State of Utah

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Lieutenant Governor

Department of
Environmental Quality

Alan Matheson
Executive Director

DIVISION OF AIR QUALITY
Bryce C. Bird
Director

DAQE-AN157400001-17

November 28, 2017

Stephen Allen
AlTech Recovery, LLC
2050 South 7500 West
Magna, UT 84044

Dear Mr. Allen:

Re: Approval Order: New Aluminum Sweat Furnace
Project Number: N15740-0001

The attached document is the Approval Order for the above-referenced project. Future correspondence on this Approval Order should include the engineer's name as well as the DAQE number as shown on the upper right-hand corner of this letter. The project engineer for this action is Ana Williams, who may be reached at (801) 536-4153.

Sincerely,

Bryce C. Bird
Director

BCB:AW:kw

cc: Salt Lake Valley Health Department

STATE OF UTAH

Department of Environmental Quality

Division of Air Quality

APPROVAL ORDER: New Aluminum Sweat Furnace

Prepared By: Ana Williams, Engineer
Phone: (801) 536-4153
Email: anawilliams@utah.gov

APPROVAL ORDER NUMBER

DAQE-AN157400001-17

Date: November 28, 2017

AlTech Recovery, LLC
Secondary Aluminum Operation

Source Contact:
Stephen Allen
Phone: (801) 414-1737
Email: steve@image-point.com

Bryce C. Bird
Director

Abstract

AlTech Recovery, LLC (AlTech) has requested a new AO for a secondary aluminum operation located in Magna, Salt Lake County. The secondary aluminum operation will process scrap aluminum from automobiles to create aluminum ingots, which AlTech will transfer off site. AlTech is requesting to install an aluminum sweat furnace. The aluminum sweat furnace will separate aluminum from the other metals contained in the aluminum scrap.

Magna in Salt Lake County is a maintenance area of the NAAQS for ozone, a NAA of the NAAQS for PM_{10}, $PM_{2.5}$, and SO_2, and an attainment area for all other criteria pollutants. MACT (40 CFR 63 Subparts A and RRR) regulations apply to this source. NSPS (40 CFR 60) and NESHAP (40 CFR 61) regulations and Title V of the 1990 CAA do not apply to this source.

The potential emissions, in TPY, will be as follows: PM_{10} = 9.64, $PM_{2.5}$ (subset of PM_{10}) = 9.64, NO_x = 1.43, SO_2 = 0.01, CO = 1.20, VOC = 0.08, HAPs = 0.03, and CO_2e = 1,710.

This air quality AO authorizes the project with the following conditions and failure to comply with any of the conditions may constitute a violation of this order. This AO is issued to, and applies to the following:

Name of Permittee:
AlTech Recovery, LLC
2050 South 7500 West
Magna, UT 84044

Permitted Location:
Secondary Aluminum Operation
2050 South 7500 West
Magna, UT 84044

UTM coordinates: 409,514 m Easting, 4,509,004 m Northing, UTM Zone 12
UTM Datum: NAD83
SIC code: 3341 (Secondary Smelting & Refining of Nonferrous Metals)

Section I: GENERAL PROVISIONS

I.1 All definitions, terms, abbreviations, and references used in this AO conform to those used in the UAC R307 and 40 CFR. Unless noted otherwise, references cited in these AO conditions refer to those rules. [R307-101]

I.2 The limits set forth in this AO shall not be exceeded without prior approval. [R307-401]

I.3 Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved. [R307-401-1]

I.4 All records referenced in this AO or in other applicable rules, which are required to be kept by the owner/operator, shall be made available to the Director or Director's representative upon request, and the records shall include the two-year period prior to the date of the request. Unless otherwise specified in this AO or in other applicable state and federal rules, records shall be kept for a minimum of two (2) years. [R307-401-8]

I.5 At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded. [R307-401-4]

I.6 The owner/operator shall comply with UAC R307-107. General Requirements: Breakdowns. [R307-107]

I.7 The owner/operator shall comply with UAC R307-150 Series. Emission Inventories. [R307-150]

I.8 The owner/operator shall submit documentation of the status of construction or modification to the Director within 18 months from the date of this AO. This AO may become invalid if construction is not commenced within 18 months from the date of this AO or if construction is discontinued for 18 months or more. To ensure proper credit when notifying the Director, send the documentation to the Director, attn.: NSR Section. [R307-401-18]

Section II: SPECIAL PROVISIONS

II.A The approved installations shall consist of the following equipment:

II.A.1 **AlTech**
Secondary Aluminum Operation

II.A.2 **One (1) Aluminum Sweat Furnace**
Control: Afterburner
Fuel: Natural Gas
Maximum Rated Capacity: 3,000 lbs-processed/hr
Primary Chamber Burner Capacity: 3.0 MMBtu/hr
Holding Chamber Burner Capacity: 1.0 MMBtu/hr
Afterburner Burner Capacity: 1.0 MMBtu/hr
MACT Applicability: Subpart RRR

II.B Requirements and Limitations

II.B.1 **Requirements and Limitations**

II.B.1.a The owner/operator shall not allow visible emissions from any stationary point or fugitive emission source on site to exceed 10% opacity. [R307-401-8]

II.B.1.a.1 Opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9. [R307-401-8]

II.B.1.b The owner/operator shall only use natural gas as fuel in the onsite combustion equipment. [R307-401-8]

II.B.1.c The owner/operator shall only process scrap aluminum in the aluminum sweat furnace. [R307-401-8]

II.B.1.c.1 The owner/operator shall remove all non-metallic materials such as fluids, rubbers, and plastics from the scrap aluminum before the scrap aluminum is charged into the aluminum sweat furnace. [R307-401-8]

II.B.1.c.2 The owner/operator shall maintain an operations log and record the type of scrap aluminum processed in the aluminum sweat furnace on a daily basis. Each entry shall include a record of whether or not the scrap aluminum is free of all non-metallic materials. [R307-401-8]

II.B.1.d The owner/operator shall not process more than 4,380 tons of scrap aluminum in the aluminum sweat furnace per rolling 12-month period. [R307-401-8]

II.B.1.d.1 The owner/operator shall determine the amount of scrap aluminum processed by scale records and maintenance of an operations log. The amount of scrap aluminum processed shall be recorded on a daily basis for all periods the aluminum sweat furnace is in operation. To determine compliance with a rolling 12-month total the owner/operator shall calculate a new 12-month total by the 20th day of each month using data from the previous 12 months. [R307-401-8]

II.B.1.e The owner/operator shall not load material into the primary chamber until the afterburner has correctly preheated to a minimum temperature of 1,600 °F. [40 CFR 63 Subpart RRR, R307-401-8]

II.B.1.f The owner/operator shall maintain the 3-hour block average operating temperature of the afterburner at or above 1,600 °F throughout the entire burn cycle. [40 CFR 63 Subpart RRR, R307-401-8]

II.B.1.f.1 The owner/operator shall install, calibrate, maintain, and operate a device to continuously monitor and record the operating temperature of the afterburner. The continuous monitoring system shall record the temperature in 15-minute block averages and determine and record the average temperature for each 3-hour block period. The owner/operator shall maintain records of the 15-minute block average and 3-hour block average afterburner operating temperatures. [40 CFR 63 Subpart RRR, R307-401-8]

II.B.1.f.2 The afterburner temperature monitoring device shall be installed at the exit of the combustion zone of the afterburner. [40 CFR 63 Subpart RRR, R307-401-8]

II.B.1.g The owner/operator shall operate the afterburner at a minimum residence time of 0.8 seconds. [40 CFR 63 Subpart RRR, R307-401-8]

II.B.1.g.1 The owner/operator shall maintain the manufacturer's specifications or analysis documenting an afterburner design residence time of no less than 0.8 seconds. This documentation shall be kept on site and be readily available for inspection upon request. [40 CFR 63 Subpart RRR, R307-401-8]

II.B.2 **Aluminum Sweat Furnace Testing Requirements**

II.B.2.a Emissions to the atmosphere from the aluminum sweat furnace shall not exceed the following rates at all times:

Pollutant	lb/ton of scrap aluminum processed*
PM_{10}	4.40
$PM_{2.5}$	4.40

*Based on a 3-test average.

[R307-401-8]

II.B.2.a.1 Stack testing to show compliance with the emission limitations stated in the above condition shall be performed as specified below:

Source: Aluminum Sweat Furnace

Pollutant	Testing Status	Test Frequency
PM_{10}	*	#
$PM_{2.5}$	*	#

* Initial compliance testing is required. The initial test date shall be performed as soon as possible and in no case later than 180 days after the startup of a new emission source or the granting of an AO to an existing emission source that is modified. A compliance test is required on the modified emission point that has an emission rate limit.

\# Compliance test every three years, subsequent to the initial compliance test. The Director may require testing at any time.

