

**Technical Support Document
For
Draft Air Emission Permit No. 03700066-102**

This technical support document (TSD) is intended for all parties interested in the draft permit and to meet the requirements that have been set forth by the federal and state regulations (40 CFR § 70.7(a)(5) and Minn. R. 7007.0850, subp. 1). The purpose of this document is to provide the legal and factual justification for each applicable requirement or policy decision considered in the preliminary determination to issue the draft permit.

1. General information

1.1 Applicant and stationary source location:

Table 1. Applicant and source address

Applicant/Address	Stationary source/Address (SIC Code: 3341 - Secondary Smelting and Refining of Nonferrous Metals)
FFS Incorporated 13220 Doyle Path E Rosemount, Minnesota 55068-2510	Spectro Alloys Corp 13220 Doyle Path E Rosemount, MN 55068-2510
Contact: Kevin Haney Phone: 651-480-6131	

1.2 Facility description

Spectro Alloys Corp. (Spectro) is a secondary aluminum processing plant. Spectro takes in aluminum scrap (used beverage cans, construction debris, aluminum turnings, etc.) and processes it into aluminum alloys ingots. Spectro operates a hammermill and two processing lines, each of which consists of a furnace, a scrap dryer, casting conveyors, and natural gas fired heating equipment.

The main pollutants at Spectro are particulate matter (PM), particulate matter less than 10 microns in aerodynamic diameter (PM10), particulate matter less than 2.5 microns in aerodynamic diameter (PM2.5), volatile organic compounds (VOC), hydrogen chloride (HCl), and dioxin/furans. Emissions from the furnaces, scrap dryers hammermill, and transfer points are controlled by lime-injected fabric filters. The scrap dryers are additionally controlled by thermal oxidizers. Spectro also operates a fabric filter to control the scrap sorter. However, this fabric filter is not needed in order to meet applicable requirements or to limit the potential to emit and does not appear in the permit. Because the fabric filter is not listed in the permit, the Spectro cannot take credit for the control in their emission inventory. Fugitive sources at the facility include paved roads, scrap handling, and scrap piles.

1.3 Description of the activities allowed by this permit action

This permit action is Major Amendment. The MPCA has a combined operating and construction permitting program under Minn. R. ch. 7007, and under Minn. R. 7007.0800. Under that authority, this permit action authorizes construction.

Permit Number 03700066-102 authorizes Spectro to install Furnace 4 (EQUI 57) and Furnace 5 (EQUI 58) as well as a new baghouse for Furnace 4 (TREA 13). Furnace 4 will operate as a batch process. The furnace emissions will be controlled by a dedicated baghouse (TREA 13) ducted to an enclosure around the furnace.

Furnace 5, a round top furnace, will operate as a semi-continuous process. It will initially operate Alternative Operation Scenario 1 (AOS 1) as an uncontrolled furnace, using only clean charge metal, but will have the option to operate as a controlled furnace (AOS 2). When operating uncontrolled, the furnace 5 will be hooded and vented to the atmosphere by an exhaust stack extending through the roof of the building. When operating controlled, the unit will be hooded and exhaust ducts will merge with the Furnace 1 exhaust duct, so that emissions will be controlled by the Furnace 1 baghouse.

In addition to the two new furnaces, the project includes construction of the following insignificant activities: lime handling, solid flux handling and storage, salt cake handling, a natural gas torch heater and dross storage.

As part of the project, the permit requires that the following unit be removed from the facility: Furnace 1 Scrap Dryer (EQUI 39)

1.4 Description of notifications and applications included in this action

Table 2. Notifications and applications included in this action

Date received	Application/notification type and description
08/17/2017	Major Amendment (IND20170002)

1.5 Facility emissions:

Table 3. Title I emissions summary

Pollutant	Unlimited potential emissions from the modification (tpy)	Limited potential emissions from the modification (tpy)	NSR/112(g) threshold for new major source (tpy)	NSR/112(g) review required? (yes/no)
PM	5,902	85	100	No
PM ₁₀	507	85	100	No
PM _{2.5}	507	85	100	No
NO _x	10.09	10.09	100	No
SO ₂	0.06	0.06	100	No
CO	8.48	8.48	100	No
Ozone (VOC)	18.08	18.08	100	No
Lead	0.02	0.02	100	No
CO ₂ e*	12,044	12,044	100,000	No

*Carbon dioxide equivalents as defined in Minn. R. 7007.0100.

