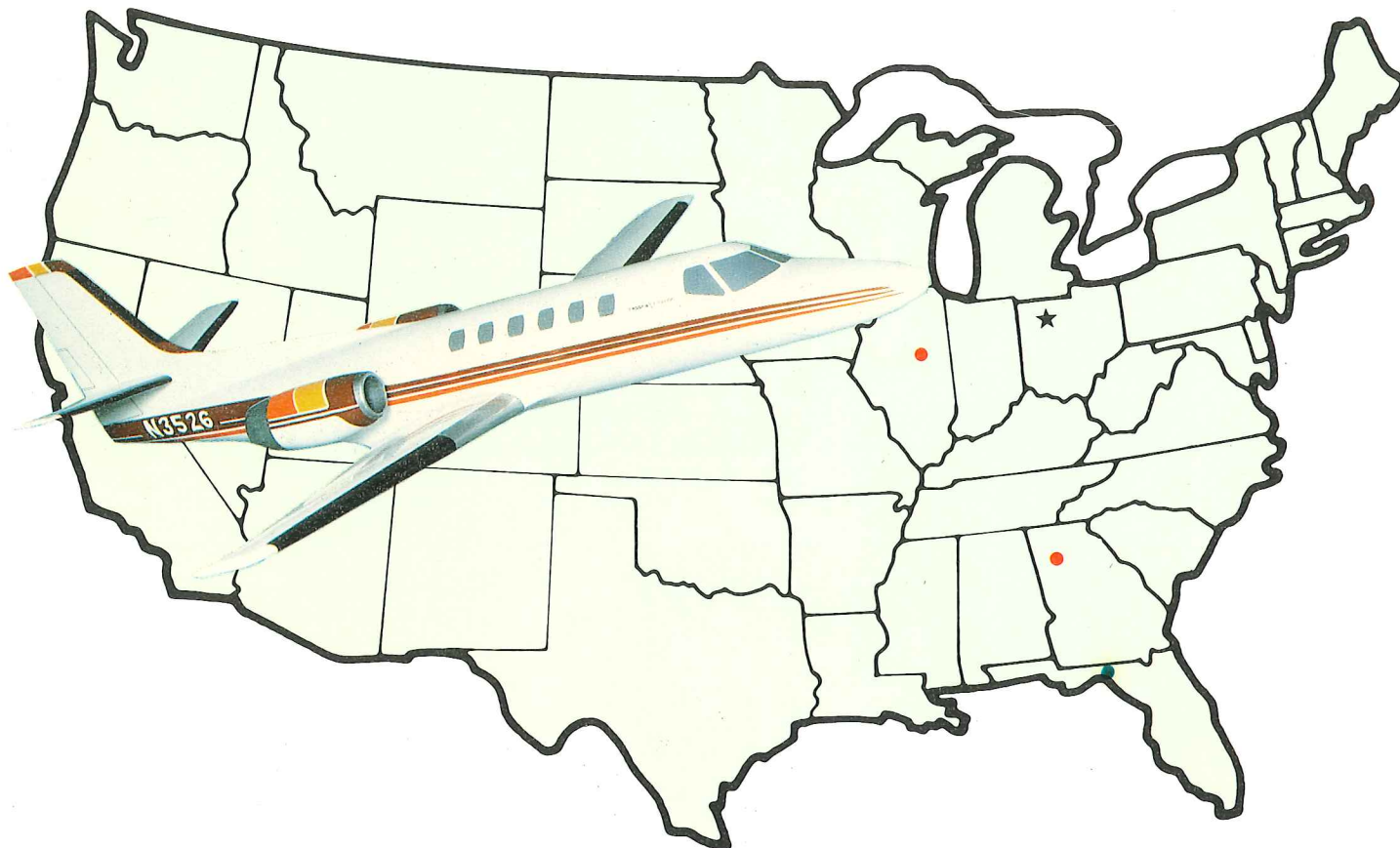




*O. H. Materials, Inc.*  
Oil and Hazardous Material Containment and Cleanup

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**24-HOUR RESPONSE 1-419-423-3526**



There is great concern and even fear today about the consequences of an incident, whether transportation or industrial, involving the release of oil and hazardous materials. These consequences range from loss of life, revenue, lading, equipment and operating time to potential long-term environmental and health damage.

Regulatory controls governing the handling, control, mitigation and cleanup of spill incidents are becoming more exacting and restrictive. Immediate response to a spill involving oil or hazardous materials is, therefore, the keystone in any effort to protect life, property and the environment.

O.H. Materials is a unique company dedicated to providing the kind of effective and economical emergency response necessary to alleviate the hazard, mitigate the damage and restore environmental integrity.

O.H. Materials, headquartered in Findlay, Ohio, is a full service contractor

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★ **Corporate Offices**  
Findlay, O.

● **Regional Offices**  
Atlanta, Ga.  
Ottawa, Ill.

● **Division Offices**  
St. Marks, Fla.

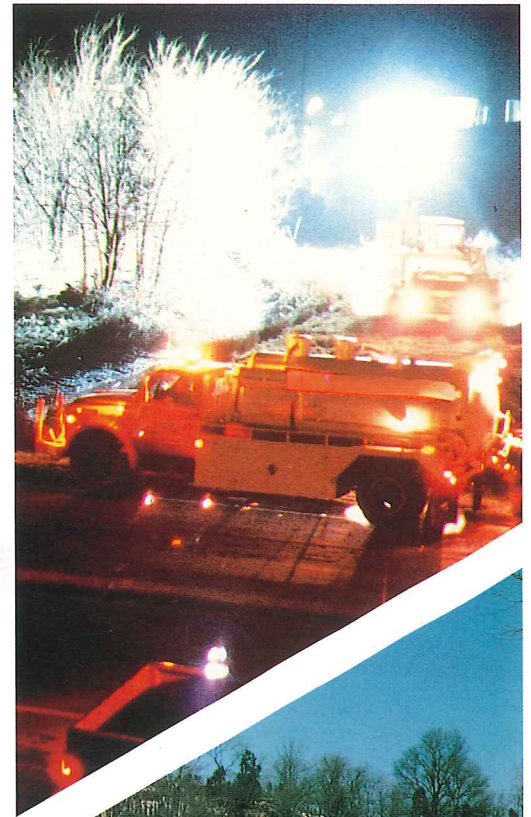
specializing in the control, handling and cleanup of oil and hazardous material spills. During the last decade, we have responded to spill emergencies across the country and have dealt with over 1,000 different hazardous and non-hazardous materials in quantities up to several million gallons.

