

TENNESSEE VALLEY AUTHORITY

TVA CANCELLATION OF
THE PHIPPS BEND NUCLEAR PLANT

Docket Nos. STN 50-553
STN 50-554

February 1983

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PDR ADOCK 05000553
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1.0 Introduction

On August 25, 1982 the Tennessee Valley Authority decided to cancel the Phipps Bend Nuclear Plant (PBN). Section 2.0 provides a summary of those activities TVA will conduct to stabilize the site.

Several activities associated with the Phipps Bend Nuclear Plant are conducted under the permits issued by other regulatory agencies. Examples of permits within this category include: NPDES permits issued by the Environmental Protection Agency, Section 404 and Section 10 permits issued by the Corps of Engineers, air quality permits issued by the State, and FAA permits issued by the Federal Aviation Administration. TVA is in the process of discussing with these regulatory agencies the need to retain, modify, and/or renew those aspects of the permits which relate to the cancelled nuclear units. Thus, descriptions of these activities are not addressed herein.

2.0 Site Stabilization

The following information describes the stabilization plans for the 1270 acre site of the cancelled Phipps Bend Nuclear Plant:

2.1 Disturbed Areas and Environmental Redressing

The disturbed areas, approximately 640 acres, at PBN include about 199 acres of denuded and spoils areas (shown as numbers 7, 94-104, and 106, on Figure 1), 141 acres of gravelled open storage areas (77-93), 162 acres of construction plant facilities which include buildings (11-47 and 51-76), roadways and parking areas (48-50), 10 acres of land committed to permanent features of PBN site (1-6), 89 acres of land committed to the substation (9 and 105) and its connecting transmission corridors and substation drainage pond, and 39 acres of temporary holding ponds for plant runoff. The original land use of the site (before construction of PBN) is described in Section 2.2 of TVA's Environmental Report.

The denuded areas designated in Figure 1 have been stripped of topsoil and vegetation. These denuded areas will be graded for proper drainage and grass cover established to control erosion.

The construction holding pond will be retained and used to collect and treat construction runoff for the duration of site stabilization. NPDES permit limitations for this discharge point will remain in effect during this period. A decision as to the future status of the holding pond will be made at the conclusion of site stabilization activities.

Materials presently located in the open storage areas will be removed from the site. Since these tracts are presently gravelled, no further stabilization effort is planned for these areas.

Current plans are to remove all temporary construction buildings from the site within approximately 5 years unless a continued need for onsite materials storage is identified or alternate onsite uses for the structures are established.

Concrete slabs that remain after removal of the buildings will be left in place. Since roadways and parking areas are presently gravelled, no additional stabilization is required on these areas.

Partially completed permanent plant structures will be left in place in essentially their present condition. At this time, TVA's only plans with

regard to these structures are to establish barriers to prevent unauthorized entry and to limit conditions that could constitute a hazard to TVA employees or to the public. These barriers will remain in place until such time as a specific need for the land area or structures has been identified.

The area around the main plant partially completed structures, cooling tower area, essential service water spray pond areas, and intake pump station will be graded to provide drainage from the area. Backfill will be placed in existing depressions, sumps, or excavations as required to provide drainage. Site drainage will continue to be directed into the construction holding pond. After grade is established, grass cover will be established in all areas except graveled surfaced areas, concrete slabs, and buildings.

Because of transmission system needs, the Phipps Bend switchyard will be completed and will serve TVA as a 500-kV substation. Construction of the Phipps Bend transmission line connections will also be completed.

2.2 State of Completion at Cancellation

At discontinuation of construction activities (March 25, 1982), construction progress for unit 1 was 27-percent complete and unit 2 was 11-percent complete. Listed below is a percent of structural concrete completion for the major features/structures.

