

HAZARDOUS

MATERIALS & WASTE MANAGEMENT

SEPTEMBER/OCTOBER 1983

\$3.50



**Workers' Right-To-Know Issue
Legal Implications Of Site Cleanups
Rx For "Leakers"**



Photo Courtesy of O.H. Materials Co.

On-Site Waste Treatment: Just One Of Ohio Firm's Diversified Services

By Margaret M. Nemec

Firms in the hazardous materials and waste industry come in all shapes and sizes. Some are large and very diversified. Others are small and offer specialized services. Well, here's a company that is small in terms of its total staff of 250, but is a giant in the industry in terms of its comprehensive services. The company is O.H. Materials, headquartered in Findlay, Ohio.

If the name doesn't ring any bells now, it may do so in the future for the company is experiencing spectacular growth both in human resources and diversity of services.

After a recent visit to the company, this editor left with the feel-

ing that it is one of the best kept secrets in industry. As a matter of fact, that's exactly how Randy Van Dyne, marketing development manager, describes his employer. Van Dyne, on the job for a little over a year, is the first in this company post charged with removing the secrecy and extolling the firm's benefits.

Company Roots

O.H. Materials (the O.H. stands for Oil and Hazardous materials) did not start out as an emergency response company. Actually, some 13 years ago it was manufacturing industrial and public sewage treatment plants in Ohio. It moved

into emergency response quite by accident.

The accident was an oil spill off a main highway just a hop and skip away from Findlay headquarters. A company principal, driving by at the time, stopped and offered his assistance, including the use of the company's vacuum truck to remove the oil that was polluting a nearby creek. That's how the company launched its oil spill and emergency response business.

The rest is history. Thirteen years since that small oil spill, the privately-held company has blossomed and now offers comprehensive services, including:

- *Emergency Response:* oil spill and chemical containment and

cleanup; chemical transfer and tank patching; explosive material handling segregation, disposal, and destruction; radioactive materials cleanups.

- *Temporary Treatment Services:* groundwater treatment; auxiliary industrial wastewater treatment; oil/water separation; leaking underground storage tanks; lagoon cleanups; sludge dewatering; recovery.

- *Superfund Cleanups:* surface cleanups; on-site treatment and destruction; liquid bulking; soil decontamination; groundwater treatment; management of TSD Facility needs; site restoration.

- *Decontamination Services For Buildings And Equipment:* interior and exterior walls; process equipment; building or material dismantling; asbestos and PCB cleanups; crushing, cutting, and handling of materials for disposal.

- *Explosive Materials Control:* decontamination/transfer of explosive materials or residues; segregation and disposal of shock-sensitive materials; demilitarization and demolition services.

- *Waste Treatment Services:* solid/liquid separation; biological studies; adsorption (carbon and polymeric); ion exchange; membrane techniques; and thermal destruction and product recovery evaluations.

- *Analytical Services:* field and mobile laboratories; sample collection and preparation; protocol development; and metal, inorganic chemical, and priority pollutant analyses.

And while the company offers a wide variety of services, it also has several unique specialties, including on-site treatment of wastes, which eliminates waste transportation costs and reduces generators' liabilities. Among these on-site capabilities are:

- *In-Situ Biodegradation:* selected strains of bacteria, which are found to have a natural appetite for the contaminant in question, are introduced to the area and literally eat up the pollutant. Example, a manufacturer in the midwest had 200,000 cubic feet of soil contaminated with an organic solvent. The company was going to

ship the soil to a disposal site some 100 miles away at a conservative estimate of \$600,000. Biological treatment by O.H. Materials shaved \$400,000 off the tab.

- *Recovery And Treatment Of Underground Contaminants:* the O.H. system hydronamically controls groundwater flow by injection and pneumatic recovery through multiple injection and recovery wells. A flushing medium, usually water, is injected into the soil to flush contaminants.

- *Carbon Adsorption System:* these systems utilize the adsorptive power of activated carbon to trap and remove dissolved organic compounds from water.

Organization And Structure

O.H. Materials Co. is owned by The KBI Corp. Two brothers of this corporation, James Kirk, president, and Joseph Kirk, executive vice president, manage O.H. Materials.

"Our key advantage is that we can provide an entire package to a customer — a turn-key approach."

