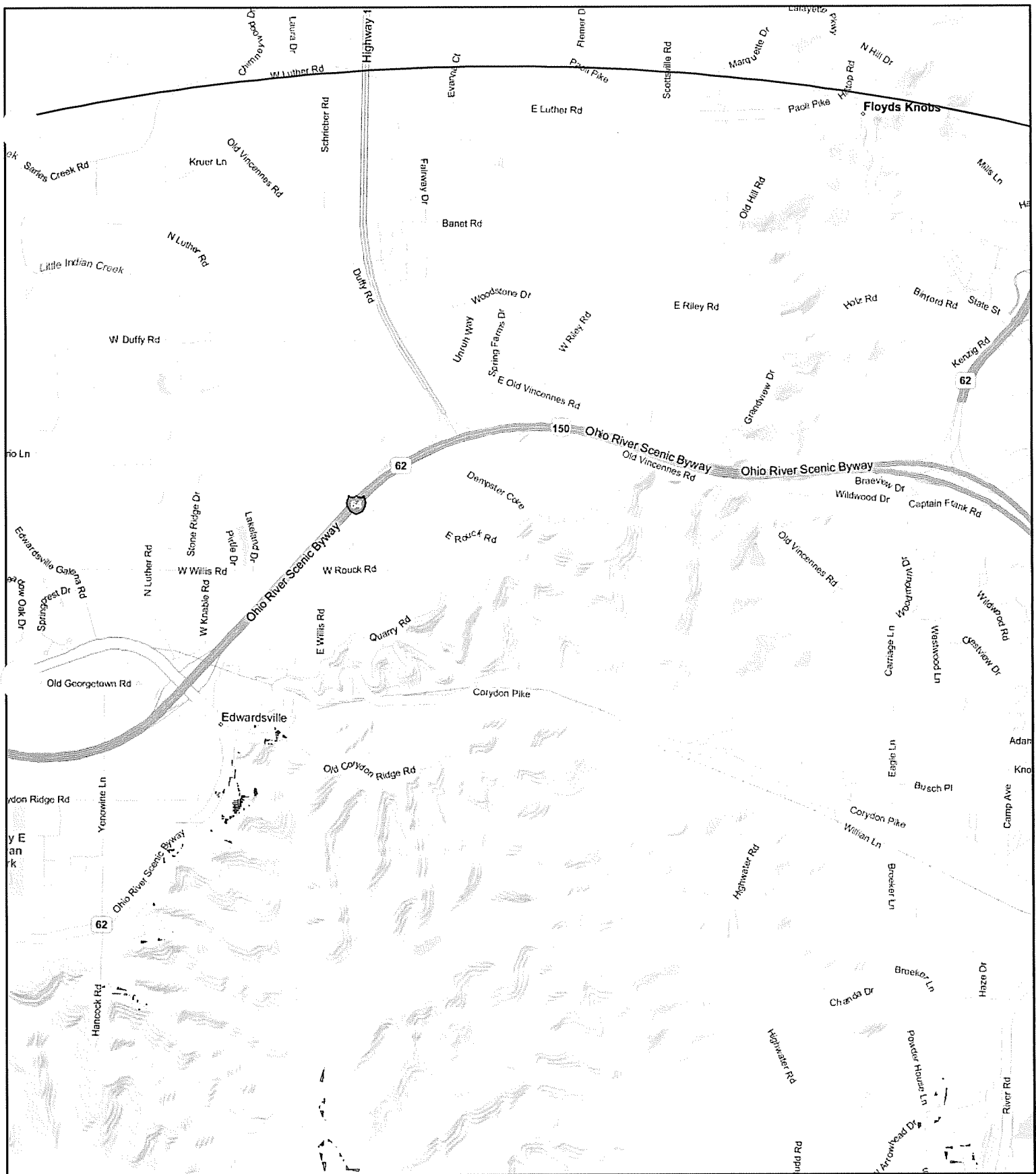
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Visible Areas  
Within 10 miles of  
Proposed Stack Location

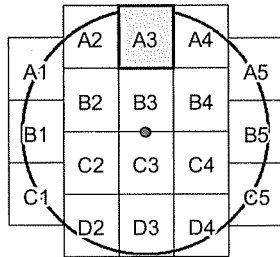
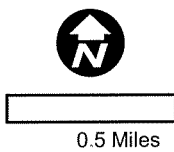
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Louisville Gas & Electric Company  
Cane Run Generating Station



**Legend**

- Historic Property
  - Proposed Tower Location
  - Visible Area
  - Study Area (10 Mile Radius)
- Background Image:  
Microsoft Road Map



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 Checked by: VLH  
 Date: 5/24/2011  
 Project: 3142111377



Visible Areas  
 Within 10 miles of  
 Proposed Stack Location

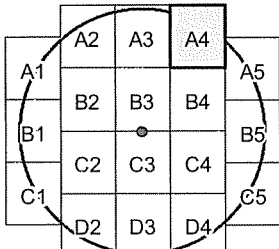
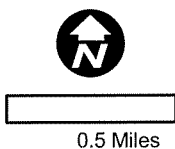
Sheet: A3  
 Louisville Gas & Electric Company  
 Cane Run Generating Station



**Legend**

- Historic Property
- Proposed Tower Location
- Visible Area
- Study Area (10 Mile Radius)

Background Image:  
Microsoft Road Map



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Checked by: VLH  
Date: 5/24/2011  
Project: 3142111377



Visible Areas  
Within 10 miles of  
Proposed Stack Location

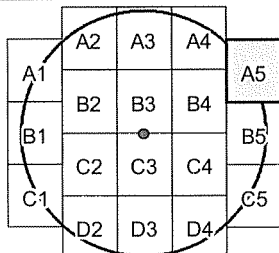
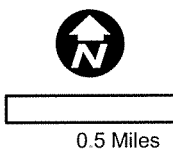
Sheet: A4  
Louisville Gas & Electric Company  
Cane Run Generating Station



**Legend**

- Historic Property
- Proposed Tower Location
- Visible Area
- Study Area (10 Mile Radius)

Background Image:  
Microsoft Road Map

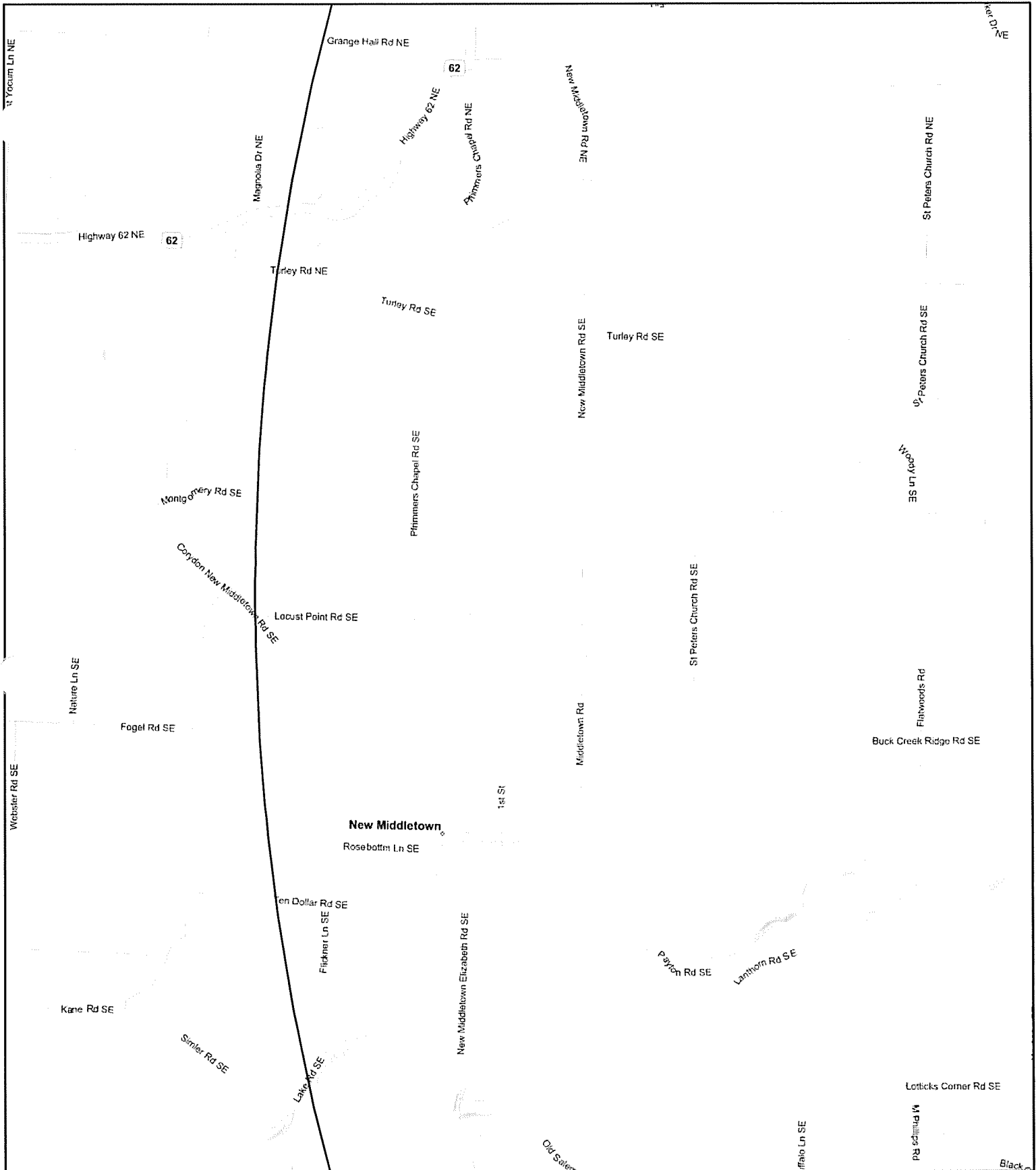


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Visible Areas  
Within 10 miles of  
Proposed Stack Location

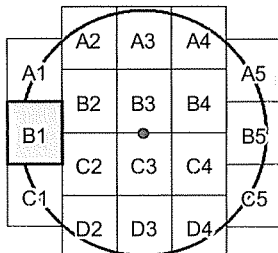
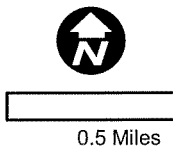
Sheet: A5  
Louisville Gas & Electric Company  
Cane Run Generating Station



**Legend**

- Historic Property
- Proposed Tower Location
- Visible Area
- Study Area (10 Mile Radius)

Background Image:  
Microsoft Road Map

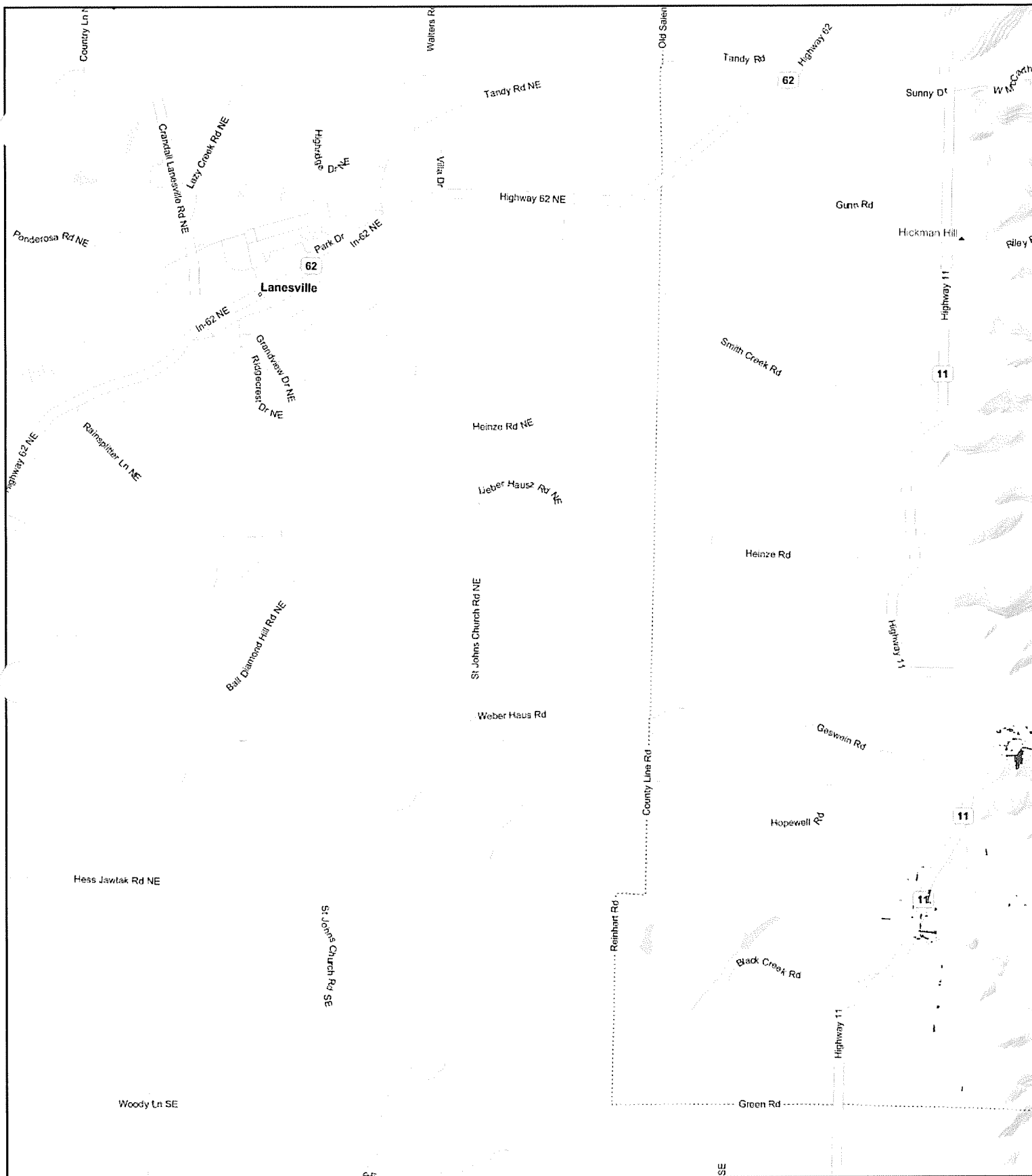


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Project: 3142111377



Visible Areas  
Within 10 miles of  
Proposed Stack Location

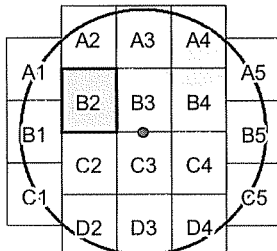
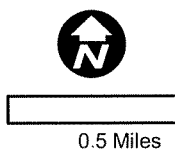
Sheet: B1  
Louisville Gas & Electric Company  
Cane Run Generating Station



**Legend**

- Historic Property
- Proposed Tower Location
- Visible Area
- Study Area (10 Mile Radius)

Background Image:  
Microsoft Road Map



Created by: CGS  
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Date: 5/24/2011  
Project: 3142111377



Visible Areas  
Within 10 miles of  
Proposed Stack Location

Sheet: B2

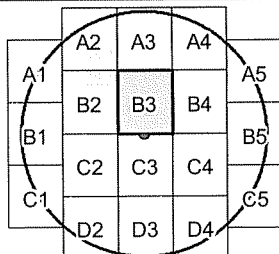
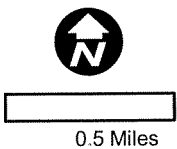
Louisville Gas & Electric Company  
Cane Run Generating Station



**Legend**

- Historic Property
- Proposed Tower Location
- Visible Area
- Study Area (10 Mile Radius)

Background Image:  
Microsoft Road Map



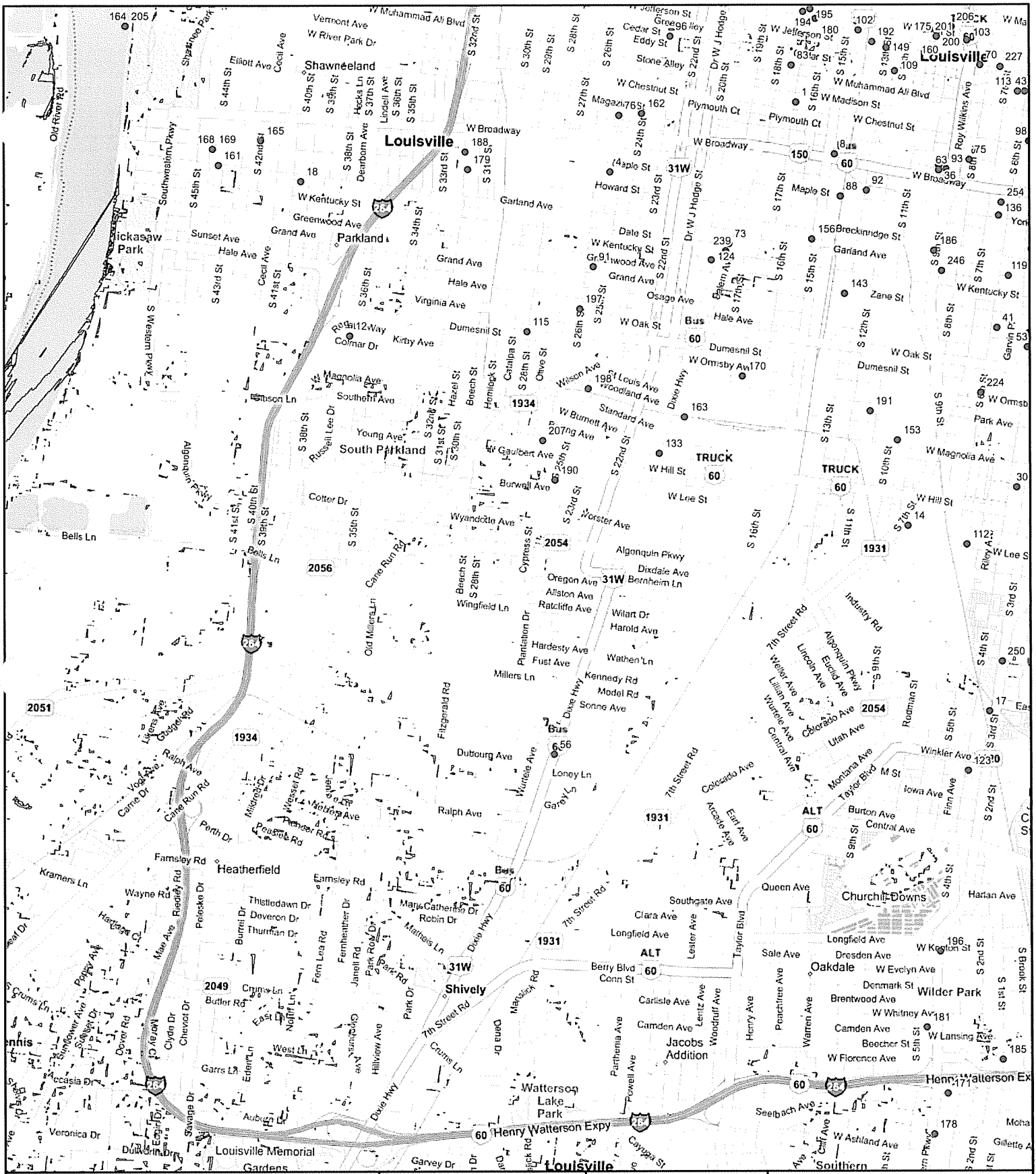
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Date: 5/24/2011  
Project: 3142111377



Visible Areas  
Within 10 miles of  
Proposed Stack Location

Sheet: B3  
Louisville Gas & Electric Company  
Cane Run Generating Station





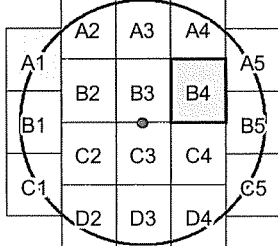
**Legend**

- Historic Property
- Proposed Tower Location
- Visible Area
- Study Area (10 Mile Radius)

Background Image:  
Microsoft Road Map



0.5 Miles

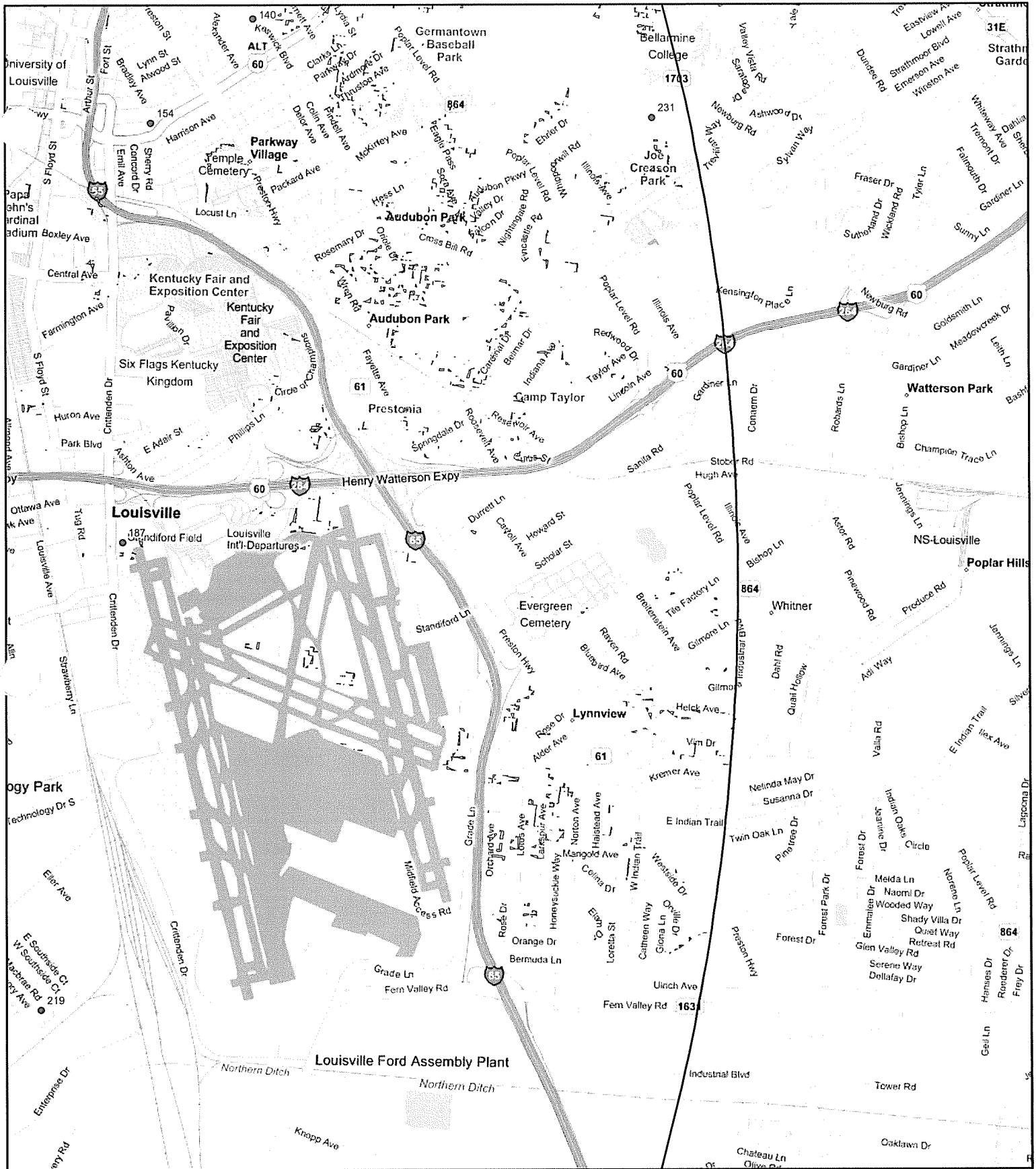


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Project: 3142111377



Visible Areas  
Within 10 miles of  
Proposed Stack Location

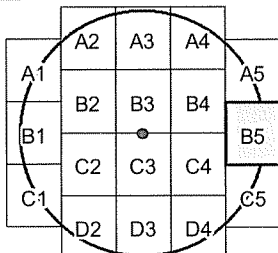
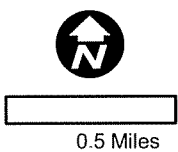
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Louisville Gas & Electric Company  
Cane Run Generating Station



