

Issue Action Group: E3 Water Quality in Lakes, Rivers and Tributaries

Meeting Notes & Summary: APC Corporate Headquarters January 30, 2002

Finalized 03-12-02

Conclusion and Next Meeting

The next meeting of the E3 IAG will be held at 9:00 am CST on February 22, 2002 through the Southern Company's conference call center. APC will send meeting materials (an agenda and work products) to IAG members in advance of the next meeting.

IAG documents and materials are posted on the Internet at www.southerncompany.com/alpower/hydro.

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Meeting Notes & Summary: APC Conference Call Center February 22, 2002

Finalized 03-12-02

Introductions and Review

Jim Crew and Kelly Schaeffer began the meeting by summarizing the group's efforts prior to this meeting and outlined an agenda for the day's meeting.

- Discuss Water Quality report requests
- Discuss Timing and Schedule of the water quality report
- Discuss March 12, 2002 meeting activities

Water Quality Report Requests

APC received responses from ADCNR, ARA, and the USFWS prior to the meeting. Isabella Trussell forwarded LMLPA comments to Jim Crew after the meeting. Jim Crew will distribute these requests to all the group members. Henry Mealing led the group through a discussion of the main points in each request.

Alabama Department of Conservation and Natural Resources

Jim McHugh commented on the need to assess in greater detail continuous Dissolved Oxygen (DO) concentrations below the project's tailraces. He recommended that APC include data from 1999 through 2001.

Alabama Rivers Alliance

Beth Wentzel commented on the need to look at various statistics for DO concentrations (minimum occurrences, monthly and daily lows). ARA is very interested in correlating water quality indicators with periods of generation and non-generation as well as times of the day. The ARA also requested additional information for:

- Temperature - Lake and Tailrace (statistics on minimum and maximum and relationship to generation)
- Nutrients - levels of phosphorus, nitrogen and chlorophyll A in the lakes.

United States Fish & Wildlife Service

Carl Couret noted the need to correlate project operations and seasonality with water quality. Specifically, he requested that the report include:

- NPDES/401 Permits for all APC projects
- Information from ADEM's 1984 water quality report
- Water quality profiles for the each project's forebay and tailrace
- Pre-dawn low DO readings
- Effect of generation cycles on temperature and DO
- Copy of ADEM's 303(d) list
- Industrial and municipal discharges
- Detailed map of project boundaries including seasonal flood easements to assess impacts to water quality and public access in the projects' upper reaches

Logan Martin Lake Protection Association

Isabella Trussell had submitted comments to Jim via e-mail but due to an e-mail problem, Jim Crew never received the comments. Isabella reviewed her comments during the meeting, noting that several of her comments were addressed by others' comments. Isabella said that there was a discrepancy in lake water use classifications (per ADEM's WQ standards) on Logan Martin Lake and inquired as to how the overlap of resource issues will be addressed.

Alabama Power Company

Bill Sim addressed several of the comments and outlined ways that APC could either directly provide the requested information or obtain it working together with other stakeholders.

- APC has all the NPDES information for the projects and will provide it for the IAG members
- ADEM's 303(d) list is available to the public in tabular format, and may be available in GIS format
- Industrial and municipal data may be incorporated into a GIS information layer
- Statistical analysis of forebay and tailrace DO is not practical because of a limited number of samples
- Limited statistical analysis (breakdown into small ranges) can be applied to APC's continuous monitoring data (15 min data over 3 years may be difficult to analyze)
- ADEM has some nutrient information that they can share with the group

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- Project boundary maps with normal and flood elevations will be incorporated into a GIS layer

In addition to the comments above, the IAG discussed the following issues in greater detail:

- ADEM's 1984 water quality report information may be useful as a reference tool to demonstrate how water quality has changed over the past twenty years. There was some discussion on how this information would be analyzed and presented in the Water Quality report. APC and Kleinschmidt will review the data and determine the best way to summarize and present it within the 2002 Water Quality Report, if appropriate.
- Additional collection of water quality information should focus on problematic areas of major concern.
- APC's objective is 100% compliance with water quality standards (4 ppm)
- The raising of pen fish is not an approved activity under APC's permitting program. If APC discovers such an activity, they will notify the party responsible to address the violation. APC will provide information on their permitting program and process at the March meeting and, if appropriate, post it on the hydro relicensing web site.

