TECHNICAL REVIEW DOCUMENT
for
OPERATING PERMIT 96OPWE125

to be issued to:

Crown Cork & Seal Company Inc.
Golden Aluminum
Weld County
Source ID 1230089

Prepared by Ashley Campsie
April 28, 1999

I. Purpose:

This document will establish the basis for decisions made regarding the Applicable Requirements, Emission Factors, Monitoring Plan and Compliance Status of Emission Units covered within the Operating Permit proposed for this site. It is designed for reference during review of the proposed permit by the EPA and during Public Comment. The conclusions made in this report are based on information provided in the original application submittal of February 13, 1996, the re-submittal of April 5, 1999 and Division files. This narrative is intended only as an adjunct for the reviewer and has no legal standing.

On April 16, 1998 the Colorado Air Quality Control Commission directed the Division to implement new procedures regarding the use of short term emission and production/throughput limits on Construction permits. These procedures are being directly implemented in all operating permits that had not started their Public Comment period as of April 16, 1998. All short term emission and production/throughput limits that appeared in the construction permits associated with this facility that are not required by a specific State or Federal standard or by the above referenced Division procedures have been deleted and all annual emission and production/throughput limits converted to a rolling 12 month total. Note that, if applicable, appropriate modeling to demonstrate compliance with the National Ambient Air Quality Standards was conducted as part of the Construction Permit processing procedures. If required by this permit, portable monitoring results and/or EPA reference test method results will be multiplied by 8760 hours for comparison to annual emission limits unless there is a specific condition in the permit restricting hours of operation.

Any revisions made to the underlying construction permits associated with this facility made in conjunction with the processing of this operating permit application have been reviewed in accordance with the requirements of Regulation No. 3, Part B, Construction Permits, and have been found to meet all applicable substantive and procedural requirements. This operating permit incorporates and shall be considered to be a combined construction/operating permit for any such revision, and the permittee shall be allowed to operate under the revised conditions upon

issuance of this operating permit without applying for a revision to this permit or for an additional or revised Construction Permit.

II. Source Description:

This source is classified as an aluminum sheet manufacturing facility which falls into the Standard Industrial Classification 3353. Golden Aluminum manufactures coiled aluminum sheet from aluminum scrap. Rigid Can Stock aluminum scrap (RCS) is shredded to expose the interior can or scrap coating. The shreds are blown though three cyclones to recover small shreds. The particulate matter generated from the shredding process is captured in a baghouse. Shredded UBCs are sent to the delacquering kiln. The delacquering kiln burns the coatings off the shreds. The particulate matter generated from the delacquering process is captured in a multicyclone. The volatile organic compounds are destroyed in the thermal oxidizer.

The shreds exit the delacquering kiln and are conveyed to the #1 furnace sidewell or #2 furnace sidewell. Plant scrap (scrap generated throughout the process) is added to #1, #2, and #3 furnace sidewells. Shredded RCS and plant scrap are mixed with prime aluminum and alloying elements. The emissions are captured by hoods above all sidewells and are collected by the melt area baghouse. The emissions from the main baths exit the hearth stacks. A by-product, dross, is cooled in the dross cooler. The emissions from the dross cooler are collected in the dross cooler baghouse located inside the dross building. The molten metal is transferred from the furnaces through a chlorine and argon degassing box and emissions are collected by a hood and vented to the melt area baghouse. The molten aluminum exits the degassing boxes and flows to the holding furnace. The molten metal exits the holding furnace and travels through two additional chlorine and argon degassing boxes and vented to the melt area baghouse. The molten aluminum continues to flow to the continuous block caster where it is solidified.

The aluminum sheet exits the caster and enters a two stand hot mill. The sheet is reduced in gage in the first and second hot mill stands. The aluminum sheet exits the hot mill and is coiled on the rewind mandrel. Emissions from the hot mill are treated in a Busch air purifier system. The aluminum coils are transferred to the annealing furnaces. The coils are annealed and transferred to the cold mill to further reduce the gage. The coils may be returned to the annealer for another anneal. The coils may be ran 1, 2 or 3 times in the cold mill to achieve the desired customer gauge specification. Emissions from the cold mill are treated in a Busch air purifier system. The finished coils are transported to the tension level, then the tab wash line or coating line.

At the tab wash line, the aluminum sheet is first washed in a hydroxide bath and then rinsed in a reverse osmosis water bath. The sheet exits the rinse tank and a lubricant is applied in the Peabody electrostatic oiler. The aluminum sheet is recoiled on the rewind mandrel and transported to the Braner or Stamco Slitter. Once the tab material has been slit, it is packaged and warehoused.

The tension level also receives coils from the cold mill that are leveled and maybe transported to the coil coating line. The leveled coils are washed and rinsed and a titanium conversion coating is applied. The aluminum sheet exits the clean and rinse section and enters the coating room where a solvent based coating is applied by coating rolls. The coated sheet enters five natural gas ovens and the coating is cured. Emissions from the coating room and the curing ovens are collected and destroyed in the thermal oxidizer. The cured sheet is cooled by a water quench tank or air blow off. The sheet passes through a waxing unit and a lubricant is rolled on. The sheet is recoiled on the rewind mandrel and is transported to the Braner or Stamco Slitters where it will be slit. The slit coils exit the slitter and are transported to the Packing Line. The coils are packed and warehoused.

The facility is located in the city of Ft. Lupton in Weld County within an area designated as attainment for all criteria pollutants. This facility is within 100 km of one Class I area, Rocky Mountain National Park. There are no states within 50 miles.

The facility is not subject to 112(r) the Accidental Release Prevention Program. This facility is not currently subject to any Maximum Achievable Control Technology (MACT) standards, however, a Secondary Aluminum MACT has been drafted and will be promulgated in the next couple of years. Facility wide emissions are as follows:

Pollutant	Potential to Emit (tpy)	Actuals (tpy)
PM/PM10	80.39	80.39
NOx	63.22	63.22
VOC	89.9	89.9
CO	49.11	49.11
HAPs	42.72	42.72

Potential emissions are based on requested permit limits within the re-submittal application received April 5, 1999. The source chose to report actuals as potential in the most recent APENs filed with the Division.