Table 4. Total facility potential to emit summary

	PM tpy	PM ₁₀ tpy	PM _{2.5} tpy	SO ₂ tpy	NO _x tpy	CO Tpy	CO ₂ e tpy	VOC tpy	Single HAP tpy	All HAPs tpy
Total Facility Limited Potential Emissions	87.35	86.5	86.31	2.92	47.94	23.34	38,327	83.92	204	220.43

Total Facility Actual Emissions (2016)	73.9	10.78	8.89	1.30	17.0	9.33	24743	20.53	*
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* Not reported in MN emission inventory.

Table 5. Facility classification

Classification	Major	Synthetic minor/area	Minor/area
PSD		X	
Part 70 Permit Program	X		
Part 63 NESHAP	X		

1.6 Changes to permit

The MPCA has a combined operating and construction permitting program under Minnesota Rules Chapter 7007, and under Minn. R. 7007.0800, the MPCA has authority to include additional requirements in a permit. Under that authority, the following changes to the permit are also made through this permit action:

1. Addition of a limit on Mercury emissions of 2.8 lbs/yr. In order to show compliance with this limit the facility will conduct emission factor testing on all mercury emitting units within the life of the permit. Further discussion can be found in Section 3.
2. Per MPCA practice, language was added for each baghouse allowing for replacement with a baghouse that meets or exceeds the control efficiency specified in the permit.
3. Existing and new Data Acquisition Systems and Monitors were added to the permit. DAS were previously permitted as a Control Monitoring System including both monitor and DAS. The permittee also identified that they have bag leak detectors on multiple cells of furnace 1 and 3 baghouses.
4. Chlorine Flux limits were adjusted according to previous performance test and moved to each individual furnace. From a performance test conducted on November 14, 2017 the new chlorine flux rates will be 340.1 lb/hr for EQUI 33 and 717.8 lb/hr for EQUI 9.
5. Dryer 1 Baghouse (TREA 12) was previously permitted but never installed and the permittee does not intend to add the unit. Therefore, it has been removed from the permit.
6. TREA 7 and 11 have been removed from the facility and thus have been removed from the permit.
7. Performance testing of PM for EQUI 20 has been removed. Consent Decree only required initial testing. The Permittee completed 2 tests on the unit one in 2012 at 3% of the limit and another in 2017 at 2% of the limit. No further performance testing is needed to show compliance with the limits in the permit.

2. Regulatory and/or statutory basis

2.1 New source review (NSR)

The permit carries forward limits on the facility such that it is a minor source under New Source Review regulations. No changes to the status of the facility under NSR are authorized by this permit.

2.2 Part 70 permit program

The facility is a major source under the Part 70 permit program.

2.3 New source performance standards (NSPS)

The Permittee has stated that no New Source Performance Standards apply to the operations at this facility.

2.4 National emission standards for hazardous air pollutants (NESHAP)

Spectro is an existing major source of HAPs and is subject to 40 CFR pt. 63, subp. RRR – National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production and 40 CFR pt. 63, subp. ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. The Permittee has stated that no other NESHAPS apply to the operations at this facility.

The NESHAP RRR Facility Requirements group contains the facility-wide requirements from NESHAP RRR along with general requirements from 40 CFR pt. 63, subp. A. It includes operational and monitoring requirements that apply to all of the applicable equipment along with recordkeeping, notification and reporting requirements.

