



Oregon

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TESTIMONY

To: Senate Interim Committee on Environment and Natural Resources

From: Janine Benner, Director
Jeff Burrigh, Nuclear Waste Remediation Specialist

Date: September 21, 2020

Re: Update on Radioactive Waste Disposal

Last year, the Oregon Department of Energy discovered, based on a citizen tip, that the Chemical Waste Management of the Northwest landfill in Arlington had accepted two and a half million pounds of Technologically Enhanced Naturally Occurring Radioactive Materials, or TENORM, over a three-year period. That waste came from the Bakken Oil Fields, primarily in North Dakota. ODOE determined that this disposal violated the state's prohibition against the disposal of radioactive waste within the state, and issued a Notice of Violation to the landfill operator, Waste Management, on February 20th.

Since the last update to the Committee in June, the Department has been busy working with Chemical Waste Management on the waste at Arlington, and with stakeholders and the public to update our rules related to the enforcement actions and penalties our agency could issue in the event that illegal disposal occurs again in Oregon.

This testimony provides information on the Risk Assessment and Corrective Action Plan that Chemical Waste Management has submitted as required by last Spring's Notice of Violation. The objective of these efforts is to determine the best and safest action to take for these wastes, given that they are currently buried within a hazardous waste landfill, and to determine what actions need to be taken to ensure this does not happen again. This testimony also provides details on the rulemaking process that's been happening over the past few months, as well as how the Senate Environment and Natural Resources Committee can strengthen the state's laws and the Department's authority when it comes to preventing the disposal of radioactive waste in Oregon.

ODOE's Notice of Violation required Chemical Waste Management to develop a Corrective Action Plan to explain the processes they will put in place to prevent a situation like this from happening again, and to conduct a Risk Assessment to evaluate potential past, present, and future risk from the waste that is already buried. This assessment was also intended help ODOE make the best decision for what will happen to the waste.

The company met their obligation to submit these documents to the agency on September 1st, and after an initial technical review by department staff, we published the documents for public review on September 9th. This started a 60-day public comment period on the analyses and on Chemical Waste Management's preferred alternative for the already-disposed wastes. The Department will also hold two public meetings on September 30 to discuss the documents, answer questions, and solicit public feedback. In the morning of the 30th, there will be a virtual meeting for interested members of the public. This will be followed by an evening meeting in an outdoor venue in Arlington for the local community who would prefer an in-person meeting.

Chemical Waste Management's [Corrective Action Plan](#) and [Risk Assessment](#) are available on the Oregon Department of Energy website, along with an [ODOE cover memo](#).

As described in these documents, Chemical Waste Management's preferred alternative is the in-place closure of the TENORM wastes, or in other words, leaving the wastes where they are currently buried at the hazardous-waste landfill, which is about five miles south of Arlington. The company's Risk Assessment concluded that even in the event of multiple compounding worst-case scenarios, including a future resident living on the landfill surface cap and drinking water from a well at the edge of the landfill, the risk of cancer morbidity due to the radioactivity in these wastes would be up to one in a million, but likely far less. Future concentrations in groundwater are also calculated to be well within drinking water standards. The risk to current and future workers that would result from leaving the buried waste in-place was found to be essentially zero. By contrast, the company's analysis concludes that the decision to exhume the wastes and redispense them at another out-of-state facility would carry a number of uncertain and potentially serious risks resulting from the disturbance of the other hazardous chemical non-radioactive wastes legally disposed in the landfill.

Chemical Waste Management's assessment of the potential risk to landfill workers and members of the public associated with the original disposal of the wastes from 2016-2019 confirmed ODOE's prior assessment, arrived at in consultation with OHA and DEQ, that the risk to workers was exceedingly small, even in the unlikely event that the same person had been present at every past disposal instance. In addition, the risk to offsite members of the public would have been small enough as to result in essentially zero adverse health effects.

In addition to analyzing the risk and providing a recommendation on what to do with the waste, Chemical Waste Management has proposed a Corrective Action Plan that outlines steps they will take to prevent another situation like this in the future. As part of that plan, Chemical Waste Management has proposed the installation of an automated radiation portal monitor to screen all future waste loads entering the site. Such radiation portal monitors are not required at Oregon landfills, but some landfills have voluntarily installed them. The company has also

already enacted a new waste verification process, which involves direct sampling and radiological measurement of representative wastes associated with each waste profile that may contain TENORM, followed by a check with our agency to seek concurrence that disposal of the wastes represented by the waste profile is legal in Oregon. This two-step verification system will provide the company, and our agency, greater confidence that the company is taking appropriate safeguards to operate the facility in accordance with Oregon statutes and rules.

The public comment period on the documents and proposed corrective actions will last through November 8th, after which time the agency will review and respond to all substantive public comments and issue a determination accepting or rejecting the company's preferred alternative.

As part of our effort to prevent something like this from happening again, ODOE is also taking a close look at our existing program, rules, and legislative authority.

As a parallel effort to the Corrective Action process at Arlington, the Department has also undertaken a rulemaking related to ODOE's authority to enforce the prohibition against the disposal of radioactive waste, including the ability to assess appropriate penalties when radioactive materials are disposed in Oregon. The rules we are proposing to amend establish criteria that must be met before the agency or the Energy Facility Siting Council can issue civil penalties, set a monetary schedule for penalties, and describe the process and requirements for corrective action when a violation occurs. The rulemaking advisory committee has met twice since July and is planning at least one more meeting to discuss updates to these rules before taking them to the Council for their consideration via a public process. Overall, it is expected that any updates to the rules will strengthen the deterrence capabilities of our enforcement authority while also incentivizing corrective action.

As indicated to the Committee in June, while the Department can take some actions administratively, changes will need to be made to the state's statutes in this area, which were written in the late 1970s before this type of waste stream became prevalent.

In February, then-Chair Dembrow introduced an amendment to a bill to strengthen ODOE's enforcement and investigation authorities. The session ended before this legislation passed, but Chair Golden has indicated an interest in continuing to pursue these statutory changes.

Specifically, the statutory enhancements ODOE is seeking include:

- clarification that the disposal of radioactive waste is prohibited anywhere in Oregon, and that such prohibition applies not only to a disposer but to anyone who arranges for such disposal;
- better defined investigative powers to pursue potential violations;

- clarified authority to require corrective action in the event of unlawful disposal, especially in cases where there is not imminent danger but where there may be future threat if wastes are not addressed;
- clarified authority to require preventative measures such as reporting processes, monitoring equipment, or other such systems;
- authority to recoup some costs to the agency when a Notice of Violation occurs; and
- authority for the agency to update and clarify, through a rulemaking, what qualifies for an exemption from the term "radioactive waste."

In recent years, several states have passed new restrictions on the disposal of the type of waste that was disposed of at Arlington. The state has the opportunity to strengthen and clarify standards to ensure that Oregon does not become an attractive disposal option for new or previously unconsidered types of TENORM waste. ODOE wants to ensure that statute and rules are fitting to the present waste landscape, based on the best available science, and consistent with the standards currently being established in other states.