We offer a wide range of services including oil and hazardous chemical spill containment and cleanup, underground recovery systems, on site treatment and stabilization, materials transfer, mobile analytical laboratory services, an integrated communication network and consultative problem solving in the field.

One phone call to corporate headquarters in Findlay, Ohio, is all that is necessary to dispatch equipment and personnel from any division—anytime.

**1-419-423-3526**

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The mobility of our specialized equipment enables us to respond immediately to even the most inaccessible areas, under the most adverse weather conditions, day or night.

## Oil Spill Containment & Cleanup

O.H. Materials crews provide professional expertise in all phases of oil spill containment and cleanup. Our personnel have successfully handled a wide variety of products spilled in diverse locations, climates and terrains throughout the United States.

Our personnel, a wide variety of equipment adaptable to normally inaccessible areas, and knowledgeable supervisors form a company that will provide cost-effective cleanup of small and large spills on land or water.

Our experience in dealing with the problems and consequences posed by a spill enables us to make a rapid assessment of the situation and apply the most efficient cleanup technology. A sophisticated communication network links all regional and division offices. This network enables our personnel to respond immediately with the equipment necessary.

In addition, our supervisory personnel have worked in conjunction with all forms of federal, state and local regulatory agencies.

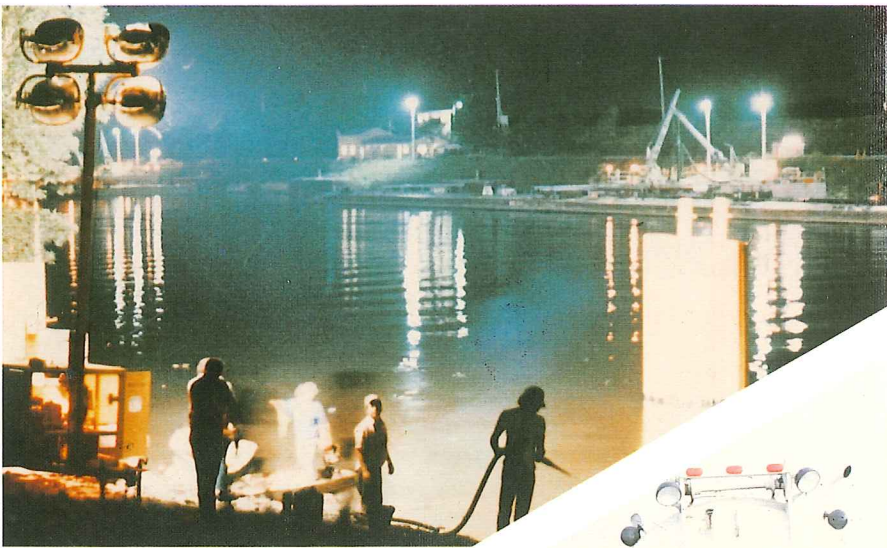
Immediately available to field crews is a large inventory of specialized equipment including a fleet of various capacity vacuum units (including skid type units that convert easily from trailer mounting to mounting on barges or railroad flat cars), work boats and jon boats, high pressure washdown pumps and water lasers, transfer pumps, small and large oil skimmers, separators, sampling equipment, portable lighting, safety gear, all terrain vehicles, pollution control equipment trucks and any heavy construction equipment needed.

Large inventories of containment booms and sorbent materials are strategically-located throughout the O.H. network, eliminating lengthy waits and problems with coordination.



**Necessary manpower and equipment are dispatched immediately from divisional offices when we receive a call, whether the spill be on land or water.**





**A variety of equipment facilitates our handling cleanup tasks of any size at any location, from highway berms to the Mississippi River.**

## Hazardous Materials Containment & Cleanup

One of the prime objectives of O.H. Materials is to alleviate the consequences of an accidental release of hazardous materials and restore environmental integrity efficiently and economically.

Regardless of spill size, location or nature, we respond with the specialized equipment and trained personnel necessary to minimize any safety or environmental hazard.

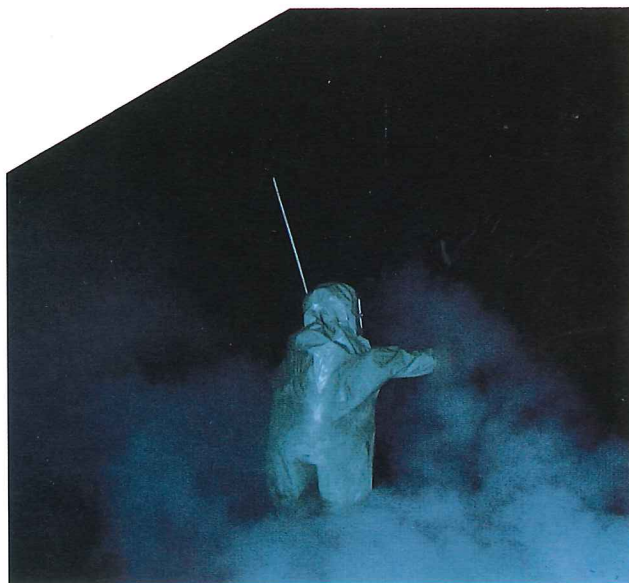
We have developed and perfected many techniques to handle diverse emergency situations involving a wide range of hazardous chemicals. These techniques are highly-effective and sophisticated and have been proven time and again under the duress of field conditions.



**Our crews have contained and cleaned up spills ranging from plant explosions to train derailments.**

Our emergency response teams are trained to prevent the contamination of rivers, streams and underground water supplies through quick containment of hazardous material spills. If, however, the material has already contaminated the water, our crews can trace the pollutant flow and isolate it for treatment or disposal.

In some cases, it may not be economically feasible to remove and properly dispose of a large volume of pollutant. Our chemists and chemical engineers can use physical, chemical or biological techniques to stabilize the situation and reduce the volume of pollutant, thereby minimizing costly disposal.





Special equipment and training prepares O.H. crews to respond to hazardous material spills on highways, along railroad lines and in the most remote locations. Our special breathing apparatus and fully-enclosed chemical/gas suits insure safety of personnel working closely with toxic substances.



