NUS CORPORATION

1927 LAKESIDE PARKWAY
SUITE 614
TUCKER, GEORGIA 30084
404-938-7710

C-586-10-9-170

SISB/SAS
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OCT 31 1989
EPA - REGION IV
ATLANTA, GA

October 26, 1989

Date: 12-1-89
Site Disposition: SSI Phase II
EPA Project Manager: Jennie Pfhemy

Mr. A. R. Hanke
Site Investigation and Support Branch
Waste Management Division
Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Subject: Screening Site Inspection, Phase I
Georgia Power Company, Wansley Steam Electric Generating Station
Roopville, Heard County, Georgia
EPA ID No. GAD000612937
TDD No. F4-8909-62

Dear Mr. Hanke:

FIT 4 conducted Phase I of a Screening Site Inspection of Georgia Power's Plant Wansley, in Roopville, Heard County, Georgia. This Phase I inspection included a review of EPA and state of Georgia files, a target survey, and drive-by reconnaissance of the facility.

The Georgia Power, Wansley Steam Electric Generating Station is located east of Highway 27 past the community of Glenlock on Friendship Road along the Carroll and Heard County border. Although most of the plant is located in Heard County, there is a small portion in Carroll County (Ref. 1). The area is sparsely populated and heavily wooded with the Chattahoochee River on the east side of the plant (Ref. 2). Operations began in 1976. This facility is jointly owned by Georgia Power Company, Oglethorpe Power Corporation, the Municipal Electric Authority of Georgia, and the city of Dalton, Georgia (Ref. 1).

Electricity is generated at the plant by burning coal or oil to boil water in large tanks. Steam generated by the boiling water is used to turn turbines, which in turn generate electricity (Ref. 1). In addition to the plant with its one stack, there is an ash pond and storage pond on the plant property (Refs. 1, 2, 3).

Wastes generated by the plant fall into three categories: fly or coal ash, boiler cleaning washings, and other waste from routine maintenance activities (Ref. 1). There is little information available concerning the handling of or nature of wastes prior to 1980. Fly or coal ash, the major waste, is discharged to the ash pond (Ref. 1). Analyses of leachate from fly ash from other Georgia Power Plants indicated the presence of a variety of heavy metal ions, so it is assumed that the ash from this plant would also contain metal ions (Ref. 4).

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Other wastes routinely generated include PCBs, paint, solvents, miscellaneous organic and inorganic chemicals, and contaminated oil (Refs. 5, 6). PCBs were handled according to the Toxic Substance Control Act of 1976 (Ref. 6). There are three satellite accumulation areas and one temporary storage area. Two satellite areas are used for the accumulation of spent solvents and waste oil, while the third is used for spent paint and paint solvents. The temporary storage area is used for a combination of the above wastes which are stored in drums (Ref. 5). Wastes are accumulated for no longer than 90 days, then shipped to either Chemical Waste Management or Safety Kleen for disposal (Refs. 7, 8). During a recent inspection by the state, three minor violations were reported (Ref. 9).

There is a descrepency in the files concerning boiler cleaning washings, which are routine at the other Georgia Power plants (Ref. 3). One trip report from 1982 claims that the last boiler washing was in 1981 and that there is no in-pipe neutralization system for washings. Although a surface impoundment was installed for boiler washings, it had not been used at that time (Ref. 3). However, two later reports claim that boilers are cleaned and that the washings are placed in the fly ash pond (Refs. 1, 6). Therefore, it is assumed that the procedure was changed to include boiler washing. No mention is made of the procedure. It is assumed that the same method would be used and that the effluent would contain the same types of heavy metal ions found in washings from other Georgia Power plants (Refs. 10, 11, attachment I).

On November 18, 1980, Georgia Power Company filed for interim status for Plant Wansley (Ref. 12). In August 1983, the permit application was withdrawn upon request since hazardous waste was no longer treated, disposed, or stored at the facility (Ref. 13). Presently, this plant has generator status (Ref. 14).

