

When OG&E needed best practices for lubrication, Noria had the best solution: LPD.



Muskogee Power Plant



Daniel Rader
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(OG&E)

Overview

Challenge

- Lack of lubrication standards
- Failure to implement proper lubrication procedures
- Lack of specialized lubrication maintenance training

Solution

- Noria's engineering design for machine optimum reference state (ORS)
- Lubricant storage room design and consolidation
- Noria's on-site private training with upper management and front-line (technicians) operators
- Customized, hands-on new equipment implementation training
- Coaching from Noria experts on goal-setting, KPIs, tracking, monitoring and other analytics
- Company culture change at plant

Results

- Achieved ROI sooner than expected
- Major cultural shift to better-performing people and machines
- Less downtime
- More efficient production
- Properly trained maintenance staff
- Decrease in operational and repair costs
- Significant increase in plant efficiency and profitability

Oklahoma Gas and Electric (OG&E) operates seven power plants throughout Oklahoma. Two years ago, OG&E retained Noria to implement its Lubrication Program Development (LPD) at the Muskogee power plant. Noria helped OG&E transform the plant's lubrication procedures on all critical assets. Now machinery breaks down less often, and maintenance issues are better anticipated.

But the real story is how OG&E went from standard operating procedure for lubrication to world-class with Noria's help.

Not a strong focus

For OG&E's plants like Muskogee, lubrication was always important, but know-how and expertise were lacking.

For example, to catch problems before they occurred, one of the things that OG&E relied on was vibration technology.

"Everyone was focused on vibration and what you get from it," said Daniel Rader, OG&E's reliability engineering supervisor. "It's really hard to say that the equipment vibrates funny when it's off."

Oil sampling for predictive maintenance was another area in which OG&E was deficient. A one-line instructional document only suggested to draw a sample.

"It was the opposite of a best practice," said Rader. ▼

"Previously, Muskogee used 23 different types of oil. That number was reduced to 16 after transitioning to best practices."

– Daniel Rader, Reliability Engineering Supervisor

Transitioning to best practices

While lubrication was not a strong focus at the Muskogee plant, it became a core strength with the integration of Noria's Lubrication Program Development.

It started with a plant-wide, top-to-bottom analysis of all plant systems that required lubrication. This was followed up with recommendations down to the component level.

"Noria made us a really good list all over the plant," said Rader. "They showed us area after area where we could do lubrication better."

Noria also supplied OG&E with detailed, step-by-step instructions for sampling and analysis. Additionally, Noria consulted OG&E on building a world-class lubrication storage room and oil analysis laboratory.

With best practices for lubrication in place, fewer unplanned outages are occurring at Muskogee. In one example, technicians were able to analyze and stop a piece of equipment from breaking down.

"It would have cost us \$350,000 if we hadn't caught it," said Rader.

This one instance more than covered the program costs. Noria has also helped OG&E be smarter about purchasing oil for lubrication. Previously, Muskogee used 23 different types of oil. That number was reduced to 16 after transitioning to best practices. As a result, OG&E has negotiating power with oil providers because fewer oil types are needed at the plant, and they know exact specifications to request.

"Noria is top of the line. They are the lubrication specialists."

– Daniel Rader

Training with lasting impact

It's not enough for management to be onboard with implementing best practices for lubrication. In a plant environment, it's the guy on the line who checks the oil, the technician in the onsite lab who analyzes the sample



and others like them. What these line workers lack in education, they make up with skill and know-how.

At Muskogee, Noria took this into account when training the entire maintenance staff of more than 200. Training materials were customized to their job functions.

"Noria took only the real applicable stuff to what those guys needed to know," said Rader. "They didn't delve into the super science, which is good."

By all accounts, the operator training has had a lasting impact that has created a best-practices culture at Muskogee. And the word is spreading.

Rader put it this way. "I know the training was effective. I've had multiple conversations, not just at Muskogee but other plants in our fleet. You can tell that the environment and changes that Noria helped us with are catching on."

For more on Noria's Lubrication Program Development, contact Noria at 800-597-5460 or visit www.noria.com.



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