**Legend**

- Historic Property
- Proposed Tower Location
- Visible Area
- Study Area (10 Mile Radius)

Background Image:  
Microsoft Road Map

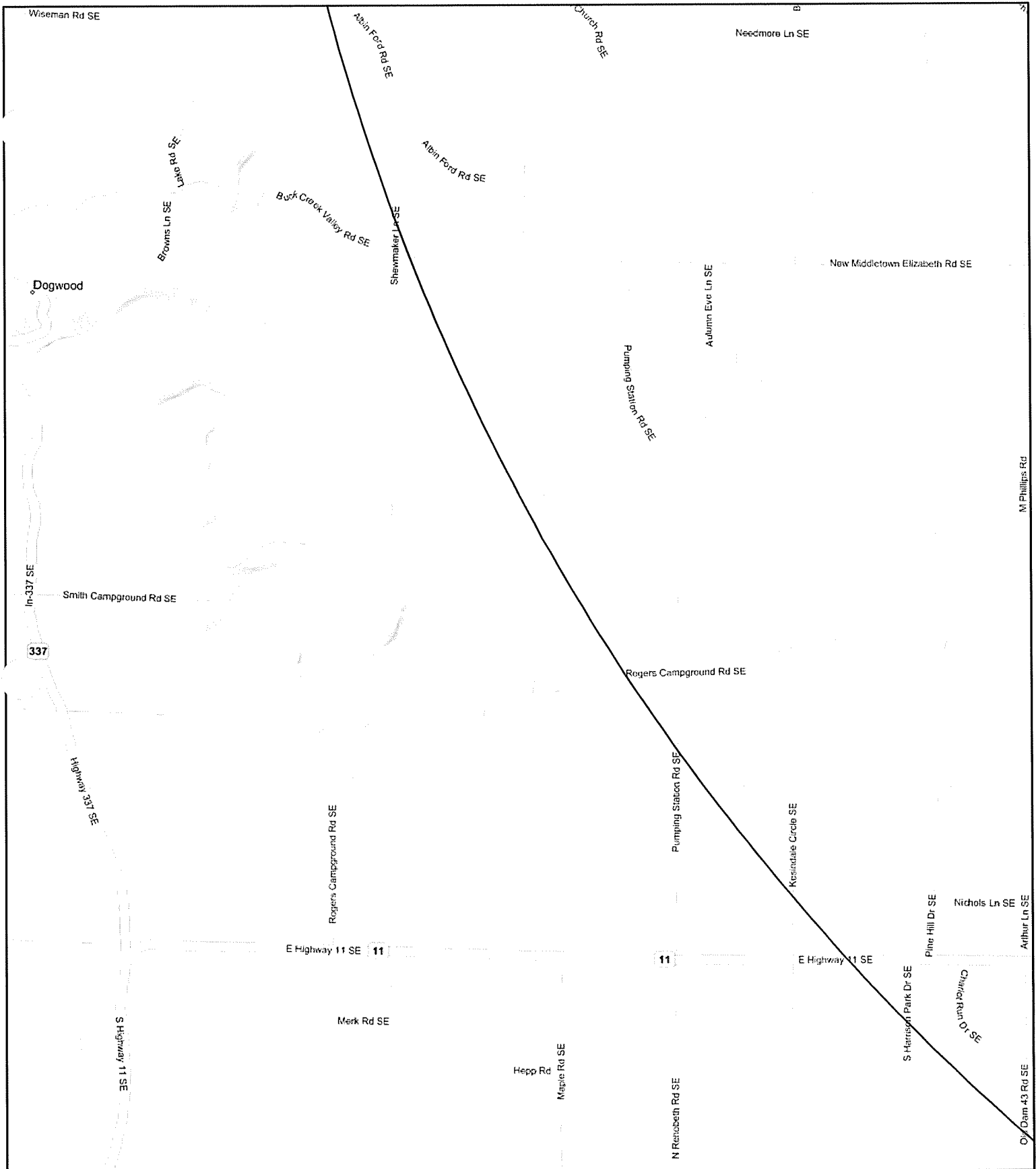


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Visible Areas  
Within 10 miles of  
Proposed Stack Location

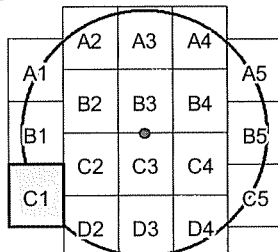
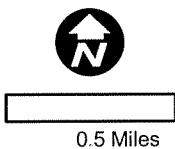
Sheet: B5  
Louisville Gas & Electric Company  
Cane Run Generating Station



**Legend**

- Historic Property
- Proposed Tower Location
- Visible Area
- Study Area (10 Mile Radius)

Background Image:  
Microsoft Road Map

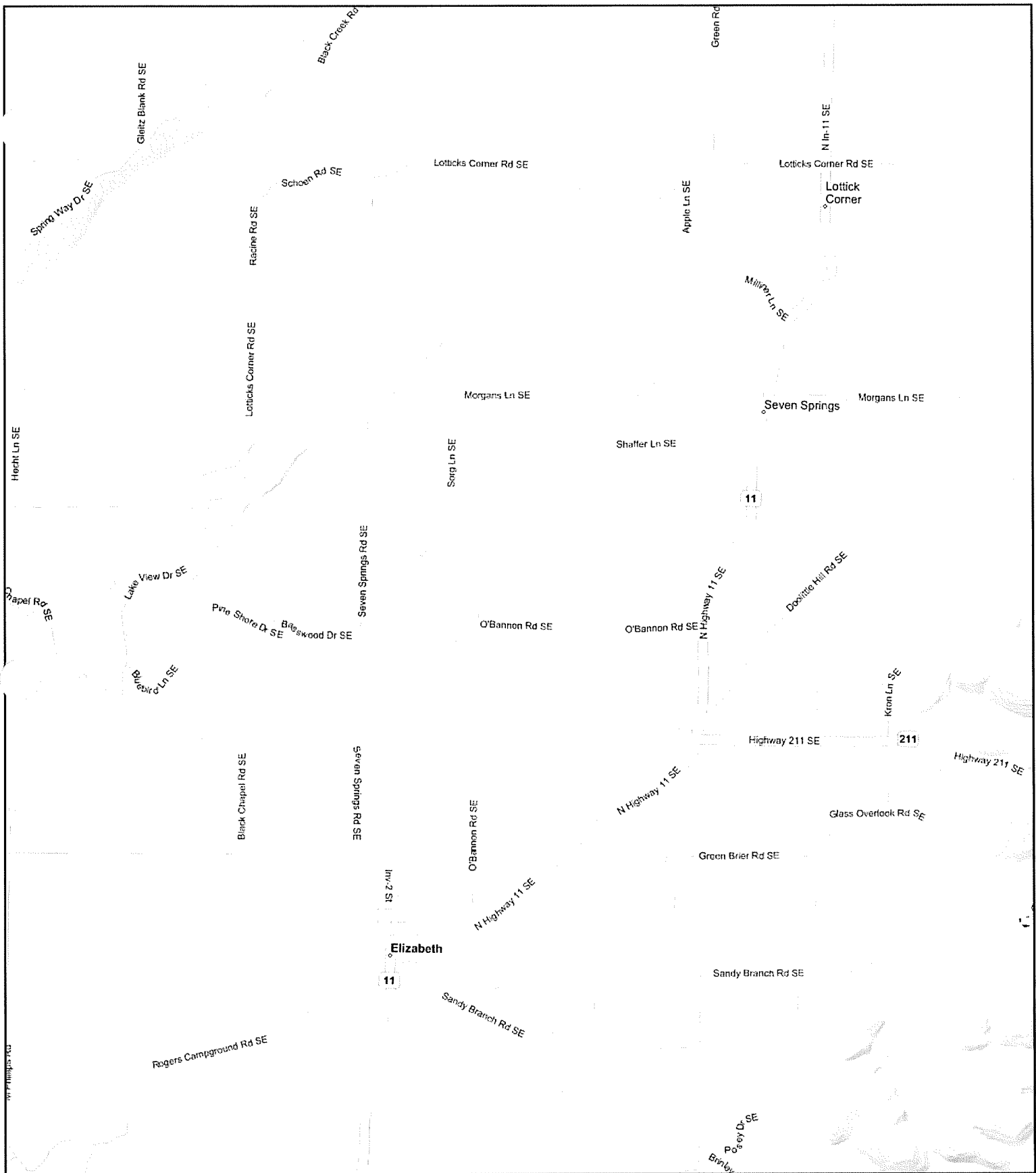


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Checked by: VLH  
Date: 5/24/2011  
Project: 3142111377



Visible Areas  
Within 10 miles of  
Proposed Stack Location

Sheet: C1  
Louisville Gas & Electric Company  
Cane Run Generating Station

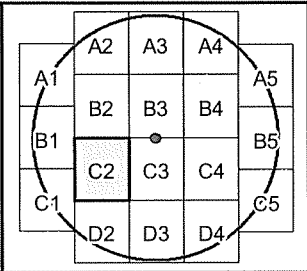


**Legend**

- Historic Property
- Proposed Tower Location
- Visible Area
- Study Area (10 Mile Radius)

Background Image:  
Microsoft Road Map

0.5 Miles







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Visible Areas  
 Within 10 miles of  
 Proposed Stack Location

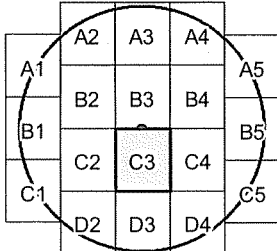
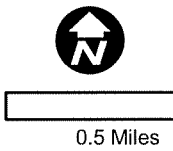
Sheet: C2  
 Louisville Gas & Electric Company  
 Cane Run Generating Station



**Legend**

-  Historic Property
-  Proposed Tower Location
-  Visible Area
-  Study Area (10 Mile Radius)

Background Image:  
Microsoft Road Map

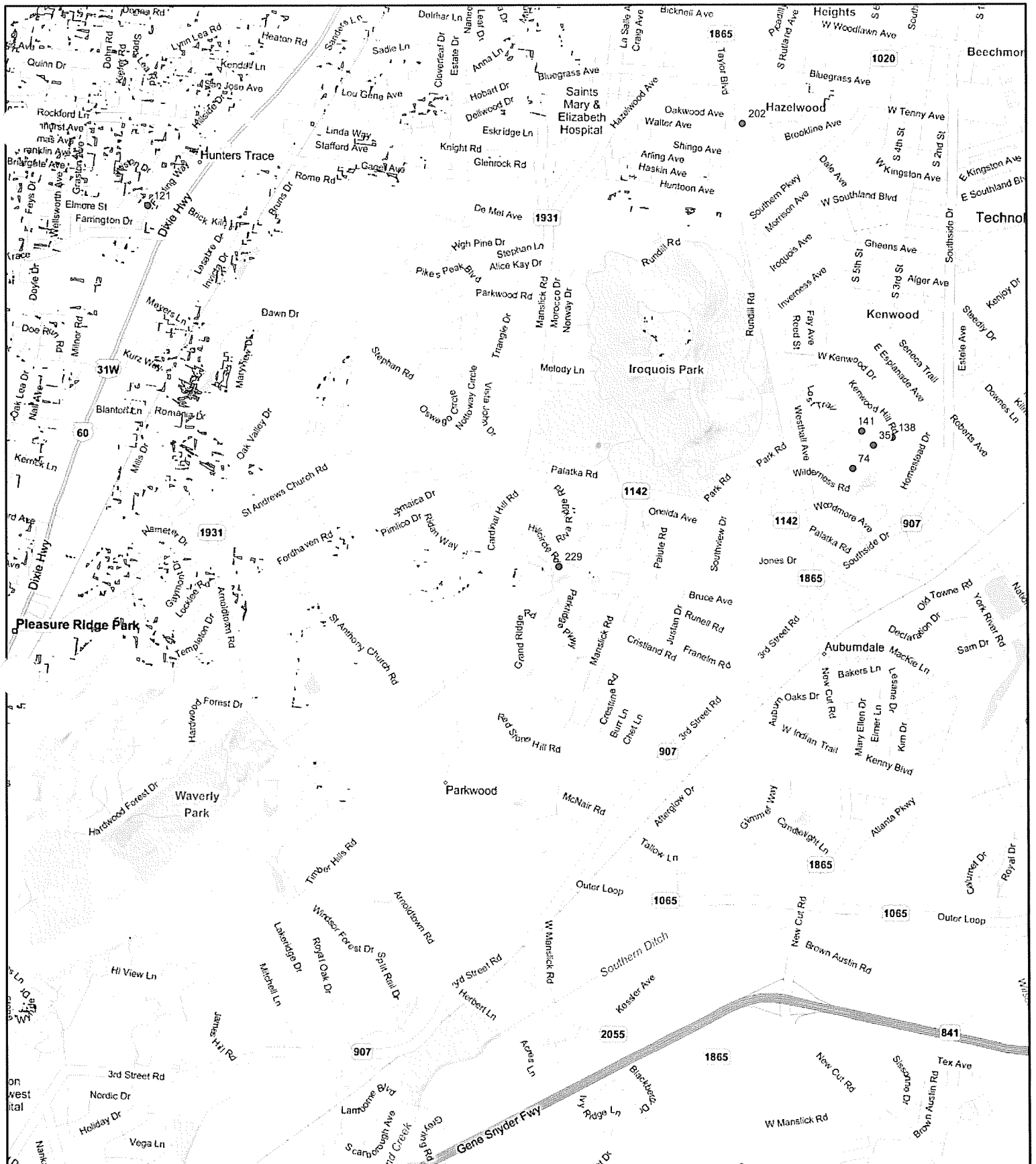


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Visible Areas  
Within 10 miles of  
Proposed Stack Location

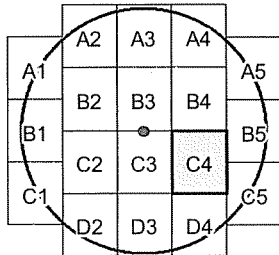
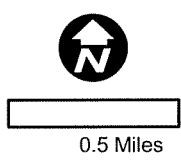
Sheet: C3  
Louisville Gas & Electric Company  
Cane Run Generating Station



**Legend**

- Historic Property
- Proposed Tower Location
- Visible Area
- Study Area (10 Mile Radius)

Background Image:  
Microsoft Road Map



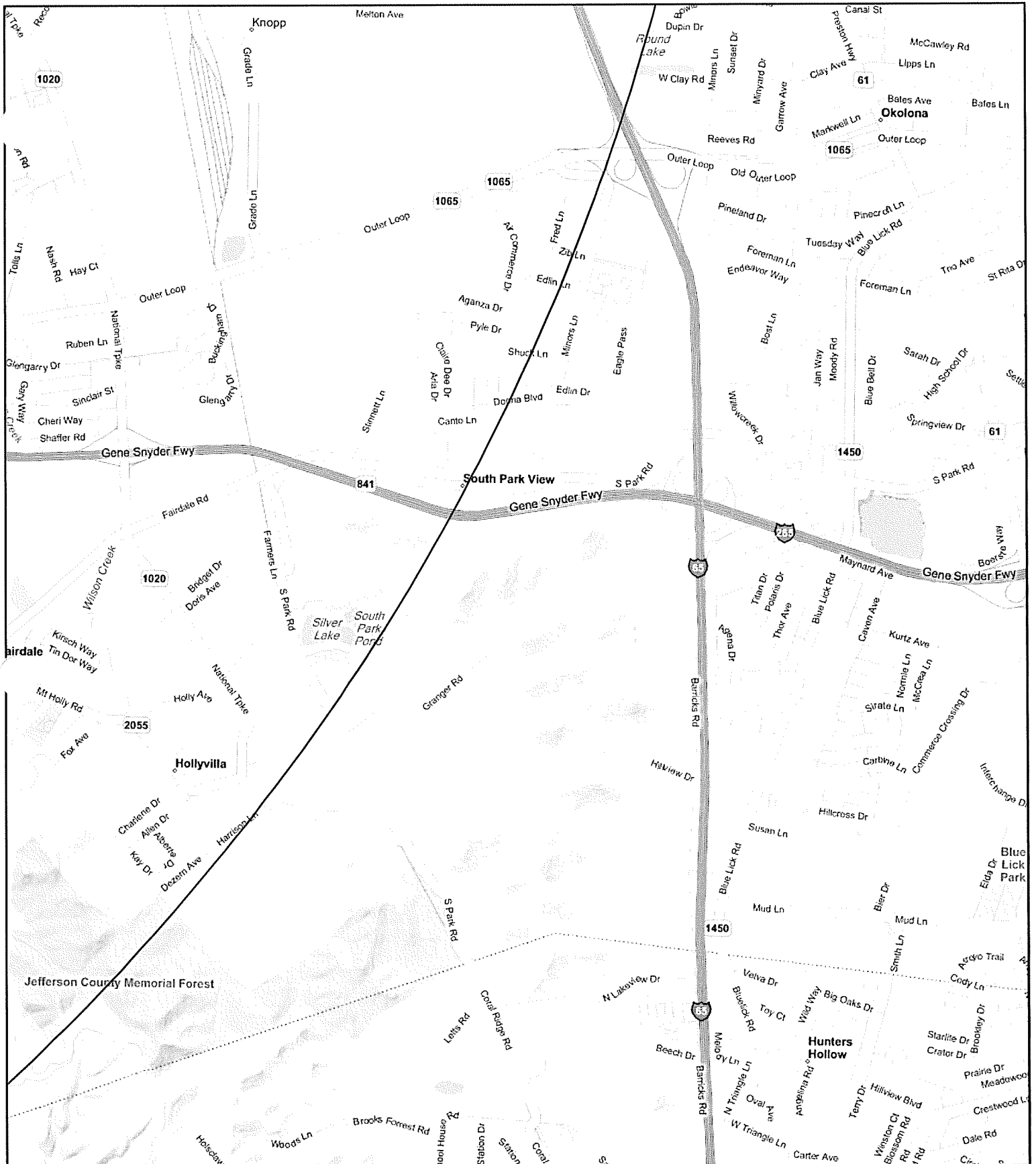
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Visible Areas  
Within 10 miles of  
Proposed Stack Location

Sheet: C4

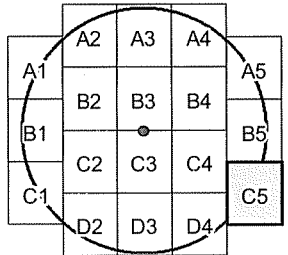
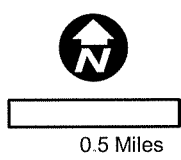
Louisville Gas & Electric Company  
Cane Run Generating Station



**Legend**

- Historic Property
- Proposed Tower Location
- Visible Area
- Study Area (10 Mile Radius)

Background Image:  
Microsoft Road Map

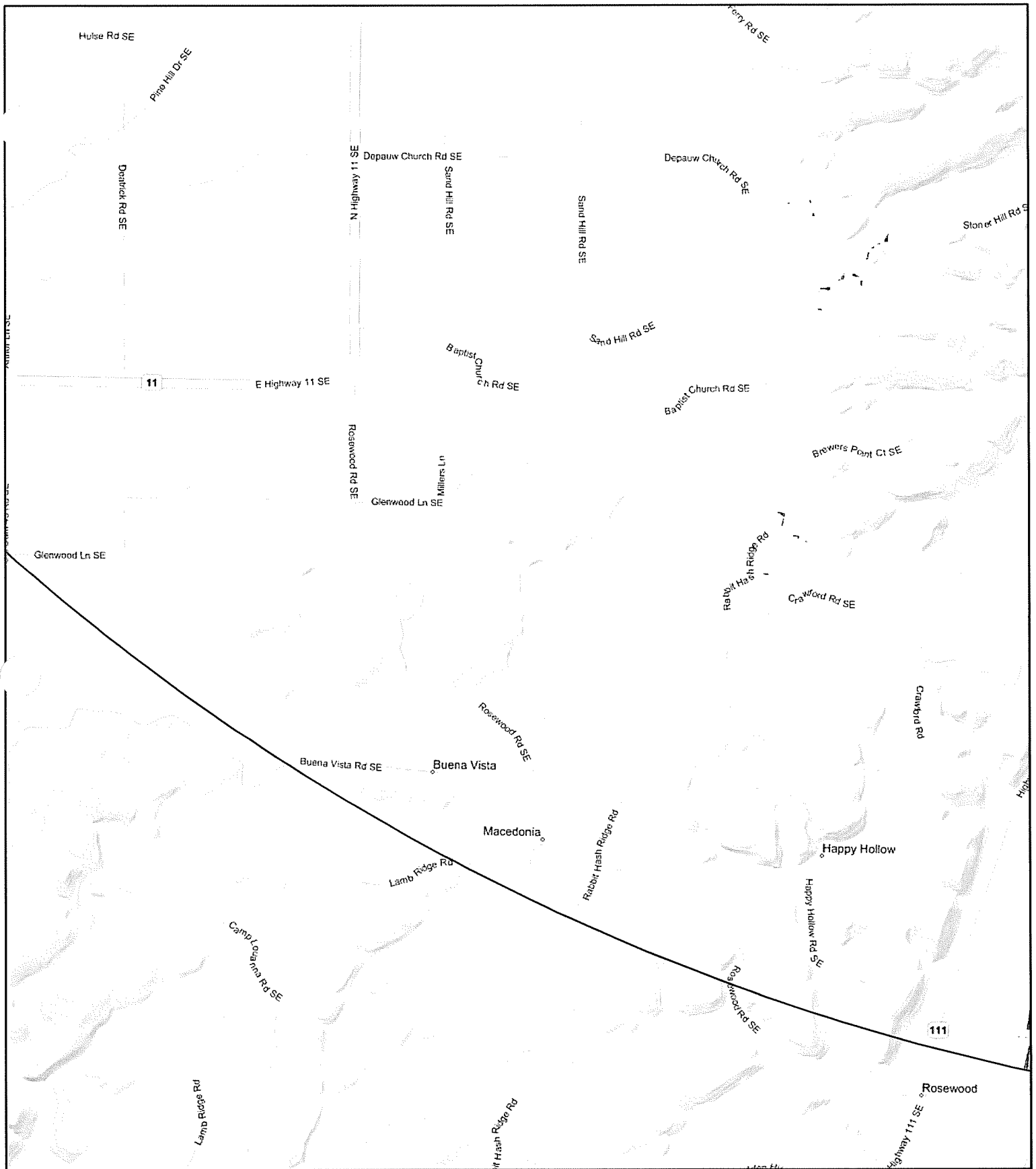


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Visible Areas  
Within 10 miles of  
Proposed Stack Location

