Steven L. Beshear Governor

Leonard K. Peters Secretary Energy and Environment Cabinet



Commonwealth of Kentucky **Public Service Commission**211 Sower Blvd.

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David L. Armstrong Chairman

James W. Gardner Vice Chairman

Daniel E. Logsdon Jr. Commissioner

July 31, 2015

#### PARTIES OF RECORD

Re:

Case No. 2015-00194

Investigation of Kentucky Utilities Company's and Louisville Gas & Electric Company's Respective Need for and Cost of Multiphase Landfills at the Trimble County and Ghent Generating Stations

Attached is a copy of a memorandum which is being filed in the record of the above-referenced case. If you have any comments you would like to make regarding the contents of the memorandum, please do so within five days of receipt of this letter.

If you have any questions, please contact Nancy J. Vinsel, Staff Attorney, at (502) 782-2581.

Sincerely,

Jeff Derouen
Executive Director

NJV/ph

Attachments



#### **INTRA-AGENCY MEMORANDUM**

#### KENTUCKY PUBLIC SERVICE COMMISSION

TO:

Case File - Case No. 2015-00194

FROM:

Nancy J. Vinsel, Staff Attorney

DATE:

July 30, 2015

RE:

Informal Conference of July 29, 2015

Pursuant to a July 21, 2015 Commission Order, an informal conference ("IC") was held in this matter on July 29, 2015 at the Commission's offices in Frankfort, Kentucky. A list of attendees is attached.

Counsel for Sterling Ventures, LLC ("Sterling Ventures"), Mr. Dennis G. Howard, II, presented opening remarks describing the IC as a working group session to discuss substantive matters and clarify certain issues related to Sterling Ventures' proposal to dispose and store coal combustion residuals ("CCR"), particularly gypsum, generated by Louisville Gas & Electric Company's and Kentucky Utilities Company's (collectively the "Companies") Trimble County and Ghent power plants at Sterling Ventures' mine. Mr. Howard passed out a proposed agenda, a copy of which is attached to this memorandum.

Counsel for the Companies, Mr. Kendrick R. Riggs, presented opening remarks, stating that, when Sterling Ventures first approached the Companies in 2012, it was determined that Sterling Ventures' proposal was not viable and that, with the current proposal and data, the Companies continue to believe Sterling Ventures' proposal is not viable.

Mr. John Walters of Sterling Ventures requested information and clarification regarding the methodology, inputs, and assumptions used by the Companies for the purpose of presenting an "apples to apples" comparison of the Companies' present value revenue requirement ("PVRR") analysis and the PVRR analysis to be developed by Sterling Ventures for Commission Staff's review. Mr. Walters distributed two sets of spreadsheets that were filed by the Companies in a previous case, copies of which are attached. One of the Companies' representatives, Mr. Robert Conroy, responded that the spreadsheet titled "Revenue Requirements" is related to annual customer billing impacts for the environmental cost recovery mechanism associated with a specific project. Mr. Conroy emphasized that this spreadsheet does not represent the Companies' PVRR analysis in evaluating a landfill project against other alternatives. Mr. John Voyles, Mr. Scott Straight, and Mr. David Sinclair, for the Companies, discussed methodology, inputs and assumptions for calculating PVRR set forth in the

Companies' responses to Sterling Ventures' data requests and documents filed in previous cases on file at the Commission.

Representatives of Sterling Ventures and the Companies next discussed assumptions underlying Sterling Ventures' proposal related to a barge facility for unloading CCR for transportation to Sterling Ventures' mine, the Companies' barge loading facility located at Trimble County Generating Station ("Trimble County"), and the processes involved in managing and treating CCR. Mr. Walters stated that Sterling Ventures proposes to use a barge unloading facility located at Warsaw, Kentucky, because, in the past, Sterling Ventures determined that a barge facility located near its mine would be impracticable, due to the nature of the terrain. Mr. Voyles distributed a map of the Warsaw site, which is attached to this memo. Mr. Voyles stated that, due to the volume of CCR generated at Trimble County, Sterling Ventures would be required to load trucks every 2 minutes (five days a week), then truck the CCR nine miles to the mine, which, among other things, would increase the traffic volume.

