Coal Combustion Byproduct Plan for Ghent Station For

Subsidiaries Kentucky Utilities and Louisville Gas and Electric

June 2009

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1. Executive Summary

Kentucky Utilities Company's ("KU") Ghent station ("Ghent") produces three primary coal combustion byproducts ("CCP"): bottom ash, fly ash and gypsum, which are currently stored in two ash treatment basins and two gypsum stacking areas. These storage areas are expected to reach full capacity in 2012, creating a need for additional CCP management solutions.

A variety of on-site and off-site options were considered to meet CCP management needs at Ghent. The most effective solutions were identified through a needs analysis and economic analysis based on engineering cost estimates.

To address the pre-2013 need for gypsum storage capacity, an opportunity to remove a quantity of gypsum to be beneficially reused as structural fill was identified. This reuse option is significantly lower cost than transporting CCP to an off-site landfill, which is the other short-term option.

For longer-term CCP storage needs, KU contracted an engineering consultant to develop potential on-site storage alternatives. Of multiple options considered, four options were selected for further economic evaluation. Based on cost estimates and qualitative factors for these alternatives, the most favorable option is a single on-site landfill to store both ash and gypsum.

The most cost effective and environmentally sound CCP management options for Ghent are:

- a proposal for beneficial reuse of 1.3 million cubic yards ("MCY") of CCP (approximately 75% of annual CCP production) by Trans Ash, Inc. in 2010-2012 (Present value of revenue requirement ("PVRR") of [redacted] million or [redacted] per cubic yard), and
- the construction of a new on-site landfill system to store both ash and gypsum production for 25 years to be in-service by 2013 (PVRR of [redacted] million or [redacted] per cubic yard).

In addition, KU will continue to pursue other beneficial reuse opportunities that result in lower disposal costs.

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2. Background

Kentucky Utilities Company's ("KU's") Ghent generating station ("Ghent") is located in Carroll and Gallatin Counties, Kentucky and is comprised of four coal-fired generating units for a total net station capacity of over 1,900 MW. The station produces three primary coal combustion byproducts ("CCP"): bottom ash, fly ash and gypsum. The Ghent station has four existing on-site storage facilities for CCP as follows:

- Ash Treatment Basin ("ATB") #1
- ATB #2
- North Gypsum Stack
- South Gypsum Stack

The ATBs are used to store bottom ash and fly ash which are byproducts of burning coal. ATB #1 is at maximum capacity[1] and ATB #2 is nearing maximum desired capacity. As of February 2009[2], ATB #2 can hold approximately an additional 2.5 MCY of ash. Ghent is forecast to produce approximately 0.7 MCY of ash annually, thus depleting the capacity in ATB #2 in 2012.[3]

Gypsum is produced by Ghent's flue gas desulfurization ("FGD") systems, which use limestone reagent to remove sulfur dioxide from flue gas. Until an additional repository can be developed, Ghent's gypsum is stacked on site. Based on the plant's expected generation, the existing capacity of the north and south gypsum stacks (collectively the "gypsum stack") is expected to be exhausted in 2012.[4]

Some gypsum is currently sold to a third party for beneficial reuse.[5] CertainTeed, Inc. ("CertainTeed") currently pays KU [redacted] per cubic yard for gypsum to be used as a raw material in the production of wallboard. This contract began in 1999 and runs through 2024. CertainTeed does not have minimum or maximum volume obligations, but their expected annual volume is approximately 222,000 cubic yards of gypsum (approximately 20% of annual gypsum production) based on recent utilization data.[6]

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[1] ATB #1 is not relevant to this analysis as it is not currently receiving any CCP, although it is available for emergency use.

[2] A bathymetric survey of ATB #2 was conducted by HDR/Quest/Rudy for GAI Consultants in February 2009.

[3] The available capacity of ATB #2 at the end of June 2009 is forecasted to be approximately 2.3 MCY.

[4] The available capacity of the gypsum stack at the end of June 2009 is forecasted to be approximately 2.6 MCY.

[5] KU identifies economically and environmentally favorable options to beneficially reuse CCP, consistent with KU's Comprehensive Strategy for Management of CCP shown in Exhibit JNV-3.

[6] Gypsum sales to CertainTeed were 263,000 tons in 2007, 375,000 tons in 2008, and 103,000 tons year-to-date through May 2009. However, their purchases decreased late in 2008 and year-to-date in 2009 as the economy slowed.

3. Process and Methodology

KU and Louisville Gas and Electric Company (collectively "the Companies") develop the most effective plan for meeting the CCP storage needs at each generating station. The process of identifying the plan consists of the three following primary tasks which are performed by several departments within the Companies.

- Needs assessment
- Development of alternatives
- Comparison of alternatives

The CCP storage needs are defined by forecasting the production of CCP over the applicable planning period as compared to the existing storage capacity. The Project Engineering department and the applicable generating station are responsible for providing an estimate of remaining capacity.

The expected life of the existing storage capacity is based on the forecast of CCP production, which is developed by Generation Planning for all stations as a function of the expected coal usage for each unit. The Companies compile information regarding the cost of generation for each unit (fuel, variable O&M, emission costs, etc.), a description of the generation capabilities of each unit (capacity, heat rate curve, commitment parameters, emission rates, availability schedules, etc.), a load forecast, the market price of electricity, and the volumetric ability (transfer capability) to access the market. All of this information is brought together in the PROSYM™[7] software, which is used to model the economic operation of the Companies' generating system. The projected coal usage data provided by this model is checked for reasonableness by comparing the results to historical data.

The Project Engineering department develops alternatives for on-site CCP storage solutions and their associated costs. Any alternatives for off-site disposal such as beneficial reuse or off-site landfill disposal are provided by the generating stations' staff and a CCP team focused on exploring alternatives for byproduct storage. The cash flows for selected options are summarized and provided to Generation Planning for evaluation.

The Generation Planning department evaluates the storage and disposal options received from Project Engineering to determine the present value of revenue requirements ("PVRR") associated with the capital expenditures and O&M expenses of each option. This analysis is performed using the Capital Expenditure Recovery module of the Strategist®[8] software model.

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[7] The PROSYM™ model has formed the foundation of prior analyses involving certificates of convenience and necessity for new generating plants, environmental cost recovery for pollution control equipment, and the fuel adjustment clause.

[8] Strategist® is a proprietary, state-of-the-art resource planning computer model. The Capital Expenditure Recovery module is used to quantify the revenue requirements impact associated with capital projects.

