

Clean Harbors Surface Rentals

Solids Control Systems



Your Defense Against Downtime™

Improved uptime and decreased drilling waste through well-maintained solids control equipment, well-trained service technicians, and well-documented processes

CleanHarbors®



Trained Technicians Optimized Operations

Improved Safety and Increased Efficiency

Safe operations at your rig site and good training go hand in hand. Our competency-based training program trains our technicians in all aspects of solids control equipment operation, repair, and maintenance.

- **We provide comprehensive training.** Before we let our technicians anywhere near your operations unsupervised, they've gone through more than just computer training. They've spent weeks in our maintenance shops. They've spent time shadowing and being mentored by experienced and committed trainers or technicians. And they've completed skills verification sign-offs on the equipment they are working with.
- **We train service technicians to make the right calls at your rig site.** Our training program ensures our technicians can confidently make the appropriate maintenance and operational decisions on location. They focus on making sure that all of your solids control equipment is:
 - Properly maintained
 - Properly set up and tested on site
 - Operated efficiently 24/7 (if requested by customer)
- **We make in-depth inspections a critical part of our on-site technicians' jobs.** Solids control technicians follow customized inspection checklists for all equipment deployed to drilling locations. We recently launched an industry-leading iPad-enabled asset tracking and management system that includes information such as: comprehensive inspection checklists, safety reporting system, online learning, and more.

Real-time data and asset tracking: Our industry-leading iPad-enabled asset tracking and inspection system gives our service technicians everything they need at their fingertips to keep your assets on time and on track.





Reliable Rentals Peak Performance

An Industry-Leading Proactive Maintenance Program

We offer good solids control equipment. But so do a lot of other surface rentals providers. What really sets us apart is our proactive maintenance program, which helps us deliver increased reliability for equipment deployed in the field.

- **We fix it before it breaks:** Our solids control equipment is well maintained because we don't run it to failure. We track equipment utilization and maintain reliable records to schedule maintenance before breakdowns occur—significantly reducing downtime.
- **We don't cut corners:** When required, we swap equipment from the field (while on a job and when convenient for the drilling operations) and replace it with a suitable substitute. This captures minor issues before they become major, and ensures that deployed equipment is maintained on time and on schedule.
- **We have in-house maintenance/rebuild capabilities:** Service technicians maintain our equipment to the same exacting standards at all of our locations. This enables us to fully control quality and provide consistent, dependable equipment at the rig site.
- **We follow best maintenance practices in every branch:** We operate a company integrated, full-service maintenance facility. We can perform complete centrifuge teardowns and rebuilds, ensuring consistent quality and reliability.



We don't run our equipment to failure: We repair centrifuges on a timed maintenance cycle, based on the number of hours they've been operating since the last rebuild.

Systems for Solving Operational Challenges

Clean Harbors' Solids Control Systems, either separately or combined, help solve a number of operational challenges, resulting in increased rig site efficiency and improved rig utilization rates.

Operational Challenge	Solids Control Solutions
Reduce Low Gravity Solids (LGS) percentage in drilling mud	<p>Our high-speed Variable Frequency Drive centrifuges can handle high volumes of abrasive solids.</p> <p>We offer 200+ centrifuges for drilling fluid separation and filtration needs. All centrifuges can be optimized for maximum solids control and barite recovery, ultimately decreasing waste volumes.</p>
Ensure correct retention time of drill cuttings (in water-based drilling fluid applications)	<p>Our patented auger tank design and process ensures maximum drilling fluids retention time, resulting in efficient solids separation, and decreased water consumption and cuttings disposal hauling costs.</p> <p>We also supply additional fluid storage tanks, ranging from premix to barite recovery to flocculation and surface, for a variety of drilling fluid needs.</p>
Effectively dewater drilling fluids for reuse and solids for disposal	<p>Our dewatering equipment + combined centrifuge technology provide the ability to process large volumes of drilling fluid.</p>
Remove oil on cuttings and reuse drilling mud	<p>Our Drilling Fluids Recovery System cost-effectively recovers increased drilling fluid volumes for reuse in the active mud system. It also reduces material, transportation, and landfill costs by minimizing stabilizer (sawdust/fly ash) volumes.</p>
Relocate equipment quickly during rig moves	<p>Our integrated centrifuge stands have hydraulic functionality. This feature eliminates the need for a crane/picker during rig moves, saving time and increasing safety.</p>
Treat, transport and dispose of drill cuttings	<p>Our extensive network of both company-owned and third-party waste treatment and disposal capabilities helps reduce liability and provide best value.</p>

Single Source Streamlined Service



Full-service drill cuttings to disposal: Clean Harbors is your single source for ensuring efficient and environmentally safe drilling practices. Once we've separated drill cuttings from the drilling fluid, we also provide a variety of programs to contain, manage, and dispose of the waste—safely, efficiently, and always in complete compliance. This turnkey approach reduces risk and decreases logistical challenges—ultimately increasing efficiency at your rig site.

More Oil and Gas Field Services

Through a series of strategic acquisitions in the oil and gas sector, we now can offer you a range of oil and gas field services that maximize operational efficiency while minimizing environmental impact. By choosing Clean Harbors as your single-source provider to support your exploration and production programs, you experience the overall benefits of dependability from 30+ years of operation, reliability through comprehensive safety and training programs, and accountability through one point of contact. Our other oil and gas field services include:

Integrated seismic and right-of-way services for efficient resource discovery and site preparation

- Seismic surveying that minimizes costs, environmental impact, and time in field
- Mulching/line clearing that expedites additional geophysical activities and minimizes environmental impact
- Shot-hole drilling that provides safe and efficient operations in every terrain, including hostile and inaccessible regions
- Borehole directional services that improve the efficient installation of pipeline, fiber optic, cable, gas, water, and sewer lines

Complete oilfield transport and production services for optimum production

- Fluids handling, transportation and disposal for turnkey operation
- Hydro-excavation, which provides a non-destructive excavation alternative to mechanical methods
- Oilfield spill cleanups, turnarounds, and tank cleaning
- Pressure/hydro testing equipment that tests facilities, lines, and wellheads before operations startups
- Rental production equipment for sour crude oil and gas well production
- Downhole well cleaning and maintenance for increased well production efficiency

In addition to these services, we also provide expert **Emergency Response Services** for containing and cleaning up oilfield spills and other emergencies, and **Transport & Disposal Services** for rig site waste hauling and disposal.

Clean Harbors is North America's leading provider of environmental, energy and industrial services. We serve a diverse customer base, including a majority of the Fortune 500, across the chemical, energy, manufacturing, and additional markets, as well as numerous government agencies. These customers rely on Clean Harbors to deliver a broad range of services such as end-to-end hazardous waste management, emergency spill response, industrial cleaning and maintenance, and recycling services. Through its Safety-Kleen subsidiary, Clean Harbors also is North America's largest re-refiner and recycler of used oil and a leading provider of parts, washers, and environmental services to commercial, industrial, and automotive customers. Headquartered in Massachusetts, Clean Harbors has waste disposal facilities and service locations throughout the United States and Canada, as well as Mexico and Puerto Rico. For more information, visit cleanharbors.com.

For Solids Control Systems

Call 800.661.3803 (U.S. & Canada)

Or visit the Web at

www.cleanharbors.com

Corporate Headquarters

42 Longwater Drive
P.O. Box 9149
Norwell, MA 02061-9149
781.792.5000
800.282.0058

