



**9th Annual
Environmental
Cleanup
Report**

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submitted to:

Governor John Kitzhaber



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Environmental Quality Commission

by:

**Langdon Marsh, Director
Department of Environmental Quality**

**Mary Wahl, Administrator
Waste Management and Cleanup Division**

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Introduction

The Evolution of Environmental Cleanup in Oregon

1997 marked the 10th anniversary of the passage of Oregon's first environmental cleanup law. DEQ's cleanup program has achieved much and changed significantly in those 10 years.

Ten years ago, the program's limited resources forced DEQ to focus on only a handful of the most contaminated sites. Often we had to rely on enforcement powers, requiring parties to take cleanup action. Significant staff resources had to be assigned to oversee each step of these complicated cleanups. During this period, many contaminated sites were identified but DEQ did not have sufficient staff to evaluate them.

Over time, however, owners of other properties with known or suspected contamination began to press for a quicker route to meet their cleanup obligations. Some were concerned about liability under state and federal laws, others needed a clean bill of health to sell their property, and still others simply wanted to erase the stigma and risks of contamination. In 1993, DEQ responded by establishing a voluntary cleanup process. In the voluntary program, property owners initiate the cleanup and agree to reimburse DEQ for its costs to oversee the cleanup. Some participants only ask DEQ to certify cleanup work they've done independently. Others want oversight throughout the process to ensure that the cleanup meets state requirements.

Since the establishment of the voluntary program, far more sites are being cleaned up. As a result, more of Oregon's environment and a larger number of Oregonians are being protected from exposure to toxic and hazardous substances. Economic development also benefits when concerns about contamination are addressed, allowing property development to move forward.

The way contaminated sites are cleaned up has also changed over the years as we have gained experience. Many of our new approaches are intended to speed up the cleanup process and reduce costs. These changes were reflected in the amendments to the cleanup law enacted by the 1995 Legislature and in the administrative rules required by the law.

The goal of cleanups in the early years was to remove or treat as much contamination as possible. Now cleanups aim to minimize the risk that pollutants will harm people or the environment. This means that some contamination may be left at the sites, but the process ensures that the risk of exposure to any remaining contamination is controlled. Because extensive scientific analysis can be involved in applying the new regulations, DEQ has provided tools and guidance to assist responsible parties. In addition, the new process

mandates close communication with affected parties and the public on how the risk is being managed.

As industrial and commercial property owners become more experienced in cleanup and better understand their obligations under cleanup laws, an increasing number of them choose to clean up without DEQ oversight. As a result, more “independent” cleanups are occurring and those property owners only seek DEQ approval after the fact. Also, a growing number of real estate developers and lending institutions are willing to invest in and clean up undervalued contaminated properties. In these cases, we offer liability protection through prospective purchaser agreements.

What Have We Accomplished?

DEQ has certified 392 hazardous substance sites as requiring “no further action” since the start of the program in 1988. A number were voluntary cleanup sites where work completed by responsible parties was sufficient to protect human health and the environment. At many of the sites, we found that the reported contamination either does not exist or does not pose significant risk to human health or the environment.

However, many more sites await investigation and cleanup. As of November, 1997, there were just over 1,550 sites with known or suspected contamination discovered by or reported to DEQ. Of these, 315 are in the process of being investigated or cleaned up. Although most projects, especially those in the voluntary program, will be done fairly quickly, others will take years to complete because of the extent and complexity of the contamination. The more complicated sites often involve groundwater contamination, which is very difficult to clean up.

Before DEQ begins working on sites, we screen them to determine if additional work is needed and assess their priority for further work. About two-thirds of the 1,550 identified sites have been through the screening and assessment process.

In addition to hazardous substance cleanups, DEQ also operates a separate program to oversee cleanups of leaking underground petroleum storage tanks. As with the hazardous substance cleanup sites, much has been accomplished, but many cleanups remain. As of November, 1997, the tanks program has approved more than 4,000 cleanups. About 2,500 of these cleanups are leaks from regulated motor fuel tanks. The remaining 1,500 are unregulated heating oil tanks, which make up an increasing share of tank cleanup work. Based on leaks reported, it is estimated that there are still nearly 3,000 regulated tank sites to be addressed in Oregon.