For Furnaces 4 and 5, NESHAP RRR contains emission limits on filterable PM, HCl, and dioxin/furan during controlled activity. Furnace 4 is controlled with a lime-injected fabric filter (TREA 13) to control filterable PM and HCl emissions. Furnace 5 will run 2 alternate operating scenarios. While running clean charge the furnace will be uncontrolled with limits on filterable PM, HCl, and HF. While controlled the unit will vent to a lime-injected fabric filter (TREA 2) to control filterable PM and HCl emissions. NESHAP RRR requires that Spectro maintain proper labeling, operate an appropriate capture/collection system, and monitor the aluminum charge rate for each furnace. Furnace 4 will use salt fluxing thus is not subject to the chlorine flux requirements. NESHAP RRR sets an operational limit on the maximum chlorine flux injection rate which Spectro is complying with by chlorine flux injection rate limits at each furnace. Spectro must continuously monitor the chlorine flux injection rate on Furnace 5 (EQUI 61). NESHAP RRR sets operational limits of lime feeder setting and maximum inlet temperature for each lime-injected fabric filter. Spectro must operate continuous temperature monitors (EQUI 60) and bag leak detectors (EQUI 59) for each lime-injected fabric filter. Spectro must conduct performance tests for filterable PM, HCl, HF, and dioxin/furan every five years.

2.5 Compliance assurance monitoring (CAM)

The table below lists the sources subject to CAM, the control equipment used, whether the source is a large or other pollutant specific emission unit (PSEU), and the pollutants triggering CAM.

Table 6. CAM summary

Unit	Control	CAM applicability	Pollutant
EQUI 57	TREA 13 Fabric Filter	Other	PM
EQUI 58	TREA 2 Fabric Filter	Other	PM

For other PSEUs (not large), records must be made at a minimum of once per 24 hours. See Attachment 4 to this document for the CAM Plan submitted by the applicant.

2.6 Environmental review and air emissions risk analysis (AERA)

This project does not trigger any of the mandatory Environmental Assessment Worksheet or Environmental Impact Statement categories in Minn. R. ch. 4410. There is no additional environmental review or air emissions risk analysis required for this project.

2.7 Minnesota state rules

Portions of the facility are subject to the following Minnesota Standards of Performance:

- Minn. R. 7011.0610 Standards of Performance for Fossil-Fuel-Burning Direct Heating Equipment
- Minn. R. 7011.0715 Standards of Performance for Post-1969 Industrial Process Equipment
- Minn. R. 7011.2300 Standards of Performance for Stationary Internal Combustion Engines

Table 7. Regulatory overview of units affected by the modification/permit amendment

Subject item*	Applicable regulations	Rationale
COMG 1 (PM, PM ₁₀ , and PM _{2.5} Emission Limits to Avoid PSD)	40 CFR pt. 63, subp. RRR	National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production. This group contains the associated monitoring and recordkeeping from NESHAP RRR.
COMG 3 (Bag Leak Detectors) COMG 5 (Fabric Filter Monitors) COMG 10 (NESHAP RRR General Requirements) TREA 13 (Furnace 4 Baghouse)	40 CFR pt. 63, subp. RRR	National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production. TREA 13 is a fabric filter with lime-injection, as defined in 40 CFR § 63.1503, with EQUI 59 bag leak detection and QUI 60 temperature monitors subject to 40 CFR pt. 63, subp. RRR requirements under COMG 3 and COMG 5. TREA 13 is also included in COMG 10.
COMG 13 (Mercury Limit)	Minn. R. 7007.0800	Mercury Limit to avoid Mercury Emissions Reduction Plan Minn. R. 7007.0502 This is a state-only requirement and is not enforceable by the U.S. Environmental Protection Agency (EPA) Administrator and citizens under the Clean Air Act.
EQUI 57 (Furnace 4)	40 CFR pt. 63, subp. RRR Title I Limits to avoid PSD	National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production. Furnace 4 is a new group 1 furnace. Prevention of Significant Deterioration. Limit set on fuel type to reduce potential emissions to avoid classification as a major source under 40 CFR § 52.21.
EQUI 58 (Furnace 5)	40 CFR pt. 63, subp. RRR Title I Limits to avoid PSD	National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production. Furnace 5 is a new group 1 furnace. Prevention of Significant Deterioration. Limit set on fuel type to reduce potential emissions to avoid classification as a major source under 40 CFR § 52.21.
TREA 13 (Furnace 4 Baghouse)	Title I Limits to avoid PSD 40 CFR pt. 63, subp. RRR 40 CFR pt. 64 Minn. R. 7017.0200	Prevention of Significant Deterioration. The permit contains a requirement to operate control equipment when associated emission unit is operating. National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production. These pieces of control equipment are fabric filters with lime-injection, as defined in 40 CFR § 63.1503. Compliance Assurance Monitoring. Furnace 4 is an other PSEU for PM emissions under CAM. Spectro is using a continuous bag leak detector to comply with the daily recordkeeping requirements.

