

EXHIBIT H  
DESCRIPTION OF PROJECT MANAGEMENT  
AND  
NEED FOR PROJECT POWER

**FINAL**

**ALABAMA POWER COMPANY  
WARRIOR RIVER PROJECT  
FERC NO. 2165**

**APPLICATION FOR NEW LICENSE  
FOR MAJOR WATER POWER PROJECT - EXISTING DAM**

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**1.0 PLANS AND ABILITY OF THE APPLICANT TO OPERATE AND MAINTAIN  
THE PROJECT**

From its earliest history, Alabama Power Company (APC) has been a developer and operator of hydroelectric facilities. For over 40 years APC has demonstrated its ability to successfully maintain and operate the Warrior River Hydroelectric Project, which is comprised of the Smith and Bankhead developments. APC has consistently provided its customers with affordable, efficient, and reliable hydroelectric power. The Warrior River Project has been a cornerstone for economic development in the region, and APC's stewardship of these projects has enhanced the quality of life for all joint users of the Warrior River system. The track record APC has established in its stewardship to develop, maintain, and operate the Warrior River hydroelectric system serves as testimony for its qualification to continue as licensee for these projects. Over the term of a new operating license, APC's unparalleled experience in operating and maintaining the Warrior River Project will ensure that its customers continue to receive the high level of service to which they have become accustomed.

**1.1 Plans to Increase Capacity or Generation**

The Applicant has no plans to increase capacity or generation at this time. The unit at the Bankhead development was completely refurbished in 1998.

## 1.2 Plans to Coordinate the Operation of the Project with other Water Resources Projects

The Smith development is operated in coordination with downstream U.S. Army Corps of Engineers (USACE) facilities to provide downstream navigational flow augmentation.

APC's Bankhead Powerhouse has been operated and will continue to be operated in close coordination with the USACE's Bankhead Lock and Dam navigation and flood control structures. Powerhouse operations are dependent upon interactions with the USACE.

APC provides the USACE a daily report of all dam operations, which include forebay and tailrace elevation, inflow, turbine discharge, spillway discharge, lock discharges, and seepage flow. River basin rainfall data from APC's 16 rain gages are available to the USACE through a cooperative program between APC and the National Weather Service. The USACE can use these rainfall data as a good advance indicator of how reservoir releases will be changing.

The Alabama Office of Water Resources (OWR) is responsible for helping to coordinate activities associated with drought conditions. APC provides input to this process as a member of the Drought Response Team. An APC representative chairs the "Monitoring and Analysis Group" which is responsible for monitoring and analyzing all available data (*e.g.* reservoir storage levels, aquifer levels, climatological data, soil moisture readings, *etc.*) in order to determine the current level of drought conditions within the state and recommend the level of conservation the state should implement. Close involvement in this process helps assure that the OWR can provide direction to all affected stakeholders in a timely manner and with an excellent understanding of the circumstances.

### 1.3 Plans to Coordinate the Operation of the Project with other Electrical Systems

APC, a public utility with its principal office in Birmingham, Alabama, is engaged in the generation, transmission, distribution, and sale of electricity. APC directly serves approximately 1,385,000 customers in a service area of about 44,500 square miles (approximately 86 percent of Alabama's land area).

As a wholly-owned subsidiary of Southern Company, APC's power generation assets, including the Project, are coordinated along with other Southern Company resources to provide reliable and cost-effective generation which meets the demands of a single integrated regional utility system that supplies power to much of the Southeastern United States. While the project is a valuable element for total system integrated operation, all project energy is retained by the customers of APC.

Project operations and electrical generation are coordinated from the Alabama Control Center (ACC) in Birmingham. The ACC monitors and directs the APC generation schedule coordinating with two Southern Company control centers, Fleet Operations and Bulk Power Operations. The Fleet Operations center is responsible for economic dispatch of Southern Company's generating resources. The Bulk Power Operations center is responsible for Southern Company's system reliability. The ACC coordinates with both entities to minimize production cost and provide reliable electric service.