## Underground Recovery Systems

O.H. Materials has pioneered innovative underground recovery systems which allow simultaneous cleanup and restoration of operations. This is of prime importance following a train derailment, when it is essential to clean up the spill and put the road back into operation quickly.

The process of injection-recovery is a technique used successfully by our field personnel. Automatic pumping systems force flushing media into the ground through an intricate piping system.

Pollutants are flushed and removed from soils and underground water tables through a pneumatic recovery system.



**A variety of portable, rapidly deployable units facilitate our underground recovery work.**

Contaminated effluent is then transferred to support facilities for removal or degradative treatment. In certain situations, this system is readily adaptable to containment of pollutant movement in underground water tables or aquifers.

The pneumatic recovery and injection systems have also proved successful for underground installation and distribution of bio-media. As a cost-effective final cleanup step, O.H. Materials has utilized in situ use of biodegradation.

O.H. field crews have also faced and treated deep water table contamination problems requiring the use of sophisticated deep well pumping systems for containment and/or removal.





One system or a combination of systems can be utilized to effectively recover underground contaminants and to return the environment to a healthy state.

## On Site Treatment

On site treatment to detoxify or immobilize oil or chemical substances is frequently the most practical solution to a contamination problem. Physical, chemical and biological treatment at the scene can often eliminate more costly solutions such as excavation and subsequent disposal or long-term monitoring and treatment of contaminated water supplies.

Mobile carbon filtration units are valuable tools for removal of organic pollutants from water. Modular systems from O.H. Materials can effectively treat waste water volumes from as little as 100 gpd. up to 1,000,000 gpd.

Aeration systems ranging in size from spargers in a waterway to fully-automated impoundments for controlled rate removal of toxic chemicals have been installed on site by O.H. crews.

Other well-known physical/chemical treatment techniques such as neutralization, precipitation, coagulation and dispersion are used when deemed appropriate by our field crews.

Also used in field applications is in situ chemical and biological degradation. Innovative techniques and equipment have been developed for monitoring treatment effectiveness.



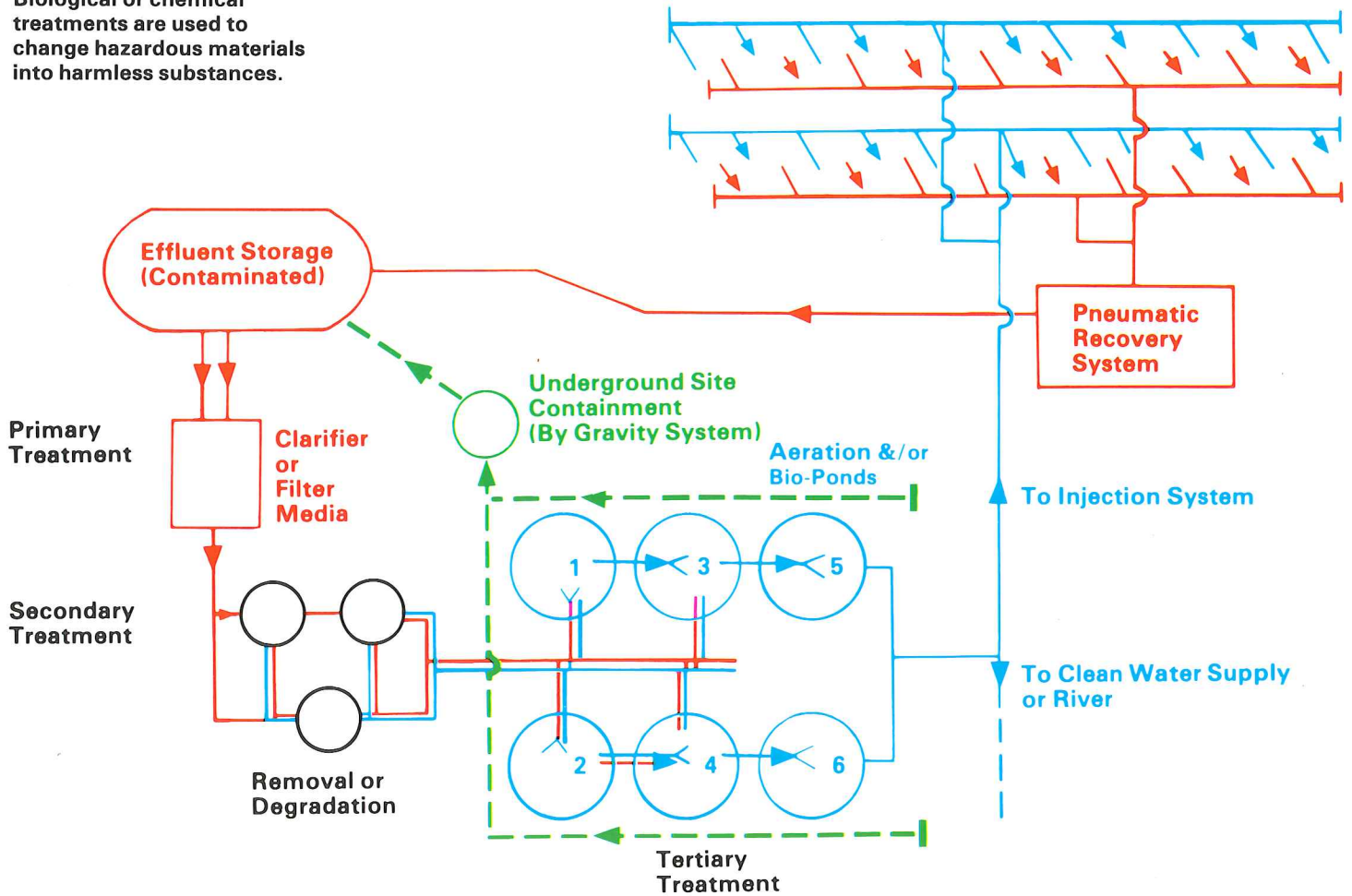
**Mobile carbon filtration systems are rapidly deployed and installed at spill sites for removal of organic pollutants.**





Biological or chemical treatments are used to change hazardous materials into harmless substances.

### Typical Process Flow Chart for Large-Scale Spill Cleanup



## Materials Transfer

Material transfers in the field often prove to be cost-saving measures when salvage value, disposal costs, shipping costs, cleanup and monitoring costs and operational downtime are considered. Minimizing operational downtime is a major concern of O.H. Materials when transferring materials.

