STATE OF MISSOURI

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: 052016-001 Project Number: 2016-01-012
Installation Number: 105-0001

Parent Company: ISCO Holding Company

Parent Company Address: P.O. Box 104, Lebanon, MO 65536

Installation Name: Independent Stave Company

Installation Address: 1078 South Jefferson Street, Lebanon, MO 65536

Location Information: Laclede County (S34, T12N, R16W)

Application for Authority to Construct was made for:
The installation of two 200 horsepower wood-fired boilers and three steam-heated dry kilns. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required.*

☐ Standard Conditions (on reverse) are applicable to this permit.

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

Prepared by
Ryan Schott
New Source Review Unit

Director or Designee
Department of Natural Resources
MAY 03 2016

Effective Date

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 startup of these air contaminant sources. The information must be made available within 30 days of actual startup. Also, you must notify the Department of Natural Resources' regional office responsible for the area within which you are located within 15 days after the actual startup of these air contaminant sources.

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 sources(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.

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."

Independent Stave Company
Laclede County (S34, T12N, R16W)

1. Superseding Condition
   The conditions of this permit supersede Special Conditions 2 & 3 of Construction Permit 022015-005, previously issued by the Air Pollution Control Program.

2. CO Emission Limitation
   A. Independent Stave Company shall emit less than 250.0 tons of CO in any consecutive 12-month period from the entire installation, as shown in Table 1.

   B. Independent Stave Company shall develop and use forms to demonstrate compliance with Special Condition 2.A. The forms shall contain at a minimum the following information:
      1) Installation name
      2) Installation ID
      3) Permit number
      4) Current month
      5) Emission units
      6) Emission unit respective current monthly throughput with units of measure matching Table 1
      7) Emission factor for each unit equivalent to those listed in Table 1
      8) Monthly emissions for each emission unit
      9) Total monthly emissions for Carbon Monoxide (CO)
      10) 12-month rolling total for CO that includes the sum of all startup, shutdown, and malfunction emissions, as reported to the Air Pollution Control Program's Compliance & Enforcement Section
      11) Indication of compliance with Special Condition 2.A.

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

Table 1: Facility Emission Units That Emit CO

Emission Unit	Description	CO Emission Factor*
EU-03	Wood-fired Heine Boiler	9.84 lb/ton of wood
EU-05	Wine Head Toaster	9.84 lb/ton of wood
EU-06	Bourbon Head Char	9.84 lb/ton of wood
EU-07	Wine Barrel Toaster/Bending	9.84 lb/ton of wood
EU-08	Bourbon BBL Char – Wood	9.84 lb/ton of wood
	Bourbon BBL Char – Natural Gas	84 lb/MMCF
EU-11	Barrel Pre-Heater No. 1	9.84 lb/ton of wood
EU-24	Drum Heater No. 1 – Wood Waste	9.84 lb/ton of wood
	Drum Heater No. 1 – Natural Gas (NG)	84 lb/MMCF
EU-36	Wine Barrel Laser	13.6 lb/ton
EU-40	Stave Toaster	9.84 lb/ton of wood
EU-45	Alternatives Tank Stave Oven – NG	84 lb/MMCF
EU-47	Electric Tank Stave Toaster	9.84 lb/ton of wood
EU-51a,b,c,d	Propane Fired Chip Roasters – NG	84 lb/MMCF
EU-60A	Chip Roaster Burner – NG	84 lb/MMCF
EU-60B	Chip Roaster Burner – NG	84 lb/MMCF
EU-68	Tank Stave Oven Wood Breakdown	9.84 lb/ton of wood
EU-69A	Tank Stave Toasting	9.84 lb/ton of wood
EU-69B	Tank Stave Toasting	9.84 lb/ton of wood
EU-70A	Wood Fire Pot Combustion	9.84 lb/ton of wood
EU-70B	Wood Fire Pot Combustion	9.84 lb/ton of wood
EU-83A	Wood-fired Boiler	9.84 lb/ton of wood
EU-83B	Wood-fired Boiler	9.84 lb/ton of wood

*CO emission factor is based on higher heating value equal to 8,200 Btu per pound of wood and an emission factor equal to 0.6 lb/MMBtu

3. HAP Emission Limitation

A. Independent Stave Company shall emit less than 10.0 tons of any individual HAP and less than 25.0 tons of total HAPs in any consecutive 12-month period from the entire installation as shown in Table 2.

B. Emissions from EU-55 through EU-57 shall be calculated using a mass balance approach assuming particulate transfer efficiency equal to 50% and particulate control efficiency equal to 95%.

