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*Auditing for a Better Oregon*

October 30, 2001

Stephanie Hallock, Director  
Oregon Department of Environmental Quality  
811 SW Sixth Avenue  
Portland, Oregon 97204-1390

Dear Ms. Hallock:

We recently completed a broad-based risk assessment of the Department of Environmental Quality. Through this process, we have identified and compiled a list of business and program risks that we feel warrant your attention (see enclosure).

The risks presented are only those that we feel warrant a risk rating above medium. We have included paragraphs explaining the basis for each risk, as well as potential mitigating controls or procedures. This listing is not intended to be all-inclusive or a formal presentation of recommendations by the Audits Division.

We appreciate the time and effort you and your staff provided as we completed the risk assessment. If you have any questions, please contact Chuck Hibner or me at (503) 986-2255.

Sincerely,  
OREGON AUDITS DIVISION

Cathy Pollino  
Director

CP:bk  
enclosure

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Management Letter No. 340-2001-10-02

## **Home Heating Oil Tank and Underground Storage Tank Programs**

### **1. DEQ's Home Heating Oil Tank (HOT) program may not adequately ensure that tanks are properly decommissioned and any leaks are properly cleaned up.**

Background: We were told that HOT contractors have been prosecuted for fraudulently representing their work, indicating a strong need for monitoring of contractor performance. DEQ does not conduct formal contractor inspections or provide needed training.

The number of reported releases continues to rise. DEQ reported that, through the end of 2000, there were more than 4,000 HOT cleanup sites for which the environmental significance of the reported leak was not known. While DEQ also reported that at least 20 percent are thought to impact ground water, there is no program to address this backlog.

#### Potential Mitigating Controls:

- Develop and implement a program to address the backlog of leaking HOTs.
- Conduct inspections of contractors' work, including soil test results, to verify that HOT decommissions and cleanups are done properly.
- Provide adequate training for contractors and realtors.

### **2. DEQ may not adequately ensure that USTs no longer in use are properly decommissioned and any leaks are properly cleaned up.**

Background: There is a universe of tanks no longer permitted for which decommissioning paperwork has not been submitted (abandoned tanks). Another universe of tanks, registered prior to the permitting program, has not been permitted and no decommissioning paperwork submitted for them (mystery tanks). DEQ has received funding to investigate abandoned tanks and is researching mystery tanks as resources allow.

According to program management, a backlog exists of UST releases about which little or no information is known. DEQ reported that, as of July 2001, there were 2,293 releases from regulated facilities for which cleanups had not been completed. In addition, since the program does not have an approved quality assurance plan, DEQ cannot use federal funds for sample analysis and does not have alternative funding to conduct this testing.

Management also stated that:

- DEQ received additional UST field compliance resources for the 2001-2003 biennium;
- In the past few years, its leaking tank efforts have been aided by using limited duration project managers and cost recovery to accelerate the resolution of abandoned tanks; and
- It is exploring ways to make these resources more permanent to ensure ongoing progress.

#### Potential Mitigating Controls:

- Continue efforts to address abandoned and mystery tanks to ensure that they are appropriately decommissioned and any leaks are properly cleaned up.
- Assign a program manager to every release site and ensure that release sites are cleaned up as necessary.

- Ensure that contractors' decommissioning and cleanup work is adequately monitored and inspected, and that soil testing is done properly.

**3. DEQ may not adequately ensure that all USTs in use permitted.**

Background: DEQ relies on fuel distributors to comply with regulations prohibiting it from delivering fuel to a non-permitted facility. While DEQ has typically conducted two or three fuel distributor audits each year, the audits consist of reviewing and verifying records maintained by the fuel distributors.

Potential Mitigating Controls:

- Develop and implement procedures to provide reasonable assurance that USTs subject to regulation are permitted. The procedures should not rely exclusively on reviewing fuel distributors' records.

## **Solid Waste Program**

**1. Information reported by disposal facilities may not be accurate.**

Background: A 1997 independent audit of the Solid Waste Program's facility reporting system and payment of fees resulted in both system and site-specific recommendations. The system recommendations addressed such issues as facility record keeping, DEQ record keeping, measurement of waste, and policy and rule interpretations. The site-specific recommendations related to findings from the 30 permitted facilities that were audited. In 1998, the Solid Waste Program Management Team (PMT) met and agreed with the majority of the recommendations and, for those with which they did not agree, developed alternative solutions to address the findings. However, the manager of the program said that the recommended best management practices were never drafted and that he was not able to find any record of training or workshops for operators having been conducted, as was also recommended. In addition, information that the regional offices provided concerning how the site-specific recommendations were handled was incomplete. According to the program manager, solid waste managers agreed more recently to move forward with implementing the audit recommendations on an accelerated schedule.