The company employs a combination of centralized and decentralized management. All emergency response calls come into a switchboard at headquarters which is staffed on a 24-hour, seven-day-a-week basis. Depending on the location of the emergency, staffers are deployed from Findlay or from one of seven service centers located in Ottawa, IL, Trenton, NJ, Atlanta, GA, Orlando, FL, Lexington, KY, Minneapolis, MN, and Baton Rouge, LA.

Much of the specialized equipment used by the company to handle spills and emergencies, and an arsenal of personal protective clothing and equipment are stock-

ed in the Findlay site and shipped to emergency sites as needed. Each service center, however, stocks the basic equipment to handle typical emergencies. All equipment purchases are made by the Findlay office.

Our visit of the facilities included a walk through the numerous trailers used for the thousands of emergencies that range in completion time from half a day to many months. Trailers, which are customized at Findlay include mobile laboratories, workers galleys, decontamination units, and administrative offices.

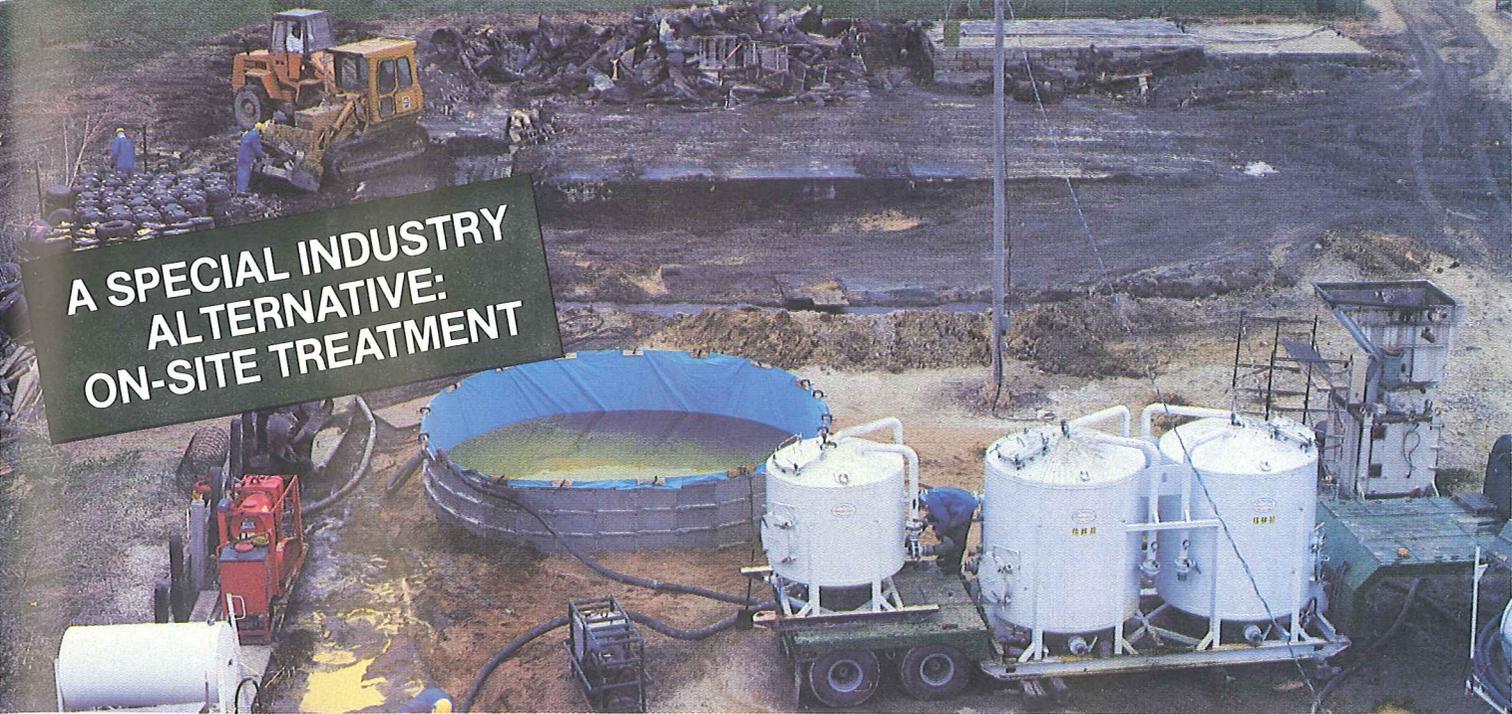
A metalworking shop in Findlay makes specially designed company equipment, including barrel grapplers and punchers for waste site cleanups; compatibility chambers for bulking of compatible liquids, portable clarifiers, mobile ion exchange equipment, and carbon filtration units.