During an offsite reconnaissance on September 18, 1989, the plant was active. Smoke was coming from the one stack and cars were leaving the facility. The area was fenced with a guardhouse at the entrance. Since the area was heavily wooded, it was not possible to see the plant itself or its waste ponds. The dirt road, when traveled east, soon led to the Chattahoochee River. The plant could not be seen from any direction. Friendship Baptist Church and two houses were located approximately 2,000 feet away from the plant on the southwest side. There were very few homes on Friendship Road (Ref. 2).

Georgia Power-Plant Wansley is located in the Piedmont Physiographic Province in the west-central portion of Georgia (Ref. 15, p. 179). The area is characterized by rolling hills with moderate relief. Elevations in the vicinity average approximately 800 feet above sea level (Ref. 16). The annual rainfall is 6 inches (Ref. 17, pp. 43, 63). The 1-year 24-hour rainfall is approximately 3.5 inches (Ref. 18, p. 93).

The Piedmont is underlain by massive igneous and metamorphic rocks of relatively low permeability. Groundwater is stored within the regolith (weathered soil and rock) overlying the bedrock and within fractures in the bedrock. Together these units form what is referred to as the crystalline rock aquifer. This aquifer is unconfined (Ref. 15, p. 182). Permeabilities are low in both the regolith, which is generally clay rich, and in the crystalline rocks. The hydraulic conductivity would be 1.0×10^{-5} cm/sec. However, the regolith has a much greater porosity (20-30%) than the bedrock (0.01-2%) and acts as a storage area that slowly releases absorbed water to fracture systems in the underlying bedrock (Ref. 19, p. 252). Groundwater flow follows topography in the regolith. In bedrock, groundwater flow is dependent on the orientation and direction of fracture systems (Ref. 20, p. 9). Depth to water table in the site vicinity is estimated to be between 60 and 100 feet (Ref. 16).

Potable water is obtained from either the Heard County Water System, Carroll County Water System, Roopville Water System or private wells within a 4-mile radius. Those residences not directly on the lines have private wells (Ref. 2). Roopville has its own water system with a municipal well and the county system is used only for fires (Ref. 21). Heard County obtains water from Central Hatchee Creek and the Chattahoochee River 13 miles downstream from Plant Wansley, while the intake for Carroll County's Water System is from the Little Tallapoosa River (Refs. 2, 22, 23) The closest private well is approximately 2,000 feet from the southwestern corner of the facility (Ref. 2). An estimated 389 residences with private wells are located within a 3-mile radius of the plant with an additional 189 between 3 and 4 miles (Refs. 2, 16, 21). The plant itself uses treated water obtained from a pond on its grounds for drinking water. There are 320 employees at Plant Wansley (Ref. 24).

Surface runoff from the facility would be directed either to the Chattahoochee River about 200 feet east of the plant or to an unnamed creek on the east. This creek appears to run directly from the waste pond to the Chattahoochee River 6,000 feet toward the southeast (Ref. 16). The river flows south through Franklin, which is approximately 13 miles away, where there is an intake for the Heard County Water System. This is the only permitted intake along the 15-mile migration pathway (Ref. 22). Although the location of the pond used for drinking water is not known, there would also be potential runoff into it. People also fish along this section of the Chattahoochee River (Ref. 25).

The red-cockaded woodpecker and the bald eagle, both state and federally designated endangered species, are found throughout the state of Georgia (Ref. 26).

Based on the large quantities of fly ash and boiler cleaning washings, which might contain heavy metal ions, that generated by Plant Wansley, and the method used for storing these wastes, it is recommended that Phase II of a Screening Site Inspection be conducted on a high-priority basis. The high population using groundwater and the pond used for drinking water on the facility's grounds is also of concern as well as contamination of the Chattahoochee River. Phase II of this Screening Site Inspection should be conducted as soon as the National Contingency Plan becomes clear on how to handle large volumes of waste such as fly ash and boiler cleaning washings, which have previously been excluded under the Georgia Hazardous Waste Management Act. If you have any questions or concerns regarding this site, please contact me at NUS Corporation.

