Executive Summary

The Big Sandy Plant is subject to on-going technology and economic evaluations by Kentucky Power. Per consent decree, Unit 2 will be required to cease operation at the end of 2015 unless, environmental controls are installed, which would include a conversion to a dry fly ash system. Unit 1 is expected to cease operation or potentially be converted to a gas fired unit in the 1st quarter of 2015. In all cases currently under consideration for Big Sandy Plant, the existing Horseford Creek fly ash reservoir (FAR) will no longer be active beyond 2015.

Proposed Coal Combustion Residuals (CCR) regulations are expected to require that all active impoundments, be subject to closure requirements upon becoming inactive. A Project Team has been assembled to oversee the necessary site evaluations and investigations, engineering, design, permitting, and construction of the pond closure.

The Project Team will use a phased approach to establish Project hold points, control the work released and manage risks. This Project will have two phases. Phase 1 – engineering, design and permitting, Phase 2 - contracting, construction, and certification. Phase 1 may include certain pre-construction activities within the confines of the existing permitted boundary of the FAR. The closure permit is not needed for certain pre-construction work within the existing permitted boundary (e.g. relocation of ash sluice lines, dewatering, etc).

Background

The Horseford Creek FAR is currently active; initial engineering to account for landfill expansion over a portion of the existing pond began early 2012 in an effort to provide disposal for a planned Flue Gas Desulfurization (FGD) retrofit to Unit 2. This charter supersedes the existing charter for the proposed landfill over the FAR. Concurrent with Kentucky Power's re-evaluation of economics for an FGD retrofit, the engineering, design and permitting for the FAR closure is moving forward based on timelines associated with closure of CCR ponds as outlined in the proposed U.S. Environmental Protection Agency (EPA) CCR regulations. The CCR regulations are expected to be issued in the second half of 2013 and notwithstanding legal challenges, go into effect approximately six months later.

A majority of the initial site investigation and field work for the engineering and design of the landfill will be utilized for the closure project.

In the absence of federal and/or state requirements for closure of the FAR, closure is funded from capital retirement; with imposition of the CCR regulations, cost accounting will transition to an Asset Retirement Obligation (ARO).

Project Work Scope

Provide a closure cap that meets state and federal regulations and strives to eliminate NPDES outfall 001 and pond seepage.

Phase 1 includes work completed to date, plus:

- Engineer, design and submit permit applications for the closure of Horseford Creek FAR.
- Extend the existing fly ash line to the back of the pond to capitalize on sluiced fill, based on a cost benefit analysis.
- Integrate seepage management associated with Outfall 018 into the design and permitting requirements.
- Receive approval from Kentucky DEP Dam Safety for alteration/modification to existing dam
 permit.
- Receive Kentucky Department for Environmental Protection (DEP) KYPDES, special waste permit and U.S. Corps of Engineers (COE) permit(s) and DEP storm water construction permits (if necessary) for the closure and development of necessary borrow areas.
- Any yet to be determined pre-construction activities already within the permitted boundaries

prior to closure design approval from DEP, based on Environmental Services' review and acknowledgment.

Phase 2 will include:

- Contracting and phased construction of approved closure plan of Horseford Creek FAR.
- Development of a post closure care and monitoring plan.

Out of Scope Work

The out of scope items listed below will be addressed as a separate project charter(s) or as a revision to this charter once the long term disposition of the plant is determined:

- Plant wastewater treatment and discharge modifications,
- Modifications to or closure of the bottom ash ponds,
- Other yet to be determined process water related issues, and
- Post closure care activities; yet to be determined.

Project Goals and Objectives

- Safety The Project will be completed in accordance with the AEP safety policies and procedures. The Project will have Target Zero goals concerning recordable incidents, first aid cases and near misses.
- Performance The Project will define scope, risks, restraints and assumptions. The Project will additionally attempt to eliminate the KYPDES permitted outfall 001 and pond seepage while developing a stable cap system meeting approved regulatory requirements.
- Costs Project costs will be controlled and refined to promote the most cost-effective design while meeting regulatory requirements.
- Schedule The Project will plan the work through the development of a project schedule and predefined plans that will adjust, as necessary to meet final CCR regulatory requirements.

Risks, Constraints, External Environmental Factors and Assumptions

The following risks, constraints and assumptions have been identified:

- Risk Agency receptivity toward a cost effective closure design which includes a center valley drainage system.
- Risk Cost effective management of storm water run-on and off, given limited receiving stream capacities.
- Constraint The needfor future waste water treatment modifications, currently the majority of wastewater from the plant is directed to the fly ash pond for final treatment.
- External Environmental Factors/ Risk Policy changes at the Federal level and/or DEP Division of Waste Management requested design changes that may impact project cost, scope and schedule.
- Assumption EPA's pending CCR regulations will be issued in the second half of 2013, consistent with RCRA Subtitle D solid waste regulations, not Subtitle C Hazardous waste regulations. Legal challenges may or may not hold the rule in suspension into 2014, or longer.
- Assumption Kentucky Public Service Commission review of closure plans is required for cost recovery, Kentucky Power to make ultimate determination.
- Assumption Once the CCR regulation is finalized, Asset Retirement Obligations (ARO) can be set up for ash ponds in Kentucky.
- Assumption Sufficient resources and funds will be available to complete the closure per