Mr. Walters asked the Companies whether there were different options to move the CCR without dewatering the materials. Mr. Straight and Mr. Voyles described the wet and dry processes the Companies use in disposing and storing CCR, and emphasized that a CCR treatment facility is fundamental to the disposal and storage of CCR at Trimble County. In response to a question from a representative of Sterling Ventures regarding the CCR treatment process, Mr. Straight described the processes for handling the different types of CCR at Trimble County. The Companies provided a handout of a diagram depicting a comparison of the process of how CCR would be transported and stored onsite against the Sterling Ventures' option. A copy of this handout is attached to the memorandum.

In response to a question from Mr. Walters seeking clarification about operating costs, the Companies stated they would provide a supplemental response to PSC 1-8(c)(iv).

Mr. Riggs inquired about scheduling a hearing date. Mr. Walters indicated he would be unavailable the week of September 18, 2015. Ms. Allyson Sturgeon, counsel for the Companies, noted that Mr. Howard was not representing Sterling Ventures at the time of the June 19, 2015 IC, but reminded the attendees that, at that IC, the Companies and Sterling Ventures had agreed to schedule a hearing date one week after the parties filed rebuttal testimony, subject to the Commission's availability. Mr. Howard expressed concern whether that schedule permitted sufficient time to prepare for a hearing. Mr. Riggs noted that, at Sterling Ventures' request, the Companies had agreed to revise the procedural schedule, adding an additional week to the deadline for each of the remaining steps. The last event in the current procedural schedule is the filing of rebuttal testimony on September 10, 2015. One of the Commission's counsel stated that scheduling a hearing was the province of the Commissioners. The parties agreed to file a joint motion if they are able to agree on hearing dates. Otherwise, each party may file a motion suggesting proposed hearing dates.

There being no further discussion, the IC was then adjourned.

cc: Parties of Record

#### COMMONWEALTH OF KENTUCKY

### BEFORE THE PUBLIC SERVICE COMMISSION

III the matter of	In the Matt	er of:
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in the Matter of.											
INVESTIGATION OF KENTUCKY UCOMPANY'S AND LOUISVILLE GATE COMPANY'S RESPECTIVE NEED OF MULTIPHASE LANDFILLS AT COUNTY AND GHENT GENERATION	AS & ELECTRIC ) CASE NO. FOR AND COST ) 2015-00194 THE TRIMBLE )										
July 29, 2015											
Please sign in:											
NAME	REPRESENTING										
Josephan Bayer	PSC										
Nancy J. Vinsel	PSC-Legal										
Matthe Bren	PSC-FA										
Mary Both Purvis	PSC-FA										
Leah Faulhuir	PSC-FA										
hus Whelan	PSC-FX										
Mary Whitaker	PSC-FA										

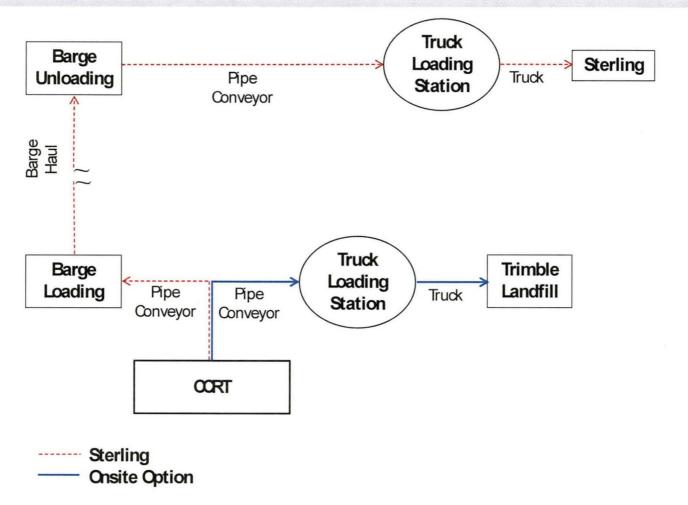
EDMUNDO LAPORTE, ECSI	
STEVE GARDNER, ECST, LLC	
Brice Whitworth, Sterling	
Steve Briefy Steoling	
AlacDone Storling	
Tim Stout, Sterling	
Breve Evaxs, Steeling	
DOSHUA D FARTEY, HOWARD + FARLEY	
Dennis Noward 1 /Sterling	
JOHN WACTERS STERLING	
Lang Cook Off	,
Mike Kutz KIUC	
PICHARD RAFF-PSCLEEAL	
Molly Katen - PSC Legal	
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Lendrick R Riggs	SKO fur	Litzalki
John Vayles	LGELKU	<u> </u>
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Robert M. Conray	here / K	
DavidSinclair	LWE/14	
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Greg Detton	A6 - via	Felephone
Jody Cohen		cliphone
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#### Agenda for Informal Conference Dated 29 July 2015 Case Number 2015-00194

