

APPENDIX I

REPRESENTATIVE SAMPLING METHODS

The methods and equipment used for sampling waste materials will vary with the form and consistency of the waste materials to be sampled. Samples collected using the sampling protocols listed below, for sampling waste with properties similar to the indicated materials, will be considered by the Department to be representative of the wastes.

Extremely viscous liquid - ASTM Standard D140-70
Crushed or powdered material - ASTM Standard D346-75
Soil or rock-like material - ASTM Standard D420-69
Soil-like material- ASTM Standard D 1452-65
Fly ash-like material - ASTM Standard D2234-76

[ASTM Standards are available from ASTM, 1916 Race St., Philadelphia, PA. 19103]

Containerized liquid wastes - "COLIWASA" described in "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods,"* U.S. Environmental Protection Agency, Office of Solid Waste, Washington, D.C. 20460.

[Copies may be obtained from Solid Waste Information, U.S. Environmental Protection Agency, 26 W. St. Clair St., Cincinnati, Ohio 45268]

Liquid waste in pits, ponds, lagoons, and similar reservoirs. - "Pond Sampler" described in "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods."*
This manual also contains additional information on application of these protocols.

* These methods are also described in "Samplers and Sampling Procedures for Hazardous Waste Streams," EPA 600/2-80-018, January 1980.

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Appendix II to Part 261 -- Method 1311 Toxicity Characteristic Leaching Procedure (TCLP)

Note: The TCLP (Method 1311) is published in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in ' 260.11 of these regulations.

Appendix III to Part 261 -- CHEMICAL ANALYSIS TEST METHODS

Note: Appropriate analytical procedures to determine whether a sample contains a given toxic constituent are specified in Chapter Two, "Choosing the Correct Procedure" found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in ' 260.11 of these regulations. Prior to final sampling and analysis method selection, the individual should consult the specific section or method described in SW-846 for additional guidance on which of the approved methods should be employed for a specific sample analysis situation.

Appendix IV (Reserved for Radioactive Waste Test Methods)

Appendix V (Reserved for Infectious Waste Treatment Specifications)

Appendix VI (Reserved for Etiologic Agents)

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PART 261, APPENDIX IX -- WASTES EXCLUDED UNDER ' ' 260.20 AND 260.22

DELISTING #: 001

FACILITY: South Adams County Water and Sanitation District ("SACWSD")

ADDRESS: 7400 Quebec Street, Commerce City

WASTE: Spent granular activated carbon ("GAC") contaminated with spent halogenated solvents, EPA hazardous waste # F002, generated after January 15, 1992.

CONDITIONS: This delisting is valid only for the above specified wastestream under the following conditions:

- a) The waste may not be land disposed. This restriction specifically includes, but is not limited to, the following forms of land disposal:
 - i) Storage in lieu of land disposal. The waste may not be stored for greater than one year unless the petitioner can prove that such storage is necessary to facilitate proper treatment of the waste as specified by the conditions of the delisting.
 - ii) Placement of the waste on or in the land as defined in 6 CCR 1007-3, ' 268.2.
- b) The waste must be regenerated at an incinerator in compliance with Sections 3004 and 3005 of the federal Solid Waste Disposal Act, 42 U.S.C. Sections 6924 and 6925; and Section 121(d)(3) of the federal Comprehensive Environmental Response Compensation and Liability Act, 42 U.S.C. Section 9621(d)(3).
- c) The unit which regenerates the waste must meet the limits on the parameters below for each batch of SACWSD's waste:
 - i) Regeneration facility must be able to demonstrate that at least 99.99% destruction removal efficiency is achieved for the following compounds:
 - chloroform
 - 1,1 dichloroethane (1,1 DCA)
 - 1,1 dichloroethene (1,1 DCE)
 - t-1, 2 dichloroethene (t-1,2 DCE)
 - 1,1 dichloropropane
 - tetrachloroethene (perchloroethylene or PCE)
 - 1,1,1 trichloroethane (1,1,1 TCA)
 - trichloroethene(TCE)

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ii) An afterburner combustion temperature that can be shown to achieve the required 99.99% destruction removal efficiency must be maintained. The afterburner combustion temperature shall not be less than 1,700 degrees F.

iii) The regeneration facility must remain in compliance with all applicable local, state, and federal environmental regulations.

d) SACWSD is required to obtain documentation which clearly shows that each batch of spent carbon was regenerated under the required conditions. Records must be kept on site at the Klein plant for a minimum of three years.

