

With over 400 years of combined reliable management experience, Eagle Services offers industrial cleaning, environmental cleaning, and industrial maintenance projects for customers in a wide variety of industries.



## AUTOMATED HIGH-PRESSURE WATERBLASTING FOR A 3,000-TUBE EXCHANGER AT A CHEMICAL PLANT

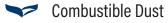
A 3,000 tube exchanger at a chemical plant in Illinois is cleaned successfully. Hot product passed through the tube side; and cooling water passed across the shell side. The product had set up in the tubes and was not responding to conventional 20,000 psi waterblasting methods, so Eagle Services increased the water pressure to 40,000 psi. This proved to be the most effective, cost efficient cleaning method for the tube side of the exchanger.

Meanwhile, as Eagle Services worked closely with the customer's lab technicians, it was determined there were no significant changes in the chemical properties of the product that could be attributed to the hardening of the product in the tubes. So we turned our attention to the shell side of the exchanger and focused on the exchanger's ability to cool the product.

After obtaining and analyzing scale retrieved from a low point drain, Eagle Services and its customer determined it was necessary to chemically clean the scale from the shell side of the exchanger. Because of the type of scale found and the metallurgy of the exchanger, the solvent of choice was inhibited hydroxyacetic, formic acid in the appropriate ratios.

Since this 48-hour episode, a routine maintenance schedule is followed; and this piece of equipment has not been down for more than 24 hours for cleaning and operates at increased efficiency between cleaning intervals.

## WHAT WE CLEAN:



Condensers

Drains and Troughs

Dryers

Evaporators

Heat Exchangers

**Fans** 

Fin Fan Air Coolers

Food Grade Process Equipment

HVAC Equipment

Industrial Ovens

Pumps & Other Machinery

Paint Booths

Pits, Ponds, & Lagoons

Process Piping

Rail Cars

Reactors

Sewers & Drain Lines

Silos

Tanks & Vessels

## EXAMPLES OF SERVICES WE PROVIDE:

Biohazard Contamination

Chemical Cleaning

Concrete Scarification

Hydroexcavating

Dry Ice Blasting

Filter Pressing

Mold Abatement

Paint Prep

Pipeline Cleaning

Pumping / Dewatering

Runway Stripping

Sewer Cleaning

Special Waste Hauling

Spill Response

Sewer Cleaning

Vacuum Dry / Wet

Video Inspection

Waterblasting (10,000 - 40,000 psi)

Water Cutting (10,000 - 40,000 psi)

## EXAMPLES OF INDUSTRIES WE SERVE:

Agribusiness

Automotive

Biodiesel Refineries

Chemical Processing

Environmental / Response Contractors

Ethanol Refineries

Food Processing

Government

Industrial Gas

Manufacturing

Municipalities

Natural Gas

Personal Care Products

Petroleum Refineries

Pharmaceuticals

Pipe Lines

Plastics Processing

Power Generation

Pulp and Paper

Rail

Resins

Steel Mills / Metal Processing

Transportation Terminals

Water Treatment

WE PROVIDE INDUSTRIAL AND ENVIRONMENTAL CLEAN UP SERVICES 24/7/365 TO PROCESS INDUSTRIES IN THE MIDWEST AND PLANNED CLEAN UP SERVICES FROM COAST TO COAST.



Contact us to learn more information about how our waterblasting and industrial cleaning services can help you maintain equipment and improve efficiency in your facility.

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