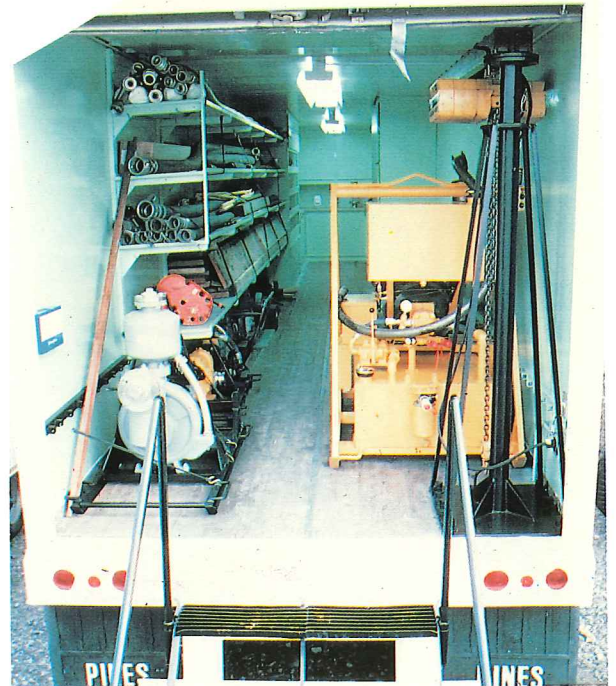
Several semi-vans, fully-equipped for any type of emergency transfer problem, form the core of our materials transfer division. In addition to a complete line of safety gear including protective clothing, the vans contain a variety of sophisticated pumps and other auxiliary equipment.

Housed in the vans are portable hydraulic power paks, high rate delivery pumps, viscous material pumps, acid pumps, nitrogen purging systems, pneumatic transfer systems with air dryers and fume scrubbers, steam heating equipment (up to 1,000,000 BTUs), stainless steel-teflon lined hoses, acid hoses, metering equipment, vapor control systems, power entry tools, tank patching equipment and stainless steel, teflon, PVC and other piping components.



**Using specialized equipment, our crews have transferred a variety of materials in spill situations.**

This state-of-the-art equipment requires the highly-trained personnel and complete technical staff available from O.H. Materials. We sample, analyze and monitor products before, during and after handling to prevent contamination and assure product stability.





**We sample, analyze and monitor products before, during and after handling to prevent contamination and assure product stability.**

## Analytical Capabilities

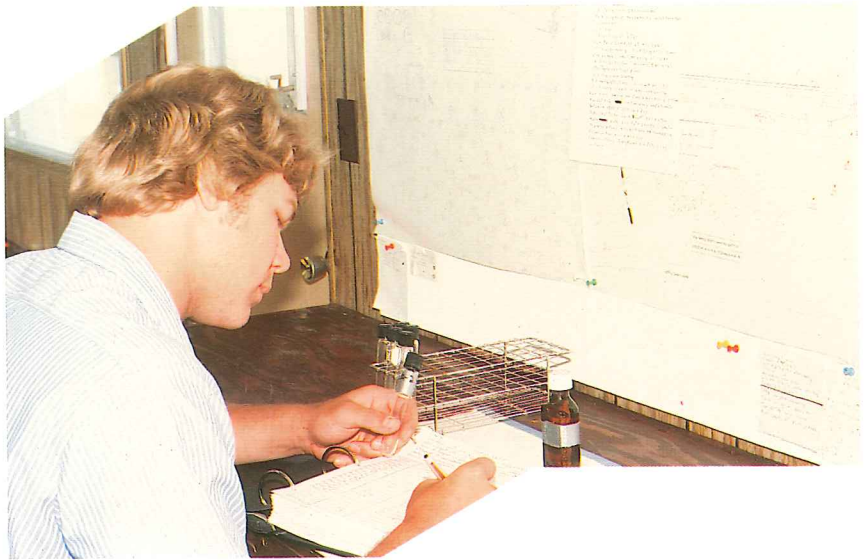
Analysis of the nature and extent of contamination resulting from a spill is essential to efficient cleanup operations. O.H. Materials maintains the mobile laboratory facilities to meet this demand.

We maintain complete, sophisticated mobile laboratory facilities at corporate headquarters in Findlay, Ohio. Our chemists maintain the most advanced equipment and strict quality control procedures.

To further serve the needs of our clients, O.H. offers rapid on-site analysis of pollutant levels and constant monitoring of effects and progress of the cleanup.

Three levels of response are available for on-site monitoring. Many situations can be handled by a technician with a field chemistry kit. More precise but still rapidly available information can be provided by van-mounted, total organic carbon analyzers.

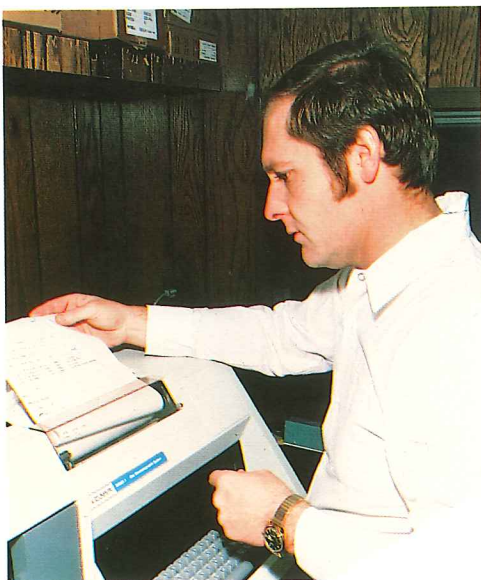
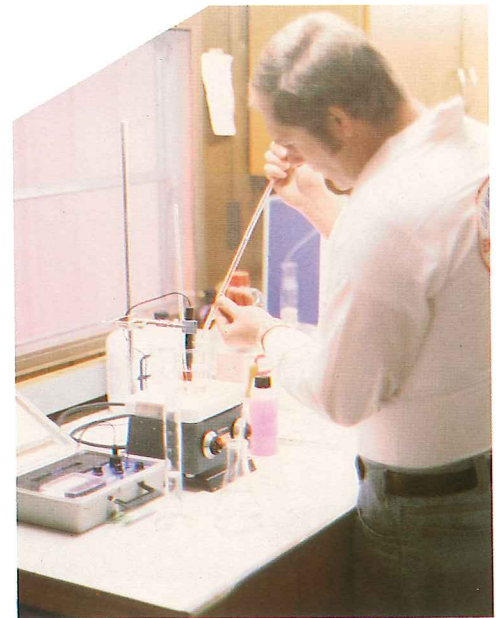
Sometimes, however, on-site analysis requires the use of more sophisticated analytical instruments. In these cases, we can dispatch a fully-staffed mobile laboratory. This laboratory can be equipped to provide rapid, precise and accurate analysis of almost any contaminant.