In today's regulatory environment, APC's generating resources are coordinated to respond to the retail and wholesale markets as either a buyer or a seller in a given market timeframe to affect the best cost position for APC retail customers. This timeframe can range from immediately (for the reliability market), to hourly and daily (for the spot market), up to longer periods (for wholesale bilateral contract markets). The retail service territory load market, effectively a contract with retail customers who continue to be served under the "regulatory compact," is regulated by the Alabama Public Service Commission (APSC). The coordination of this integrated retail and wholesale market is in accordance with the Southern Company Intercompany Interchange Contract and APC is an affiliate party to this contract.

## **2.0 THE NEED FOR ELECTRICITY GENERATED BY THE PROJECT**

The Project is an important component of APC's power generation system. Project generation is necessary in both the short and long term to maintain system reliability, operational flexibility, and low cost electricity for APC customers.

Project generation represents a valuable portion of APC's total generation production. Lost generation would have to be replaced by other resources which may be potentially less efficient and cost effective than that currently provided by the Project. Operational flexibility created by unique project-specific ancillary benefits is a necessary component in maintaining the integrity of the APC electrical system, particularly during periods of peak electrical demand. The loss of these unique benefits and the resulting reduction in flexibility may limit APC's ability to efficiently and cost effectively provide power. Additionally, the distinctive nature of hydroelectric power generation allows APC to provide its customers with low-cost electricity which, if lost, would have to be replaced by potentially more expensive generation resources resulting in higher consumer costs.

The effect of not having this resource available would be significant. In both the short term and long term, APC would be forced to replace this resource either by constructing new capacity or purchasing power from other generators.

### **2.1 The Effect of Each Alternative Source of Power**

The most likely source for alternative power would be constructing combustion turbine type units or combined cycle combustion turbine [having a Heat Recovery Steam Generator (HRSG) and steam turbine] units. Alternatively, depending upon the availability of spot market capacity in the region and transmission capability to deliver this power to APC, purchasing electricity might be another alternative solution to meet short-term power needs. However, neither of these resources offers the level of reliability obtained from the Warrior River Project. The APC system is interconnected with a large number of power sources making replacement power generally available. Replacement power, however, is dependent on available transmission capacity.

### 2.1.1 The Applicant's Customers, Including Wholesale Customers

The loss of the generation capacity from this Project would negatively impact customers by requiring APC to construct or to purchase more power from other suppliers at an increasingly higher price. The additional cost associated with either of these options would most likely result in an increase in costs to customers.

### 2.1.2 The Applicant's Operating and Load Characteristics

In its service territory which covers most of the state of Alabama, APC had total retail sales of approximately 54,244 thousand megawatt-hours while serving 1.38 million customers during 2004. Peak hour demand experienced while serving all customers was approximately 10,938 Mw. Also, in order to enhance its economic position for all of its customers, APC participated in both affiliate and non-affiliate wholesale markets. Total sales in these markets were approximately 22,717 thousand megawatt-hours during 2004. The loss of the generation capacity from this project would make it difficult for APC to meet peak demands within the system.

### 2.1.3 The Communities Served or to be Served

Hydroelectric projects by nature are high capital cost projects (per installed kw) having long life and slow payback. For long life generating assets, most of the project benefit is derived at the end of the life cycle. The Warrior Project is just now approaching the mid-point of its life-cycle. Granting a license to another party other than APC would deprive APC's investors and customers of these end of life cycle benefits. Additionally, the Project facilities and APC staff at the Project provide many benefits to the community in addition to low cost power. APC is an important part of the local community.

### **3.0 ALTERNATIVE SOURCES OF POWER**

Should project generation be lost as a result of a license not being granted, APC would have to replace this lost power (capacity and energy) from other resources. Replacement power would have to be provided by alternative resources which either must be constructed or possibly purchased (if capacity and energy is available in the territory and transmission is also available to reliably acquire power for APC's customers).

#### **3.1 Average Annual Cost of the Power Produced by the Project**

The average annual cost of power produced by the units is \$7.6 million (based on 30 year analysis in 2007 dollars). This value is calculated using the Project Operation and Management (O&M) costs, depreciation, taxes and other costs associated with operating the Project.