[R307-401-8]

II.B.2.a.2 Notification:

At least 30 days prior to conducting any emission testing required under any part of UAC, R307, the owner/operator shall notify the Director of the date, time, and place of such testing. A source test protocol shall be submitted to DAQ when the testing notification is submitted to the Director. The source test protocol shall be approved by the Director prior to performing the tests. The source test protocol shall outline the proposed test methodologies, stack to be tested, and procedures to be used. A pretest conference shall be held, if directed by the Director. The pretest conference shall include representation from the owner/operator, the tester, and the Director. [R307-401-8]

II.B.2.a.3 Sample Location:

The emission point shall be designed to conform to the requirements of 40 CFR 60, Appendix A, Method 1, or other methods as approved by the Director. OSHA or MSHA approved access shall be provided to the test location. [R307-401-8]

II.B.2.a.4 Volumetric Flow Rate

40 CFR 60, Appendix A, Method 2, or other testing methods approved by the Director. [R307-401-8]

II.B.2.a.5 PM_{10} and $PM_{2.5}$

The following methods shall be used to measure filterable particulate emissions: 40 CFR 51, Appendix M, Method 201 for PM_{10} or Method 201A for PM_{10} and $PM_{2.5}$, or other EPA-approved testing method, as acceptable to the Director. If other approved testing methods are used which cannot measure the PM_{10} or $PM_{2.5}$ fraction of the filterable particulate emissions, all of the filterable particulate emissions shall be considered PM_{10} or $PM_{2.5}$. The portion of the filterable particulate emissions considered PM_{10} or $PM_{2.5}$ shall be based on information in Appendix B of the fifth edition of the EPA document, AP-42, or other data acceptable to the Director.

The following methods shall be used to measure condensable particulate emissions: 40 CFR 51, Appendix M, Method 202 for PM_{10} and $PM_{2.5}$, or other EPA-approved testing method, as acceptable to the Director.

Both the filterable particulate emissions and the condensable particulate emissions shall be used for compliance demonstration. [R307-401-8]

II.B.2.a.6 Calculations

To determine emissions in lb/ton of scrap aluminum processed, the pollutant concentration as measured by the methods identified above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Director and divided by the total tonnage of scrap aluminum processed during the test run, to give the results in the specified units of the emission limitation. [R307-401-8]

II.B.2.a.7 New Source Operation

For a new source/emission point, the production rate during all compliance testing shall be no less than 90% of the maximum production rate (rated capacity) of the source. If the production rate has not been achieved at the time of the test, method-testing shall be conducted at no less than 90% of the maximum production rate achieved as of the date of the test. [R307-401-8]

II.B.2.a.8 Existing Source Operation

For an existing source/emission point, the production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years. [R307-401-8]

Section III: APPLICABLE FEDERAL REQUIREMENTS

In addition to the requirements of this AO, all applicable provisions of the following federal programs have been found to apply to this installation. This AO in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including UAC R307.

MACT (Part 63), A: General Provisions
MACT (Part 63), RRR: NESHAP for Secondary Aluminum Production

PERMIT HISTORY

This AO is based on the following documents:

Is Derived From	NOI dated March 23, 2017
Incorporates	Additional Information dated April 25, 2017
Incorporates	Additional Information dated April 26, 2017
Incorporates	Additional Information dated June 13, 2017

ADMINISTRATIVE CODING

The following information is for UDAQ internal classification use only:

Salt Lake County
CDS B
MACT (Part 63), Nonattainment or Maintenance Area

ACRONYMS

The following lists commonly used acronyms and associated translations as they apply to this document:

40 CFR	Title 40 of the Code of Federal Regulations
AO	Approval Order
BACT	Best Available Control Technology
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CDS	Classification Data System (used by EPA to classify sources by size/type)
CEM	Continuous emissions monitor
CEMS	Continuous emissions monitoring system
CFR	Code of Federal Regulations
CMS	Continuous monitoring system
CO	Carbon monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent - 40 CFR Part 98, Subpart A, Table A-1
COM	Continuous opacity monitor
DAQ/UDAQ	Division of Air Quality
DAQE	This is a document tracking code for internal UDAQ use
EPA	Environmental Protection Agency
FDCP	Fugitive dust control plan
GHG	Greenhouse Gas(es) - 40 CFR 52.21 (b)(49)(i)
GWP	Global Warming Potential - 40 CFR Part 86.1818-12(a)
HAP or HAPs	Hazardous air pollutant(s)
ITA	Intent to Approve
LB/HR	Pounds per hour
MACT	Maximum Achievable Control Technology
MMBTU	Million British Thermal Units
NAA	Nonattainment Area
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOI	Notice of Intent
NO_x	Oxides of nitrogen
NSPS	New Source Performance Standard
NSR	New Source Review
PM_{10}	Particulate matter less than 10 microns in size
$PM_{2.5}$	Particulate matter less than 2.5 microns in size
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
R307	Rules Series 307
R307-401	Rules Series 307 - Section 401
SO_2	Sulfur dioxide
Title IV	Title IV of the Clean Air Act
Title V	Title V of the Clean Air Act
TPY	Tons per year
UAC	Utah Administrative Code
VOC	Volatile organic compounds