



# INDUSTRIAL SERVICES

*SINCE 1968*



Handex is a nationwide provider of industrial services which includes sludge removal and waste minimization services with expertise in the full suite of dewatering services, customized to accomplish your specific goals. We process over 40 million gallons of sludge every year, reducing volumes by up to 80%. Our treatment solutions are widely recognized as the most cost effective methods of achieving volume reduction while generating minimal waste residue.



**(321) 441-9801**  
**[www.HCR-LLC.com](http://www.HCR-LLC.com)**

**2211 Lee Road, Suite 110**  
**Winter Park, FL 32789**



## Our Commitment

Handex has over 55 years of experience in the field which provides us with the understanding that your operations must be competitive and profitable as well as:

- Promoting safety
- Conserving resources and reducing waste
- Comply with environmental and community regulations
- Improving sustainability overall

That is why at Handex our vision is to be the safest, most reliable, trusted and consistently performing provider of environmental services.

## Who we are?

Founded in 1968, Handex is a full-service environmental company focused on providing professional environmental consulting, remediation, construction, vacuum truck services, emergency response and sludge dewatering services in the United States.

## Safety

Handex is committed to protecting the health and safety of its employees, clients, contractors and communities. Handex believes that all injuries and illnesses are preventable through cooperation with our employees, clients and contractors. Our goal is to prevent the occurrence of all work-related injuries and illnesses. To achieve this goal Handex has adopted superior health and safety performance as a core value. All Handex personnel have extensive training in Health and Safety, including Confined Space Entry and OSHA 40-Hour HAZWOPER and annual OSHA 8-hour refreshers.

## Our Value

We help our customers save money and time through waste minimization and system improvements.



Proud Member of



# OUR SOLUTIONS

## INDUSTRIAL SLUDGE REMOVAL & WASTE MINIMIZATION SERVICES



Our specialized services include the removal and processing of sludge from oil refineries and industrial plant wastes. Sludges processed by Handex include:

- API separator sludge
- Benzene contaminated sludge
- DAF sludge
- Mixed sludge
- Cooling tower sludge
- Paint sludge
- Biosolid sludge
- Drinking water treatment residuals
- Alum sludge
- Industrial sludges

We offer a broad range of experience in handling tank bottoms, which includes sludge removal, processing, transportation and disposal of waste materials.

We start by understanding the problem and coming up with an appropriate solution. Services begin with preliminary bench scale evaluation of a representative sample to determine the most appropriate and cost-effective dewatering technology content.

In most cases, the processing of tank bottoms through mechanical separation of the liquid and solid phases is the most cost-effective approach when compared to the costs associated with pumping and trucking off-site for disposal.

Processing and volume reduction is accomplished by plate and frame filter presses, centrifuges, belt filter-presses and geomembranes. Additional equipment can be added to the process treatment train to remove low-level contaminants in the liquid phase prior to discharge. Solid filter cake is loaded into containers for shipment and disposal or recycling, which can be arranged by either us or the client.

We utilize equipment that complies with Benzene NESHAPS, and secondary treatment of the process effluent to meet refinery requirements.

All of our personnel have extensive training in Health and Safety, including Confined Space Entry and OSHA 40-Hour HAZWOPER and annual OSHA 8-hour refreshers.

This includes:

- Up to 80% volume reduction
- Treatability testing of sludge to achieve the optimum process choice and filter aids
- Sludge removal
- Sludge pretreatment
- Waste handling and disposal
- Completely mobile and self-contained equipment for remote locations
- Treatment and discharge/disposal of filtrate

# PIT/POND/LAGOON CLEANUP & CLOSURE



We perform lagoon closures as well as interim sludge removal. Sludge removal services are performed as a routine maintenance task to maintain freeboard or facilitate liner inspection or repairs. Sludge removal may be required for concrete basin or liner inspection or liner removal and relining.

Our services encompass all aspects of the closure from planning to transportation and disposal of the lagoon waste. We utilize a network of subcontractors to provide relining services for lagoons and concrete basins.