e) SACSWD must notify the Hazardous Materials and Waste Management Division, Hazardous Waste Control Section on a quarterly basis, of SACWSD's knowledge of any significant changes in the type or concentration of hazardous constituents in the carbon or in the influent to SACWSD's GAC system. "Significant changes" are defined as increases in the total concentration of any of the following constituents (in the carbon or the influent) which exceed the values given in the October 1990 petition by 50% or greater:

- chloroform
- 1,1 dichloroethane (1,1 DCA)
- 1,1 dichloroethene (1,1 DCE)
- trans-1,2 dichloroethene (t-1,2 DCE)
- 1,1 dichloropropane
- tetrachloroethene (perchloroethylene or PCE)
- 1,1,1 trichloroethane (1,1,1 TCA)
- trichloroethene (TCE)

"Significant changes" also refers to the appearance of any additional Part 264, Appendix IX hazardous constituents (in either the carbon or the influent) not represented in SACWSD's October 1990 delisting petition.

f) The Department reserves the right to re-evaluate and, if necessary, revoke this delisting or modify its conditions in the event of any "significant changes" (as defined above) in the carbon or in the influent to SACWSD's GAC system.

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DELISTING #: 002

FACILITY: NTI, A Division of Colorado Springs Circuits, Inc. ("NTI")

ADDRESS: 6035 Galley Road, Colorado Springs, 80915

WASTE: Wastewater Treatment Sludge from Electroplating Operations
EPA hazardous waste # F006, generated after August 20, 1996.

The Solid and Hazardous Waste Commission is hereby removing the conditional delisting granted to NTI, a division of Colorado Springs Circuits, Inc. ("NTI"), for its facility located at 6035 Galley Road in Colorado Springs, Colorado (the "Facility").

NTI was granted a conditional delisting by the Commission on August 20, 1996 for wastewater treatment sludge (F006 hazardous waste) generated from electroplating operations at the Facility.

The delisting was granted under conditions that specified sampling, storage, recordkeeping and disposal requirements for the delisted sludge. The conditional delisting of the F006 waste also prohibited any major changes to the electroplating process or wastewater treatment process at the Facility without prior notification, evaluation, and approval by the Division.

In January of 2000, Dynamic Details, Inc. ("DDI"), formally known as NTI, announced its plans to consolidate its pre-production manufacturing operations located at the Facility into its Dallas, Texas operation, which would result in the complete closure of the Colorado Springs facility.

On June 20, 2000, the Division received formal notice indicating that DDI had officially ceased Operations at the Facility on December 31, 1999, and had completed all closure activities at the Facility as of May 18, 2000. Therefore, NTI's August 1996 conditional delisting is no longer applicable, and the Commission is removing the delisting.

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DELISTING #: 003

FACILITY: Denver Arapahoe Chemical Waste Processing Facility (ADACWPF@)

EPA ID NO.: COD000695007

ADDRESS: 27500 E. Yale Avenue, Aurora, Colorado 80044

WASTE: Leachate which collects in the primary and secondary leachate collection sumps of the DACWPF reconstructed cell (EPA hazardous waste # F039), removed after October 30, 1998.

CONDITIONS: This delisting is valid only for the waste stream specified above and referenced in the delisting petition submitted June 16, 1998, under the following conditions:

1. The collected leachate must be used only for dust suppression at Subtitle D solid waste disposal facilities;
2. Use of the collected leachate for dust suppression shall be limited to areas within the footprint of any Subtitle D solid waste disposal facility liner system and shall not be applied to the final cover of any Subtitle D solid waste disposal facility;
3. The leachate must be sampled annually and analyzed for toxicity characteristic leaching procedure (ATCLP@) metals, volatiles, semi-volatiles, and pesticides to ensure that it will satisfy the conditions presented in the petition and does not exceed applicable risk levels; and
4. Appropriate precautions should be taken to avoid dermal contact or ingestion of the leachate such as, where appropriate, use of repellent boots, coveralls, gloves, and safety glasses.

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DELISTING #: 004

FACILITY: AAA Plating, Inc.

ADDRESS: 7777 40th Avenue, Denver, CO 80205

WASTE: Wastewater Treatment Sludge from Electroplating and Chemical Conversion Coating Operations. EPA Hazardous Waste Codes F006 and F019 generated after June 20, 2000.