What’s Ahead for Cleanup in Oregon?

Significantly, the rate at which cleanups are completed and approved has accelerated. As a result, more Oregonians and their environment are protected from exposure to hazardous substances. However, new sites are reported to or discovered by DEQ at a steady rate of at least 150 a year. We also continue to find contamination affecting broad areas. One example is widespread groundwater contamination, such as that recently found in the communities of Keno and Spray. Another example is contaminated riverbed sediments, like those found in

the Columbia Slough. These are particularly difficult problems because the sources of contamination are hard to pinpoint and cleanup can be very complicated. Work on these areawide sites is vital to protecting the environment and the state's water resources.

We anticipate continuing to handle about 100 high priority enforcement and 200 voluntary cleanup sites concurrently. An increasing number of property owners have come forward to voluntarily clean up and we expect this demand to continue to grow as more "brownfield" properties – sites that have been long abandoned because of real or perceived contamination – are redeveloped.

For regulated underground tanks, we project that total releases reported will peak about the year 2002 and that it will take ten years at the current staff level to review and approve the backlog and expected new sites. We will also face increasing reports of heating oil tank releases. Although heating oil tanks tend to have less environmental impact than regulated tanks, they are an increasing focus for DEQ staff because of homeowner liability concerns.

1997 Program Accomplishments and Challenges

Highlights of our 1997 accomplishments include:

- Approved a record number of both hazardous substance and underground tank cleanups
- Increased the number of "active" sites – those being investigated or cleaned up
- Made significant strides in cleaning up major, high priority sites
- Enhanced the tools we use to achieve the goals of protecting human health and contributing to the long-term viability of Oregon's environment
- Engaged in efforts that will help us to clean up more effectively and efficiently
- Developed detailed guidance to provide responsible parties with the information they need to clean up sites
- Participated in brownfield redevelopment efforts to take advantage of the growing interest in abandoned properties
- Increased the number of prospective purchaser agreements negotiated
- Initiated site work under the dry cleaner program
- Worked with local governments to assist in redevelopment and cleanup
- Hosted focus group sessions with voluntary cleanup program participants to design program improvements
- Continued meeting with appointed cleanup program advisory committees, including a dry cleaner advisory committee

1997 was also a year of challenges. The funding sources supporting both underground storage tank and other hazardous substance cleanups have decreased significantly. With the help of the 1997 Legislature, we expect to have sufficient resources to maintain the current level of work except in two key programs – underground storage tanks and spill response. The tank program providing cleanup grants to gas stations was eliminated. We expect that some station

owners will not be able to afford upgrades and cleanup, and some may have to be paid for with the state's orphan funds. In addition, spill response staff was reduced 50%. As a result, we will be able to respond only to the most serious spills and spill prevention will be significantly curtailed. We continue to face the challenge of obtaining stable long-term funding for the cleanup programs.

Cleanup Activities

During the year ending June 30, 1997, DEQ approved cleanups at a record number of sites. The following summarizes cleanup activities in FY 1997. Details can be found in the chart on page 8.

Underground Storage Tank Cleanups

Responsible parties cleaned up 779 underground petroleum storage tank sites. This was a 31% increase from the previous year. About half of these – 393 – were leaks from motor fuel tanks regulated under state and federal law, and the remainder – 386 – were from non-regulated heating oil tanks.

The number of new releases from regulated tanks reported to the agency has slowed over the last two years. We expect it will continue to do so as Oregonians reap the benefits of stricter tank standards. The reported leaks from heating oil tanks, on the other hand, have been on a significant upswing over the last several years. Real estate disclosure requirements contribute to this upswing as does the fact that more aging tanks are beginning to fail.

Hazardous Substance Cleanups

In FY 1997, DEQ signed off on 42 hazardous substance cleanups, stating that no further action was required to protect human health and the environment. This was an increase of 17 sites, or 68%, over the previous year. In addition to these, 15 sites were determined not to require further work after the screening and assessment process.

We are currently working on 315 sites – 103 Site Response projects and 212 Voluntary Cleanup sites. This is nearly a 20% increase from the fiscal year 1996 workload. The increase is mostly in the Voluntary Program, where staff resources have been added over the last several years in response to demand.

