

Audit Program

Operations Department – Coal Fired Power Plant
FY 2003

I. AUDIT OBJECTIVES

The objectives of the audit were to review the internal controls of the Operations Department to determine whether:

1. Unit performance is competitive compared to peer plants,
2. Operational problems are identified and reported for correction,
3. Operational statistic are gathered and calculated in compliance with NERC guidelines,
4. Reports to the Department of Energy and other external entities are complete, accurate and timely,
5. Staffing levels are reasonable and whether alternative shift staffing models would decrease total labor costs,
6. Procedures properly record Operations Department expenses to the appropriate FERC accounts for financial reporting,
7. Departmental procedures exist and are up to date, and

<p>I. PRELIMINARY SURVEY</p> <p>A. Review future audit considerations</p> <p>B. Establish preliminary objectives</p> <p>C. Discuss preliminary objectives with applicable management. Solicit areas of concern from management.</p> <p>D. Research applicable standards and/or audit programs for indicated area.</p> <p>E. Review for “canned audit programs” on web resources.</p> <p>F. Consider risks of fraud.</p>	
<p>II. Planning</p> <p>A. Review the job descriptions for the operations area.</p> <p>1. Do they appear up-to-date and adequate? Job descriptions are very detailed and appear to have been updated in FY 2002 (prior year).</p> <p>B. Sit through an operations shift. Identify key functions and particularly data accumulated. Are the functions documented in the job descriptions consistent with the work observed?</p>	

C. Risk assess and identify key control and area for further investigation.

D. Budgetary review. Review prior three years operations department budget. Analyze cost trends.

III. Fieldwork

A. Log Review –

1. Review operational logs for a period of time to determine whether identified problems are being reported on incident reports.
2. Review incident reports to determine if problems ultimately resolved. Assess the volume of incident reports for reasonableness. Are problems being reported. Review GENCAP problems, are incident reports being written?

B. Staffing Review

1. Review department organizational structure. Document and analyze the positions on the operating shift and their functions. Look for overstaffing.

Note: Operational staffing levels are very hard to evaluate since staffing must be sufficient to handle mechanical problems as they occur and not trip the unit. There may appear to be slack time between these problems. These times are typically filled with small maintenance items and operator rounds on the various mechanical systems. Therefore, an auditor might think there is “slack” time built into the staffing structure. However, operators are like firemen waiting for a fire. You staff to a reasonable level to address the typical “fire.” However, the “firemen” are not always out fighting fires. If so, they are not being proactive to manage preventative maintenance and catching the problems before they are large.

2. Look at staffing levels under different threat levels (NERC Security Levels) and absentee situations. If Supervisor is out, who covers? When does a person get excess straight? When are short-shifts run vs. relief? Etc...
3. Review span-of-control for reasonableness.
4. Review vacancies. If vacancies exist for a long period, are the positions truly necessary?

5. Review turn-over rate and tenure in department. Compare to the overall organization. Investigate any negative significant trends.

C. Review utilization of excess straight time, overtime, etc

1. Review the control process over approving time sheets to ensure adequacy. All payroll timesheets at agency receive supervisory review. Shift supervisors approve for crew. Pass further testing.

2. Obtain payroll data for the operations department by time type (Reg, OT, Sick, etc).

a) Review at department level time for unusual relationships.

b) Trend Sick, Vacation, OT, X. Evaluate results.

Analyze overtime and excess straight time to determine if mechanisms could be used to minimize these costs. Estimate the number of FTEs required to cover leave time. Review shift coverage policies to determine how much of that time is covered by short shifts.

c) Calculate total overtime/excess straight as a percentage of regular time. Assess reasonableness. Result is how hard we are working the operators.

d) Exclude outage overtime and recalculate. How many FTEs are in non-outage OT? Exclude shift overtime.

e) Develop a model of benefit hours per employee. Calculate the amount of coverage time required to cover other employee's time off?

f) Review utilization of operations personnel during outages.

D. Statistical Comparisons to Industry. Obtain data for DOE and other sources (Platt's Power Magazine 2001 plant ranking, Utilities Data Institute) to compare performance to a logical peer group on key performance statistics like: Heat Rate, Fuel Cost, O&M cost, etc.. Consider safety record, employees/MWH for comparison as well.

E. Procedure review. Review the operating procedure of the Operations Department. Determine whether they are up to date. Risk assess, sample, test.

<p>F. Reports – Review the key report, availability and capacity statistics generated by the Operations Specialist (NERC filings). Determine the standards by which the calculations occur (NERC, etc.). Compare calculation to standards. Sample data used to generate calculation and tie to source data.</p> <ol style="list-style-type: none"> 1. Review de-rates, scheduled and force outages. Compare to peer data where available. Are recurring problems causing de-rates and outages. 2. Review a selection of incident reports and verify that the problems were ultimately resolved. <p>G. Review the shift schedule. Research shift schedules. Two key factors are 1) cost effectiveness of schedule 2) employee satisfaction with schedule. Determine if alternative schedules exists which would be more effective than the current schedule.</p> <p>H. Operational Performance</p> <ol style="list-style-type: none"> 1. Determine the parameters for maximum load utilization. 2. Review Daily reports (GenCaps) for load limits. Quantify whether load limits were complied with? 3. Review frequency and magnitude of load changes. Are they in compliance with management’s expectations? <p>I. Review the Operations Department workpackages for proper FERC coding.</p> <p>J. Review the external reports to NERC and DOE for consistency with reporting instructions, sufficiency of support, and conformance with deadlines.</p> <p>K. Departmental procedures to ensure they exist and are up to date. The auditor’s technical expertise was not sufficient to opine on the quality of the content of the procedures, nor was an audit trail maintained in the performance of the procedures. Therefore, little assurance could be provided other than that the procedures exist and were reviewed recently.</p> <p>L.</p>	
<p>IV. Reporting</p> <p>A. Checklist</p>	

B. Discuss exceptions with the auditee and during the audit.

C. Develop potential audit findings(i.e. point sheets).

D. Discuss audit findings with Auditee.

E. Discuss draft report with auditee and obtain management responses.

F. Discuss draft report with General Manager.

G. Issue Final Report.