



State of Oregon
Department of
Environmental
Quality

Oregon Department of Environmental Quality
July 15, 2019

Notice of Proposed Rulemaking

ATI Delisting 2019

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Accessibility Information

The Oregon Department of Environmental Quality can provide documents in an alternate format or in a language other than English upon request. Call DEQ at 800-452-4011 or email deqinfo@deq.state.or.us.

Introduction

DEQ invites public input on proposed permanent rule amendments to chapter 340 of the Oregon Administrative Rules.

Request for Other Options

During the public comment period, DEQ asks for public comment on whether there are other options for achieving the rules' substantive goals while reducing the rules' negative economic impact on business.

Overview

Background

Pacific Cast Technologies, Inc., doing business as ATI Cast Products (ATI) manufactures titanium-alloy castings and machine parts for the aerospace industry using an electroplating process known as chemical etching and milling.

Chemical etching and milling uses chemical solutions to dissolve metal layers. The U.S. Environmental Protection Agency defines wastewater treatment sludge from electroplating operations, including chemical etching and milling, as an F006-listed hazardous waste. Chemicals commonly associated with this process include cadmium, chromium, nickel and complexed cyanides. When it is improperly managed, wastewater treatment sludge from chemical etching and milling processes has the potential to significantly contribute to an increase in mortality, serious injury, or environmental harm.

This rulemaking concerns a material called “wastewater treatment sludge from electroplating operations.” For ease of reading and understanding, from this point on, this document will refer to that material as “sludge.”

Historically, ATI managed sludge as a non-hazardous industrial waste at a permitted landfill. However, in 2017, DEQ conducted an updated review of chemical etching and milling operations at titanium-casting facilities in Oregon. DEQ then notified ATI that it should handle its sludge as listed F006 hazardous waste. In April 2019, ATI petitioned DEQ to exempt this sludge from classification as a listed F006 hazardous waste.

EPA authorizes the state of Oregon to manage its hazardous waste program under the Resource Conservation and Recovery Act. EPA also authorizes Oregon to stop categorizing specific substances as hazardous waste in Oregon when specific conditions are met. This process is called “delisting.”

A petitioner who wants DEQ to delist a hazardous waste must comply with 40 C.F.R. sections 260.20 and 260.22, incorporated by reference in OAR 340-100-0020 and -0022. The petition must show the waste does not contain the chemicals for which EPA originally listed the waste in concentrations above appropriate risk-based standards. The risk-based evaluation must also determine that factors, including additional constituents other than those for which the waste was listed, do not warrant retaining the waste as a hazardous waste. In addition, the waste must not be ignitable, reactive, corrosive, or toxic.

In April 2019, ATI petitioned DEQ to exclude sludge from the F006 listing. This delisting petition includes sludge generated by ATI’s production of titanium-alloy cast parts for the aerospace industry. If adopted, the ATI Delisting 2019 rulemaking will be the second hazardous waste delisting in Oregon.

In November 2018, the Oregon Environmental Quality Commission adopted the state’s first rulemaking to delist a hazardous waste. DEQ concluded F006 chemical etching and milling wastewater treatment sludge produced by Selmet, Inc., in Albany, Oregon is excluded from listing as hazardous waste provided Selmet meets specified conditions described in OAR 340-101-0004.

DEQ proposal

DEQ proposes delisting the specific waste that is the subject of ATI’s petition. This action is justified based on our review of the sampling and analysis results and the delisting petition SLR International Corporation prepared for ATI. DEQ proposes amending Oregon’s hazardous waste regulations in Chapter 340, Division 101, of the Oregon Administrative Rules to delist ATI’s F006 hazardous waste. DEQ is taking this action under the following authorities:

- 50 Federal Register 52629, Oct. 10, 1995 (EPA authority for Oregon to operate hazardous waste program)
- 40 CFR Sections 260.20 and 260.22 (authority for petitions to delist a substance), incorporated by reference in OAR 340-100-0020 and -0022

- ORS 466.075(3) (authority to exempt substances from hazardous waste requirements)
- OAR 340-100-0020, -0022 (authority to petition for exclusion)

Who does this affect?

