

**NOTE: 10-31-2022 Revision to Proposed Delisting - See the proposed revisions to the Chromium (Total) values in the table on page 2 and the revision to paragraph a.3. on page 3.**

**DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT**

**Solid and Hazardous Waste Commission/Hazardous Materials and Waste Management Division**

**6 CCR 1007-3**

**HAZARDOUS WASTE**

**Proposed Golden Aluminum, Inc. F019 Delisting**

**1) Appendix IX of Part 261 is amended by deleting and reserving Delisting #7 as follows:**

**DELISTING #: 007 RESERVED**

**FACILITY:** ~~Golden Aluminum, Inc.~~

**ADDRESS:** ~~1405 East 14th Street, Fort Lupton, CO 80621~~

**WASTE:** ~~Wastewater Treatment Sludge from Aluminum Cleaning and Conversion Coating Operations. EPA Hazardous Waste Code F019 generated after the effective date of this delisting.~~

~~The Solid and Hazardous Waste Commission is hereby removing the conditional delisting granted to the Golden Aluminum, Inc. ("Golden Aluminum") facility in Fort Lupton, Colorado (the "Facility").~~

~~Golden Aluminum was granted a conditional delisting by the Commission on October 18, 2005 for wastewater treatment sludge (F019 hazardous waste) generated from aluminum cleaning and conversion coating operations at the Facility.~~

~~The delisting was granted under conditions that specified disposal, recordkeeping, and storage requirements for the delisted sludge. The conditional delisting of the F019 waste also prohibited any major changes to the chemical conversion coating process or wastewater treatment process without prior notification, evaluation, and approval by the Division.~~

~~On February 12, 2008, the Division received notification from Golden Aluminum indicating that the Facility would be converting its titanium conversion coating process to a chrome conversion coating process effective February 18, 2008.~~

~~Delisting determinations are made on a case-by-case basis with respect to a specific waste generation process. Golden Aluminum's change to a new chromate conversion coating process using hexavalent chromium is a significant change from the titanium conversion coating process described in the Facility's April 8, 2005 delisting petition.~~

~~Golden Aluminum's 2005 delisting no longer covers the wastewater treatment sludge generated at the~~

Facility, and the Facility was notified by the Division on March 24, 2008 that wastewater treatment sludge generated from the new chromate conversion coating process at the Facility must be collected and managed as a hazardous waste with the waste code of F019.

**2) Appendix IX of Part 261 is amended by adding Delisting #11 to read as follows:**

**PART 261, APPENDIX IX – WASTES EXCLUDED UNDER §§ 260.20 AND 260.22**

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**DELISTING #:** 11

**FACILITY:** Golden Aluminum, Inc.

**ADDRESS:** 1405 East 14th Street, Fort Lupton, CO 80621

**WASTE:** Wastewater Treatment Sludge from Aluminum Cleaning and Conversion Coating Operations. EPA Hazardous Waste Code F019 generated after the effective date of this delisting.

**CONDITIONS:** This delisting is valid only for the waste stream specified above and referenced in the delisting petition submitted on May 12, 2022 and October, 2022 under the following conditions:

**a. Changes to Current Operations**

1. Golden Aluminum, Inc. must notify the Division at least 30-days prior to implementing any major change to the chemical conversion coating process. A major change is any change including alteration of the current wastewater treatment process or incorporating different chemicals or reagents such that the composition of the wastewater treatment sludge is altered.
2. Golden Aluminum, Inc. must notify the Division within 15-days after implementing any change to the wastewater treatment or chemical conversion coating processes that causes a significant change in the type or concentration of any hazardous constituent in the waste or causes the waste to exhibit a hazardous waste characteristic. A significant change is defined as an increase in the total waste concentration for any constituent identified below:

Constituent	Average Concentration (ppm)	2xs the Standard Deviation	Concentration Requiring Notification to the Division (Two Standard Deviations above the Average Concentration)
Arsenic	2.3	1.7	4.0
Barium	7.1	16.0	23.1
Cadmium	Non-detect	Non-detect	Detection
Chromium (Total)	8,33512,333	14,4621,154	22,79713,487
Chromium VI	158	306	464
Copper	4.2	6.0	10.2
Cyanide (amendable)	Non-detect	Non-detect	Detection
Cyanide (free/reactive)	Non-detect	Non-detect	Detection

Lead	4.9	NA	4.9
Mercury	Non-detect	Non-detect	Detection
Nickel	5.3	4.0	9.3
Selenium	Non-detect	Non-detect	Detection
Silver	Non-detect	Non-detect	Detection
Zinc	10.6	20.0	30.6

A significant change also includes the detection of any additional Part 264, Appendix IX hazardous constituents that are not identified in the above table.