<u>Feature</u>	<u>Percent Complete</u>		<u>Common</u>
	<u>Unit 1</u>	<u>Unit 2</u>	
1. Auxiliary building	50%	14%	
2. Fuel building	56%	11%	
3. Reactor building	33%	13%	
4. Turbine building	73%	15%	
5. Cooling towers	5%	0%	
6. Control building			32%
7. CCW pump station			79%
8. ESW ponds and intake structure			51%
9. Makeup water treatment plant			51%
10. Safety office and security building			92%
11. Radwaste building			55%

Some miscellaneous equipment has been installed in the plant buildings. This equipment will be removed at TVA's option. Also, buried piping and electrical conduits, either permanent or temporary, will be abandoned.

As of August 25, 1982, the plant switchyard was at least 99-percent complete. The switchyard will be completed and will serve as a 500-kV substation. Construction on all transmission lines associated with the

Phipps Bend site was complete as of August 25, 1982, with the exception of the four John Sevier-Phipps Bend 161-kV transmission lines. These lines were approximately 50-percent complete as of the cancellation date and all will be completed to meet system needs.

2.3 Permanent Site Modifications

Permanent modifications to the site, which preclude other land uses, include the main plant structures, the electrical substation, and transmission corridors. The holding pond, the concrete slabs which remain after removal of the construction buildings, and the various graveled areas around the site will remain as a site modification for an indefinite period of time.

TVA will barricade the main plant structures to prevent unauthorized entry and thus limit conditions that could constitute a hazard to TVA employees or to the public. Current plans are for these main plant buildings to be retained for vector control.

The electrical substation and transmission corridors will be maintained and operated as a portion of TVA's power grid system.

The construction holding pond is a temporary preclusion to other land uses since it will be retained and used to collect and treat site runoff for the duration of site stabilization.

2.4 Future Use

The Phipps Bend site will be retained in TVA's inventory for potential future use as a generating facility site.

TVA will make the site available to public and/or private entities for appropriate uses on an interim basis. Until such time as a specific permanent use is identified the site could be used for agricultural, recreational, or light manufacturing purposes by neighboring communities and organizations. However, any use by non-TVA entities would be in a manner that would not interfere with ongoing TVA security requirements or with future use of the site for a power generating facility (buildings primarily available for lease are shown on Figure 1.)

At the end of this interim use period, interim use areas and structures could be retained and incorporated into construction of some planned permanent site facility or removed and the area environmentally stabilized.

Surfaced roads and parking lots, gravelled areas, etc., will be maintained in an environmentally sound condition. Any areas that become susceptible to erosion will be graded to drain and grassed.

3.0 Environmental Monitoring and Mitigation Programs

All terrestrial monitoring programs have been terminated. Technical reviews of site stabilization plans and land use proposals will be performed.

TVA plans to remove the meteorological tower and associated hardware from the site. However, if TVA does decide to retain the meteorological tower, TVA will maintain it in an inoperative mode.

4.0 Socioeconomics

Deferral/Cancellation Impact Mitigation--A deferral/cancellation impact mitigation program was developed and is being implemented as a single program for the Hartsville, Phipps Bend, and Yellow Creek projects. In August 1981, TVA authorized \$150,000 at each project for implementation of a deferral economic impact mitigation program. The purpose of this program was to help offset the impacts of sudden unexpected unemployment in the areas around the deferred nuclear plants.

More recently, TVA approved an additional two-fold deferral/cancellation economic impact mitigation program. This program is designed to stimulate rapid creation of new, permanent private-sector job opportunities in the impact areas. Under this program, a total of approximately \$3 million for the three project areas is available on a loan basis to local communities for strategic investment in industrial development projects. These loans are to be provided interest free for up to three years with interest at TVA's long-term borrowing rate beyond this period. The program also provides \$250,000 for the three projects for a training/retraining element designed to supply the labor for new industry attracted to the area as a result of the loan program efforts.

TVA is presently receiving and evaluating requests for participation in the loan program and will continue to do so until September 30, 1983. As of that date, any unexpended funds will be retained by TVA and all mitigation assistance activities will be terminated. Also at that time, summary socioeconomic impact monitoring reports will be prepared.