

Client: Sunoco Chemicals

Plant: 60,000 TPY Aniline

Timeframe: 2011

Location: Haverhill, OH

Approx. Value: \$3,000,000

Service: Plant Acquisition / Dismantlement



BACKGROUND

Sunoco Chemical closed its aniline plant in 2001 due to changing markets. The aniline plant was located within a larger facility that still operated several other chemical process plants. As part of a corporate initiative to exit non-core businesses, the entire site was put up for sale. However, prior to selling the entire site, our client wanted to remove all assets associated with the non-operating portions of the site, which included the aniline plant as well as a thermal oxidizer area, boiler area, exhaust stack area and boneyard.

Our Solution

ASSET RECOVERY / SALES PLAN

Phoenix Equipment paid Sunoco for the plant and equipment and performed all removal and dismantlement work at no cost to Sunoco. Phoenix Equipment was able to pay Sunoco and perform the entire scope of dismantlement and environmental work by leveraging our ability to purchase and resell chemical process equipment far beyond inherent scrap value. Phoenix safely dismantled and rigged out at its own expense over 45 pieces of process equipment for resale, including: (4) 90,000 gallon bullet tanks - 250 psi; Multi-Stage Pfaulder Wiped Film Evaporator System; Ammonia Recovery System; Riley Stoker Boiler System; Callidus Technologies Thermal Oxidizer System; (2) Stainless Steel Scrubbing Systems; Stainless Steel and Carbon Steel Packed and Tray Columns; (25+) Vertical and Horizontal Stainless Steel and Carbon Steel Shell & Tube Heat Exchangers.

ASSET RECOVERY SUMMARY

- 45+ Pieces of Process Equipment
- 1,000,000 lbs+ of Non-ferrous material
- 2500 Ton+ of Carbon Steel

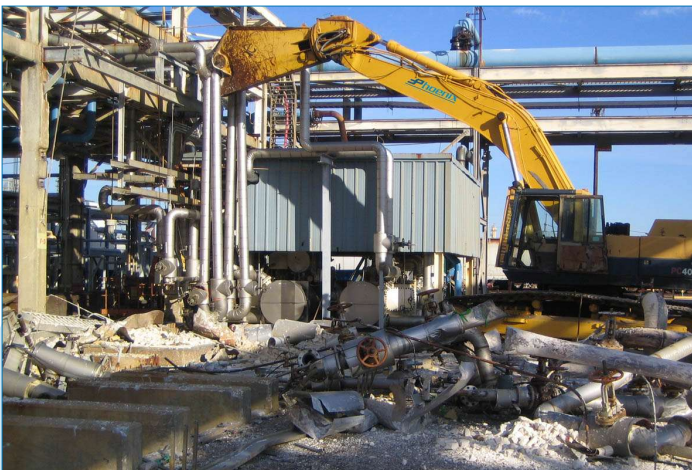


DISMANTLEMENT SUMMARY

- *Process Equipment and Piping Rinsing*
- *Catalyst Recovery*
- *Equipment Rigging*
- *Plant Dismantlement and Demolition*
- *Scrap Recycling*

DISMANTLEMENT WORK

During our assessment of the dismantlement work, we uncovered several complications with the plant that would require a safe and economic solution. The 80,000 square foot Aniline Plant had been shut down over 10 years ago, including the closure of water and chemical sewers in the area. Despite the equipment and piping having been cleaned prior to the shutdown, there was a likelihood that residual product remained in the exchangers and that an Alumina pellet catalyst remained in the reactors. Since Phoenix could not verify the extent of the equipment cleaning done 10 years ago, we set up an equipment/piping clean-up area within the Aniline Area and connected the clean-up area to the active chemical sewer in an adjacent active area. Using appropriate PPE, our workers performed line breaks of the piping at the equipment connections and low points, moving equipment and piping to the clean-up area as necessary. Upon finding Alumina catalyst in select pieces of equipment, we were able to recycle the waste through one of our contact's companies as opposed to disposing the catalyst in a landfill, saving our client significant money.



The (4) 90,000 gallon bullet tanks we removed were in a diked area surrounded by soft earth. Our PE designed a cost effective dunnage system allowing our crane to sit close enough for safe and economical lifts. The area housing the Riley-Stokes Boiler system was surrounded by elevated active pipe bridges and an active tank storage area, and also contained a 150'0" high column to be removed. To minimize sparks emanating from cutting operations, Phoenix devised a system to contain the sparks then dismantled the column using (1) man-lift and (1) 300 Ton crane. Since the Thermal Oxidizer was located beneath a remaining steel structure, which supported active equipment and piping, the Oxidizer had to be sectionalized and carefully removed.

Our 10 person crew spent seven months at the Ohio plant to safely perform the project without any injury or incident. Phoenix utilized a Komatsu PC400 Excavator equipped with a shear, a Komatsu PC300 Excavator equipped with a grapple, various cranes ranging from 65 Tons to 500 Tons, man-lifts, skid-steer dozers and forklifts. Our crew worked compliantly with the plant's employees to time our operations in the plant's active areas.