- 1. Framework of Comparative PVRR analysis
  - a. Depreciation/Capital Cost Recovery Period for CCRT and Landfill.
  - b. Discount Rate for comparative PVRR.
  - c. Inflation Rate for Capital and O&M costs
  - d. Effect, if any of, accelerated depreciation/capital cost recovery on deferred tax calculation.
- 2. Sterling Ventures' CCR Proposal.
  - a. Physical/logistical limitations that would prevent using Sterling's proposal of Warsaw barge facility for unloading CCR for transportation to mine.
  - b. Physical/logistical limitations that prevent using Synmat's barge loading facility at Trimble County, the Holcim Barge Loading facility and/or or building barge loading facility at Trimble for transportation of CCR to proposed Warsaw barge facility.
  - c. Physical/logistical limitations that would prevent short term storage of Trimble CCR in a tank, "CCR piles" (as defined in CCR regulations), the gypsum pond and/or barges pending delivery to Warsaw barge facility.
  - d. Infrastructure need to implement the Companies' back up plan to transport Trimble CCR to Ghent for disposal in Ghent Landfill.

# **CCR Transport and Storage**









### Revenue Requirements Project 30 - KU

					January					
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
In-Service					1	2	3	4	5	6
Ghent 4										
Capital Expenditures - Project 30 - Ghent Landfill - Phase I	\$ 4,321,671	\$ 42,157,177	\$ 59,006,955	\$ 72,091,553	\$ 13,556,562	\$ 10,808,035	\$ 637,023	\$ 675,244	\$ 715,759	\$ -
Accumulated Expenditures	\$ 4,321,671	\$ 46,478,848	\$ 105,485,803	\$ 177,577,356	\$ 191,133,918	\$ 201,941,953	\$ 202,578,976	\$ 203,254,220	\$ 203,969,979	\$ 203,969,979
Book Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	2.790%	2.790%	2.790%	2.790%	2.790%	2.790%
Tax Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%	5.285%
Income tax rate	36.70%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
Deferred Tax Balance	-		-	-	732,114	3,915,287	6,717,731	9,167,825	11,289,716	13,100,909
Book Accumulated Depreciation Balance	-	-	-	-	5,110,443	10,744,624	16,396,577	22,067,370	27,758,132	33,448,895
Unrecovered Investment – Book	4,321,671	46,478,848	105,485,803	177,577,356	191,133,918	201,941,953	202,578,976	203,254,220	203,969,979	203,969,979
Book Depreciation		-	0.00	-	5,110,443	5,634,180	5,651,953	5,670,793	5,690,762	5,690,762
Unrecovered Investment – Tax total	4,321,671	46,478,848	105,485,803	177,577,356	191,133,918	201,941,953	202,578,976	203,254,220	203,969,979	203,969,979
Tax Depreciation .	-		7	-	7,167,522	14,578,190	13,526,198	12,555,013	11,652,805	10,779,813
Allowed Rate of Return	11.12%	10,97%	10.97%	10.97%	10.97%	10.97%	10.97%	10.97%	10.97%	10.97%
Book Depreciation expense total		-		-	5,110,443	5,634,180	5,651,953	5,670,793	5,690,762	5,690,762
Tax Depreciation expense total	~	-			7,167,522	14,578,190	13,526,198	12,555,013	11,652,805	10,779,813
Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
Deferred Tax Balance	18.			*	732,114	3,183,173	2,802,444	2,450,094	2,121,891	1,811,193
Revenue Recovery on Capital Expenditure to date										
Eligible Plant, cumulative capital expenditures	4,321,671	46,478,848	105,485,803	177,577,356	191,133,918	201,941,953	202,578,976	203,254,220	203,969,979	203,969,979
Less: Retired Plant	-	*		-		=	•	- *		*
Less: Accumulated Depreciation	-	*			(5,110,443)	(10,744,624)	(16,396,577)	(22,067,370)	(27,758,132)	(33,448,895)
Plus: Accumulated Depreciation on Retired Plant	*	•	-	-	-	*		-	-	=
Less: Deferred Tax Balance	12	-		-	(732,114)	(3,915,287)	(6,717,731)	(9,167,825)	(11,289,716)	(13,100,909)
Plus: Deferred Tax Balance on Retired Plant	-	-	-	-		-		-	-	-
Environmental Compliance Rate Base	4,321,671	46,478,848	105,485,803	177,577,356	185,291,361	187,282,042	179,464,668	172,019,025	164,922,131	157,420,175
Rate of return	11.12%	10.97%	10.97%	10.97%	10.97%	10.97%	10.97%	10.97%	10.97%	10.97%
Return on Environmental Compliance Rate Base	\$ 480,509 \$	5,098,393	\$ 11,571,030 \$	19,478,952	20,325,122	\$ 20,543,486	19,685,976 \$	18,869,243 \$	18,090,765	17,267,855
Operating Expenses	84,800	121,349	128,630	136,348	19,003,308	20,143,507	21,352,117	22,633,244	23,991,239	25,430,713
Annual Depreciation expense	14.		-		5,110,443	5,634,180	5,651,953	5,670,793	5,690,762	5,690,762
Less depreciation on retired plant		-		-		-	-	2	-	-
Annual Property Tax expense		6,483	69,718	158,229	266,366	279,035	286,796	279,274	271,780	264,318
Total OE	\$ 84,800 \$	127,832	\$ 198,348 \$	294,577 \$	24,380,117	26,056,723 \$	27,290,866 \$	28,583,310 \$	29,953,782 \$	31,385,793
•										
Total E(m) - Project	565,309	5,226,225	11,769,378	19,773,528	44,705,239	46,600,208	46,976,843	47,452,553	48,044,547	48,653,648

