50-346

Docket No. 50-346

APR 28 1972

R. C. DeYoung, Assistant Director for Pressurized Water Reactors, DRL
THRU: A. Schwencer, Chief, Pressurized Water Reactors Branch No. 4, DRL

Original Signed by
Albert Schwencer

SITE VISIT TO TOLEDO EDISON, DAVIS-BESSE NUCLEAR POWER STATION
DOCKET NO. 50-346

The purpose of the subject visit was to view the environment related features of the Davis-Besse Station prior to the "Show Cause" hearing to be held the week of May 2, 1972. Enclosed is a summary of the information gathered and observations made. Other participants in the visit are also listed in the enclosure.

Original Signed by
Irving A. Peltier

I. A. Peltier, Project Leader
Pressurized Water Reactors Branch No. 4
Division of Reactor Licensing

Enclosures:
1. Trip Summary
2. Attendance List

cc w/encls:
PAMorris, DRL
FSchroeder, DRL
TRWilson, DRL
RSBoyd, DRL
DJSkovholt, DRL
HRDenton, DRL
RTedesco, DRL
EGCase, DRS
RRMaccary, DRS
DKnuth, DRS
PWR/RPS Branch Chiefs
RWKlecker, DRL
CO (3)
IAPeltier, DRL
FWKaras, DRL (2)
CKnighton, DREP
RWeat, DREP

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| SURNAME ▶ | IAPeltier:emp | ASchwencer | | | |
| DATE ▶ | 4/28/72 | 4/28/72 | | | |

Form AEC-318 (Rev. 9-53) AECM 0240

U. S. GOVERNMENT PRINTING OFFICE : 1970 O - 405-146

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ENCLOSURE 1

VISIT TO TOLEDO EDISON, DAVIS-BESSE SITE FOR PRE-HEARING TOUR

DOCKET NO. 50-346

APRIL 24, 1972

I. Site Areas Visited

The following areas of the Davis-Besse site were observed during the tour:

A. Marsh area (Wild Life Refuge) and dike system

B. Intake canal and beach front to be dredged for reactor vessel barge, intake pipe and discharge pipe

C. Settling pond and drainage ditch

D. Borrow pits and quarry

E. Onsite transmission corridor and rail spur

F. Pumping station for excavations within the grouting curtain

G. Cooling Tower and underground piping to cooling tower and open channel area return from cooling tower

H. Reactor double containment system and other areas of the reactor plant under construction

II. Observations

The following statements are the result of observation mixed with discussions with TECO staff:

A. Marsh areas and dikes:

The dike system around the marsh area (wild life refuge) is complete with controlled access by automobile and by foot. Water in the marsh is being controlled by a gravity system into the drainage ditch. According to TECO positive pumping stations will be added at a later date per agreement with the Ohio Fish and Wildlife Management Bureau.

Wildlife is abundant in the marsh. There are many species of duck, heron, gulls and other water birds as well as land species. The only fish observed were carp which are spawning. Many of the carp have worked their way up channels and some have been locked in water too shallow to successfully navigate and have become natural prey for birds and other predators. The carp range in size from 10 to 20 inches. Thousands of them were observed from the dike roadway.

The only land mammals observed were wood chucks and there were a number of sightings of these. According to TECO, deer and fox inhabit the area also and a number of muskrat nests were spotted in the Navarre Marsh.

In general the wild life appear to be settled and undisturbed by the construction activities at the site. Control (lowering) of the water level in the marsh appears to have stimulated vegatation growth which provides cover and nesting facilities for the birds. Some of the marsh area (about 5 acres) has been isolated with dikes and designated as an experimental area for wild life studies.

The dike system does isolate the marsh area from the construction area other than for run off and excavation pumping which may under some circumstances find its way from the drainage ditch into the marsh. However, draining water from the marsh to the ditch to lower the level of water in the marsh would not create problems in this regard.

The refuge area is virtually silent of construction noise and therefore there is no apparent disturbance of the wild life in this regard. Our traverse of the marshy areas by auto did not greatly excite wildlife. Birds that rose from the water or edge of the car path alighted nearby or circled and returned to their original positions as we passed the area.