Job Specifics

We asked Van Dyne about the kinds and number of jobs the firm handles. The company has completed more than 2,000 hazardous waste cleanups, ranging in cost from \$500 to \$26 million, and has handled just about every possible emergency and hazardous materials situation. Added Van Dyne, "There are very few chemicals that we are not familiar with."

No problem is too small or too large for the company. For instance, you may recall reading about the unfortunate couple in Cleveland, Ohio who sunk their savings into the restoration of their Victorian home only to discover their property was a ticking time bomb. Hundreds of vials of radium — 226 had been buried on their property and in a backyard barbecue. Decontamination, covered under state and federal (Superfund) funds, was handled by O.H. Materials.

At the other extreme, O.H. Materials has cleaned up some of the biggest and worst waste sites in the country. Included are Chem-Dyne (see accompanying story on these pages), Love Canal, and Valley of the Drums. In addition, the com-



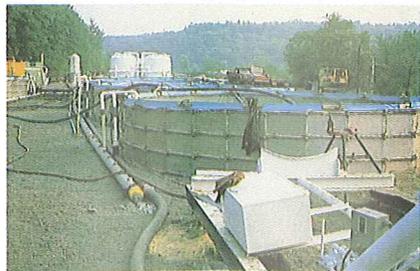
**A SPECIAL INDUSTRY
ALTERNATIVE:
ON-SITE TREATMENT**

New alternatives for on-site treatment of environmentally regulated materials.

OHM feels the real answer to hazardous materials problems is the destruction of these materials once and for all. This is done on-site, eliminating high transportation and disposal costs and attendant liability concerns. OHM therefore offers a turn-key approach to hazardous materials management including...

ON-SITE TREATMENT

Various methods to treat hazardous chemicals on-site are available. These include clarifiers, pressure filters, stripping units, centrifuges, biological treatment systems, carbon adsorbers, ion exchange units, explosive handling systems, chemical



treatment systems, and membrane systems. Our proven mobile systems neutralize or destroy hazardous waste at reasonable cost, without a capital investment.

UNDERGROUND RECOVERY

When efficient cleanup and site restoration is essential. The OHM underground recovery system can flush out contaminants from the



surrounding soil or affected ground water for recovery, treatment, and/or degradation on-site.

DECONTAMINATION SERVICES

Contamination of buildings, process equipment, storage tanks, etc. is cost effectively handled by our specialized



equipment and skilled personnel. When coupled with our on-site treatment capability, our decontamination services result in a permanent, economical solution.

ANALYTICAL SERVICES

OHM personnel offer quick turn-around time in identifying hazardous substances. This is accomplished in our mobile laboratories, on-site, or at



our other laboratory facilities.

EMERGENCY RESPONSE

OHM maintains a fleet of strategically located aircraft and mobile equipment, an on-call staff of highly qualified and experienced people, linked by a modern communications system for immediate response... 24 hours a day. We are available to solve any emergency problem no matter how small or large.



If you're interested in having any hazardous material problem permanently resolved... Consider the Alternative... call O.H. Materials, P.O. Box 551, Findlay, OH 45840. Phone 419-423-3526 or 800-537-9540.

O.H. Materials Co.

Offering progressive solutions throughout the U.S. and in Canada.

pany helped clean up the aftermath of the Chemical Control Corp. fire in Elizabeth, NJ where more than 60,000 barrels were removed.

Spectacular Growth

Indeed, O.H. Materials has come a long way since its emphasis on oil spills in the early 1970s. In those days, it was known as Ohio Hygienic Co. and its ratio of emergency response to remedial work was 90-10. Van Dyne currently estimates the ratio is 10 percent emergencies and 90 percent remedial planned cleanups. These emergencies include oil spills and other short-term jobs. Van Dyne added that it is not unusual for the company to juggle an average of 17 jobs at once.

As for human resources, the company has doubled in size every year since 1978 and now employs a host of professional personnel, technicians, and support personnel.

When asked what he attributes the company's success to, Van Dyne said, "Our key advantage is that we can provide an entire package to a customer — a turn-key approach. And, if there is a particular aspect of a job that we can't handle ourselves, we can subcontract it. In addition, our company is not tied into any particular technology. We offer diversified services."

What's next on its slate of services? Van Dyne notes that the company is addressing the pressing need throughout the country to detect leaking underground storage tanks. According to Van Dyne, there are nearly one million of these tanks, and anywhere from 10 to 15 percent of them are leaking. The problem, he said, is that many of the storage tanks were installed following World War II, and have reached their 20 to 30 year life span. Virtually every industry utilizes underground storage tanks for petroleum, chemicals, and other materials storage.

O.H. Materials meets the need with a comprehensive program that includes detection, monitoring, and spill containment and restoration.

Chem-Dyne Cleanu

It was a scorching hot day in Hamilton, Ohio, an industrial city of 65,000 not too far away from the Great Miami River and just a drive away from Cincinnati. Despite the intense heat and high humidity, it was business as usual for the crew of 30 O.H. Materials workers, most of which were garbed in splash suits and equipped with breathing air as they went about the dirty, time-consuming and tedious chore of cleaning up Ohio's worst waste site — Chem-Dyne.

HMWM visited Chem-Dyne in early July to witness cleanup activities as well as to see O.H. Materials in action.

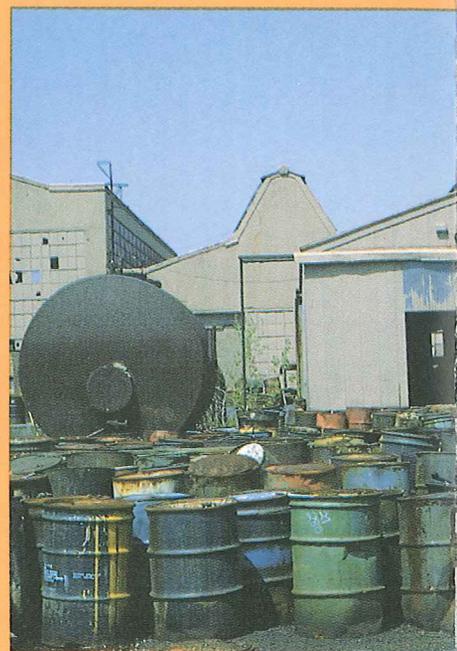
Checked History

Chem-Dyne Corporation began business in 1974 as a chemical waste transfer and storage facility. While in business, it handled a wide variety of wastes, including pesticides, chlorinated compounds, PCBs, acids, resins, solvents, heavy metals, and cyanide wastes. In 1980, after failing to meet a court-ordered waste reduction schedule, the site was closed and placed in the control of a court-appointed receiver in an effort to utilize corporate assets to clean up the site. These efforts, in addition to voluntary removals by generators of some of the wastes at the site, reduced the waste inventory significantly until the corporation went bankrupt.

In October 1981, the site made EPA's national priority list and was also deemed the worst site in the state by the Ohio EPA.

Chem-Dyne was also a controversial subject when EPA's former head of Superfund, Rita Lavelle, was accused of striking "sweet-heart deals" here and elsewhere. Nonetheless, the deal at Chem-Dyne netted agreement by more than 100 of the nearly 300 companies identified as generating or transporting waste at the site to pay \$2.4 million toward surface cleanup alone.

After some legal wrestling



matches, the U.S. Army Corps of Engineers was granted access to the site and accepted cleanup bids in late 1982. The Findlay, Ohio firm was awarded the contract with its \$1.74 million bid.

Surface cleanup, however, didn't begin until this May under a cooperative arrangement with the U.S. Army Corps of Engineers, the U.S. EPA, Ohio EPA, and O.H. Materials Co. Greeting O.H. Materials in early May were 8,600 drums and 20 to 30 different storage tanks as well as refuse inside buildings on site.

Progress Report

HMWM's tour guides for the day were O.H.'s Randy Van Dyne, marketing development manager, and John Hitchings, project engineer. The tour, for the most part, was restricted to viewing the 4.1 acre site from a 14-foot high wooden tower constructed exclusively for viewing purposes. In addition, HMWM toured the various customized mobile trailers on the site and was treated to lunch in the workers' galley. Chef Robert Steyer serves the crew hearty, home-cooked breakfasts and lunches and stocks his pantries with a wide variety of goodies.

Up: The Barrels Are Almost Gone



Lunch that day was prime rib, which was surprisingly good. Van Dyne was delighted to find one of his favorite snacks – Fig Newtons.

The company employs a full-time cook at major cleanup sites. And, as expected, the cook is hired with great care since workers are quick to grumble if the chow isn't up to par. Of course, the O.H. galleys will never earn four stars, but the meals are a highpoint of a worker's day.

Van Dyne described the work force at Chem-Dyne as predominately young (19 to 24), single men. He noted that the men are bused in from the Findlay area each Monday morning and are brought home on Friday after work. During the work week workers are housed in a nearby hotel.

Perched atop the tower, we observed the cleanup. Workers safely inside airconditioned cabs of their bright yellow trackhoes, painstakingly removed one barrel after another, overpacked barrels in salvage drums when necessary, and transported the barrels to a staging area. As a safety feature, workers don't physically handle the barrels. A specially-designed, remote controlled barrel grappler

does that job and a similarly fashioned barrel puncher puts holes in drum lids for samplings.

The staging area itself was humming with activity. It is specially constructed to prevent any contaminants from escaping. Inside the area are three compatibility chambers where wastes are stored following sampling and analysis. A mobile lab right on the site analyzes the samples and turns out results within two to three days. Liquid wastes are pumped from the compatibility chambers directly into tank trucks which depart for designated waste sites. Solids are also loaded on trucks in the staging area and then carefully tarped.

Vehicles next proceed to a decontamination pad where they are hosed down before leaving the site. Any contaminants are then collected in a sump and treated with other contaminated water (rainwater, water found on the site, water from workers' showers, etc.). The on-site waste water treatment system employs a flash mix tank, clarifier, and sand filter, and carbon adsorption. Treated water is then sprayed on the site for dust control.

Chem-Dyne Update

HMWM called on John Hitchings for a progress report since our July visit. He told us that the completion date has been pushed from the end of September to the end of October due to the discovery of more solids on site than originally expected. Solids, he noted, are more difficult and time consuming to handle than liquids. They are more difficult to get at and their flashpoints dictate handling and disposal activities. For instance, those with low flashpoints require drumming in accordance with DOT packaging requirements. Nonflammables, on the other hand, can be shipped in bulk, depending on flashpoint.

We asked Hitchings how much waste has left the site as of the end of September. Approximately 160,000 gallons of liquid waste

were shipped, the majority of which (60 percent) represented base neutrals – non-acidic, inorganic materials and some cyanides, and the remaining 40 percent were flammables. Approximately 4,000 tons of solids have been hauled away, including crushed drums, flammable and nonflammable solids.

Other than this delay, surface cleanup is proceeding very smoothly and is viewed by O.H. Materials staffers as a typical job. Hitchings said the biggest problem faced at Chem-Dyne was one of "logistics – dealing with one drum at a time and tracking and recording each and every drum for evidentiary purposes." Two full-time O.H. Materials staffers diligently recorded all drum numbers, any existing identifiers, and sampling results.

The hot summer months, however, prompted changes in the work schedule. Said Hitchings, "We were out there by the crack of dawn and quit in early afternoon so that workers wouldn't be exposed to the intense heat for long periods." In addition, workers took more breaks and a full-time safety professional was on hand to detect any signs of worker heat stress."

Summary

This is just one chapter in the Chem-Dyne cleanup. HMWM will keep you posted on other facets, such as monitoring and groundwater activities. For instance, Pedco Environmental Inc., a Cincinnati firm subcontracted by O.H. Materials is responsible for ambient air monitoring. The firm put nine air-monitoring stations along the perimeter of the site to ensure that residents are not exposed to excessive levels of airborne contaminants. To date, this has not been a problem.

Residents of Hamilton, which have shown their appreciation of O.H. Materials' effort by baking cakes and stringing banners, will breathe a sigh of relief when the site is finally cleaned up.