A regional solid waste official noted that his region is in the process of developing written inspection procedures. He did not believe that any of the other regions have formal inspection policies. He said that once his region completes their inspection procedures draft, he plans to share it with the Solid Waste PMT.

Potential Mitigating Controls:

- Implement the audit recommendations and alternative solutions as the PMT had intended.
- Develop formal, written inspection procedures that include steps to ensure that facilities are maintaining proper records and accurately reporting to DEQ; implement the inspection procedures consistently in all regions.

**2. Land disposal sites may not be adequately maintaining cost estimates and financial assurance for costs of closure, post-closure maintenance and potential corrective action.**

Background: In September 2000, DEQ contracted for an independent audit of solid waste facility compliance with financial assurance regulations for closure, post-closure and corrective action. The audit, which covered a sample of solid waste disposal and waste tire storage facilities, found that the majority were not in compliance with regulations and posed a serious financial threat to the state.

A solid waste staff team has created a work plan that addresses the audit findings and recommendations. In addition, the solid waste managers have identified the follow-up actions they intend to take. According to the program manager, he also plans to provide training for landfill operators and DEQ staff, appoint a headquarters staff member to oversee compliance with financial assurance requirements, and appoint one to two people in each region as financial assurance point people.

Potential Mitigating Controls:

- Implement the follow-up actions agreed to by the solid waste program managers.
- After the follow-up actions have been implemented, determine whether they and the assignment of any additional staff have adequately addressed the problems identified in the audit. Take further actions as warranted.

**3. Regulation of landfills beyond the 30-year post closure time period may not be adequate.**

Background: Federal regulations require the owner or operator of a closed municipal landfill to conduct post-closure care for a period of 30 years. No program exists to monitor and address problems with landfills that have been closed for more than 30 years.

Potential Mitigating Controls:

- Develop and implement policies and procedures to address problems associated with landfills that have been closed for more than 30 years.

**4. DEQ may not be able to meet waste generation goals.**

Background: According to the 2000 solid waste management report to the Oregon legislature, annual per capita waste generation has increased from 6.1 pounds per day in 1994 to 7.3 pounds-per day in 1999. The Waste Policy Leadership Group (WPLG), a fourteen-member diverse stakeholder group appointed by the DEQ Director in late 1999, spent a year studying, discussing and proposing changes to solid waste policies and programs. In terms of strategic direction, the WPLG encouraged the solid waste program to devote greater emphasis and resources to waste prevention.

Potential Mitigating Controls:

- Implement the recommendations proposed by the WPLG related to reduction of waste generation.

**5. DEQ's material recovery (recycling, composting, energy recovery) efforts may not be adequate.**

Background: Between 1998 and 1999, the total percent of waste recovered decreased for the first time since 1992. Moreover, the state did not meet the statewide material recovery goal of 50 percent by the year 2000 that the Oregon legislature set.

The WPLG drafted programs and legislation to reach the 50 percent recovery goal by 2009. This past June, the Governor signed HB 3744, which sets new county-by-county waste recovery goals and requires plans that identify policies or programs to achieve those goals.

Potential Mitigating Controls:

- Implement strategies as outlined by the WPLG.
- Monitor performance in attaining new goals and adjust strategies as needed.

## **Air Quality Division**

**1. The Air Quality Division (AQ) may not be properly applying prevention of significant deterioration (PSD) requirements from the Clean Air Act.**

Background: PSD requirements in the Clean Air Act (CAA) provide guidance to states for preventing air quality in certain areas from deteriorating beyond a specified increment. States are to define a baseline of pollutants throughout the state and then track increases in emissions to ensure that they do not exceed the allowable level of air quality degradation.

To date, AQ has not established a comprehensive tracking system to determine how much of the increments have been consumed. (Nor, according to management, has any other state.) In addition, concerns about negative effects on air quality related values (AQRVs) in Class I areas have been expressed, indicating possible PSD increment exceedences.

Potential Mitigating Controls:

- Determine which areas have exceeded their allotted increment of pollutant levels.
- Identify and restrict sources of air pollution causing increment exceedences.
- Develop and implement appropriate PSD rules.
- Establish a regional policy framework with EPA and Region 10 states to address cumulative consumption of increment.