C. When considering using an alternative coating in the painting booth that is different than a material listed previously permitted, Independent Stave Company shall calculate the potential emissions of VOCs and all individual HAP in the alternative material.

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

D. If the alternative coating contains a HAP that is also a product of combustion of wood or natural gas, Independent Stave shall track that individual HAP's emissions from all combustion equipment and add them to the alternative coating emissions.

E. Independent Stave Company shall seek approval from the Air Pollution Control Program before use of the alternative material in the following cases:
   1) If the potential VOC emissions for the alternative material is greater than or equal to 131.8 tons per year; or
   2) If the potential individual HAP emissions for the alternative material are greater than or equal to the screening model action level (SMAL) for any chemical listed in Appendix B, or the most recent HAP SMAL table located at: http://dnr.mo.gov/env/apcp/docs/cp-hapsmaltbl6.pdf

F. Independent Stave Company shall develop and use forms to demonstrate compliance with Special Condition 3.A. The forms shall contain at a minimum the following information:
   1) Installation name
   2) Installation ID
   3) Permit number
   4) Current month
   5) Current 12-month date range
   6) Emission units
   7) Emission unit respective current monthly throughput with units of measure matching Table 2
   8) Emission factor for each unit equivalent to those listed in Table 2
   9) Monthly emissions for each emission unit
   10) Total monthly emissions for total HAPs and individual HAPs
   11) 12-month rolling total for total HAPs and individual HAPs that includes the sum of all startup, shutdown, and malfunction emissions, as reported to the Air Pollution Control Program's Compliance & Enforcement Section
   12) Indication of compliance with Special Condition 3.A.

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

Table 2: Facility Emission Units That Emit HAPs

Emission Unit	Description	HAP Emission Factor**	
		Individual	Total
EU-03	Wood-fired Heine Boiler (HCl)	0.164 lb/ton of wood	0.3 lb/ton of wood
	Wood-fired Heine Boiler (Hexane)	0.005 lb/ton of wood	
	Wood-fired Heine Boiler (Ethylbenzene)	0.0001 lb/ton of wood	
	Wood-fired Heine Boiler (Toluene)	0.0005 lb/tons of wood	
	Wood-fired Heine Boiler (Xylene)	0.0005 lb/tons of wood	
	Wood-fired Heine Boiler (Cobalt)	0.000003 lb/tons of wood	
EU-05	Wine Head Toaster (HCl)	0.164 lb/ton of wood	0.3 lb/ton of wood
	Wine Head Toaster (Hexane)	0.005 lb/ton of wood	
	Wine Head Toaster (Ethylbenzene)	0.0001 lb/ton of wood	
	Wine Head Toaster (Toluene)	0.0005 lb/tons of wood	
	Wine Head Toaster (Xylene)	0.0005 lb/tons of wood	
	Wine Head Toaster (Cobalt)	0.000003 lb/tons of wood	
EU-06	Bourbon Head Char (HCl)	0.164 lb/ton of wood	0.3 lb/ton of wood
	Bourbon Head Char (Hexane)	0.005 lb/ton of wood	
	Bourbon Head Char (Ethylbenzene)	0.0001 lb/ton of wood	
	Bourbon Head Char (Toluene)	0.0005 lb/tons of wood	
	Bourbon Head Char (Xylene)	0.0005 lb/tons of wood	
	Bourbon Head Char (Cobalt)	0.000003 lb/tons of wood	
EU-07	Wine Barrel Toaster/Bending (HCl)	0.164 lb/ton of wood	0.3 lb/ton of wood
	Wine Barrel Toaster/Bending (Hexane)	0.005 lb/ton of wood	
	Wine Barrel Toaster/Bending (Ethylbenzene)	0.0001 lb/ton of wood	
	Wine Barrel Toaster/Bending (Toluene)	0.0005 lb/tons of wood	
	Wine Barrel Toaster/Bending (Xylene)	0.0005 lb/tons of wood	
	Wine Barrel Toaster/Bending (Cobalt)	0.000003 lb/tons of wood	
EU-08	Bourbon BBL Char-Wood (HCl)	0.164 lb/ton of wood	0.3 lb/ton of wood
	Bourbon BBL Char-Wood (Hexane)	0.005 lb/ton of wood	
	Bourbon BBL Char-Wood (Ethylbenzene)	0.0001 lb/ton of wood	
	Bourbon BBL Char-Wood (Toluene)	0.0005 lb/tons of wood	
	Bourbon BBL Char-Wood (Xylene)	0.0005 lb/tons of wood	
	Bourbon BBL Char-Wood (Cobalt)	0.000003 lb/tons of wood	
	Bourbon BBL Char – Natural Gas (NG) (Hexane)	1.8 lb/MMCF	1.88 lb/MMCF
	Bourbon BBL Char-Wood (Toluene)	0.0034 lb/MMCF	
	Bourbon BBL Char-Wood (Cobalt)	0.000084 lb/MMCF	

