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**west virginia department of environmental protection**

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Division of Air Quality  
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Charleston, WV 25304  
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Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
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**ENGINEERING EVALUATION / FACT SHEET**

**BACKGROUND INFORMATION**

Application No.: R13-2880A  
Plant ID No.: 033-00198  
Applicant: Skana Aluminum Corporation (Skana)  
[formerly Scott Aluminum Corporation (Scott);  
formerly Aluminum Services, Inc. (Aluminum Services);  
formerly Precision Coil, Inc. (Precision Coil)]  
Facility Name: Wilsonburg  
Location: Harrison County  
NAICS Code: 331319 -  
Application Type: Class II Administrative Update  
Received Date: April 3, 2015  
Engineer Assigned: John Legg  
Fee Amount: \$300.00  
Date Received: April 9, 2015  
Complete Date: May 21, 2015  
Due Date: July 20, 2015  
Applicant Ad Date: April 6, 2015 - Advertisement identified the proposed change as being a  
Construction instead of a Class II Administrative Update.  
May 15, 2015 - Advertisement re-run identifying the proposed change as  
being an update. Advertisement re-run in the same  
newspaper.  
Newspaper: *The Exponent-Telegram*  
UTM's: Easting: 552.6 km Northing: 4,348.5 km Zone: 17  
Description: Update to place back into service existing natural gas-fired Annealing  
Furnace 3.

**PROCESS DESCRIPTION**

The Wilsonburg, Harrison County, WV aluminum sheet rolling and sizing facility has had 4 different owners and has been shutdown and restarted since Precision Coil, Inc. submitted the first permit application for its construction in 1995. A history of the facility is provided in Attachment 1 to this evaluation. The facility current employs one cold rolling mill, two natural gas-fired

annealing furnaces, and other operations to support these sources. This update (R13-2880A) proposes to place back into service existing natural gas-fired Annealing Furnace 3. The following process description provides an overview of the facility as it was operated by Scott Aluminum Corporation (Scott), the owner before Skana.

Aluminum coils are unloaded via fork truck in the plant's receiving area and are transported to the cold rolling mill (101S) where they are drawn through a set of rolls that physically reduce the sheet thickness. The cold rolling mill has a maximum design capacity of 16.5 tons of aluminum per hour (TPH).

To facilitate the rolling process, a light hydrocarbon oil (similar to Number 2 Fuel Oil) is applied to the aluminum sheet as it passes through the mill. The high-speed rolling process, however, creates an oil mist which is mostly captured by a collection hood (an estimated 5% is emitted as fugitive emissions) and then is directed to a mist eliminator (101C). The mist collector knocks out a minimum of 50% of the oil mist. The remainder of the oil mist is emitted through the mist eliminator stack (101E). The collected oil from the rolling mill and the mist collector is filtered with diatomaceous earth and sent to below ground storage tanks. New rolling oil, to make up for oil lost in the process, is brought in by truck and added to an above ground 8,000 gallon storage tank (300S).

After passing through the rolling mill, the aluminum sheet is re-rolled into a coil and is sent to either Furnace 1 or 2 for annealing. Each furnace uses natural gas as a fuel for the indirect burners. The actual furnace payload area which contains the coils of aluminum is inerted with nitrogen to provide a non-oxidizing environment. Furnace 1 (210S) has a maximum design heat input (MDHI) of 18.0 mm Btu/hr and can process up to 30 tons of aluminum per hour. Furnace 2 (220S) has a MDHI of 5.0 mm Btu/hr and can process up to 10.5 tons of aluminum per hour. While Furnace 1 has one emission point (210E) for combustion emissions and purge emissions, Furnace 2 has three emission points: two for combustion exhaust (220E and 222E) and one for purge emissions (221E). In addition to the emission of criteria pollutants from natural gas combustion, some oil that remains on the rolled aluminum will be volatilized in the furnaces and emitted when the furnaces are purged.

After annealing, the finished aluminum is inspected, packed and shipped. Two annealing furnaces that were operated by Precision Coil (Furnaces 3 and 4) have been decommissioned and will not be used by Scott Aluminum. The facility also utilizes 1.39 mmBtu/hr of natural gas-fired space heating.