### Revenue Requirements Project 32 - KU

								January						
	2009		2010		2011	2012		2013	2014	2015	2016	2017		2018
In-Service								1	2	3	4	5		6
TrimbleNPC Capital Expenditures - Project 32 - TC CCP Storage (Landfill) (Proportional Ownership)	\$ 205,835	\$	-	\$	16,342,683	\$ 17,306,5	06 \$	-	\$ -	\$ -	\$ -	\$ -	\$	
Accumulated Expenditures	\$ 205,835	\$	205,835	\$	16,548,518	\$ 33,855,0	24 \$	33,855,024	\$ 33,855,024	\$ 33,855,024	\$ 33,855,024	\$ 33,855,02	4 \$	33,855,024
Book Depreciation rate, per year	0.000%	Ê	0.000%		0.000%	0.00	0%	3.620%	3,620%	3.620%	3,620%	3.620	%	3,620%
Tax Depreciation rate, per year	0.000%		0.000%		0.000%	0.00	0%	3.750%	7.219%	6.677%	6.177%	5.713	%	5.285%
Income tax rate	36.70%		35.59%		35,59%	35.5	9%	35.59%	35.59%	35,59%	35.59%	35.59	%	35.59%
Deferred Tax Balance	-		2			-		33,838	467,481	835,819	1,143,912	1,396,09	В	1,596,714
Book Accumulated Depreciation Balance	-		-		-	_		1,174,487	2,400,039	3,625,591	4,851,143	6,076,69	5	7,302,247
Unrecovered Investment — Book	205,835		205,835		16,548,518	33,855,02	24	33,855,024	33,855,024	33,855,024	33,855,024	33,855,02	4	33,855,024
Book Depreciation	-				-	_		1,174,487	1,225,552	1,225,552	1,225,552	1,225,55	2	1,225,552
Unrecovered Investment – Tax total	205,835		205,835		16,548,518	33,855,02	24	33,855,024	33,855,024	33,855,024	33,855,024	33,855,02	1	33,855,024
Tax Depreciation	*		-			-		1,269,563	2,443,994	2,260,500	2,091,225	1,934,13	3	1,789,238
Allowed Rate of Return	11.12%		10.97%		10.97%	10.97	%	10.97%	10.97%	10.97%	10.97%	10.97	%	10.97%
Book Depreciation expense total	4				4	-		1,174,487	1,225,552	1,225,552	1,225,552	1,225,55	2	1,225,552
Tax Depreciation expense total	-		-		-	-		1,269,563	2,443,994	2,260,500	2,091,225	1,934,138	3	1,789,238
Annual Property Tax Rate	0.1500%		0.1500%		0.1500%	0.1500	%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500	6	0.1500%
Deferred Tax Balance	-					-		33,838	433,644	368,338	308,093	252,186	i	200,616
6														
Revenue Recovery on Capital Expenditure to date														
Eligible Plant, cumulative capital expenditures	205,835		205,835		16,548,518	33,855,02	4	33,855,024	33,855,024	33,855,024	33,855,024	33,855,024		33,855,024
Less: Retired Plant	-		-		-	-		-		-	1.5	-		-
Less: Accumulated Depreciation	4	-	-		-	-		(1,174,487)	(2,400,039)	(3,625,591)	(4,851,143)	(6,076,695	)	(7,302,247)
Plus: Accumulated Depreciation on Retired Plant			-		~	-		-		*	-	-		
Less: Deferred Tax Balance	-		-		-	-		(33,838)	(467,481)	(835,819)	(1,143,912)	(1,396,098	)	(1,596,714)
Plus: Deferred Tax Balance on Retired Plant	-		-	140		1-			-	-	æ	~		-
Environmental Compliance Rate Base	205,835		205,835	1	16,548,518	33,855,024	1	32,646,699	30,987,504	29,393,614	27,859,969	26,382,231		24,956,064
Rate of return	 11.12%		10.97%		10.97%	10.979	%	10.97%	10.97%	10.97%	10,97%	10.97%	_	10.97%
Return on Environmental Compliance Rate Base	\$ 22,886	\$	22,579	\$	1,815,253 \$	3,713,651	\$	3,581,107 \$	3,399,105	3,224,267	\$ 3,056,037	\$ 2,893,940	\$	2,737,500
Operating Expenses	-		-	*	*	-		892,889	946,462	1,003,249	1,063,444	1,127,251		1,194,886
Annual Depreciation expense	5		*			-		1,174,487	1,225,552	1,225,552	1,225,552	1,225,552		1,225,552
Less depreciation on retired plant	1		1		4				1-	-	=			-
Annual Property Tax expense			309		309	24,823		50,783	49,021	47,182	45,344	43,506		41,667
Total OE	\$ - \$	5	309 \$		309 \$	24,823	\$	2,118,158 \$	2,221,035 \$	2,275,984	2,334,340	\$ 2,396,309	\$	2,462,105
Total E(m) - Project	22,886		22,887		1,815,561	3,738,474		5,699,265	5,620,140	5,500,251	5,390,377	5,290,249		5,199,605