4. Needs Assessment

The following capacities were provided by Project Engineering and the Ghent station:

- ATB #1 is at capacity and is available for emergency use only.
- As of February 2009, the remaining available capacity of ATB #2 is 2.5 million cubic yards.[9]
- The remaining available capacity of the gypsum stacks is estimated to be 2.9 MCY as of January 2009.[10]

The expected life of the remaining capacity of the ATB #2 and the Gypsum Stack were estimated by forecasting the CCP production of ash and gypsum at Ghent. The quantity of ash produced at Ghent is estimated at a coal specification of 11.5% ash by weight of the total quantity of coal used, or approximately 11.5 tons of ash per 100 tons of coal. Converting to volumetric measurement, assuming ash production consists of 80% fly ash and 20% bottom ash by weight, approximately 11.5 cubic yards of total ash is produced per 100 tons of coal.[11]

The chemical reaction by which gypsum is produced results in a net gypsum production of approximately 18% by weight of the total quantity of coal used,[12] or approximately 18 tons of gypsum per 100 tons of coal. Converting to volumetric measurement for the gypsum stack, approximately 17.8 cubic yards of gypsum is produced per 100 tons of coal.

The forecasted CCP production volume for Ghent is shown in Table 1 and depicted graphically in Figure 1 and Figure 2, based on the forecasted coal burn shown in Table 2. Table 2 also contains the historical quantities of coal burned as a comparison to the forecast. The increase in coal burn during the 2010-2013 period is due to the completion of the FGD installations at Ghent in 2009, which required prior scheduled outages on each of the Ghent units during 2007-2009. Also, with the addition of the FGDs, Ghent has lower fuel costs, resulting in higher forecasted generation.

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[9] Based on expected coal burn, Generation Planning forecasts that by the end of 2009, the remaining capacity of ATB #2 will be 1.9 MCY.

[10] Based on expected coal burn and existing beneficial reuse, Generation Planning forecasts that by the end of 2009, the remaining capacity of the gypsum stacks will be 2.2 MCY.

[11] Density assumptions for wet storage are 0.945 tons per cubic yard for bottom ash and 1.0125 tons per cubic yard for both fly ash and gypsum.

[12] Fuel specification assumptions include SO_2 content of approximately 5.9 lb/mmBTU and heat content of 22.16 mmBTU/ton.

Table 1: CCP Production Forecast (MCY)

CCP Production Forecast *(MCY – wet storage)*			
	Fly Ash	**Bottom Ash**	**Gypsum**
2009	0.54	0.14	0.88
2010	0.55	0.15	1.09
2011	0.58	0.15	1.12
2012	0.55	0.15	1.06
2013	0.55	0.15	1.09

Table 2: Ghent Coal Usage (Million Tons)

Ghent Coal Usage *(M Tons)*	
Historical	
2004	5.4
2005	5.6
2006	5.6
2007	5.3
2008	5.7
Forecast	
2009	5.6
2010	6.0
2011	6.3
2012	6.1
2013	6.1

The forecasted generation and the resulting coal usage at Ghent correspond to an average capacity factor of approximately 77%. This relatively high capacity factor is consistent with Ghent's low production cost. Since Ghent is already modeled as a baseload station, the risk of significantly underestimating CCP production is low. However, reduction in load or unexpected outages at Ghent could affect the capacity factor and lower future CCP production.

Figures 1 and 2 show the forecasted cumulative CCP production at the end of each year compared to the expected available capacity at the end of 2009. With current forecasts for ash production and without any additional on-site capacity or off-site storage or reuse, ATB #2 is expected to reach full capacity during 2012, as shown in Figure 1. Assuming no beneficial reuse beyond the expected 222,000 cubic yards per year by CertainTeed, the gypsum stack is also expected to reach maximum capacity in 2012, as shown in Figure 2.

Figure 1: ATB #2 Capacity

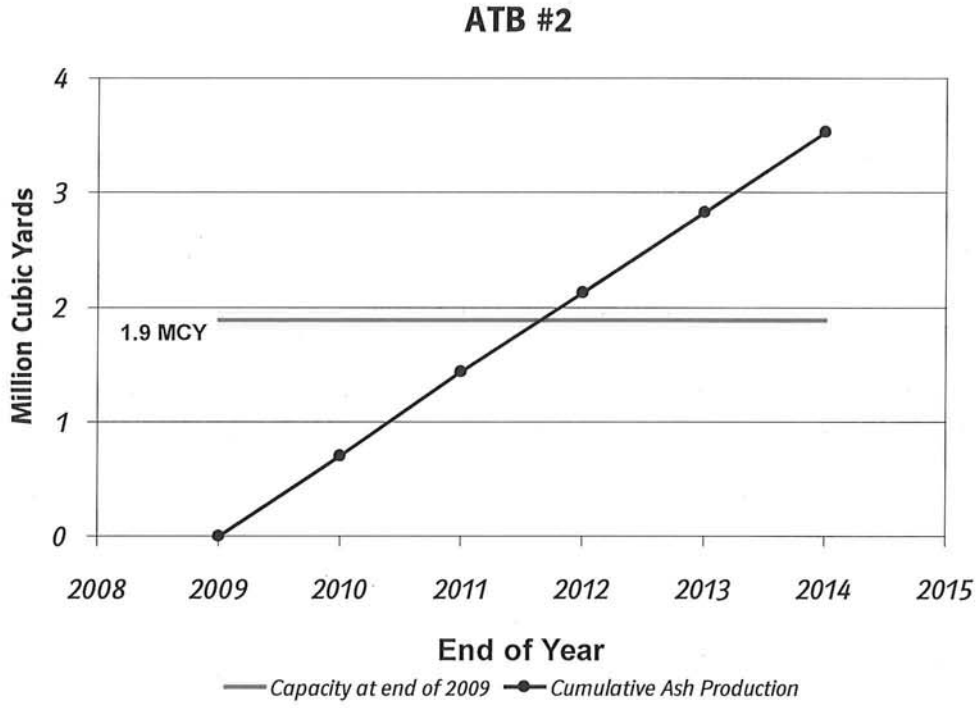
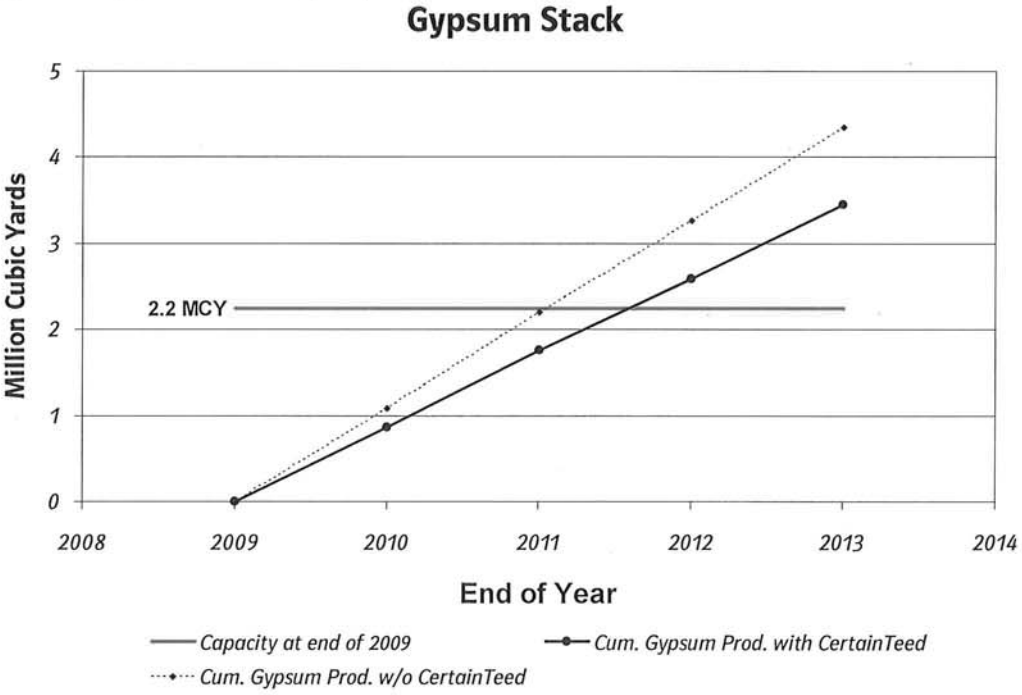