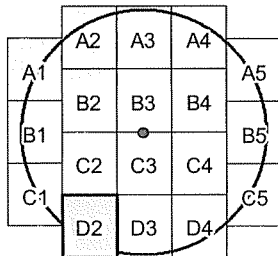
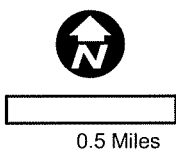
Sheet: C5  
Louisville Gas & Electric Company  
Cane Run Generating Station



**Legend**

- Historic Property
- Proposed Tower Location
- Visible Area
- Study Area (10 Mile Radius)

Background Image:  
Microsoft Road Map



Created by: CGS  
Checked by: VLH  
Date: 5/24/2011  
Project: 3142111377



Visible Areas  
Within 10 miles of  
Proposed Stack Location





Sheet: D2

Louisville Gas & Electric Company  
Cane Run Generating Station

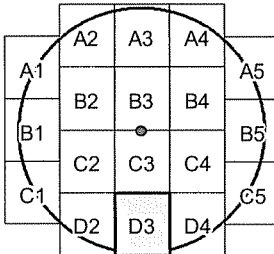
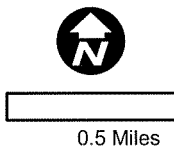




**Legend**

-  Historic Property
-  Proposed Tower Location
-  Visible Area
-  Study Area (10 Mile Radius)

Background Image:  
Microsoft Road Map

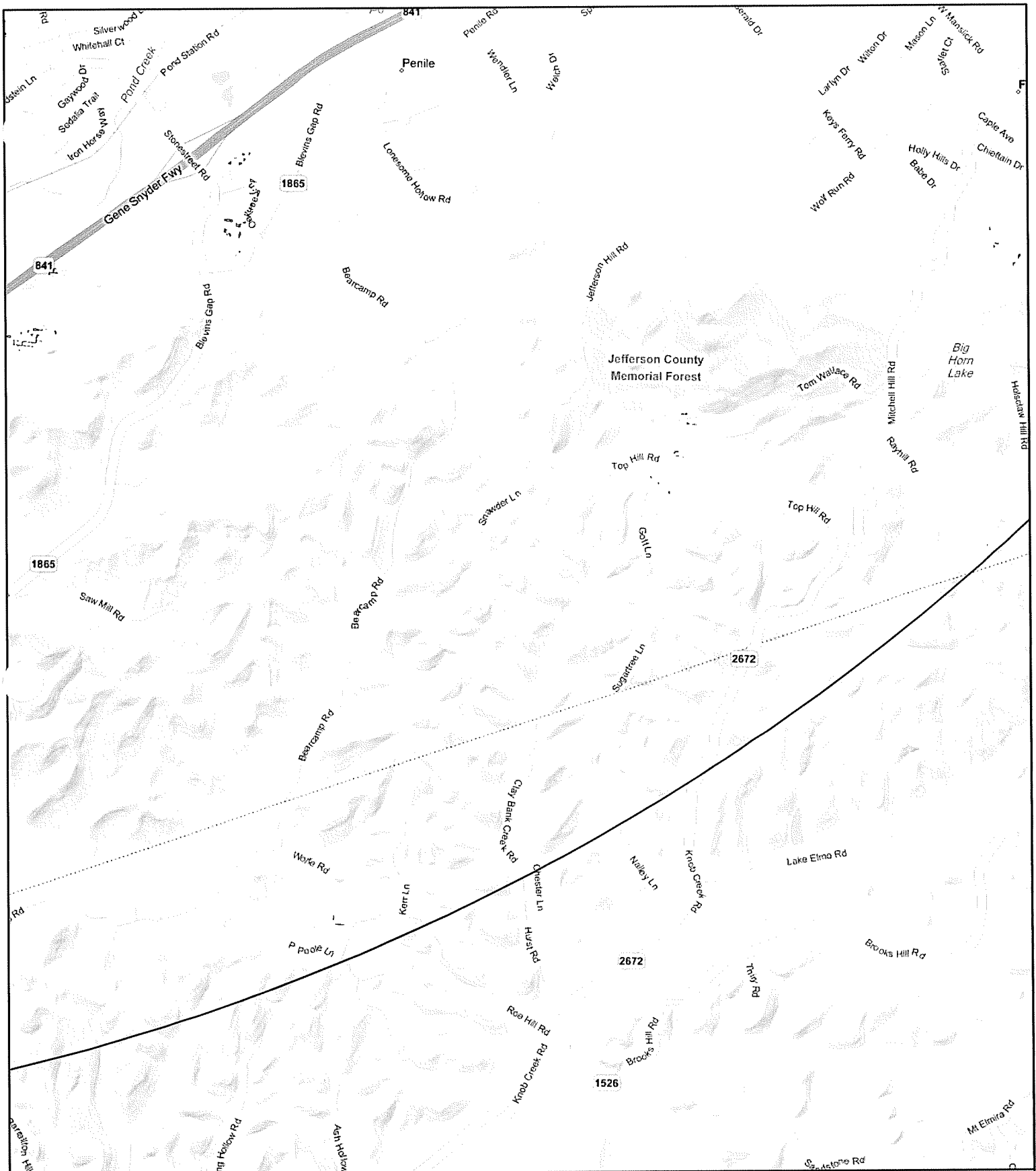


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Visible Areas  
Within 10 miles of  
Proposed Stack Location

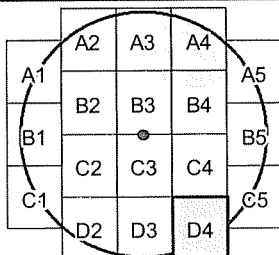
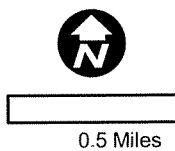
Sheet: D3  
Louisville Gas & Electric Company  
Cane Run Generating Station



**Legend**

- Historic Property
- Proposed Tower Location
- Visible Area
- Study Area (10 Mile Radius)

Background Image:  
Microsoft Road Map



Created by: CGS  
Checked by: VLH  
Date: 5/24/2011  
Project: 3142111377



Visible Areas  
Within 10 miles of  
Proposed Stack Location

Sheet: D4  
Louisville Gas & Electric Company  
Cane Run Generating Station

**APPENDIX C - TABLE SUMMARIZING HISTORIC PROPERTIES WITHIN 10 MILE RADIUS OF SITE**

Proposed Natural Gas Combined-Cycle Electric Generating Unit  
 Louisville Gas & Electric Company  
 52 Cane Run Road  
 Louisville, Kentucky 40216

<b>LABEL</b>	<b>NAME</b>	<b>ADDRESS</b>	<b>CITY</b>	<b>COUNTY</b>	<b>STATE</b>
1	Russell Historic District (Boundary Increase)	Jct. of Muhammad Ali Blvd. and S. 17th St.	Louisville	Jefferson	KENTUCKY
2	Wirth, Lang and Company--The Louisville Leather Company Tannery Building	711-715 Brent St.	Louisville	Jefferson	KENTUCKY
3	Pike Inn, Old	941 State St.	New Albany	Floyd	INDIANA
4	Universal Car Company	2500 W. Broadway	Louisville	Jefferson	KENTUCKY
5	Division Street School	1803 Conservative St.	New Albany	Floyd	INDIANA
6	Stewart, W.K., Bookstore	550 S. Fourth St.	Louisville	Jefferson	KENTUCKY
7	Louisville Grocery Company Building	231 E. Main St.	Louisville	Jefferson	KENTUCKY
8	Axton--Fisher Tobacco Company Warehouse	1405 W. Broadway	Louisville	Jefferson	KENTUCKY
9	Finzer, J., and Brothers Company Building	419 Finzer St.	Louisville	Jefferson	KENTUCKY
10	Howard--Hardy House	429 S. Second St.	Louisville	Jefferson	KENTUCKY
11	Pendennis Club	218 W. Walnut St.	Louisville	Jefferson	KENTUCKY
12	Virginia Avenue Colored School	3628 Virginia Ave.	Louisville	Jefferson	KENTUCKY
13	St. Cecilia School Building	2530 Slevin St.	Louisville	Jefferson	KENTUCKY
14	Brass Finishing Building, Standard Sanitary Manufacturing Company	1547 S. 7th St.	Louisville	Jefferson	KENTUCKY
15	St. Columba Catholic Campus	3514 W. Market	Louisville	Jefferson	KENTUCKY
16	Buildings at 900-906 East Main Street	900-906 E. Main St.	Louisville	Jefferson	KENTUCKY
17	Ford Motor Company, Louisville Plant	2500 S. 3rd St.	Louisville	Jefferson	KENTUCKY
18	Stephen Foster Elementary School	4020 Garland Ave.	Louisville	Jefferson	KENTUCKY
19	Spring Street Freight House	1030 Spring St.	Jeffersonville	Clark	INDIANA
20	Olympic, The	223 W. Breckinridge St.	Louisville	Jefferson	KENTUCKY
21	Business Women's Club, The	425 Muhammad Ali Blvd.	Louisville	Jefferson	KENTUCKY
22	Hamilton Brothers Warehouse	125-127 W. Main St.	Louisville	Jefferson	KENTUCKY
23	Woodbourne House	2024 Woodford Pl.	Louisville	Jefferson	KENTUCKY
24	Hadley, Mary Alica, House	1638 Story Ave.	Louisville	Jefferson	KENTUCKY
25	Southern National Bank	320 W. Main St.	Louisville	Jefferson	KENTUCKY
26	BELLE OF LOUISVILLE (steamer)	4th St. and River Rd.	Louisville	Jefferson	KENTUCKY
27	Jefferson County Courthouse	527 W. Jefferson St.	Louisville	Jefferson	KENTUCKY
28	Christ Church Cathedral	421 S. 2nd St.	Louisville	Jefferson	KENTUCKY
29	Jefferson County Jail	514 W. Liberty St.	Louisville	Jefferson	KENTUCKY
30	Landward House	1385-1387 S. 4th St.	Louisville	Jefferson	KENTUCKY
31	Trade Mart Building	131 W. Main St.	Louisville	Jefferson	KENTUCKY
32	Tyler Block	319 W. Jefferson	Louisville	Jefferson	KENTUCKY
33	Culbertson Mansion	914 E. Main St.	New Albany	Floyd	INDIANA
34	Adath Israel Temple	834 S. 3rd St.	Louisville	Jefferson	KENTUCKY
35	Little Loomhouses	328 Kenwood Hill Rd.	Louisville	Jefferson	KENTUCKY
36	Louisville Free Public Library, Western Colored Branch	604 S. 10th St.	Louisville	Jefferson	KENTUCKY
37	Ronald--Brennan House	631 S. 5th St.	Louisville	Jefferson	KENTUCKY
38	Seelbach Hotel	500 S. 4th St.	Louisville	Jefferson	KENTUCKY
39	St. Therese Roman Catholic Church, School, and Rectory	1010 Schiller Ave.	Louisville	Jefferson	KENTUCKY
40	University of Louisville School of Medicine	101 W. Chestnut St.	Louisville	Jefferson	KENTUCKY
41	Central Colored School	542 W. Kentucky St.	Louisville	Jefferson	KENTUCKY
42	Church of the Messiah	805 S. 4th St.	Louisville	Jefferson	KENTUCKY
43	Louisville City Hall Complex	601, 603, 617 W. Jefferson St.	Louisville	Jefferson	KENTUCKY
44	Scribner House	106 E. Main St.	New Albany	Floyd	INDIANA
45	Cathedral of the Assumption	443 S. 5th St.	Louisville	Jefferson	KENTUCKY
46	Louisville Trust Building	208 S. 5th St.	Louisville	Jefferson	KENTUCKY
47	Louisville War Memorial Auditorium	970 S. 4th St.	Louisville	Jefferson	KENTUCKY
48	Old U.S. Customhouse and Post Office	300 W. Liberty St.	Louisville	Jefferson	KENTUCKY
49	Tompkins--Buchanan House	851 S. 4th St.	Louisville	Jefferson	KENTUCKY
50	Tyler-Muldoon House	132 E. Gray St.	Louisville	Jefferson	KENTUCKY
51	Weissinger-Gaulbert Apartments	709 S. 3rd St.	Louisville	Jefferson	KENTUCKY
52	Y.M.C.A. Building	227--229 W. Broadway	Louisville	Jefferson	KENTUCKY
53	Bayly-Schroering House	1012 S. 4th St.	Louisville	Jefferson	KENTUCKY
54	Brown Hotel Building and Theater	675 River City Mall	Louisville	Jefferson	KENTUCKY
55	Calvary Episcopal Church	821 S. 4th St.	Louisville	Jefferson	KENTUCKY
56	Clover Hill	2618 Dixie Hwy.	Louisville	Jefferson	KENTUCKY
57	College Street Presbyterian Church	113 W. College St.	Louisville	Jefferson	KENTUCKY
58	Cornwall and Brown Houses	957 S. 4th St.	Louisville	Jefferson	KENTUCKY
59	Eclipse Woolen Mill	1044 E. Chestnut St.	Louisville	Jefferson	KENTUCKY
60	Fifth Ward School	743 S. 5th St.	Louisville	Jefferson	KENTUCKY

APPENDIX C - TABLE SUMMARIZING HISTORIC PROPERTIES WITHIN 10 MILE RADIUS OF SITE

Proposed Natural Gas Combined-Cycle Electric Generating Unit  
 Louisville Gas & Electric Company  
 52 Cane Run Road  
 Louisville, Kentucky 40216

LABEL	NAME	ADDRESS	CITY	COUNTY	STATE
61	Howard-Gettys House	1226 Bates Ct.	Louisville	Jefferson	KENTUCKY
62	Kaufman-Straus Building	427--437 S. 4th St.	Louisville	Jefferson	KENTUCKY
63	Knights of Pythias Temple	928--932 W. Chestnut St.	Louisville	Jefferson	KENTUCKY
64	Levy Brothers Building	235 W. Market St.	Louisville	Jefferson	KENTUCKY
65	Loew's and United Artists State Theatre	625 S. 4th St.	Louisville	Jefferson	KENTUCKY
66	Old Presbyterian Theological Seminary	109 E. Broadway	Louisville	Jefferson	KENTUCKY
67	Paget House and Heigold House Facade	1562 Fulton St. and River Rd.	Louisville	Jefferson	KENTUCKY
68	Presentation Academy	861 S. 4th St.	Louisville	Jefferson	KENTUCKY
69	Rossmore Apartment House	664 River City Mall	Louisville	Jefferson	KENTUCKY
70	Snead Manufacturing Building	817 W. Market St.	Louisville	Jefferson	KENTUCKY
71	Ursuline Academy and Convent	800 E. Chestnut St.	Louisville	Jefferson	KENTUCKY
72	Walnut Street Theater	416 W. Walnut St.	Louisville	Jefferson	KENTUCKY
73	White Mills Distillery Company	18th and Howard Sts.	Louisville	Jefferson	KENTUCKY
74	Bush, S. S., House	230 Kenwood Hill Rd.	Louisville	Jefferson	KENTUCKY
75	Chestnut Street Methodist Church	809 W. Chestnut St.	Louisville	Jefferson	KENTUCKY
76	Doerhoefer-Hampton House	2422 W. Chestnut St.	Louisville	Jefferson	KENTUCKY
77	Elks Athletic Club	604 S. 3rd St.	Louisville	Jefferson	KENTUCKY
78	Finzer, Nicholas, House	1212 Hull St.	Louisville	Jefferson	KENTUCKY
79	First Christian Church	850 S. 4th St.	Louisville	Jefferson	KENTUCKY
80	Fourth Avenue Methodist Episcopal Church	318 W. St. Catherine St.	Louisville	Jefferson	KENTUCKY
81	Heyburn Building	332 W. Broadway	Louisville	Jefferson	KENTUCKY
82	House of Weller	121 W. Main St.	Louisville	Jefferson	KENTUCKY
83	Jefferson Branch Louisville Free Public Library	1718 W. Jefferson St.	Louisville	Jefferson	KENTUCKY
84	Kentucky National Bank	300 W. Main St.	Louisville	Jefferson	KENTUCKY
85	Louisville Male High School	911 S. Brook St.	Louisville	Jefferson	KENTUCKY
86	Meek-Miller House	3123 N. Western Pkwy.	Louisville	Jefferson	KENTUCKY
87	Porter-Todd House	929 S. 4th St.	Louisville	Jefferson	KENTUCKY
88	Whiteside Bakery	1400 W. Broadway St.	Louisville	Jefferson	KENTUCKY
89	Farnsley-Moremeyn House	W of Louisville at 10908 Lower River Rd.	Louisville	Jefferson	KENTUCKY
90	Baker-Hawkins House	3603 W. Market St.	Louisville	Jefferson	KENTUCKY
91	Brandeis, Albert S., Elementary School	1001 S. 26th St.	Louisville	Jefferson	KENTUCKY
92	Broadway Temple A.M.E. Zion Church	662 S. 13th St.	Louisville	Jefferson	KENTUCKY
93	Chestnut Street Baptist Church	912 W. Chestnut St.	Louisville	Jefferson	KENTUCKY
94	Hook and Ladder Company No. 2	221 S. Hancock St.	Louisville	Jefferson	KENTUCKY
95	Hook and Ladder Company No. 3	Frankfort Ave. and Pope St.	Louisville	Jefferson	KENTUCKY
96	Hook and Ladder Company No. 4	2301 Jefferson St.	Louisville	Jefferson	KENTUCKY
97	Inter-Southern Insurance Building	239-247 S. 5th St.	Louisville	Jefferson	KENTUCKY
98	Jefferson County Armory	525 W. Muhammad Ali Blvd.	Louisville	Jefferson	KENTUCKY
99	Jefferson County Courthouse Annex	517 Court Pl.	Louisville	Jefferson	KENTUCKY
100	Louisville Free Public Library	301 W. York St.	Louisville	Jefferson	KENTUCKY
101	Main Street District, Expanded	316,320,324 and 328 W. Main St.	Louisville	Jefferson	KENTUCKY
102	National Foundry and Machine Company	1402 W. Main St.	Louisville	Jefferson	KENTUCKY
103	New Enterprise Tobacco Warehouse	925 W. Main St.	Louisville	Jefferson	KENTUCKY
104	Old U.S. Customhouse and Post Office and Fireproof Storage Company Warehouse	300--314 W. Liberty St.	Louisville	Jefferson	KENTUCKY
105	Rose Hill	1835 Hampden Ct.	Louisville	Jefferson	KENTUCKY
106	Schuster Building	1500-1512 Bardstown Rd.	Louisville	Jefferson	KENTUCKY
107	Shelby Park Branch Library	600 E. Oak St.	Louisville	Jefferson	KENTUCKY
108	South Central Bell Company Office Building	521 W. Chestnut St.	Louisville	Jefferson	KENTUCKY
109	St. Peter's German Evangelical Church	1231 W. Jefferson St.	Louisville	Jefferson	KENTUCKY
110	Steam Engine Company No. 10	1419 E. Washington	Louisville	Jefferson	KENTUCKY
111	Steam Engine Company No. 11	1122 Rogers	Louisville	Jefferson	KENTUCKY
112	Steam Engine Company No. 18	2600 S. 4th St.	Louisville	Jefferson	KENTUCKY
113	Steam Engine Company No. 2	617--621 W. Jefferson St.	Louisville	Jefferson	KENTUCKY
114	Steam Engine Company No. 20	1330 Bardstown Rd.	Louisville	Jefferson	KENTUCKY
115	Steam Engine Company No. 21	1761 Frankfort Ave.	Louisville	Jefferson	KENTUCKY
116	Steam Engine Company No. 22	37th and Broadway	Louisville	Jefferson	KENTUCKY
117	Steam Engine Company No. 3	802--804 E. Main St.	Louisville	Jefferson	KENTUCKY
118	Steam Engine Company No. 4	1024 Logan St.	Louisville	Jefferson	KENTUCKY
119	Steam Engine Company No. 7	821 S. 6th St.	Louisville	Jefferson	KENTUCKY
120	Aydellott House	6814 Bethany Lane	Valley Station	Jefferson	KENTUCKY

APPENDIX C - TABLE SUMMARIZING HISTORIC PROPERTIES WITHIN 10 MILE RADIUS OF SITE

Proposed Natural Gas Combined-Cycle Electric Generating Unit  
 Louisville Gas & Electric Company  
 2 Cane Run Road  
 Louisville, Kentucky 40216