**2. AQ may not have an adequate plan for addressing toxic air pollution.**

Background: The CAA provides guidance for regulating toxic air emissions at their source; however, it does not provide a plan for regulating ambient levels of toxic air pollution. According to DEQ, EPA studies have estimated some toxics to be 10 times above acceptable levels in counties throughout the state. Citizen groups also have been active on this issue, due to concerns about exposure to high ambient toxic air pollution levels.

The division has been developing an air toxics program, one of the few states to do so. However, there have been problems in detecting the variety of toxic air pollutants that exist and establishing a monitoring network to identify what can be a localized and acute problem.

Potential Mitigating Controls:

- Ensure that all toxic air pollutants of concern are identified and addressed by the program.
- Ensure that there is a sufficient monitoring network to detect emissions that could threaten public health.
- Given the potentially serious threats posed by toxic air emissions, proceed promptly with program development and implementation.

**3. AQ may not have an adequate plan for regulating nonpoint sources of criteria pollutants.**

Background: Division management reported that nonpoint sources account for the majority of emissions of concern in non-attainment areas. Historically, regulation has focused on point sources. Nonpoint source reductions are likely to be important for maintaining compliance with ambient air quality standards and for improving air quality in the future.

Potential Mitigating Controls:

- Maintain an updated inventory that identifies all nonpoint sources and their overall contribution to ambient air pollution.
- Develop and implement measures to reduce significant nonpoint sources.
- Develop funding mechanisms for nonpoint source programs and regulation.

**4. AQ's use of contract employees at vehicle inspection stations may not be appropriate.**

Background: In the past, AQ has utilized a significant number of private contract employees at its vehicle inspection stations. AQ currently employs a relatively small number of contract employees. AQ management noted that contract employees perform the same work as state employees but do not receive similar benefits. AQ management also reported that turnover of contract employees is a problem and results in additional training costs.

Potential Mitigating Controls:

- Solicit advice from the Department of Administrative Services and Department Justice regarding past and continued use of contract employees, including whether they are entitled to additional benefits.
- Evaluate current and any future use of contract employees to ensure that it is cost-effective and does not compromise program effectiveness.

**5. AQ's permitting practices may not be adequate.**

Background: AQ is responsible for permitting sources of air emissions. Sources are responsible for notifying AQ and obtaining the proper permits. Information we gathered indicates that AQ may not be adequately identifying sources that should have permits, and

may not be providing sufficient oversight in order to ensure that technological and deadline requirements are consistent among the three regions. In addition, concerns were expressed about the complexity of permitting rules, and staff's understanding of these rules. AQ's handling of public comments also has been questioned. Finally, AQ needs to provide adequate background emissions calculations for PSD permits.

Potential Mitigating Controls:

Institute appropriate policies and procedures to:

- Identify sources that should have permits;
- Ensure the consistent and proper application of technological and deadline requirements;
- Ensure that staff understands permitting rules and that rules are not unnecessarily complex;
- Handle public comments properly; and
- Update calculations of PSD background levels and use them properly for sources requiring PSD permits.

## **Environmental Cleanup and Spill Programs**

### **1. DEQ may not be adequately protecting environmentally sensitive areas.**

Background: DEQ requires certain industries to have geographic response plans so that, in the case of a spill, the responsible party knows whom to contact, and the response team knows how and where to react. The response teams also practice occasionally throughout the year. These plans are required only for the Columbia River, Lower Willamette River, and certain deepwater ports. Other environmentally critical areas crucial to wildlife or public health (e.g. a drinking water source) should be considered for protection by response plans. For example, division management indicated that areas near major pipelines not covered by response plans constitute a significant risk.

Mitigating Controls:

- Identify other environmentally critical areas for which response plans are warranted.
- Develop appropriate response plans for such areas.

### **2. DEQ may not ensure that the response to spills is appropriate.**

Background: The division has on-scene coordinators (OSCs), who are assigned to respond to certain spill sites. When spills are reported, the OSCs gather information and determine if they are going to visit the site in person or if they can monitor it without being present. An OSC is responsible for ensuring that the responsible party handles the spill in a way that minimizes immediate damage and future harm.

There has been concern on the part of EPA that the OSCs are not visiting a sufficient number of sites. This could lead to greater environmental damage arising from inadequate oversight of responsible parties. According to management, DEQ currently has resources for three FTEs for OSCs.