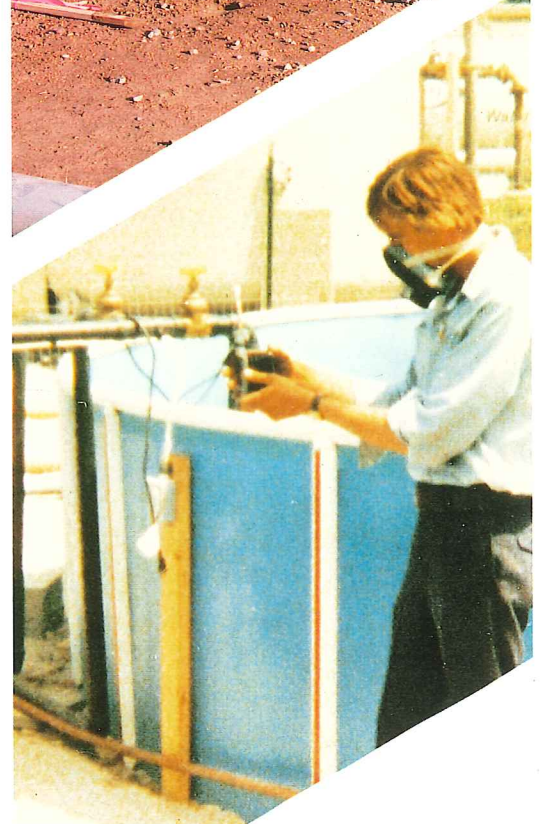
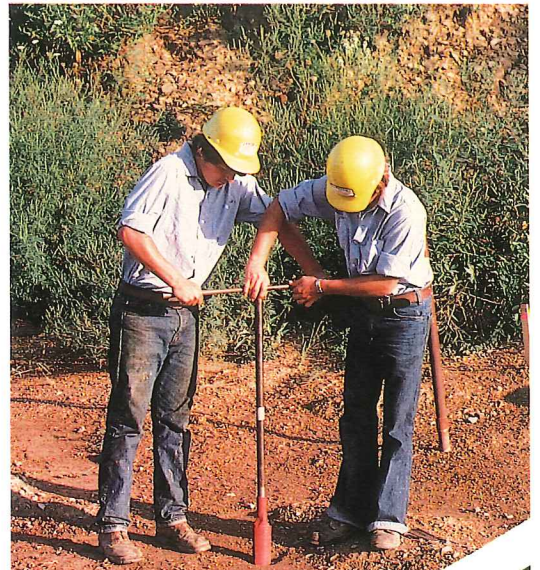
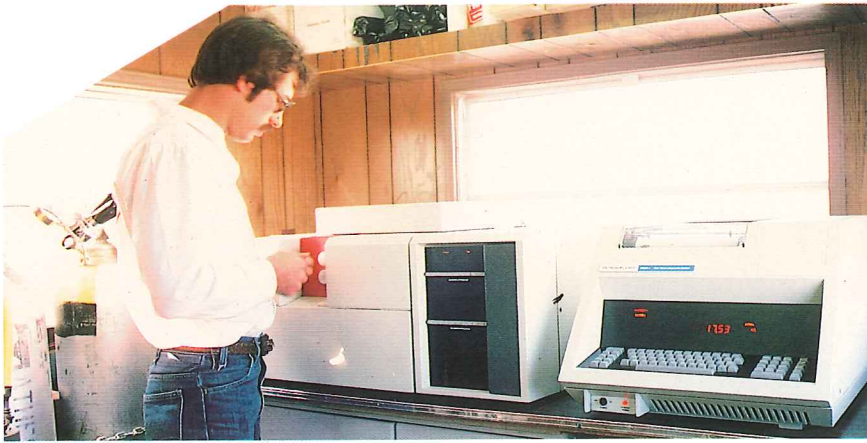


**Skilled personnel using precision instruments maintain our lab facilities in the most advanced state of the art.**

If equipment too sensitive to be moved is involved, off-site analysis is an option. We can transport samples to our laboratory in Findlay for extensive analysis.

Sometimes it is advisable to have some analyses run by an independent laboratory. We can serve as liaison with numerous competent, independent laboratories to provide certified analysis of samples.





**Our expertise with testing procedures enables us to make quick, precise analysis. Our mobile lab units are linked with the homebase lab to provide in-depth analysis of the spill site situation.**

## Specialized Personnel & Services

O.H. Materials provides highly specialized services requiring a full complement of experienced professionals and custom-designed equipment.

Our staff includes chemists, chemical engineers, civil engineers, geologists and technicians who remain continually aware of new regulations and advances in technology and field methodology. We also conduct weekly safety classes to keep our response teams alert to the problems facing them in the field.

The expertise of our staff in safety procedures, handling and cleanup techniques insures cost-effective and efficient handling of any material spill.

We also deploy an experienced supervisor to each job site to assess the situation and to coordinate manpower and activities.

In all spill situations a quick, dependable and safety-conscious response can save time, money, and very possibly, lives.

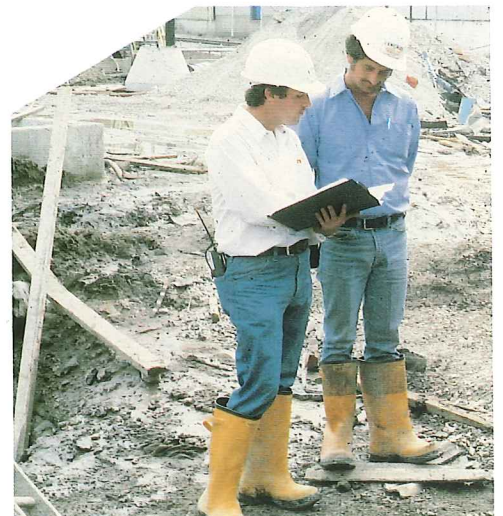
Equipment needs are as specialized and diversified as the services we offer. Much of our equipment is designed by our own engineers to meet the specific job needs.