### **Re-commissioning Annealing Furnace 3**

This update by Skana proposes to place back into service Annealing Furnace 3:

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<b>Table 1: Emission Units Table.</b>					
<b>Emission Unit ID</b>	<b>Emission Point ID</b>	<b>Emission Unit Description</b>	<b>Year Installed</b>	<b>Design Capacity</b>	<b>Control Device</b>
101S	101E	Rolling Mill	1989	16.5 TPH	Mist Eliminator (101C)
210S	210E	Annealing Furnace 1	1989	18.00 mmBtu/hr 30 tons/cycle	None
220S	220E 221E 222E	Annealing Furnace 2	1989	5.00 mmBtu/hr 10.5 tons/cycle	None
230S	230E <sup>(1)</sup> 231E <sup>(2)</sup>	Annealing Furnace 3	1992	0.80 mm Btu/hr 917 lb/hr	None
300S	300E	Rolling Oil Storage Tank	1989	8,000 gal	None
Various	Various	Natural Gas-Fired Space Heating	1989	1.39 mmBtu/hr	None
(1) Purge Stack. (2) Combustion Stack.					

Permit application R13-2880A, Attachment L provides the following information on Annealing Furnace 3:

<b>Table 2: Information on Annealing Furnace 3 from R13-28809A, Attachment L.</b>		
Name/type/model of affected source:	Westinghouse Aluminum Coil Annealing Furnace Model EC-13333 F-1	
Name and maximum amount of material charged per hour:	Aluminum Coils - 917 lb/hr	
Maximum design heat input:	800,000 Btu/hr	
Projected operating schedule:	10 hr/day; 5 day/week; 52 week/yr	
Date constructed:	1992	
Type of firing equipment used:	Natural Gas Burner	
Stack Data	Inside diameter	1.1 ft
	Gas exit temperature	600 °F
	Height	38 ft
	Stack serves:	This equipment only

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Fuel Requirements	Fuel	Natural Gas
	Quantity	800 ft <sup>3</sup> /hr; 7.008 mm ft <sup>3</sup> /yr @8,760 hr/yr
	Btu content of fuel	1,000 Btu/ft <sup>3</sup> of natural gas

**Updated Process Description:**

After passing through the rolling mill, the aluminum sheet is re-rolled into a coil and is sent to either Furnace 1, 2, or 3 for annealing.

Each furnace uses natural gas as a fuel for the indirect burners. The actual furnace payload area which contains the coils of aluminum is inerted with nitrogen to provide a non-oxidizing environment. Furnace 3 (230S) has a MDHI of 0.80 mm Btu/hr and can process up to 917 pounds of aluminum per hour.

Furnace 3 has one emission point (231E) for combustion emissions and one for purge emissions (230E). In addition to the emission of criteria pollutants from natural gas combustion, some oil that remains on the rolled aluminum will be volatilized in the furnaces and emitted when the furnaces are purged. The furnaces are heated to a maximum temperature of 600 °F. The inerting atmosphere from the furnaces contains a limited VOC content which remains on the coils from the rolling process. The total VOC content per furnace load is estimated to be less than ten (10) pounds per furnace cycle (this is stated in Skana's single page process description found in permit application R13-2880A, Attachment G).

**SITE INSPECTION**

The writer did not conduct an inspection for this Class II Administrative Update.

Skana's Wilsonburg facility was last inspected on March 3, 2015, by Enforcement Inspector Karl L. Dettinger out of the DAQ's North Central Regional Office in Fairmont, WV. The facility was found to be in compliance and was given the inspection code of 30. Karl wrote the following entry into the Airtrak inspection portion of the database:

F.C.E. inspection of Skana Aluminum Company's Wilsonburg facility was conducted on 3-2-15. Several issues were discovered during the inspection. This included the operation of

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Annealing Furnace 3 and no ability to individually monitor and record natural gas usage in each of the identified sources at the facility. Facility-wide natural gas usage was less than the total of the allowable unit-specific limits on natural gas usage. Photos were taken of the rolling mill exhaust and of the rolling mill equipment during the inspection.

**Writer's Note:** Update R13-2880A does not address the problem of no ability to individually monitor and record natural gas usage in each of the identified sources at the facility.

The facility is located in an industrial area just off Route 50, west of downtown Clarksburg. The closest residential area is about 0.25 miles north-northeast of the facility.

**Directions:** From Clarksburg take US Route 50 West. Exit at Wilsonburg. Turn right at the stop sign. The plant is located on the left approximately 0.25 miles from the exit.

**EMISSIONS ESTIMATE**

**Annealing Furnace 3 Combustion Emissions**

**Combustion** emission for Annealing Furnace 3 are calculated in Attachment N to R13-2880A. The writer reviewed the calculations and found them to be logical and correct.