#### **3.2 Resources Required to Meet Capacity and Energy Requirements**

##### **3.2.1 Energy and Capacity Resources**

The Warrior River Project contributes up to 211.5 MW of APC's total generating capability. As of 2008, the summer capability of APC's owned generating assets totals 13,022 MW. Additionally, under long-term contracts with other generating systems, APC has 1250 MW of firm purchases.

##### **3.2.2 Resource Analysis**

APC continues to operate in the retail market under the jurisdiction of the APSC. A diverse mix of generation capacity has historically been added to provide reliable power and to mitigate fuel cost volatility. Historically, project approval has been granted by the APSC in their certification process. This includes adequate reserves to ensure reliable service. The APSC has exercised latitude in their approval for reserves to recognize economies of scale in project size, general economic environment for construction, and shifting national and global energy conditions.

All generating plants that are capable of running contribute to the reserve margin. Removal of the Warrior Project from the system would therefore affect system reserves. Replacing Project power with existing system reserves would entail losing 11.70% of the 1807 MW extended reserve capacity. APC maintains a 15-20% target reserve margin for firm native load customers.

### 3.2.3 Effects of Load Management Measures

Nationally, APC was one of the first electric utilities to promote “Load Management.” The company continues to promote load management through interruptible contracts with large industrial and commercial customers. Also, APC has actively promoted passive load management to recognize the need for all customers to use energy wisely.

### 3.2.4 Annual Cost of Each Alternative Source of Power to Replace Project Power

If a new license were not granted for the Warrior Project, cost for alternative capacity and energy would likely follow costs for natural gas fired generating resources typical for the region. Asset and operating and maintenance costs for these resources are fairly predictable. However, cost for fuel to power these resources is very volatile and the reliability of fuel supply and transportation is also a serious concern. Resulting costs would be expected to be significantly greater than existing hydro power from the Warrior Project.

### 3.3 Costs and Availability of Alternative Sources of Power

Projection of these costs are more predictable under the regulatory regime. The Power value is based on an estimate of the cost of alternative power from gas fired Combined Cycle capacity at construction cost as provided by the Department of Energy EIA. Two and one half life cycles (20 years each) of combined cycle capacity is deemed equivalent to hydro capacity over a 30 year study period for a total of \$120 MWh (in 2007 dollars, level over 30 years). Regardless of the market environment, APC’s objective will be to continue providing a reliable mix of capacity to mitigate volatility in energy cost in order to provide economical electrical energy.

### 3.4 Effects of Using Alternative Sources of Power

Hydroelectric power has provided APC and its customers with dependable capacity and energy at dependable cost. A great strength for hydro power is its ability to mitigate volatility in fuel cost and to enhance overall fuel efficiency by enabling the de-commitment of fossil units over night since hydro can easily be cycled to meet daily peak loads. APC electric customers would lose these economic advantages if the Warrior Project license was awarded to others or not renewed.

**4.0 EFFECT OF PROJECT GENERATON ON APPLICANTS OWN INDUSTRIAL FACILITIES**

*Not Applicable*

## **5.0 NEED FOR ELECTRICITY BY INDIAN TRIBE**

*Not Applicable*

## **6.0 THE IMPACT ON THE OPERATIONS AND PLANNING OF THE APPLICANT'S TRANSMISSION SYSTEM**

In compliance with FERC rulemaking, APC (as part of Southern Company) has functionally separated its transmission and wholesale merchant functions. Even though most of the generating and transmission infrastructure exists to serve the retail market under APSC jurisdiction, wholesale uses of transmission have moved the FERC to an open access transmission policy with all parties being governed by the same operating rules.

### **6.1 The Effects of Power Flow Redistribution**

If a party or parties other than APC were granted licenses for the Warrior Project, the new owner(s) would not necessarily dispatch the projects for the state's retail market. If the new party has another market interest, use of transmission and availability of transmission support from hydro projects could be appreciably different.

### **6.2 Advantages of the Applicant's Transmission System**

Under current operating policy, the Warrior Project is continuously available for reactive and real power flow control to support transmission reliability needs. A new licensee may be averse to using generation resources to provide this service without significant compensation.