CONDITIONS: This delisting is valid only for the waste stream specified above and referenced in the delisting petition submitted on January 5, 2000 under the following conditions:

a. Changes to Current Operations

1. AAA Plating must notify the Division at least 30-days prior to implementing any major change to the electroplating or chemical conversion coating processes. A major change is any change including alteration of the current wastewater treatment process or incorporating different hazardous chemicals or reagents such that the composition of the wastewater treatment sludge is altered.

2. AAA Plating must notify the Hazardous Waste Compliance Unit of the Hazardous Materials and Waste Management Division within 15 days after implementing any change to the wastewater treatment, electroplating, or chemical conversion coating processes that cause a significant change in the type or concentration of any hazardous constituent in the waste. A significant change is defined as an increase in the total waste concentration for any constituent identified below:

<u>Constituent</u>	<u>Total Concentration (ppm)</u>
Arsenic	0.58
Barium	10.87
Cadmium	8.53
Chromium (Hexavalent)	Detection
Lead	16.88
Mercury	Detection
Nickel	3083
Selenium	Detection
Silver	30.1

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

3. The Division reserves the right to re-evaluate and, if necessary, revoke this approval or modify these conditions in the event that a significant change, as defined above, is reported by AAA Plating. In such case, the Division may revoke or impose temporary requirements on the petitioned waste until such time as the petition can be re-evaluated.

b. Storage Requirements

1. The delisted waste generated by AAA Plating 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 40 cubic yards or 28 tons 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.

c. Recordkeeping Requirements

1. AAA Plating 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. AAA Plating shall maintain all records required by number one above for a period of at least three years.

d. Disposal Requirements

1. The delisted waste shall be disposed in a landfill meeting the requirements of the Colorado Solid Waste Regulations (6 CCR 1007-2) or recycled at an appropriate metal reclamation facility.

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DELISTING #: 005

FACILITY: Wright and McGill Company

ADDRESS: 4245 East 46th Avenue, Denver, Colorado 80216

WASTE: Wastewater Treatment Sludge from Chemical Etching Operations. EPA Hazardous Waste Code F006 generated after November 20, 2001.

CONDITIONS: This delisting is valid only for the waste stream specified above and referenced in the delisting petition submitted on June 25, 2001 under the following conditions:

a. Changes to Current Operation

1. The Wright and McGill Company must notify the Department at least 30-days prior to implementing any major change to the chemical etching (i.e., the lazer sharpening) process. A major change is any change including alteration of the current wastewater treatment process or incorporating different hazardous chemicals or reagents such that the composition of the lazer sludge is altered.

2. The Wright and McGill Company must notify the Hazardous Waste Compliance Unit of the Hazardous Materials and Waste Management Division within 15 days after implementing any change to the wastewater treatment or chemical etching process that causes a significant change in the type or concentration of any hazardous constituent in the waste. A significant change is defined as an increase in the total waste concentration for any constituent identified below:

<u>Constituent</u>	<u>Total Concentration (ppm)</u>
Arsenic	Detection
Barium	7.96
Cadmium	0.23
Chromium (Hexavalent)	Detection
Lead	16.53
Mercury	Detection
Nickel	244.25
Selenium	Detection
Silver	Detection

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

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3. The Department reserves the right to re-evaluate and, if necessary, revoke this approval or modify the conditions in the event that a significant change, as defined above, is reported by the Wright and McGill Company. In such case, the Department may revoke or impose temporary requirements on the petitioned waste until such time as the petition can be re-evaluated.

b. Storage Requirements

1. The delisted waste generated by the Wright and McGill Company 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 40 cubic yards or 28 tons 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@ with an accumulation start date, and the container must be kept closed except for when waste is being added to or removed from the container.

c. Recordkeeping Requirements

1. The Wright and McGill Company shall maintain records documenting that the delisted waste is managed in accordance with the delisting petition.
2. The Wright and McGill Company shall maintain all records required by number one above for a period of at least three years.

d. Disposal Requirements

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

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DELISTING #: 006

FACILITY: Photo Stencil, LLC

ADDRESS: 4725 Centennial Boulevard
Colorado Springs, Colorado 80919

WASTE: Wastewater Treatment Sludge from Electroplating and Chemical Etching Operations. EPA Hazardous Waste Code F006 generated after June 17, 2003.