Potential Mitigating Controls:

- Institute additional OSC visits to spill sites to provide oversight of responsible parties and verify that they are adequately cleaning up the sites.

**3. DEQ may not be collecting sufficient revenue from dry cleaners to fund cleanups.**

Background: The dry cleaner program includes program rules designed to prevent spills and a fund for cleaning up sites contaminated by dry cleaning solvents including, but not limited to, perchloroethylene (PERC). The program provides for improvements in dry cleaning facilities' equipment and processes so that spills of PERC are eliminated. The cleanup fund is generated through fees paid for each dry cleaning store and surcharges on PERC and other solvents.

The program was designed to raise \$1 million each year to clean up sites contaminated by program participants. Solvent fees have more than quadrupled the price paid for PERC by dry cleaners, creating an incentive for individual dry cleaners to avoid the fee by purchasing PERC outside the state. According to management, program fees historically have generated only \$750,000 per year. Management also indicated that, given the current number of sites to be cleaned up, \$1 million annually will fall short of what is needed for adequate and timely cleanup. Finally, management indicated that program rules may need to be revised so that they are more specific and clearly exclude businesses that do not meet program requirements.

Mitigating Controls:

- Determine funding needed per biennium to provide for adequate and timely dry cleaner cleanups.
- Secure necessary funding, including identifying alternative funding mechanisms, as needed.
- Ensure that program rules are sufficiently specific to exclude businesses that do not meet program requirements from obtaining coverage and depleting available funding.

## **Water Quality Division**

**1. Water quality criteria may not be appropriate.**

Background: Water quality criteria are designed to limit concentrations of pollutants. The Water Quality Division (WQ) is responsible for ensuring that water quality criteria are developed and updated in a timely manner. Changes in criteria are necessary due to new knowledge concerning the impact a pollutant has on the environment.

Currently, the division has approximately 140 water quality criteria. According to division staff, nearly half of these are not current. It is important to have current criteria, given DEQ's ongoing efforts to update total maximum daily loads (TMDLs) and related permits, and to address the increasing use of the RCRA wastewater exemption (see Hazardous Waste program risk No. 1 below). Management added that they are dedicating two FTEs to water quality standards and WQ is conducting an intensive "triennial review" of all standards.

In addition, CWA and DEQ regulations allow pollution concentrations in a zone near a point of discharge to be higher than otherwise specified by water quality criteria. DEQ management indicated that these “mixing zones” do represent a significant risk, given that the water in these areas could be chronically toxic.

Potential Mitigating Controls:

- Dedicate sufficient resources to eliminate the backlog of criteria to be established and updated, and to prevent backlogs from occurring in the future. Ensure that planning and project management devoted to these efforts is adequate.
- Consider using EPA standards on an interim basis when new state standards will not be updated or developed on a timely basis.
- Determine the extent of threats posed by mixing zones, and appropriately address the threats.

**2. WQ may not adequately control nonpoint source pollution.**

Background: WQ may not have sufficient authority to regulate nonpoint sources that significantly affect water quality, such as runoff from agricultural and silvicultural operations. Other nonpoint sources, including urban storm water, may not be adequately controlled through current regulations. Management pointed out that the legislature, not DEQ, determines who has authority for controlling nonpoint sources.

Potential Mitigating Controls:

- Take appropriate steps to effectively control all nonpoint sources that pose a significant risk.
- Undertake cooperative efforts with the Departments of Forestry and Agriculture to make sure their efforts to control nonpoint sources are adequate. Provide assistance and training as needed.

**3. WQ's processes may not be adequate to sufficiently protect groundwater and lakes.**

Background: The division, which has started to inventory underground injection wells (UICs), estimates that there may be as many as 60,000 around the state. The division does not know the impact that these UICs are having on groundwater. Concerns have been raised that sources may be using these wells inappropriately and discharging considerable amounts of contaminants into them. In addition, information we obtained about well water testing and lakes indicates that groundwater and lake water quality may not be adequately monitored or protected.

Management noted that resources dedicated to UIC control, groundwater and lake management are limited and have not been well funded by the legislature.

Potential Mitigating Controls:

- Complete the inventory of UICs and assess the effluent they are receiving.
- Assess the impact these wells have had, or may have, on groundwater and regulate them accordingly.
- Dedicate sufficient resources to regulate UICs in the future.

- Take adequate steps to assess lake water quality and address problems found.