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

EU-11	Barrel Pre-Heater No. 1 (HCl)	0.164 lb/ton of wood	0.3 lb/ton of wood
	Barrel Pre-Heater No. 1 (Hexane)	0.005 lb/ton of wood	
	Barrel Pre-Heater No. 1 (Ethylbenzene)	0.0001 lb/ton of wood	
	Barrel Pre-Heater No. 1 (Toluene)	0.0005 lb/tons of wood	
	Barrel Pre-Heater No. 1 (Xylene)	0.0005 lb/tons of wood	
	Barrel Pre-Heater No. 1 (Cobalt)	0.000003 lb/tons of wood	
EU-24	Drum Heater No. 1 - Wood (HCl)	0.164 lb/ton of wood	0.3 lb/ton of wood
	Drum Heater No. 1 – Wood (Hexane)	0.005 lb/ton of wood	
	Drum Heater No. 1 – Wood (Ethylbenzene)	0.0001 lb/ton of wood	
	Drum Heater No. 1 – Wood (Toluene)	0.0005 lb/tons of wood	
	Drum Heater No. 1 – Wood (Xylene)	0.0005 lb/tons of wood	
	Drum Heater No. 1 – Wood (Cobalt)	0.000003 lb/tons of wood	
	Drum Heater No. 1 - (NG) (Hexane)	1.8 lb/MMCF	1.88 lb/MMCF
	Drum Heater No. 1 - (NG) (Toluene)	0.0034 lb/MMCF	
	Drum Heater No. 1 - (NG) (Cobalt)	0.000084 lb/MMCF	
EU-36	Wine Barrel Laser (HCl)	0.164 lb/ton of wood	0.3 lb/ton of wood
	Wine Barrel Laser (Hexane)	0.005 lb/ton of wood	
	Wine Barrel Laser (Ethylbenzene)	0.0001 lb/ton of wood	
	Wine Barrel Laser (Toluene)	0.0005 lb/tons of wood	
	Wine Barrel Laser (Xylene)	0.0005 lb/tons of wood	
	Wine Barrel Laser (Cobalt)	0.000003 lb/tons of wood	
EU-40	Stave Toaster (HCl)	0.164 lb/ton of wood	0.3 lb/ton of wood
	Stave Toaster (Hexane)	0.005 lb/ton of wood	
	Stave Toaster (Ethylbenzene)	0.0001 lb/ton of wood	
	Stave Toaster (Toluene)	0.0005 lb/tons of wood	
	Stave Toaster (Xylene)	0.0005 lb/tons of wood	
	Stave Toaster (Cobalt)	0.000003 lb/tons of wood	
EU-45	Alternatives Tank Stave Oven – NG (Hexane)	1.8 lb/MMCF	1.88 lb/MMCF
	Alternatives Tank Stave Oven – NG (Toluene)	0.0034 lb/MMCF	
	Alternatives Tank Stave Oven – NG (Cobalt)	0.000084 lb/MMCF	
EU-47	Electric Tank Stave Toaster (HCl)	0.164 lb/ton of wood	0.3 lb/ton of wood
	Electric Tank Stave Toaster (Hexane)	0.005 lb/ton of wood	
	Electric Tank Stave Toaster (Ethylbenzene)	0.0001 lb/ton of wood	
	Electric Tank Stave Toaster (Toluene)	0.0005 lb/tons of wood	
	Electric Tank Stave Toaster (Xylene)	0.0005 lb/tons of wood	
	Electric Tank Stave Toaster (Cobalt)	0.000003 lb/tons of wood	