Conclusion and Next Meeting

The next meeting of the E3 IAG will be held on March 12, 2002. APC will send meeting materials (an agenda and work products) to IAG members in advance of the next meeting.

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Meeting Summary: Sheraton Perimeter Park South Hotel March 12, 2002

Final 07-16-02

- DO levels exhibit natural fluctuation patterns (diurnal and seasonal). Nutrient and P&NP Source loading contributes to lower DO levels within the project. Some of the lowest DO levels occur in late summer at night when there is no generation.
- Lay water quality data includes continuous 15-minute average DO measurements in the tailrace. There are currently no turbine aeration capabilities associated with the Lay facilities.
- Logan Martin
 - Low DO water leaks from underneath the dam
 - APC currently pulses the generation units during off-peak periods to increase DO levels
 - Aeration facilities at the dam can add 3ppm DO
- Jordan, Logan Martin and Bankhead have required aeration facilities.
- The State of Alabama requires DO oxygen levels of 4 ppm immediately downstream of project powerhouses. APC expects that a new license will require DO levels of 4 ppm at all the projects and anticipates compliance with these requirements.

DO Summary Statistics

The IAG requested that the final water quality report include the following summary statistics:

- Monthly averages
- Maximum, minimum and average values
- Percentage of time below 4ppm
- Diurnal fluctuations in water quality

Nutrient Information

APC has nitrate, nitrogen, ammonia and phosphorus data for all the projects.

Water Quality Report & Schedule – APC is anticipating that the water quality report and IAG requested analyses can be completed in time for the July meetings and that Bill Sim might be able to provide the IAG with an update at the May IAG meetings.

Water Quality Data Gaps – As a homework assignment, the IAG was asked to think of any possible data gaps and send their suggestions to APC (Jim Crew).

Conclusion

The next meeting of the E3 IAG will be held on either May 20th or 21st, 2002. APC will send meeting materials (agenda, work products, and meeting logistics) to IAG members in advance of the next meeting.

IAG documents and materials are posted on the Internet at www.southerncompany.com/alpower/hydro.

Issue Action Group: E3 Water Quality in Lakes, Rivers & Tributaries

Meeting Summary: Marriott Birmingham July 16, 2002

Final 02-19-03

Meeting Notes

These notes summarize the major items discussed during the meeting and are not intended to be a transcript or analysis of the meeting.

E1 Point and Non-Point Source Pollution

At the June 25, 2002 E1 IAG meeting, members agreed that it would be more efficient to include its efforts with those of the E3 IAG. Since the two IAGs share almost identical membership, the E1 and E3 IAGs agreed to add an agenda item at each E3 IAG meeting to address any outstanding E1 IAG issues.

Jason Moak presented a reformatted CD version of ADEM's point and non-point source pollution information, including known discharges and locations. The CD is currently being finalized and will be mailed to E1 IAG members once it has been completed.

Lay Lake Water Quality Report

The IAG reviewed each section the Lay Lake water quality report, which was distributed prior to the IAG meeting. Points of discussion in the review included stratification, nutrient load, dissolved oxygen content, and tailrace specific information. IAG members expressed satisfaction with the report and tasked APC with preparing the remaining lake water quality reports.

State Dissolved Oxygen Standards

The Alabama Department of Environmental Management (ADEM) requires Dissolved Oxygen (DO) levels of 4 mg/l for tailrace areas of existing hydroelectric plants.

Some IAG members requested that APC consider applying a DO standard of 5 mg/l. Further, stakeholders requested that APC investigate and discuss the feasibility of obtaining a 4 mg/l DO standard in the project tailraces. IAG members also requested that APC investigate how they can improve the overall health of the river when APC is not generating. APC informed the IAG that their goal is to fully comply with current water quality standards.

Conclusion

The next meeting of the E3 IAG will be held at the Alabama 4-H Center in Columbiana in September 2002. APC will send a meeting agenda and any other pertinent materials to IAG members for review prior to the next meeting.

E3 IAG documents and materials are posted on the Internet at www.southerncompany.com/alpower/hydro.