<b>Table 3: Emission Calculations for Annealing Furnace 3.</b>				
<b>Pollutant</b>	<b>AP-42 Emission Factor <sup>(1)</sup></b>	<b>Emissions</b>		
		<b>(lb/mm ft<sup>3</sup>)</b>	<b>(lb/hr)</b>	<b>(ton/yr) <sup>(2)</sup></b>
CO	84	0.67	0.294	0.087
NOx	100	0.080	0.350	0.104
SO2	0.6	0.0005	0.0021	0.001
PM	7.6	0.0061	0.027	0.008
VOC	5.5	0.0044	0.019	0.006

(1) USEPA AP-42, Chapter 1, Section 4, Tables 1.4-1 and 1.4-2, dated 7/1998.  
 (2) Based on operating 8,760 hr/yr.  
 (3) Based on operating 2,600 hr/yr (10 hr/day; 5 day/wk; 52 wk/yr)

Example:  $84 \text{ lb CO}/10^6 \text{ ft}^3 \times 800 \text{ ft}^3/\text{hr} = 0.067 \text{ lb CO}/\text{hr}$   
 $0.067 \text{ lb CO}/\text{hr} \times 8,760 \text{ hr}/\text{yr} \times 1 \text{ ton} / 2000 \text{ lb} = 0.294 \text{ ton CO}/\text{yr}$

burner size	800,000 Btu/hr
natural gas heating value	1,000 Btu/ft <sup>3</sup>
fuel usage	800 ft <sup>3</sup> /hr
annual operating hours	8,760 hr/yr

### Annealing Furnace 3 Purge Stack Emissions

Skana (current owner) in Permit application R13-2880A did not calculate emissions nor list any emission numbers for annealing furnace 3's purge stack (Emission Point 130E).

For the entire facility, the way VOC emissions from the use of rolling oil are accounted for was decided by the previous owner (Scott Aluminum Corporation) prior to this permit under permit (R13-2880, sections 4.1.3, 4.2.1, and 4.2.3). Skana did not request that this method be changed/re-examined.

The following discussion was taken from the engineering evaluation for R13-2880:

#### Use of Rolling Oil

The use of rolling oil in the mill has the potential to create VOC emissions at various points in the process. These are: (1) fugitive loss of oil mist not captured by the cold rolling mill hood, (2) oil mist collected by the cold rolling mill hood that passes through the mist collector and emitted from the mist collector stack, (3) oil that remains on rolled aluminum and volatilizes during storage prior to annealing, and (4) oil mist that is driven off the rolled coils during the annealing process and vented up the purge stacks of the annealing furnaces.

Due to the impracticality of predicting the emissions from each individual point, Scott Aluminum Corporation, the previous owner, has estimated, on a mass balance basis, that the facility-wide loss of rolling oil (which is 100% VOCs by-weight) will be 80.80 tons per year (TPY). The annual emission rate is based on a worst-case hourly loss of 38.35 lbs-VOC and operation of 4,160 hours/year.

However, it is important to note that the permit will not limit the rolling operations to 4,160 hours/year; as this annual hours of operation number is only a variable in the worst-case emissions calculations. The limited variable is question is the loss of 80.80 TPY of rolling oil - and the permit will include appropriate monitoring and record-keeping to verify compliance with this limit. As the use of rolling oil varies based on the aluminum being rolled and the loss of VOCs during the process, the facility may operate more than 4,160

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hours/year and still be in compliance with the annual VOC emission limit. Therefore, the permit will base compliance with the annual VOC on an actual emissions calculation performed on a monthly basis at the facility using mass balance equations.

**Table 4: Facility-Wide Annual PTE Summary in TPY**

Source	CO	NO <sub>x</sub>	PM <sub>2.5</sub>	PM <sub>10</sub>	PM	SO <sub>2</sub>	VOCs
Rolling Oil Use <sup>(1)</sup>	n/a	n/a	n/a	n/a	n/a	n/a	80.80
Rolling Mill	n/a	n/a	0.58	0.58	0.58	n/a	n/a
Annealing Furnaces (1 & 2)	2.01	2.39	0.18	0.18	0.18	0.01	0.13
Space Heating	0.26	0.30	0.02	0.02	0.02	0.01	0.02
Paved Haulroads	n/a	n/a	0.08	0.33	1.67	n/a	n/a
<b>Old Facility-Wide Totals →</b>	<b>2.27</b>	<b>2.69</b>	<b>0.86</b>	<b>1.11</b>	<b>2.45</b>	<b>0.02</b>	<b>80.95</b>
Annealing Furnace (3)	0.30	0.35	0.01	0.01	0.01	0.01	0.01
<b>New Facility-Wide Totals</b>	<b>2.57</b>	<b>3.04</b>	<b>0.87</b>	<b>1.12</b>	<b>2.46</b>	<b>0.03</b>	<b>80.96</b>

(1) As noted above, this accounts for all the oil lost in the process from various emission points.