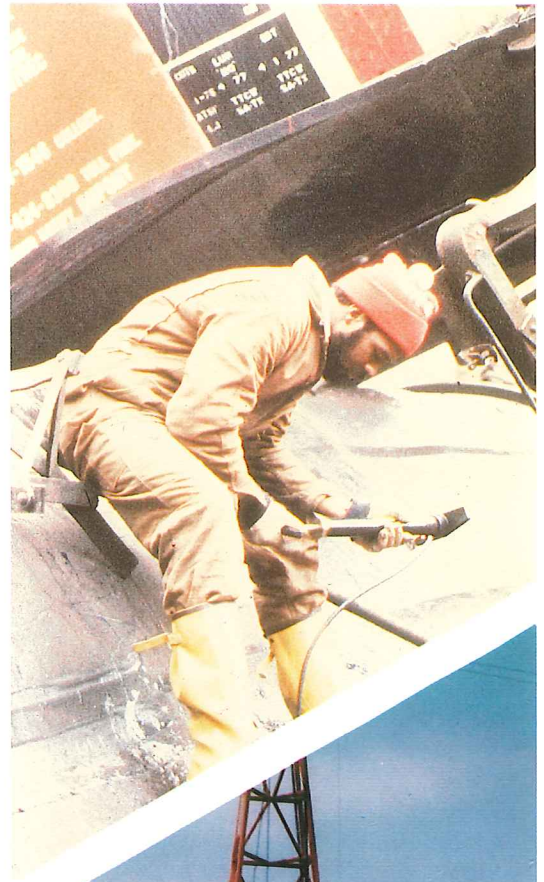
**O.H. personnel and equipment are as diversified as the situations we encounter. To coordinate activities, experienced supervisory personnel are deployed to each site.**

Unique to O.H. Materials are mobile activated carbon filtration systems, designed and built to serve our customers. Our systems comprise the only mobile operation of its kind in the U.S. owned and operated by private industry.

O.H. expertise has also provided a technological breakthrough in tank car patching capabilities. When properly utilized, tank patching reduces your potential liability by limiting product loss, spill cleanup costs, additional personnel and property exposures and costly loss of operating revenues. Successful patches have been safely applied by our crews to various types of hazardous material containers.







Through the use of our proprietary equipment, and our familiarity with new procedures and techniques, O.H. crews can complete the job expediently in the most safe and cost-effective manner.



## Communication

Communication plays a vital role in our ability to handle the diverse situations we encounter. It is essential not only in dealing with our clients, but with our personnel as well.

In any emergency or a situation threatening the safety of the environment and even lives, conditions demand instant and knowledgeable decisions and directives for crews. To provide that direction, we have developed an integrated communication system that relays necessary information to all personnel en route to and at the spill site.

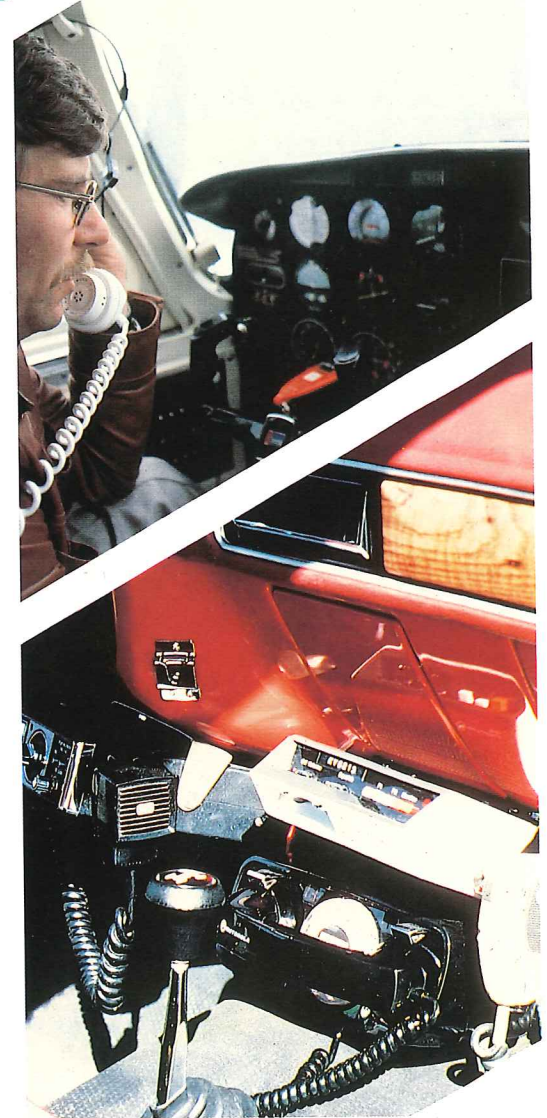
All O.H. response lead vehicles are equipped with citizen band radios, marine band radios, the company's own UHF radio system and radio telephones to assure constant and direct communication.

Hand-held UHF radios tie all crews into the communication system to more efficiently coordinate all on-scene activity. Telephone computer hookups also provide the necessary communication with divisional offices and with headquarters in Findlay, Ohio.

Each division is capable of handling normal spills and each has direct computer contact with headquarters for required chemical analysis and other backup services.



**From the time crews are dispatched until the job is completed, workers are in contact with divisional offices and supervisory personnel through our sophisticated network of communication.**



# *O. H. Materials, Inc.*

**Oil & Hazardous Material Spill  
CONTAINMENT & CLEANUP**

*24-hour number*

**419-423-3526**

**P.O. Box 1022—Findlay, Ohio 45840**

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***NATIONAL RESPONSE CENTER***

**1-800-424-8802**

O.H. Materials, Inc. is dedicated to providing the kind of effective, economical emergency response necessary to alleviate the hazard, mitigate the damage and restore environmental integrity.