LABEL	NAME	ADDRESS	CITY	COUNTY	STATE
121	Lewiston House	4902 Ranchland	Valley Station	Jefferson	KENTUCKY
122	Steam Engine Company No.4	1617 W. Main St.	Louisville	Jefferson	KENTUCKY
123	Steam Engine Company No. 20	1735 Bardstown Rd.	Louisville	Jefferson	KENTUCKY
124	Fire Department Headquarters	1135 W. Jefferson St.	Louisville	Jefferson	KENTUCKY
125	Firehouse No. 13	100 N. 34th St.	Louisville	Jefferson	KENTUCKY
126	Farnsley, Gabriel, House	N of Bridgeport off IN 111	Bridgeport	Floyd	INDIANA
127	Bradford Mills	1034 E. Oak St.	Louisville	Jefferson	KENTUCKY
128	Falls City Jeans and Woolen Mills	1010 S. Preston St.	Louisville	Jefferson	KENTUCKY
129	First Lutheran Church	417 E. Broadway	Louisville	Jefferson	KENTUCKY
130	Keneseth Israel Synagogue	232-236 W. Jacob St.	Louisville	Jefferson	KENTUCKY
131	Louisville Cotton Mills	1008 Goss Ave.	Louisville	Jefferson	KENTUCKY
132	St.Bonifacius Kirche Complex	501-531 E. Liberty St.	Louisville	Jefferson	KENTUCKY
133	St George's Roman Catholic Church	1909 Standard Ave.	Louisville	Jefferson	KENTUCKY
134	Adath Jeshurun Temple and School	749-757 S. Brook St.	Louisville	Jefferson	KENTUCKY
135	Almsted Brothers Building	425 W. Market St.	Louisville	Jefferson	KENTUCKY
136	Ancient and Accepted Scottish Rite Temple	200 E. Gray St.	Louisville	Jefferson	KENTUCKY
137	Bullock-Clifton House	1824 Rosedale Ave.	Louisville	Jefferson	KENTUCKY
138	Bush, Cornelia, House	316 Kenwood Dr.	Louisville	Jefferson	KENTUCKY
139	Commodore Apartment Building	2140 Bonnycastle Ave.	Louisville	Jefferson	KENTUCKY
140	Emerson School	1100 Sylvia Ave.	Louisville	Jefferson	KENTUCKY
141	Gordon, Cornelia, House	308 Kenwood Hill Rd.	Louisville	Jefferson	KENTUCKY
142	Montgomery Street School	2500-2506 Montgomery St.	Louisville	Jefferson	KENTUCKY
143	Rauchfuss Houses	837--847 S. Brook St.	Louisville	Jefferson	KENTUCKY
144	Republic Building	429 W. Muhammad Ali Blvd.	Louisville	Jefferson	KENTUCKY
145	Roosevelt, Theodore, Elementary School	222 N. 17th St.	Louisville	Jefferson	KENTUCKY
146	St. Anthony's Roman Catholic Church, Rectory, Convent, and School	2222--233 W. Market St.	Louisville	Jefferson	KENTUCKY
147	St. Elizabeth of Hungary Roman Catholic Church	1024--1028 E. Burnett St.	Louisville	Jefferson	KENTUCKY
148	St. James Roman Catholic Church, Rectory, and School	1430 Bardstown Rd., 1826 and 1818 Edenside	Louisville	Jefferson	KENTUCKY
149	St. Patrick's Roman Catholic Church, Rectory, and School	1301--1305 W. Market St.	Louisville	Jefferson	KENTUCKY
150	St. Paul's German Evangelical Church and Parish House	213 E. Broadway	Louisville	Jefferson	KENTUCKY
151	Stewart's Dry Goods Company Building	501 S. 4th St.	Louisville	Jefferson	KENTUCKY
152	Theater Building	625--33 S. 4th Ave.	Louisville	Jefferson	KENTUCKY
153	Vogt, Henry, Machine Company Shop	10th St. and Ormsby Ave.	Louisville	Jefferson	KENTUCKY
154	Johnston, J. Stoddard, Elementary School	2301 Bradley Blvd.	Louisville	Jefferson	KENTUCKY
155	Grisamore House	111-113 W. Chestnut St.	Jeffersonville	Clark	INDIANA
156	Bernheim Distillery Bottling Plant	822-828 S. 15th St.	Louisville	Jefferson	KENTUCKY
157	Board of Extension of the Methodist Episcopal Church, South	1115 S. 4th St.	Louisville	Jefferson	KENTUCKY
158	Bosler Fireproof Garage	423 S. 3rd St.	Louisville	Jefferson	KENTUCKY
159	Bridges, C. A., Tobacco Warehouse	1719-23 W. Main St.	Louisville	Jefferson	KENTUCKY
160	Brown Tobacco Warehouse	1019-25 W. Main St.	Louisville	Jefferson	KENTUCKY
161	Christ the King School and Church	718-724 S. 44th St.	Louisville	Jefferson	KENTUCKY
162	Church of Our Merciful Saviour	473 S. 11th St.	Louisville	Jefferson	KENTUCKY
163	Columbian School	18th and Wilson	Louisville	Jefferson	KENTUCKY
164	Diebold, Anton, House	4303 W. Broadway	Louisville	Jefferson	KENTUCKY
165	Diebold, J. W., Jr. House	4119 W. Broadway	Louisville	Jefferson	KENTUCKY
166	District #1	S. Brook and E. Breckinbridge St.	Louisville	Jefferson	KENTUCKY
167	District #2	W. Breckinridge St. and S. 2nd St.	Louisville	Jefferson	KENTUCKY
168	Doerhoefer, Basil, House	4432 W. Broadway	Louisville	Jefferson	KENTUCKY
169	Doerhoefer, Peter C., House	4422 W. Broadway	Louisville	Jefferson	KENTUCKY
170	Dumesnil Street ME Church	17th and Dumesnil Sts.	Louisville	Jefferson	KENTUCKY
171	Epworth Methodist Evangelical Church	412 M. St.	Louisville	Jefferson	KENTUCKY
172	Ewing, D. H., & Sons Creamery	981 S. 3rd St.	Louisville	Jefferson	KENTUCKY
173	Farnsley, David, House	4816 Cane Run Rd.	Louisville	Jefferson	KENTUCKY
174	First National Bank-Kentucky Title Company Building	214 S. 5th St.	Louisville	Jefferson	KENTUCKY
175	Givens Headley and Co. Tobacco Warehouse	1119-1121 W. Main St.	Louisville	Jefferson	KENTUCKY
176	Greve, Buhrlage, and Company	312-316 N. 15th St.	Louisville	Jefferson	KENTUCKY
177	Greve, Buhrlage, and Company	1501 Lytle St.	Louisville	Jefferson	KENTUCKY
178	Heywood, John H., Elementary School	422 Heywood Ave.	Louisville	Jefferson	KENTUCKY
179	Holy Cross Catholic Church, School and Rectory	31st and Broadway	Louisville	Jefferson	KENTUCKY
180	Ideal Theatre	2315-19 W. Market St.	Louisville	Jefferson	KENTUCKY

APPENDIX C - TABLE SUMMARIZING HISTORIC PROPERTIES WITHIN 10 MILE RADIUS OF SITE

Proposed Natural Gas Combined-Cycle Electric Generating Unit  
 Louisville Gas & Electric Company  
 52 Cane Run Road  
 Louisville, Kentucky 40216

LABEL	NAME	ADDRESS	CITY	COUNTY	STATE
181	Immanuel Chapel Protestant Episcopal Church	410 Fairmont Ave.	Louisville	Jefferson	KENTUCKY
182	Irvin, James F., House	2910 Northwestern Pkwy.	Louisville	Jefferson	KENTUCKY
183	Jones House	4998 Valley Station Rd.	Valley Station	Jefferson	KENTUCKY
184	Kentucky Street School	119 E. Kentucky St.	Louisville	Jefferson	KENTUCKY
185	Kentucky Wagon Works	2601 S. 3rd St.	Louisville	Jefferson	KENTUCKY
186	Louisville and Nashville Railroad Office Building	908 W. Broadway	Louisville	Jefferson	KENTUCKY
187	Lowell, James Russell, Elementary School	4501 Crittenden Dr.	Louisville	Jefferson	KENTUCKY
188	Marlow Place Bungalows District	3139 to 3209 W. Broadway	Louisville	Jefferson	KENTUCKY
189	Marvin, Dr. J. B., House	809 S. 4th St.	Louisville	Jefferson	KENTUCKY
190	McFerran, J. B., School	Cypress and Hill Sts.	Louisville	Jefferson	KENTUCKY
191	Mengel Box Company	1247-1299 S. 12th St.	Louisville	Jefferson	KENTUCKY
192	Monon Freight Depot	1400 W. Main St.	Louisville	Jefferson	KENTUCKY
193	National Tobacco Work Branch Stemery	2410-18 W. Main St.	Louisville	Jefferson	KENTUCKY
194	National Tobacco Works	1800-10 W. Main St.	Louisville	Jefferson	KENTUCKY
195	National Tobacco Works Branch Drying House	2400 W. Main St.	Louisville	Jefferson	KENTUCKY
196	Oakdale District	Roughly bounded by Terrace Park, Southern Pk	Louisville	Jefferson	KENTUCKY
197	Parkland Evangelical Church	1102 S. 26th St.	Louisville	Jefferson	KENTUCKY
198	Parkland Junior High School	2509 Wilson Ave.	Louisville	Jefferson	KENTUCKY
199	Peaslee-Gaulbert Warehouse	1427 Lytle St.	Louisville	Jefferson	KENTUCKY
200	Planter's Tobacco Warehouse	1027-1031 W. Main St.	Louisville	Jefferson	KENTUCKY
201	Reed, J. V., and Company	1100 W. Main St.	Louisville	Jefferson	KENTUCKY
202	South Louisville Reformed Church	1060 Lynnhurst Ave.	Louisville	Jefferson	KENTUCKY
203	Speed Building	319 Guthrie Green	Louisville	Jefferson	KENTUCKY
204	Thierman Apartments	416-420 W. Breckinridge St.	Louisville	Jefferson	KENTUCKY
205	Tiller, F. M., House	4309 W. Broadway	Louisville	Jefferson	KENTUCKY
206	Tobacco Realty Company	118-126 N. 10th St.	Louisville	Jefferson	KENTUCKY
207	Wedekind House and Servant's Quarters	2630 and 2532 W. Burnett St.	Louisville	Jefferson	KENTUCKY
208	Western Junior High School	22nd and Main Sts.	Louisville	Jefferson	KENTUCKY
209	Wrampelmeier Furniture Company	226-228 N. 15th St.	Louisville	Jefferson	KENTUCKY
210	Thornburgh House	376 N. 26th St.	Louisville	Jefferson	KENTUCKY
211	German Bank Building	150 S. 5th St.	Louisville	Jefferson	KENTUCKY
212	Shawnee Elementary School	4151 Herman St.	Louisville	Jefferson	KENTUCKY
213	Shawnee High School	4015 Herman St.	Louisville	Jefferson	KENTUCKY
214	Grove, Benjamin, House	518 N. 26th St.	Louisville	Jefferson	KENTUCKY
215	St. Vincent DePaul Church, Rectory, School, St. Ursula Home and Convent	Oak and Shelby Sts., and 1214 Logan St.	Louisville	Jefferson	KENTUCKY
216	Wright and Taylor Building	611-617 S. 4th St.	Louisville	Jefferson	KENTUCKY
217	Brandeis House	310 E. Broadway	Louisville	Jefferson	KENTUCKY
218	Caperton Block	564-574 4th Ave.	Louisville	Jefferson	KENTUCKY
219	First Street District	Roughly bounded by E. Breckinridge, E. Kentu	Louisville	Jefferson	KENTUCKY
220	Kosmosdale Depot	Off Dixie Hwy.	Valley Station	Jefferson	KENTUCKY
221	Tingley, George H., Elementary School	1311-1317 S. Preston St.	Louisville	Jefferson	KENTUCKY
222	Electric Building	619 S. 4th Ave.	Louisville	Jefferson	KENTUCKY
223	German Insurance Bank	207 W. Market St.	Louisville	Jefferson	KENTUCKY
224	Stuart Building	601 W. Oak St.	Louisville	Jefferson	KENTUCKY
225	Preston-St. Catherine Street Historic District	Roughly bounded by Roland, Preston, Jackson,	Louisville	Jefferson	KENTUCKY
226	Preston-St. Catherine Street Historic District	Roughly bounded by Roland, Preston, Jackson,	Louisville	Jefferson	KENTUCKY
227	Starks Building	455 S. 4th Ave.	Louisville	Jefferson	KENTUCKY
228	Madrid Building	545 S. 3rd St.	Louisville	Jefferson	KENTUCKY
229	Bodley, Temple, Summer House	Off Riva Ridge Rd. SW of Palatka Rd.	Louisville	Jefferson	KENTUCKY
230	Schneikert, Valentine, House	1234 Lexington Rd.	Louisville	Jefferson	KENTUCKY
231	Saint Frances of Rome School	2105--2117 Payne St.	Louisville	Jefferson	KENTUCKY
232	German Evangelical Church of Christ Complex	1236 E. Breckinridge St.	Louisville	Jefferson	KENTUCKY
233	Saint Francis of Assisi Complex	1960 Bardstown Rd.	Louisville	Jefferson	KENTUCKY
234	Second and Market Streets Historic District	Roughly, area around Second and Market Sts.	Louisville	Jefferson	KENTUCKY
235	Third and Market Streets Historic District	201--219 S. Third St. and 224--240 W. Market S	Louisville	Jefferson	KENTUCKY
236	Savoy Historic District	209--221 W. Jefferson St.	Louisville	Jefferson	KENTUCKY
237	Tyler Hotel	229--245 W. Jefferson St.	Louisville	Jefferson	KENTUCKY
238	Third and Jefferson Streets Historic District	301--317 S. Third St. and 232--244 Jefferson St.	Louisville	Jefferson	KENTUCKY
239	Warehouse A, Brown--Forman Corporation	18th and Howard Sts.	Louisville	Jefferson	KENTUCKY
240	MAYOR ANDREW BROADDUS	4th St. and River Rd.	Louisville	Jefferson	KENTUCKY

**APPENDIX C - TABLE SUMMARIZING HISTORIC PROPERTIES WITHIN 10 MILE RADIUS OF SITE**

Proposed Natural Gas Combined-Cycle Electric Generating Unit  
 Louisville Gas & Electric Company  
 52 Cane Run Road  
 Louisville, Kentucky 40216

<b>LABEL</b>	<b>NAME</b>	<b>ADDRESS</b>	<b>CITY</b>	<b>COUNTY</b>	<b>STATE</b>
241	Dolfinger, J., and Company Building	642 S. Fourth St.	Louisville	Jefferson	KENTUCKY
242	Marmaduke Building	520 S. Fourth Ave.	Louisville	Jefferson	KENTUCKY
243	Jewish Hospital Complex	236 E. Kennedy St.	Louisville	Jefferson	KENTUCKY
244	Hope Worsted Mills	942 E. Kentucky St.	Louisville	Jefferson	KENTUCKY
245	Cumberland, The	201 York St.	Louisville	Jefferson	KENTUCKY
246	Harig, Koop & Company--Columbia Mantel Company	845 S. Ninth St.	Louisville	Jefferson	KENTUCKY
247	Sweet Gum Stable	627 W. Main St.	New Albany	Floyd	INDIANA
248	Union Monument in Louisville	Cave Hill Cemetery. Jct. of Payne St. and Lexin	Louisville	Jefferson	KENTUCKY
249	Bloedner, August, Monument	Cave Hill Cemetery. Jct. of Payne St. and Lexin	Louisville	Jefferson	KENTUCKY
250	Confederate Monument in Louisville	Jct. of 2nd and 3rd Sts.	Louisville	Jefferson	KENTUCKY
251	Castleman, John B., Monument	Jct. of Cherokee Rd. and Willow Ave.	Louisville	Jefferson	KENTUCKY
252	Cave Hill National Cemetery	701 Baxter Ave.	Louisville	Jefferson	KENTUCKY
253	Brown, J.T.S., and Son's Complex	105, 107-109 W. Main St.	Louisville	Jefferson	KENTUCKY
254	United States Post Office, Court House and Custom House	601 W. Broadway	Louisville	Jefferson	KENTUCKY
255	New Albany National Cemetery	1943 Ekin Ave.	New Albany	Floyd	INDIANA

## **APPENDIX D**

**Copy of:**

**Ambient Sound Level Survey for the Cane Run Generating  
Station. Burns & McDonnell Engineering Company, Inc.,  
Kansas City, Missouri Project No. 59211 (December 2010)**





---

January 4, 2011

Thomas Guelda and  
Philip Imber  
Louisville Gas & Electric and  
Kentucky Utilities Services Company  
Louisville, Kentucky

Re: Ambient Sound Level Survey for the  
Can Run Generating Station  
Louisville, KY  
Burns & McDonnell Project No. 59211

Dear Mr. Guelda and Mr. Imber:

Attached please find the Ambient Sound Level Survey for the Cane Run Generating Station, located in Jefferson County, Kentucky, as conducted by Burns & McDonnell Engineering Company, Inc. on November 19 and 20, 2010.

After review of the methods, procedures, and results, in my opinion the results and associated calculations support the stated conclusions. No recommendations are required since this study measured background sound levels.

Thank you for the opportunity to provide this work for you. If you have any questions, please contact Mr. Chris Howell at 816-822-4243.

Sincerely,

Eric Wenger, CIH  
Certified Industrial Hygienist

Chris Howell, Environmental Engineer  
Report Author

Attachment  
cc: Mary Hauner-Davis

**Ambient Sound Level Survey**

for the

**Cane Run Generating Station  
Louisville, KY**

for

**Louisville Gas & Electric and Kentucky Utilities  
Services Company**

**December 2010**

**AMBIENT SOUND LEVEL SURVEY  
for the  
CANE RUN GENERATING STATION**

prepared for

**Louisville Gas & Electric and Kentucky Utilities  
Services Company  
Louisville, KY**

**December 2010**

**Project No. 59211**

prepared by

**Burns & McDonnell Engineering Company, Inc.  
Kansas City, Missouri**



## EXECUTIVE SUMMARY

LG&E and KU Services Company (Owner) hired Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) to conduct an ambient sound level survey for the Cane Run Generating Station (Facility) located in Jefferson County, Kentucky, on the southwestern edge of Louisville. There were several objectives in this study, including:

- Identify any applicable county, state, or federal noise ordinances or other guidelines
- Determine the ambient existing sound levels in the area surrounding the Facility using an ANSI Type-I noise meter and the methods described in Section 3.0 of this document

Jefferson County, the City of Louisville, nor the Commonwealth of Kentucky has quantitative noise regulations. There is a state and a county noise ordinance, but neither specifies a numerical noise limit. Qualitative regulations such as these for similar areas around the country were recently declared unconstitutionally vague by the Supreme Court. Therefore, there were no identified, enforceable sound level limits that would be applicable to this facility.

Ambient sound levels were measured to establish the baseline sound levels around the Facility. The average measured existing ambient sound levels ( $L_{eq}$ ) ranged from 38 to 83 dBA. Field personnel logged extraneous sounds that influenced the sound levels, specifically noting that the measurements were heavily influenced by traffic, airplanes, trains, and animals. The Cane Run Generating Station was audible during many of the measurements, but did not dominate the measured sound near any of the residential areas.

\* \* \* \* \*

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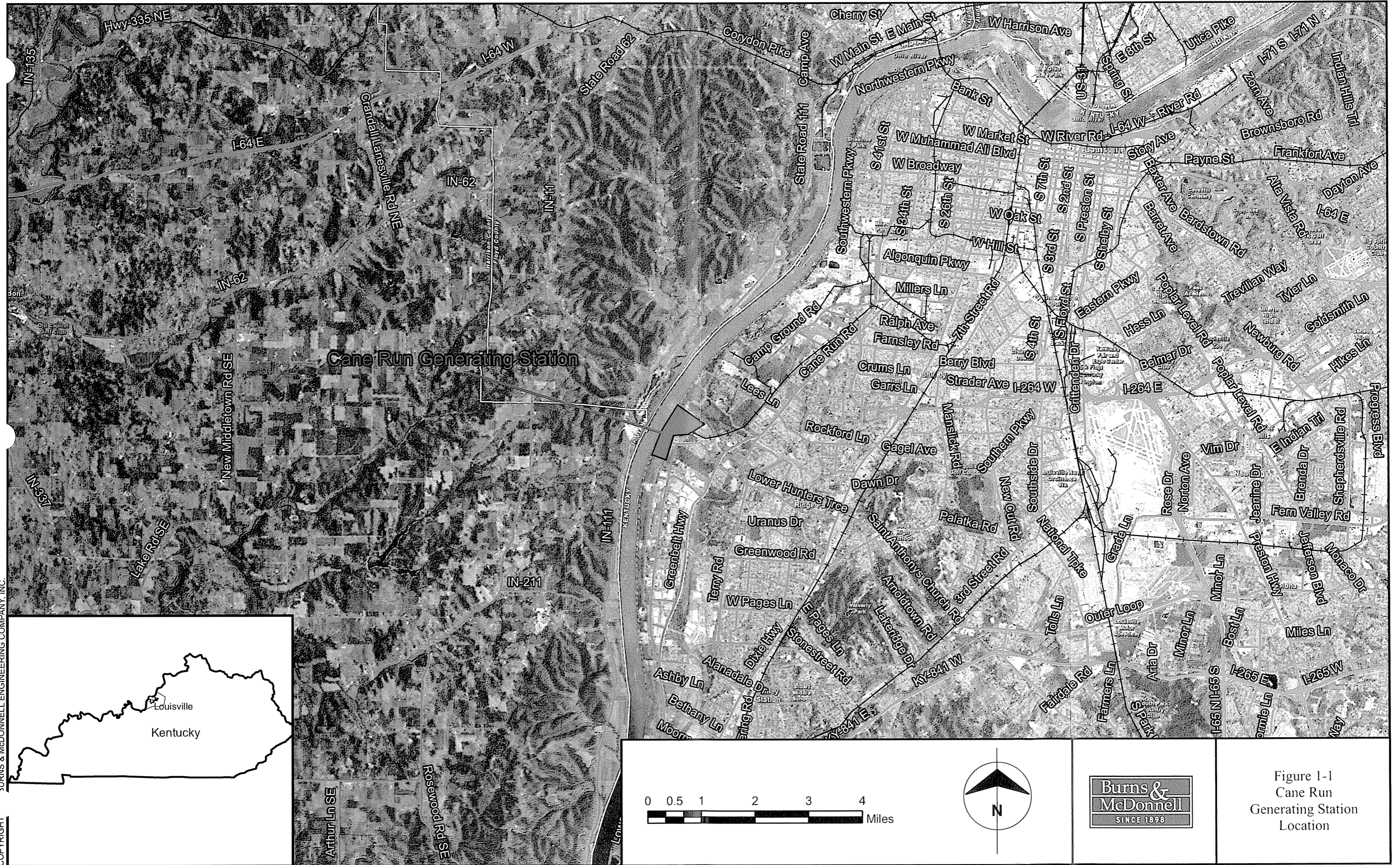
## 1.0 INTRODUCTION

LG&E and KU Services Company (Owner) hired Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) to conduct an ambient sound level survey for the Cane Run Generating Station (Facility) in Jefferson County, Kentucky, on the southwestern edge of Louisville (Figure 1-1). There were several objectives in this study, including:

- Identifying any applicable county, state, or federal noise ordinances or other guidelines
- Determining the ambient existing sound levels in the area surrounding the Facility using an ANSI Type-I noise meter and the methods described in section 4.0.