### **6.3 Single Line Diagrams**

These will be filed with FERC under the Critical Energy Infrastructure Information, pursuant to the Commission's Order No. 630, concurrent with the final license application.

## **7.0 PLANS TO MODIFY EXISTING PROJECT FACILITIES**

The economic benefit APC customers derive from the Warrior River Project is relative to all other power options available from alternative generating resources. Opportunities to enhance hydro operating efficiencies are economically weighed in light of “competing alternative power options.” In recent years turbine manufacturers have improved turbine design technology so that refurbishing hydro turbines to increase project efficiencies is an economical alternative. For the same flow, incremental increases in capacity and energy are available. These incremental power gains provide increases in renewable energy resources, which are environmentally benign relative to alternative thermal resources.

For the long term, upgrading hydro turbines continues to be a viable economic alternative. During the short term, however, the timing for undertaking improvements at individual developments will be weighed with other competing capital projects, short term resource needs, and purchase options that could become available.

APC has utilized the Alabama Power Cooperative Approach (APCA) to involve all stakeholders from the early stage of this relicensing activity. Their input, along with routine planned changes the applicant desires, has resulted in providing a minimum flow below Smith Dam to enhance the put-and-take trout fishery. APC is also proposing to design, install, operate, an aeration system within 18 months of license issuance to improve dissolved oxygen levels below the Smith development. APC will monitor the system for 3 years, per the 401 Water Quality Certification issued July 1, 2005.

## 8.0 CONFORMANCE WITH COMPREHENSIVE WATERWAY PLANS

APC, in conjunction with Section 10(a)(2) of the Federal Power Act, has identified the following comprehensive plans as those whose mandates and regulations are applicable to the Project:

- United States Fish and Wildlife Service. Recovery Plan for Mobile River Basin Aquatic Ecosystem
- United States Fish and Wildlife Service. 1990. North American Waterfowl Management Plan, Gulf Coast joint venture plan.
- United States Fish and Wildlife Service. Undated. Recreational Fishery Policy of the USFWS.
- Alabama Department of Conservation and Natural Resources. 1986. Statewide Comprehensive Outdoor Recreation Plan
- Alabama Department of Conservation and Natural Resources. 1990. Wildlife lands needed for Alabama.
- National Oceanic and Atmospheric Administration. Coastal Zone Management Act
- National Marine Fisheries Service. 1995. Gulf sturgeon (*Acipenser oxyrinchus desotoi*) Recovery/Management Plan. Prepared by the Gulf Sturgeon Recovery/Management Task Team
- National Marine Fisheries Service. 1999. Fishery Management Report No. 35 of the Atlantic States Marine Fisheries Commission: Shad and river herring - Amendment 1 to the Interstate Fishery Management Plan for shad and river herring
- National Marine Fisheries Service. 2000. Technical Addendum 1 to Amendment 1 of the Interstate Fishery Management Plan for shad and river herring
- National Park Service. 1982. The nationwide rivers inventory.

Based on a review of these plans, APC has determined that proposed project operations and enhancements will be consistent with these comprehensive plans.

## **9.0 FINANCIAL AND PERSONNEL RESOURCES**

Alabama Power is the second largest subsidiary of Southern Company, the nation's largest generator of electricity. Alabama Power, an investor-owned, tax paying utility, serves 1.38 million homes, businesses and industries in the southern two-thirds of Alabama. More than 79,000 miles of power lines carry electricity to customers throughout 44,500 square miles. Electric operating revenues were \$4.24 billion for the year 2004.

Southern Company intends to meet its future capital needs through internal cash flow and externally through the issuance of debt, preferred securities, and equity. The amount and timing of additional equity capital to be raised in 2004 - as well as in subsequent years - will be contingent of Southern Company's investment opportunities. Equity capital can be provided from any combination of the company's stock plans, private placements, or public offerings. Alabama Power receives equity requirements from Southern Company.