O. H. MATERIALS CO.  
P. O. BOX 1022, Findlay, Ohio  
24 HR. PHONE 419/423-3526

EXPERIENCE DATA PARTIAL LISTING

<u>LOCATION</u>	<u>MATERIALS</u>	<u>AMT. SPILLED</u>
St. Paul, MN	#4 Oil	5,600 GAL.
Jacksonville, FLA	Pesticides	16,000 GAL.
Dittmer, MO	Chlorobenzenes, PCB, Solvents, Ethers, Phenols	4,600 BBL.
Cuba, NY	Petroleum Naptha	5,600 GAL.
Bay St. Louis, MS	Kepone, Mirex, other pesticides	147 BBL.
Rushville, OH	Monomethylamine, Phosphorus Trichloride, Ammonium Nitrate, Chloroform, LPG etc.	UNKNOWN
Detroit, MI	#2 Diesel	20,000 GAL.
Chicago, ILL	Polychlorinated Biphenyls	800 GAL.
Hagerstown, MD	White Phosphorus	37,000 LBS.
Selma, AL	Aniline Oil	450 GAL.
Benson, KY	Acrylonitrile, Hydrocyanic Acid, Lube Oil	7,000 GAL.
Monticello, ARK	#6 Oil	7,000 GAL.
Lodi, OH	Latex Paint	60,000 GAL.
Newark, NJ	Hydroflouric Acid, Benzene, Phosphorus, Pyridine	1,000,000 GAL.
Arlington, NEB	Anhydrous Ammonia	UNKNOWN
Cincinnati, OH	Phenol	21,000 GAL.
Atlanta, GA	Acids, Arsenic Trioxide/Pentoxide, Copper Sulfate	4,500 GAL.
St. Marks, FLA	Oil	UNKNOWN
Sarnia, Ontario	Ethyl Acrylate	UNKNOWN
Clearfield, PENN	Phosphorus Trichloride	2 BBL.
Milwaukee, WS	Bunker Oil	15,000 GAL.
Charlotte, NC	50% Caustic Soda	UNKNOWN
Alexandria Bay, NY	#6 Oil	308,000 GAL.
Louisville, KY	Industrial Wastes	28,000 BBL.
Millbury, OH	Hydrogen Peroxide (90%)	2,500 GAL.
Dillsboro, IN	Methyl Acrylate, Cresol Lube Oil	40,000 GAL.
Jackson, MISS	Animal Fat	3,000 GAL.
Forest, OH	Trichloroethylene, Methylene Chlorine	4,500 GAL.
Crestview, FLA	Anhydrous Ammonia, Chlorine	
Andover, NY	Raw Linseed Oil	7,000 GAL.
Atlanta, GA	Monzalite sand (radioactive)	30,000 LBS.
Hanover, OH	Ethylene Oxide, Ethyl Acrylate, Acetaldehyde	52,000 GAL.
Ottuma, IO	Isooctyl Alcohol, Propylene	3,000 GAL.
Charleston, SC	Crude Oil	15,000 GAL.
Conyers, GA	Hexanol, Octanol, Decanol, Carbon Dioxide	12,000 GAL.
Woodland Park, MI	Phenol, Vinylidene Chloride, Ethylene Oxide	80,000 GAL.
Lasalle, ILL	Styrene	2,000 GAL.
Montezuma, IN	LPG, Denatured Alcohol	47,000 GAL.
Forest, OH	Hexavalent Chrome	700 GAL.
Linden, NJ	Sulfur Trioxide	12 BBL.
Lima, OH	Vinyl Chloride, Calcium Metasilicate	1,500 GAL.
Bowling Green, KY	Toluene Diisocyanate	UNKNOWN
Myersville, OH	Crude Oil	100,000 GAL.
Erie, PA	Gasoline	5,000 GAL.
Ithaca, NY	Monochloroacetic Acid	30,000 LBS.
Cincinnati, OH	Chlorosulfonic Acid	14,000 GAL.
Memphis, TN	Methyl Parathion, EPN, other Pesticides	
Uhrichsville, OH	Tetrahydrofuran	9,000 GAL.

EXPERIENCE DATA PARTIAL LISTING CONTINUED

<u>LOCATION</u>	<u>MATERIALS</u>	<u>AMT. SPILLED</u>
Point Pleasant, WV	Epichlorohydrin	20,000 GAL.
Laporte, IN	Phosphorus	1,500 GAL.
Findlay, OH	Propylene Dichloride, Ditertiary Nonyl Polysulfide	45,000 GAL.
Basset, VA	Hydraulic Oil	1,000 GAL.
Bedford, IN	Super Phosphoric Acid	2,000 GAL.
Elkhorn, WS	Arsenic Trioxide	65 TONS
Akron, OH	Phenolic Mercury Acetate	17 BBL.
Danville, ILL	Xylene	700,000 GAL.
Lafayette, IN	Picric Acid, Nitroglycerin, Phosgene, Metallic Sodium, Nitrocellulose, Explosives	41 BBL.
Lacrosse, WS	JP4	113,000 GAL.
Knoxville, TN	Cyanide, Waste	1 BBL.
Cordova, AL	Methyl Isobutyl Ketone, MEK, Paint, Waste Oil	120 TONS
Star City, IN	Formaldehyde	20,000 GAL.
Summit, ILL	Asphalt	20,000 GAL.
Tiffin, OH	Chromic Acid	28,000 GAL.
Ft. Wayne, IN	Sodium Hydroxide	5,000 GAL.
Delaware, OH	Heavy Metals, Chlorinated Hydrocarbons	72,000 GAL.
Sarnia, Ontario	Propylene	78 Tank Cars.

# O. H. Materials Co.

Oil and Hazardous Material Spill Containment and Clean-up

Regional Offices:  
Ottawa, Illinois  
Atlanta, Georgia  
Washington, D.C.

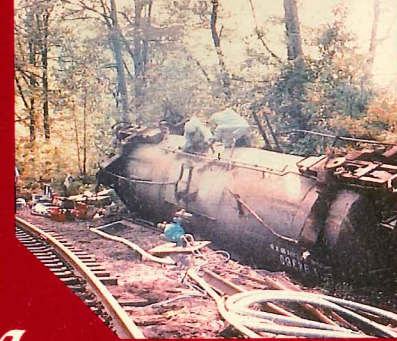
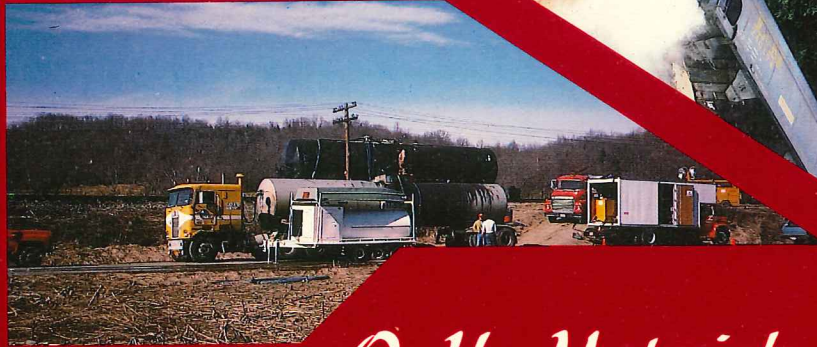
P. O. Box 1022  
Findlay, Ohio 45840  
Telephone (419) 423-3526  
1-800-537-9540

