

STATE OF MISSOURI



PERMIT BOOK

DEPARTMENT OF NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: 092007-001 Project Number: 2007-05-103

Parent Company: The Loxscreen Company, Inc.

Parent Company Address: P.O. Box 4004, Columbia, SC 29171

Installation Name: The Loxscreen Company, Inc.

Installation Address: Highway 84 West, Hayti, MO 63851

Location Information: Pemiscot County, Section 4, Township 18N, Range 12E

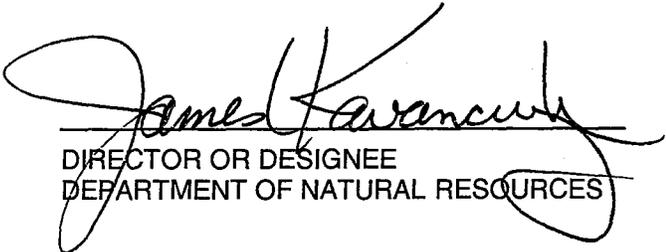
Application for Authority to Construct was made for:

A change in the stack configuration of the reverberatory remelt furnace (EP-01) resulting in the emissions combining into a single stack and a structural change to the reverberatory remelt furnace door. The structural change will result in approximately 10,000 to 20,000 pounds more aluminum per charge depending on the shape of the scrap aluminum. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

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- Standard Conditions (on reverse) are applicable to this permit.
- Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

SEP - 4 2007

EFFECTIVE DATE


DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the department's Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available not more than 60 days but at least 30 days in advance of this date. Also, you must notify the Department of Natural Resources Regional office responsible for the area within which you are located with 15 days after the actual start up of this (these) air contaminant source(s).

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant source(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW

Project Number: 2007-05-103
Installation ID Number: 155-0045
Permit Number:

The Loxcreen Company, Inc.
Highway 84 West,
Hayti, MO 63851

Complete: May 18, 2007
Reviewed: August 16, 2007

Parent Company:
The Loxcreen Company, Inc.
P.O. Box 4004,
Columbia, SC 29171

Pemiscot County, Section 4, Township 18N, Range 12E

REVIEW SUMMARY

- The Loxcreen Company, Inc. has applied for authority to change the stack configuration of the reverberatory remelt furnace to allow the emissions to combine in a single stack and report a structural change to the reverberatory remelt furnace door (EP-01). This structural change will increase the capacity of the furnace, allowing for a larger volume of aluminum to be processed per charge. Depending on the shape of the scrap aluminum, this results in approximately 10,000 to 20,000 pounds more aluminum per charge and an emission increase.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment. HAPs of concern from this process are Hydrogen Chloride (HCl) (CAS# 7647-01-0) and trace amounts of Dioxins and Furans (CAS # 110-00-9).
- None of the New Source Performance Standards (NSPS) apply to the proposed equipment.
- The Maximum Achievable Control Technology (MACT) standard, 40 CFR Part 63, Subpart RRR, National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production applies to this project. None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) 40 CFR Part 61, regulations apply to the project.
- No air pollution control equipment is being used in association with the equipment structural modification.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all HAPs (HCl, Dixon/Furan) and PM₁₀ are below de minimis levels.

- This installation is located in Pemiscot County, an attainment area for all criteria air pollutants.
- This installation is not on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2]. However, secondary metal production plants are on the list. According to EPA documents a simple remelt of clean aluminum scrap would not put the plant on the list. Other factors are no smelting and that argon gas is used to remove impurities instead of a high particulate emission source dropping operation appears to not cause the installation to be on the List of Named Installations.
- Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels.
- Emissions testing is not required for the source.
- A Part 70 Operating Permit application is required for this installation within 1 year of equipment startup.
- Approval of this permit is recommended without special conditions.