*Location of the requirement in the permit (e.g., EQUI 1, STRU 2, etc.).

The language 'This is a state-only requirement and is not enforceable by the U.S. Environmental Protection Agency (EPA) Administrator and citizens under the Clean Air Act' refers to permit requirements that are established only under state law and are not established under or required by the federal Clean Air Act. The language is to clarify the distinction between permit conditions that are required by federal law and those that are required only under state law. State law-only requirements are not enforceable by the EPA or by citizens under the federal Clean Air Act, but are fully enforceable by the MPCA and citizens under provisions of state law.

3. Technical information

3.1 Mercury Limit COMG 13

The facility has chosen to take a limit of 2.8 lb/yr of Mercury to remain below the 3 lb/yr actual Mercury emissions that would classify it as an existing mercury emitting source under Minn. R. 7005.0100, subp. 23b. This limit excludes the facility from mercury reduction plan found at Minn. R. 7007.0502, subp. 2. The limit also excludes them from completing the requirements of the Guidelines for New and Modified Mercury Air Emission Sources which can be found on the MPCA website at <https://www.pca.state.mn.us/sites/default/files/wq-iw4-01s.pdf>.

The limit can be found in COMG 13 of the permit which includes all permitted mercury emitting sources EQUI 9, 10, 33, 34, 37, 38, 40, 57, and 58. Using the calculation and emission factors listed in Appendix C the permittee will show compliance with the 2.8 lb Hg/yr limit. Previous actual Mercury emissions from 2016 emissions inventory were 0.5 lbs/yr. EQUI 20 has been excluded from the permit because its emission account for 0.00002 lb Hg/yr. The facility also creates a small amount of Mercury emissions from insignificant activities which account for 0.02 lb Hg/yr.

Spectro currently reports mercury emissions using mercury content testing of the particulate captured in their baghouses. Because mercury can also be in the vapor phase the Permit requires Spectro to conduct performance testing to better represent the mercury emissions from the source.

The permit requires Spectro to conduct performance tests on COMG 13 units according to the following schedule.

Performance test due date	Unit
180 days following permit issuance	Furnace 3 (EQUI 9, 10)
180 days following Startup of EQUI 58	Furnace 5 (EQUI 58) AOS 1
180 days following Startup of EQUI 57	Furnace 4 (EQUI 57)
180 days following permit issuance	Furnace 1 (EQUI 33, 34)
02/14/2023	Scrap Dryer 3 (EQUI 37)
02/14/2023	Hammermill (EQUI 38)
365 after startup in AOS 2	Furnace 5 (EQUI 58) AOS 2

No performance testing is needed for EQUI 40 since AP-42 emission factors are used for the mercury emissions of that source.

New emission factors from performance testing of each individual unit will become the emission factor used in COMG 13 compliance calculations until the emission factors in Appendix C of the permit are updated in future permit actions.

3.2 Calculations of potential to emit and emissions increase analysis

Attachment 1 to this TSD contains a summary of the PTE of the Facility, as well as detailed spreadsheets and supporting information prepared by the MPCA and the Permittee.

Emissions for the Title I increase for the addition of EQUI 57 and 58 include, 40 CFR pt. 63, subp. RRR NESHAP limits on PM, HCL, HF, and Dioxin/Furan. The metal HAPs emission factors for EQUI 57 and EQUI 58 are based on 2013 main baghouse hazardous waste testing and are expected to be representative as the same scrap material will be charged, and similar collection system will be utilized. Combustion related emissions for the new units were derived from Natural Gas Combustion Emission factors from AP-42.