Figure 2: Gypsum Stack Capacity



In summary, the needs assessment indicates that additional CCP disposal alternatives will be needed for both ash and gypsum at Ghent by 2012. At least 0.6 MCY of CCP must be moved off-site in order to maintain operations of the existing storage facilities at Ghent through 2012.

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5. Development of Alternatives

In the case of CCP solutions for Ghent, Project Engineering and the CCP team developed two sets of options for evaluation:

1. Short-term storage options to meet 2009-2012 requirements
2. Long-term storage options to meet 2013-2037 requirements.

The short-term options were developed because long-term options cannot be in service before 2013, and on-site capacity is expected to be depleted in 2012. These options were evaluated independently, leading to a recommendation for short-term and long-term solutions.

5.1 Short-Term Disposal

As a result of ATB #2 and the gypsum stack nearing their maximum desired storage capacities, the station, in conjunction with the CCP Team, negotiated with Trans Ash, Inc. ("Trans Ash"), a company specializing in the reuse of CCP, to beneficially reuse 1.3 MCY (approximately 1.5 million tons as hauled) of CCP as structural fill. The 2009 base cost of this proposal is [redacted] per MCY[13], subject to annual adjustments to the base price and fuel cost adjustments. The base price is redetermined by increasing the previous year's price by 90 percent of the year-over-year percent change in the Consumer Price Index – All Urban Customers, U.S. City Average. The fuel adjustments are made for both off-road and on-road diesel use. Off-road fuel adjustments are calculated as the difference between the base diesel unit price of [redacted] per gallon and the average unit diesel price paid multiplied by the quantity of off-road diesel purchased each year. The on-road diesel adjustment is calculated as the product of the average quantity of fuel used and the difference between the base diesel price and the index price as published by the U.S. Department of Energy, Energy Information Administration in "The U.S. No 2 Diesel Low Sulfur (15-500 ppm) Retail Sales by All Sellers (Cents per Gallon)"

An agreement with Trans Ash would require that the full 1.3 MCY be moved in 2010-2012 to satisfy the end consumer of the beneficial reuse opportunity. Consistent with KU's CCP management strategy, this fill location has been evaluated and confirmed as appropriate for beneficial reuse. The location is not in an environmentally sensitive area.

The only near-term alternative to beneficial reuse of CCP is the use of an existing off-site commercial landfill. For 2009, the total unit cost of storage in the closest off-site landfill was estimated to be [redacted] per cubic yard[14]. In contrast to the Trans Ash proposal, an off-site landfill storage option requires that only a minimum of 0.6 MCY must be moved off-site prior to 2013 to ensure continuing operations at Ghent.

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[13] [redacted] per MCY as stored is equivalent to [redacted] per ton as hauled.

[14] [redacted] per cubic yard is equivalent to [redacted] per ton as hauled for transport and storage at Valley View landfill near Sulphur, KY, approximately 25 miles from Ghent. Cost components per ton are [redacted] for excavating and loading, [redacted] for hauling, and [redacted] for landfill tipping fee. This quoted tipping fee is slightly below the listed rates of [redacted]/ton for other regional public landfills.

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5.2 Long-Term Storage

To meet the long-term storage needs at Ghent, KU contracted GAI Consultants, Inc., Pittsburgh, PA ("GAI") to provide both an Initial Siting Study ("ISS") and a Final Conceptual Design Study of CCP storage alternatives at Ghent.[15] The ISS identified over forty potential alternatives based on combinations of a number of variables, including storage and transport methods, site locations, and relocation of transmission lines. As a result of this study, four on-site alternatives shown in Table 3 were selected for further consideration. In the process of developing the Final Conceptual Design Study, GAI refined the cost estimates for these alternatives in addition to other detailed engineering tasks. As an alternative to building on-site storage facilities, use of an existing off-site commercial landfill for storing future CCP was also considered as a long-term option.

Table 3: Alternatives for Long-Term Storage

		On-Site				
Case		**14/28**	**37**	**41**	**42/28**	**Off-Site Landfill**
Description		2 Landfills	1 Landfill	1 Pond	1 Pond 1 Landfill	
Total Capacity *(MCY)*		46.1	46.1	53.6	48.3	46.1 needed
Nominal Cost *($M)*	**Capital**					
	O&M[16]					

Each of the cases for on-site long-term storage was designed to hold twenty-five years of CCP production with phased construction. The total capacity required for each case differs due to the different density of CCP stored in ponds versus landfills. Table 4 shows the construction periods, the in-service years, and the capacity for each phase of the on-site cases. The site locations as shown in Figure 3 are noted as follows:

- Site M is north of ATB #2 on property owned by KU.
- Site E/F which is southeast of ATB #2 and include properties owned by KU and approximately 350 acres owned by others.
- Pond L represents vertical and lateral expansion east of ATB #2 with an impoundment.

[15] A preliminary draft of the Final Conceptual Design Study is shown in Exhibit JNV-4.
[16] The O&M figures in Table 3 include the cost for power to operate the on-site storage alternatives.

Figure 3: CCP Storage Site Alternatives

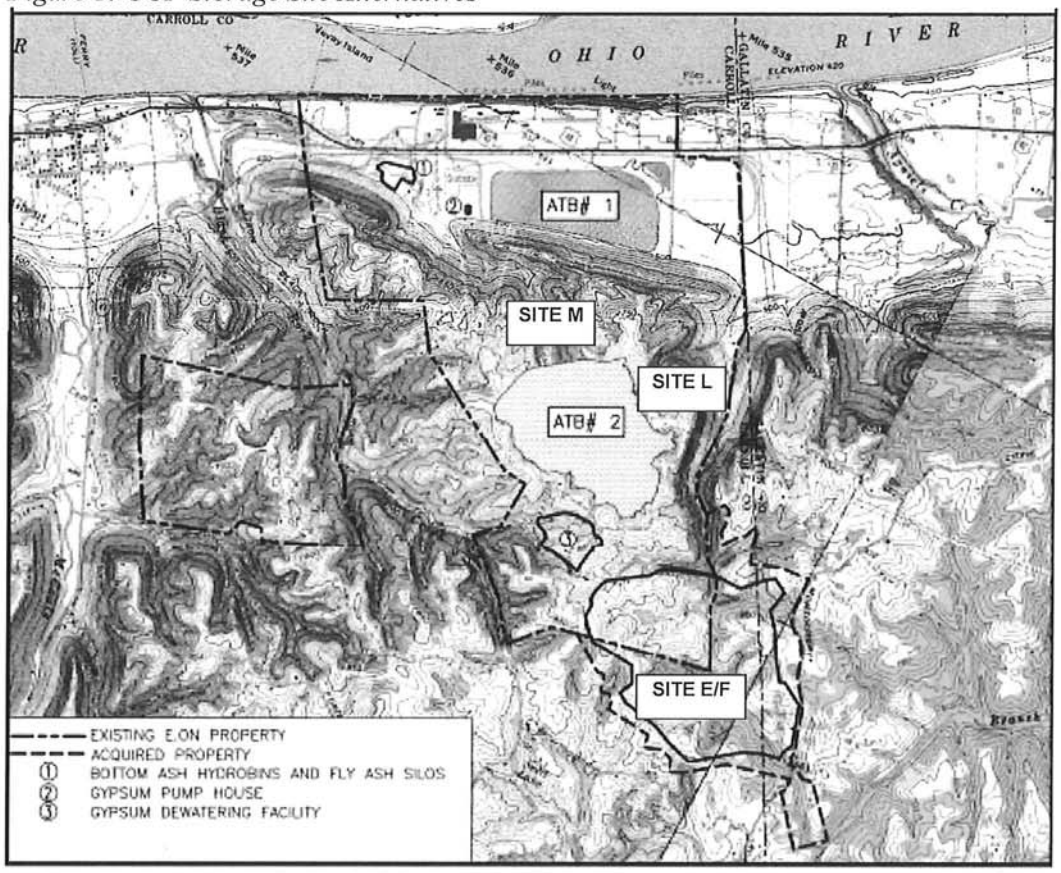


Table 4: Construction Phases for On-Site Storage Options

Case		**14/28**		**37**	**41**	**42/28**	
Site Location		M	E/F	E/F	L	L	E/F
Phase 1	**Construction**	2010-14		2010-14	2010-13	2010-14	
	In-Service	2013		2013	2013	2013	
	Capacity *(MCY)*	5.3	5.7	14.7	16.5	7.2	8.4
Phase 2	**Construction**	2016-18		2018-19	2017-19	2018-20	
	In-Service	2019		2020	2020	2021	
	Capacity *(MCY)*	8.5	8.0	12.3	15.7	8.3	7.7
Phase 3	**Construction**	--	2023-25	2024-26	2025-27	2027-29	
	In-Service	--	2026	2027	2028	2030	
	Capacity *(MCY)*	--	12.4	19.1	21.6	6.1	8.0
Phase 4	**Construction**	2027-29	--	--	--	--	
	In-Service	2030	--	--	--	--	
	Capacity *(MCY)*	6.2	--	--	--	--	--

Case 14/28. Case 14/28 consists of separate landfills for ash and gypsum with ash stored at Site M and gypsum stored at Site E/F. Construction of the landfills consists of four phases as shown in Table 4 with the first phase beginning in 2010 and the final phase ending in 2029. Figure 4 shows the phased cumulative design capacity of the landfill at Site M compared to the forecasted ash production. Figure 5 shows the phased cumulative design capacity of the landfill at Site E/F compared to the forecasted gypsum production both including and excluding the effect of the expected gypsum reuse by CertainTeed. These figures, as well as Figures 6-9, demonstrate that the designs for the timing and volume of capacity additions for each of the cases considered are reasonable compared the forecasted CCP production.

Figure 4: Long-Term Needs Assessment – Case 14/28, Landfill M

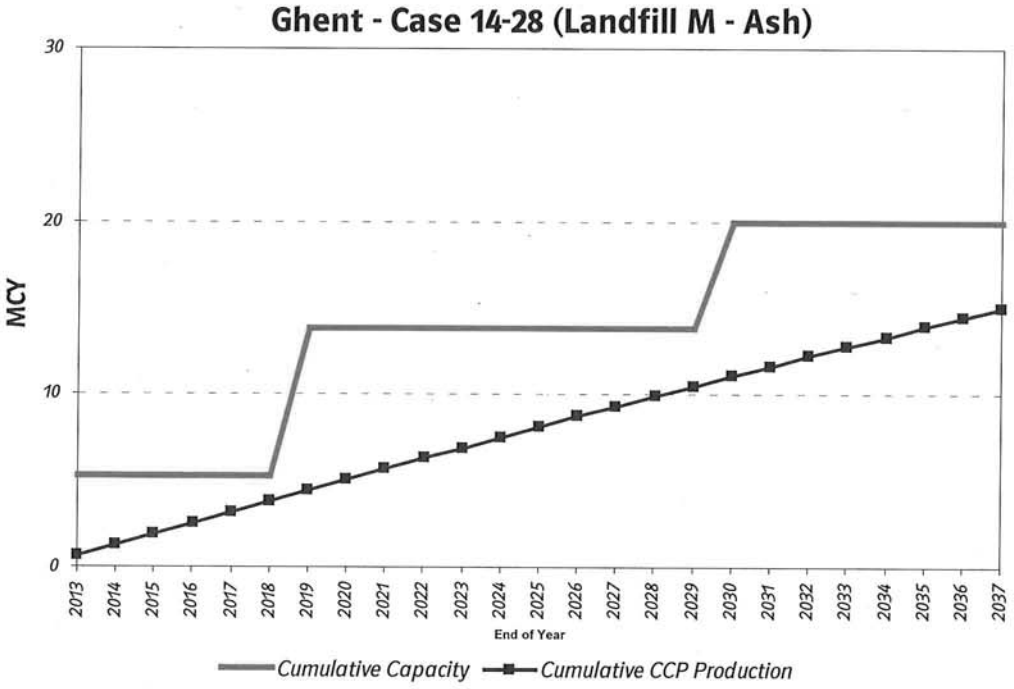
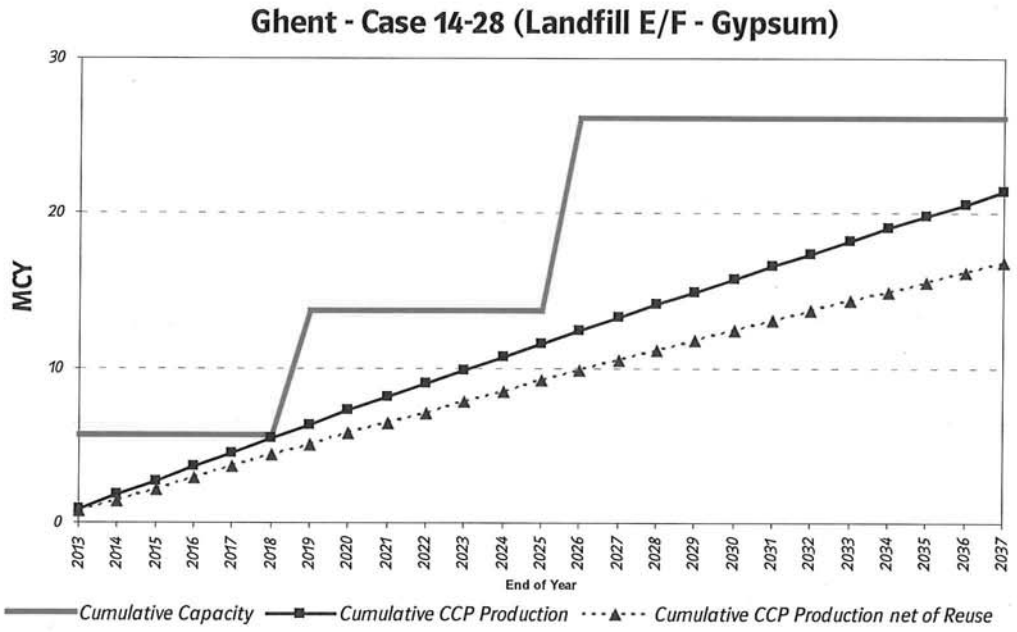
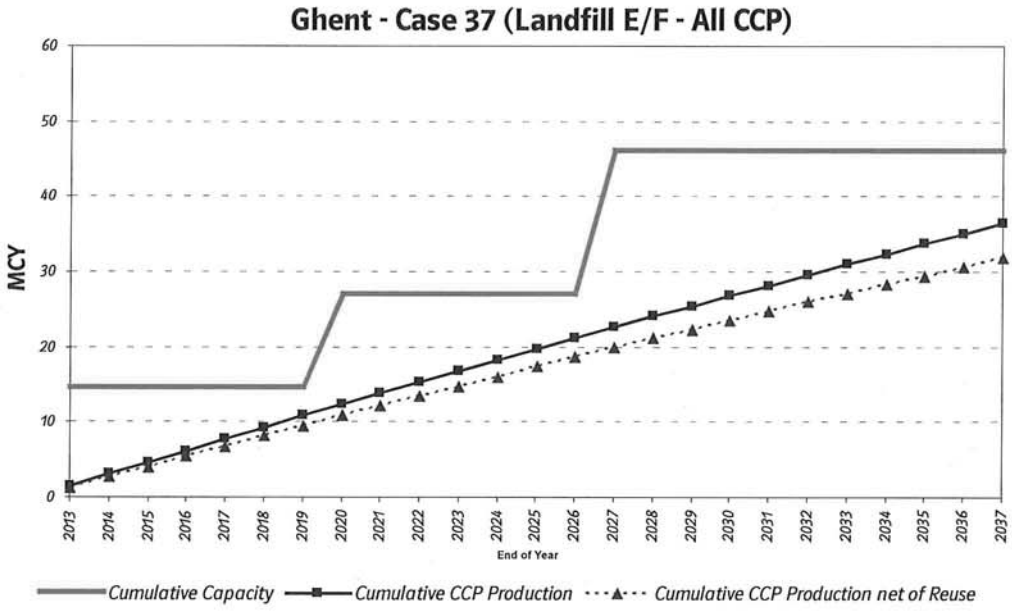


Figure 5: Long-Term Needs Assessment – Case 14/28, Landfill E/F



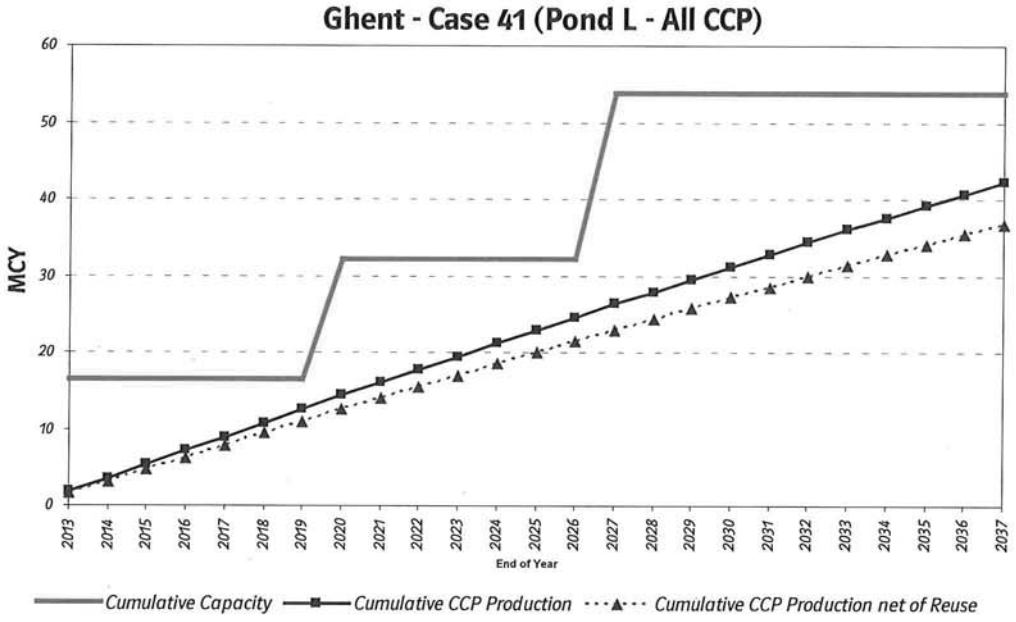
Case 37. Case 37 consists of a single landfill for both ash and gypsum at Site E/F. The construction schedule consists of three phases beginning in 2010 and ending in 2026. Figure 6 shows the phased cumulative design capacity of this landfill compared to the forecasted cumulative CCP production both including and excluding the effect of the expected gypsum reuse by CertainTeed.

Figure 6: Long-Term Needs Assessment – Case 37, Landfill E/F



Case 41. Case 41 consists of a single pond for both ash and gypsum at Site L. The construction schedule consists of three phases beginning in 2010 and ending in 2027. Figure 7 shows the phased cumulative design capacity of this landfill compared to the forecasted cumulative CCP production both including and excluding the effect of the expected gypsum reuse by CertainTeed.

Figure 7: Long-Term Needs Assessment – Case 41, Pond L



Case 42/28. Case 42/28 consists of a pond at "Site L" for ash and a landfill at "Site E/F" for gypsum. Construction of these facilities consists of four phases as shown beginning in 2010 and the final phase ending in 2029. Figure 8 shows the phased cumulative design capacity of the pond at Site L compared to the forecasted ash production. Figure 9 shows the phased cumulative design capacity of the landfill at Site E/F compared to the forecasted gypsum production both including and excluding the effect of the expected gypsum reuse by CertainTeed.

Figure 8: Long-Term Needs Assessment – Case 42/28, Pond L

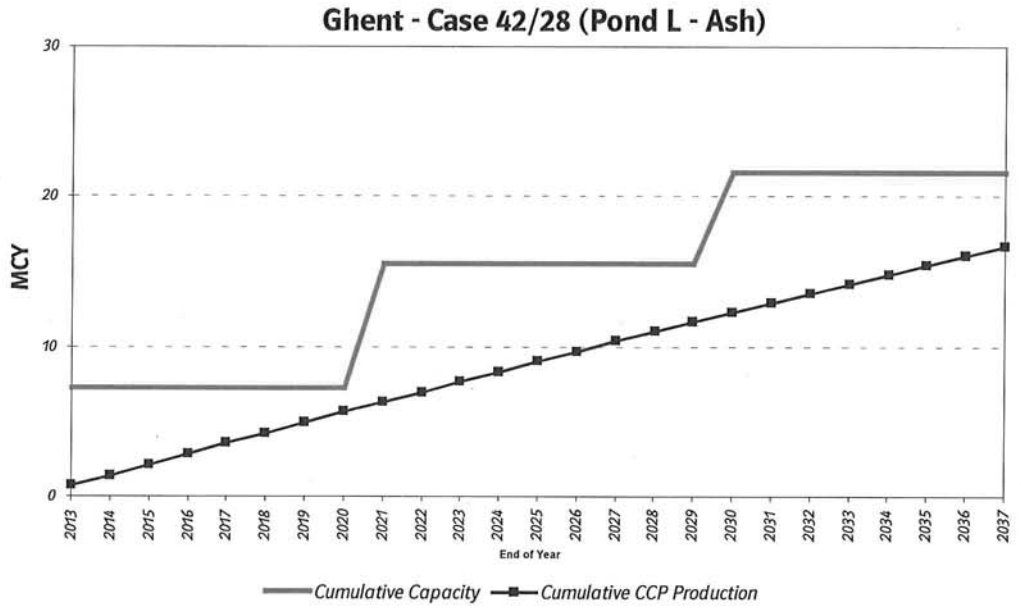
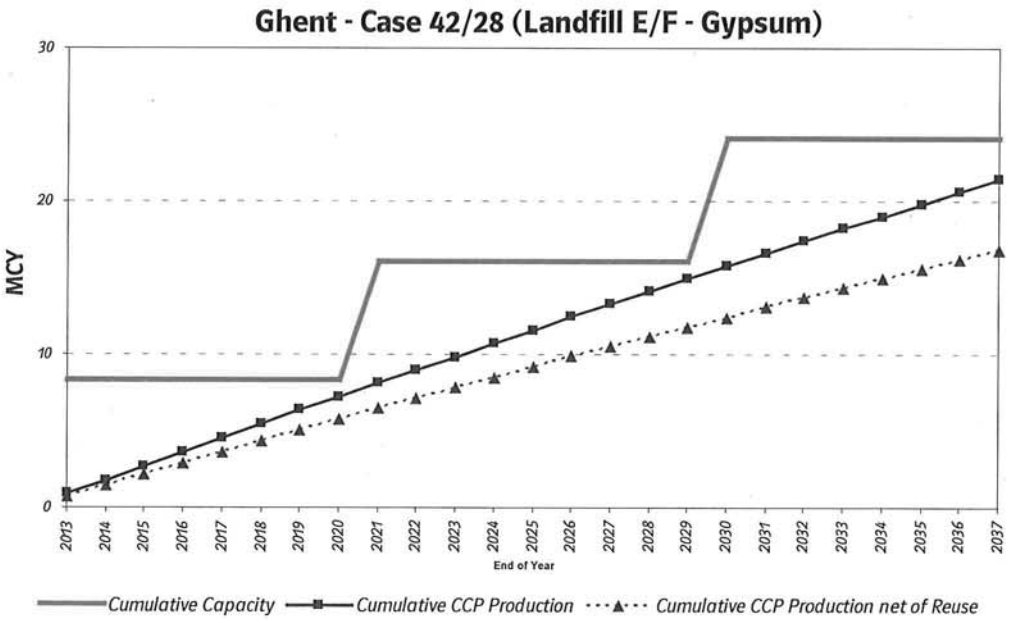


Figure 9: Long-Term Needs Assessment – Case 42/28, Landfill E/F



6. Comparison of Alternatives

6.1 Short-Term Disposal

The short term disposal analysis compares the cost of a beneficial reuse initiative with Trans Ash to the cost of off-site landfill disposal. The Trans Ash proposal is to move 1.3 MCY in 2010 through 2012 and the plan for off-site landfill disposal is to move 0.6 MCY in 2012. Both of these options consist only of O&M costs, with no additional capital expenditure. As seen in Table 5, the Trans Ash proposal is the least-cost option to meet the short term capacity needs at Ghent. On a cost per volume basis, the Trans Ash option is almost 80% less costly than the off-site landfill option. Also, despite the higher volume requirement, the Trans Ash proposal's PVRR is $9.8 million lower than the off-site landfill alternative.

Table 5: PVRR Analysis Summary of Short-Term Alternatives

	Trans Ash Beneficial Reuse	**Off-site Landfill Disposal**
Total Quantity *(MCY)*	1.3	0.6
PVRR *(2009 million $)*	[redacted]	
Delta to Least Cost Case	*Least Cost*	*9.8*
Unit Cost *(2009 PVRR $/cubic yard)*	[redacted]	

6.2 Long-Term Storage

The long-term storage evaluation (Table 6) compares the PVRR and per-unit cost of four on-site storage alternatives selected in the engineering studies, in addition to disposal in an off-site commercial landfill. The financial assumptions related to the analysis of these cases are shown in Appendix 1, the projected cash flows are shown in Appendix 2, and the annual revenue requirements are detailed in Appendix 3.

The following is a brief comparison of the results:

Case 37. Case 37 consists of a common on-site landfill for both ash and gypsum. This is least cost on a PVRR basis by $26 million. This option is also lowest cost on a per unit volume basis at [redacted] PVRR per cubic yard. The favorable capital profile of this project results from the single landfill approach compared to Case 14/28, which includes separate landfills for ash and gypsum.

Case 14/28. Case 14/28 consists of separate landfills for ash and gypsum and involves higher up-front capital costs ($34 million higher through 2017, $6 million of which is due to transmission expenditures), an accelerated timeline for the addition of subsequent phases, and an additional construction phase compared to Case 37. This is partially offset by slightly lower annual O&M costs due to reduced distances for transporting ash. In summary, the lower costs associated with the shorter transport distances are overcome by the additional costs of the two landfills.

Cases 41 and Case 42/28. Case 41 consists of a single pond for both ash and gypsum and Case 42/28 consists of an ash pond and a gypsum landfill. The construction of an ash

pond is significantly more capital intensive compared to a landfill, although the ongoing operation is less costly. Through 2016, both of these cases are approximately $95 million higher in total capital costs than Case 37. Construction of the second and third phases increases the capital premium to $850 million for Case 41 and $350 for Case 42/28. Inclusion of the pond closure costs in 2038 raises these figures to $1,145 million and $475 million for Cases 41 and 42/28, respectively. Although the O&M is significantly lower for these cases compared to Case 37, it is not enough to offset the effect of the higher initial capital expenditures.

Off-site landfill. The off-site landfill option consists only of O&M costs, but this option is the highest-cost alternative due to the high unit cost of off-site landfill disposal, which is approximately [redacted] PVRR per cubic yard.

Beneficial Reuse. KU will evaluate beneficial reuse opportunities as they arise, and will pursue proposals that are favorable to on-site disposal.

Table 6: PVRR Analysis Summary of Long-Term Alternatives
(2009 PVRR million $)

Case	14/28	37	41	42/28	Off-Site Landfill
PVRR					
Capital	[redacted]				
O&M					
Total					
Delta to Least Cost Case	*26*	*Least Cost*	*254*	*125*	*413*
Capacity *(MCY)*	46.1	46.1	53.6	48.3	46.1
Unit Cost *(2009 PVRR $/CY)*	[redacted]				

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7. Recommendations

The needs assessment demonstrates a need for additional CCP storage capacity at the Ghent station by 2012. Analysis of the options provided by Project Engineering demonstrates that the most favorable alternatives to meet Ghent's CCP storage needs are:

- Short-term: the proposal for beneficial reuse of 1.3 MCY of gypsum by Trans Ash in 2010 through 2012. The PVRR is [redacted] million, or [redacted] per cubic yard.
- Long-term: constructing the first phase of an on-site landfill to store both ash and gypsum, to be in-service in 2013. The PVRR is [redacted] million, comprised of [redacted] million capital and [redacted] million O&M.

The short-term solution utilizing beneficial reuse is almost 80% less on a per unit of volume basis than disposal at an off-site commercial landfill. The unit cost of this short-term recommendation is also lower than the unit cost of the recommended long-term on-site landfill. The long-term solution includes the construction of a single landfill and is 4% less on a PVRR basis than the dual landfill option (Case 14/28).

Further details regarding the status of this project and the expected construction schedule are shown in Appendix 4.

Appendix 1

Analysis Assumptions

- Study Period: 30-year period for operational costs impacts (2009-2038)
  50-year period for capital costs impacts (2009 through tax life of final project phase).

  The revenue requirements associated with capital costs are determined via the Capital Expenditure and Recovery module of the Strategist production and capital costing software. To completely account for capital projects costs over their lifetime, the revenue requirements associated with new capital projects were included beyond the operational study period through the end of their tax life.

- Capital and O&M costs associated with the addition of new environmental projects will be subject to recovery through the Environmental Cost Recovery ("ECR") mechanism. O&M costs for electrical power usage required to operate equipment related to CCP storage are included when comparing alternatives (noted as "Power" in Appendix 2) but are not included as recoverable costs for calculation of ECR billing factors.

- Financial data
  - Discount rate: 7.81%
  - Income tax rate: 38.9%
  - Insurance rate: 0.07%
  - Property tax rate: 0.15 %
  - Percentage of debt in capital structure: 47.01%
  - Debt interest rate/weighted cost of debt: 4.64%
  - Return on equity: 10.63%
  - Book life - average landfill phase (non-transmission): 12 years
  - Book life – transmission (line relocation): 40 years
  - Tax life: 20 years
  - Annual capital and O&M escalation rate: 6%
  - Contingency included in cost estimates: ~28%
  - E.ON US overhead included in capital costs 3.5%
  - Capital expenditures are assumed to occur at year end.