INSTALLATION DESCRIPTION

The Loxcreen Company of Hayti, Missouri in Pemiscot County makes and finishes aluminum extrusions. It is a major source for HAPs and has a P70 operating permit. The Loxcreen Company is responsible for the invention of the tension window screen. The Hayti plant commenced operation in 1972. The facility has complete extrusion, anodizing, painting and fabricating capabilities and a remelt and billet casting foundry. The foundry casts 6" and 7" diameter billets in 6000 series alloys. They make a wide variety of extruded aluminum products from aluminum alloys 6005, 6061, 6063, 6463 with Temper range of T1, T4 T5, T52 and T6.

The following permits have been issued to The Loxcreen Company, Inc. from the Air Pollution Control Program.

Table 1: Permits and Permit Actions for The Loxcreen Company.

Permit Number	Description
OP 2006-021	P70 Operating Permit expires 4/16/2011
Applicability Determination	Dross Press no permit required
Applicability Determination	Cleaning ovens no permit required
1198-017	New bake off oven section 5 permit issued
0997-001	Two filter cake dryers
0497-025	Solvent still
0496-013	Paint line operation
1093-011	Aluminum buffing operation
0188-005	Dip process, billet heater aging oven
0981-002	Remelt furnace and a homogenizing oven

PROJECT DESCRIPTION

A structural change to the remelt furnace door to allow it to slide at a 45 degree angle. The facility had experienced a number of difficulties with the door's 90 degree up and down operation. This change increased the size of the furnace which allowed for a larger volume of aluminum to be processed per charge. Approximately 10,000 to 20,000 pounds more aluminum can be processed per charge after the change. The second part of this project is to recombine the emissions into a stack which allows for testing of all of the emissions from this source. No increase in actual emissions are expected to occur from the combining of the stacks. The existing data associated with the testing did not include the second stack which is to be combined.

No new equipment is being installed and no control device has been installed. The remelt furnace is authorized in permit 0981-002. In that permit emission calculations are based on 8736 operating hours per year. Five percent of the operating hours, or 437 hours, are based on fuel oil combustion and the remaining hours are based on natural gas combustion. No other fuels have been approved for use in this furnace. The site submitted stack test data in the current application, but it was not used due to the modification for the stack emissions to be combined. For purposes of emission calculations it will be assumed as a reasonable worst case that all scrap is dealer scrap.

A modification is treated for permit applicability the same as for a new source. The entire Potential to Emit is calculated based on the Maximum Hourly Design Rate (MHDR). In this case, the Potential to Emit is calculated, including the increased capacity, to determine if a permit is needed. However, the Potential To Emit of only the change or modification is added to the installations potential.

Because site specific testing did not include the increase in emissions the potential emission change will be calculated using the maximum allowable emission rate from the applicable MACT, Subpart RRR. These rates are for particulate emission (PM_{10}) factor of 0.40 pounds per ton of AL charge, HCL emissions of 0.40 pounds per ton of AL charge and dioxin/furan emissions of 15 micrograms per ton of AL charge. The particulate matter less than 10 microns in diameter (PM_{10}), HCl and dioxins/furans emission factors used to estimate emissions were 0.40 pounds per tons of aluminum charge, 0.40 pounds per ton of aluminum charge, and 15 micrograms per ton of aluminum charge, respectively.

Potential throughput = 102,000 pounds Al /charge X 2 charges /day x 7 days/week x 52 weeks/year x 1 ton/2000 lb = 37,128 tons Al/year

Potential emission for the modification to determine permit applicability would be:

37,128 tons AL/year x 0.40 lb PM₁₀ per ton Al x year/8760hrs = 1.695 pounds of PM₁₀/hr

37,128 tons AL/year x 0.40 lb HCL per ton Al x year/8760hrs = 1.695 pounds of HCL/hr

37,128 tons Al/year x 15 micrograms dioxin/furan per ton Al = 556,920 micrograms/year or 0.001228 pound/year or 1.4×10^{-7} lb/hr.

