

UNITED STATES GOVERNMENT

Memorandum

TENNESSEE VALLEY AUTHORITY

TO : Civil Design Branch Files

FROM : W. N. Calvert, Head Civil Engineer (Highway and Railroad), 401 AB-K

DATE : May 5, 1969

SUBJECT: JOHNSONVILLE STEAM PLANT - ASH POND - MEETINGS BETWEEN DESIGN AND POWER AND TVA AND DUPONT

On April 28, 1969, M. C. Beattie, R. J. Bowman, and W. N. Calvert attended a meeting with Power which included E. F. Thomas, Carl Turner, John Holmes, Meigs Brewer, George Hommel, and others.

Refer to the attached drawing for the areas designated A, B, and C. Agreements reached during this meeting are as follows:

1. A minimum of four feet of freeboard should be maintained within ash area B.
2. Repair eroded lakeside ash slope in the break area. The berm at the toe of the ash fill will be maintained, and the equivalent of a 3:1 lakeside ash slope will be obtained by filling inside the pond. Additional fill will be placed inside the pond to insure that water is kept well away from the break area.
3. Repair earth dike to original slope conditions at the break, using gravel or similar material below water level and in soft muddy places.
4. Decisions concerning adjustments to dike in other areas will be deferred pending further study by Design.

In the afternoon the group listed above met with representatives of the DuPont plant concerning the maintaining of minimum water levels. DuPont representatives expressed concern that if minimum pond levels are maintained the retention time would be reduced to an extent that the water quality of the effluent would be unacceptable. They stated that a three-foot reduction of water levels in pond B would require the raising of the level in pond C to obtain minimal water quality. After much discussion the following decisions were made:

1. DuPont will attempt to maintain a water level in pond B three feet lower than now exists. DuPont pointed out that this may not be possible if the raising of the water level in pond C (see item 2) does not result in an effluent of acceptable quality.



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2. TVA will raise the north dike of pond C to allow an increased water level elevation in this pond. It will initially be raised three feet. If this adjustment does not allow the required retention time, TVA will make further adjustments. This dike is to be raised as shown on Design's initial plans on the inside of the dike. The existing ash fill is on a slope considerably steeper than 3:1. Hommel agreed that the new fill would begin at the point where a theoretical 3:1 outside slope on the existing ash fill would intersect the top of the present dike. The inside slope below the water level will be that taken by the material. Above the water a 2:1 slope will be used.

The DuPont skimmer at the spillway discharging into Kentucky Lake was 0 to 4 inches above the waterline and was not effective. We have asked DPP to get DuPont to raise the skimmer as this presumably would help their problem of solids entering the lake.

The immediate problem is stabilizing the weak dike at the place where failure occurred. We should then improve the remainder of the dike.

TVA should evaluate whether we discontinue using this area after the new area under construction is completed or continue filling. If discontinued, the DuPont contract will probably have to be changed. In any event a decision and agreement with DuPont should be made regarding responsibility for maintenance and operation of the ash area after DuPont takes over. There may be some contractual arrangement about maintenance, but no one at the April 28 meeting of TVA people knew of it.


W. N. Calvert

MCB:WNC:NCH
Attachment
CC: F. P. Lacy, 405 UB-K