This proposal affects only ATI and is specific to the waste generated by ATI's Albany, OR 150 Queen Avenue SW facility.

Procedural Summary

More information

Information about this rulemaking is on this rulemaking's webpage: [ATI Delisting Rulemaking](#)

Public Hearings

DEQ plans to hold one public hearing. Anyone can attend a hearing in person, or by webinar or teleconference.

Information about the public hearing:

- **Date: Aug. 19, 2019**
- Start time: 6 p.m.
- Street address: Linn-Benton Community College, 6500 Southwest Pacific Blvd
- Room: Vineyard Mountain Room CC213
- City: Albany
- Teleconference phone number: 888-363-4734
- Participant code: 1910322
- Webinar link: [Webinar Link](#)
- Instructions on how to join webinar or teleconference: [Webinar/teleconference instructions](#)

How to comment on this rulemaking proposal

DEQ is asking for public comment on the proposed rules. Anyone can submit comments and questions about this rulemaking. A person can submit comments through an online webpage, by regular mail or at the public hearing.

Comment deadline

DEQ will only consider comments on the proposed rules that it receives by 4 p.m., on Aug. 20, 2019.

Submit comment online

Any person can submit comments electronically, through a link on this rulemaking's webpage: [ATI Delisting Rulemaking](#)

Note for public university students:

Oregon Revised Statute 192.345(29) allows Oregon public university and OHSU students to protect their university email addresses from disclosure under Oregon's public records law. If you are an Oregon public university or OHSU student you may omit your email address when you complete the online form to submit a comment.

By mail

Oregon DEQ
Attn: Eileen Naples
700 NE Multnomah St., Room 600
Portland, OR 97232-4100

At hearing

Sign up for rulemaking notices

Get email or text updates about this rulemaking by signing up through this link: [ATI Delisting Email List](#); or on the rulemaking web site: [ATI Delisting web page](#).

Get email or text updates about other, future DEQ rulemaking by signing up through this link: [DEQ Email Notice List](#).

What will happen next?

DEQ will include a written response to public comments in a staff report DEQ will submit to the Oregon Environmental Quality Commission. DEQ may modify the rule proposal based on the comments.

Present proposal to the EQC

Proposed rules only become effective if the Oregon Environmental Quality Commission adopts them. DEQ plans to present the proposed rules to the commission for a decision at its meeting on Nov. 14-15, 2019.

Optional Additional Topic

Waste Analysis and Risk Screening

Before testing ATI's chemical etching and milling sludge, DEQ worked with ATI and its contractor, SLR, to review the materials used in all stages of the titanium casting process. DEQ also worked with ATI to identify a sampling and analysis plan for sludge. DEQ staff approved ATI's sampling and analysis plan in February 2019.

Parameters for Analysis

Based on DEQ's review of chemicals used in the titanium casting process, SLR analyzed ATI's sludge for cadmium, hexavalent chromium, cyanide, and nickel, the chemicals for which EPA lists F006 as a hazardous waste. SLR also analyzed ATI's sludge for additional toxic chemicals that might be present in the waste—total chromium, manganese, molybdenum, silver, vanadium, zirconium and fluoride.

Screening Criteria

ATI is requesting permission to dispose of up to 9,000 cubic yards of sludge per year. This volume accounts for current activities, approximately 1,800 yards per year, and potential future business growth.

Sludge samples are screened against concentrations of hazardous chemicals derived from EPA's Delisting Risk Assessment Software. The software uses knowledge of the volume of waste and final disposition along with toxicity information to determine an acceptable concentration for the waste to go to a permitted, non-hazardous landfill.

Calculations are targeted to a carcinogenic risk not to exceed one in a million excess cancer and a non-carcinogenic hazard index of one. This is similar to other DEQ Land Quality programs using risk-based screening levels. The screening process uses the most conservative screening levels the software calculates for both total concentrations and Toxicity Characteristic Leaching Procedure concentrations.