Alabama Power Company plans to obtain the funds required for construction and other purposes from sources similar to those used in the past, which were primarily from operating cash flows. However, the type and timing of any financings - if needed - will depend on market conditions and regulatory approval. In recent years, financings primarily have utilized unsecured debt and preferred securities.

APC has committed significant, highly trained, and experienced staff to the physical operation and maintenance of project facilities as well as to meeting the regulatory and compliance requirements of the project license.

## **10.0 EXPANSION OF PROJECT LANDS AND NOTIFICATION OF AFFECTED PROPERTY OWNERS AND GOVERNMENT AGENCIES**

There are no plans to expand the project to encompass additional lands, therefore no notification is required.

## **11.0 ELECTRICITY CONSUMPTION EFFICIENCY IMPROVEMENT PROGRAM**

### **11.1 Applicant's Record of Encouraging Power Conservation and Plans for Promoting Power Conservation**

APC has encouraged its customers for numerous years to both conserve and use energy efficiently. APC has and continues to utilize several communication mediums to spread these messages including paid print, television and radio advertisements, sponsorships of conservation-oriented events, sporting activities and other programs as well as conservation/recreation-themed shows, workshops and conferences. APC has also utilized brochures, bill stuffers and other literature to spread this message. Now, websites and e-mail campaigns provide much of this information. For example, Energy Tips is a comprehensive online resource designed to provide customers with home energy information using easy to understand terms and illustrations. In addition, the Energy Tips section has an extensive set of Frequently Asked Questions (FAQ) on energy use in the home.

### **11.2 Compliance of Power Conservation Programs with Applicable Regulatory Requirements**

There are no regulatory requirements by the Alabama Public Service Commission for conservation programs. APC however, does have customer conservation programs with financial incentives.

## 12.0 AFFECTED TRIBAL LANDS

There are no tribal reservation lands within the Project's boundaries. However, there are several tribes that attach historic, religious and/or cultural significance to lands within the Project's boundaries. APC has contacted the following tribes and initiated consultations with them to address potentially affected lands:

Debbie Thomas  
Tribal Representative  
Alabama-Coushatta Tribe of Texas  
Route 3, Box 645  
Livingston, TX 77351

Augustine Asbury  
Tribal Representative  
Alabama-Quassarte Tribal Town  
P.O. Box 187  
Wetumpka, OK 74883

Delores Herrod  
Tribal Representative  
Kialegee Tribal Town of the Muscogee  
(Creek) Nation  
P.O. Box 332  
108 N. Main Street  
Wetumka, OK 74883

Joyce Bear  
Tribal Historic Preservation Officer  
Muscogee (Creek) Nation of Oklahoma  
P.O. Box 580  
Highway 75 & Loop 56  
Okmulgee, OK 74447

Kenneth Chambers, Principal Chief  
Seminole Nation of Oklahoma  
P.O. Box 1498  
Seminole, OK 74884

W.S. Steele  
Ah-Tah-Thi-Ki Museum  
HC 61, Box 21 A  
Clewiston, FL 33440

Charles Coleman  
Tribal Warrior  
Thlopthlocco Tribal Town  
Rt. 1 Box 190\_A  
Weleetka, OK 7488

Terry Cole  
Cultural Preservation Committee  
Choctaw Nation of Oklahoma  
P.O. Drawer 1210  
16th and Locust  
Durant, OK 74702

Ken Carleton  
Mississippi Band of Choctaw Indians  
P.O. Box 6257  
Choctaw, MS 39350

Honorable Bill Anoatubby, Governor  
Chickasaw Nation  
P.O. Box 1548  
Ada, OK 74820

Christine Norris  
Jena Band of Choctaw Indians  
P.O. Box 14  
Jena, LA 71342

Tribal Historic Preservation Officer  
Poarch Band of Creek Indians  
128 Olive Street  
Pineville, LA 71360

### **13.0 MEASURES TO ENSURE SAFE MANAGEMENT, OPERATION AND MAINTENANCE OF THE PROJECT**

APC utilizes trained personnel and a number of specific management programs to ensure the continued safe operation of the Project. A combination of trained multi-craft skilled technicians and specialty contractors help to maintain project equipment and facilities at each development. Routine maintenance inspections and services are conducted by APC staff to further ensure the safe management of each project development.

