

A photograph of a large industrial refinery at night, illuminated by numerous lights. Two tall distillation columns are prominent on the left. The entire scene is reflected in a body of water in the foreground. The sky is a mix of dark blue and orange from the sunset or sunrise.

REFINING INDUSTRY

Safer. Simpler. Smarter.

The complete approach to refinery
materials processing

CleanHarbors[®]

An ongoing commitment to materials processing safety and excellence.

Known for our ongoing commitment to safe, leading-edge technology and methodologies, Clean Harbors offers a comprehensive suite of plant turnaround, cleaning and routine maintenance services specifically designed for refineries. Prior to implementation, our team performs a thorough treatability assessment, partnering with our clients to lower transportation and disposal costs, maximize materials recovery and accelerate issue resolution. Equally important, our approach goes well beyond the most stringent regulatory requirements, making safety our #1 priority companywide. With the most experienced on-site field experts in the industry, our services meet and exceed industry standards for the safety of the environment, the community and your personnel—all with the bottom-line value you expect.

On-site Dewatering

Designed to minimize waste, maximize product reclamation and decrease off-site transportation and disposal costs, our dewatering service includes oil recovery, product recycling, water reuse and solids management.

On-site Tank Cleaning and Dewatering

Clean Harbors state-of-the-art technology offers safe, efficient and cost-effective tank cleaning and dewatering. Our equipment includes high solids pumping systems, robotic manway and tracked cannons, and a variety of proven waste minimization techniques: Centrifuges, Recessed Chamber Presses and Belt Presses.

Dredging

Operated by technicians with an average of 15+ years of experience, Clean Harbors can dredge to a depth of 20 feet with a dredge pass of eight feet. Each unit is equipped with durable stainless steel pontoons, a 6-inch, 1,000 GPM pump, and state-of-the-art hydraulics that operate on cost-efficient, low-impact vegetable oil.



Robotics

Designed to mitigate safety risk and PPE cost associated with confined space operations, Clean Harbors robotic units feature 1-250 GPM @ 150-170 PSI, nozzle range from -15-90 degrees, track mounts with replaceable track pads and optional Auger head attachment for removing heavier sludge material.

Tank Sweep Nozzles

With flows up to 2,000 GPM at 150-250 PSI, our Tank Sweep nozzle units fluidize tank bottoms for pumping and are capable of rolling a 100' diameter tank each. Typical application is to leave roof floating and maintain liquid at a minimum of 3' above nozzles.

Safer.

Safety is Clean Harbors' #1 priority companywide. Employees at all levels share this philosophy and are committed to taking ownership in thinking "safety"—for themselves and others—at all times.

Coker Slurry Preparation

With 15+ years of experience and a significant investment in equipment and manpower, Clean Harbors is a leading provider of coker slurry preparation services. Clients choose our process systems because of our customized approach to their specific needs, ability to safely manage airborne VOCs, efficient process, and ability to avoid costly transportation and disposal of waste while recovering valuable oil.

Manway Cannon

Equipped with an Infrared video camera and LED lights, our high-performance manway cannon is hydraulically controlled and operated remotely. With an effective spray up to 70 feet, it reduces the need for confined space entry and provides a safe alternative to manned operation.

Plug and Play Centrifuge

Designed for rapid deployment—within six hours of placement—our Plug and Play Centrifuge units offer Centrysis 21-4HC 3 phase, feed capacity up to 150 (bph) and cake dryness up to 50%. Units feature heated, easy-clean tanks sealed with durable scrubber connections.



Centrifuge

Each of our oily waste processing centrifuges is designed to work with the specific gravity of any given waste stream and subsequent product recovery, offering high levels of VOC vapor recovery from recovered materials, maximum cutter stock recapture and waste minimization.

Simpler.

Clean Harbors offers a full suite of industrial services, eliminating the need to engage and manage multiple providers.

Vapor Recovery

Performed with up to 99% efficiency, our vapor recovery process employs liquid scrubbers, activated carbon, thermal oxidizers and catalytic oxidizers (catox), and is fully compliant with federal, state and district guidelines for fugitive emissions and hazardous air pollutants.

Plate and Frame

Trailer-mounted for rapid deployment, our plate and frame units are designed for non-oily, non-hazardous waste that includes chemical waste, biological and silt materials. Batch processing technology allows for higher waste reduction levels than Belt Filter press at lower production rates.

Belt Press

Our high-production units are designed to accommodate non-oily, non-hazardous waste that includes biological and silt materials. With continuous operation capabilities, the units allow for continuous chemical additions to be made “on the fly,” significantly increasing processing efficiency.

Thermal Degassing

Operated by professionally trained personnel, our degassing systems are recognized as being the safest in the industry. Featuring combustion technology specifically designed for tank degassing, they offer the highest possible destruction efficiencies and the lowest supplemental fuel requirements.

Thermal Desorption Units (TDU)

Exempt from RCRA regulation, our TDUs process emulsions, solids and other oil-bearing Hazardous Secondary Materials before they are designated as waste, resulting in the recovery of valuable oil and significantly reducing the need for off-site management and disposal costs.

Smarter.

Clean Harbors' experience and expertise offer a cost-effective alternative to specialty vendors. For more information about the entire portfolio of Clean Harbors services, visit www.cleanharbors.com or call 866.283.0626.



The Clean Harbors Advantage

Recognized throughout the industry as experts in the handling of hazardous, non-hazardous, wet and dry materials, Clean Harbors provides comprehensive cleaning and routine maintenance to refineries throughout North America, delivering seamless end-to-end solutions from a broad network of recycling, transportation and disposal facilities professionals. Our staff of experienced filtration media and chemical treatment specialists, civil engineers, geologists, licensed wastewater operators and scientists work together to offer cost-effective services designed to reduce costs, minimize waste and decrease environmental impact.

For more information about the entire portfolio of Clean Harbors services, visit www.cleanharbors.com or call **866.283.0626**.

Corporate Headquarters

42 Longwater Drive
P.O. Box 9149
Norwell, MA 02061-9149

www.cleanharbors.com
800.645.8265