Sampling and Analysis

As the RCRA Waste Sampling Draft Technical Guidance specifies, SLR used random unbiased composite sampling techniques to sample ATI's sludge. SLR collected four composite sampling events from the sludge approximately one week apart on Feb. 14, Feb. 20, March 1 and March 7, 2019, to represent unique periods of sludge generation.

For each sampling event, SLR drew a grid dividing the sludge into a schematic of numbered squares and random numbers. SLR used this grid to select five squares to composite for one

analytical sample. For one of the sampling events, SLR collected two unique composite samples from the same waste bin to verify consistent results.

SLR composited and collected samples in appropriate sample containers for each analysis, placed the samples on ice, and shipped them to analytical laboratories. Pace Analytical did most analytical work and Specialty Analytical did additional analysis. The Oregon Environmental Laboratory Accreditation Program certifies both labs.

SLR measured sludge composite samples for:

- Metals (cadmium, total chromium, manganese, molybdenum, nickel, silver, vanadium) by EPA test method 6010B
- Zirconium by method 6020D
- Cyanide by method 9012B
- Fluoride by method 9056A
- Hexavalent chromium by method 7196A

Results and Risk Screening

The software provides screening levels for total concentrations of chemicals and concentrations that may leach into soil and water. ATI's sludge is below the allowable concentrations of toxic metals, fluoride, and cyanide (Table 1).

DEQ agrees ATI's sludge is not ignitable, reactive, toxic or corrosive. Therefore, DEQ concludes it does not require handling as hazardous waste and ATI may dispose of sludge in a permitted, non-hazardous Subtitle D landfill.

Recommendation

Based on DEQ's technical review of ATI's petition and the results of the delisting risk assessment data in the sampling and analysis results, DEQ recommends ATI's petition be brought before the Oregon Environmental Quality Commission for approval of the rule excluding the facility's waste from classification as a F006 hazardous waste.

Table 1
Chem Mill Wastewater Sludge Sampling Laboratory Analytical Results F006 Delisting Petition
Pacific Cast Technologies, Inc. dba ATI Cast Products Albany, Oregon

Analyte Group	Individual Analytes	Total Concentration Test Method ^{1,2}	TCLP Test Method	DRAS Maximum Allowable Total Concentration (mg/kg) ³	DRAS Maximum Allowable TCLP Concentration (mg/l) ³	TCLP RCRA Toxicity Characteristic Regulatory Levels (mg/l)	02/14/2019		02/20/2019		03/01/2019		03/07/2019			
							Period 1A		Period 1B		Period 2		Period 3		Period 4	
							Composite Sample		Composite Sample		Composite Sample		Composite Sample		Composite Sample	
							Total (mg/kg) ⁴	TCLP (mg/l) ⁵								
Metals	Cadmium	6010D	E1311/6020	8,150	0.0911	1	< 0.773	-	< 0.850	-	< 7.97	<0.00500	2.98	<0.00500	2.69 (J)	<0.00500
	Chromium	6010D	E1311/6020	2,610	2.27	5	31.5	-	34.6	-	30.9 (J)	-	27.1	-	37.1 (J)	-
	Manganese	6010D	E1311/6020	779,000	15.7	--	30.3	-	30.4	-	30.4 (J)	-	32.2	-	32.2 (J)	-
	Molybdenum	6010D	E1311/6020	42,400,000	3.33	--	240	< 0.0250	244	< 0.0250	491	< 0.0250	487	< 0.0250	256	0.0268
	Nickel	6010D	E1311/6020	130,000	13.5	--	22.7	-	23.7 (J)	-	< 55.8	-	18.0	-	33.8 (J)	-
	Silver	6010D	E1311/6020	842,000	8.61	5	< 1.33	-	< 1.46	-	< 13.7	-	< 0.288	-	<4.60	-
	Vanadium	6010D	E1311/6020	42,400,000	3.77	--	4,420	< 0.0250	4,790	< 0.0250	3,840	< 0.0250	3,870	< 0.0250	4,650	< 0.0250
	Zirconium	6020B	E1311/6020	4,060	--	--	805 (V)	-	954	-	1,680 (V)	-	1,400	-	648 (V)	-
Anions	Cyanide	9012B	E1311/E335.4	467,000	3.08	--	0.634	-	1.09	-	0.798 (P1)	-	<0.281 (Q) ⁶	-	0.316 (J)	-
	Fluoride	9056A	E1311/E340.2	508,000,000	39.2	--	123	-	139	-	124	-	132	-	107	-
Metal Ion	Chromium (VI) (+6)	3060A/7196A	E1311/M3500 Cr B	373	2.27	--	19.9 (J)	-	2.43 (J, J6, O1)	-	< 1.46	-	2.98 (J)	-	7.97	-