#### **4. WQ's processes may not be adequate to determine if state waters are impaired.**

Background: WQ is responsible for monitoring and testing surface waters around the state to verify that they meet water quality standards.

Information we obtained from DEQ staff indicates that some areas of the state may receive insufficient testing and monitoring overall, but especially with respect to toxic substances. We also found that DEQ does not monitor water quality at ocean and bay recreational beaches. Management noted that monitoring resources are limited and they have decided that monitoring water quality at such beaches is not a high priority.

##### Potential Mitigating Controls:

- Develop appropriate testing and monitoring plans that provide more thorough knowledge of water quality in lakes, rivers, streams, and ocean and bay beaches. Take appropriate action when problems are found.
- Review and evaluate testing procedures to ensure that accurate equipment and an appropriate methodology are being used.

#### **5. WQ's permitting practices may not be adequate.**

Background: WQ is responsible for permitting sources that discharge effluent to both surface water and ground wells. Sources are required to keep their effluent levels at or below permitted levels. Permitting is the process that limits effluents to safe and predictable levels.

The following permitting-related issues came to our attention:

- The division currently does not appear to have a thorough method of identifying sources.
- WQ has not performed well in terms of permit timeliness. Specifically, DEQ received a grade of D for its wastewater permit timeliness benchmark in the 2001 Benchmark Performance Report. Concerns also exist about the backlog of permits and the sufficiency of the current plan to reduce it.
- Permits being renewed do not always include the most recent criteria.
- Agency staff expressed concerns that a source's potential to discharge pollutants is not fully evaluated during the permitting process.
- The Hazardous Waste program has expressed the concern that water quality regulation may not be effectively controlling hazardous waste discharged in wastewater streams as allowed by the RCRA wastewater exemption.
- According to management, DEQ requested additional resources as part of its 2001-03 budget request, but these resources were not approved by the legislature.

##### Potential Mitigating Controls:

- Establish an adequate process for identifying the regulated population.
- Ensure that permits are issued on a timely basis. Dedicate resources to eliminate the permit backlog and prevent it from occurring in the future.

- Ensure that permits reflect the most recent criteria and contain appropriate conditions, including conditions adequate to address hazardous wastes discharged through the RCRA wastewater exemption.
- Conduct thorough permit reviews and assessments to ensure that permit language is appropriate and permit conditions reflect a source's potential to discharge.

#### **6. WQ's inspection practices may not be adequate.**

Background: WQ is responsible for inspecting sources and verifying that they comply with permit requirements. Division staff explained that inspections are performed regularly only for major individual sources and are not done with regularity for smaller sources. Inspections consist mainly of reviewing daily monitoring reports (DMRs) provided by sources; some unannounced onsite visits also are conducted. Information we collected indicates that DMRs may not provide an adequate means of verifying compliance. In addition, EPA expressed concerns about the practice of a staff person both permitting and inspecting the same source.

##### Potential Mitigating Controls:

- Consider increasing the number of inspections performed each year to include smaller sources as appropriate.
- Refine the reporting process so that compliance with permit conditions may be better assessed from DMRs. Develop procedures for verifying data reported on DMRs.
- Assess the effectiveness of current methods for verifying compliance with permit conditions; consider developing other methods as warranted.
- Assess the appropriateness of the practice of having a staff person both permit and inspect the same source; make changes as necessary.
- During inspections, take steps to ensure that sources are disclosing all substances discharged, including hazardous wastes discharged through the RCRA wastewater exemption.

#### **7. WQ may not be adequately reviewing Clean Water Act Section 401 certification applications.**

Background: As provided under Section 401 of the Clean Water Act, DEQ must certify that federally permitted or licensed projects that could result in a discharge to surface water will not violate water quality standards.

WQ has only 1.5 FTE dedicated to the review and approval of about 2,000 of these certification applications each year, raising questions about the ability of the division to adequately review these projects. In fact, we were told that DEQ approved large-scale projects, resulting in harm to Oregon water quality. Management also expressed concern about the adequacy of their review of these projects and noted that they have little ability to get out to verify that required mitigation has been adequately completed.

##### Potential Mitigating Controls:

- Dedicate sufficient resources to ensure that the review and approval of certification applications is thorough and performed in a timely manner.

- Ensure that required mitigation has been adequately completed.

#### **8. WQ may not be providing sufficient technical assistance to sources it permits.**

Background: Division staff explained that sources rely on WQ staff to provide them with information and assist them on various issues, including permitting and remediating permit violations. Staff indicated that this assistance can prevent delays in the permitting process, reduce impacts from excessive discharges, improve source reaction to permit violations, and make WQ staff aware of plant modifications. Staff members said that they are seeing more delays later in the process because sufficient levels of technical assistance are not available earlier.

#### Potential Mitigating Controls:

- Dedicate sufficient resources to provide adequate technical assistance to sources.

### **Hazardous Waste Program**

#### **1. Hazardous waste may not be adequately regulated when disposed of through a wastewater stream.**

Background: RCRA regulations contain an exemption that allows wastes that would otherwise be regulated hazardous waste to be managed in a permitted wastewater treatment unit. DEQ's water quality program is responsible for issuing permits to facilities that discharge wastewater, including both publicly owned treatment works and industrial sources.

The Hazardous Waste program collects data on the volume of wastewater discharged by small and large quantity hazardous waste generators who report this information on their annual reports. Recently, the program has seen a dramatic increase in reported quantities of hazardous waste being managed in wastewater treatment units. In 1995, 14 generators reported managing 1.4 billion kilograms of hazardous waste in these units; in 1998 these numbers increased to 50 facilities and 6.1 billion kilos. Moreover, this data does not necessarily include all hazardous substances (and their amounts) within the wastewater and, since it is not verified and only includes small and large quantity generators, it is likely underreported.

Hazardous Waste program management has expressed concern about the RCRA wastewater exemption and noted that hazardous wastes managed in this way are excluded from program oversight. In addition, there is growing federal concern that existing regulations may provide inadequate environmental protection. Other issues of concern include the possibility that these wastewaters result in contaminated sediment and the fact that they can contain persistent bioaccumulative toxic pollutants (PBTs).

#### Potential Mitigating Controls:

- The Hazardous Waste program should coordinate with the Water Quality program and DEQ Laboratory to ensure that hazardous waste disposed of in wastewater is adequately identified and appropriately treated. For example, the Hazardous Waste program could

collect additional information on hazardous wastes discharged in wastewater streams and share it with the Water Quality program.

- Consider policy changes, rule changes, or both that would either discourage or prohibit the discharge of hazardous wastes in wastewater.
- 2. DEQ may not be adequately addressing risks posed by the rapid creation of new chemicals.**

Background: Federal and state hazardous waste authority exists once a chemical becomes a waste. Currently, DEQ does not have a program to address new chemicals not yet listed by the EPA. Management indicated that they do not have resources and expertise necessary for such a program and that EPA support would be needed.

Potential Mitigating Controls:

- Develop and implement a program for collecting information on chemicals used in Oregon and addressing the risks they pose. Solicit support from EPA, as necessary, to accomplish this.

**3. DEQ may not be adequately regulating conditionally exempt generators.**

Background: The RCRA regulatory framework imposes relatively few requirements on conditionally exempt generators (CEGs). Generally, CEGs must count their waste and properly dispose of it. DEQ's technical assistance (TA) program gives compliance as well as best management practices advice to generators who participate on a voluntary basis. TA visits are prioritized and scheduled by area sweeps, industry focus, complaints, yellow pages, cold calls, etc. The TA program can reach many more facilities than DEQ could cover through compliance inspections.

The universe of CEGs is very large. DEQ tracks only those CEGs in their database. Given the regulatory structure, the only generators in the database are those requiring an identification number for purposes such as shipping hazardous waste. Thus, many CEGs with which DEQ has no contact exist and, while they generate relatively small amounts of hazardous waste, may collectively have a significant environmental impact. Certain CEGs not annually certifying become a compliance inspection priority. In addition, CEG complaints are investigated and sectors may be scheduled for compliance inspections. There is, however, no formal CEG compliance inspection program.

Management noted that when visiting these facilities they have seen fewer and fewer releases and regulatory problems and a generally increased awareness of environmental management.

Potential Mitigating Controls:

- Continue to evaluate and develop measures to better address risks posed by the CEG universe, including taking appropriate steps to ensure that CEGs know about and comply with requirements to count and properly dispose of their hazardous waste.