## **REGULATORY APPLICABILITY**

This section will address the potential regulatory applicability/non-applicability of substantive state and federal air quality rules relevant to this permitting action.

### **45CSR2: To Prevent and Control Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers.**

Furnace 3 has been determined to meet the definition of “fuel burning unit” under 45CSR2 and is, therefore, subject to the applicable requirements therein. Each substantive 45CSR2 requirement is discussed below.

#### *45CSR2 Opacity Standard - Section 3.1*

Pursuant to 45CSR2, Section 3.1, Furnace 3 is subject to an opacity limit of 10%. Proper maintenance and operation of the furnace (and the authorized use of only natural gas as fuel) should keep the opacity of the unit well below 10% during normal operations.

#### *45CSR2 Weight Emission Standard - Section 4.1.b*

The allowable filterable particulate matter (PM) emission rate for Furnaces 1, 2, and 3, and the space heaters, identified as Type “b” fuel burning units, per 45CSR2, Section 4.1.a, is the product of 0.09 and the total design heat input of the furnaces in million Btu per hour. The maximum aggregate design heat input (short-term) of the furnaces/space heaters is 25.19 mmBtu/Hr. Using

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the above equation, the 45CSR2 facility-wide PM emission limit of the boilers will be 2.27 lb/hr. The maximum aggregate potential hourly PM emissions from the furnaces/space heaters is estimated to be 0.21 lb/hr (including condensables). This emission rate is 9.25% of the 45CSR2 limit.

#### *45CSR2 Control of Fugitive Particulate Matter- Section 5*

Section 5 of 45CSR2 requires a fugitive particulate matter control system for any source of fugitive particulate matter associated with the fuel burning units. Using natural gas as the fuel of the furnaces will result in no potential for fugitive emissions.

#### *45CSR2 Testing, Monitoring, Record-keeping, & Reporting (TMR&R) - Section 8*

Section 8 of Rule 2 requires testing for initial compliance with the limits therein, monitoring for continued compliance, and keeping records of that compliance. The TMR&R requirements are clarified under 45CSR2A and discussed below.

#### *45CSR2A Applicability - Section 3*

Pursuant to §45-2A-3, as an individual applicable “fuel burning unit” under 45CSR2 with an MDHI less than 100 mmBtu/hr, the furnaces (1, 2 & 3) are not subject to the Testing and MRR Requirements under 45CSR2A.

### **45CSR7: To Prevent and Control Particulate Air Pollution from Manufacturing Process Operations**

Pursuant to Section 10.1 of 45CSR7, the furnaces are not subject to the provisions of Rule 7 as they are subject to the particulate matter standards of 45CSR2.

### **45CSR10: To Prevent and Control Air Pollution from the Emission of Sulfur Oxides**

45CSR10 has requirements limiting SO<sub>2</sub> emissions from “fuel burning units,” limiting in-stack SO<sub>2</sub> concentrations of “manufacturing processes,” and limiting H<sub>2</sub>S concentrations in process gas streams. Furnaces 1, 2, and 3 are defined as a “fuel burning units” and subject to the applicable requirements discussed below.

#### *45CSR10 Fuel Burning Units - Section 3*

The allowable aggregate SO<sub>2</sub> emission rate for Furnaces 1, 2 and 3, identified as a Type “b” fuel burning units in a Priority III Region, per 45CSR10, Section 3.3(f), is the product of 3.2 and the total design heat input of the furnaces in million Btu per hour. The maximum aggregate design heat input (short-term) of the furnaces is 25.19 mmBtu/hr. Using the above equation, the 45CSR10 SO<sub>2</sub> emission limit of the boiler would be 80.61 lb/hr. The maximum potential hourly SO<sub>2</sub> emissions from the boiler is estimated to be 0.04 lb/hr. This emission rate is less than one percent of the 45CSR10 limit.

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### ***45CSR10 Testing, Monitoring, Record-keeping, & Reporting (TMR&R) - Section 8***

Section 8 of Rule 10 requires a test for initial compliance with the limits therein, monitoring for continued compliance, and record-keeping of that compliance. The TMR&R requirements are clarified under 45CSR10A and discussed below.

### ***45CSR10A Applicability - Section 3***

Pursuant to §45-10A-3.1(b), as the furnaces will only “combust natural gas, wood or distillate oil, alone or in combination,” it is not subject to the Testing and MRR Requirements under 45CSR10A.

### **45CSR13: Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation**

Skana’s Wilsonburg Facility is an existing stationary source that already has a Rule 13 permit (R13-2880).

The re-commissioning of Furnace 3 is considered to be a class II administrative update because it adds a new emission point to the source/facility and results in an increase in emissions (of CO, NO<sub>x</sub>, SO<sub>2</sub>, PM, and VOC) of less than

- six (6) pounds per hour and ten (10) tons per year or more, or more than 144 pounds per calendar day, of any regulated air pollutant;
- 2 pounds per hour or 5 tons per year of hazardous air pollutants considered on an aggregated basis;

Skana submitted a complete application, ran a legal advertisement, and paid a \$300.00 application fee to update their permit.

### **45CSR14: Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration**

Harrison County is classified as “in attainment” with all criteria pollutants. Therefore, as the Wilsonburg Plant is not a “listed source” under §45-14-2.43, the major source applicability threshold for all pollutants is 250 TPY. The post-updated PTE of all criteria pollutants is less than 250 TPY and, therefore, the provisions of 45CSR14 do not apply.

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### ***45CSR30: Requirements for Operating Permits***

45CSR30 provides for the establishment of a comprehensive air quality permitting system consistent with the requirements of Title V of the Clean Air Act.

The updated facility will not have criteria pollutant emissions in excess of 100 TPY or have any applicability to a federal performance standard and, therefore, will not be subject to the requirements of 45CSR30.

[The permit is still defined as a “synthetic minor” for the purposes of Title V permitting based on the limitation of rolling oil loss of 80.80 TPY, and the theoretical loss (if unlimited by the permit) of over 100 TPY of rolling oil.]

### **TOXICITY ANALYSIS OF NON-CRITERIA REGULATED POLLUTANTS**

This section provides an analysis for those regulated pollutants that may be emitted from the facility and that are not classified as “criteria pollutants.”

Criteria pollutants are defined as Carbon Monoxide (CO), Lead (Pb), Oxides of Nitrogen (NO<sub>x</sub>), Ozone, Particulate Matter (PM), Particulate Matter less than 10 microns (PM<sub>10</sub>), Particulate Matter less than 2.5 microns (PM<sub>2.5</sub>), and Sulfur Dioxide (SO<sub>2</sub>). These pollutants have National Ambient Air Quality Standards (NAAQS) set for each that are designed to protect the public health and welfare. Other pollutants of concern, although designated as non-criteria and without national concentration standards, are regulated through various federal and programs designed to limit their emissions and public exposure. These programs include federal source-specific Hazardous Air Pollutants (HAPs) limits promulgated under 40 CFR 61 (NESHAPS) and 40 CFR 63 (MACT). Any potential applicability to these programs were discussed above under REGULATORY APPLICABILITY.

The majority of non-criteria regulated pollutants fall under the definition of HAPs which, with some revision since, were 188 compounds identified under Section 112(b) of the Clean Air Act (CAA) as pollutants or groups of pollutants that EPA knows or suspects may cause cancer or other serious human health effects.

The restarted facility, however, does not have the potential to emit any substantive amount of non-criteria regulated pollutants.

### **AIR QUALITY IMPACT ANALYSIS**

The proposed modification does not meet the definition of a “major source” pursuant to 45CSR14 and, therefore, an air quality impact analysis was not required.

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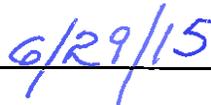
**MONITORING, COMPLIANCE DEMONSTRATIONS, RECORD-KEEPING, AND REPORTING REQUIREMENTS**

Skana will be required to maintain monthly and rolling twelve month records of the amount of natural gas that is combusted in Furnace 3.

**RECOMMENDATION TO DIRECTOR**

Skana's request to place Annealing Furnace 3 back into service at it Wilsonburg, Harrison County, WV facility meets the requirements of 45CSR13 (Rule 13) and all other applicable rules, and therefore, should be granted the updated, Rule 13 permit (R13-2880A).

  
\_\_\_\_\_  
John Legg  
Permit Writer

  
\_\_\_\_\_  
Date

**Attachment 1  
History of Past Ownership  
Scana Aluminum Corporation  
Wilsonburg Facility, Harrison County, WV**

- April 3, 2015 - R13-2880A submitted by Skana to re-start natural gas-fired annealing furnace # 3.
- MM, DD, YYYY - Skana Aluminum Company (Skana) becomes owner of the Wilsonburg Facility.
- August 8, 2011 - R13-2880 issued to Scott.
- June 14, 2011 - Permit application R13-2880 updated to Scott from Aluminum Services.
- May 2011 - Scott Aluminum Corporation (Scott) purchases Aluminum Services.
- May 3, 2011 - Aluminum Services was granted a “no-permit needed” decision (PD11-023) to conduct “Research & Development” activities at the facility as allowed under 45CSR13A prior to receiving a construction permit.
- April 13, 2011 - R13-2880 submitted by Aluminum Services, Inc. (Aluminum Services) to restart facility.
- April 29, 2009 - Precision ceased operating and was given an enforcement status of “90 - Permanent Shutdown.”
- March 24, 1997 - Permit R13-1972 issued to Precision (Facility ID 033-00065).
- November 11, 1995 Permit application R13-1972 submitted by Precision Coil, Inc. (Precision) to construct an aluminum sheet rolling and sizing facility in Wilsonburg, Harrison County, WV.

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**Attachment 2**  
**File Comparison**  
**Comparing R13-2880A to R13-2880**  
**Skana Aluminum Corporation**  
**Wilsonburg, Harrison County, WV**

R13-2880A  
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## WordPerfect Document Compare Summary

Original document: Q:\AIR\_QUALITY\LEGG\Skana Aluminum  
Company\033-00198\_PERM\_13-2880.wpd

Revised document: @PFDesktop\MyComputer\Q:\AIR\_QUALITY\LEGG\Skana Aluminum  
Company\033-00198\_PERM\_13-2880A.wpd

Deletions are shown with the following attributes and color:

~~Strikeout~~, **Blue** RGB(0,0,255).

Deleted text is shown as full text.

Insertions are shown with the following attributes and color:

Double Underline, Redline, **Red** RGB(255,0,0).

The document was marked with 21 Deletions, 26 Insertions, 0 Moves.

# Permit to Construct Update



**R13-2880**A

*This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45 C.S.R. 13 — Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation. The permittee identified at the facility listed below is authorized to construct the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.*

Issued to:  
**Scott**Skana **Aluminum Corporation**Company  
Wilsonburg Plant  
033-00198

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*John A*William F. *Benedict*Durham  
Director

*Issued: August 8, 2011 • Effective: August 8, 2011*Draft

Facility Location: Wilsonburg, Harrison County, West Virginia  
Mailing Address: ~~PO Box 2146~~ 345 Wilsonburg Road, Clarksburg, WV ~~26302-2146~~ 26301  
Facility Description: Aluminum Sheet Rolling and Sizing Facility  
NAICS Codes: 331319  
UTM Coordinates: 552.6 km Easting • 4,348.5 km Northing • Zone 17  
Permit Type: ~~Construction~~ Class II Administrative Update  
Desc. of Change: Permit to ~~restart Aluminum Sheet Rolling and Sizing Facility~~ place back into service existing natural gas-fired Annealing Furnace 3.

*Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.*

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*As a result of the granting of this permit, the source is not subject to 45CSR30.*

**1.0 Emission Units**

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
101S	101E	Rolling Mill	1989	16.5 TPH	Mist Eliminator (101C)
210S	210E	Annealing Furnace 1	1989	18.00 mmBtu/hr 30 tons/cycle	None
220S	220E 221E 222E	Annealing Furnace 2	1989	5.00 mmBtu/hr 10.5 tons/cycle	None
<u>230S</u>	<u>230E</u> <sup>(1)</sup> <u>231E</u> <sup>(2)</sup>	<u>Annealing Furnace 3</u>	<u>1992</u>	<u>0.80 mm Btu/hr</u> <u>917 lb/hr</u>	<u>None</u>
300S	300E	Rolling Oil Storage Tank	1989	8,000 gal	None
Various	Various	Natural Gas-Fired Space Heating	1989	1.39 mmBtu/hr	None
<p><u>(1) Purge Stack.</u>  <u>(2) Combustion Stack.</u></p>					

### 2.3. Authority

This permit is issued in accordance with West Virginia Air Pollution Control Law W.Va. Code §§22-5-1 et seq. and the following Legislative Rules promulgated thereunder:

- 2.3.1. 45CSR13 – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation.*

### 2.4. Term and Renewal

- 2.4.1. This permit supercedes and replaces previously issued Permit R13-2880. This permit shall remain valid, continuous and in effect unless it is revised, suspended, revoked or otherwise changed under an applicable provision of 45CSR13 or any applicable legislative rule.

### 2.5. Duty to Comply

- 2.5.1. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Applications R13-2880, R13-2880A and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to; [45CSR§§13-5.11 and 13-10.3]
- 2.5.2. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA;
- 2.5.3. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7;
- 2.5.4. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses and/or approvals from other agencies; i.e., local, state and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

### 2.6. Duty to Provide Information

The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for administratively updating, modifying, revoking or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.

Director  
WVDEP  
Division of Air Quality  
601 57th Street, SE  
Charleston, WV 25304-2345

Associate Director  
Office of Air Enforcement and Permits Review  
Compliance Assistance  
(3AP123AP20)  
U. S. Environmental Protection Agency  
Region III  
1650 Arch Street  
Philadelphia, PA 19103-2029

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#### 3.5.4. Operating Fee.

3.5.4.1. In accordance with 45CSR22 – Air Quality Management Fee Program, the permittee shall not operate nor cause to operate the permitted facility or other associated facilities on the same or contiguous sites comprising the plant without first obtaining and having in current effect a Certificate to Operate (CTO). Such Certificate to Operate (CTO) shall be renewed annually, shall be maintained on the premises for which the certificate has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.

~~3.5.4.2. In accordance with 45CSR22 – Air Quality Management Fee Program, enclosed with this permit is an Application for a Certificate to Operate (CTO), from the date of initial startup through the following June 30. Said application and the appropriate fee shall be submitted to this office no later than 30 days prior to the date of initial startup. For any startup date other than July 1, the permittee shall pay a fee or prorated fee in accordance with Section 4.5 of 45CSR22. A copy of this schedule may be found on the reverse side of the application for a Certificate to Operate (CTO).~~

3.5.5. **Emission inventory.** At such time(s) as the Secretary may designate, the permittee herein shall prepare and submit an emission inventory for the previous year, addressing the emissions from the facility and/or process(es) authorized herein, in accordance with the emission inventory submittal requirements of the Division of Air Quality. After the initial submittal, the Secretary may, based upon the type and quantity of the pollutants emitted, establish a frequency other than on an annual basis.

1. The permit or rule evaluated, with the citation number and language;
2. The result of the test for each permit or rule condition; and,
3. A statement of compliance or noncompliance with each permit or rule condition.

[WV Code § 22-5-4(a)(14-15) and 45CSR13]

### 3.4. Recordkeeping Requirements

- 3.4.1. **Retention of records.** The permittee shall maintain records of all information (including monitoring data, support information, reports and notifications) required by this permit recorded in a form suitable and readily available for expeditious inspection and review. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. Where appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.
- 3.4.2. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.  
[45CSR§4. *State-Enforceable only.*]

### 3.5. Reporting Requirements

- 3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.
- 3.5.2. **Confidential information.** A permittee may request confidential treatment for the submission of reporting required by this permit pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
- 3.5.3. **Correspondence.** All notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class with postage prepaid to the address(es) set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

**If to the DAQ:**

**If to the USEPA:**

**4.0. Source-Specific Requirements**

**4.1. Limitations and Standards**

4.1.1. The emission sources authorized to operate at the facility, excluding those as defined as *de minimis* sources under §45-13-2.6, are limited to those specified under Table 1.0 of this permit. Each source shall be:

- a. Designed, maintained, and operated so as to minimize any fugitive escape of pollutants; and
- b. Shall not exceed the specified design parameters; and
- c. Shall, where applicable, use the specified control device.

4.1.2. Maximum combustion exhaust emissions from each specified combustion source shall exceed those values given in the following table:

**Table 4.1.2.: Combustion Emission Limits**

Source (ID)	Emission Point ID	CO		NO <sub>x</sub>		PM/PM <sub>10</sub> <sup>(1)</sup>		SO <sub>2</sub>		VOCs <sup>(2)</sup>	
		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Furnace #1 (210S) <sup>(2)</sup>	210E	1.51	1.57	1.80	1.87	0.14	0.14	0.01	0.01	0.10	0.10
Furnace #2 (220S) <sup>(2)</sup>	220E 221E 222E	0.42	0.44	0.50	0.52	0.04	0.04	0.01	0.01	0.03	0.03
<u>Furnace #3 (230S)<sup>(2)</sup></u>	<u>230E</u> <u>231E</u>	<u>0.07</u>	<u>0.30</u>	<u>0.08</u>	<u>0.35</u>	<u>0.01</u>	<u>0.03</u>	<u>0.01</u>	<u>0.01</u>	<u>0.01</u>	<u>0.02</u>
Space Heating	Various	0.23	0.26	0.28	0.30	0.02	0.02	0.01	0.01	0.02	0.02

(1) All particulate matter emissions are assumed to be PM<sub>2.5</sub> and include condensable emissions.

(2) VOC emissions from Annealing Furnaces do not account for rolling oil flashed off during heating process. These emissions are accounted for under 4.1.3.

4.1.3. Facility-wide emissions of VOCs from the use of rolling oil shall not exceed 80.80 TPY.

4.1.4. Emissions of total particulate matter (assumed for the purposes of this permit as PM<sub>2.5</sub> or smaller), as emitted from the Mist Collector Stack (Emission Point 101E), and based on testing methods given under 45CSR7A, shall not exceed 0.40 lb/hr or 0.58 TPY.

4.1.5. Annealing Furnace 1, Annealing Furnace 2, Annealing Furnace 3, and the Space Heaters shall only combust natural gas and shall be subject to the following annual natural gas combustion limits:

**Table 4.1.5.: Annual Natural Gas Combustion Limits**

Source (ID)	Annual Natural Gas Combustion Limit (mmscf/yr)
Furnace #1 (210S)	37.44
Furnace #2 (220S)	10.40
<u>Furnace #3 (230S)</u>	<u>2.08<sup>(1)</sup></u>
Space Heating	3.04

(1) Based on operating 2,600 hr/yr. (10 hr/day x 5 day/wk x 52 wk/yr).

- 4.1.6. The permittee shall properly maintain the pavement on all haulroads and mobile work areas (including a reasonable shoulder area) within the plant boundary.
- 4.1.7. Annealing ~~Furnaces 3 and~~ Furnace 4 shall be permanently removed from service. For the purposes of this permit, "removed from service" shall mean that the fuel supply to the furnaces shall be cut in a such a manner that they it may not be reasonably reconnected in a short time frame.
- 4.1.8. The fuel burning units, identified as the Annealing Furnaces and Natural Gas-Fired Space Heating, are subject to the applicable limitations and standards under 45CSR2, including the requirements as given below under (a) through (c).
- a. The permittee shall not cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from the fuel burning units which is greater than ten (10) percent opacity based on a six minute block average.  
[45CSR§2-3.1]
  - b. The permittee shall not cause, suffer, allow or permit the discharge of particulate matter into the open air from the fuel burning units, measured in terms of pounds per hour in excess of the amount determined as follows:
    - (1) The product of 0.09 and the total design heat input for the fuel burning units in million British Thermal Units (B.T.U.'s) per hour, provided however that no more than twelve hundred (1200) pounds per hour of particulate matter shall be discharged into the open air.  
[45CSR§2-4.1a]
  - c. The visible emission standards set forth in section 3 of 45CSR2 shall apply at all times except in periods of start-ups, shutdowns and malfunctions. Where the Director believes that start-ups and shutdowns are excessive in duration and/or frequency, the Director may require an owner or operator to provide a written report demonstrating that such frequent start-ups and shutdowns are necessary.  
[45CSR§2-9.1]
- 4.1.9. The Cold Rolling Mill is subject to the applicable limitations and standards under 45CSR7, as given below under (a) through (c).
- a. The permittee shall not cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from the Cold Rolling Mill which is greater than twenty (20) percent opacity, except as noted under 4.1.6.b.  
[45CSR§7-3.1]
  - b. The provisions of subsection 4.1.9.a shall not apply to smoke and/or particulate matter emitted from the Cold Rolling Mill which is less than forty (40) percent opacity for any period or periods aggregating no more than five (5) minutes in any sixty (60) minute period.  
[45CSR§7-3.2]
  - c. The permittee shall not cause, suffer, allow or permit particulate matter to be vented into the open air from any manufacturing process source operation, or from all air pollution control equipment installed on any manufacturing process source operation, in excess of the quantity specified under