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

EU-51 (a,b,c,d)	Propane Fired Chip Roasters – NG (Hexane)	1.8 lb/MMCF	1.88 lb/MMCF
	Propane Fired Chip Roasters – NG (Toluene)	0.0034 lb/MMCF	
	Propane Fired Chip Roasters – NG (Cobalt)	0.000084 lb/MMCF	
EU-55	Building #4 Paint Booth	Mass balance approach assuming all HAPs are emitted	
EU-56	Truck Shop Parts Cleaner		
EU-57	Building #2 Parts Cleaner		
EU-60A	Chip Roaster Burner – NG (Hexane)	1.8 lb/MMCF	1.88 lb/MMCF
	Chip Roaster Burner – NG (Toluene)	0.0034 lb/MMCF	
	Chip Roaster Burner – NG (Cobalt)	0.000084 lb/MMCF	
EU-60B	Chip Roaster Burner – NG (Hexane)	1.8 lb/MMCF	1.88 lb/MMCF
	Chip Roaster Burner – NG (Toluene)	0.0034 lb/MMCF	
	Chip Roaster Burner – NG (Cobalt)	0.000084 lb/MMCF	
EU-68	Tank Stave Oven Wood Breakdown (HCl)	0.164 lb/ton of wood	0.3 lb/ton of wood
	Tank Stave Oven Wood Breakdown (Hexane)	0.005 lb/ton of wood	
	Tank Stave Oven Wood Breakdown (Ethylbenzene)	0.0001 lb/ton of wood	
	Tank Stave Oven Wood Breakdown (Toluene)	0.0005 lb/tons of wood	
	Tank Stave Oven Wood Breakdown (Xylene)	0.0005 lb/tons of wood	
	Tank Stave Oven Wood Breakdown (Cobalt)	0.000003 lb/tons of wood	
EU-69A	Tank Stave Toasting (HCl)	0.164 lb/ton of wood	0.3 lb/ton of wood
	Tank Stave Toasting (Hexane)	0.005 lb/ton of wood	
	Tank Stave Toasting (Ethylbenzene)	0.0001 lb/ton of wood	
	Tank Stave Toasting (Toluene)	0.0005 lb/tons of wood	
	Tank Stave Toasting (Xylene)	0.0005 lb/tons of wood	
	Tank Stave Toasting (Cobalt)	0.000003 lb/tons of wood	
EU-69B	Tank Stave Toasting (HCl)	0.164 lb/ton of wood	0.3 lb/ton of wood
	Tank Stave Toasting (Hexane)	0.005 lb/ton of wood	
	Tank Stave Toasting (Ethylbenzene)	0.0001 lb/ton of wood	
	Tank Stave Toasting (Toluene)	0.0005 lb/tons of wood	
	Tank Stave Toasting (Xylene)	0.0005 lb/tons of wood	
	Tank Stave Toasting (Cobalt)	0.000003 lb/tons of wood	

SPECIAL CONDITIONS:
The permittee is authorized to construct and operate subject to the following special conditions:

EU-70A	Wood Fire Pot Combustion (HCl)	0.164 lb/ton of wood	0.3 lb/ton of wood
	Wood Fire Pot Combustion (Hexane)	0.005 lb/ton of wood	
	Wood Fire Pot Combustion (Ethylbenzene)	0.0001 lb/ton of wood	
	Wood Fire Pot Combustion (Toluene)	0.0005 lb/tons of wood	
	Wood Fire Pot Combustion (Xylene)	0.0005 lb/tons of wood	
	Wood Fire Pot Combustion (Cobalt)	0.000003 lb/tons of wood	
EU-70B	Wood Fire Pot Combustion (HCl)	0.164 lb/ton of wood	0.3 lb/ton of wood
	Wood Fire Pot Combustion (Hexane)	0.005 lb/ton of wood	
	Wood Fire Pot Combustion (Ethylbenzene)	0.0001 lb/ton of wood	
	Wood Fire Pot Combustion (Toluene)	0.0005 lb/tons of wood	
	Wood Fire Pot Combustion (Xylene)	0.0005 lb/tons of wood	
	Wood Fire Pot Combustion (Cobalt)	0.000003 lb/tons of wood	
EU-80 (A,B,C)	Steam Heated Kilns (Acetaldehyde)	0.052 lb/1,000 board feet	0.29 lb/1,000 board feet
	Steam Heated Kilns (Acrolein)	0.0075 lb/1,000 board feet	
	Steam Heated Kilns (Formaldehyde)	0.018 lb/1,000 board feet	
	Steam Heated Kilns (Methanol)	0.2 lb/1,000 board feet	
	Steam Heated Kilns (Phenol)	0.01 lb/1,000 board feet	
	Steam Heated Kilns (Propionaldehyde)	0.0009 lb/1,000 board feet	
EU-83A	Wood-Fired Boiler (Acetaldehyde)	0.014 lb/ton of wood	0.64 lb/ton of wood
	Wood-Fired Boiler (Benzene)	0.069 lb/ton of wood	
	Wood-Fired Boiler (Formaldehyde)	0.072 lb/ton of wood	
EU-83B	Wood-Fired Boiler (Acetaldehyde)	0.014 lb/ton of wood	0.64 lb/ton of wood
	Wood-Fired Boiler (Benzene)	0.069 lb/ton of wood	
	Wood-Fired Boiler (Formaldehyde)	0.072 lb/ton of wood	

**Emission factors are based on AP-42 emission factors and a higher heating value equal to 8,200 Btu per pound

4. Control Device Requirement – Multiple Cyclone Separator

A. Independent Stave Company shall control emissions from the two wood-fired boilers (EU-83A & EU-83B) using a multiple cyclone separator, as specified in the permit application.