III. Emission Sources:

The following sources are specifically regulated under terms and conditions of the Operating Permit for this Site:

<u>Unit S001</u> - Three Modified Miller Shedders and Fisher-Klosterman Cyclones XQ240, Design Rated at 3 TPH each, Baghouse Controlled.

Discussion:

1. Applicable Requirements- These units were installed and began operation in 1990. Initial Approval 90WE247 was issued on November 8,

1994. The source requested a modification in 1996 that was never issued. In 1999 the source submitted an additional modification with the application re-submittal. Applicable requirements for this equipment are the following:

Visible emissions shall not exceed twenty percent (20%) opacity.

Emissions of air pollutants shall not exceed the following limitations:

PM:	0.21 lb/hr	1.02 tons/yr	0.002 gr/dscfm
PM10:	0.21 lb/hr	1.02 tons/yr	0.002 gr/dscfm

The source requested 4.28 tons per year for both PM and PM10. The short term limits have been removed per the policy stated above.

Production of recycled aluminum shall not exceed 11,000 lbs/hr or 30,500 tons/yr. The source requested a production limit of 37,500 tons/yr total for all three shredders together. The short term limit has been removed per the policy stated above.

A source compliance test shall be conducted to measure the emission rate(s) for the pollutants listed below:

Particulate Matter using EPA approved methods.

Revised APEN reporting in accordance with Regulation No.3, Part A.II.

In addition, Regulation No. 1, Section III.C and Regulation No. 6, Part B, Section III.C., particulate standards for manufacturing processes are applicable requirements and Regulation No. 6, Part B, Section III.D., sulfur dioxide standards for manufacturing processes. However, because the standard is the same in each section Reg. 6, Part B, Section III.C. will be streamlined out. This unit is not a significant source of SO2 emissions therefore, based on engineering judgement the sulfur dioxide requirement in Regulation No. 6, Part B, Section III.D will not be incorporated into the operating permit.

The due date of the first semi-annual monitoring report required by this operating permit will be more than 180 days after the initial approval construction permit was issued and/or the equipment commenced operation. Therefore, the Division considers that the Responsible Official certification submitted with that report will serve as the self-certification for construction permit 90WE247 and the appropriate provisions of the construction permit have been directly incorporated into this operating permit.

2. Emission Factors - Emissions from these prebreakers and shedders are produced while the aluminum scrap bales are broken apart then shredded. Pollutants of concern are Particulate Matter (PM) and Particulate Matter less than 10 microns (PM10). Emission factors requested by the source are from worse case calculations and are listed below:

Pollutant	Emission Factor (lbs/Ton Al Processed)
PM	0.228
PM10	0.228

Each shredder has a cyclone shred separator that collects scrap and is inherent to the system. Emissions from the shredders and cyclones are controlled by a baghouse.

3. Monitoring Plan - The source shall measure and record Aluminum scrap processed by the prebreaker/shedders on a monthly basis. Compliance with the production limits shall monitor compliance with the emission limits as long as baghouse maintenance specified in the permit is completed. Actual emissions shall be calculated annually.

4. Compliance Status - A current APEN reporting criteria pollutants is on file with the Division. The source based their compliance determination on the 1996 modifications that were never issued. However, they are out of compliance because a stack test required in the 1994 permit has not been performed. A performance test on PM shall be performed within 180 days of permit issuance.

<u>Unit S002</u> - Custom Apros Delaquering Kiln, 14 MMBtu Natural Gas Fired Burner, Design Rated at 10 TPH, SN: BIN221, Controlled by a Multicyclone and a Thermal Oxidizer.

Discussion:

1. Applicable Requirements- The kiln was installed and began operation in 1983. Final Approval Construction permit 82WE250-2 was issued on June 17, 1988. The source requested a modification to the permit in 1996 that was never issued. The source requested additional modifications with the re-submittal application. Applicable requirements for this unit are the following:

Visible emissions shall not exceed 20% opacity.

Emissions of air pollutants shall not exceed the following limitations:

PM	2.38 lbs/hr	20.39 tons/yr
SO2	0.01 lbs/hr	0.02 tons/yr
NOx	2.25 lbs/hr	6.31 tons/yr
VOC	0.03 lbs/hr	0.08 tons/yr
CO	0.17 lbs/hr	0.47 tons/yr

The source requested the following limitations based on new emission factors:

PM/PM10	13.67 tons/yr
SO2	0.32 tons/yr

NOx	4.97 tons/yr
VOC	2.28 tons/yr
CO	3.33 tons/yr
Lead	0.32 tons/yr

The short term limits have been removed per the policy stated above.

Consumption of Aluminum scrap shall not exceed 10 tons/hr or 42,000 tons/yr. The source has requested a limit of 37,500 tons/yr.

Consumption of natural gas shall not exceed 9800 scf/hr or 54.9 MMscf/yr. The source has requested a limit of 57.2 MMscf/yr.

The short term limits have been removed per the policy stated above.

All process equipment shall be maintained and operated so that there is no leakage of air contaminants to the atmosphere prior to their treatment in the pollution control system. The emission control equipment shall be maintained in accordance with the manufacturer's instructions to achieve a continuous control efficiency of at least 84% for particulates through the operation of a multicyclone and 95% for hydrocarbons through the operation of the thermal oxidizer.

Revised APEN reporting in accordance with Regulation No.3, Part A.II.

In addition, Regulation No. 1, Section III.C and Regulation No. 6, Part B, Section III.C., particulate standards for manufacturing processes are applicable requirements and Regulation No. 6, Part B, Section III.D., sulfur dioxide standards for manufacturing processes. However, because the standard is the same in each section Reg. 6, Part B, Section III.C. will be streamlined out. This unit is not a significant source of SO2 emissions therefore, based on engineering judgement the sulfur dioxide requirement in Regulation No. 6, Part B, Section III.D will not be incorporated into the operating permit.