We also continued to become aware of new sites, evaluate their potential impact on the environment, and add them to two statutorily required lists. One is the Confirmed Release List of sites where releases of hazardous substances to the environment have been verified. The other is the Inventory of sites DEQ has determined need additional investigation or remediation. In FY 1997, we made 191 new entries to the database of sites with suspected

contamination. Sixty-eight sites were added to the Confirmed Release List and 34 were added to the Inventory.¹

Other Significant Accomplishments

Guidance Development

In January, 1997, the Environmental Quality Commission unanimously adopted a comprehensive set of changes to the state's environmental cleanup regulations. The rules implement the new risk-based cleanup approach enacted by the 1995 Oregon Legislature. The rule adoption capped an 18-month effort during which DEQ received input from diverse interested parties.

During 1997, cleanup staff began an intensive effort to create guidance to assist parties in implementing the new rules. Ten workgroups were formed to conduct research, evaluate options, and develop draft guidance. Although there is no legal requirement to do so, DEQ is providing opportunities for public participation in guidance development. This input from outside parties is critical to producing useful guidance. To date, four documents have been produced in final form and several more have been released for public review and comment. (For continuing updates on guidance development, visit the Web site listed on Page 1.)

High Priority Cleanups

- Since the last annual report, DEQ has added 6 more sites to the list of orphans – high priority cleanups where the responsible party has not been identified or is unable or unwilling to pay for cleanup. Two of the new orphans are investigations of areawide groundwater contamination (Keno and Spray); two others are sites contaminated with petroleum fuel. The fifth is an inactive dry cleaner that may be a source of groundwater contamination in Lebanon and the last is a site contaminated by used tires and other hazardous wastes.
- DEQ has completed prospective purchaser agreements at two orphan sites and negotiations are in process at two more. These agreements provide an opportunity to fund remaining cleanup work and sometimes partially reimburse DEQ for cleanup costs already incurred.
- Twenty-seven sites have been declared orphans since the program began in 1991. DEQ has completed the high priority work at five of the sites and two are being funded from other sources – one by responsible parties and another by a federal Superfund grant.
- During fiscal year 1997, work at two orphans – Vadis Pole Yard and Astoria Plywood – neared completion. Significant progress was also made at the Nu-Way Oil site on the Columbia River, where highly contaminated sludges were removed from a former lagoon.
- A major remedial action was also completed at a non-orphan high priority site – a former wood treater in the Portland area. Approximately 15,000 tons of contaminated soil was excavated and removed; groundwater containment and monitoring is now underway.

¹ Because of their size, these lists are not appended to this report. Copies are available by contacting the Waste Management and Cleanup program at (503) 229-5913 or by calling the Department toll-free at (800) 452-4011.

Prospective Purchaser Agreements

Prospective purchaser agreements are becoming an increasingly important tool that DEQ can use to encourage cleanup that otherwise might not occur. Through these agreements, DEQ can relieve a buyer of contaminated property of the liability to clean up existing pollution. Although the prospective purchaser is not liable for cleanup, the agreements usually specify an amount of cleanup the buyer is obligated to perform or finance. Prospective purchaser agreements require the purchaser to provide a substantial public benefit, which may also include things such as job creation or returning the idle property to productive use. Providing the purchaser with a limit on cleanup costs often gives the certainty needed to make an investment decision or to secure financing.

DEQ has negotiated 20 prospective purchaser agreements since 1995, when the Legislature enacted this provision. Twelve agreements were signed in fiscal year 1997. Many of them will achieve cleanup that might otherwise have taken years to complete. With the growing pressure to preserve undeveloped “greenfields,” there is increasing interest in prospective purchaser agreements because they can make brownfield redevelopment possible.

Dry Cleaner Environmental Cleanup Program

The 1995 Legislature enacted a special program for cleaning up sites contaminated by dry cleaning solvents. The program is funded by a levy on the approximately 375 active dry cleaning establishments in the state. In fiscal year 1997, DEQ established criteria for prioritizing sites to be cleaned up with program funds and began accepting applications. Eight applicants met the program’s criteria and cleanup activities have begun on five of them.