## PARTIAL LISTING OF PRODUCTS HANDLED

ACETALDEHYDE	CHROME ACETATE
ACETIC ACID	CHROME OXIDE
ACETIC ANHYDRIDE	COBALT AMMONIUM PHOSPHATE
ACETONE	COPPER SULFATE
ACETYLENE	CORN SYRUP
ACRYLIC ACID	CRESOLS
ACRYLONITRILE	CRUDE OILS
ALDRIN	CYCLOHEXANES
ALLYL ALCOHOL	DALAPON
ALUMINA HYDRATE	DIAZINON
ALUMINUM CHLORIDE	DICAMBA
ALUMINUM SULFATE	DDT
AMMONIUM HYDROXIDE	DICHLOROBENZENE
AMMONIUM NITRATE	DICHLOROMETHANE
AMYL ACETATE	DICHLOROPHENOL
AMYL ALCOHOL	DICHLORVOS
ANHYDROUS AMMONIA	DICHLOROPROPANE
ANILINE	DICYCLOPENTADIENE
ARSENIC ACID	DIELDRIN
ARSENIC TRIOXIDE	DIESEL FUELS
ASBESTOS	DIISOBUTYLENE
ASPHALT	DIMETHYLAMINE
BENZENE	DIMETHYLHYDRAZINE
BENZYL CHLORIDE	DINITROTOLUENE
BROMINE	DIOXANE
BUTADIENE	DIOXIN
BUTANE	DIQUAT
BUTYL ACETATE	DURSBAN
BUTYL ALCOHOL	ENDOSULFAN
BUTYL CELLOSOLVE	ENDRIN
BUTYLENE	EPICHLOROHYDRIN
CADMIUM NITRATE	EPSILON CAPROLACETONE
CALCIUM CARBIDE	ETHANE
CALCIUM HYDROXIDE	ETHER
CALCIUM HYPOCHLORITE	ETHYL ACETATE
CALCIUM METASILICATE	ETHYL ACRYLATE
CAPTAN	ETHYLENE
CARBON BLACK	ETHYLENE GLYCOL
CARBON TETRACHLORIDE	ETHYLENE OXIDE
CAUSTIC SODA	ETHYL ETHER
CHLORACETIC ACID	ETHYL P-NITROPHENYL
CHLORINE	THONOBENZENE (EPN)
CHLORDANE	FORMALDEHYDE
CHLOROBENZENE	FORMIC ACID
CHLOROFORM	FURFURAL
CHLOROPHENOLS	GASOLINE
CHLOROSULFONIC ACID	GLYCERINE

GUTHION  
HEPTACHLOR  
HEPTANE  
HEXACHLOROCYCLOPENTADIENE (C-56)  
HEXAETHYL TETRAPHOSPHATE (HETP)  
HEXANE  
HEXAVALENT CHROME  
HEXENE  
HYDROCHLORIC ACID  
HYDROFLUORIC ACID  
HYDROGEN CHLORIDE  
HYDROGEN CYANIDE  
HYDROGEN PEROXIDE  
HYDROGEN SULFIDE  
HYDRAZINE  
ISOBUTYL ALCOHOL  
ISOPRENE  
ISOPROPYL ALCOHOL  
JET FUELS  
KEPONE  
KEROSENE  
LATEX  
LEAD ACETATE  
LINDANE  
LINSEED OIL  
LNG  
LPG  
MALATHION  
MERCURY  
METHACRYLIC ACID  
METHANE  
METHANOL  
METHYL ACRYLATE  
METHYL ALCOHOL  
METHYL AMYL KETONE  
METHYL BROMIDE  
METHYL CHLORIDE  
METHYL ETHYL KETONE  
METHYL ISOBUTYL CARBINOL  
METHYL ISOCYANATE  
METHYL METHACRYLATE  
METHYL PARATHION  
MOLYBDIC OXIDE  
MONOCHLOROACETIC ACID  
MONOMETHYLAMINE  
MINERAL SPIRITS  
NAPTHAS  
NAPHTHALENE  
NICKEL CARBONATE  
NITRIC ACID  
NITROBENZENES  
NONENE  
OCTADECANE  
OCTENE  
OILS - #1 thru #6

OLEUM  
ORTHOCHLOROPHENOL  
PARAFORMALDEHYDE  
PARANITROANILINE  
PARATHION  
PENTACHLOROPHENOL  
PENTANE  
PHENOL  
PHORATE (THIMET)  
PHOSGENE  
PHOSPHINE  
PHOSPHORIC ACID  
PHOSPHORUS  
PHOSPHORUS TRICHLORIDE  
PICRIC ACID  
PCB's  
POTASSIUM CYANIDE  
POTASSIUM HYDROXIDE  
POTASSIUM PERMANGANATE  
PROPANE  
PROPYLENE  
PROPIONIC ACID  
SODIUM  
SODIUM BICHROMATE  
SODIUM BISULFITE  
SODIUM CHLORATE  
SODIUM CYANIDE  
SODIUM FLUROIDE  
SODIUM HYDROXIDE  
SODIUM HYPOCHLORITE  
SODIUM SILICATE  
STYRENE  
SULFUR  
SULFUR DIOXIDE  
SULFUR TRIOXIDE  
SULFURIC ACID  
TALLOW  
TETRAETHYL  
DITHIOPYROPHOSPHATE (TEDP)  
TETRAETHYL LEAD  
TETRAHYDROFURAN  
TITANIUM DIOXIDE  
TITANYL SULFATE  
TOLUENE  
TOLUENE DIISOCYANATE  
TOXAPHENE  
TRICHLOROETHYLENE  
TURPENTINE  
VINYL ACETATE  
VINYL CHLORIDE  
VINYLIDENE CHLORIDE  
XYLENES  
ZINC ACETATE  
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*O. H. Materials, Inc.*  
Oil and Hazardous Material Containment and Cleanup