## DREDGING - REMEDIATION SUPPORT



A cutter-head dredge enables the removal of sludge and sediment at a fixed or variable depth over the surface area of a lagoon.

The dredge is used on basins where the agitation of the sludge and sediments is necessary to achieve effective removal, and where there is an adequate layer of surface water to float the dredge.

Dredges are also appropriate for a lagoon where a water layer is required to maintain odor control. The dredge can cut a swath eight feet wide and as deep as thirteen feet below the surface.

## DEWATERING TECHNOLOGIES



Comprehensive sludge dewatering technologies reduce volumes of liquid/solid mixtures by up to 80%. The end result is a reduction in transportation and disposal costs, and a step towards compliance with the EPA regulations to minimize waste generation. Handex dewatering options include Plate and Frame Filter Press, Belt Press filtering, and Centrifuge processing.

Treatability testing provides information on a pilot scale for selection of the best dewatering equipment and costs associated with alternative equipment and filter aids to meet client specifications.



**CENTRIFUGE**



**FILTER PRESS**



**GEO TUBES**

# CENTRIFUGE



A centrifuge is a device, which employs a high rotational speed to separate components of different densities. The principle of a centrifuge is based via buoyancy. A component with a higher density would fall to the bottom of a mixture, while the less dense component would be suspended above it. Centrifuges typically produce between 18% to 25% solids by weight.

The main benefit of the centrifuge is the speed of the process. This process is generally reserved for situations where oil recovery is the main priority, and the quality of residual solids is less of a concern.

Centrifuge is most useful for the following applications:

- Oily Sludge Dewatering
- Water and Wastewater Treatment Sludge Dewatering

Advantages of Centrifuge

- Lower maintenance and operation costs
- Reduced processing time
- Fast commissioning and start-up
- Higher throughput capacity
- Maintenance repair can be done easily, as items can be easily removed and replaced.
- Centrifuges are easy to clean
- While centrifuges require an experienced operator to run them, they require minimal operator attention when operations are stable
- Centrifuges provide low exposure to aerosols, pathogens, hydrogen sulfide, and other odors because of their closed-loop capabilities.
- Handles oily material

When deciding if a centrifuge is right for your sludge dewatering project, it is important to consider the overall objective, disposal options, and cost of dewatering when deciding which the best choice for your specific needs is.

At Handex we provide our clients support in making these decisions by utilizing our highly experienced dewatering professionals and bench-scale treatability capabilities in evaluating a variety of technologies to choose the optimal solution.



# FILTER PRESS



Plate and frame filter presses use recessed-chamber filter plates to separate the liquids from the solids. Two plates join together to form a chamber to pressurize the slurry and squeeze the filtrate out through the filter cloth lining in the chambers. The filter cake is collected on the surface of the filter plate cloths and dropped onto a horizontal conveyor.

There are two main types of filter presses that can be used:

- High-pressure plate and frame filter presses typically produce filter cakes that are between 40% - 70% solids by weight.
- Low-pressure plate and frame filter presses typically produce filter cakes that are between 25% - 50% solids by weight.

Some benefits of using a plate and frame filter press is that they produce stackable, cake-like solids that are amongst the “driest” of all technology. This gives you the most cost reduction when dealing with higher disposal cost materials such as hazardous waste.

The plate and frame filter press are most useful for the following applications:

- Biological sludge
- API Separator Sludge

Dewatering is used in every town with a wastewater treatment plant, power plant, chemical plant, paper mill, or refinery. Selecting the right process will depend on many factors. Knowing the different materials and what your project necessitates will help determine what your needs are. Handex has several decades of experience in dewatering and can put together a plan that works for you.



# GEO TUBES



Aptly named to reflect their shape, geotubes are tube-shaped bags that environmental workers install along the shorelines of water bodies. Geotubes are an integral part of the dewatering stage of dredging – the process of isolating and retaining solids while releasing clear water back into the waterway. Engineers build the walls of geotubes with a strong yet permeable fabric that allows water to drain out while holding onto particulate matter.





# HANDEX

## Contact Us



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### WEBSITE

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