\* \* \* \* \*





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Figure I-1  
Cane Run  
Generating Station  
Location

## 2.0 ACOUSTICAL TERMINOLOGY

The term “sound” is often used to describe two different sound characteristics called sound power and sound pressure. Every source that produces sound has a sound power level ( $L_w$ ). The sound power level is the acoustical energy emitted by a sound source and is an absolute number that is not affected by the environment. The acoustical energy produced by a source propagates with air pressure fluctuations. These pressure fluctuations, also called sound pressure ( $L_p$ ), are what human ears hear and microphones measure.

Sound energy is physically characterized by amplitude and frequency. Sound amplitude is measured in decibels (dB) as the logarithmic ratio of a sound pressure to a reference sound pressure (20 MicroPascals). The reference sound pressure corresponds to the typical threshold of human hearing. A 3-dB change in a continuous broadband sound is generally considered “just barely perceptible” to the average listener. A 6-dB change is generally considered “clearly noticeable,” and a 10 dB change is generally considered a doubling (or halving) of the apparent loudness.

Frequency is measured in hertz (Hz), which is the number of cycles per second. The typical human ear can hear frequencies ranging from approximately 20 to 20,000 Hz. Normally, the human ear is most sensitive to sounds in the middle frequencies (1,000 to 8,000 Hz) and is less sensitive to sounds in the low and high frequencies. As such, the A-weighting scale was developed to simulate the frequency response of the human ear to sounds at typical environmental levels. The A-weighting scale emphasizes sounds in the middle frequencies and de-emphasizes sounds in the low and high frequencies. Any sound level to which the A-weighting scale has been applied is expressed in A-weighted decibels, or dBA. For reference, the A-weighted sound pressure level and subjective loudness associated with some common noise sources are listed in Table 2-1.

**Table 2-1: Typical Sound Pressure Levels Associated with Common Noise Sources**

Sound Pressure Level (dBA)	Subjective Evaluation	Environment	
		Outdoor	Indoor
140	Deafening	Jet aircraft at 75 ft	
130	Threshold of pain	Jet aircraft during takeoff at a distance of 300 ft	
120	Threshold of feeling	Elevated train	Hard rock band
110		Jet flyover at 1000 ft	Inside propeller plane
100	Very loud	Power mower, motorcycle at 25 ft, auto horn at 10 ft, crowd noise at football game	
90		Propeller plane flyover at 1000 ft, noisy urban street	Full symphony or band, food blender, noisy factory
80	Moderately loud	Diesel truck (40 mph) at 50 ft	Inside auto at high speed, garbage disposal, dishwasher
70	Loud	B-757 cabin during flight	Close conversation, vacuum cleaner, electric typewriter
60	Moderate	Air-conditioner condenser at 15 ft, near highway traffic	General office
50	Quiet		Private office
40		Farm field with light breeze, birdcalls	Soft stereo music in residence
30	Very quiet	Quiet residential neighborhood	Bedroom, average residence (without TV and stereo)
20		Rustling leaves	Quiet theater, whisper
10	Just audible		Human breathing
0	Threshold of hearing		

Source: Adapted from Architectural Acoustics, M. David Egan, 1988 and Architectural Graphic Standards, Ramsey and Slocper, 1994.

Sound in the environment is constantly fluctuating; examples could be when a car drives by, a dog barks, or a plane passes overhead. Therefore, sound metrics have been developed to numerically describe fluctuating environmental sound levels. These metrics include the exceedance sound levels. The exceedance sound level,  $L_x$ , is the sound level exceeded "x" percent of the sampling period and is referred to as a statistical sound level. The most common  $L_x$  values are  $L_{eq}$ ,  $L_{90}$ ,  $L_{50}$ , and  $L_{10}$ . The  $L_{90}$  is the sound level exceeded 90 percent of the sampling period. The  $L_{90}$  represents the sound level without the influence of loud, transient sound sources and is often referred to as the residual or background sound level. The  $L_{50}$  is the sound level exceeded 50 percent of the sampling period. The  $L_{10}$  represents the occasional louder sounds and is often referred to as the intrusive sound level. The variation between the  $L_{90}$ ,  $L_{50}$ , and  $L_{10}$  sound levels can provide an indication of the variability of the acoustical environment. If the acoustical environment is perfectly steady, all values are identical. A large variation between the

values indicates highly fluctuating sound levels. For instance, measurements near a roadway with passing vehicles may cause a large variation in the statistical sound levels. The average sound level for a specific time period is called the  $L_{eq}$ .  $L_{eq}$ ,  $L_{90}$ ,  $L_{50}$ , and  $L_{10}$  are all presented in this assessment.

\* \* \* \* \*

### 3.0 NOISE REGULATIONS AND GUIDELINES

Burns & McDonnell reviewed applicable federal, state, county, and local sound regulations for the Facility site. Both the Commonwealth of Kentucky and the City of Louisville have qualitative noise ordinances, but neither has any enforceable, numerical limits associated with them. Additionally, the Supreme Court has recently ruled that ordinances such as these, in similar areas across the country, as being unconstitutionally vague. Therefore, there were no identified, enforceable sound level limits that would be applicable to this facility.

\*\* \* \*

#### 4.0 EXISTING SOUND LEVELS

An ambient sound level survey was conducted for near the Facility. Measurements were taken during four time periods near representative sound receivers to determine the existing sound levels in the area. Burns & McDonnell personnel obtained background sound level measurements between the hours of 1:00 and 3:00 A.M., 5:30 and 7:30 A.M., 11:30 A.M. and 1:30 P.M., and 3:30 and 5:30 P.M. on both November 19 and 20, 2010.

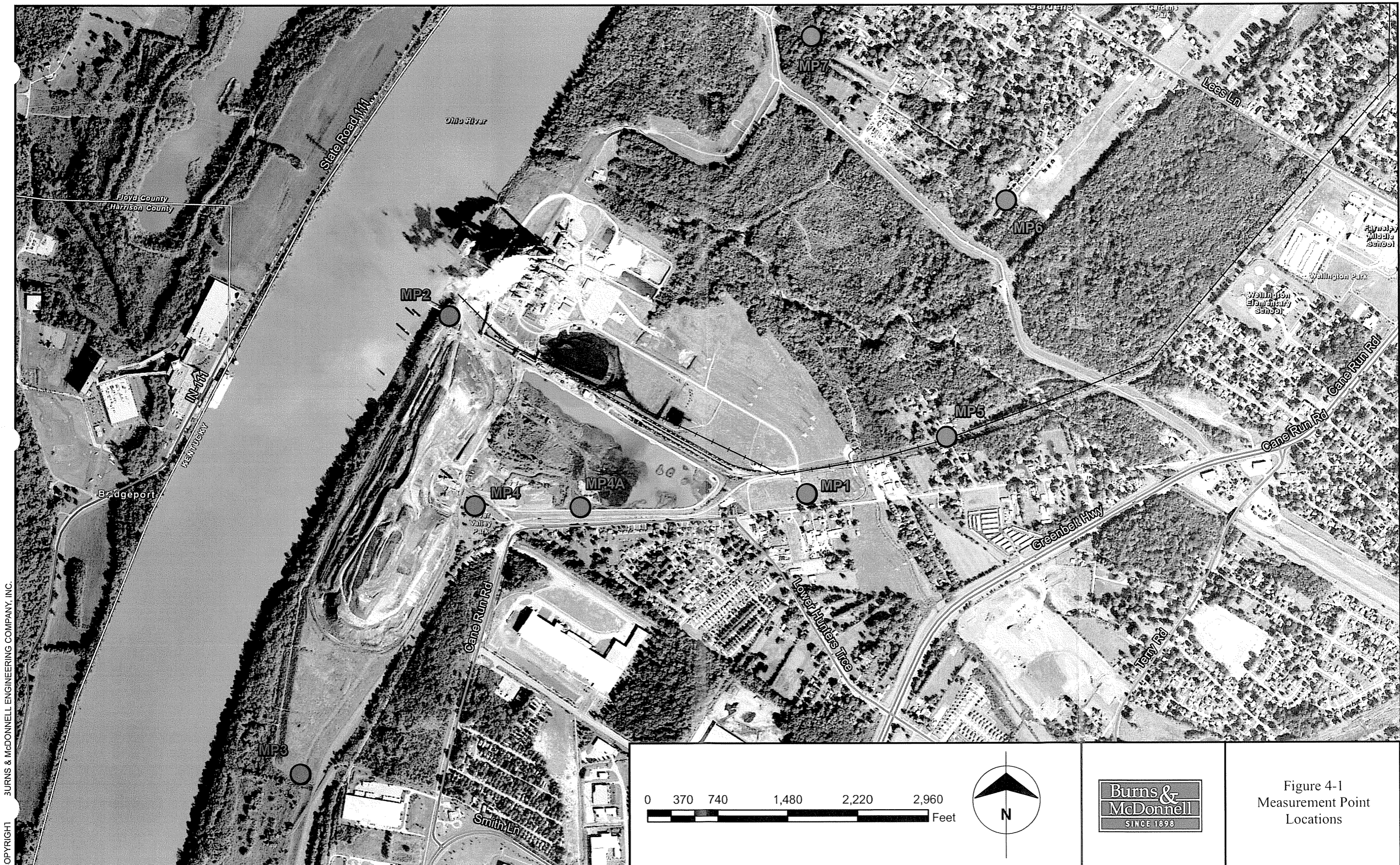
Weather conditions were mostly favorable for conducting ambient sound measurements during all survey periods. Nearly all wind speeds were lower than what ANSI recommends as acceptable levels for taking measurements, and the average wind speeds were below the recommended speed. Approximate ambient meteorological conditions during the sound survey are displayed in Table 4-1.

**Table 4-1: Meteorological Conditions During Sound Measurements**

Date	Time Period	Temperature (°F)	Relative Humidity (%)	Wind Speed (mph)	Sky Cover
November 19, 2010	1:00 to 3:00 A.M.	44-47	58-68	0-2	Cloudy
November 19, 2010	5:30 to 7:30 A.M.	44-47	66-71	Calm	Cloudy
November 19, 2010	11:30 A.M. to 1:30 P.M.	48-55	47-61	3-8	Cloudy
November 19, 2010	3:30 to 5:30 P.M.	54	50	2-4	Cloudy
November 20, 2010	1:00 to 3:00 A.M.	37-43	58-80	Calm	Clear/Foggy
November 20, 2010	5:30 to 7:30 A.M.	37-42	67-83	Calm	Foggy
November 20, 2010	11:30 A.M. to 1:30 P.M.	53-62	51-64	3-6	Clear
November 20, 2010	3:30 to 5:30 P.M.	51.9-62	49-71	0-4	Clear

Sound level measurements were taken at the seven locations shown in Figure 4-1. These locations were selected because they were deemed to be representative of existing environmental sound conditions, were near sensitive receivers, and were accessible. Measurements were made using a Larson-Davis Model 824 sound level meter (Type I sound level meters as specified in American National Standards Institute S1.4).

The sound level meter was calibrated before and after each set of measurements. None of the calibration level changes exceeded  $\pm 0.4$  dB. A windscreen was used at all times on the meter, and the meter was mounted on a tripod, approximately five feet above the ground. The  $L_{eq}$ ,  $L_{90}$ ,  $L_{50}$ , and  $L_{10}$  sound levels were recorded at each location. Fifteen-minute measurement samples were taken during each of the eight time periods. The measured sound levels for the A-weighted overall  $L_{eq}$ ,  $L_{90}$ ,  $L_{50}$ , and  $L_{10}$  sound levels are presented in Table 4-2 through Table 4-8.



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Issued: December, 2010

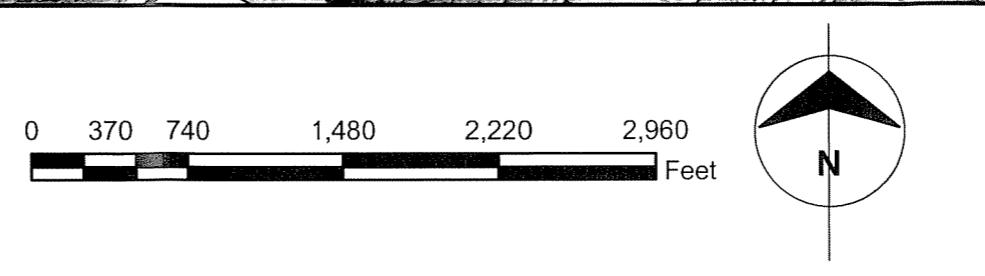


Figure 4-1  
Measurement Point  
Locations



**Table 4-2: Existing Ambient Sound Levels – MPI**

<b>Time Period</b>	<b>Measured L<sub>eq</sub> (dBA)</b>	<b>Measured L<sub>90</sub> (dBA)</b>	<b>Measured L<sub>50</sub> (dBA)</b>	<b>Measured L<sub>10</sub> (dBA)</b>	<b>Extraneous Sounds</b>
November 19, 2010 1:00 A.M. - 3:00 A.M.	52	51	52	53	Gas meters ~100 feet away (constant sound), plant barely audible, airplane (not visible), car (x2), train started up, truck idling in distance
November 19, 2010 5:30 A.M. - 7:30 A.M.	60	52	53	61	Car (x18), truck (x3), gas meter, possible train idling, 52-53 dBA without traffic
November 19, 2010 11:30 A.M. - 1:30 P.M.	56	51	54	58	Car (x30), truck (x2), gas meter, distant traffic, flag hitting pole, facility audible, train idling, birds, about 50 dBA without cars, coal unloading
November 19, 2010 3:30 P.M. - 5:30 P.M.	53	49	51	56	Gas meter, car (x27), distant traffic, car horn, truck, train horn, flag pole clanking, birds, construction activities at RR
November 20, 2010 1:00 A.M. - 3:00 A.M.	53	52	53	53	Gas meter, car (x5), plane (x2), dog in distance, train in distance, facility not audible
November 20, 2010 5:30 A.M.- 7:30 A.M.	54	52	53	54	Gas meter, car (x10), facility barely audible, distant traffic, siren
November 20, 2010 11:30 A.M. - 1:30 P.M.	50	45	47	52	Cars (x15), gas meter, man lift for transformer repairs, plane, distant bang, distant traffic, back-up beep nearby, plant not distinguishable
November 20, 2010 3:30 P.M - 5:30 P.M.	49	43	45	51	Plant audible, gas meter, cars (x8), dogs barking, distant traffic, gate beeping across Cane Run Road

**Table 4-3: Existing Ambient Sound Levels – MP2**

<b>Time Period</b>	<b>Measured L<sub>eq</sub> (dBA)</b>	<b>Measured L<sub>90</sub> (dBA)</b>	<b>Measured L<sub>50</sub> (dBA)</b>	<b>Measured L<sub>10</sub> (dBA)</b>	<b>Extraneous Sounds</b>
November 19, 2010 1:00 A.M. - 3:00 A.M.	53	52	52	53	Plant clearly audible, airplane (not visible)
November 19, 2010 5:30 A.M. - 7:30 A.M.	56	52	53	59	Plant clearly audible, airplane (not visible), train horn (x2), car, train moving/clanking
November 19, 2010 11:30 A.M. - 1:30 P.M.	67	53	55	63	Facility clearly audible (whirl or winding sound), construction activities to SE, train horn (x7), car (x2), train motion, haul truck (x3)
November 19, 2010 3:30 P.M. - 5:30 P.M.	53	52	53	54	Facility clearly audible, steam unit 1 to 2 seconds long (x2)
November 20, 2010 1:00 A.M. - 3:00 A.M.	50	49	50	51	Facility audible, traffic across river, plane
November 20, 2010 5:30 A.M.- 7:30 A.M.	50	49	50	51	Facility audible, traffic across river, plane (x2)
November 20, 2010 11:30 A.M. - 1:30 P.M.	50	48	50	51	Plant audible, traffic across river
November 20, 2010 3:30 P.M - 5:30 P.M.	49	48	49	50	Plant audible, traffic across river

Table 4-4: Existing Ambient Sound Levels – MP3

Time Period	Measured L <sub>eq</sub> (dBA)	Measured L <sub>90</sub> (dBA)	Measured L <sub>50</sub> (dBA)	Measured L <sub>10</sub> (dBA)	Extraneous Sounds
November 19, 2010 1:00 A.M. - 3:00 A.M.	49	43	47	51	Trucks leaving nearby facility (non-LGE x4) and idling, plant not audible over trucking and distant traffic, plane overhead (not visible/x3), train horn (x5)
November 19, 2010 5:30 A.M. - 7:30 A.M.	49	45	47	52	Truck traffic at Multicorp, back-up beeping (x2), noise to SE, airplane (not visible), train horn (x4)
November 19, 2010 11:30 A.M. - 1:30 P.M.	53	49	51	54	Pile maintenance on landfill, construction to SE, trucks at Multicorp (x2), airplane (not visible)
November 19, 2010 3:30 P.M. - 5:30 P.M.	51	49	50	53	Train horn (x6), truck at Multicorp (x3), facility not audible, birds, hammering in distance
November 20, 2010 1:00 A.M. - 3:00 A.M.	41	40	41	42	Distant traffic, facility not distinguishable, distant train
November 20, 2010 5:30 A.M. - 7:30 A.M.	42	40	41	44	Distant traffic, facility not distinct, traffic across river, garbage truck (x2)
November 20, 2010 11:30 A.M. - 1:30 P.M.	40	37	39	42	Facility audible, distant traffic, traffic across river, steam unit (1-2 seconds), gunshot in distance (x2), car at Multicorp started & drove off
November 20, 2010 3:30 P.M. - 5:30 P.M.	39	37	38	41	Distant traffic, dogs, air compressor at facility, plant barely audible, plane (not visible), relief valve to southeast, clanking in distance

**Table 4-5: Existing Ambient Sound Levels – MP4/MP4A\***

<b>Time Period</b>	<b>Measured L<sub>eq</sub> (dBA)</b>	<b>Measured L<sub>90</sub> (dBA)</b>	<b>Measured L<sub>50</sub> (dBA)</b>	<b>Measured L<sub>10</sub> (dBA)</b>	<b>Extraneous Sounds</b>
November 19, 2010 1:00 A.M. - 3:00 A.M.	52	51	52	53	Fly ash stacker operating, rest of facility barely audible, non-visible airplane in distance (x2)
November 19, 2010 5:30 A.M. - 7:30 A.M.	52	49	50	56	Train, plant barely audible, birds, dog, train horn (x11), car (x14)
November 19, 2010 11:30 A.M. - 1:30 P.M.	63	57	62	65	Leaf blower and lawn mower across street, facility barely audible, construction activities to south and east, traffic on street, car on levee
November 19, 2010 3:30 P.M. - 5:30 P.M.	53	46	49	57	Train leaving, traffic on street, wind in grass, talking across street, train horn (x4), facility barely audible, birds, dog
November 20, 2010 1:00 A.M. - 3:00 A.M.	45	44	45	46	Plant audible, distant traffic/hum, ducks/birds
November 20, 2010 5:30 A.M.- 7:30 A.M.	49	46	47	50	Train horn (x3), car (x5), train, distant traffic, plant barely distinguishable
November 20, 2010 11:30 A.M. - 1:30 P.M.	53	42	45	55	Car on Cane Run Road (x22), people talking across Cane Run Road, distant traffic, steel factory audible
November 20, 2010 3:30 P.M - 5:30 P.M.	48	43	45	52	Distant traffic, car (x11), birds, facility barely distinguishable, ladder across Cane Run Road, people talking across Cane Run Road, dogs, plane

\* Original Measurement Point moved

**Table 4-6: Existing Ambient Sound Levels – MP5**

<b>Time Period</b>	<b>Measured L<sub>eq</sub> (dBA)</b>	<b>Measured L<sub>90</sub> (dBA)</b>	<b>Measured L<sub>50</sub> (dBA)</b>	<b>Measured L<sub>10</sub> (dBA)</b>	<b>Extraneous Sounds</b>
November 19, 2010 1:00 A.M. - 3:00 A.M.	38	37	37	39	Facility audible, some distant traffic, plane barely audible
November 19, 2010 5:30 A.M. - 7:30 A.M.	50	45	46	51	Distant traffic, birds chirping, facility not distinguishable, car (x2), plane
November 19, 2010 11:30 A.M. - 1:30 P.M.	59	45	48	53	Dog barking, distant traffic, truck unloading banging, leaves rustling, facility not distinguishable, car, 44-45 without truck or dogs
November 19, 2010 3:30 P.M. - 5:30 P.M.	83	48	51	75	Dog, general noise in distance, plane, wind in trees, car, train horn (x5), train within 50 feet at 12 minute mark
November 20, 2010 1:00 A.M. - 3:00 A.M.	45	42	44	47	Traffic distant, train horn (x15), plant not distinguishable
November 20, 2010 5:30 A.M.- 7:30 A.M.	49	46	49	52	Birds, traffic in distance, train horn (x6), bang in distance, distant gunshot
November 20, 2010 11:30 A.M. - 1:30 P.M.	43	40	42	45	Plant barely audible, distant traffic, birds, leaves rustling
November 20, 2010 3:30 P.M - 5:30 P.M.	49	44	46	49	distant traffic, people across street talking, car at 10:11, birds, dogs, people in street talking