2. Emission Factors - Emissions from the delaquering kiln are produced from the combustion of the shred coatings and natural gas. Pollutants of concern are Particulate Matter (PM), Particulate Matter less than 10 microns (PM10), Oxides of Nitrogen (NOx), Carbon Monoxide (CO), Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs). Emission factors for while the unit is running are from stack tests and the emission factors used during idle time are from AP-42, Section 1.4 (3/98) for natural gas combustion. The emission factors are listed below:

Pollutant	Operating EFs (lb/ton Al Delaquered)	Idle EFs (lb/MMscf)
PM/PM10	0.727	7.6
SO2	0.0169	0.6
NOx	0.24	100

CO	0.157	84
VOC	0.12	5.5
Lead	0.0167	neg.

3. Monitoring Plan - The source shall measure and record the amount of Aluminum that is processed by the kiln on a monthly basis. Natural gas usage shall also be calculated and recorded monthly with a breakdown of idle vs. operational time. Control equipment parameters and maintenance procedures shall be followed as indicated in the permit. Emission calculations shall be performed monthly including both operational time and idle time to compare with the annual limits.

4. Compliance Status - A current APEN reporting criteria pollutants and Hazardous air pollutants is on file with the Division. The source indicated they were out of compliance with VOC and CO limitations. The operating permit for this facility will incorporate the requested limit changes, therefore, as of issue date of this permit the source will be considered in compliance with all current applicable requirements.

<u>Unit S003</u> - Custom Melter # 1 Main Hearth, 28 MMBtu Natural Gas Fired Burner, Design Rated at 10 TPH.

Discussion:

1. Applicable Requirements- This melter was installed and began operation in 1982. Final Approval Construction permit 82WE250-3 was issued on June 17, 1988. The source requested a modification in 1996 that was never issued. The source requested additional modifications with the re-submittal application. Applicable requirements for this unit are the following:

Visible emissions shall not exceed twenty percent (20%) opacity.

Emissions of air pollutants shall not exceed the following limitations:

PM	2.78 lb/hr	11.09 tons/yr
SO2	0.01 lb/hr	0.04 tons/yr
NOx	4.97 lb/hr	14.90 tons/yr
VOC	0.07 lb/hr	0.19 tons/yr
CO	0.37 lb/hr	1.10 tons/yr

The source requested the following emission limitations based on new emissions factors:

PM/PM10	11.30 tons/yr
NOx	11.35 tons/yr
VOC	2.79 tons/yr
CO	9.53 tons/yr

The short term limits have been removed per the policy stated above.

Consumption of Aluminum scrap shall not exceed 7.5 tons/hr or 65,000 tons/yr. The source requested a limit of 42,657 tons per year.

Consumption of natural gas shall not exceed 21,600 scf/hr or 129.3 MMscf/yr. The source requested a limit of 227 MMscf /yr.

The short term limits have been removed per the policy stated above.

Proper operating procedures during charging of the melter will be maintained to minimize particulate emissions.

Revised APEN reporting in accordance with Regulation No.3, Part A.II.

In addition, Regulation No. 1, Section III.C and Regulation No. 6, Part B, Section III.C., particulate standards for manufacturing processes are applicable requirements and Regulation No. 6, Part B, Section III.D., sulfur dioxide standards for manufacturing processes. However, because the standard is the same in each section Reg. 6, Part B, Section III.C. will be streamlined out. This unit is not a significant source of SO2 emissions therefore, based on engineering judgement the sulfur dioxide requirement in Regulation No. 6, Part B, Section III.D will not be incorporated into the operating permit.

2. Emission Factors - Emissions from the melter are produced from the melting of the Aluminum and combustion of the natural gas. Pollutants of concern are Particulate Matter (PM), Particulate Matter less than 10 microns (PM10), Oxides of Nitrogen (NOx), Carbon Monoxide (CO), Volatile Organic Compounds (VOC), and Hazardous Air Pollutants (HAPs). Emission factors for PM and VOCs are from stack test results and NOx and CO emission factors come from AP-42, Section 1.4 (3/98) for natural gas combustion. The emission factors are listed below:

Pollutant	Emission Factors
PM/PM10	0.53 lbs/ton Al melted
NOx	100 lb/MMscf
CO	84 lb/MMscf
VOC	0.131 lbs/ton Al melted

3. Monitoring Plan - The source shall determine and record the amount of Aluminum melted and natural gas consumed on a monthly basis. Emission

calculations shall be performed monthly to be used in a rolling twelve month total to compare with annual limits.

4. Compliance Status - A current APEN reporting criteria pollutants and Hazardous air pollutants is on file with the Division. The source based their compliance determination on the 1996 modifications that were never issued. However, they were still out of compliance with VOC limitations and hourly limits for Aluminum throughput and gas consumption set forth in the 1996 modifications. The operating permit for this facility will incorporate the requested limit changes and remove short term limits, therefore, as of issue date of this permit the source will be considered in compliance with all current applicable requirements.

<u>Unit S004</u> - Custom Melter # 2 Main Hearth, 28 MMBtu Natural Gas Fired Burner, Design Rated at 10 TPH.

Discussion:

1. Applicable Requirements- Melter # 2 was installed and began operation in 1982. Melter #1 and Melter #2 are identical, therefore, the source has requested the same changes to Final Approval Construction permit 82WE250-4 that were requested for Melter #1. The applicable requirements for this unit are the following:

Visible emissions shall not exceed twenty percent (20%) opacity.

Emissions of air pollutants shall not exceed the following limitations:

PM	1.51 lb/hr	6.60 tons/yr
SO2	0.01 lb/hr	0.04 tons/yr
NOx	4.97 lb/hr	14.90 tons/yr
VOC	0.07 lb/hr	0.19 tons/yr
CO	0.37 lb/hr	1.10 tons/yr

The source requested the following emission limitations:

PM/PM10	11.30 tons/yr
NOx	11.35 tons/yr
VOC	2.79 tons/yr
CO	9.53 tons/yr

The short term limits have been removed per the policy stated above.

