



FOR THE SINCLAIR WYOMING REFINERY, MACHINERY LUBRICATION WAS A TROUBLE SPOT UNTIL NORIA HELPED PUT IT IN THE SPOTLIGHT.

The renovated lube room at the Sinclair Wyoming Refinery

Overview

The Sinclair Wyoming Refinery is one of the largest high-conversion refineries in the Rocky Mountain region. In terms of production, the refinery processes 80,000 barrels of crude per day.

As impressive as its barrel production is, the refinery had major challenges with maintaining its machinery. Bearing and seal failures were commonplace and storage/handling of lube oils was haphazard. Noria was brought in to augment in-house solutions. What happened next turned the Sinclair refinery into an industry leader for machinery lubrication.

Challenges

- Bearing and seal failures
- Improper storage and handling
- A reactive approach to maintenance

Solution

Noria's Lubrication Program Development (LPD)

Results

- Best practices for machinery lubrication
- \$2 million a year in maintenance cost savings
- Lowered lube oil consumption by 80,000 gallons a year
- Increased mean time between stoppages (MTBS) from 3 to 5.25 years
- Received the 2013 John R. Battle Award for excellence in machinery lubrication from the International Council for Machinery Lubrication

A Reactive Approach to Maintenance

Before calling Noria, Sinclair had a reactive approach to maintenance. If a bearing or seal failed, it was fixed. Oil and greases weren't given much thought other than adding or applying them.

"The biggest eye-opener for me was our storage and handling and our in-use lubricants," said Jon McNeese, maintenance engineer for the Sinclair Wyoming Refinery. "Tops were left open, strung throughout the units and covered in oil, brine, dirt and water."

In the dead of a Wyoming winter, bearings kept failing, attitudes were ambivalent and maintenance was stuck reacting to the latest crisis.

Streamlining to Best Practices

Noria's first task was to conduct a benchmark assessment of the Sinclair refinery's machinery lubrication operations. While scores were low in many of the 12 areas, recommendations offered a clear path forward.

"When we started implementing Noria's recommendations, I was amazed how it made a lot of things more streamlined," said McNeese.

For McNees and his team, Noria's Lubrication Program Development was hands-on and instructive.

"What's the best way to install a breather or take an oil sample off a compressor? Noria showed us exactly how to do it," McNees noted.

With Noria's guidance and instruction on machinery lubrication best practices, the Sinclair refinery shifted from a reactive to a proactive approach to maintenance. This meant, for example, that lube oils were correctly stocked and warehoused. Proper oil sampling and analysis has also led to detection of lubrication issues that can be corrected before machines are damaged.

Overall, the refinery's shift to proactive maintenance and adoption of best practices impacted operations and the bottom line. The time between machine breakdowns increased from as low as 3 years to 5.25 years.

What's more, after the first quarter of implementing Noria's recommendations, the Sinclair refinery reduced its lube consumption by 20,000 gallons, which translates to approximately half a million dollars.

The Impact of Training

Noria provided Sinclair with onsite training. While directed mainly to the operations and maintenance groups, the training was open to everyone.

"We had very good participation, and the word has gotten out and spread throughout the refinery," said McNees. "Now people are training each other on how to handle lubricants, and it all started with Noria's training."



Jon McNees, Maintenance Engineer
Sinclair Wyoming Refinery



The Sinclair Wyoming Refinery

Instead of throwing out the oil, mechanics take oil samples. If the oil doesn't look normal, they sample it and bring it to McNees for testing. Now when lubrication issues occur, work orders are put in to fix them, resulting in fewer machine failures.

"The culture has changed from the top management down," McNees added. "That's how I saw it work."

Thanks to Sinclair's commitment to best practices and an assist from Noria, the refinery was recognized by the International Council for Machinery Lubrication with the 2013 John R. Battle Award for excellence in the application of machinery lubrication.

The future looks promising, too, with Noria's rebenchmarking in the works.

"We want to be the best," said McNees.

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

"I really like working with Noria. They're a great group of guys. They have the attitude that we're in this together."

- Jon McNees, Sinclair Wyoming Refinery



Noria Corporation
1328 E. 43rd Ct. Tulsa, OK 74105

Phone: 800.597.5460
Website: www.noria.com