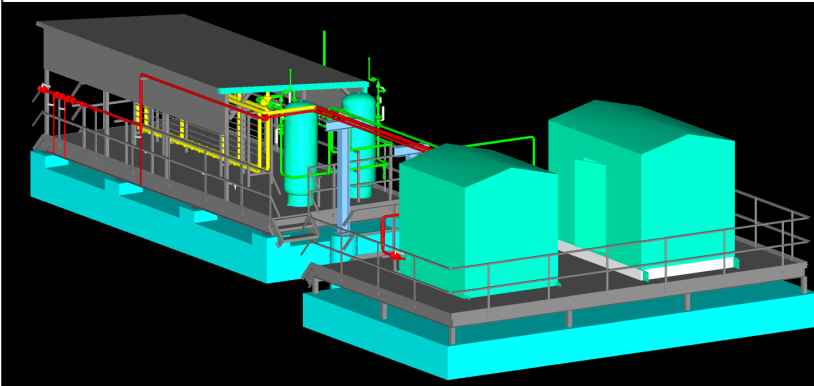


CONVERSION OF BIOMASS WASTE TO FUEL



SCOPE:

- BIOFUELS
- RENEWABLES
- BIOMASS

LOCATION:

LAKEVIEW, OREGON

THE CHALLENGE

Our client owns a process to convert carbon containing feedstock into syngas. This specific technology was selected for application at a Biofuels project in Lakeview, Oregon, which was designed to convert waste woody biomass into renewable jet and diesel fuels. Our client was having difficulty progressing their portion of the design with their original engineering contractor and was looking for a nimble engineering firm to help facilitate completion. Halker stepped into the project at the point of ~80% engineering completion to finalize the design. Halker interfaced with the client and the previous engineering contractor to establish outstanding engineering tasks to support project completion. During the transition, a few major design changes to interconnecting systems occurred that affected the operation of the water treatment system, as well changes to the utility systems.

THE SOLUTION

The client was responsible for the design of the feed solids handling, pyrolysis and water treatment portions of the Biofuels facility. Prior to Halker's involvement, the design was partially complete but Halker identified additional areas that required further engineering and design development to support our client in delivering a final IFC package. The following list is a brief summary of the major tasks Halker performed to finalize the design of these sections of the facility:

- Completed PSV sizing
- Managed outstanding recommendations from completed PHAs as well as remaining systems
- Designed a modular water treatment skid using the client's proprietary technology
- Finalized P&IDs
- Performed stress analysis of various piping runs
- Provided input to overall facility cause and effect matrix
- Completed structural and foundation designs
- Reviewed mechanical equipment packages
- Finalized instrumentation and controls specification and selection, and assisted with procurement
- Finalized tie point list at scope breaks

THE RESULT

With Halker's help, the client was able to complete their portion of the design ahead of the rest of the plant. Due to the aggressive schedule and dynamic nature of the project, changes to interconnecting systems and supporting systems needed to be reviewed promptly and potential effects to other systems identified. Halker continuously collaborated with technical and management teams to ensure design changes, operational concerns, and safety shortfalls were identified and addressed with limited schedule delays. Halker provided a targeted approach to issuing deliverables, such as identifying changes to key items that could affect overall project schedule and budget and issuing any changes / updates to vendor packages before issues could cascade into future deliverables. In one instance, Halker reviewed control valve sizing of previously ordered valves and identified potential operating concerns based on new COS. Halker was able to identify these changes early in the schedule to avoid change fees or delays in schedules.

HALKER

WHY HALKER?

Halker uses a people-first approach to every step of project execution, assembling the best teams, gathering input from everyone, and leveraging the power of this open and inclusive environment to develop industry-leading designs. We leverage process, methodology, standards and policy to scale productivity and continually improve quality and efficiency.

Given our broad background in engineered solutions, we understand the factors beyond project objectives that go into everything we work on, including evolving regulations and environmental impacts. By addressing these aspects head-on at the start of every project, Halker is better able to design effective, compliant projects and reduce rework.

We dig deep to fully understand your strategic objectives and what you need to accomplish. This sets Halker up to deliver fit-for-purpose solutions as well as additional, value-added project approaches that make a real difference to your bottom line.

To find out more about how Halker can help move your project forward in a safe, professionally engineered and optimized manner, contact us today.

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