Consumption of Aluminum scrap shall not exceed 7.5 tons/hr or 65,000 tons/yr. The source requested a limit of 42,657 tons per year.

Consumption of natural gas shall not exceed 21,600 scf/hr or 129.3 MMscf/yr. The source requested a limit of 227 MMscf /yr.

The short term limits have been removed per the policy stated above.

Proper operating procedures during charging of the melter will be maintained to minimize particulate emissions.

APEN reporting in accordance with Regulation No.3, Part A.II.

In addition, Regulation No. 1, Section III.C and Regulation No. 6, Part B, Section III.C., particulate standards for manufacturing processes are applicable requirements and Regulation No. 6, Part B, Section III.D., sulfur dioxide standards for manufacturing processes. However, because the standard is the same in each section Reg. 6, Part B, Section III.C. will be streamlined out. This unit is not a significant source of SO2 emissions therefore, based on engineering judgement the sulfur dioxide requirement in Regulation No. 6, Part B, Section III.D will not be incorporated into the operating permit.

2. Emission Factors - Emissions from the melter are produced from the melting of the Aluminum and combustion of the natural gas. Pollutants of concern are Particulate Matter (PM), Particulate Matter less than 10 microns (PM10), Oxides of Nitrogen (NOx), Carbon Monoxide (CO), Volatile Organic Compounds (VOC), and Hazardous Air Pollutants (HAPs). Emission factors for PM and VOCs are from stack test results and NOx and CO emission factors come from AP-42, Section 1.4 (3/98) for natural gas combustion. The emission factors are listed below:

Pollutant	Emission Factors
PM/PM10	0.53 lbs/ton Al melted
NOx	100 lb/MMscf
CO	84 lb/MMscf
VOC	0.131 lbs/ton Al melted

3. Monitoring Plan - The source shall determine and record the amount of Aluminum melted and natural gas consumed on a monthly basis. Emission calculations shall be performed monthly to be used in a rolling twelve month total to compare with annual limits.

4. Compliance Status - A current APEN reporting criteria pollutants and Hazardous air pollutants is on file with the Division. The source based their compliance determination on the 1996 modifications that were never issued. However, they were still out of compliance with VOC limitations and hourly limits for Aluminum throughput and gas consumption set forth in the 1996 modifications. The operating permit for this facility will incorporate the requested limit changes and remove short term limits, therefore, as of issue date of this permit the source will be considered in compliance with all

current applicable requirements.

<u>Unit S005</u> - Gillespie/Powers Melter # 3 Main Hearth, 26 MMBtu Natural Gas Fired Burner, Design Rated at 7.5 TPH, SN: 0286.

Discussion:

1. Applicable Requirements- Melter # 3 was installed and began operation in 1984. Final Approval Construction permit 84WE342 was issued on December 15, 1994. The source requested a modification in 1996 that was never issued. The source requested an additional modification with the re-submittal application. The applicable requirements for this unit are the following:

Visible emissions shall not exceed twenty percent (20%) opacity.

Emissions of air pollutants shall not exceed the following limitations:

PM	0.09 lbs/hr	0.39 tons/yr
PM10	0.09 lbs/hr	0.39 tons/yr
SO2	0.02 lbs/hr	0.10 tons/yr
NOx	4.43 lbs/hr	18.0 tons/yr
VOC	0.09 lbs/hr	0.40 tons/yr
CO	1.09 lbs/hr	4.50 tons/yr

The source requested the following limitations based on new emission factors:

PM/PM10	11.51 tons/yr
NOx	12.51 tons/yr
VOC	7.68 tons/yr
CO	10.21 tons/yr

The short term limits have been removed per the policy stated above.

Consumption of natural gas shall not exceed 31,000 scf/hr or 256.9 MMscf/yr. The source requested a limit of 242.8 MMscf/yr and also a limit of 37,674 tons/yr of Aluminum processed.

The short term limit has been removed per the policy stated above.

Revised APEN reporting in accordance with Regulation No.3, Part A.II.

In addition, Regulation No. 1, Section III.C and Regulation No. 6, Part B, Section III.C., particulate standards for manufacturing processes are applicable requirements and Regulation No. 6, Part B, Section III.D., sulfur dioxide standards for manufacturing processes. However, because the standard is the same in each section Reg. 6, Part B, Section III.C. will be streamlined out. This unit is not a significant source of SO2 emissions

therefore, based on engineering judgement the sulfur dioxide requirement in Regulation No. 6, Part B, Section III.D will not be incorporated into the operating permit.

2. Emission Factors - Emissions from the melter are produced from the melting of the Aluminum and combustion of the natural gas. Pollutants of concern are Particulate Matter (PM), Particulate Matter less than 10 microns (PM10), Oxides of Nitrogen (NOx), Carbon Monoxide (CO), Volatile Organic Compounds (VOC), and Hazardous Air Pollutants (HAPs). Emission factors for PM and VOCs are from stack test results and NOx and CO emission factors come from AP-42, Section 1.4 (3/98) for natural gas combustion. The emission factors are listed below:

Pollutant	Emission Factors
PM/PM10	0.611 lbs/ton Al melted
NOx	100 lb/MMscf
CO	84 lb/MMscf
VOC	0.408 lbs/ton Al melted

3. Monitoring Plan - The source shall determine and record the amount of Aluminum melted and natural gas consumed on a monthly basis. Emission calculations shall be performed monthly to be used in a rolling twelve month total to compare with annual limits.

4. Compliance Status - A current APEN reporting criteria pollutants and Hazardous air pollutants is on file with the Division. The source based their compliance determination on the 1996 modifications that were never issued. However, they were still out of compliance with CO limitations set forth in the 1996 modifications. The operating permit for this facility will incorporate the requested limit changes, therefore, as of issue date of this permit the source will be considered in compliance with all current applicable requirements.

<u>Unit S006</u> - Melt Area Baghouse for Sidewell Melting, Degassing and Filtration, Design Rated at 15 TPH.