Very truly yours,

Maureen Gordon

Maureen M. Gordon, Ph.D.
Project Manager

Approved:

Greg Schank

MMG/dwf

Enclosures

cc: Mario Villamarzo

REFERENCES

1. Preliminary Assessment, (EPA Form 2070-12), and attachments for Plant Wansley. Filed by Steve Walker, Georgia Department of Natural Resources, August 21, 1985.

2. NUS Corporation Field Logbook No. F4-1632. Documentation of FieldReconnaissance, Georgia Power-Plant Wansley, Roopville, Heard County, Georgia,September 18, 1989.

3. Trip Report for Plant Wansley on October 28, 1982; filed by Margaret Markey, Georgia Department of Natural Resources, December 3, 1982.

4. Stephen P. Ellis, Southern Company Services, letter to Gary Brendel, GAI Consultants, Inc., June 5, 1986. Subject: Analysis of fly ash for the FlyAsh Project.

5. Department of Natural Resources, Environmental Protection Division, WasteManagement Data Sheet for Plant Wansley, filed by T.E. Byerley, Manager ofEnvironmental Affairs, Georgia Power Company, March 22, 1984.

6. Trip Report for Plant Wansley on April 18, 1989; filed by William Salter,Georgia Department of Natural Resources, May 16, 1989.

7. W.R. Woodall, Jr., Georgia Power Company, letter to Howard Barefoot,Georgia Environmental Protection Division, May 11, 1989. Subject: Storage ofWaste.

8. Georgia Biennial Hazardous Waste Report, (Form A) for Plant Wansley. Filed by W.C. Sewell, Plant Manager, Georgia Power Company-Plant Wansley, February22, 1988.

9. Howard Barefoot, Georgia Department of Natural Resources, letter to W.R. Woodall, Manager of Environmental Affairs, Georgia Power Company, May 16,1989. Subject: Notice of Violations.

10. T.E. Byerley, Manager of Environmental Affairs, Georgia Power Company,letter to Clyde Fehn, Georgia Environmental Protection Division, November 16,1981. Subject: Boiler Cleaning Washing Procedure.

11. T.E. Byerley, Manager of Environmental Affairs, Georgia Power Company,letter to John D. Taylor, Jr. Georgia Environmental Protection Division, February 17, 1983. Subject: Analyses from Boiler Cleaning Washings.

12. Environmental Protection Agency, Hazardous Waste Permit Application (EPA Form 3510-1) for Plant Wansley. Filed by W.E. Ehrensperger, Sr., V.P. Power Supply, November 18, 1980.

13. John D. Taylor, Program Manager, Industrial and Hazardous Waste, GeorgiaDepartment of Natural Resources, letter to D.N. MacLemore, Jr., Vice Presidentand Chief Engineer Power Supply, Georgia Power Company, August 15, 1983. Subject: Request for facility status change.

14. Georgia Environmental Protection Division, Georgia Annual Hazardous Waste Report (Form A) for Plant Wansley. Filed by T.E. Byerley, Manager of Environmental Affairs, Georgia Power Company, March 22, 1984.

15. U.S. Geological Survey, National Water Summary 1983, U.S. Geological Survey Water-Supply Paper 2275.

16. U.S. Geological Survey, 7.5 Minute Series Topographic Quadrangle Maps ofGeorgia: Lowell (Photorevised 1982), Roopville (PR 1982), Frolona (PR 1982), Franklin (1964), Newnan SW (PR 1982), Whitesburg (PR 1982), scale 1:24,000.

17. U.S. Department of Commerce, Climatic Atlas of the United States, (Washington, D.C.: GPO, June 1968), Reprint: 1983, National Oceanic andAtmospheric Administration.

18. David M. Hershfield, Rainfall Frequency Atlas of the United States, U.S. Department of Commerce Technical Paper No. 40, (Washington, D.C.: GPO, June 1968), Reprint: 1983, National Oceanic and Atmospheric Administration.

19. Linda Aller, et al., DRASTIC: A Standardized System for EvaluatingGround Water Pollution Potential Using Hydrogeologic Settings, EPA-600/2-87-035, (Ada, Oklahoma: EPA, April 1987).

20. H.E. LeGrand, Ground Water of the Piedmont and Blue Ridge Provinces inthe Southeastern States. Geological Survey Circular 538, 1967.

21. Jim Baxley, Manager, Carroll County Water System, telephone conversationwith Maureen Gordon, NUS Corporation, October 11, 1989. Subject: Water lines for the southern part of Carroll County in the area of Plant Wansley.

22. Water Availibility and Use, Chattahoochee River Basin, Georgia Environmental Protection Division, 1984.

23. NUS Corporation Field Logbook No. F4-1609, Documentation of Field Reconnaissance, Douglas and Lomason Company, Carrollton, Carroll County, Georgia, September 5, 1989.

24. Randy Pusser, Laboratory, Georgia Power-Plant Wansley, telephone conversation with Maureen Gordon, NUS Corporation, October 6, 1989. Subject: Potable water for Plant Wansley.

25. Kris Martin, Georgia Department of Natural Resources, Department ofFisheries, telephone conversation with Maureen Gordon, NUS Corporation, September 21, 1989. Subject: Fishing and boating along the ChattahoocheeRiver south of Atlanta.

26. U.S. Fish and Wildlife Service, Endangered and Threatened Species of the Southeastern United States, (Atlanta, Georgia, 1987), pp. 1,2.

RECONNAISSANCE CHECKLIST FOR HRS2 CONCERNS

Instructions: Obtain as much "up front" information as possible prior to conducting fieldwork. Complete the form in as much detail as you can, providing attachments as necessary. Cite the source for all information obtained.

Site name: Georgia Power - Plant Wansley
City, County, State: Roopville, Heard, Ga
EPA ID No.: GAD000612937
Person responsible for form: Maureen Gordon
Date: 10/6/89

Air Pathway

Describe any potential air emission sources onsite: There is one stack with smoke coming from it.
Identify any sensitive environments within 4 miles: none

Identify the maximally exposed individual (nearest residence or regularly occupied building - workers do count): The closest home is 2000 feet from the site. Plant Wansley has 320 employees.

Groundwater Pathway

Identify any areas of karst terrain: none

Identify additional population due to consideration of wells completed in overlying aquifers to the AOC: none

Do significant targets exist between 3 and 4 miles from the site? no

Is the AOC a sole source aquifer according to Safe Drinking Water Act? (i.e. is the site located in Dade, Broward, Volusia, Putnam, or Flager County, Florida) no

Surface Water Pathway

Are there intakes located on the extended 15-mile migration pathway? The city of Franklin, Heard Cty System, has an intake 13 mile area

Are there recreational areas, sensitive environments, or human food chain targets (fisheries) along the extended pathway? Fishing occurs in the Chattahoochee River.

Onsite Exposure Pathway

Is there waste or contaminated soil onsite at 2 feet below land surface or higher? Yes, there are fly ash stacks.

Is the site accessible to non-employees (workers do not count)?
The plant was fenced.

Are there residences, schools, or daycare centers onsite or in close proximity? ONly residences are near, over 2000 feet away.

Are there barriers to travel (e.g., a river) within one mile? Yes, the Chattahoochee River is a barrier on the east side.

Surface Water (cont.)

There is a pond used for drinking water for employees onsite.

A creek connects the waste pond area with the Chattahoochee River on the east side of the facility.