**Table 4-7: Existing Ambient Sound Levels – MP6**

<b>Time Period</b>	<b>Measured L<sub>eq</sub> (dBA)</b>	<b>Measured L<sub>90</sub> (dBA)</b>	<b>Measured L<sub>50</sub> (dBA)</b>	<b>Measured L<sub>10</sub> (dBA)</b>	<b>Extraneous Sounds</b>
November 19, 2010 1:00 A.M. - 3:00 A.M.	43	39	40	43	Rubbertown plainly audible, train horn at 13 minutes, Cave Run not distinguishable, distant traffic, long screech (x10)
November 19, 2010 5:30 A.M. - 7:30 A.M.	48	44	45	48	Distant traffic, birds, sirens, car, woman getting dog out of car, dog barking at about 9 minute mark, 43-44 dBA without dog and talking
November 19, 2010 11:30 A.M. - 1:30 P.M.	46	42	43	47	Plane, shotgun (x10), birds (periodic), wind chimes, train horn (x3), distant traffic, facility not distinguishable
November 19, 2010 3:30 P.M. - 5:30 P.M.	46	44	46	48	Distant traffic, dogs, plant not audible, siren, cars down street
November 20, 2010 1:00 A.M. - 3:00 A.M.	42	39	41	44	Plant audible, distant traffic
November 20, 2010 5:30 A.M.- 7:30 A.M.	47	45	46	48	Plane, distant traffic, birds, gunshot, train horn (x2)
November 20, 2010 11:30 A.M. - 1:30 P.M.	45	39	42	47	Plant audible, distant traffic, birds, people talking in barn, wind chimes, 40dBA without car at 10', car horn
November 20, 2010 3:30 P.M - 5:30 P.M.	47	41	43	49	Plant barely audible, distant traffic, birds, dogs in distance, truck idling within 25 feet, cell phone ringing (neighbor's), 4-wheelers behind barn

**Table 4-8: Existing Ambient Sound Levels – MP7**

<b>Time Period</b>	<b>Measured L<sub>eq</sub> (dBA)</b>	<b>Measured L<sub>90</sub> (dBA)</b>	<b>Measured L<sub>50</sub> (dBA)</b>	<b>Measured L<sub>10</sub> (dBA)</b>	<b>Extraneous Sounds</b>
November 19, 2010 1:00 A.M. - 3:00 A.M.	47	37	39	50	Rubbertown, Cane Run barely audible, train horn (x9), loud popping, dogs in distance for several minutes (39 dBA without dog)
November 19, 2010 5:30 A.M. - 7:30 A.M.	45	41	42	48	Distant traffic, train horn (x3), birds, car about 200-250 feet away, gunshot in distance
November 19, 2010 11:30 A.M. - 1:30 P.M.	58	40	42	47	Birds, leaves rustling, gunshot at 50-100 yards, distant banging, distant gunshots (x10)
November 19, 2010 3:30 P.M. - 5:30 P.M.	47	41	42	46	Birds, distant hum, facility barely audible, car down street, wind in trees, plane
November 20, 2010 1:00 A.M. - 3:00 A.M.	42	41	42	43	Rubbertown is clearly audible, plant audible, distant traffic
November 20, 2010 5:30 A.M.- 7:30 A.M.	44	42	43	45	Plant audible, distant traffic, train horn, truck leaving, hammering in distance (x3), birds
November 20, 2010 11:30 A.M. - 1:30 P.M.	44	38	39	48	Plant barely audible, distant traffic, birds, 4-wheeler in woods to south, yelling in woods, plane
November 20, 2010 3:30 P.M - 5:30 P.M.	44	40	42	47	Talking, plane (x2), 4-wheeler, lawn-mower, plant clearly audible, yelling, dogs

Over the two days, the  $L_{eq}$  sound levels varied considerably between measurement points and between different time periods. The largest differential in values occurred at MP5 where sound levels ranged from 38 dBA to 83 dBA. There were various sources of sound for MP5, with the highest contributor of sound being the movement of a train within fifty feet of the noise meter. Nearly all of the measurement points experienced some sound from the Facility. However, the site was only distinct at the closest measurement points. Facility sound was not distinguishable at many of the points during times that the other extraneous sounds were loudest. Those other extraneous sounds that occurred included birds, vehicular traffic, dogs barking, trains (including horns), and airplanes. These sounds are not uncommon for areas around the Facility. However, the magnitude and type of extraneous sound will vary according to season and human, animal, and insect activity.

Sound is most intrusive when it is not steady in nature. A completely steady sound would have a value for  $L_{eq}$  that equals the  $L_{90}$ ,  $L_{50}$ , and  $L_{10}$  values. An inspection of each of these metrics for each measurement point shows that the sound slightly fluctuated at most points. This would be due to an occasional dog bark or cars passing by. However, some points had large differences between the different metrics. This is caused when an extremely loud event occurs during the measurement. For example, MP5 during the 3:30 P.M. to 5:30 P.M. measurement on November 19 (see Table 4-6) was heavily influenced by the passing of a train. As can be seen, the  $L_{eq}$  is significantly higher than the  $L_{90}$  value. This would indicate that the sound level was much lower ninety percent of the time, but much higher while the train passed. Fluctuations such as this are going to routinely occur near rail lines, and are generally unavoidable. Sound from the train however, is not indicative of the Facility's contribution to the ambient sound levels and would typically be excluded during any type of compliance demonstration.

\* \* \* \* \*



## 5.0 CONCLUSION

An ambient sound level survey was performed for the Cane Run Generating Station near Louisville, Kentucky to quantify the existing acoustical environment.

Ambient sound levels were measured to establish the baseline sound levels around the facility on November 19 and 20, 2010. Measured overall existing ambient sound levels ( $L_{eq}$ ) ranged from 38 to 83 dBA. Field personnel logged extraneous sounds that influenced the sound levels, specifically noting that the measurements were heavily influenced by traffic, airplanes, trains, and animals. The Cane Run Generating Station was audible during many of the measurements, but did not dominate the measured sound near any of the residential areas.

\* \* \* \* \*

**APPENDIX A – FIELD LOGS**



Burns & McDonnell  
 9400 Walnut Parkway  
 Kansas City, MO 64114  
 Phone: (816) 333-9400  
 Fax: (816) 822-3515

PROJECT: Care Run

**NOISE FIELD LOG**

Date	Time	Picture	Location Description (Distance, Height, Address, etc.)	Weather (Wind & Temp.)	Calibration	Leq (dBA)	File Name	Notes
1/19/2000	1:05 AM	—	MP1 - Entrance Gate	Cloudy 1-2 mph 45°F 63% rh 34°F DP	113.9	52.2	1	Gas meters ~ 100' away: constant sounds Plant barely audible. Airplane - not visible. cars: 11 - train started up
"	1:27 AM	—	MP2 - West side of plant @ foot bridge.	cloudy calm 47°F 64% rh 34°F DP	—	52.6	2	Plant clearly audible. Airplane - not visible.
"	1:52 AM	—	MP3 - SE corner. landfill Multi Corp	Cloudy calm 45°F 66% RH 33.2° DP	—	48.9	3	trucks leaving facility (non-LGE) idling plant not audible over trucking & dist traffic. 3 planes overhead not visible. train horns
"	2:27 AM	—	MP4 - River Valley Candy (near fly ash landfill)	46°F 58% 33°F DP calm cloudy	—	52.1	4	Fly ash stack operating. rest of facility barely audible. 2 Airplanes, not visible. distant.
"	2:48	—	MP5 - Woodland (in (America Sales & Service Patterns & train tracks)	Calm cloudy 44°F 60% RH 35°F D.P.	—	38.0	5	facility audible. some distant traffic. Plane barely audible.
"	3:15 AM	—	MP6 - Huff	44° 68% RH 36°F DP cloudy calm	—	42.6	6	Rubber-town plainly audible. train horns concrete not distinguishable. Distant traffic long <del>screech</del> screech x10
"	3:37 AM	—	MP7 PUTMAN	"	113.8	47.0	7	Rubber-town. Lane Run barely audible. train horns (1111) low popping. Dogs in distance several (whistles) 39 equal
"	5:24 AM	—	MP1	44°F 71% RH 36°F DP calm/cloudy	113.9	52.9	8	Cars: 11111111111111111111 gas meter. train idling? 52-53 w/out traffic.
"	5:47 AM	—	MP2	"	—	56.2	9	Plant clearly audible. airplane (NW) train horns: 11 car: 1 train moving/clanking
"	6:10 AM	—	MP3	"	—	49.4	10	truck traffic at MultiCorp. Backup heaps: 11 noise to SE. airplane (NW) train horns: 1111
"		—	MP4A (top + levy. moved from candy)	"	—	52.4	11	train. plant barely audible. Birds. Dog. Train horns: 111111 car: 11111111111111111111

Engineer(s): C. Chuell

Church Collins

Signature(s): [Signature]





Burns & McDonnell  
 9400 W. Parkway  
 Kansas City, MO 64114  
 Phone: (816) 333-9400  
 Fax: (816) 822-3515

**NOISE FIELD LOG**

PROJECT: Cane Run

Date	Time	Picture	Location Description (Distance, Height, Address, etc.)	Weather (Wind & Temp.)	Calibration	Leq (dBA)	File Name	Notes
7/19/08	3:52 PM	—	MP2	54°F 37°DP 24 mph from S 50% RH	—	23	52.8	facility clearly audible. steam vent - 1-2 seconds long :
11/19	4:14 PM	—	MP3	✓	—	24	51.3	train horn:      Hammering truck out, Multicorp:     in distance. facility not audible. Birds
11	4:34 PM	—	MP4A	✓	—	25	53.0	train leaving. traffic on street. wind in grass talking across street. Train horn:      facility barely audible. Birds, Dog
11	5:01 PM	—	MP5	✓	—	26	83.0	Dog. General noise in distance. Plane:    wind in trees. Car:   train horn:      train w/in 50' @ 12 mph
11	5:31 PM	—	MP6	✓	—	27	46.1	Distant traffic. Dogs. Plant not audible. siren. cars down street
11	5:52 PM	—	MP7	✓	113.7	28	46.5	Birds. Distant hum. facility barely audible. Car down street. wind in trees. plane.

Engineer(s): C. Howell Tom Guelda

Signature(s): [Signature]







**NOISE FIELD LOG**

Burns & McDonnell  
 9400 Ward Parkway  
 Kansas City, MO 64114  
 Phone: (816) 333-9400  
 Fax: (816) 822-3463

Project: CANE RUN

Date	Time	Picture	Location Description (Distance, Height, Address, etc.)	Weather (Wind & Temp)	Calibration (dBA)	Leq (dBA)	File Name	Notes
11/20	3:20 PM	-	MP1	2-4 mph from S 60°F 51% 42°F DP	114.0	48.7	19	Plant audible. gas meter. cars: <del>THH</del> III Dogs barking plant traffic. gate beeping across CRR
"	3:42 PM	-	MP2	"	-	49.1	20	plant audible. Traffic across river
"	4:03 PM	-	MP3	"	-	39.2	21	Distant traffic. Dogs - Air compressor (plant valve at facility) to SEE plant barely audible. plane (NW) climbing in distance
"	4:24 PM	-	MP4A	1-2 mph from S 62°F 49% 42°F DP	-	48.4	22	Distant traffic. Cars: <del>THH</del> I Birds. facility barely audible. ladder across CRR. people talking across CRR. Dogs. plane.
"	4:44 PM	-	MP5	"	-	49.0	23	Distant traffic. People across street talking Birds. Dogs. People in street talking. Car @ 10'
"	5:14 PM	-	MP6	" calm	-	47.2	24	Plant barely audible. Distant traffic. Birds. dogs in distance. truck idling w/in 25' cell phone ringing (neighbors) 4-wheelers behind barn
"		-	MP7	51.9°F 71% 44° DP	113.6		25	Talking. Planes: 4-wheeler. lawnmower. Plant clearly audible. Yelling. Dogs.

Engineer(s): C. Howell Tom Guelda

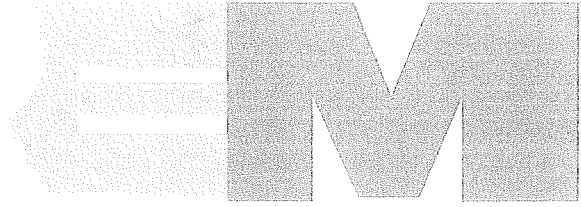
Signature(s): [Signature]



## **APPENDIX E**

**Copy of:**

**Community Noise Monitoring Report, Louisville Gas and  
Electric Company Cane Run Generating Station, Louisville,  
Kentucky, REM Safety Consulting Inc., Sand Springs,  
Oklahoma (June 2010)**



**SAFETY CONSULTING, INC.**

**COMMUNITY NOISE MONITORING REPORT  
LOUISVILLE GAS AND ELECTRIC COMPANY  
CANE RUN GENERATING STATION  
LOUISVILLE, KY**

**REPORT PREPARED FOR: STOLL KEENON OGDEN PLLC**

**PREPARED BY**

**RALPH MOSELY  
CERTIFIED SAFETY PROFESSIONAL**

**REM SAFETY CONSULTING INC.  
3963 South Highway 97 # 317  
Sand Springs, OK 74063  
Telephone 918-245-4906  
WWW.REMSAFETY.COM**

**COMMUNITY NOISE MONITORING REPORT  
LOUISVILLE GAS AND ELECTRIC COMPANY  
CANE RUN GENERATING STATION  
LOUISVILLE, KENTUCKY  
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## 1.0 EXECUTIVE SUMMARY

Noise monitoring was accomplished at the Cane Run Generating Station (the "Facility") and at several locations within the Riverside Gardens residential community on June 16-17, 2010. The analysis of the noise monitoring results shows that the Facility complies with all local and federal ordinances and guidelines for noise coming from its facility towards the Riverside Gardens residential community.

## 2.0 INTRODUCTION

REM Safety Consulting Inc. (REM) was retained by Stoll Keenon Ogden PLLC, Legal Counsel for Louisville Gas and Electric Company, to conduct a community noise monitoring survey for possible noise from the Facility in Louisville, KY, to determine possible noise effect towards the Riverside Gardens community; located to the north of the Cane Run facility.

Ralph E. Mosely, Certified Safety Professional (CSP), traveled to Louisville, KY, met with legal counsel and plant officials, toured the plant and nearby neighborhoods and determined specific noise monitoring locations. Mr. Travis Crump, Esq., an attorney with the firm of Stoll Keenon Ogden, PLLC of Louisville, accompanied Mr. Mosely throughout the noise monitoring activities.

Noise monitoring equipment was set up on the afternoon of June 16, 2010 at two selected locations in the Riverside Gardens community where noise from the Facility was anticipated to be the loudest. The noise monitoring stations ran continuously from approximately 2:45 PM on June 16, 2010 until approximately 8:30 AM on June 17, 2010. During this time, a boiler was restarted early in the morning of June 17, 2010, and the noise monitoring captured the noise associated with that activity as well.

The findings from the study are presented in section 5, below, of this report.

## 3.0 APPLICABLE NOISE ORDINANCES AND GUIDELINES

There are three noise ordinances or guidelines applicable to noise from an industrial facility impacting a residential area located in the Louisville–Jefferson County Metropolitan area:

Louisville-Jefferson County Metro Government Title IX: GENERAL REGULATIONS  
CHAPTER 99: NOISE

United States Environmental Protection Agency. 1973. *Public Health and Welfare Criteria for Noise*. EPA 550/9-73-002 July 1973.

United States Environmental Protection Agency. 1978. *Protective Noise Levels*. EPA 550/9-79-100.

A discussion of these items appears in the findings section of this report.

#### 4.0 PROJECT EQUIPMENT AND METHODOLOGY

Noise monitoring was accomplished with three Quest Technologies SoundPro Model DL Integrating Sound Level Meters. All three of the instruments had received the annual factory calibration within the last twelve months. Additionally, the sound level meters were field calibrated prior to and immediately after the noise monitoring activity with a Quest model QC-10 calibrator, as specified in applicable noise monitoring standards. Likewise, the Quest QC-10 calibrator had received its annual factory calibration, and calibration certificates for all these instruments were obtained.

Additionally, the following equipment was utilized in the noise monitoring activities:

- Two Sony model PX 820 digital voice recorders to record all the sounds present during the noise monitoring activity.
- A Magellan Model GPS 315 12-channel GPS Navigator to locate the coordinates of each location being monitored.
- A Bushnell Model 400 laser rangefinder to determine distances from objects.
- A Kestrel Model 1000 wind meter to determine wind direction and velocity.
- A Panasonic Model DMC-LS75 digital camera was used to photograph the monitoring points with north, east, south and west views for location purposes.

Two of the Integrating Sound Level Meters and the two digital voice recorders were installed on LG&E utility poles at a height of about 12 feet above ground level to measure and record sounds coming through those respective areas.

The sound level meters and voice recorders were located at approximately 6788 Flagler Avenue on LG&E utility pole # 39305-85755, coordinates N 38 11.30 and W 085 52.33 (the "Flagler Location or location A-1") and at approximately 6612 Melrose Avenue on LG&E utility pole # 39167-85852, coordinates N 38 11.45 and W 085 52.63 (the "Melrose Location or location B-2). The third Integrating Sound Level Meter was installed on a tripod at various locations to take intermittent measurements at the following locations:

- Location D-4, 570 feet NNE of the north side of the boiler building within the Facility. The coordinates were N 38 11.08 and W 085 53.26. This location was in the direction of the Riverside Gardens subdivision.
- Location C-3, 1470 feet E of the boiler building in the front of the boiler building within the Facility towards Cane Run Road. The coordinates were N 38 10.86 and W 085 53.09.
- Location E-5, approximately 4398 Wilmoth Avenue one street to the south from the Hexion Specialty Chemicals manufacturing facility located on Campground Road. The monitoring location coordinates were N 38 11.65 and W 085 52.45.
- Location F-6, at the south end of Putnam Avenue towards the Cane Run facility. The coordinates were N 38 11.41 and W 085 52.73.

## 5.0 FINDINGS

- **Review of noise ordinances and guidelines**

**Louisville-Jefferson County Metro Government Title IX: GENERAL REGULATIONS CHAPTER 99: NOISE.** Commonly known as the Louisville- Jefferson County noise ordinance, this ordinance does not contain specific noise levels that are either acceptable or are not allowed and simply says in section 99.02(A) "It shall be unlawful for any person within Louisville Metro to make, continue, or cause to be made or continued, any unreasonable loud, harsh or excessive noise which either annoys, disturbs, injures, or endangers the comfort, repose, health, peace or safety of others, unless the making and continuing of the noise is necessary for the protection or preservation of property or the life, health, or safety of a person or persons." It is my professional opinion that the noise generated by the Facility, as monitored during the survey, does not constitute a violation of the prohibitive portion of this ordinance.

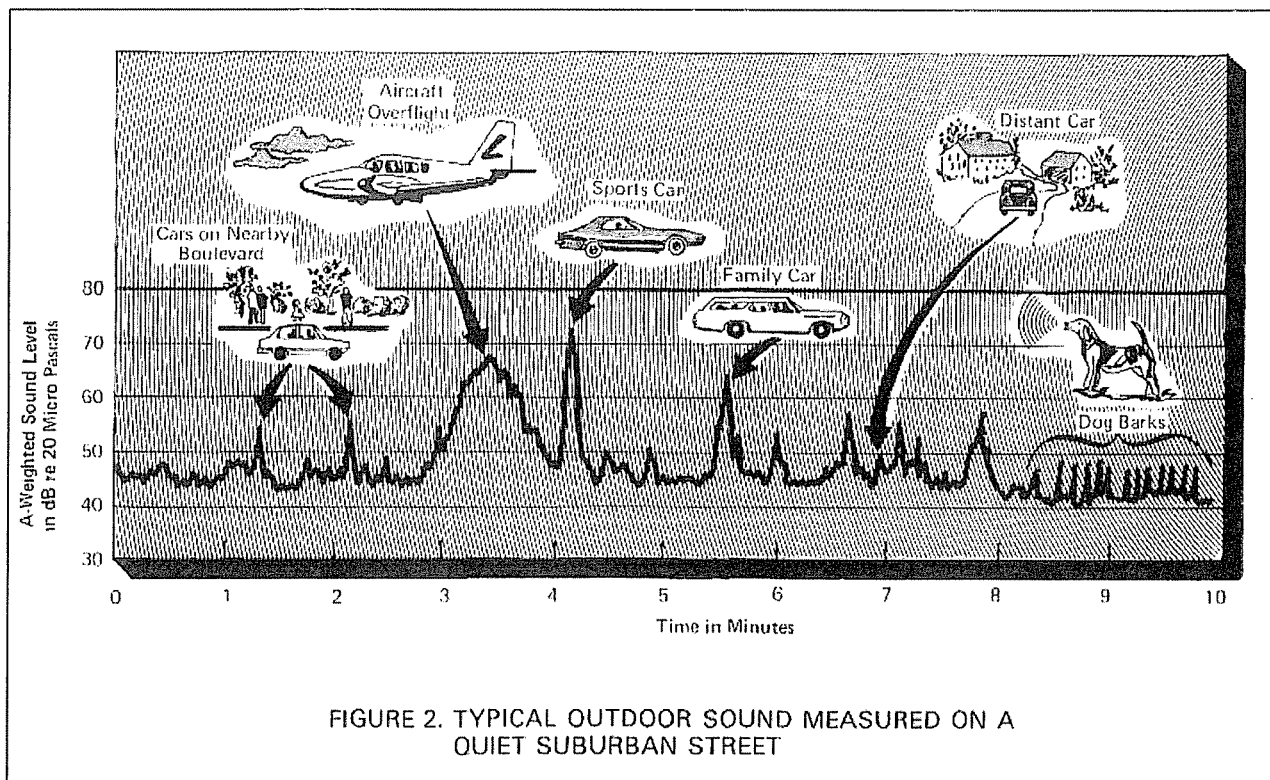
Additionally, section 99.03 (B) Exemptions, item (2), states that "Noises originating from safety signals, warning devices, and emergency pressure relief valves;" are exempt from section 99.02. Therefore, any pressure relief valves located at the Facility, which are designed to reduce the risk of a pressure vessel explosion, are exempt from this noise ordinance.

**United States Environmental Protection Agency. 1973. *Public Health and Welfare Criteria for Noise*. EPA 550/9-73-002 July 1973.** There are no federal or state industrial noise statutes applicable to the Facility. The document in the caption to this paragraph is not a standard, regulation or ordinance, but is a guideline for use to determine whether noise emanating from an industrial process may adversely impact persons living in nearby residences. Community noise impacts are usually judged with respect to existing background noise levels and the increase which the "intruding" noise from a facility would impose on this background level of noise. In this document, the United States Environmental Protection Agency (EPA) has recommended a system for considering the impacts of noise in both indoor and outdoor spaces, which was developed with the intention of protecting public health and welfare over life spans. The "outdoor interference" level from "intruding" noise is 55 dBA, commonly measured at the property line of the recipient of the noise. This level is regarded by the EPA to be a long-term goal, not a standard. The guideline categories correspond to Day-Night Average Sound Levels (Ldn) for a 24-hour period, and reflect a 10 decibel (dBA) penalty to be added to intruding noise between 10:00 PM and 7:00 AM.

