CARMEUSE SYSTEMS

CUSTOMER FEATURETTE

GOLDEN VALLEY ELECTRIC ASSOCIATION (GVEA)

Location:
Healy, Alaska

Raw Material:
Quicklime

The Golden Valley Electric Association (GVEA) serves nearly 100,000 Interior residents in Fairbanks, Delta Junction, Nenana, Healy and Cantwell, Alaska, providing reliable electric service, quality customer service, and innovative energy solutions.

SITUATION

The GVEA coal fire power plant located in Healy, Alaska needed to immediately replace a slaker unit following a catastrophic equipment failure that led to a plant outage. GVEA had a Metso Vertimill vertical ball mill slaker on site which had been experiencing some issues processing lime. To improve operation, GVEA hired a 3rd party company to clean and perform maintenance on their Vertimill. Unfortunately, while doing so, mounting pressure compromised the integrity of the system's door, causing a catastrophic failure of the lime slaker and damage to the facility. No injuries resulted from the incident, but immediate replacement of the slaker would be needed to bring the power plant back into operation.

CHALLENGES

Providing a replacement for the vertical ball mill slaker at the Healy power plant faced several challenges:

- **Urgent timeline**
  Time was of the utmost importance as the replacement slaker needed to be installed and operational within a short timeline to enable GVEA to come out of their outage window.
- **Remote location**
  Situated in the remote town of Healy, Alaska, GVEA had difficulty finding a vendor willing to travel to the power plant to assess their needs on site.
- **Slaker selection**
  Prior to the equipment failure, the lime system at the power plant had a history of lime processing issues including plugging and inconsistent slaking. GVEA needed to select the best slaker option to not only replace the damaged system but also help ensure the operational issues they had experienced previously would be less likely to recur.

SOLUTION

The Carmeuse Systems team was ready and willing to perform a site visit to GVEA's remote Alaskan location to understand their unique needs and fully scope a solution. During the facility tour, our team evaluated the amount of lime being used on site and concluded that a vertical ball mill slaker was unnecessary for the scale of their operation. The power plant could instead use a small detention slaker and still produce more than enough lime slurry for their needs.

With time of the essence, GVEA needed a vendor who could work quickly to replace the slaking system. Our Carmeuse Systems Applications, Engineering, and Project Management teams worked tirelessly to pull together a full proposal, establish timelines, and bring the solution to fruition by their deadline. We ensured that the equipment would be on site to give GVEA time to install the replacement and for our teams to assist with commissioning before GVEA needed to come out of their outage.

In summary, Carmeuse was able to provide the following to help address GVEA's specific needs:

- On-site system evaluation by our dedicated Applications Team
- Expert engineering and project management support
- Slaking system replacement with the ZMI Portec Detention Slaker (M-5 Model)
- Commissioning and start-up services to properly calibrate the system and train GVEA personnel in its operation
- Consulting with Carmeuse lime experts, GVEA was advised to change the quicklime product sizing to help optimize the system, flowability characteristics and maximize utilization of the lime being slaked

ONGOING & CONTINUED SUPPORT

When Carmeuse Systems commissions a new system, the team provides support for the systems through the entire lifecycle. Representatives from our engineering team provided training to the operators on site as they became familiar with the new system and continue to stay in close contact with the system operators as questions arise. Our post-commissioning support team made multiple site visits to train all shifts while also fielding phone calls at all hours to ensure all operators were able to use the system effectively and safely.

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to do it right.

OUTCOMES

Carmeuse Systems' customer service and willingness to take time to see GVEA at their site set us apart from the competition. Additionally, Carmeuse Systems being a part of the global lime producer Carmeuse gave GVEA confidence that they were dealing with experts in lime handling who understood the intricacies of slaking systems.

By replacing the damaged Vertimill vertical ball mill slaker with a ZMI Portec Detention Slaker, a significantly less capital-intense system, our solution saved GVEA money compared to a like-in-kind replacement.

Working fast to meet GVEA's deadline, Carmeuse Systems shipped the slaker in time for installation and commissioning on site, enabling GVEA to come out of their outage window.