#### **13.1 Existing and Planned Operations During Flood Conditions**

Existing and planned operations during flood conditions are described in detail in Exhibit B of this license application.

#### **13.2 Warning Devices used to Ensure Downstream Public Safety**

APC utilizes several warning devices at each development including audible alarms, signs, and buoys to warn the public of potentially dangerous flow conditions resulting from project operations. Audible alarms have been installed at each development to alert the public of powerhouse discharges. Strategically placed lit and unlit signs explaining the alarms and warning the public of these and other dangerous conditions have also been placed around and on important project structures including dikes, intakes, powerhouses, spillways and tailraces. Additional signs along project tailraces remind boaters that state law requires them to wear personal flotation devices within 800-ft of a dam. Warning buoys placed upstream from project structures alert boaters to dangerous conditions in those waters.

#### **13.3 Proposed Changes Affecting the Emergency Action Plan**

There are no proposed changes that would affect the emergency action plan.

#### 13.4 Existing and Planned Monitoring Devices

APC dispatchers remotely monitor lake, tailwater and generation levels on a continuous basis. Lake and tailwater levels are monitored to provide a signal of any unusual operating conditions.

An intensive inspection program has been implemented consisting of daily monitoring, twice weekly dam inspections, biennial engineering inspections, and periodic inspections of the principal powerhouse mechanical equipment, including the generating components, and the spillway equipment where applicable. These inspections are in addition to FERC conducted annual inspections and the five-year consultant inspection.

The purpose of the inspection and monitoring program is to detect any developing problems with the dam and water conveyance structures, and to identify any needed maintenance and corrective measures prior to small maintenance issues turning into larger public safety concerns.

On a twice weekly basis operations personnel perform an inspection of the dam structures. At Smith, Security Officers working the evening and night shifts routinely inspect the structures, weirs, and riverbanks twice per shift and also monitor the tailrace areas for changes. Readings of the piezometers are generally taken on a monthly basis, and a thorough visual inspection is performed of these structures. Any problems observed are reported to in-house engineering staff that assess the nature of the problem and recommend appropriate maintenance or corrective action.

A complete engineering inspection of all project facilities is performed on a biennial basis by in-house engineering staff. A detailed report of these inspections is prepared and used as a basis for scheduling project maintenance or immediate corrective action. Scheduled turbine-generator outages are also used as an opportunity to thoroughly inspect project electrical / mechanical equipment.

Each development is classified under FERC regulations as a “high” hazard dam. Therefore, as required by 18 CFR Parts 8 and 12, APC retains an independent consultant every five years to perform an intensive field inspection and to confirm that project structures adequately meet stringent federal dam safety criteria for high hazard dams.

The dams are monitored through instrumentation as outlined below:

SMITH – There are 4 piezometers in the east dam abutment that are read monthly, seepage flow is measured by weirs or timed filling of a container at 5 points; two that are read weekly and three that are read monthly, and 11 deformation monuments along the top of the dam are surveyed annually.

BANKHEAD - There are 4 gallery relief drains that are measured annually.

### 13.5 Employee and Public Safety Records

There has not been a lost time accident involving employees at Bankhead since October 4, 1990. There has never been a lost time accident at Smith.

APC places a high priority on public safety at its hydroelectric project developments. APC maintains public safety measures (lighting, signage, markers, audible warnings, fencing, *etc.*) consistent with plans filed with the FERC's Atlanta Regional Office (ARO). In accordance with 18 CFR 12.10, APC files public safety incident reports with the ARO.

In the past 5 ½ years, (January 1, 2000 – June 2005) there has been a total of 11 public safety incidents that APC has been aware of at hydroelectric developments licensed under Project No. 2165. These incidents resulted in 10 fatalities and six injuries. All occurred at the Smith Dam development and none were determined to have been caused by project operations.

## **14.0 CURRENT PROJECT OPERATIONS**

The Project is operated within the constraints outlined in its existing license. A detailed description of current project operations can be found in Exhibit B of this license application.