B. The multiple cyclone separator shall be operated and maintained in accordance with the manufacturer's specifications. The multiple cyclone separator shall be equipped with a gauge or meter, which indicates the pressure drop across the control device.

SPECIAL CONDITIONS:
The permittee is authorized to construct and operate subject to the following special conditions:

C. Independent Stave Company shall monitor and record the operating pressure drop across the multiple cyclone separator at least once every 24 hours while the plant is operating. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.

D. Independent Stave Company shall maintain an operating and maintenance log for the multiple cyclone separator which shall include the following:
   1) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
   2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.

5. Control Device Requirement – Baghouse

A. Independent Stave Company shall control emissions from the Storage Silo (EU-85) using a baghouse, as specified in the permit application.

B. The baghouse shall be operated and maintained in accordance with the manufacturer's specifications. The baghouse shall be equipped with a gauge or meter, which indicates the pressure drop across the control device. These gauges or meters shall be located such that the Department of Natural Resources' employees may easily observe them.

C. Replacement filters for the baghouses shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).

D. Independent Stave Company shall monitor and record the operating pressure drop across the baghouses at least once every 24 hours while the plant is operating. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty. The manufacturer's performance warranty shall be kept onsite.

E. Independent Stave Company shall maintain an operating and maintenance log for the baghouses which shall include the following:
   1.) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
   2.) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.

SPECIAL CONDITIONS:
The permittee is authorized to construct and operate subject to the following special conditions:

6. Fuel Requirement
Independent Stave Company shall burn exclusively untreated wood or natural gas in the emission units listed in Table 1.

7. Equipment Dismantling Requirement
   A. Independent Stave Company shall render the Cleaver Brooks Boiler (EU-04) inoperable once the two new boilers (EU-83A & EU-83B) begin successful operations and are deemed capable of handling the responsibilities of the Cleaver Brooks Boiler. The Cleaver Brooks Boiler may not be operated after the new boilers begin successful takeover operations without first obtaining a New Source Review permit or receiving approval for the like-kind replacement of other existing equipment at the installation from the Air Pollution Control Program.

   B. Independent Stave Company shall notify the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, Missouri 65102, no later than 15 days after the date the existing equipment (as indicated in Special Condition 7.A.) was rendered inoperable.

8. Record Keeping and Reporting Requirements
   A. Independent Stave Company shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.

   B. Independent Stave Company shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than 10 days after the end of the month during which any record required by this permit shows an exceedance of a limitation imposed by this permit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW
Project Number: 2016-01-012
Installation ID Number: 105-0001
Permit Number:

Installation Address:
Independent Stave Company
1078 South Jefferson Street
Lebanon, MO 65536
Laclede County (S34, T12N, R16W)

Parent Company:
ISCO Holding Company
P.O. Box 104
Lebanon, MO 65536

REVIEW SUMMARY

- Independent Stave Company has applied for authority to install two 200 horsepower wood-fired boilers and three steam-heated dry kilns.
- The application was deemed complete on February 3, 2016.
- HAP emissions are expected from the proposed equipment. HAPs of concern from this process include products of wood combustion.
- None of the NSPS, NESHAPs, or currently promulgated MACT regulations apply to the proposed equipment.
- A multiple cyclone separator and a baghouse are being used to control PM, PM_{10}, and $PM_{2.5}$ emissions from the equipment in this permit.
- 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 conditioned below de minimis levels.
- This installation is located in Laclede County, an attainment area for all criteria pollutants.
- This installation is not on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation's major source level is 250 tons per year and fugitive emissions are not counted toward major source applicability.
- Emissions testing is not required for the equipment.
- Submittal of an application to amend your Intermediate Operating Permit is required within 90 days of equipment startup.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Independent Stave Company manufactures oak barrels and oak flavoring products for the alcoholic beverage industry. Independent Stave Company is located in Lebanon, Missouri, is a minor source for construction permits, and currently has an intermediate operating permit. The following New Source Review permits have been issued to Independent Stave Company from the Air Pollution Control Program:

Table 3: Permit History

Permit Number	Description
0995-014	Wood/ bark waste-fired boiler for wine barrel toasting
072001-008	Bucket loader, metering bin, and a hammermill
0995-014A	Electric barrel toasting elements replace wood/ bark waste
092002-024	Sawdust loading
082006-007	New barrel types
052009-005	New screen and conveyors
022010-004	Surface coating booth
092010-007	Sawdust bagging
022015-005	(2) NG-fired chip roasters, (2) wood-fired stave toasters, stave oven, bulk bagging

PROJECT DESCRIPTION

Independent Stave Company is planning to install two 200 horsepower wood-fired boilers and three steam-heated dry kilns, due to increased steam demand. The new boilers will be used to supply steam to the new kilns and existing kilns, process steam for existing operations, and supply building heat. The new boilers will replace the existing Cleaver Brooks Boiler (EU-04), which will be dismantled and removed.

Each new boiler (EU-83A & EU-83B) is rated at 9.289 MMBtu/hr, and will have its particulate emissions controlled by a multiple cyclone separator. The ancillary storage silo (EU-85) will be controlled by a baghouse. The new kilns (EU-80 A,B,C) are capable of processing 593.6 board feet per hour, total.

EMISSIONS/ CONTROLS EVALUATION

The emission factors and control efficiencies used in this analysis were obtained from the EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 1.6 *Wood Residue Combustion in Boilers* (September 2003) and Section 13.2.1 *Paved Roads* (January 2011). Kiln emissions were calculated using the North Carolina Division of Air Quality *Lumber Kiln Emissions Spreadsheet* (Revision C, July 2007). Emissions from ash transfer were estimated using a revoked emission factor for sawdust pile handling, taken from EPA's WebFIRE database, using SCC 30700803.

For this review, it was assumed that 0.3% of debarked white oak is ash; therefore, based on the estimated 3,348 tons of white oak burned per year, 10.04 tons of ash will go into the burner box. Approximately ⅓ of the ash will remain in the box and need to be cleaned out manually.

The multiple cyclone separator was given a 95% control efficiency for PM_{10} and an 80% control efficiency for $PM_{2.5}$, as listed in AP-42; the baghouse was given a 99.5% control efficiency for PM_{10} and $PM_{2.5}$, which was taken from the manufacturer's specifications.

The following table provides an emissions summary for this project. Existing potential emissions were taken from the installation's previous construction permit (022015-005). Existing actual emissions were taken from the installation's 2014 EIQ. Potential emissions of the project represent the potential of the new equipment, assuming continuous operation (8,760 hours per year). Conditioned potential emissions of the project represent the potential of the new equipment, after accounting for the use of control devices. New installation conditioned potential emissions represent the total potential emissions from all equipment at the facility.

Table 4: Emissions Summary (tons per year)

Pollutant	Regulatory *De Minimis* Levels	Existing Potential Emissions	Existing Actual Emissions (2014 EIQ)	Potential Emissions of the Project	Conditioned Potential Emissions of the Project	New Installation Conditioned Potential
PM	25.0	N/D	N/D	N/D	N/D	<major
PM_{10}	15.0	166.53	19.52	46.43	7.72	173.19
$PM_{2.5}$	10.0	N/D	11.73	42.41	5.25	N/D
SO_x	40.0	2.04	2.63	2.03	2.03	4.07
NO_x	40.0	79.36	52.26	39.87	39.87	119.23
VOC	40.0	116.06	2.15	2.45	2.45	118.51
CO	100.0	<250.0	63.73	48.82	48.82	<250.0
HAPs	10.0 / 25.0	<10.0 / 25.0	0.18	3.92	3.92	<10.0 / 25.0

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

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 conditioned below de minimis levels.

APPLICABLE REQUIREMENTS

Independent Stave Company 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
    - Per 10 CSR 10-6.110(4)(B)2.B(II) and (4)(B)2.C(II) a full EIQ is required for the first full calendar year the equipment (or modifications) approved by this permit are in operation.

- *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 10-6.165

SPECIFIC REQUIREMENTS

- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400

- *Control of Sulfur Dioxide Emissions*, 10 CSR 10-6.261

- *Restriction of Particulate Matter Emissions From Fuel Burning Equipment Used for Indirect Heating*, 10 CSR 10-6.405

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*, it is recommended that this permit be granted with special conditions.

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated January 5, 2016, received January 8, 2016, designating ISCO Holding Company as the owner and operator of the installation.