Studies by the Bureau of Fish and Wildlife Management should provide data which can be used to assess the impact of the station on the wildlife over the near long term (several years).

B. Intake canal and beach front:

The beach front provides a high ridge or natural dike on the lake side of the marsh area. The roadway along the beach is being raised to some minimum elevation to maintain isolation of the marsh even under lake flood up conditions.

Although the water in the lake is brownish in color, the beach is sandy and clean. There are no signs of scum, or unnatural deposits on the shore. The shore is littered with shells and the usual flotsam (twigs, etc.). Along part of the roadway and on the beach side large bolders have been placed to protect the roadway from wave errosion. According to TECO the lake is at its ten year cycle high and the water appears to be right up to the natural high water shore line.

The intake canal is completed and dry except for run off and aquifer water. It is divided by a dike and roadway at the grouting curtain and is dry on the side which is inside the curtain and has some water on the other side (northeast side). The banks have been seeded but growth is very poor. There does not appear to be any problem associated with cutting the 650 ft-long channel from the intake canal out into the lake for the reactor vessel barge. According to TECO the barge is expected to draw less than five feet and so the dredging will be shallow. The dredging for the intake pipe and discharge pipe will be much deeper since they will be completely submerged systems extending 3000 ft and 1300 ft respectively out into the lake. According to TECO the dredging for the barge will take place this fall during the NEPA review period and will be filled in before winter after the vessel delivery. The dredging for the intake and discharge pipes will take place next spring after the NEPA review period.

TECO now plans (on advice from their consultant) to pile the dredgings along the channel rather than depositing them temporarily in the borrow pits. It is TECO's opinion that because of the sandy composition there will be no silting or irrepairable damage to the beach front resulting from this procedure

Along the northern boundary of the TECO property is a private hunt club and marsh. Also along the shore north of the site are private summer homes. TECO has erected a wire fence along its property line from the beach in to discourage trespassing but the fence only extends a few feet into the water so that a person could easily wade around it and of course it will not keep out boats.

At the present time impact of the site construction on the hunt club and shore homes except for the erection of the fence and the marsh access road appears negligible. Bird life is also abundant along the shore and northern boundary of the TECO property. All species observed in the Navarre marsh appear to be present in the marsh to the north, but of course there is an increase in the number of gulls.

C. Settling Pond and Drainage Ditch:

According to TECO water pumped from the construction area excavations within the grouting curtain has a relatively high concentration of solids (>1500 ppm as opposed to the lake's 200 ppm) and is rich in hydrogen sulfide. Because of its poor taste and high concentration of solids, this aquifer water is not suitable for human consumption. It is first pumped to a settling pond and from there drains into a narrow drainage ditch which eventually widens to what appeared to be over 100 feet. The construction site terrain is packed very hard even in areas where it has been disturbed and is probably impervious to water. Rain water runoff is piped to the drainage ditch downstream of the settling pond. The drainage ditch is about 7000 ft long and has a flapper gate at the end before entering the Toussaint River.

According to TECO the amount and direction of flow in the mouth of the river (at the discharge of the drainage ditch) depends largely on the lake conditions. Therefore the instantaneous flow from the drainage ditch can wash both ways in the Toussaint towards the lake or island. It is more like a bay than a river although basically it feeds water to the lake from small streams. TECO has purchased the land between the drainage ditch and the Toussaint to discourage summer home development along the river.

According to TECO sampling of water at the outlet of the drainage ditch has established that the settling of solids and removal of hydrogen sulfide is effective. At this location hydrogen sulfide is negligible and solids are down to lake concentrations or below.

The drainage ditch is infested with spawning carp as mentioned above. According to TECO pumping from the aquifer will terminate as soon as construction is completed on the intake structure to the plant in July of this year. This pumping has affected the water table offsite to about 2000 feet west of Rt. 2 and TECO has purchased some water for the residents. However, we were told that the water from nearby wells is not used for human consumption and that much drinking water is trucked into the surrounding areas as a commercial business.