## Summary Cash Flow Cash Flow for 2009 thru 2018 2009 KU Amended ECR Plan

					14						TC		тс сср			
						В	R Ash Pond	G	hent Landfill	E	BAP/Gypsum		Storage		Beneficial	
	TC2	AQS O	&M		BR3 SCR		Phase II		Phase I		Storage	*	(Landfill)		Reuse	
Date	(Pr	oject 2	3)	<b>(</b> F	Project 28)	(	(Project 29)	(	Project 30)		(Project 31)		(Project 32)		(Project 33)	Total
2009	\$		_	\$	348,805	\$	120,681	\$	4,321,671	\$	4,728,491	\$	205,835	\$	996,705	\$ 10,722,188
2010	\$		-	\$	34,500,000	\$	8,019,610	\$	42,157,177	\$	7,107,408	\$	-	\$	3,169,522	\$ 94,953,717
2011	\$			\$	74,100,000	\$	10,168,204	\$	59,006,955	\$	-	\$	16,342,683	\$	-	\$ 159,617,842
2012	\$		_	\$	69,900,000	\$	6,549,852	\$	72,091,553	\$	-	\$	17,306,506	\$	-	\$ 165,847,911
2013	\$-		-	\$	5,000,000	\$		\$	13,556,562	\$	-	\$	-	\$	-	\$ 18,556,562
2014	\$			\$	-	\$	-	\$	10,808,035	\$	-	\$	-	\$	-	\$ 10,808,035
2015	\$			\$	-	\$	2	\$	637,023	\$	-	\$	-	\$	-	\$ 637,023
2016	\$			\$	-	\$	_	\$	675,244	\$	-	\$		\$	-	\$ 675,244
2017	\$			\$	-	\$	-	\$	715,759	\$	-	\$	-	\$	-	\$ 715,759
2018	\$	,		\$		\$	-	\$	-	\$	-	\$	-	\$	-	\$ -
	\$			\$	183,848,805	\$	24,858,347	\$	203,969,979	\$	11,835,899	\$	33,855,024	\$	4,166,227	\$ 462,534,281
2008 2009 2010 2011 2012 2013	*	*		\$	348,805			\$	472,583	***	191,000 12,943,697 19,742,801 - -	***	571,764 - - 45,396,341 48,073,628 -	***	2,768,625 8,804,228 - -	
2014 2015 2016 2017 2018		*			LG&E	Prop	portional Share - <sup>.</sup>	TC S		A \$\$ \$\$ \$\$	- - - - - 75%	\$ \$ \$ \$ \$		A \$ \$ \$ \$		
									LG&E KU		52% 48%					