Notes:

- Total concentration test method 6010 used to analyze metals, except Zirconium, was updated from version B to version D after Period 1 composite samples were collected.
- Total concentration test method 6020 used to analyze Zirconium was updated from version A to version B after Period 1 composite samples were collected.
- Maximum allowable total and TCLP concentration determined for Chem Mill process sludge from DRAS using example analyses and the following inputs:
 - Waste Management Unit Type - Landfill
 - Waste Volume - 9,000 cubic yards per year
 - Cancer Risk Level - 1E-6
 - Hazard Quotient (HQ) - 1.0
 - Waste management Unit Active Life - Multiple Year Batch
 - Active Life - 20 years
- All Total analysis performed by Pace.
- All TCLP analysis performed by Specialty.
- Original Period 3 test result for total cyanide was 27.8 mg/L but may have contained matrix interference(s) from an unknown source. A subsequent analysis reported a concentration of <0.281 mg/kg. The analysis was performed four days beyond the holding time using less sample volume to eliminate possible interferences. Although the matrix interference is unknown, possible sources include nitrate and/or nitrite.

Highlighted in light gray: 20 times greater than DRAS Maximum Allowable TCLP Concentration values or 20 times greater than TCLP RCRA Toxicity Characteristic Regulatory Level values

- : TCLP Testing not performed

-- : No regulatory limit specified.

J: The identification of the analyte is acceptable; the reported value is an estimate.

J6: The sample matrix interfered with the ability to make any accurate determination; spike value is low.

O1: The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference. P1: RPD value not applicable for sample concentrations less than 5 times the reporting limit.

Q: Sample was prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values. V: The sample concentration is too high to evaluate accurate spike recoveries.

Statement of need

What need would the proposed rule address?

ATI is currently managing its chemical etching and milling wastewater treatment sludge as F006 listed hazardous waste. It is costly for ATI to manage the waste this way. Through the delisting petition, ATI has demonstrated the waste can safely go to a permitted, non-hazardous Subtitle D landfill. This will also allow ATI to use a nearby landfill rather than trucking the waste approximately 200 miles to a hazardous waste landfill.

How would the proposed rule address the need?

If the Oregon Environmental Commission approves the delisting rulemaking, ATI can manage the sludge as non-hazardous industrial waste, significantly reducing management and disposal costs.

How will DEQ know the rule addressed the need?

DEQ will know when ATI no longer manages the sludge as hazardous waste because it will no longer list the waste on its annual hazardous waste management report.

Rules affected, authorities, supporting documents

Lead division

Land Quality

Program or activity

Hazardous Waste Program

Chapter 340 action

Rules Amended – OAR 340

340-101-0004

Statutory Authority - ORS

466.020 and 466.180

Statutes Implemented - ORS

466.015 and 466.195

Documents relied on for rulemaking

Document title	Document location
Delisting Petition: #DP-2019-001	DEQ-HQ-HW Program 700 NE Multnomah Street, Suite 600 Portland, OR 97232-1400
Delisting Risk Assessment Software	https://www.epa.gov/hw/hazardous-waste-delisting-risk-assessment-software-dras

Fee Analysis

This rulemaking does not involve fees.

Statement of fiscal and economic impact

Fiscal and Economic Impact

Following delisting, DEQ will no longer require ATI to pay hazardous waste management fees for its F006 listed hazardous waste. However, DEQ will continue to inspect ATI and offer compliance assistance.

ATI will receive positive fiscal benefits. Since June 2017, ATI has managed its chemical-etching and milling sludge as a F006 hazardous waste at an approximate annual cost of \$250,000. If the Oregon Environmental Quality Commission adopts the proposed rule amendments, ATI pay less to handle and dispose of the materials that are the subject of this rulemaking.

Statement of Cost of Compliance

State agencies

The proposed rule will reduce revenue for DEQ's hazardous waste program. DEQ will no longer require the specific facility these rules affect to pay fees for hazardous waste disposal. In addition, DEQ will receive less fee revenue from the treatment, storage and disposal facility that is currently receiving the hazardous waste.

Local governments

DEQ anticipates there will be no fiscal or economic impact to local governments, as the rule impacts only one specific facility.

Public

DEQ anticipates there will be no fiscal or economic impact to the general public.

Large businesses - businesses with more than 50 employees

DEQ anticipates there will be a fiscal or economic impact to one large business that currently receives the F006 hazardous waste for disposal. If EQC adopts the proposed rule amendments, ATI will reduce its costs in handling and disposal of the materials that are the subject of this rulemaking.

Small businesses – businesses with 50 or fewer employees

a. Estimated number of small businesses and types of businesses and industries with small businesses subject to proposed rule.

DEQ anticipates there will not be adverse impacts on small businesses.

b. Projected reporting, recordkeeping and other administrative activities, including costs of professional services, required for small businesses to comply with the proposed rule.

These rule changes will not require any additional reporting, recordkeeping, or other administrative activities.

c. Projected equipment, supplies, labor and increased administration required for small businesses to comply with the proposed rule.

No additional equipment, supplies or labor is required to comply with these rules.

d. Describe how DEQ involved small businesses in developing this proposed rule.

DEQ did not involve small businesses in developing these proposed rules because the rules do not affect small businesses.

Documents relied on for fiscal and economic impact

Document title	Document location
Delisting Petition: #DP-2019-001	DEQ-HQ-HW Program 700 NE Multnomah Street, Suite 600 Portland, OR 97232-1400

Advisory committee fiscal review

DEQ did not convene an advisory committee. The proposed rulemaking affects only one specific facility, does not affect any small businesses or the general public, and only has a fiscal impact on DEQ and the petitioner. There will be a public hearing and public comment period to gather public comments on the rulemaking.

Housing cost

As Oregon Revised Statute 183.534 requires, DEQ evaluated whether the proposed rules affect the development cost of a 6,000-square-foot parcel and construction of a 1,200-square-foot detached, single-family dwelling on that parcel. DEQ determined the proposed rules would have no effect on the development costs because the proposed rules do not have any bearing on housing.

Federal relationship

Relationship to federal requirements

ORS 183.332, 468A.327, and OAR 340-011-0029 require DEQ to attempt to adopt rules that correspond with existing equivalent federal laws and rules unless there are reasons not to do so.

In this case, there is no comparable federal requirement. The proposed rule amendments are not in addition to or different from federal requirements.

Under the state and federal rules cited above, the EPA authorizes DEQ to operate Oregon's hazardous waste program. The EPA also authorizes Oregon to exempt substances from being classified as a listed hazardous substances in Oregon if a petitioner meets the requirements stated in the state and federal rules listed above. This action is consistent with, and DEQ is taking it, under the authority of, federal rules.

Land use

Land-use considerations

In adopting new or amended rules, Oregon Revised Statute 197.180 and Oregon Administrative Rule 340-018-0070 require DEQ to determine whether the proposed rules significantly affect land use. If so, DEQ must explain how the proposed rules comply with state wide land-use planning goals and local acknowledged comprehensive plans.