Noise monitoring was accomplished following the methodology contained in this guideline, and the 10 dBA "noise penalty" was added during the nighttime hours listed. Noise projection calculations were made based on the actual noise measured at the Facility and was "projected" as "intruding noise" into the residential areas included in the study. These "noise projections" were in every case lower than the actual noise levels measured in the residential areas, showing compliance with this guideline. Even with

the 10 dBA “penalty” added to the noise levels at the Facility, “intruding” noise levels in adjacent neighborhoods were consistently below 55 dBA and were therefore fully in compliance with this EPA guideline. Moreover, the projected noise levels from the Facility were so much less than the background noise levels already present in the neighborhoods monitored, that the background noise levels “masked” or covered over the projected noise levels from the Facility.

**United States Environmental Protection Agency. 1978. *Protective Noise Levels*. EPA 550/9-79-100.** This document contains helpful information regarding noise and its effect upon humans. Of particular interest is Figure 2, “Typical Outdoor Sound Measured on a Quiet Suburban Street”, which is reproduced below:



Note the “interference” from normal background noise in the middle 40’s (dBA) that is produced by cars passing by, airplanes flying overhead, dogs barking, and loud vehicles like trucks and motorcycles (depicted by the “sports car” in the drawing) that generate noise levels 5 to 15 decibels higher than the normal background noise levels. We experienced all of these noises (and more) in our noise monitoring activities. These noise levels were generated within the neighborhoods and did not come from the Facility. Noise from the Facility was actually lower than the normal neighborhood noise and was “masked” or covered over by the noise from normal neighborhood activities.

- Review of noise data

Below as Figure 1 is a recap of the noise level averages found at each noise monitoring location. Locations A-1 and B-2 were fixed monitoring stations and were not moved during the entire noise monitoring period. Except for very short periods of time to change batteries in the instruments, they operated continually during the noise monitoring period. Wind speeds, as measured with the Kestrel Model 1000 wind meter, were mostly completely still with occasional slight wind movements of less than 2 miles per hour from variable directions. Wind was not a factor in the noise monitoring activities and had no affect on the noise results obtained by the instruments.

Locations C-3, D-4, E-5 and F-6 were mobile noise monitoring locations and the same instrument was used to collect noise data at various times at different locations throughout the noise monitoring period.

Note in the figure below that the noise monitoring stations in residential areas (locations A-1, B-2, in green, and E-5, and F-6 in blue) never came close to the EPA guideline of 55 dBA. Note also that the noise measured at the noise monitoring locations within the Cane Run Generating Station facility (locations C-3 and D-4 in yellow) was so low that projections of that noise at the noise monitoring stations in the residential areas also never came close to the EPA guideline.

FIGURE 1			
CANE RUN GENERATING STATION - NOISE MONITORING AVERAGES			
LOCATION NUMBER	LOCATION INFORMATION	Time Frame Monitored	AVERAGE dBA
A-1	Approximately 6788 Flagler Avenue	2:44 PM 6/16/2010 to 8:22 AM 6/17/2010	48.54
B-2	Approximately 6612 Melrose Avenue	3:18 PM 6/16/2010 to 8:30 AM 6/17/2010	49.50
C-3	Approximately 1470 feet east of the front of the boiler building within the Cane Run Generating Station facility	Various times from 7:27 PM 6/16/2010 to 3:54 AM 6/17/2010	51.56
D-4	Approximately 570 feet north northeast of the north side of the boiler building within the Cane Run Generating Station facility	Various times from 7:38 PM 6/16/2010 to 7:57 AM 6/17/2010	57.78
E-5	Approximately 4398 Wilmoth Avenue	1:36AM to 1:39 AM 6/17/2010	50.39
F-6	Approximately at the south end of Putnam Avenue	1:45 AM to 1:48 AM 6/17/2010	47.70

Below is a table (Table 1) reflecting the noise monitoring results projected from the north side of the boiler building at the Facility to the monitoring station located at approximately 6788 Flagler Avenue. Appendix 1 contains photographs to the north, east, south and west of the monitoring station for location identification purposes. The green column in the table reflects the actual noise monitoring results obtained at the Flagler monitoring location during the noise sampling periods from about 7:30 PM on June 16, 2010 to about 8:00 AM on June 17, 2010. Note that the actual neighborhood



noise levels are in the 40's up to almost 52 dBA. When one listens to the digital voice recordings that were taken alongside the noise level instruments, the noises heard were automobiles, motorcycles, airplanes, music from homes and people talking. Noise from the Facility, if any, was not loud enough to be recorded on the noise monitoring instruments.

Appendix 2 contains the logs from the reviews of the digital voice recorders (which collect all noises, not just voices) at both monitoring stations. Numerous examples of loud cars and trucks, motorcycles, airplanes passing over head, and even voices walking near the monitoring stations were noted and logged. No notations were made for noise from the Facility because those noises, if any, were so low that they were not loud enough to be recorded on the noise monitoring instruments.

A mobile sound level meter was utilized to collect noise levels close to the Facility which were in turn "projected" out to the two neighborhood monitoring stations using published scientific methods. Those noise levels were recorded in the third column (Lp – Measured dBA) and then were "projected" using logarithmic calculations through the cells to the right to determine the "intruding noise" from the Facility to each monitoring station. That result is in the yellow column for each monitoring station.

The EPA guidelines suggest that a 10 dBA "noise penalty" be added to the "intruding noise" for the nighttime hours of 10:00 PM until 7:00 AM. That was accomplished in the orange column. In every case, the "projected noise" from the Facility was less than the actual noise levels recorded at each monitoring location. The tan column at the far right shows the increase from the noise "projected" from the Facility in the actual noise levels recorded.

The EPA guideline of a day-night maximum outdoor average of 55 dBA was never exceeded at any of the residential monitoring stations. Even after the addition of the 10 dBA "penalty," maximum levels of "projected noise" only ranged from 29-47 dBA.

THE BELOW TABLE SHOWS THE AVERAGE NIGHTTIME NOISE FROM THE CANE RUN FACILITY WITH THE MONITORING POINT SET AT LOCATION D4, WHICH IS 570 FEET TO THE NORTH NORTHEAST OF THE NORTH SIDE OF THE BOILER BUILDING WALL. NOTICE THE INTRUDING NOISE AT EACH RECEPTOR LOCATION IN YELLOW, THE 10 dB NIGHTTIME PENALTY ADDED IN ORANGE, THE BACKGROUND NOISE AT EACH RECEPTOR LOCATION IN GREEN, AND THE INCREASE IN THE TAN COLUMN THAT THE INTRUDING NOISE CONTRIBUTES TO THE BACKGROUND NOISE LEVEL

**CANE RUN POWER GENERATING FACILITY - TABLE 1 - LOCATION D4 TO FLAGLER MONITORING LOCATION**  
 NOISE LEVEL PROJECTIONS TO MONITORING LOCATIONS  
 BASED ON DATA FROM JUNE 16-17, 2010 NOISE MONITORING

**NOISE FROM NORMAL OPERATIONS AND BOILER STARTUP - JUNE 16-17, 2010 - PROJECTED FROM LOCATION D4 TO FLAGLER MONITORING LOCATION**

Time	LP (feet) Distance From Source	LP (Measured dBA)	Distance from Source to Receptor Location	Ground Atten to Lp	Atmos Atten to Lp	A(comb) Atten to Lp	Ground / Foliage Atten to Receptor Location	Atmos Atten to Receptor Location	A(comb) Atten to Receptor Location	Intruding Cane Run Noise at Receptor Location	Intruding Cane Run Noise at Receptor Location with 10 dB nighttime penalty	Ave Ambient (Background) Noise Levels at Receptor Location	Increase of Projected Cane Run Noise at Receptor Location
1938-2011	570	50.44	4646	0	0	0	6	6	12	20.22	30.22	45.69	0
2034-2045	570	55.15	4646	0	0	0	6	6	12	24.93	34.93	45.49	0
2245-0116	570	60.06	4646	0	0	0	6	6	12	29.04	39.04	48.54	0
0137-0152	570	62.86	4646	0	0	0	6	6	12	32.64	42.64	47.20	0
0406-0501	570	57.36	4646	0	0	0	6	6	12	27.14	37.14	49.49	0
0513-0757	570	60.85	4646	0	0	0	6	6	12	30.63	40.63	51.68	0

NOTES: (1) DISTANCES ARE BASED ON GPS COORDINATES  
 ATTENUATION FACTORS COME FROM NOISE AND VIBRATION CONTROL  
 ENGINEERING: PRINCIPLES AND APPLICATIONS, BERANEC AND VER, AND ARE  
 CONSERVATIVE APPLICATIONS OF THAT REFERENCE.  
 (2) AVERAGE AMBIENT (BACKGROUND) NOISE LEVELS RECEPTOR LOCATIONS  
 ARE THE AVERAGE NOISE LEVELS MEASURED AT THAT MONITORING LOCATION  
 DURING THAT SAME TIME PERIOD.

The same conclusions were reached for the Melrose monitoring location. Below is a table (Table 2) reflecting the noise monitoring results projected from the North side of the Facility to the monitoring station located at approximately 6612 Melrose Avenue. The data is similar to that at the Flagler location. Background noise levels from sounds being generated in the local area were greater than those coming from the Facility. The noise "projections" from the Facility were also less than the background noise levels generated in the neighborhood, as reflected in a comparison between the orange, green, and tan columns below.

THE BELOW TABLE SHOWS THE AVERAGE NIGHTTIME NOISE FROM THE CANE RUN FACILITY WITH THE MONITORING POINT SET AT LOCATION D4, WHICH IS 570 FEET TO THE NORTH NORTHEAST OF THE NORTH SIDE OF THE BOILER BUILDING WALL. NOTICE THE INTRUDING NOISE AT EACH RECEPTOR LOCATION IN YELLOW, THE 10 dB NIGHTTIME PENALTY ADDED IN ORANGE, THE BACKGROUND NOISE AT EACH RECEPTOR LOCATION IN GREEN, AND THE INCREASE IN THE TAN COLUMN THAT THE INTRUDING NOISE CONTRIBUTES TO THE BACKGROUND NOISE LEVEL

**CANE RUN POWER GENERATING FACILITY - TABLE 2 - LOCATION D4 TO MELROSE MONITORING LOCATION**  
 NOISE LEVEL PROJECTIONS TO MONITORING LOCATIONS  
 BASED ON DATA FROM JUNE 16-17, 2010 NOISE MONITORING

**NOISE FROM NORMAL OPERATIONS AND BOILER STARTUP - JUNE 16-17, 2010 - PROJECTED FROM LOCATION D4 TO MELROSE MONITORING LOCATION**

Time	Lp (feet) Distance From Source	Lp (Measured dBA)	Distance from Source to Receptor Location	Ground Atten to Lp	Atmos Atten to Lp	A(Comb) Atten to Lp	Ground / Foliage Atten to Receptor Location	Atmos Atten to Receptor Location	A(Comb) Atten to Receptor Location	Intruding Cane Run Noise at Receptor Location	Intruding Cane Run Noise at Receptor Location with 10 dB nighttime penalty	Ave Ambient (Background) Noise Levels at Receptor Location	Increase of Projected Cane Run Noise at Receptor Location
1938-2011	570	50.44	3749	0	0	0	5	4	9	25.08	35.08	48.17	0
2034-2045	570	55.15	3749	0	0	0	5	4	9	29.79	39.79	48.65	0
2245-0116	570	60.06	3749	0	0	0	5	4	9	34.70	45.70	48.96	0
0137-0152	570	62.86	3749	0	0	0	5	4	9	37.50	47.50	48.40	0
0406-0501	570	57.36	3749	0	0	0	5	4	9	32.00	42.00	48.84	0
0513-0757	570	60.85	3749	0	0	0	5	4	9	35.49	45.49	51.65	0

NOTES: (1) DISTANCES ARE BASED ON GPS COORDINATES  
 ATTENUATION FACTORS COME FROM NOISE AND VIBRATION CONTROL  
 ENGINEERING: PRINCIPLES AND APPLICATIONS, BERANEC AND VER, AND ARE  
 CONSERVATIVE APPLICATIONS OF THAT REFERENCE.  
 (2) AVERAGE AMBIENT (BACKGROUND) NOISE LEVELS RECEPTOR LOCATIONS  
 ARE THE AVERAGE NOISE LEVELS MEASURED AT THAT MONITORING LOCATION  
 DURING THAT SAME TIME PERIOD.

The same noise monitoring was conducted from a second location at the Facility which was located 1470 feet to the east of the boiler building towards Cane Run Road. The noise projections from this location to the two Riverside Garden monitoring locations are shown in the two tables below:

THE BELOW TABLE SHOWS THE AVERAGE NIGHTTIME NOISE FROM THE CANE RUN FACILITY WITH THE MONITORING POINT SET AT LOCATION C3, WHICH IS 1470 FEET TO THE EAST OF THE EAST SIDE OF THE BOILER BUILDING WALL. NOTICE THE INTRUDING NOISE AT EACH RECEPTOR LOCATION IN YELLOW, THE 10 dB NIGHTTIME PENALTY ADDED IN ORANGE, THE BACKGROUND NOISE AT EACH RECEPTOR LOCATION IN GREEN, AND THE INCREASE IN THE TAN COLUMN THAT THE INTRUDING NOISE CONTRIBUTES TO THE BACKGROUND NOISE LEVEL

**CANE RUN POWER GENERATING FACILITY - TABLE 3 - LOCATION C3 TO FLAGLER MONITORING LOCATION**  
 NOISE LEVEL PROJECTIONS TO MONITORING LOCATIONS  
 BASED ON DATA FROM JUNE 16-17, 2010 NOISE MONITORING

NOISE FROM NORMAL NIGHTTIME OPERATIONS AND BOILER STARTUP - JUNE 16-17, 2010 - PROJECTED FROM LOCATION C3 TO FLAGLER MONITORING

Time	Lp (feet) Distance From Source	Lp (Measured dBA)	Distance from Source to Receptor Location	Ground Atten to Lp	Atmos Atten to Lp	A(comb) Atten to Lp	Ground / Foliage Atten to Receptor Location	Atmos Atten to Receptor Location	A(comb) Atten to Receptor Location	Intruding Cane Run Noise at Receptor Location	Intruding Cane Run Noise at Receptor Location with 10 dB Nighttime Penalty Added	Ave Ambient (Background) Noise Levels at Receptor Location	Increase of Projected Cane Run Noise at Receptor Location
1927-1928	1470	50.40	4541	0	0	0	6	6	12	28.60	38.60	47.08	0
2025-2036	1470	53.09	4541	0	0	0	6	6	12	31.29	41.29	47.22	0
0013-0029	1470	51.33	4541	0	0	0	6	6	12	29.53	29.53	47.28	0
0205-0354	1470	51.42	4541	0	0	0	6	6	12	29.62	29.62	48.80	0

NOTES: (1) DISTANCES ARE BASED ON GPS COORDINATES ATTENUATION FACTORS COME FROM NOISE AND VIBRATION CONTROL ENGINEERING: PRINCIPLES AND APPLICATIONS, BERANEC AND VER, AND ARE CONSERVATIVE APPLICATIONS OF THAT REFERENCE.  
 (2) AVERAGE AMBIENT (BACKGROUND) NOISE LEVELS RECEPTOR LOCATIONS ARE THE AVERAGE NOISE LEVELS MEASURED AT THAT MONITORING LOCATION DURING THAT SAME TIME PERIOD.

THE BELOW TABLE SHOWS THE AVERAGE NIGHTTIME NOISE FROM THE CANE RUN FACILITY WITH THE MONITORING POINT SET AT LOCATION C3, WHICH IS 1470 FEET TO THE EAST OF THE EAST SIDE OF THE BOILER BUILDING WALL. NOTICE THE INTRUDING NOISE AT EACH RECEPTOR LOCATION IN YELLOW, THE 10 dB NIGHTTIME PENALTY ADDED IN ORANGE, THE BACKGROUND NOISE AT EACH RECEPTOR LOCATION IN GREEN, AND THE INCREASE IN THE TAN COLUMN THAT THE INTRUDING NOISE CONTRIBUTES TO THE BACKGROUND NOISE LEVEL

**CANE RUN POWER GENERATING FACILITY - TABLE 4 - LOCATION C3 TO MELROSE MONITORING LOCATION**  
 NOISE LEVEL PROJECTIONS TO MONITORING LOCATIONS  
 BASED ON DATA FROM JUNE 16-17, 2010 NOISE MONITORING

NOISE FROM NORMAL NIGHTTIME OPERATIONS AND BOILER STARTUP - JUNE 16-17, 2010 - PROJECTED FROM LOCATION C3 TO MELROSE MONITORING

Time	Lp (feet) Distance From Source	Lp (Measured dBA)	Distance from Source to Receptor Location	Ground Atten to Lp	Atmos Atten to Lp	A(comb) Atten to Lp	Ground / Foliage Atten to Receptor Location	Atmos Atten to Receptor Location	A(comb) Atten to Receptor Location	Intruding Cane Run Noise at Receptor Location	Intruding Cane Run Noise at Receptor Location with 10 dB Nighttime Penalty Added	Ave Ambient (Background) Noise Levels at Receptor Location	Increase of Projected Cane Run Noise at Receptor Location
1927-1928	1470	50.40	4224	0	0	0	6	5	11	30.23	40.23	46.62	0
2025-2036	1470	53.09	4224	0	0	0	6	5	11	32.92	42.92	47.56	0
0013-0029	1470	51.33	4224	0	0	0	6	5	11	31.16	41.16	46.96	0
0205-0354	1470	51.42	4224	0	0	0	6	5	11	31.25	41.25	50.22	0

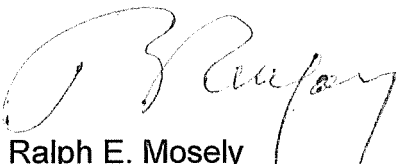
NOTES: (1) DISTANCES ARE BASED ON GPS COORDINATES ATTENUATION FACTORS COME FROM NOISE AND VIBRATION CONTROL ENGINEERING: PRINCIPLES AND APPLICATIONS, BERANEC AND VER, AND ARE CONSERVATIVE APPLICATIONS OF THAT REFERENCE.  
 (2) AVERAGE AMBIENT (BACKGROUND) NOISE LEVELS RECEPTOR LOCATIONS ARE THE AVERAGE NOISE LEVELS MEASURED AT THAT MONITORING LOCATION DURING THAT SAME TIME PERIOD.

The above tables reflect results that are similar to the noise monitoring data shown in tables 1 and 2. Background noise levels from neighborhood activities were again at a higher level than the noise levels “projected” from the Facility.

The noise levels at the Facility reflected normal operations from early afternoon on June 16, when the noise monitoring was initiated, until approximately midnight on June 17, 2010. At that time, boiler # 5 was started and slowly built up pressure until it came fully on line at approximately 7:00 AM on June 17, 2010. Careful attention was paid to noise levels measured at the Facility, both at locations D4 and C3, and although slight increases in noise levels were recorded at the Facility, those noises were not significant enough to be recorded at the monitoring locations in Riverside Gardens.

Another observation was made during the noise monitoring activities. While driving down Wilmoth Avenue at approximately 1:35 AM on June 17, 2010, we noted industrial noise coming from behind the houses on the northern side of Wilmoth Avenue. Investigation showed that the noises were apparently from air handling equipment located at the Hexion Specialty Chemicals facility located off of Campground Road with this part of the physical facility located just behind those houses. As Figure 1, above shows, the noise levels were not excessive (averaging about 50 dBA) , but were louder than the normal residential sounds that time of night, and were clearly heard as steady state noise coming from the Hexion Specialty Chemicals facility. Moving further from Wilmoth Avenue back to the south end of Riverside Gardens on Putnam Avenue (again see figure 1), we found noise levels of approximately 48 dBA but the direction of the noise was clearly from the Hexion Specialty Chemicals facility coming straight down Putnam Avenue, and was slightly higher than the ambient or background noise levels generated by that neighborhood.

It is therefore my professional opinion (1) that noise levels associated with normal operating conditions at the Facility and also with boiler pressure buildup and bringing a boiler on line at the Facility are not significant enough to be considered “intrusive” to nearby residents, and (2) that the noise levels at the monitoring locations in the residential areas, even with the 10 dBA nighttime “penalty”, are well within the 55 dBA guideline set by the EPA for outdoor, residential activities, and are not recordable at those monitoring locations.