3.3 Monitoring

In accordance with the Clean Air Act, it is the responsibility of the owner or operator of a facility to have sufficient knowledge of the facility to certify that the facility is in compliance with all applicable requirements.

For CAM, the Permittee submitted a CAM proposal as required by 40 CFR § 64.3. It can be found in Attachment 4 to this TSD. Further discussion of decisions about CAM can be found in Table 6.

In evaluating the monitoring included in the permit, the MPCA considered the following:

- The likelihood of the facility violating the applicable requirements.
- Whether add-on controls are necessary to meet the emission limits.
- The variability of emissions over time.
- The type of monitoring, process, maintenance, or control equipment data already available for the emission unit.
- The technical and economic feasibility of possible periodic monitoring methods.
- The kind of monitoring found on similar units elsewhere.

The table below summarizes the monitoring requirements associated with this amendment.

Table 8. Monitoring

Subject item*	Requirement (rule basis)	What is the monitoring	Why is this monitoring adequate?
COMG 1 (PM, PM ₁₀ , and PM _{2.5} Emission Limits to Avoid PSD)	PM ≤ 85 tpy; PM ₁₀ ≤ 85 tpy; PM _{2.5} ≤ 85 tpy (Limits to avoid PSD)	Recordkeeping: Daily records, monthly calculations; performance tests	For each unit in this group, Spectro will measure the daily aluminum charge and chlorine flux throughputs using the methods prescribed in NESHAP RRR and will use these records to calculate the monthly material use. Spectro will use the monthly material use records to calculate the monthly PM, PM ₁₀ , and PM _{2.5} emissions followed by the 12-month rolling sum. The month-to-month material use for units in this group is not expected to fluctuate significantly; therefore, this monitoring is adequate to assure compliance. Spectro will conduct performance tests every five years on all subject items in this group to reassess the PM, PM ₁₀ , and PM _{2.5} emission factors.

Subject item*	Requirement (rule basis)	What is the monitoring	Why is this monitoring adequate?
COMG 13 (Mercury Limit)	Mercury \leq 2.8 lb/yr	Daily records of aluminum charge for each unit, monthly calculations of emissions, performance tests	Spectro will measure the daily aluminum charge throughput using the methods prescribed in NESHAP RRR and will use these records to calculate the monthly material use. Spectro will use the monthly material use records to calculate the monthly mercury emissions followed by the 12-month rolling sum. The month-to-month material use for the facility is not expected to fluctuate significantly; therefore, this monitoring is adequate to assure compliance. Performance testing requirements are at EQUI 9, 33, 37, 38, 57, and 58. EQUI 40 uses the AP-42 mercury emission factor which is considered adequate for the purposes of the mercury compliance calculations required by the permit. Therefore, performance testing is not being required for EQUI 40.
EQUI 57 (Furnace 4)	Filterable PM \leq 0.40 lb/ton of feed/charge	Daily records of aluminum charge for each unit, monthly calculations of emissions, performance tests	Monitoring requirements of 40 CFR pt. 63, subp. RRR are adequate to demonstrate compliance with the standard. Performance tests required at EQUI 57 will be used to determine compliance with Front-half particulate matter, dioxin (TCDD-TE), Hydrochloric acid limits and to verify emission factors used for PM, PM ₁₀ , PM _{2.5} emissions.
	Dioxin/Furan \leq 0.00021 gr/ton of feed/charge		
	HCl \leq 0.40 lb/ton of feed/charge or 10% reduction of uncontrolled HCl emissions by weight (40 CFR pt. 63, subp. RRR)		
	PM \leq 0.30 gr/dscf Opacity \leq 20%, with exceptions (Minn. R. 7011.0610)	Recordkeeping: fuel type and usage	This unit uses natural gas; therefore, the likelihood of violating either of the emission limits is very small. The Permittee can demonstrate that this unit will continue to operate such that emissions are well below the emission limits by only burning natural gas. Since this is a permit condition, the semi-annual deviations report will document any deviations from this condition.
Fuel Use: natural gas only (Limit to avoid PSD)	Recordkeeping: fuel type and usage	Monthly purchase records are adequate to demonstrate compliance.	