3. ~~The Division reserves the right to re-evaluate and, if necessary, remove this approval or modify these conditions in~~ In the event that a significant change, as defined above, is reported by Golden Aluminum, Inc. ~~In such case,~~ the Division may suspend this delisting or impose temporary requirements on the delisted waste until such time as an appropriate amendment to this delisting can be considered by the Solid and Hazardous Waste Commission.

**b. Sampling Requirements**

Golden Aluminum, Inc. shall conduct annual verification sampling of the delisted waste in January of each year to monitor for any significant change in the type or concentration of any hazardous constituents in the delisted waste. Annual verification sampling shall be submitted to the Division within sixty (60) days of the sampling event for review against initial criteria and sampling methodology for both total waste concentration and Toxicity Characteristic Leaching Procedure (TCLP).

**c. Storage Requirements**

1. The delisted waste generated by Golden Aluminum, Inc. may not be accumulated on-site for a period in excess of one year.
2. The volume of delisted waste accumulated on-site may not exceed 20 cubic yards at any given time.
3. The delisted waste must be stored in a container that is capable of being closed. The container must be marked or labeled to identify the contents as “delisted waste” and with an accumulation start date. The container must be kept closed except for when waste is being added to or removed from the container.

**d. Recordkeeping Requirements**

1. Golden Aluminum, Inc. shall maintain records of the disposal or recycling of all delisted waste that documents that such activities are in accordance with the delisting petition.
2. Golden Aluminum, Inc. shall maintain all records required by paragraph d.1 above for a period of at least three years.

**e. Disposal Requirements**

The delisted waste shall be disposed in a landfill meeting the requirements of the Colorado Solid Waste Regulations (6 CCR 1007-2).

128 **3) Section 8.101 {Statement of Basis and Purpose for the Rulemaking Hearing of**  
129 **November 15, 2022} is added to Part 8 of the Regulations to read as follows:**

130  
131 **Statement of Basis and Purpose**  
132 **Rulemaking Hearing of November 15, 2022**

133  
134 **8.101 Basis and Purpose**

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136 This amendment to 6 CCR 1007-3, Part 261, Appendix IX is made pursuant to the authority granted to  
137 the Solid and Hazardous Waste Commission in § 25-15-302(2), C.R.S.

138  
139 **Amendment of Part 261, Appendix IX to Conditionally Delist F019 Hazardous Waste Generated by**  
140 **Golden Aluminum, Inc. at 1405 East 14th Street in Fort Lupton, Colorado 80621.**

141  
142 Appendix IX of Part 261 is being amended to conditionally delist F019 hazardous waste generated at  
143 Golden Aluminum in Fort Lupton, Colorado. This delisting will allow Golden Aluminum to dispose of this  
144 waste at a solid waste landfill meeting the requirements of the Colorado Solid Waste Regulations (6 CCR  
145 1007-2) or a metals recycling facility provided it complies with the conditions of the delisting. The Solid  
146 and Hazardous Waste Commission (the "Commission") is requiring an annual verification sampling of the  
147 delisted waste and the results of that verification sampling must be submitted to the Division within sixty  
148 (60) days of the sampling event for review against initial delisting criteria and sampling methodology for  
149 both total waste concentration and Toxicity Characteristic Leaching Procedure (TCLP).

150  
151 Golden Aluminum operates a manufacturing facility in Fort Lupton, Colorado for the production of  
152 aluminum sheets for the caning industry. The waste is generated from chromate process  
153 on rolled aluminum sheets and has a North American Industry Classification System (NAICS) number of  
154 331315 and 331314 for Secondary Smelting and Alloying of Aluminum and Aluminum Sheet, Plate and  
155 Foil manufacturing. Manufacturing processes related to this delisting process include: cleaning,  
156 chromating preparation of aluminum for coatings, packaging, and distribution.

157  
158 As part of the facility's manufacturing processes, aluminum sheets are cold rolled and then cleaned and  
159 chromated to allow for a coating process on the aluminum sheets. These aluminum sheets are then used  
160 in the canning industry. The rinse waters from these finish processes are pretreated in the facility's  
161 permitted industrial wastewater treatment system. Pursuant to the listing description at § 261.31,  
162 wastewater treatment sludge generated from the chemical conversion coating of aluminum is classified  
163 as F019 hazardous waste. The facility currently generates in excess of one ton per month of F019  
164 hazardous waste.

165  
166 The basis for the F019 hazardous waste listing is described in Appendix VII of Part 261 of the hazardous  
167 waste regulations. Each listing is based on hazardous constituents that are typically contained in the  
168 waste described by the listing. The hazardous constituents that formed the basis for the F019 listing  
169 include hexavalent chromium (Chromium VI) and complexed cyanide. Complexed cyanide was not  
170 detected in the waste stream

171  
172 The wastewater treatment process at Golden Aluminum's facility specifically treats the wastewater to  
173 reduce the hexavalent chromium to a trivalent chromium. This is achieved by reducing the hexavalent  
174 chromium to trivalent chromium for removal by the industrial wastewater treatment system. However, a  
175 small percentage of the hexavalent chromium remains in the wastewater treatment sludge. To address  
176 this issue, TCLP analysis for hexavalent chromium was performed. Hexavalent chromium was detected  
177 above the method detection limit (<0.020 mg/l).

178  
179 The F019 wastewater sludge filter cakes generated at the Golden Aluminum facility were periodically  
180 sampled according to the facility's sampling and analysis plan. This sampling analysis was developed to

181 demonstrate that the wastewater treatment sludge does not exhibit the toxicity characteristic for the  
182 constituents listed in Table 1 of 6 CCR 1007-3 Section 261.24 using the Toxicity Characteristic Leachate  
183 Procedure (TCLP).

184  
185 The results of the TCLP analysis indicated that the waste does not leach any of the 8 RCRA heavy metal  
186 constituents analyzed (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) at  
187 concentrations above regulatory standards; and therefore, the waste does not meet the definition of the  
188 toxicity characteristic. Analytical testing also indicated the presence of copper, nickel and zinc in the  
189 wastewater treatment sludge. However, the concentrations of these constituents were below risk-based  
190 levels. The waste also does not exhibit the hazardous waste characteristic of corrosivity, ignitability or  
191 reactivity.

192  
193 Initial laboratory analysis from the May 12, 2022 delisting petition indicated interferences of the analysis  
194 with hexavalent chromium. In addition, the Division requested testing for perfluorooctanesulfonic acid  
195 (PFOS) and perfluorooctanoic acid (PFOA). While these constituents are not currently regulated  
196 compounds, the Division wanted to confirm that they are not present in the waste stream. Three  
197 additional samples were collected in August and September of 2022 for this analysis and Eurofins – Test  
198 America provided testing for all of the parameters. There was not any PFOS or PFOA found in the waste  
199 sludge. In addition, the hexavalent chromium did not experience the interferences and was also found to  
200 be non-detect for TCLP. This confirms that the sludge meets the delisting criteria.

201  
202 A risk evaluation of the wastewater treatment sludge waste was also performed utilizing the EPA program  
203 Delisting Risk Assessment Software (DRAS) version 4.0 (EP-S7-05-05 – July 31, 2020). The results of  
204 this risk assessment indicated that this waste is suitable for disposal in a Subtitle D landfill.

205  
206 This delisting is being granted under conditions specifying disposal, record keeping, storage and  
207 sampling requirements for the delisted sludge. Conditional delisting of the waste also prohibits any major  
208 changes to the chromating operations or wastewater treatment process without prior notification,  
209 evaluation, and approval by the Division.

210  
211 This delisting does not apply to waste that demonstrates a “significant change” as defined in Delisting  
212 #011 in Part 261, Appendix IX—Wastes Excluded Under § 260.20 and 260.22(d), or if any of the  
213 conditions specified in Part 261, Appendix IX for this delisting are not met. Should either of these occur,  
214 the waste is and must be managed as a hazardous waste. While the Commission is approving this  
215 conditional delisting for this specific waste at this specific site, the findings and criteria associated with the  
216 approval are unique. Other petitions for delisting, even if similar in material or use, will be reviewed by the  
217 Division on a case-by-case basis.