Ralph E. Mosely  
Certified Safety Professional  
Certification # 5117

Appendix 1 – Photograph log of noise monitoring locations

Appendix 2 – Log of types of noises heard on digital recorders at noise monitoring stations

Appendix 3 – Due to the immense number of printed pages for the noise level data collected (over 2000), and to the extremely large size of the digital audio recordings made at each residential monitoring location, this data is presented on two DVD’s that

are appended to this report – one for Flagler and one for Melrose. Additionally, the Mobile SLM Data Files are located on the Melrose DVD.  
Appendix 4 – References

**APPENDIX 1  
PHOTOGRAPH LOG OF NOISE MONITORING STATIONS  
COMMUNITY NOISE MONITORING REPORT  
LOUISVILLE GAS AND ELECTRIC COMPANY  
CANE RUN GENERATING STATION  
LOUISVILLE, KENTUCKY  
PHOTOGRAPHS TAKEN JUNE 16, 2010**

**CANE RUN GENERATING STATION  
COMMUNITY NOISE MONITORING REPORT – PHOTOGRAPHS TAKEN JUNE 16, 2010**

**LOCATION 1A**

**6788 FLAGLER AVENUE**

**DIST. FROM CANE RUN BOILER BLDG– 5216 FEET**



**PHOTO 1180035 -- NORTH**



**PHOTO 1180036 – EAST**



**PHOTO 1180037 – SOUTH**



**PHOTO 1180038 – WEST**



**CANE RUN POWER GENERATING FACILITY  
COMMUNITY NOISE MONITORING REPORT – PHOTOGRAPHS TAKEN JUNE 16, 2010**

**LOCATION 2B**

**6612 MELROSE AVENUE**

**DIST. FROM CANE RUN BOILER BLDG – 4316 FEET**



**PHOTO 1180040 – NORTH**



**PHOTO 1180041 – EAST**



**PHOTO 1180042 – SOUTH**



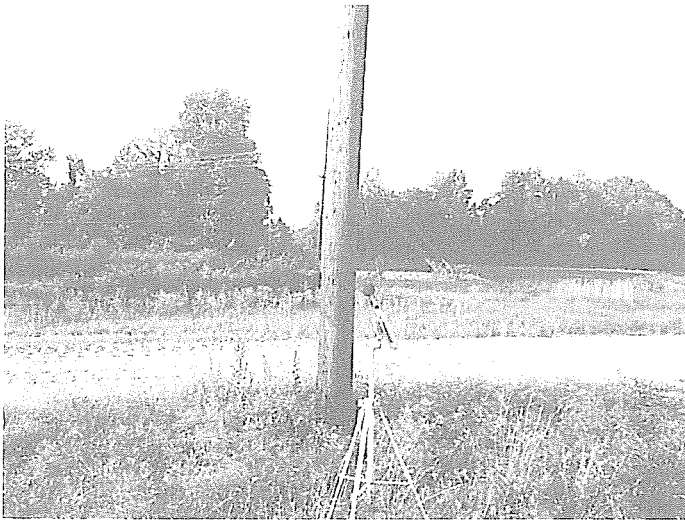
**PHOTO 1180043 – WEST**

**CANE RUN POWER GENERATING FACILITY  
COMMUNITY NOISE MONITORING REPORT – PHOTOGRAPHS TAKEN JUNE 16, 2010**

**LOCATION 3C**

**EAST OF CANE RUN BOILER BLDGS**

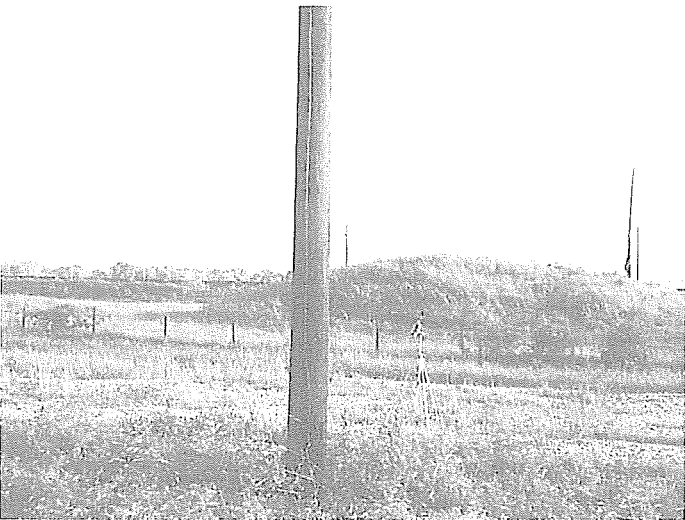
**DIST. FROM BOILER BLDG – 1470 FEET**



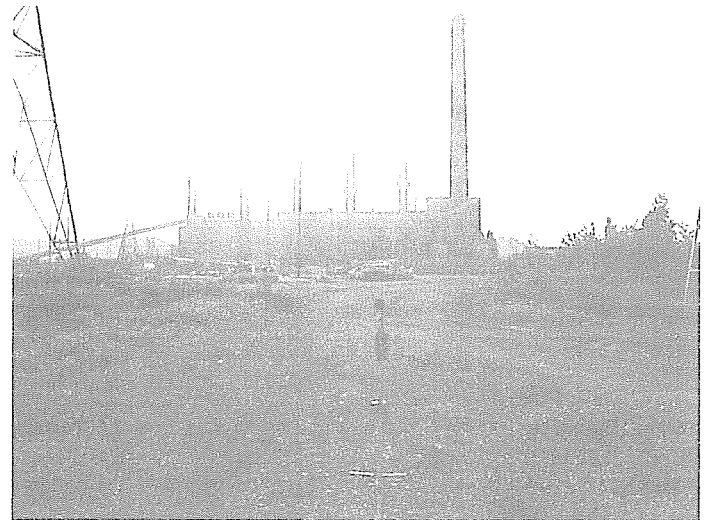
**PHOTO 1180046 – NORTH**



**PHOTO 1180047 – EAST**



**PHOTO 1180048 – SOUTH**



**PHOTO 1180050 – WEST**

**CANE RUN POWER GENERATING FACILITY  
COMMUNITY NOISE MONITORING REPORT – PHOTOGRAPHS TAKEN JUNE 16, 2010**

**LOCATION 4D**

**NORTH OF CANE RUN BOILER BLDGS**

**DIST. FROM BOILER BLDG– 570 FEET**



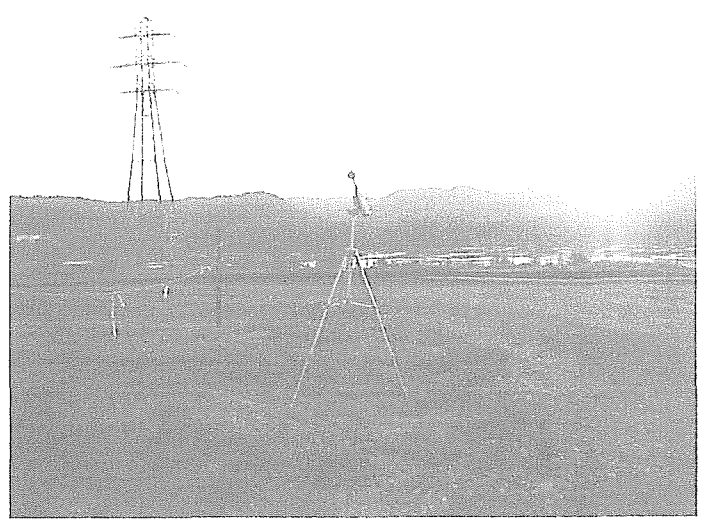
**PHOTO 1180052 – NORTH**



**PHOTO 1180053 – EAST**



**PHOTO 1180054 – SOUTH**



**PHOTO 1180055 – WEST**

**APPENDIX 2  
LOG OF TYPES OF NOISES HEARD ON DIGITAL RECORDERS  
AT NOISE MONITORING STATIONS  
COMMUNITY NOISE MONITORING REPORT  
LOUISVILLE GAS AND ELECTRIC COMPANY  
CANE RUN GENERATING STATION  
LOUISVILLE, KENTUCKY  
JUNE 16-17, 2010**

FLAGLER LOCATION NOISE LOG			
FILE NUMBER	RECORDER ELAPSED TIME START	RECORDER ELAPSED TIME STOP	NOISES HEARD
10061601	0:00:01	0:18:30	LG&E bucket truck engine running, ladder, talking, vehicle drives away
	0:21:40	0:21:45	train whistle
	0:23:22		car starting
	0:30:55	0:34:10	car drive by in distance / 2 airplanes
	0:36:50	0:37:25	airplane
	0:39:10	0:40:10	airplane
	0:40:12	0:41:00	dog barking in distance
	0:41:40	0:43:00	airplane
	0:43:00	0:43:40	dog & plane
	0:43:40	0:44:30	dog barking in distance
	0:45:00	0:45:25	bird squawking loud
	0:45:40	0:46:00	bird squawking loud
	0:46:15		dog barking close
	0:47:25	0:47:45	bird close
	0:49:20	0:49:25	bird squawking loud
	0:52:25		vehicle engine / stopping / motor running
	0:53:55		train whistle / motor still running
	0:54:20	0:54:50	train whistle / vehicle drives away
	0:55:50	0:55:55	dog bark in distance
	0:56:35	0:56:45	gust of wind
	0:57:30	0:57:40	gust of wind
	0:58:45	0:58:55	gust of wind
	01:04:35		yelling in distance
	01:05:00	01:05:40	vehicle motor
	01:06:10	01:06:50	airplane
	01:06:58		loud bird
	01:14:05		car honking
	01:14:20		car honking
	01:18:10		yelling in distance
	01:23:25	01:24:35	airplane
	01:24:35	01:25:20	bells-like on porch wind chime
	01:25:55	01:26:20	bells-like on porch wind chime
	01:27:00	01:27:35	bells-like on porch wind chime
	01:36:00	01:36:30	train whistle
	01:37:00		voice in distance
	01:39:20	01:39:25	train whistle
	01:41:17		yelling in distance
	01:48:45	01:48:50	train whistle
	01:51:50	01:51:55	car engine
	01:53:00	01:54:20	airplane
	01:59:18		car honking
	01:59:25	01:59:30	like a garage door opening
	02:02:35	02:02:40	train whistle
	02:03:00	02:03:05	train whistle
	02:03:50	02:05:20	airplane
	02:06:15		car honking
	02:08:40	02:10:40	bird squawking close
	02:11:40	02:12:55	bird squawking close
	02:13:55	02:14:35	bird squawking close

FLAGLER LOCATION NOISE LOG			
FILE NUMBER	RECORDER ELAPSED TIME START	RECORDER ELAPSED TIME STOP	NOISES HEARD
	02:13:55	02:17:25	engine motor / ladder / talking
	02:19:25		engine motor revving
	02:22:50		bird close
	02:27:35		bird close
	02:28:35		bird close
	02:28:50	02:29:15	train whistle
	02:30:15	02:30:20	car in distance
	02:33:05	02:33:10	car in distance
	02:43:55	02:44:25	airplane
	02:44:18	02:44:30	train whistle
	02:46:30	02:47:40	airplane
	02:58:50	02:59:30	airplane
	03:06:15	03:06:20	car in distance
	03:27:00	03:27:40	vehicle driving by
	03:27:45	03:28:00	motorcycle
	03:39:00	03:40:10	airplane
	03:53:10	03:55:20	airplane
	03:58:30	04:00:00	airplane
	04:00:20	04:00:50	airplane
	04:19:30	04:19:50	car engine in distance
	04:20:35		train whistle
	04:21:40		voice in distance
	04:22:00	04:23:00	voice in distance
	04:22:20		train whistle
	04:38:10	04:38:40	airplane
	04:42:00	04:43:15	barking dog close
	04:43:50	04:44:10	car engine
	04:44:25	04:44:35	talking
	04:45:15	04:45:20	talking
	04:47:00		train whistle
	05:39:00	05:40:25	loud bird
	05:41:40	05:42:20	airplane
	05:45:15	05:45:30	talking in distance
	05:46:50	05:47:05	motorcycle
	05:59:45	06:00:00	vehicle drive by
10061602	0:09:50	0:10:10	hissing sound
	0:11:00	0:11:20	car drive by
	0:14:55	0:17:30	hissing sound
	0:18:55	0:19:00	car drive by
	0:39:40	0:39:50	car drive by
	0:55:50	0:54:30	airplane
	0:57:00	0:58:00	airplane
	01:48:55	01:49:40	airplane
	01:59:15	01:59:20	train whistle
	02:09:40	02:10:20	train whistle
	02:13:50	02:14:08	train whistle
	02:24:00	02:24:40	train whistle

FLAGLER LOCATION NOISE LOG			
FILE NUMBER	RECORDER ELAPSED TIME START	RECORDER ELAPSED TIME STOP	NOISES HEARD
	02:25:00	02:25:30	dog barking close
	02:42:40	02:42:45	train whistle
	02:50:00	02:50:10	airplane
	02:54:15		train whistle
	02:54:42	02:55:05	train whistle
	03:01:00	03:01:40	airplane
	03:01:40	03:02:10	train whistle
	03:04:10	03:05:17	train whistle
	03:08:00	03:08:10	train whistle
	03:30:45	03:31:15	airplane
	03:35:05	03:35:35	airplane
	03:40:40	03:41:10	airplane
	04:01:00	04:01:35	airplane
	04:04:12	to end 04:18:24	ladder / talking
10061702	0:01:00	00:3:45	talking / ladder /vehicle leaves
	0:15:05	00:15:10	motorcycle
	01:06:30		train whistle
	01:18:20	01:15:48	vehicle drive by
	01:26:10	01:26:50	airplane
	02:46:00	02:46:05	airplane
	02:47:00		train whistle
	02:51:35		train whistle
	02:53:55	02:54:30	airplane
	03:00:25	03:01:00	train whistle
	03:09:35	03:09:50	train whistle
	03:22:45		loud bang
	03:32:05	03:32:50	motorcycle
	03:58:00	03:58:45	airplane
	04:02:30	04:02:40	motorcycle
	04:03:00	04:03:10	airplane
	04:11:20	04:11:30	vehicle engine
	04:24:05	04:24:40	vehicle engine
	04:52:50	04:53:30	airplane
	05:01:40	05:01:50	airplane
	05:03:25	05:03:35	vehicle engine
	05:07:50	05:08:45	airplane
	05:29:25	05:29:35	vehicle engine
	05:39:20	05:39:50	motorcycle
	05:50:20	05:50:30	airplane
	05:53:45	05:54:30	airplane
	05:56:10		vehicle door closing
10061703	0:15:40	16:00	motorcycle
	0:20:35	20:45	vehicle engine
	0:25:30	25:35	vehicle drive by

FLAGLER LOCATION NOISE LOG			
FILE NUMBER	RECORDER ELAPSED TIME START	RECORDER ELAPSED TIME STOP	NOISES HEARD
	0:39:45	39:55	vehicle drive by
	0:48:08		horn honk
	01:04:10	to end	vehicle engine / ladder /talking/remove instruments and shut them off



MELROSE LOCATION NOISE LOG			
FILE NUMBER	RECORDER ELAPSED TIME START	RECORDER ELAPSED TIME STOP	NOISES HEARD
1006101	0:00:00	0:07:23	LG&E Bucket truck diesel engine noise, voices
	0:07:50	0:08:10	Quiet
	0:08:11	0:08:40	Our PU truck starts, idles, and leaves
	0:29:25	0:29:42	Vehicle drives by
	0:31:58	32:10:00	Vehicle drives by
	0:35:34	36:04:00	Vehicle drives by
	0:44:36		Vehicle drives by
	0:45:20		Vehicle drives by
	0:55:59		Vehicle drives by
	1:08:00	1:09:00	Birds chirping
	1:11:15	1:11:20	Vehicle drives by
	1:20:58		Loud car start
	1:21:39		Car drive away
	1:22:30	1:29:00	Car idling and voices
	1:25:00		Vehicle drives by
	1:29:00	1:30:24	Music and dog bark
	1:31:00		Vehicle drives by
	1:35:30		Airplane flies over and faint music
	1:36:00		Faint music continues
	1:51:00		Vehicle drives by
	1:51:40		Faint music continues
	1:53:30	1:57:42	Our PU arrives, door shuts, ladder noise, check equipment, voices, music still present
	1:58:00		Our PU leaves, music still present
	2:00:20		Voices and faint music
	2:03:00		Vehicle drives by
	2:04:00		Vehicle drives by
	2:09:00		Vehicle drives by
	2:10:48		Motorcycle in distance
	2:11:09		Motorcycle in distance
	2:11:22		Vehicle drives by
	2:13:00		Motorcycle in distance
	2:14:20		Motorcycle in distance
	2:14:40		Motorcycle in distance
	2:17:00	2:18:20	Airplane flies over
	2:22:00		Faint music ends
	2:26:50		Vehicle drives by
	2:43:00		Vehicle drives by
	2:47:00		Vehicle drives by
	2:52:00		Voices
	2:54:00		Car goes by and faint voices
	2:55:00		Vehicle drives by
	2:57:00	2:58:00	Car goes by and motorcycle in distance
	2:58:00	2:59:00	Motorcycle in distance
	3:00:00		Motorcycle in distance
	3:04:00		Vehicle drives by
	3:05:00		Vehicle drives by
	3:06:00		Vehicle drives by
	3:09:00		Vehicle drives by
	3:11:00		Vehicle drives by
	3:12:00	3:16:00	Faint music
	3:17:00		Country music starts up again
	3:32:00		Vehicle drives by
	3:33:00	3:41:00	Quiet
	3:41:00	3:56:00	Soft country music starts up again
	3:56:00		Owl hoots in distance-music stops

MELROSE LOCATION NOISE LOG			
FILE NUMBER	RECORDER ELAPSED TIME START	RECORDER ELAPSED TIME STOP	NOISES HEARD
	3:57:00		Motorcycle in distance
	3:57:00		Vehicle drives by
	4:04:00		faint music
	4:10:10		Wind noise - brief
	4:32:00		Vehicle drives by
	4:38:00		Two house doors slam
	4:38:00		Garage doors open or close
	4:48:52		Car starts and idles-loud muffler
	4:51:54	4:52:20	Car leaves
	4:52:33	4:52:53	Car at distance
	4:52:53		Quiet again
	4:54:00		Vehicle drives by
	4:57:00		Dogs barking in distance
	4:58:00		Car at distance - dogs in distance
	5:08:00		Vehicle drives by
	5:09:55		Voices
	5:12:00		Dogs barking in distance-airplane flies over
	5:13:00		Car starts and idles
	5:16:00		Car in distance -dog barking
	5:16:30		Loud motorcycle
	5:17:00	5:19:00	Voices and car at distance, door slams, dog barking
	5:22:30		Vehicle drives by
	5:23:40		Vehicle drives by
	5:41:00	5:49:00	Quiet
	5:49:51		Vehicle drives by
	5:51:00		Dog barking in distance
	5:52:00		Vehicle drives by
	5:55:00		Vehicle drives by
	5:56:00	6:03:00	Quiet
	6:03:00		Child calls out
	6:03:00	6:04:00	Quiet
	6:04:02	6:04:02	End
10061602	00:01:15	00:01:25	airplane
	00:04:15	00:04:25	car drive by
	00:09:50	00:10:15	car drive by
	00:14:25		car horn
	00:17:35	00:18:10	airplane
	00:18:45	00:19:00	motorcycle
	00:24:40	00:25:45	airplane
	00:28:35	00:29:15	airplane
	00:47:00	00:47:10	car drive by
	00:54:50	00:55:10	motorcycle
	00:56:55	00:57:15	airplane
	01:20:00	01:20:30	airplane
	01:30:25		train whistle
	01:40:40	01:41:20	train whistle
	01:55:20	01:55:35	train whistle
	02:13:15	02:13:25	train whistle
	02:20:55	02:21:15	airplane
	02:25:15	02:26:10	train whistle
	02:31:50	02:33:00	airplane & train whistle
	02:35:25	02:36:10	train whistle
	02:38:00	02:38:20	train whistle
	02:38:40	02:39:15	car drive by & train whistle

MELROSE LOCATION NOISE LOG			
FILE NUMBER	RECORDER ELAPSED TIME START	RECORDER ELAPSED TIME STOP	NOISES HEARD
	02:39:40	02:40:30	airplane
	02:41:50	02:42:00	train whistle & airplane
	02:44:45	02:45:05	airplane
	02:50:10	02:50:40	airplane
	03:01:35	03:02:00	airplane
	03:04:10	03:04:20	airplane
	03:05:50	03:06:25	airplane
	03:11:25	03:12:05	airplane
	03:14:15	03:14:30	airplane
	03:18:25	03:18:50	airplane
	03:22:25	03:22:35	airplane
	03:31:50	03:32:20	airplane
	03:46:50	3:46:59	motorcycle
	03:49:40	03:50:20	airplane
	03:57:40	04:04:10	vehicle / ladder / talking / vehicle leaves
	04:12:15	04:12:20	loud dog barks
	04:13:15		dog barks
	04:57:30	04:57:40	vehicle drive by
	05:06:05	05:06:25	airplane
	05:17:05	05:17:45	airplane
	05:20:15	05:20:30	airplane in distance
	05:44:30	05:45:30	airplane in distance
	06:02:50	06:03:10	airplane in distance
10061703	00:09:00	00:09:15	airplane
	00:20:45	00:21:15	train whistle
	00:28:00	00:28:30	airplane
	00:32:40	00:33:10	airplane
	00:33:50	00:34:00	train whistle
	00:34:00	00:35:15	train whistle
	00:37:20	00:38:30	train whistle
	00:40:45	00:41:40	airplane
	00:47:25	00:47:50	train whistle
	01:07:55	01:08:10	vehicle drive by
	01:37:45	01:38:05	vehicle drive by
	01:42:20	01:42:25	airplane
	01:46:00	01:45:35	airplane
	01:58:15		train whistle
	02:13:00	02:13:05	vehicle drive by
	02:16:10		birds and garage door open or close
	02:17:00	02:17:10	vehicle drive by
	02:22:15	02:22:50	vehicle drive by
	02:24:05		car door shut
	02:24:30		garage door opens or closes-birds chirping
	02:25:45		vehicle drive by
	02:34:45	02:34:55	vehicle drive by
	02:37:20	02:37:30	vehicle drive by
	02:40:05	02:40:25	airplane
	02:46:30	02:46:35	vehicle drive by
	02:54:55	02:55:45	airplane
	03:05:40	03:05:45	vehicle drive by
	03:11:20	03:11:30	vehicle drive by
	03:12:15	03:12:25	vehicle drive by
	03:13:15	03:13:35	vehicle drive by
	03:15:05	03:15:30	vehicle drive by

MELROSE LOCATION NOISE LOG			
FILE NUMBER	RECORDER ELAPSED TIME START	RECORDER ELAPSED TIME STOP	NOISES HEARD
	03:19:45	03:19:55	vehicle drive by
	03:24:55	03:25:00	vehicle drive by
	03:26:18	03:26:22	motorcycle
	03:31:35	03:31:50	vehicle drive by
	03:40:40	03:41:15	airplane
	03:19:15	03:49:30	vehicle drive by
	03:51:25	03:51:35	vehicle drive by
	03:58:50	03:59:05	vehicle drive by
	03:59:40	04:00:45	car door shut / engine start / drive off
	04:10:40	04:11:05	airplane
	04:17:35	04:17:55	vehicle drive by
	04:38:35	04:38:40	3 or 4 beeps
	04:49:50	04:51:00	motorcycle starts / drives off
	04:52:10	04:52:40	vehicle pulls up / car door shuts
	05:10:00	05:01:15	vehicle drive by
	05:02:05	05:02:20	vehicle drive by
	05:05:35	to end	vehicle / ladder / talking-recording device turned off and removed

## APPENDIX 4 - REFERENCES

Louisville-Jefferson County Metro Government Title IX: GENERAL REGULATIONS  
CHAPTER 99: NOISE

United States Environmental Protection Agency. 1973. *Public Health and Welfare Criteria for Noise*. EPA 550/9-73-002 July 1973.

United States Environmental Protection Agency. 1978. *Protective Noise Levels*. EPA 550/9-79-100.

Ver, Istvan L.; Beranek, Leo L., 2005, *Noise and Vibration Control Engineering: Principles and Applications, 2 Revised Edition*, ISBN: 9780471449423, John Wiley & Sons, Inc., New York, NY