CONDITIONS: This delisting is valid only for the waste stream specified above and referenced in the delisting petition submitted on April 16, 2003 under the following conditions:

a. Changes to Current Operation

1. Photo Stencil must notify the Department at least 30-days prior to implementing any major change to the electroplating and/or chemical etching processes. A major change is any change including alteration of the current wastewater treatment process or incorporating different hazardous chemicals or reagents such that the composition of the wastewater treatment sludge is altered.

2. Photo Stencil must notify the Hazardous Waste Compliance Unit of the Hazardous Materials and Waste Management Division within 15 days after implementing any change to the wastewater treatment, electroplating, or chemical etching process that causes a significant change in the type or concentration of any hazardous constituent in the waste. A significant change is defined as an increase in the total waste concentration for any constituent identified below:

<u>Constituent</u>	<u>Total Concentration (ppm)</u>
Arsenic	0.54
Barium	4.6
Cadmium	Detection
Chromium (Hexavalent)	Detection
Chromium – total	308.5
Copper	4,715
Lead	10.6
Mercury	Detection
Nickel	13,183
Selenium	Detection
Silver	Detection
Complexed Cyanide	Detection

A significant change also includes the detection of any additional Part 261, Appendix VIII hazardous constituents that are not identified above.

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3. The Department reserves the right to re-evaluate and, if necessary, revoke this approval or modify the conditions in the event that a significant change, as defined above, is reported by Photo Stencil. In such case, the Department may revoke or impose temporary requirements on the petitioned waste until such time as the petition can be re-evaluated.

b. Storage Requirements

1. The delisted waste generated by Photo Stencil 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 40 cubic yards or 28 tons 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” with an accumulation start date, and the container must be kept closed except for when waste is being added to or removed from the container.

c. Recordkeeping Requirements

1. Photo Stencil shall maintain records documenting that the delisted waste is managed in accordance with the delisting petition.
2. Photo Stencil shall maintain all records required by number one above for a period of at least three years.

d. Disposal Requirements

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

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DELISTING #: 007

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.

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DELISTING #: 008

FACILITY: Advanced Surface Technologies, Inc.

ADDRESS: 6155 West 54th Avenue, Arvada, CO 80002

WASTE: Wastewater treatment sludge generated from the on-site wastewater pretreatment of electrolytic and electroless plating operations. EPA Hazardous Waste Codes F006 and 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 April 8, 2008 under the following conditions:

a. Changes to Current Operations

1. Advanced Surface Technologies, Inc. must notify the Division at least 30-days prior to implementing any major change to the electrolytic and/or electroless plating processes at the Facility. A major change is any change including alteration of the current wastewater treatment process or incorporating different hazardous chemicals or reagents such that the composition of the wastewater treatment sludge is altered.

2. Advanced Surface Technologies, Inc. must notify the Hazardous Waste Compliance Unit of the Hazardous Materials and Waste Management Division within 15 days after implementing any change to the wastewater treatment, or electrolytic and/or electroless plating processes that cause a significant change in the type or concentration of any hazardous constituent in the waste. Advanced Surface Technologies, Inc. shall also notify the Division whenever the sludge exhibits a characteristic of hazardous waste. 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 CDPHE Notification (Two Standard Deviations above the average concentration)
Cyanide (amenable)	0.23	0.51	0.74
Cyanide	0.28	0.35	0.63
Chromium VI	39.50	35.17	74.67
Chromium III	5,350	4,704.25	10,054.25
Mercury	<0.02	Non-detect	Detection
Arsenic	7.17	13.91	11.08
Cadmium	10.55	15.06	25.61
Copper	17,500	7,468	24,968
Lead	17.20	25.76	42.96
Nickel	20,450	10,558	31,008
Selenium	<5.00	Non-detect	Detection
Silver	42.33	27.15	69.48
Barium	3.43	3.91	7.34

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

3. The Division reserves the right to re-evaluate and, if necessary, remove this approval or modify these conditions in the event that a significant change, as defined above, is reported by Advanced Surface Technologies, Inc. In such case, the Division may remove 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

Advanced Surface Technologies, Inc. shall conduct annual verification sampling of the delisted waste to monitor for any significant change in the type or concentration of any hazardous constituents in the waste. Annual verification sampling shall be submitted to the Division within sixty (60) days of the sampling event for review against initial delisting criteria and sampling methodology.

c. Storage Requirements

1. The delisted waste generated by Advanced Surface Technologies, 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 40 cubic yards or 28 tons 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. Advanced Surface Technologies, 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. Advanced Surface Technologies, 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) or recycled at an appropriate metal reclamation facility.