### Attachment\_to\_SV\_1-2c\_(KU\_Attach\_to\_Q1-4\_-\_Ghent\_Cash\_Flow\_Detail)Capital

### **GHENT LANDFILL (PHASE I)**

Capital Expenditures (\$ million)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
Property Acquisition								3. 30			
Disposal Site(s)	-	-	4.66	-	-	-	-	-	-	-	4.6
Overhead Electric Line(s)	-	-	0.03	-	-	-	-	-	-	-	0.0
Buffer Zones	-	-	-	-	2.37	-	-	-	-	-	2.3
Higher End House Acquisition	-	-	1.40	-	-	-	-	-	-	-	1.4
Engineering, Permits and Fees, and Construction Documents	0.46	2.00	-	-	-	-	_	-	-	-	2.4
Stream and Wetland Mitigation	-	-	4.14	-	-	-	-	-	-	-	4.1
Ground Water Monitoring System	-	0.27	-	-	-	-	-	-	-	-	0.2
Transmission Line Relocation Design, Engineering, and Construction	-	-	-	-	0.82	-	-	-	-		0.8
CCWD Relocation	-	-	0.12	-	-		-	-	-		0.1
Pump House Fly Ash and Bottom Ash Segregation	-	0.72	-	-	-	-	-	0 =	-	=	0.7
Dry Ash/Pyrites Handling System - Conveyor	_	-	16.29	27.08	38.93	-	-	-	-	9	82.3
Dry Gypsum Handling System	-	-	7.79	15.96	13.05	-	_	-	-	-	36.8
Gypsum Fines Project	-	0.74	6.30	6.30	-	-	-	-	-	-	13.3
Initial Site Preparation											
Clearing, Grubbing, and Site Preparation	-	-	-	0.62	0.65	0.69	-	-	-	-	1.9
Stripping and Stockpiling Soil	-	-	-	0.50	0.53	0.56	-	-	-	-	1.5
Hauling Topsoil - Phase 1 - 1.0 Mile Round Trip	-	-	-	0.19	0.20	0.21	-	;=:	-	- 1	0.5
Erosion and Sedimentation Controls	-	-	-	0.06	0.06	0.06	-	-	-	-	0.1
Sedimentation Pond	-	_	-	0.33	-	-	-	-	-	-	0.3
Collection Channels (Fabriform)	-	-	-	0.36	0.38	0.40	-	-	-	-	1.1
Diversion Channels (Riprap)	-	-	-	0.11	0.12	0.12	-	-	-	-	0.3
Liner Subgrade Preparation											
Scraping and Hauling - 0.25 Mile Round Trip	-	-	-	0.32	0.33	0.35	-	-	-	-	1.0
Excavating	-	-	-	0.15	0.16	0.17	-	-	-	-	0.4
Hauling Subgrade - Phase 1 - 1.0 Mile Round Trip	-	-	-	0.31	0.33	0.35	-	-	-	-	0.9
Spreading and Compacting Subgrade	-	-	-	0.49	0.52	0.55	-	-		-	1.5
Subgrade QA/QC	_	-	-	0.24	0.25	0.27	-	-	-	-	0.7
Gypsum Dewatering Facility Earthwork											
Excavating	-	-	_	0.73	-	-	-	Ē	-	-	0.7
Hauling Earth - 1.0 Mile Round Trip	-	-	-	1.53	-	-	-	-		17.1	1.5
Spreading and Compacting	-	-	-	1.21	<b>.</b>	-	-	-	-	-	1.2
Earthwork QA/QC		_		0.24	_	_	-	_			0.2