Subject item*	Requirement (rule basis)	What is the monitoring	Why is this monitoring adequate?
EQUI 58 (Furnace 5)	<p>AOS 1 & 2 : Filterable PM \leq 0.40 lb/ton of feed/charge</p> <p>AOS 1: HF \leq 0.40 lb/ton of feed/charge</p> <p>AOS 1 & 2 : HCl \leq 0.40 lb/ton of feed/charge or 10% reduction of uncontrolled HCl emissions by weight</p> <p>AOS 2: Dioxin/Furan \leq 0.00021 gr/ton of feed/charge</p> <p>(40 CFR pt. 63, subp. RRR)</p>	Daily records of aluminum charge for each unit, monthly calculations of emissions, performance tests	<p>Monitoring requirements of 40 CFR pt. 63, subp. RRR are adequate to demonstrate compliance with the standard.</p> <p>Performance tests required at EQUI 58 will be used to determine compliance with Front-half particulate matter, dioxin (TCDD-TE), Hydrochloric acid limits and to verify emission factors used for PM, PM₁₀, PM_{2.5} emissions.</p>
	<p>Chlorine Flux \leq 400 lb/hr</p> <p>(40 CFR pt. 63, subp. RRR)</p>	Chlorine Rate Monitor	Monitoring requirements of 40 CFR pt. 63, subp. RRR are adequate to demonstrate compliance with the standard.
	<p>PM \leq 0.30 gr/dscf</p> <p>Opacity \leq 20%, with exceptions</p> <p>(Minn. R. 7011.0610)</p>	Recordkeeping: fuel type and usage	This unit uses natural gas; therefore, the likelihood of violating either of the emission limits is very small. The Permittee can demonstrate that this unit will continue to operate such that emissions are well below the emission limits by only burning natural gas. Since this is a permit condition, the semi-annual deviations report will document any deviations from this condition.
	<p>Fuel Use: natural gas only</p> <p>(Limit to avoid PSD)</p>	Recordkeeping: fuel type and usage	Monthly purchase records are adequate to demonstrate compliance.

Subject item*	Requirement (rule basis)	What is the monitoring	Why is this monitoring adequate?
TREA 13 (Furnace 4 Baghouse)	Requirement to vent EQUI 57 emissions to TREA 13 and operate and maintain TREA 13 (Limit to avoid PSD) Inlet Temperature ≤ 220 °F Lime ≥ 60.9 lbs/hr (40 CFR pt. 63, subp. RRR)	CAM Plan, Temperature monitor, recordkeeping of lime usage.	Monitoring requirements of 40 CFR pt. 63, subp. RRR, monitoring based on the Minnesota Performance Standards for Control Equipment and monitoring based on the approved CAM plan are adequate to demonstrate compliance with the applicable requirements.

*Location of the requirement in the permit (e.g., EQUI 1, STRU 2, etc.).

3.4 Insignificant activities

Spectro Alloys Corp has several operations which are classified as insignificant activities under the MPCA's permitting rules. These are listed in Appendix A to the permit. The following insignificant activities are included in this modification.

The permit is required to include periodic monitoring for all emissions units, including insignificant activities, per EPA guidance. The insignificant activities at this Facility are only subject to general applicable requirements. Using the criteria outlined earlier in this TSD, the following table documents the justification why no additional periodic monitoring is necessary for the insignificant activities affected by this modification. See Attachment 1 of this TSD for PTE information for the insignificant activities.