Potential throughput increase because of change = 20,000 lb Al/charge X 2 charges /day x 7 days/week x 52 weeks/year x 1 ton/2000 pounds = 7280 tons Al/year

7280 tons Al/year x 0.40 lb PM₁₀ per ton Al = 2,912 lb PM₁₀ per year or 1.46 tons PM₁₀/year.

7280 tons Al/year x 0.40 lb HCL per ton Al = 2,912 lb HCL per year or 1.46 tons HCL/year.

7280 tons Al/year x 15 micrograms dioxin/furan per ton Al = 109,200 micrograms (dioxin/furan) per year or 2.41×10^{-4} pound (dioxin/furan) per year or 1.21×10^{-7} tons (dioxin/furan) per year.

A permit is required for this structural door change because the emission of HCL, a HAP, exceeds the 0.5 pound per hour exemption rate established in 10 CSR 10-6.061 Construction Permit Exemptions at (3)(A)3.B. and the emission of PM₁₀ exceeds the amount of 1 pound per hour exemption established in Table 1 insignificant Emission Exemption Levels in 10 CSR 10-6.061 Construction Permit Exemptions at (3)(A)3.A..

EMISSIONS/CONTROLS EVALUATION

The emission factors used in this analysis were obtained from the Maximum Achievable Control Technology (MACT) standard, 40 CFR Part 63, Subpart RRR, National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production. Potential emissions of the application represent the potential emission of the change in the equipment, assuming continuous operation (8760 hours per year.) The following table provides an emissions summary for this project.

Table 1: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions**	Existing Actual Emissions (2006 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM ₁₀	15.0	45.88	7.51	1.46	N/A
SOx	40.0	0.18	0.05	N/D	N/A
NOx	40.0	49.83	8.97	N/D	N/A
VOC	40.0	123.11	32.85	N/D	N/A
CO	100.0	8.11	7.53	N/D	N/A
HAPs	10.0/25.0	55.55	10.10	1.46	N/A
HCL	10	N/D	N/D	1.46	N/A
Dioxin/Furan	10	N/D	N/D	1.21×10^{-7}	N/A

N/A = Not Applicable; N/D = Not Determined

** Existing Potential Emissions taken from permit 1198-017 with project number 1998-02-0192

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants are below de minimis levels.

APPLICABLE REQUIREMENTS

The Loxscreen Company, Inc. shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved. For a complete list of applicable requirements for your installation, please consult your operating permit.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of an Emissions Inventory Questionnaire (EIQ) is required April 1 for the previous year's emissions.
- *Operating Permits*, 10 CSR 10-6.065
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emission of Odors*, 10 CSR 10-3.090

SPECIFIC REQUIREMENTS

- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400
- *Maximum Achievable Control Technology (MACT) Regulations*, 10 CSR 10-6.075, *National Emission Standards for National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production* applies to this site, 40 CFR Part 63, Subpart RRR
- *Restriction of Emission of Sulfur Compounds*, 10 CSR 10-6.260
- *Maximum Allowable Emissions of Particulate Matter From Fuel Burning Equipment Used for Indirect Heating*, 10 CSR 10-3.060

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted without special conditions.

Timothy Paul Hines
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated May 12, 2007, received May 18, 2007, designating The Loxcreen Company, Inc. as the owner and operator of the installation.
- Additional information received via email on August 06, 2007 concerning stack configurations and test data.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Southeast Regional Office Site Survey, dated 06/15/07.

Mr. Scott Patterson
The Loxcreen Company, Inc.
P.O. Box 40 Highway 84 West
Hayti, MO 63851

RE: New Source Review Permit - Project Number: 2007-05-103

Dear Mr. Patterson:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files.

Operation in accordance with these conditions, your new source review permit application and with your amended operating permit is necessary for continued compliance.

The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

If you have any questions regarding this permit, please do not hesitate to contact Tim Hines at the department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or you can call (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale
New Source Review Unit Chief

KBH:thl

Enclosures

c: Southeast Regional Office
PAMS File 2007-05-103

Permit Number: