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Alternative Site Audit Trip Report Callaway Plant Unit 2 Combined License Application AmerenUE

April 20-21, 2009

Overview

On April 20-21, 2009, staff from the U.S. Nuclear Regulatory Commission (NRC), Pacific Northwest National Laboratory (PNNL), and Numark Associates, Inc. (Numark) visited the four sites that AmerenUE proposed as alternative sites in its environmental report. These sites were identified as the Lamine site, Chamois site, Fred Weber Quarry site, and Paynesville site. The team visited the first two sites on April 20 and the latter two on April 21. The purpose of the visit was to gather information that the staff will use to evaluate these alternative sites vs. the proposed Callaway site. The NRC staff discussed issues with the applicant as they visited each site as well as before and after the site visits.

Team Participants

NRC: Bruce Olson (EPM)
John Fringer (EPM Project Support)
Nancy Kuntzleman (terrestrial and aquatic ecology)
Dan Mussatti (socioeconomics and environmental justice [construction, operation, & alternative sites]; need for power; and benefit-cost)
Allen Fetter (alternatives and cultural resources)
Andy Kugler (alternatives)

PNNL:
George Last (lab team lead)
Tom Anderson (alternatives, need for power, benefit-cost, land use, transmission lines)
Kristi Branch (socioeconomics and environmental justice)

Numark:
Sally Mayasich (terrestrial ecology)
Jim Scherrer (hydrology)

Schedule of Activities

Monday, April 20, 2009

- Introductions and overview for the alternative sites audit
- Presentation by AmerenUE on the alternative site selection process
- Drive to and tour the Lamine site
- Lunch
- Drive to and tour the Chamois site
- Drive to O'Fallon, Missouri.

Tuesday, April 21, 2009

- Review logistics from the previous day and the plan for that day
- Drive to and tour the Fred Weber Quarry Site
- Drive to and view a potential Mississippi River collector well site

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- Drive to and tour the Paynesville Site
- Lunch
- Debriefing and review of Alternative Information Needs
- Review of other information needs and AmerenUE and NRC's status tables.

Daily Summary

Presentation on Alternative Site Selection Process

A contractor for AmerenUE gave a presentation on the alternative site selection and evaluation process. NRC staff asked for a copy of the presentation that could be docketed.

Among the topics discussed were:

- Purpose and need and region of interest of the proposed Callaway Plant Unit 2;
- The reasons why some sites were eliminated from study and others were retained;
- How exclusionary criteria, especially "Distance from areas with significant flood potential", were used in the site selection process;
- Site ranking and weighting criteria;
- How AmerenUE defined SMALL, MODERATE, and LARGE impacts;
- Socioeconomic and environmental justice impacts; and
- How cultural resources were identified for the alternative sites and which agencies AmerenUE contacted.

Alternative Sites Tour Summary

Staff from AmerenUE and its contractor led staff from NRC, PNNL, and Numark on a general road tour of the alternative sites and associated water withdrawal/discharge areas. A brief discussion of each site and associated major issues follows.

Lamine Site

On April 20, the staff toured the Lamine site. The property is located on a farm with adequate acreage, some of which is described as prime farmland. A number of wooded drainages and some farm ponds are located on the property. Water for the site would come from the Missouri River/Missouri River Alluvial Aquifer via a collector well system. However, the potential intake and discharge locations could not be viewed because road access was not available.

The site is located on a plateau above the Missouri and Lamine Rivers. The staff did not immediately identify any issues or concerns that would preclude this site from further consideration as an alternative site.

Chamois Site

On April 20, the staff toured the Chamois site. Staff drove across the floodplain and observed the Missouri River where the power lines cross.

The Chamois site is a brownfield site with proximity to an existing railroad line and an existing transmission line. However, the site is within the floodplain immediately adjacent to the Missouri River. Some staff met with one of the managers of the existing coal plant on the site and briefly toured the facility's surroundings. Staff observed evidence from the 1993 flood, which is believed to have crested slightly higher than the estimated 100-year-flood level. Staff noted that the site elevation is below the estimated 100-year floodplain.

Fred Weber Quarry Site

On April 21, the staff toured the Fred Weber Quarry Site. A representative of the quarry company joined the group at the site and led the tour. This site is a limestone quarry (currently idle) with limited acreage near the intersection of State Highway 61 and County Road B.

The staff noted that the open excavation of the quarry, if not modified, could possibly collect enough water during a postulated probable maximum precipitation event to impact the site. The available acreage at the quarry site is inadequate for the proposed plant, so additional acreage adjacent to the quarry would need to be procured, and a small number of nearby existing commercial enterprises would need to be demolished. Also, the 0.5-mile-radius exclusionary boundary would extend over the four-lane State Highway 61 and the two-lane County Road B.

Paynesville Site

On April 21, the staff toured the Paynesville site where they met with the site owner. The owner led the group on a tour of his property, which is mostly ranch land with many wooded drainages and several small farm ponds. The NRC staff asked about the source of the water that fills the ponds and possible artesian sources. The acreage available at this site appeared to be adequate, and the site is located high on a plateau. Staff did not identify specific issues that would preclude the Paynesville Site's further consideration as an alternative site, other than its impacts to prime farmland.

Potential Mississippi River Collector Well Site

On April 21, the staff toured a potential collector well site on the west shore of the Mississippi River, across from Hamburg, Illinois. The site is located on the edge of the Mississippi River, across a wide floodplain and wildlife habitat area called Prairie Slough. Evidence of recent flooding was widespread, and many houses in the vicinity have been constructed on stilts or berms.

This general area could be the site of collector wells and outfalls for either the Fred Weber or Paynesville sites. No specific issues were identified for this site, other than its distance (about 12 and 7.5 miles, respectively) from those sites.

Debriefing and Closeout of Alternative Sites Tour

In a discussion of Alternatives and Information Needs, AmerenUE stated that its contractor would modify the alternative site selection process slides and provide them to NRC at a later date.

In response to a question about the schedule for the next revision of the ER, AmerenUE said that a revision or supplement to the ER was due by the end of June, but a draft may be placed in a reading room before then. AmerenUE also stated that it is making progress in making the priority references (previously requested) available.

The discussion then turned back to the alternative site selection process. The following issues were discussed:

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- AmerenUE's site ranking criteria;
- AmerenUE's rationale for selecting its candidate sites;
- AmerenUE's rationale for deviating from its threshold and exclusion criteria;
- The need for power and how extra power would be sold in the region of interest (ROI);
- The potential exclusion zone for the Fred Weber Quarry that would cover portions of highway 61N;
- The need for additional cultural resources information in the ER revision; and
- The safety and environmental impacts of the Chamois site's location in a floodplain.

AmerenUE then confirmed that it would provide to the NRC:

- a copy of the alternatives presentation and all priority references by the end of April.
- a draft supplement of ER revisions (except for enhanced cultural resources discussion) by mid-May

The full team was then dismissed.

Review of Information Needs and Status

A smaller team reconvened to review the status of information needs resulting from the site audit. The following issues were discussed:

AmerenUE and the staff discussed the draft information needs status table, and a copy was provided. The following issues arising from the site audit were then discussed:

- The environmental impacts of the possible new road to the plant;
- Differences between the NRC information needs status table and the one prepared by AmerenUE;
- Use of a reading room for NRC and contractor staff to review AmerenUE documents vs. the requirement for docketing some EIS references.

In a discussion related to some ER figures, it was agreed that a conference call with PNNL's geographic information system expert would be set up with AmerenUE to resolve these issues.

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Attendees

Staff listed in the following tables attended the morning meetings.

Monday, April 20, 2009

NRC Staff and Contractors

Name	Affiliation
Bruce Olson	NRC
John Fringer	NRC
Andy Kugler	NRC
Nancy Kuntzleman	NRC
Allen Fetter	NRC
Daniel Mussatti	NRC
George Last	PNNL
Tom Anderson	PNNL
Kristi Branch	PNNL
Sally Mayasich	Numark
Jim Scherrer	Numark

AmerenUE Staff and Contractors

Name	Affiliation
David Shafer	AmerenUE
Tom Grothe	AmerenUE
David Waller	AmerenUE
Adam Lunn	AmerenUE
Roger Wink	AmerenUE
Johanna Lindsley	AmerenUE
Melissa Dubinsky	Rizzo
Clifford Merchant	Rizzo
Mel Koleber	Rizzo

Tuesday, April 21, 2009

NRC Staff and Contractors

Name	Affiliation
John Fringer	NRC
Andy Kugler	NRC
Bruce Olson	NRC
Nancy Kuntzleman	NRC
Allen Fetter	NRC
Daniel Mussatti	NRC
George Last	PNNL
Tom Anderson	PNNL
Kristi Branch	PNNL
Sally Mayasich	Numark
Jim Scherrer	Numark

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David Shafer	AmerenUE
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Roger Wink	AmerenUE
Melissa Dubinsky	Rizzo
Clifford Merchant	Rizzo
Mel Koleber	Rizzo