It appears to be feasible to widen the drainage ditch on the upstream end if lower plant discharge flows or event additional cooling water capacity becomes desirable. However, the drainage ditch or canal has become a natural habitate for fish and foul along its 7000 feet length and such widening activity could have some environmental impact.

Eventually the ditch will be used only for surface runoff and control of the marsh area water level. TECO claims to have studied the feasibility of additional cooling ponds with spray modules and has found the pay off to be marginal, technically, because under some conditions the system could add rather than extract heat.

D. Borrow Pits and Quarry:

The borrow pits and quarry on site were viewed from a distance and are typical of a construction site. One pit is being used as a dump site for solid construction waste materials. There is a substantial pile of crushed rock along the Route 2 boundary of the site. This pile will probably be depleted before the end of the construction. Beautifying these areas or converting to onsite scenic ponds will require considerable landscaping.

E. Transmission Lines and RR spur:

The transmission lines and the rail spur were only viewed from the site location. According to TECO the rail spur is completed. The transmission towers to the Bay Shore substation are all ready to add the transmission line conductors. The right-of-way to Limogne substation is not all purchased but little clearing of trees and no displacement of people will be required to compete this line. Bases for the towers are under construction on the Limogne right-of-way. Our travel by car in the vicinity of the site indicated no major stands of timber in the area.

F. Pumping Station for Excavation:

This system was viewed at a distance and there is nothing to discuss.

G. Cooling tower and Underground piping:

The cooling tower is complete up to and slightly beyond the base ring. Progress appears to be good and height should be added rapidly The tower feed pipes from the condensers are in and buried and only the cooling tower ends project above the ground. The open water return canal to the main plant has not been dug. The tower is 40 feet or more above ground elevation but has not become prominent as a land mark. It will not be long before it dominates the landscape, however. TECO has had consultants study the cooling tower discharge to the atmosphere. The prevailing cold weather wind direction is out over the lake and so fog or icing conditions on adjacent highways are not probable. However, under certain high wind conditions down drafts could create icing on Route 2 and TECO does not have a good plan for how it would cope with the situation. It assumes that the state would treat this event like a natural event and sand and salt the roads and/or put up warning signs for potential fog or icing.

H. Reactor Building and Other Structures:

The reactor building concrete is up to the dome level but the dome is not on. The pressure barrier steel inside the concrete shield is up to just above the polar crane level (near dome level). This containment employs the double containment concept of a 3 foot annular region between the pressure barrier and the shield wall. The polar crane rail is being installed at this time.

Other below grade construction is nearly completed and some equipment such as waste gas holdup tanks are in-place. The intake structure is the final below grade structural work to be completed before allowing the aquifer water table to rise to its normal height in the construction area.

The turbine building and office building steel is nearly all erected and it appears that it will be completed during the review period.

III. General Overall Impressions:

The overall impression of the station from the highway approaching the site could be better. Because there are no hills or mountains todwarf the size of the containment structure and construction cranes, they completely dominate the scenery and give the impression that they are right in the backyards of the houses and commerical enterprises along the highway. It can be assumed that one would get this same impression from the lake. This situation will be worse when the cooling tower is completed because it will have more than twice the diameter and height of the containment building. One can imagine that the residents of the summer homes along the shore north of the site might feel that the cooling tower is hovering over them.

At the present time the roadways onsite are very dusty with a gray silt and concrete trucks and other vehicles moving on these roads create clouds of dust on site. It is doubtful, however, that these clouds carry offsite although the truck traffic must track some of the composition out onto Route 2.

In general the construction site from Route 2 is not attractive and the deposits of quarry products along the highway are unsightly. Then again the whole area is not particularly attractive because of the apparent run down condition and depletion of forestry and other natural resources. With proper landscaping and planting of trees and vegetation the site could make a marked improvement in the area. There are few if any roadside signs and no visitors centers to explain to passers by what is going on or to promote goodwill.

ENCLOSURE NO. 2

ATTENDANCE LIST

DAVIS-BESSE NUCLEAR POWER STATION

APRIL 24, 1972

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