- CCP data
  - Coal ash content: 11.5%
  - Coal SO_2 content: ~5.9 lb/mmBTU
  - Coal heat content: 22.16 mmBTU/ton
  - FGD removal efficiency:
    Units 1, 3, 4 98%
    Unit 2 (currently Unit 1) 94.3%

CCP Plan for Ghent Station
June 2009
Appendix 2 – Projected Cash Flows

Appendix 2

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Projected Cash Flows

Annual Cash Flows *Short-Term Options* *O&M Only ($ thousands)*		
Case	**Beneficial Reuse**	**Off-Site Landfill**
2008	[redacted]	
2009		
2010		
2011		
2012		
2013+		
Total		

$ thousands

Case **14/28** **2 landfills**

	Annual Cash Flows										
	Capital						**O&M**				**Total**
	Phase1	*Phase2*	*Phase3*	*Phase4*	*Transmission*	**Total Capital**	*Non-Power*	*Power*	*Trans Ash*	**Total O&M**	
2008	[redacted]										
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Total											

CCP Plan for Ghent Station
June 2009
Appendix 2 – Projected Cash Flows

CONFIDENTIAL INFORMATION

$ thousands

Case **37** **1 landfill**

	Annual Cash Flows										
	Capital						O&M				Total
	Phase1	*Phase2*	*Phase3*	*Phase4*	*Transmission*	**Total Capital**	*Non-Power*	*Power*	*Trans Ash*	**Total O&M**	
2008	[redacted]										
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Total											

CCP Plan for Ghent Station
June 2009
Appendix 2 – Projected Cash Flows

CONFIDENTIAL INFORMATION

$ thousands

Case 41 1 pond

	Annual Cash Flows										
	Capital						O&M				Total
	Phase1	*Phase2*	*Phase3*	*Phase4*	*Transmission*	**Total Capital**	*Non-Power*	*Power*	*Trans Ash*	**Total O&M**	
2008	[redacted]										
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Total											

CCP Plan for Ghent Station
June 2009
Appendix 2 – Projected Cash Flows

CONFIDENTIAL INFORMATION

$ thousands

Case **42/28** **1 pond/1 landfill**

	Annual Cash Flows										
	Capital						O&M				Total
	Phase1	*Phase2*	*Phase3*	*Phase4*	*Transmission*	**Total Capital**	*Non-Power*	*Power*	*Trans Ash*	**Total O&M**	
2008	[redacted]										
2009											
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Total											

CCP Plan for Ghent Station
June 2009
Appendix 2 – Projected Cash Flows

CONFIDENTIAL INFORMATION
$ thousands

Case	**Off-Site Landfill (O&M Only)**	
	Capital	**O&M**
Cost Escalation	[redacted]	
2008		
2009		
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2011		
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Total		

CCP Plan for Ghent Station
June 2009
Appendix 3 – Revenue Requirements Detail

Appendix 3

CONFIDENTIAL INFORMATION

Revenue Requirements Detail

$ thousands

Case **Short-Term Beneficial Reuse (O&M Only)**

	Capital	O&M
2008	[redacted]	
2009		
2010		
2011		
2012		
2013+		
2009 PVRR		

$ thousands

Case **Short-Term Off-Site Landfill (O&M Only)**

	Capital	O&M
2008	[redacted]	
2009		
2010		
2011		
2012		
2013+		
2009 PVRR		

CCP Plan for Ghent Station
June 2009
Appendix 3 – Revenue Requirements Detail

CONFIDENTIAL INFORMATION

$ thousands

Case **14/28** **2 landfills**

	Annual Revenue Requirements										
	Capital						O&M				Total
	Phase1	*Phase2*	*Phase3*	*Phase4*	*Transmission*	**Total Capital**	*Non-Power*	*Power*	*Trans Ash*	**Total O&M**	
2009	[redacted]										
2010											
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2058											
2009 PVRR											

CCP Plan for Ghent Station
June 2009
Appendix 3 – Revenue Requirements Detail

CONFIDENTIAL INFORMATION

$ thousands

Case **37** **1 landfill**

	Annual Revenue Requirements										
	Capital						O&M				Total
	Phase1	*Phase2*	*Phase3*	*Phase4*	*Transmission*	**Total Capital**	*Non-Power*	*Power*	*Trans Ash*	**Total O&M**	
2009	[redacted]										
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2009 PVRR											

CONFIDENTIAL INFORMATION

$ thousands

Case 41 1 pond

	Annual Revenue Requirements										
	Capital						O&M				Total
	Phase1	*Phase2*	*Phase3*	*Phase4*	*Transmission*	**Total Capital**	*Non-Power*	*Power*	*Trans Ash*	**Total O&M**	
2009	[redacted]										
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2009 PVRR											

CCP Plan for Ghent Station
June 2009
Appendix 3 – Revenue Requirements Detail

CONFIDENTIAL INFORMATION

$ thousands

Case **42/28** **1 pond/1 landfill**

	Annual Revenue Requirements										
	Capital						O&M				Total
	Phase1	*Phase2*	*Phase3*	*Phase4*	*Transmission*	**Total Capital**	*Non-Power*	*Power*	*Trans Ash*	**Total O&M**	
2009	[redacted]										
2010											
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2009 PVRR											

CCP Plan for Ghent Station
June 2009
Appendix 3 – Revenue Requirements Detail

CONFIDENTIAL INFORMATION

Case **Off-Site Landfill (O&M Only)**
$ thousands

using 6% cost escalation

	Capital	O&M
2008	[redacted]	
2009		
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2038		
2009 PVRR		

using 2% cost escalation

	Capital	O&M
2008	[redacted]	
2009		
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2009 PVRR		

Appendix 4

Project Status *(As of April 2009)*

Detailed Design

The detailed design phase for Case 37 is currently in progress. Meetings are being conducted with the E.ON U.S. property appraiser and the individual owners of properties within the boundaries of Site F. After obtaining approval from these property owners, geotechnical, archaeological, ecological, and historical structures studies have begun. This will allow for the completion of the detailed engineering design and the start of the development of the permits for this location. The permits are expected to be submitted by the end of 2009.

Construction Schedule

The preliminary design for the landfill is to develop it in three distinct phases. This detail as well as the closure plan for each phase will be further developed in the detailed design phase. The current schedule is shown in Table A4-1.

Table A4-1: Preliminary Construction Schedule

Task	Schedule
Property acquisition	3rd Quarter 2009
Begin first phase landfill development	2nd Quarter 2010
Finish first phase landfill development	4th Quarter 2014
Begin second phase landfill development	2nd Quarter 2018
Finish second phase landfill development	4th Quarter 2019
Begin third phase landfill development	2nd Quarter 2024
Finish third phase landfill development	4th Quarter 2026

The risks associated with the project include the following:

- Inability to reach a settlement on purchase price for one or more of the properties required for the site, resulting in lengthy eminent domain litigation
- Discovery of unknown geotechnical issues
- Litigation and intervention of the 401/404 permits for Sites E/F could delay the construction of this section of the work
- Failure of major components during start-up
- Unseasonable weather, such as exceptionally heavy rainfall, late spring, early on-set of winter, etc.
- Engineering design failure of a component of design
- Contractor delays due to shortage of materials or manpower issues
- Change in regulations