## **Office of Compliance and Enforcement**

### **1. DEQ's enforcement efforts may not be adequate.**

EPA has indicated that size of DEQ penalties should be higher, since this would provide a more effective deterrent. In contrast, DEQ managers indicated that assessing smaller fines covering a broader range of violators is a more effective deterrent. Management also said that DEQ received a \$150,000 grant from EPA that it is using to study the issue of what penalty size constitutes an effective deterrent. Management added that they are revising their enforcement guidance, noting that it is an important tool for ensuring that cases are consistently referred for enforcement. In addition, as noted in our change of director report, DEQ's enforcement efforts concerning registering and reporting violations may not be adequate.

#### Potential Mitigating Controls

- Continue efforts to determine what level of penalty constitutes an effective deterrent. Work towards increasing penalty size as warranted.
- Complete revisions to the enforcement guidance and ensure that regional staff consistently refer cases that should be referred.

## **Miscellaneous Risks**

### **1. DEQ's reliance on self-reported information may not be appropriate.**

Background: While DEQ does conduct compliance inspections, the agency also relies on information reported by sources/permittees to assess compliance. In some cases, sources/permittees self-certify their compliance with applicable regulations.

Problems with self-reported information have been found. For example, the usefulness of daily monitoring reports required by the Water Quality program has been questioned. An audit of solid waste facilities disclosed tipping fee underpayments and problems with recordkeeping. In addition, a survey of UST facilities for which compliance with regulations is self-certified disclosed that only a relatively small percentage was in full compliance.

#### Potential Mitigating Controls:

- Take appropriate measures to ensure that self-reported information is useful for assessing compliance and is reasonably accurate.

### **2. DEQ's information systems may not be adequately developed and maintained.**

Background: DEQ divisions rely on information systems to carry out programs and provide information to stakeholders. Some of these systems need to be upgraded or replaced. In fact, DEQ's information systems manager noted that if one considers the average information system life cycle to be about five years, DEQ is five to 10 years behind in upgrading or replacing its systems. The following are specific examples of problems agency officials brought to our attention:

- The Air Quality program database is text-based and therefore unpopular with users. Consequently, additional management emphasis on system use may be warranted.
- The HOT and UST database has not kept up with recent business practices affecting the data model; it fails to adequately enforce business rules and is in need of replacement.
- The current Environmental Cleanup Site Information database is not user friendly and was not designed to generate reports.
- Data needs to be entered into the Lab's LASAR database and updated. Concerns also exist about public access to water quality data contained in the database.
- A significant risk exists of under-investment in systems upkeep. Historically, systems known to be due for replacement have been kept in production for several years because of budget constraints, according to management.
- DEQ needs to better document its systems development model.

Management stated that although outdated in architecture, many of DEQ's systems are soundly engineered and consistent with such state systems as OSPS, PICS and SFMS. They indicated that while these systems will be designed with new interfaces, they currently meet objectives. They added that their plans to update these systems and enhance ease of use is not necessarily an indication that they are not functional. In addition, the department has formed a workgroup to look at the issue of how they are managing their information system resources throughout the agency.

Potential Mitigating Controls:

- Ensure that an appropriate, well-documented system development life cycle methodology is used when upgrading or replacing information systems.
- Employ procedures to ensure that data is accurately recorded in databases, and updated regularly and on a timely basis.
- Data should be kept secure, but also should be readily accessible to staff and stakeholders who need it.
- Systems should be flexible and relatively easy to use.
- Use the work group to assess the adequacy of DEQ's information systems and create a prioritized plan for proceeding with needed upgrades and replacements.

**3. DEQ's efforts to eliminate the release of persistent bioaccumulative toxic pollutants (PBTs) may not be adequate.**

Background: PBTs are highly toxic, long-lasting substances that can build up in the environment to levels harmful to human and ecosystem health. The Governor's Executive Order No. 99-13 charged DEQ with leading a statewide effort to eliminate the release of PBTs into the environment. The order established a goal of outlining approaches that could be undertaken to eliminate the of PBTs release in Oregon by 2020.

DEQ has established a fulltime, limited duration position that will serve as the PBT coordinator. The Hazardous Waste program included measures to address PBTs in its Performance Partnership Agreement with EPA, and is working on eliminating PBTs from certain processes/wastestreams. The Waste Policy Leadership Group has recommended that DEQ develop policies and programs to ensure that products containing PBTs are no longer

disposed of as solid waste in Oregon. However, department officials indicated that it probably will not be possible to eliminate the release of PBTs by the specified deadline.

Potential Mitigating Controls:

- Undertake efforts to identify, track and eliminate PBTs from all environmental media consistent with the Governor's order.
- Regularly inform the Governor's office on the status of these efforts.