## 15.0 PROJECT HISTORY

The Project was originally constructed between 1957 and 1963 to provide hydroelectric generation, flood control, and flow regulation. In the subsequent years since construction of the developments was completed, APC has continued to actively manage the Project's other resources including recreational and environmental resources.

As discussed in previous exhibits, APC has continually monitored, maintained, repaired, and improved each development as necessary to comply with FERC requirements and to provide reliable electrical service. Maintenance personnel are on site eight hours a day and each development is monitored and operated remotely 24 hours a day. At Smith, the remaining 16 hours a day is covered by security personnel. All APC project personnel have been trained in regulatory compliance, safety, dam surveillance, and emergency action procedures. APC also performs periodic inspections and facility maintenance (repairs, renewals, and replacements) to ensure reliable and safe operation.

The following descriptions and accompanying table highlight APC actions at each respective development.

Improvements at the Smith development, following its initial construction in 1957 and placement into service in 1961, include rewinding both generators, replacement of the main power transformer, governors and governor air compressors on both units, installation of a programmable logic controller (PLC), replacement of the remote terminal unit (RTU), protective relay enhancements, plus routine maintenance.

Improvements at the Bankhead development, following its initial construction in 1961 and placement into service in 1963, include:

- 1993 Installation of a new wicket gate greasing system and a perforated drain pipe on the ledge behind the powerhouse.
- 1994 Construction of a new office building.
- 1995 Painting of the draft tube stop logs, construction of a new warehouse, installation of a new sump pump, and caulking of the powerhouse.
- 1996 Installation of a new powerhouse roof, a new cooling water strainer, over-excitation protection relays, and painting of the head gates.
- 1997 Installation of an electronic security gate, new generator cooling water piping and valves, a new sump pump for “B” Building, a new turbine bearing strainer, a new generator thrust bearing oil cooler, strainer, and flow meters, and a frequency response relay.
- 1998 Replacement of the turbine and discharge liner, refurbishment of the wicket gates and turbine bearing, and installation of new station batteries.
- 1998 Replacement of Remote Terminal Unit (RTU) used for remote control operations and monitoring.
- 1999 Replacement of unit trash racks
- 2001 Addition of a Programmable Logic Control (PLC) to improve remote control operations.
- 2002 Replacement of trash boom
- 2004 Replacement of the original rotating exciter with a solid state static excitation system; addition of remote security cameras.

## **16.0 SUMMARY OF LOST GENERATION OVER THE LAST FIVE YEARS**

There have been no major unscheduled outages at either development from January 2000-June 2005). On occasion, there have been short-term outages over the last five years having no significant impact on generation or the environment.

## **17.0 COMPLIANCE WITH THE TERMS AND CONDITIONS OF THE EXISTING LICENSE**

Compliance with all license articles is a top priority for APC. From January 1, 2000 – June 2005, there have been no serious non-compliance incidents involving either of the two developments licensed under Project No. 2165.

## **18.0 ACTIONS TAKEN WHICH AFFECT THE PUBLIC**

APC has a long history of management actions that have benefited the public beyond the terms and conditions outlined in the existing operating licenses. Beneficial APC management actions have taken the form of contributed funds, provided services and adjusted project operations.

## **19.0 REDUCED OWNERSHIP AND OPERATING EXPENSES IF THE PROJECT LICENSE WERE TRANSFERRED**

If the operating license were transferred from APC, ownership expenses incurred by APC would be greatly reduced if the transferee assumed all financial responsibility for project lands, facilities, and equipment.

Operating expenses borne by APC would be eliminated if the operating license was transferred to a new entity. However, APC does not believe that overall operating costs would be significantly reduced if the operating license was transferred because APC continuously reviews and amends its operating budget to ensure that the project is operated safely and efficiently.

## **20.0 ANNUAL FEES PAID UNDER PART I OF THE FEDERAL POWER ACT**

For fiscal year 2004, APC paid a charge of \$143,399.92 for the use of 2691.44 (includes inundated and non-inundated) acres of Federal lands on Project No. 2165.