Table 9. Insignificant activities

Insignificant activity	General applicable emission limit	Discussion
Individual units with potential emissions less than 2000 lb/year of certain pollutants	PM, variable depending on airflow; Opacity ≤ 20%, with exceptions (Minn. R. 7011.0715) PM ≤ 0.6 or 0.4, depending on year constructed Opacity ≤ 20% with exceptions (Minn. R. 7011.0510/0515)	These activities include a new lime storage silo, salt cake and flux handling, and a heat torch. For these units, based on available emission factors and anticipated operations, it is highly unlikely that they could violate the applicable requirement. Heat torch is subject to direct heating fossil fuel burning equipment rule. natural gas units, based on fuels used and EPA published emission factors, it is highly unlikely that they could violate the applicable requirement

3.5 Permit organization

In general, the permit meets the MPCA Tempo Guidance for ordering and grouping of requirements. One area where this permit deviates slightly from Tempo guidance is in the use of appendices. While appendices

are fully enforceable parts of the permit, in general, any requirement that the MPCA thinks should be electronically tracked (e.g., limits, submittals, etc.), should be in the Requirements table in Tempo. The main reason is that the appendices are word processing sections and are not part of the electronic tracking system. Violation of the appendices can be enforced, but the computer system will not automatically generate the necessary enforcement notices or documents. Staff must generate these. The permit contains the following appendices:

- Appendix A: Insignificant Activities and Applicable General Requirements. This appendix is a table of insignificant activities at the facility with their respective applicable requirements.
- Appendix B: 40 CFR pt. 63, subp. RRR Equations. This appendix contains equations found in 40 CFR §§ 63.1512 and 63.1513. The equations are used to calculate the chlorine flux injection rate and to determine compliance with emission limits.
- Appendix C: PM, PM₁₀, and PM_{2.5} 12-Month Rolling Sum Calculations. This appendix contains the calculation methods that Spectro will use to calculate the 12-month rolling sum of PM, PM₁₀, and PM_{2.5} emissions to show compliance with the emission limits taken to avoid major source classification under PSD.
- Appendix D: PM, PM₁₀, and PM_{2.5} Charging and Fluxing Emission Factor Equations. This appendix contains the equations that Spectro will use to determine the PM, PM₁₀, and PM_{2.5} charging and fluxing emission factors for Furnaces 1 and 3 based on results of performance tests.
- Appendix E: Emission Limits for Secondary Aluminum Processing Units (SAPU). This appendix contains the equations that Spectro will use to determine the PM, HCl, and D/F emission limits and rates while operating Furnace 1 and 5 as a SAPU.

Another area that deviates from the guidance is in the use of groups where the requirements in the group apply to the members of the group individually. This was done in order to shorten the permit and where no testing or tracking specific to a unit is in the permit (thereby reducing the likelihood that there will be further unit-specific requirements later). This is the case for the requirements at: COMG 3 (Bag Leak Detectors), COMG 4 (Afterburner Temperature Monitors), COMG 5 (Fabric Filter Temperature Monitors), COMG8 (Chlorine Injection Monitors), COMG 10 (NESHAP RRR General Requirements), COMG 13 (Mercury Limit) and COMG 1 (PM Emission Limit to Avoid PSD).

3.6 Comments received – *This section will be completed after the public comment and EPA review periods.*

Public Notice Period: [start date] – [end date]

EPA Review Period: [start date] – [end date]

4. Permit fee assessment

Attachment 3 to this TSD contains the MPCA's assessment of Application and Additional Points used to determine the permit application fee for this permit action as required by Minn. R. 7002.0019. The permit action includes a permit applications, received after the effective date of the rule (July 1, 2009).

5. Conclusion

Based on the information provided by Spectro Alloys Corp the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 03700066-102 and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff members on permit team: Benjamin Carlson (permit engineer)
Sarah Sevcik (peer reviewer)
Beckie Olson (permit writing assistant)
Michaela Leach (Data Coordinator)
Laurie O'Brien (administrative support)
Dan Dietrich (enforcement)
Curt Stock (compliance)
Andy Place (compliance)

TEMPO360 Activities: Major Amendment (IND20170002)

Attachments: 1. PTE summary and emissions increase calculation spreadsheets
2. Subject item inventory and requirements report
3. Points calculator
4. CAM Plan