

Hazardous Materials Removal Worker

by
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One of the occupations described on the Workforce Info website

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Hazardous materials—commonly referred to as “hazmat” among persons who work with them—are substances that pose a threat to safety, human health, and the environment. Some hazardous materials, such as asbestos and lead, can be found in materials once used to construct our homes and workplaces. Heavy metals, including mercury and cadmium, abound in computers and other electronic devices, and find their way into the soil and air when the devices are discarded. Other hazardous materials are the byproduct of energy production, as with nuclear waste, or result from the treatment of wastewater. The Environmental Protection Agency (EPA) alone monitors more than 500 specific hazardous wastes, and estimates that some 40 million tons are produced in the U.S. each year.

Given the prevalence of these hazardous materials throughout our industrial processes and products, demand for workers qualified to deal with their disposal is strong. Hazardous materials removal workers are trained to identify, remove, pack, transport, and dispose of these materials in ways that adhere to strict guidelines codified in various federal and state laws and regulations. In Alaska, these workers are employed in several industries including both heavy and residential construction, sanitary services, oil and gas extraction, and freight transportation and warehousing. The work performed depends upon the hazardous substances involved.

Asbestos is a commercial term given to a group of six fibrous minerals that occur naturally. Because these fibers are basically inert, and thus resistant to burning and dissolving and chemical reactions, they were once commonly used in building

materials for insulation and fireproofing and in automotive brakes and textile products. When these fibers are disturbed, a common occurrence in construction renovation and demolition, they can become airborne. Studies have linked the inhalation of these fibers to higher incidences of lung cancer and asbestosis, a scarring of the lungs that can lead to disability and death.

Like asbestos, lead was once commonly incorporated into products due to its low melting point and corrosion resistance. Used as a paint additive until the late 1970s, lead is nearly ubiquitous in older homes and buildings. Lead laden dust particles and fumes pose a hazard when inhaled, with increased concentration in the bloodstream leading to fatigue, decreased brain function, and higher incidence of miscarriage among pregnant women.

Asbestos and lead abatement workers are trained to identify, remove, and dispose of these materials in a manner that minimizes exposure. Personal protective gear, such as respiratory masks and body suits, is worn to protect against inhalation and skin exposure. Areas where material removal takes place must be sealed off to prevent the escape of fibers and dust. Chemical sprays and putties are applied to surfaces containing asbestos and lead, allowing workers to scrape the materials from surfaces. Vacuums with special filters are then employed to gather the hazardous substances and confine them to containers approved for their transport.

Some hazmat workers are trained to respond to emergency spills of hazardous substances. The Alaska Department of Environmental Conservation estimates that some twenty extremely

hazardous substances are commonly used in or are a by-product of industrial operations in the state, including hydrogen sulfide gas, anhydrous ammonia, chlorine gas, and sulfuric acid. In the event of a spill of these dangerous chemicals, special emergency response teams are deployed to mitigate the potential threat. In the most severe cases, termed Level A, hazmat teams of up to eight people don fully-encapsulating suits and self-contained breathing apparatus to take "offensive" action to stop or contain the release. In cases where chemicals leach into the ground, earth-moving equipment is used.

Variety of opportunities

Hazardous materials removal worker is a broad occupational title that encompasses a variety of job titles and duties. Using any of a number of job search engines, a search on hazardous materials removal workers will return job titles including:

- Hazardous Materials Technician
- Chemical Spill Specialist
- Soil Remediation Field Tech
- Hazardous Materials Handler
- Hazardous Waste Disposal
- Asbestos Abatement
- Irradiated Fuel Handler
- Hazmat Responder
- Hazmat Truck Drivers
- Decontamination Technicians

The skills, education, and training required for these occupations vary depending on the types of hazardous materials a worker is likely to encounter and the worker's role in the remediation process.

In general, anyone who works with hazardous materials on the job must have Occupational Safety and Health Administration (OSHA) training in hazard communication, emergency response planning, personal protective equipment, and US Department of Transportation hazardous materials training. Workers involved in removing hazardous materials or responding to spills must also obtain a Hazardous Waste Operations and Emergency Response (HAZWOPER) Certificate.

The Alaska Department of Labor and Workforce Development (DLWD) certifies asbestos removal workers upon the completion of a course that

covers state OSH regulations, federal EPA regulations, and the medical ramifications of working with asbestos. In 2002, there were 1,229 persons licensed for asbestos removal.

While hazardous materials removal workers do not generally need education beyond a high school diploma, the various types of work performed can require specific on-the-job skills and knowledge. Workers dealing with asbestos and lead abatement often work at construction and demolition sites where knowledge of the construction trade is important, including the use of heavy machinery. A background in chemistry can be vital to a worker who is on a first responder hazmat team where identification of hazardous materials is the first priority. Because workers must usually wear extensive protective gear for extended periods, physical stamina can be an important trait.

Employment Outlook

Most hazardous materials removal workers work in the private sector, and some work for federal, state, and local government. In 1976, congress passed the Resource Conservation and Recovery Act, which signaled the government's entry into regulating hazardous waste. The EPA, Department of Defense, and the Department of Energy all have a hand in monitoring and facilitating the cleanup of hazardous waste sites across the country. State and local governments employ hazardous materials workers in public safety, water treatment, waste management, and to mitigate the effects of chemical spills and accidents.

Employment prospects for hazardous materials removal workers are promising, both in Alaska and nationally. Employment is projected to grow 33 percent through 2010.

Earnings

According to Alaska's 2001 wage survey data, hazardous materials removal workers enjoy relatively high earnings. The statewide median wage, the wage at which half of these workers earn more and half earn less, was reported at \$24.91. This translates to an annual salary of nearly \$52,000, assuming a standard 2,080 hour work year.