PATH FORWARD

Continue with Existing Blanket Drain at Bottom Layer

1. Supports No Liner Argument
    a. If Blanket is not installed, Greater Potential for Groundwater Impacts (Flux)
    b. If Drainage Blanket is not installed, Will Probably lead to installing GCL
    c. All Hydrogeologic modeling has been done with blanket installed
    d. Dry Flyash placed in the existing cell area is problematic due to projected NH3 concentrations in Swan Pond Embayment causing aquatic toxicity issues
2. If Liner Is Required By TDEC - Will Need Drainage Blanket Layer Anyway
3. Design Precedence Set By Cumberland Fossil Plant Stack
4. Allows for flexibility in initial location of dikes.
5. Conservative Approach - Good Sell To TDEC with many benefits as outlined below:
    a. More Positive Sluice Water Drainage By Slope Of Base - Less Infiltration Into Stack
    b. Water Out Faster - Consolidate Stack Faster - Increases Usable Storage Volume Quicker
    c. Drains Interior Of Stack - Increases Friction Between Particles On Interior Of Stack
        i. Builds Inner Strength
        ii. No Jell-O Effect
        iii. Overall Increased Stability From Slope Failures Including Earthquake InduceD Liquefaction.
    d. Relieves Build Up Of Pore Water Pressures As The Stack Is Built Higher (Stability Improved Particularly On Intermediate Stages)
    e. Lower Underlying Deposits Gain Strength Faster [Soft Foundation Condition - Underlying Clay And Deposited Ash (10' Loose Ash Above Clay)]
    f. Improves Uniform Consolidation Settlement Across The Stack
    g. Provides Outlet For Column Drains
6. Only Adds about 1% to Total Project Costs (About $1.5 to over $ 100 million)

Kingston Fossil Plant - By-Product Disposal
Path Forward - Taking the Geosyntec Peer Review and Move Forward
Engineering Team Recommendations:

I Pursue the Immediate Needs

A. Restore Dredging Capability for existing cells in 2005
B. Develop Minor Modification Request to Permit for French Drain
    1. Allows us to revise things in the permit application that is currently in the state's hands.
    2. Submit an additional drawing in the package to address Gypsum only in Phase 2/3 (see item II. D below)

II. TVA Responses to Review Comments

A. "NOD Type" Comments on Operations Manual and Drawings - Environmental Affairs to advise which of the following categories each comment would fall.
    1. Editorial comments (like Al Majors Name etc.) will be revised.
    2. Other potential NOD comments (Example: Financial Assurance) will be responded to if noted by TDEC.

B. Stability Comments
    1. Review and address all comments including:
        a. Revisit to ensure identified stability parameters are defensible
        b. Evaluate additional cross section in area that was suspected to be critical
        c. Provide basis for 0.11g acceleration in the Document
        d. Revise Veneer Stability for Defensibility
        e. Address Concerns about Liquefaction Analysis
        f. Revisit Upper Blanket Drainage Layers
        g. Resolve Differing Stratification between Models

C. Seepage Comments

    1. The level of the detail presented in the permit application was conceptual. Both consultants agree with the approach for correcting the seepage failure. Differences in the methodology were expressed by GeoSyntec. To insure consensus between TVA Hydrologists, Parsons, and GeoSyntec on model inputs and boundaries:

a. Both consultants are to be tasked with analyzing the French Drain (using differing methods)
b. Reconcile differences (if any) in model results and impacts to design
c. Utilize the results of these analyses as the basis for the detailed to insure the optimum fix is designed.
d. Schedule ?

2. The results of these analyses will be used as the basis for the detail design to be submitted to TDEC as part of the Minor Modification

D. Proposed Alternative Operating Scenario

1. All parties agree that keeping ash and gypsum separate is the preferred approach if economically defendable; no co-managing will occur until 2016.
2. TDEC has concerns about stack heights.
3. Make Minor Plans Revision to Reflect an All FGD Pond Option - Delay Permitting for Vertical Expansion until 2012.
   a. Allows time to demonstrate that design works
   b. Permitting tall by-product stacks in phases has a higher probability of success with TDEC; TDEC will likely become more comfortable as successful experience with tall stacks on existing ponds is demonstrated by TVA.