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DRAFT
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KINGSTON FOSSIL PLANT - COAL YARD RAINFALL RUNOFF STUDY

As a result of recently imposed budgetary restraints on future F&HP capital expenditures a thorough review of the proposed conceptual design for the subject project has been conducted. It now appears that the design described in the conceptual design package can be modified somewhat in order to cut costs. Therefore, the previously transmitted design package should be revised to reflect the following design premises:

- a. Pumps constructed of materials tolerant of runoffs having a pH of 3.2 to 3.8. (Previous design was based on a pH of 2.4.)
- b. A sump constructed of concrete and pump supports constructed of steel, if these materials are tolerant of runoffs having a pH of 3.2 to 3.8.
- c. Three alternative pump and pipeline configurations:
 1. One pump and one discharge pipeline to ash pond.
 2. Two pumps and one discharge pipeline to ash pond.
 3. Two pumps and two discharge pipelines to ash pond.

The revised design package should present information in a manner that will allow separate cost estimates to be prepared for each of the above three configurations (Alternatives 1, 2 and 3). (No cost estimate is to be prepared based on the original design.)

The revised design package should also contain the following data in a format that can be readily interpreted by plant management and others having project approval authority.

- a. Intervals between rainfall events. Historical rainfall data for the Kingston Plant region, including short duration time intervals between those 24-hour rainfall events that exceeded or approached the magnitude of a 10-year, 24-hour event (approximately 4.8 inches).
- b. Pumping durations. Time required to pump a volume of rainfall runoff equivalent to an amount falling on the coal pile area during a 10-year, 24-hour event for the following pump/pipeline configurations:
 1. One pump and one discharge pipeline to ash pond.
 2. Two pumps and one discharge pipeline to ash pond.
 3. Two pumps and two discharge pipelines to ash pond.
- c. Rainfall volume. The volume of rain that falls on the coal pile drainage area during a 10-year, 24-hour event.

- d. Working volume of coal pile runoff basin. The volume of coal pile runoff basin contained between those elevations at which the first pump starts and the basin overflows.
- e. Pumping volumes. The volume of runoff that would be pumped during a 24-hour period for the following pump/pipeline configurations:
 1. One pump and one discharge pipeline to ash pond.
 2. Two pumps and one discharge pipeline to ash pond.
Two pumps operating.
 3. Two pumps and two discharge pipelines to ash pond.
Two pumps operating.

Remaining work performed during this study should be charged to the same activity numbers as used in the past. The revised design package should be available to Cost Estimating by August 1 in order to support preparation of a PAB package for the September PAB meeting.

If you have any questions please call me at 4446.

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DWS

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