Under Oregon Administrative Rules 660-030-0005 and 340 Division 18, DEQ considers that rules affect land use if:

- The statewide land use planning goals specifically refer to the rule or program, or
- The rule or program is reasonably expected to have significant effects on:
 - Resources, objectives or areas identified in the statewide planning goals, or
 - Present or future land uses identified in acknowledged comprehensive plans

DEQ determined whether the proposed rules involve programs or actions that affect land use by reviewing its Statewide Agency Coordination plan. The plan describes the programs that DEQ determined significantly affect land use. DEQ considers that its programs specifically relate to the following statewide goals:

Goal	Title
5	Open Spaces, Scenic and Historic Areas, and Natural Resources
6	Air, Water and Land Resources Quality
9	Ocean Resources
11	Public Facilities and Services
16	Estuarial Resources

Statewide goals also specifically reference the following DEQ programs:

- Nonpoint source discharge water quality program – Goal 16
- Water quality and sewage disposal systems – Goal 16
- Water quality permits and oil spill regulations – Goal 19

Determination

DEQ determined that these proposed rules do not affect land use under Oregon Administrative Rule 340-018-0030 or DEQ’s State Agency Coordination Program.

EQC Prior Involvement

DEQ did not present additional information specific to this proposed rule revision.

Advisory Committee

DEQ did not convene an advisory committee. The proposed rulemaking affects only one specific facility, does not affect any small businesses or the general public, and only has a fiscal impact on DEQ and the petitioner. There will be a public hearing to gather public comments on the rulemaking.

Public Engagement

Public notice

DEQ provided notice of the proposed rulemaking and rulemaking hearing on July 15, 2019, by:

- Filing notice with the Oregon Secretary of State for publication in the Aug. 1, 2019 Oregon Bulletin
- Notifying EPA by mail

- Posting the Notice of Rulemaking and draft rules on the webpage for this rulemaking, located at: [ATI Delisting Rulemaking](#)
- Emailing 11,493 interested parties on the following DEQ lists through GovDelivery:
 - Rulemaking
 - Hazardous Waste
- Emailing the following key legislators required under ORS 183.335:
 - Senator Michael Dembrow, Chair, Senate Committee on Environment and Natural Resources
 - Senator Alan Olsen, Vice Chari, Senate Committee on Environment and Natural Resources
 - Representative Ken Helm, Chair, House Committee on Energy and Environment
 - Representative E. Werner Reschke, Vice-Chair, House Committee on Energy and Environment
 - Representative Sheri Schouten, Vice-Chair, House Committee on Energy and Environment
- Posting on the DEQ event calendar: [DEQ Calendar](#)
- Publishing notice in the following newspaper: *The Albany Democrat Herald*, July 15, 2019.

Public Comment

How to comment on this rulemaking proposal

DEQ is asking for public comment on the proposed rules. Anyone can submit comments and questions about this rulemaking. A person can submit comments through an online webpage, by regular mail or at the public hearing.

Comment deadline

DEQ will only consider comments on the proposed rules that DEQ receives by 4 p.m., on Aug. 20, 2019.

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By mail

Oregon DEQ
Attn: Eileen Naples
700 NE Multnomah St., Room 600
Portland, OR 97232-4100

At hearing

Aug. 19, 2019

Public Hearing

Public hearings

DEQ plans to hold one public hearing. The details are listed below. Anyone can attend a hearing in person or by teleconference.

DEQ will consider all comments received at the hearings before completing the draft rules. DEQ will summarize all comments and respond to comments in the EQC staff report.

Information about the public hearing:

- Date: Aug. 19, 2019
- Start time: 6 p.m.
- Street address: Linn-Benton Community College, 6500 Southwest Pacific Blvd.
- Room: Vineyard Mt. Room CC213
- City: Albany, OR 97321
- Teleconference phone number: 888-363-4734
- Participant code: 1910322
- Webinar link: [Webinar Link](#)
- Instructions on how to join webinar or teleconference: [Webinar/teleconference instructions](#)

DEQ will consider all written comments received at the hearings listed below before completing the draft rules. DEQ will summarize all comments and respond to comments in the Environmental Quality Commission staff report.

Any person can submit comments on the proposed rules as described in the Introduction section of this document.