Assisting Local Governments

During fiscal year 1997, DEQ worked with two municipalities to identify contamination problems at government-owned “brownfield” sites. The work was a pilot project funded by the Environmental Protection Agency (EPA) to test whether additional funding for environmental assessments would assist local government redevelopment efforts.

Both projects – one in Nyssa in Malheur County and the other in White City, near Medford – involved assessing the environmental threats posed by former landfill property. Both municipalities needed assistance in evaluating whether the sites could be used for an industrial park. As a result of assessment work conducted by DEQ, the cities now have additional information to help them develop or market the sites. In fiscal year 1998, DEQ has received additional funding from EPA to conduct several additional assessments. Work has already begun at a former mill site in Falls City and at a former auto repair shop in Benton County.

Underground Storage Tank Cleanups

The tank program completed its first full year of operation under interim guidance for risk-based corrective actions (RBCA). Industry representatives strongly advocated adopting this process. As with hazardous substance risk-based cleanups, RBCA provides an option to

perform more detailed evaluation of site contamination and may result in less cleanup being required. This methodology has been used primarily at more complex sites.

1998 Projections

In 1998, we expect to maintain about the same level of cleanup activity as in 1997. Projections of specific cleanup actions are shown in the table below.

One critical area – spill response and prevention – will, however, be significantly curtailed. Projected revenue declines necessitated a 50% reduction in the budget for these efforts. DEQ will be able to respond to only the most significant spills. For the vast majority of spills reported to DEQ, staff will use information provided to determine which ones require follow-up. The lack of DEQ expertise on scene may lead to an increase in releases to the environment or higher cleanup costs in the long run. DEQ is also significantly reducing its efforts to educate responsible parties in spill prevention and response.

During fiscal year 1998, the underground tank cleanup program will begin two significant undertakings. The first is to implement the new heating oil cleanup assistance program made possible by the Legislature's allocation of revenues to financial assistance and DEQ oversight. DEQ will also be engaging in a major review of the tank cleanup regulations to align them with the revised risk-based environmental cleanup law.

In the hazardous substance cleanup arena, we will also continue our program improvements. These efforts will include producing additional guidance documents to help responsible parties and others involved in cleanups. We also plan to expand outreach efforts to improve program effectiveness and to ensure that Oregonians understand the impact of cleanup programs in their communities. In particular, we will be using the feedback received about the voluntary cleanup program to improve its effectiveness and responsiveness. We also plan to establish a set of environmental indicators and performance measures that accurately reflect program accomplishments in terms of human health and environmental protection.

In order to accomplish these goals, we must also address the question of program funding. We are approaching that issue by continuing to manage our resources effectively and looking for new ways to achieve and increase environmental protection at a lower cost to the state. In addition, we are also continuing our search for a stable long-term funding source for environmental cleanups.

Cleanup Phases Completed and Initiated

CATEGORIES	Completed		Initiated	
	7/96-6/97	Projected 7/97-6/98	7/96-6/97	Projected 7/97-6/98
Suspected Releases Added	191	190	NA	NA
Added to Confirmed Release List	68	75	NA	NA
Facilities Added to Inventory	34	35	NA	NA
Site Screenings	190	190	234	165
Preliminary Assessments	122	125	136	120
Voluntary Cleanup				
Remedial Investigations	13	15	41	34
Feasibility Studies	3	7	6	7
Remedial Designs	2	2	4	4
Removals and Remedial Actions	23	27	36	36
No Further Action Determinations	40	48	NA	NA
Site Response				
Remedial Investigations	5	19	6	16
Feasibility Studies	2	8	2	10
Remedial Design	0	3	3	4
Removals and Remedial Actions	12	18	6	18
No Further Action Determinations	2	3	NA	NA
Underground Tanks				
Regulated Tank Releases Reported	339	400	NA	NA
Regulated Tank Cleanups	393	400	213	250
Heating Oil Releases Reported	926	1,000	NA	NA
Heating Oil Tank Cleanups	386	400	398	500

Since the beginning of program operations, 9 sites have been removed from the Confirmed Release List and 7 from the Inventory.