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	state agency regulatory requirements.					
	Assumption – The DEP and USCOE will approve permit application.	ons within 12-24 months.				
	Route Phase 1 Cl	12/31/12				
Project	Define strategy for Wastewater Management from CCR Ponds	03/31/13				
Milestones	Agency Closure Application Submittals	06/15/13				
	Final Construction Cost Estimate	06/15/13				
	State Agency Approvals (i.e. KY DEP)	06/15/15				
	Prepare/ Route Phase 2 Cl or Project Notification Letter 07/01/15					
	Start Construction - Target 2016 construction season	04/01/16				
	Closure Completion - Tentative subject constructability evaluations	11/30/19				
Success Criteria	The following success criteria are established for this project: • Safety: The project will have Target Zero safety goals concerning recordable, first aid and near misses. However, these metrics will be trackd and documented during Phase 2 only.					
	 Quality / Product Performance: Provide permit application drawings and reports that are acceptable to DEP waste management and dam safety divisions. 					
	 Cost Control: Project costs estimates will be progressively refined. The EAC shall fall within the predefined range of the definitive cost estimate (-5% +15%) and expenditures shall not exceed authorization, without prior approval. 					
	 Schedule: Submit the permit application/modification to the DEP special waste and Dam Safety divisions as shown in the Project Milestone section (Agency submittal), as well as meeting all other project milestones. 					
	 Risk Management: Successful risk management will be achieved if Project Goals and Objectives are not adversely impacted by either: risks identified by the project team but not properly managed or failure by the project team to identify latent risks that require mitigation. 					
	 Communication/Collaboration: The project communication plan will be developed with intent to announce, motivate, educate, inform and support decision making of all team members and stakeholders. The plan will detail that a collaborative effort is expected from everyone. Specific strategies for creating a collaborative project environment include: involvement of all key players to facilitate decision making, support, recognition, establishing a shared vision of the expected outcome, build ownership, and maintain communication to facilitate decision making that accepts disagreement but strives towards unity. 					
	 Environmental: Meet environmental and permit requirements for the field investigation and construction work and receive without Notices of Violation (NOV) from the DEP. 					
Budget and Forecast	Pond Closure Current Cl 000008348 Big Sandy Unit 2 Landfill authorizes \$8.91-million for landfill design and partial pond closure design through August 2013. Total controllable costs expended through July 2012 are \$3.1-million for the current Cl. A new Cl will be initiated for the Phase 1 scope of work authorized by this charter. The overall recommended controllable budget for the new Cl, subject to change following completion of detailed engineering and re-estimate of project cost, is shown below.					

			Controllable Pro				<u> </u>	1====
		2012 2013	2014 2015	2016		018	2019	TOTAL
		S1700 \$600	\$100 \$100	\$18,000		27,000		\$92,500
		pplicable to po						kisting landfill Cl nillion +/- through
Project Phasing Strategy	 The phases are defined as follows: Phase 1: Engineering, design & permitting of the pond closure and water management, as well as extending the existing fly ash line to the back of the pond. Phase 1 may include certain pre-construction activities. Phase 2: Contracting, construction & certification of the closure, as well as development of a post closure care and monitoring plan. 							
Stakeholder ID and Analysis	Key Stakeholder	Category	Management Effort	Expectati	on	Mar	nager	Communication
	T. Thomas	Project Sponsor	Keep Informed	and signifi	status updates cant variances est & schedule	Dav to Luca Cun	as/Robert	Quarterly program updates meetings
	T. Riordan	Key Stakeholder	Keep Informed	decisions,	design basis review boards, ledule variances		iya/Gary	Weekly staff meetings and/or weekly progress reports.
	J. McManus	Key Stakeholder	Keep Informed	decisions,	design basis review boards, edule variance		/ood /or Tom ob	Weekly staff meetings and/or weekly progress reports.
	A. Sink	Owner	Keep Informed	decisions,	design basis review boards, ledule variance		es on/Guy mele	Weekly staff meetings and/or weekly progress reports.
	AEP Matrix Organization	Management	Keep Informed	Project Sta	atus	and, Proj	mele	Per Project Communication Plan

Dustrat	Project Role	Individual	Approval	Date
Project Charter Approvals	Performing Organization	Guy Cerimele Program Manager	Gyllil.	10/23/12.
	Performing Organization	Robert Cundiff Senior Project Manager	Bobut Rundill	10-25-12
	Performing Organization	Dave Lucas Director of Projects	DANOAL6	10/31/12
	Performing Organization	Bob Walton Managing Director – Pro"ects & Controls	Pholl	10/31/2012
	Key Stakeholder	Tim Riordan VP - Engineering Services	1.K 000	11/6/12
	Key Stakeholder	John McManus VP - Environmental Services	Lohn the Held ands	11/9/12
	Owner	Aaron Sink Big Sandy Plant Manager		
	Project Sponsor	Toby Thomas Mng. Dir. – KP Gen, Gas, Ren & Planning		

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Project Charter Approvals	Performing Organization	Guy Cerimele Program <u>M</u> anager	Gyllil.	10/23/12.
	Performing Organization	Robert Cundiff Senior Project Manager	Bobut RundiM	10-25-12
	Performing Organization	Dave Lucas Director of Projects	DANOAL 6	10/31/12
	Performing Organization	Bob Walton Managing Director- Pro'ects & Controls	Pholl	10/31/2012
	Key Stakeholder	Tim Riordan VP • Engineering Services	1.100	11/6/12
	Key Stakeholder	John McManus VP • Environmental Services	John M. Hullames	11/9/12
	Owner	Aaron Sink BigSandy Plant Manager	Sara M. Sink	11/19/12
	Project Sponsor	Toby Thomas Mng.Dir. – KP Gen, Gas, Ren & Planning	Ily La Ilones	11/20/12