APPENDIX A

Abbreviations and Acronyms

% ..... percent
ºF ..... degrees Fahrenheit
acfm ..... actual cubic feet per minute
BACT ..... Best Available Control Technology
BMPs ..... Best Management Practices
Btu..... British thermal unit
CAM ..... Compliance Assurance Monitoring
CAS..... Chemical Abstracts Service
CEMS ..... Continuous Emission Monitor System
CFR ..... Code of Federal Regulations
CO ..... carbon monoxide
CO_2..... carbon dioxide
CO_2e..... carbon dioxide equivalent
COMS..... Continuous Opacity Monitoring System
CSR..... Code of State Regulations
dscf ..... dry standard cubic feet
EIQ ..... Emission Inventory Questionnaire
EP..... Emission Point
EPA ..... Environmental Protection Agency
EU..... Emission Unit
fps ..... feet per second
ft ..... feet
GACT ..... Generally Available Control Technology
GHG ..... Greenhouse Gas
gpm..... gallons per minute
gr..... grains
GWP..... Global Warming Potential
HAP..... Hazardous Air Pollutant
hr..... hour
hp ..... horsepower
lb ..... pound
lbs/hr..... pounds per hour
MACT ..... Maximum Achievable Control Technology
$\mu g/m^3$..... micrograms per cubic meter
m/s ..... meters per second
Mgal ..... 1,000 gallons
MW ..... megawatt
MHDR..... maximum hourly design rate
MMBtu.... Million British thermal units
MMCF..... million cubic feet
MSDS ..... Material Safety Data Sheet
NAAQS... National Ambient Air Quality Standards
NESHAPs National Emissions Standards for Hazardous Air Pollutants
NO_x..... nitrogen oxides
NSPS..... New Source Performance Standards
NSR..... New Source Review
PM ..... particulate matter
$PM_{2.5}$..... particulate matter less than 2.5 microns in aerodynamic diameter
PM_{10}..... particulate matter less than 10 microns in aerodynamic diameter
ppm..... parts per million
PSD ..... Prevention of Significant Deterioration
PTE..... potential to emit
RACT..... Reasonable Available Control Technology
RAL ..... Risk Assessment Level
SCC..... Source Classification Code
scfm ..... standard cubic feet per minute
SDS ..... Safety Data Sheet
SIC..... Standard Industrial Classification
SIP..... State Implementation Plan
SMAL ..... Screening Model Action Levels
SO_x..... sulfur oxides
SO_2..... sulfur dioxide
tph..... tons per hour
tpy ..... tons per year
VMT..... vehicle miles traveled
VOC..... Volatile Organic Compound

APPENDIX B: Table of Hazardous Air Pollutants and Screening Model Action Levels (May 2012, Revision 10)