Discussion:

1. Applicable Requirements- This baghouse controls the sidewells from Melter's #1, #2 and #3 and the Alpur D Degassing and Filtration units. It was installed and began operation in 1991. Initial Approval Construction permit 91WE864 was issued on May 11, 1992. The source has requested modifications to the existing permit as part of the re-submittal application. Applicable requirements for this unit are as follows:

Visible emissions shall not exceed 20% opacity.

Emissions of air pollutants shall not exceed the following limitations:

Particulate Matter	3.7 lbs/hr	15.5 tons/yr

The source has requested a limit of 10.6 tons per year for particulate. The short term limit has been removed per the policy stated above.

A source compliance test shall be conducted to measure the emission rates for the pollutants listed below:

Particulate Matter using EPA Method 5
Chlorine compounds using EPA Method 26
Fluorine using EPA Method 13B

The required compliance tests were performed on September 15, 1993.

Revised APEN reporting in accordance with Regulation No.3, Part A.II.

In addition, Regulation No. 1, Section III.C and Regulation No. 6, Part B, Section III.C., particulate standards for manufacturing processes are applicable requirements and Regulation No. 6, Part B, Section III.D., sulfur dioxide standards for manufacturing processes. However, because the standard is the same in each section Reg. 6, Part B, Section III.C. will be streamlined out. This unit is not a significant source of SO2 emissions therefore, based on engineering judgement the sulfur dioxide requirement in Regulation No. 6, Part B, Section III.D will not be incorporated into the operating permit.

The due date of the first semi-annual monitoring report required by this operating permit will be more than 180 days after the initial approval construction permit was issued and/or the equipment commenced operation. Therefore, the Division considers that the Responsible Official certification submitted with that report will serve as the self-certification for construction permit 91WE864 and the appropriate provisions of the construction permit have been directly incorporated into this operating permit.

2. Emission Factors - Emissions from these units are produced from melting of the aluminum as well as degassing activities. Pollutants of concern are Particulate Matter (PM), Particulate Matter less than 10 microns (PM10) and Hazardous Air Pollutants (HAPs). Emission factors are based on stack tests and are as follows:

Pollutant	Emission Factors
PM/PM10	0.31088 lbs/ton Al melted (shredded and plant scrap only)

3. Monitoring Plan - The source shall measure and record the amount of shredded and plant scrap melted monthly. Emissions shall be calculated monthly to be used in a twelve month rolling total to compare with annual

limitations.

4. Compliance Status - A current APEN reporting criteria pollutants and Hazardous air pollutants is on file with the Division. The source certified to being in compliance, therefore, this unit is currently considered to be in compliance with all applicable requirements.

<u>Unit S007</u> - Custom Apros Holding Furnace, 7 MMBtu Natural Gas Fired Burner, Design Rated at 30 TPH.

Discussion:

1. Applicable Requirements- The holding furnace was installed and began operation in 1982. Final Approval Construction permit 82WE250-5 was issued on June 17, 1988. The source requested a modification in 1996 that was never issued. The source requested an additional modification with the re-submittal application. The applicable requirements for this unit are the following:

Visible emissions shall not exceed 20% opacity.

Emissions of air pollutants shall not exceed the following limitations:

PM	0.4144 lbs/hr	1.22 tons/yr
SO2	0.01 lbs/hr	0.01 tons/yr
NOx	1.35 lbs/hr	1.35 tons/yr
VOC	0.02 lbs/hr	0.02 tons/yr
CO	0.10 lbs/hr	0.10 tons/yr

The source requested the following limitations based on new emission factors:

PM/PM10	1.99 tons/yr
NOx	2.62 tons/yr
VOC	0.83 tons/yr
CO	2.88 tons/yr

Consumption of Aluminum alloy shall not exceed 15 tons/hr or 57,000 tons/yr. The source requested a Aluminum alloy limit of 84,772 tons per year.

Consumption of natural gas shall not exceed 5880 scf/hr or 11.76 MMSCF/yr. The source has requested a limit of 57.6 MMSCF/yr.

The short term limits have been removed per the policy stated above.

APEN reporting in accordance with Regulation No. 3, Part A.II.

In addition, Regulation No. 1, Section III.A and Regulation No. 6, Part B,

Section II.C., particulate standards for fuel burning equipment are applicable requirements. However, because the standard is the same in each section Reg. 6, Part B, Section II.C. will be streamlined out.

2. Emission Factors - Emissions from the holding furnace are produced from the molten Aluminum casted and held and combustion of the natural gas. Pollutants of concern are Particulate Matter (PM), Particulate Matter less than 10 microns (PM10), Oxides of Nitrogen (NOx), Carbon Monoxide (CO), Volatile Organic Compounds (VOC), and Hazardous Air Pollutants (HAPs). Emission factors for PM and VOCs are from stack test results and NOx and CO emission factors come from AP-42, Section 1.4 (3/98) for natural gas combustion. The emission factors are listed below:

Pollutant	Emission Factors
PM/PM10	0.047 lbs/ton Al melted
NOx	100 lb/MMSCF
CO	84 lb/MMSCF
VOC	0.0195 lbs/ton Al melted

3. Monitoring Plan - The source shall determine and record the amount of Aluminum alloy and natural gas consumed on a monthly basis. Emission calculations shall be performed monthly to be used in a rolling twelve month total to compare with annual limits.

4. Compliance Status - A current APEN reporting criteria pollutants and Hazardous air pollutants is on file with the Division. The source based their compliance determination on the 1996 modifications that were never issued. However, they were still out of compliance with PM, VOC and CO limitations set forth in the 1996 modifications. The operating permit for this facility will incorporate the requested limit changes, therefore, as of issue date of this permit the source will be considered in compliance with all current applicable requirements.

<u>Unit S008</u> - Hot Mill, Design Rated at 13.5 TPH, Controlled with an Air Purifier Centrifugal Separator.

Discussion:

1. Applicable Requirements- The hot rolling mill was installed and began operation in 1982. Initial Approval Construction permit 82WE250-6 was issued on March 11, 1992. The source requested a modification in 1996 that was never issued. The source requested an additional modification with the re-submittal application. The applicable requirements for this unit are the following:

Visible emissions shall not exceed 20% opacity.

Emissions of air pollutants shall not exceed the following limitations:

Particulate Matter	1.2 lbs/hr	3.05 tons/yr

The source has requested 3.9 tons per year of PM and PM10. The short term limit has been removed per the policy stated above.

The total amount of aluminum sheet processed shall not exceed 13.3 tons/hr or 67,400 tons/yr. The source has requested a limit of 84,722 tons per year of aluminum sheet pressed. The short term limit has been removed per the policy stated above.

APEN reporting in accordance with Regulation No. 3, Part A.II.

In addition, Regulation No. 1, Section III.C and Regulation No. 6, Part B, Section III.C., particulate standards for manufacturing processes are applicable requirements and Regulation No. 6, Part B, Section III.D., sulfur dioxide standards for manufacturing processes. However, because the standard is the same in each section Reg. 6, Part B, Section III.C. will be streamlined out.

The due date of the first semi-annual monitoring report required by this operating permit will be more than 180 days after the initial approval construction permit was issued and/or the equipment commenced operation. Therefore, the Division considers that the Responsible Official certification submitted with that report will serve as the self-certification for construction permit 82WE250-6 and the appropriate provisions of the construction permit have been directly incorporated into this operating permit.

2. Emission Factors - Emissions from the hot mill are produced by the pressing of the aluminum. Pollutants of concern are Particulate Matter and Particulate Matter less than 10 microns. Emissions factors are from stack tests plus a safety factor and are listed below:

Pollutant	Emission Factors
PM/PM10	0.0929 lbs/ton Al pressed

3. Monitoring Plan - The source shall measure and record the amount of Aluminum pressed on a monthly basis. Emission calculations shall be performed monthly to be used in a rolling twelve month total to compare with annual limits. Control equipment parameters shall be monitored and maintenance procedures followed.

4. Compliance Status - A current APEN reporting criteria pollutants is on file with the Division. The source based their compliance determination on

the 1996 modifications that were never issued. Therefore, this unit is currently considered to be in compliance with all applicable requirements.

<u>Unit S009</u> - Two Custom Secowarwick Anneal Ovens, Two U-Tube 17.5 MMBtu Natural Gas Fired Burners, Design Rated at 78 TPH each.

Discussion:

1. Applicable Requirements- These annealing ovens were installed and began operation in 1982. Initial Approval Construction permit 82WE250-8 was issued on March 11, 1992. The source requested a modification in 1996 that was never issued. The source requested an additional modification with the re-submittal application. The applicable requirements for this unit are the following:

Visible emissions shall not exceed 20% opacity.

Emissions of air pollutants shall not exceed the following limitations:

PM	0.43 lbs/hr	1.80 tons/yr
SO2	0.01 lbs/hr	0.03 tons/yr
NOx	1.65 lbs/hr	4.38 tons/yr
VOC	3.24 lbs/hr	10.72 tons/yr
CO	0.33 lbs/hr	0.88 tons/yr

The source requested the following limitations based on new emission factors:

PM/PM10	1.32 tons/yr
NOx	4.04 tons/yr
VOC	4.03 tons/yr
CO	3.40 tons/yr

Consumption of aluminum coil shall not exceed 15.66 tons/hr or 78,572 tons/yr. The source requested a limit of 82,481 tons/yr of aluminum coil.

Consumption of natural gas shall not exceed 16,509 scf/hr or 87.48 MMSCF/yr. The source has requested a limit of 80.864 MMscf/yr.

The short term limits have been removed per the policy stated above.

APEN reporting in accordance with Regulation No. 3, Part A.II.

In addition, Regulation No. 1, Section III.C and Regulation No. 6, Part B, Section III.C., particulate standards for manufacturing processes are applicable requirements and Regulation No. 6, Part B, Section III.D., sulfur dioxide standards for manufacturing processes. However, because the standard is the same in each section Reg. 6, Part B, Section III.C. will be streamlined out. This unit is not a significant source of SO2 emissions

therefore, based on engineering judgement the sulfur dioxide requirement in Regulation No. 6, Part B, Section III.D will not be incorporated into the operating permit.

The due date of the first semi-annual monitoring report required by this operating permit will be more than 180 days after the initial approval construction permit was issued and/or the equipment commenced operation. Therefore, the Division considers that the Responsible Official certification submitted with that report will serve as the self-certification for construction permit 82WE250-8 and the appropriate provisions of the construction permit have been directly incorporated into this operating permit.

2. Emission Factors - Emissions from the annealing units are produced from the softening of the Aluminum, evaporation of rolling oil residue and combustion of the natural gas. Pollutants of concern are Particulate Matter (PM), Particulate Matter less than 10 microns (PM10), Oxides of Nitrogen (NOx), Carbon Monoxide (CO), Volatile Organic Compounds (VOC), and Hazardous Air Pollutants (HAPs). Emission factors are from stack test results. The emission factors are separated based on the annealing process. The process is separated into three: hot mill anneal; intermediate anneal; and stabilize anneal. The emission factors are listed below :

Pollutant	Hot Mill	Intermediate	Stabilize
PM/PM10	0.0455	0.0205	0.0224
NOx	0.0978	0.0976	0.0986
CO	0.0823	0.0830	0.0825
VOC	0.0055	0.1537	0.1786

3. Monitoring Plan - The source shall determine and record the amount of Aluminum coils and their distribution and natural gas consumed on a monthly basis. Emission calculations shall be performed monthly to be used in a rolling twelve month total to compare with annual limits.

4. Compliance Status - A current APEN reporting criteria pollutants and Hazardous air pollutants is on file with the Division. The source based their compliance determination on the 1996 modifications that were never issued. However, they were still out of compliance with CO limitations set forth in the 1996 modifications. The operating permit for this facility will incorporate the requested limit changes, therefore, as of issue date of this permit the source will be considered in compliance with all current applicable requirements.

<u>Unit S010</u> - Davy-McKee Cold Rolling Mill 2-STD, Design Rated at 35 TPH, Controlled with a Air Purifier Centrifugal Separator.

Discussion:

1. Applicable Requirements- The cold rolling mill was installed and began operation in 1982. Initial Approval Construction permit 82WE250-7 was issued on March 11, 1992. The source requested a modification in 1996 that was never issued. The source requested an additional modification with the re-submittal application. The applicable requirements for this unit are the following:

Visible emissions shall not exceed 20% opacity.

Emissions of air pollutants shall not exceed the following limitations:

Particulate Matter	2.66 lbs/hr	2.30 tons/yr
Volatile Organic Compounds	3.66 lbs/hr	4.93 tons/yr

The source requested the following limitations based on new emission factors:

PM/PM10	8.06 tons/yr
VOC	59.29 tons/yr

The short term limits have been removed per the policy stated above.

Total amount of aluminum sheet processed shall not exceed 157,000 tons/yr. The source has requested a limit of 108,386 tons/yr of aluminum sheet processed.

APEN reporting in accordance with Regulation No. 3, Part A.II.

In addition, Regulation No. 1, Section III.C and Regulation No. 6, Part B, Section III.C., particulate standards for manufacturing processes are applicable requirements and Regulation No. 6, Part B, Section III.D., sulfur dioxide standards for manufacturing processes. However, because the standard is the same in each section Reg. 6, Part B, Section III.C. will be streamlined out. This unit is not a significant source of SO2 emissions therefore, based on engineering judgement the sulfur dioxide requirement in Regulation No. 6, Part B, Section III.D will not be incorporated into the operating permit.

The due date of the first semi-annual monitoring report required by this operating permit will be more than 180 days after the initial approval construction permit was issued and/or the equipment commenced operation. Therefore, the Division considers that the Responsible Official certification submitted with that report will serve as the self-certification for construction permit 82WE250-7 and the appropriate provisions of the construction permit have been directly incorporated into this operating permit.

2. Emission Factors - Emissions from the cold mill are produced from the

rolling of the Aluminum and evaporation of rolling oil residue. Pollutants of concern are Particulate Matter (PM), Particulate Matter less than 10 microns (PM10), and Volatile Organic Compounds (VOC). Emission factors are from stack test results. The emission factors are separated based on the number of passes: breakdown, intermediate and finish. The emission factors are listed below :

Pollutant	Breakdown (lb/ton coils)	Intermediate (lb/ton coils)	Finish (lb/ton coils)
PM/PM10	0.0592	0.1431	0.2476
VOC	0.4902	1.212	1.680

3. Monitoring Plan - The source shall measure and record the amount of Aluminum coils and their distribution. Emission calculations shall be performed monthly to be used in a rolling twelve month total to compare with annual limits. Control equipment parameters shall be monitored and maintenance procedures followed.

4. Compliance Status - A current APEN reporting criteria pollutants and Hazardous air pollutants is on file with the Division. The source based their compliance determination on the 1996 modifications that were never issued. However, they were still out of compliance with VOC limitations set forth in the modifications. The operating permit for this facility will incorporate the requested limit changes, therefore, as of issue date of this permit the source will be considered in compliance with all current applicable requirements.

<u>Unit S011</u> - Custom Hunter Coil Coating, 26.1 MMBtu Grace Tec Natural Gas Fired Burner, Controlled with a Thermal Oxidizer.

Discussion:

1. Applicable Requirements- The coil coating unit was installed and began operation in 1982. The thermal oxidizer was added in 1996. Initial Approval Construction permit 82WE250-12(MOD) was issued on May 1, 1996. The source has requested modifications to the existing permit as part of the re-submittal application. Applicable requirements for this unit are as follows:

This source is subject to the odor requirements of Regulation No. 2.

Visible emissions shall not exceed twenty percent (20%) opacity.

Emissions of air pollutants shall not exceed the following limitations:

PM	11.86 tons/yr	1977 lbs/month
PM10	11.86 tons/yr	1977 lbs/month
NOx	13.53 tons/yr	2255 lbs/month
VOC	16.11 tons/yr	2685 lbs/month

CO	4.35 tons/yr	725 lbs/month

The source requested the following limitations based on new emission factors:

PM/PM10	0.86 tons/yr
NOx	11.28 tons/yr
VOC	8.40 tons/yr
CO	9.47 tons/yr

Consumption of natural gas shall not exceed 144.1 MMscf/yr or 19,239 scf/hr. The source has requested a limit of 225 MMscf/yr.

Consumption of clean-up solvent shall not exceed 780 gallons/yr or 15 gallons/day. The source has requested to remove this limit altogether. However, this activity contributes approximately 2.6 tons per year of VOCs and must be tracked for compliance. The source then requested a higher limit of 1495 gallons/yr.

Coating of sheet aluminum shall not exceed 823,427 ft^2/yr or 110,000 ft^2/hr.

The short term limits have been removed per the policy stated above.

This source shall be equipped with a thermal oxidizer capable of reducing uncontrolled emissions of volatile organic compounds from the coating process by at least 99%. The solvent used for clean-up described above is not passed through the thermal oxidizer.

A source compliance test for Volatile Organic Compounds shall be conducted to measure the control efficiency for the thermal oxidizer. This source test shall also be conducted to show compliance with Regulation No. 6, Part A, Subpart TT, as outlined in Section 60.8. The compliance test was completed on 8/21/96. The reduction efficiency was determined to be 99.96% and the Thermal Oxidizer effluent average temperature was 1317°F.

This source is subject to New Source Performance Standards requirements of Regulation No. 6, Part A, Subpart TT, Standards of Performance for Metal Coil Surface Coating.

In addition, the requirements of Regulation No. 6, Part A, General Provisions, apply.

APEN reporting in accordance with Regulation No. 3, Part A.II.

In addition, Regulation No. 1, Section III.A and Regulation No. 6, Part B, Section II.C., particulate standards for fuel burning equipment are applicable requirements. However, because the standard is the same in each section Reg. 6, Part B, Section II.C. will be streamlined out.

The due date of the first semi-annual monitoring report required by this operating permit will be more than 180 days after the initial approval construction permit was issued and/or the equipment commenced operation. Therefore, the Division considers that the Responsible Official certification submitted with that report will serve as the self-certification for construction permit 82WE250-12 and the appropriate provisions of the construction permit have been directly incorporated into this operating permit.

2. Emission Factors - Coil coating emissions are produced from evaporation of solvents and oils and combustion of natural gas. Pollutants of concern are Particulate Matter (PM), Particulate Matter less than 10 microns (PM10), Oxides of Nitrogen (NOx), Carbon Monoxide (CO), Volatile Organic Compounds (VOC), and Hazardous Air Pollutants (HAPs). Emissions factors are based on a mass balance on coatings and solvents used and AP-42, Section 1.4 (3/98) for natural gas combustion.

3. Monitoring Plan - The source shall keep track of all coatings/solvents used and their VOC constituents and amounts of each used on a monthly basis. Natural gas consumption shall be calculated and recorded on a monthly basis. The amount of aluminum sheet coated shall be measure and recorded on a monthly basis. Emissions shall be calculated on a monthly basis and used in a twelve month rolling total to compare with annual limitations. Control equipment parameters shall be monitored and maintenance procedures followed. In addition, NSPS Subpart TT standards shall be followed, reported and recorded as required in 40 CFR 60, Subpart TT (Regulation No. 6, Part A, Subpart TT).

4. Compliance Status - A current APEN reporting criteria pollutants and Hazardous air pollutants is on file with the Division. The source certified to being in compliance, therefore, this unit is currently considered to be in compliance with all applicable requirements.

<u>Unit S012</u> - MFS - 68 Dross Cooler, Design Rated at 3.75 TPH, Baghouse Controlled.

Discussion:

1. Applicable Requirements- The dross cooler was installed and began operation in 1991. Final Approval Construction permit 90WE248 was issued on April 3, 1992 with the following applicable requirements:

Visible emissions shall not exceed 20% opacity.

Emissions of air pollutants shall not exceed the following limitations:

Particulate Matter	2.07 lbs/hr	2.07 tons/yr

<u>Specific limits for Regulated Pollutants</u>

Lead	2.07 lb/yr
Beryllium	0.04 lb/yr

The source has requested a limit of 1.30 tons/yr for PM and PM10. The short term limits have been removed per the policy stated above. A stack test performed on this unit determined undetected amounts of lead and beryllium, therefore, these limits will not be incorporated into the operating permit.

Production of aluminum dross shall not exceed 7500 lbs/hr or 7500 tons/yr. The short term limit has been removed per the policy stated above.

APEN reporting in accordance with Regulation No. 3, Part A.II.

In addition, Regulation No. 1, Section III.C and Regulation No. 6, Part B, Section III.C., particulate standards for manufacturing processes are applicable requirements and Regulation No. 6, Part B, Section III.D., sulfur dioxide standards for manufacturing processes. However, because the standard is the same in each section Reg. 6, Part B, Section III.C. will be streamlined out. This unit is not a significant source of SO2 emissions therefore, based on engineering judgement the sulfur dioxide requirement in Regulation No. 6, Part B, Section III.D will not be incorporated into the operating permit.

2. Emission Factors - Emissions from the dross cooler are from agitation of the dross. Pollutants of concern are Particulate Matter and Particulate Matter less than 10 microns. Emission factors are based on stack testing and are listed below:

Pollutant	Emission Factors
PM/PM10	0.347 lbs/ton dross

3. Monitoring Plan - The source shall measure and record the amount of dross produced on a monthly basis. Compliance with the production limits shall demonstrate compliance with the emission limits as long as baghouse maintenance specified in the permit is completed. Actual emissions shall be calculated annually.

4. Compliance Status - A current APEN reporting criteria pollutants is on file with the Division. The source certified to being in compliance, therefore, this unit is currently considered to be in compliance with all applicable requirements.

IV. Insignificant Activities

Tab wash line, wash and rinse tank, burners 1-5, tension level, paint storage room,

stamco and braer slitter, roll shop, truck shop, Maintenance shop, electrical shop, block shop, emergency generator room, cooling tower, UCB storage building, chemical storage pad, pallet storage building, waste water pretreatment, air handling units, space heater exhaust, air intake stacks, water vent, cooling tower vent, steam vent washer, burner exhaust, rinse tank, steam vent rinse tank, steam vent, air vent restrooms, burner exhaust predryer, burner exhaust washer, coating room vent, annealing furnace exhaust, QA/QC lab vents, water exhaust out, ventilation fan radiant heater, west and east QA/QC lab, coating line satellite lab, melt house lab, coil coating material, lubricating material, coolants (cold and hot mill), future building expansion, (9) 150,000 btu space heaters, sodium hydroxide totes, potassium hydroxide totes, phosphoric acid totes, sulfuric acid totes, titanium conversion coating totes, 55 gallon drums and totes, welding and soldering operations, striping the parking lot as needed, various labs and offices, furnace rebuilds, delaquering kiln rebuild, thermal oxidizer rebuilds, various lawn mowers and weed eaters, weeding activities, sweeping parking lot, landscaping and pest control activities, trash bins, thermite fires, baghouse fires, grass and weed fires, truck wash unit, (4) copying machines, pc printers, daily janitorial services, (8) 50 lb propane tanks, (2) 1,000 gallon diesel fuel tanks, (2) 12,000 gallon coolant tanks, hot mill Hoffman filter exhaust, (2) 1,078 and 4,800 gallon waste coolant tanks, (1) 297 gallon gasoline tank, (1) 2,674 gallon Morgoil tank, (2) 900K btu heating units, (3) 600K btu heating units, 14 forklifts, 3 frontloaders, emergency power generator, front office lighting.

V. Alternative Operating Scenarios

No alternative operating scenarios were requested.

VI. Permit Shield

No specific regulations were requested for the permit shield.