### Attachment\_to\_SV\_1-2c\_(KU\_Attach\_to\_Q1-4\_-\_Ghent\_Cash\_Flow\_Detail)Capital

# GHENT LANDFILL (PHASE I)

Capital Expenditures (\$ million)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
Haul Roads											
CCP Disposal On-Landfill Haul Road (60 Feet Wide)	_	-	-	-	0.61	0.05	0.05	0.05	0.05	0.06	0.87
CCP Disposal Off-Landfill Haul Road (60 Feet Wide)	-	-	-	0.30	1.03	-	-	-	-	9-1	1.33
Liner											
Landfill - Single Liner System	-	-	-	-	7.00	7.43	7.87	(=)	-	-	22.30
Liner System QA/QC	-	-	-	-	1.23	1.30	1.38		-	1=1	3.90
Leachate Collector Line	-	-	-	-	0.19	0.20	0.21	_	-	-	0.60
On-Landfill Leachate Trunk Line	-	-	-	-	0.08	0.08	0.09	-	-	-	0.25
Off-Landfill Leachate Trunk Line	-	-	-	-	0.07	-	-	121	_	-	0.07
Leachate Storage Pond	-	- 1	-	-	0.29	-	<del>-</del>	-	12	-	0.29
Leachate Pump House	-	-	_	=	0.09	-	-	-	-	-	0.09
Leachate Pipe Line	-	- 1	-	-	0.08	-	-	8	-	_	0.08
Underdrains - Trunk	Α	-	-	-	0.17	0.18	0.19	-	-	-	0.54
Underdrains - Collector		-	-	-	0.11	0.12	0.12	-	-	-	0.35
Cap		161									
Intermediate Soil Cover	-	-	2-	9	_	-	0.28	0.30	0.32	0.34	1.24
Cap System	_	-	-	-	-	-	0.22	0.23	0.25	0.26	0.96
Cap System QA/QC	-	-	-	-	-	-	0.03	0.03	0.03	0.03	0.12
Total	0.46	3.72	40.73	57.01	69.65	13.10	10.44	0.62	0.65	0.69	197.07
E.ON-US Overheads	0.02	0.13	1.43	2.00	2.44	0.46	0.37	0.02	0.02	0.02	6.90
Total with Overheads	0.47	3.85	42.16	59.01	72.09	13.56	10.81	0.64	0.68	0.72	203.97

# GHENT LANDFILL (PHASE I)

Operating & Maintenance Costs (\$)	2010	2011	2012	2013	2014	2015	2016	2017
Ground Water Sampling and Testing	14,045	14,888	15,781	16,728	17,731	18,795	19,923	21,118
Leachate Management	-	-	-	83,639	88,657	93,977	99,616	105,592
Surveying (As-builts)	16,292	17,270	18,306	19,404	20,569	21,803	23,111	24,497
Pump House Fly Ash and Bottom Ash Segregation	75,843	80,394	85,217	-	ij	1	-	=
Dry Ash/Pyrites Handling System - Conveyor	=	-	-	2,161,234	2,290,908	2,428,363	2,574,065	2,728,509
Dry Gypsum Handling System	-	-	-	682,495	723,445	766,851	812,863	861,634
Leachate Pump House	15,169	16,079	17,043	18,066	19,150	20,299	21,517	22,808
Hauling Fly Ash and Bottom Ash to Landfill								
Loading	-	- 1	-	1,338,226	1,418,519	1,503,630	1,593,848	1,689,479
Phase 1 - 2.25 Mile Round Trip	=	-	-	2,822,723	2,992,087	3,171,612	3,361,909	3,563,623
Hauling Gypsum to Landfill					· · · · · · · · · · · · · · · · · · ·			
Loading		-	-	1,746,384	1,851,167	1,962,237	2,079,972	2,204,770
Phase 1 - 2.25 Mile Round Trip	-	-		3,997,156	4,236,986	4,491,205	4,760,677	5,046,318
Landfilling Fly Ash and Bottom Ash	÷.	-	-	2,408,806	2,553,334	2,706,534	2,868,927	3,041,062
Landfilling Gypsum	-	-		3,143,492	3,332,101	3,532,027	3,743,949	3,968,586
Ash/Gypsum Placement QA/QC	-	-	-	54,198	57,450	60,897	64,551	68,424
Maintenance			_					
Landfills	-	-	_	301,101	319,167	338,317	358,616	380,133
Haul Roads	-	-	-	53,529	56,741	60,145	63,754	67,579
Dust Control	-		-	156,126	165,494	175,424	185,949	197,106
TOTAL	121,349	128,630	136,348	19,003,308	20,143,507	21,352,117	22,633,244	23,991,239

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