Chemical	CAS #	SMAL (tons/yr)	Group ID	VOC	PM	Chemical	CAS #	SMAL (tons/yr)	Group ID	VOC	PM	Chemical	CAS #	SMAL (tons/yr)	Group ID	VOC	PM
ACETALDEHYDE	75-07-0	9		Y	N	CARBARYL	63-25-2	10	V	Y	Y	DICHLOROPROPANE, [1,2-]	78-87-5	1		Y	N
ACETAMIDE	60-35-5	1		Y	N	CARBON DISULFIDE	75-15-0	1		Y	N	DICHLOROPROPENE, [1,3-]	542-75-6	1		Y	N
ACETONITRILE	75-05-8	4		Y	N	CARBON TETRACHLORIDE	56-23-5	1		Y	N	DICHLORVOS	62-73-7	0.2		Y	N
ACETOPHENONE	98-86-2	1		Y	N	CARBONYL SULFIDE	463-58-1	5		Y	N	DIETHANOLAMINE	111-42-2	5		Y	N
ACETYLAMINOFLUORINE, [2-]	53-96-3	0.005	V	Y	Y	CATECHOL	120-80-9	5		Y	N	DIETHYL SULFATE	64-67-5	1		Y	N
ACROLEIN	107-02-8	0.04		Y	N	CHLORAMBEN	133-90-4	1		Y	Y	DIETHYLENE GLYCOL MONOBUTYL ETHER	112-34-5	5	P	Y	N
ACRYLAMIDE	79-06-1	0.02		Y	N	CHLORDANE	57-74-9	0.01		Y	Y	DIMETHOXYBENZIDINE, [3,3-]	119-90-4	0.1	V	Y	Y
ACRYLIC ACID	79-10-7	0.6		Y	N	CHLORINE	7782-50-5	0.1		N	N	DIMETHYL BENZIDINE, [3,3-]	119-93-7	0.008	V	Y	Y
ACRYLONITRILE	107-13-1	0.3		Y	N	CHLOROACETIC ACID	79-11-8	0.1		Y	N	DIMETHYL CARBAMOYL CHLORIDE	79-44-7	0.02		Y	N
ALLYL CHLORIDE	107-05-1	1		Y	N	CHLOROACETOPHENONE, [2-]	532-27-4	0.06		Y	N	DIMETHYL FORMAMIDE	68-12-2	1		Y	N
AMINOBIPHENYL, [4-]	92-67-1	1	V	Y	N	CHLOROBENZENE	108-90-7	10		Y	N	DIMETHYL HYDRAZINE, [1,1-]	57-14-7	0.008		Y	N
ANILINE	62-53-3	1		Y	N	CHLOROBENZILATE	510-15-6	0.4	V	Y	Y	DIMETHYL PHTHALATE	131-11-3	10		Y	N
ANISIDINE, [ORTHO-]	90-04-0	1		Y	N	CHLOROFORM	67-66-3	0.9		Y	N	DIMETHYL SULFATE	77-78-1	0.1		Y	N
ANTHRACENE	120-12-7	0.01	V	Y	N	CHLOROMETHYL METHYL ETHER	107-30-2	0.1		Y	N	DIMETHYLAMINOAZOBENZENE, [4-]	60-11-7	1		Y	N
ANTIMONY COMPOUNDS		5	H	N	Y	CHLOROPRENE	126-99-8	1		Y	N	DIMETHYLANILINE, [N-N-]	121-69-7	1		Y	N
ANTIMONY PENTAFLUORIDE	7783-70-2	0.1	H	N	Y	CHROMIUM (VI) COMPOUNDS		0.002	L	N	Y	DINITRO-O-CRESOL, [4,6-] (Note 6)	534-52-1	0.1	E	Y	Y
ANTIMONY POTASSIUM TARTRATE	28300-74-5	1	H	N	Y	CHROMIUM COMPOUNDS		5	L	N	Y	DINITROPHENOL, [2,4-]	51-28-5	1		Y	N
ANTIMONY TRIOXIDE	1309-64-4	1	H	N	Y	CHRYSENE	218-01-9	0.01	V	Y	N	DINITROTOLUENE, [2,4-]	121-14-2	0.02		Y	N
ANTIMONY TRISULFIDE	1345-04-6	0.1	H	N	Y	COBALT COMPOUNDS		0.1	M	N	Y	DIOXANE, [1,4-]	123-91-1	6		Y	N
ARSENIC COMPOUNDS		0.005	I	N	Y	COKE OVEN EMMISIONS	8007-45-2	0.03	N	Y	N	DIPHENYLHYDRAZINE, [1,2-]	122-66-7	0.09	V	Y	Y
ASBESTOS	1332-21-4	0	A	N	Y	CRESOL, [META-]	108-39-4	1	B	Y	N	DIPHENYLMETHANE DIISOCYANATE, [4,4-]	101-68-8	0.1	V	Y	N
BENZ(A)ANTHRACENE	56-55-3	0.01	V	Y	N	CRESOL, [ORTHO-]	95-48-7	1	B	Y	N	EPICHLOROHYDRIN	106-89-8	2		Y	N
BENZENE	71-43-2	2		Y	N	CRESOL, [PARA-]	106-44-5	1	B	Y	N	ETHOXYETHANOL, [2-]	110-80-5	10	P	Y	N
BENZIDINE	92-87-5	0.0003	V	Y	N	CRESOLS (MIXED ISOMERS)	1319-77-3	1	B	Y	N	ETHOXYETHYL ACETATE, [2-]	111-15-9	5	P	Y	N
BENZO(A)PYRENE	50-32-8	0.01	V	Y	N	CUMENE	98-82-8	10		Y	N	ETHYL ACRYLATE	140-88-5	1		Y	N
BENZO(B)FLUORANTHENE	205-99-2	0.01	V	Y	N	CYANIDE COMPOUNDS		0.1	O	Y	N	ETHYL BENZENE	100-41-4	10		Y	N
BENZO(K)FLUORANTHENE	207-08-9	0.01	V	Y	N	DDE	72-55-9	0.01	V	Y	Y	ETHYL CHLORIDE	75-00-3	10		Y	N
BENZOTRICHLORIDE	98-07-7	0.006		Y	N	DI(2-ETHYLHEXYL) PHTHALATE, (DEHP)	117-81-7	5		Y	N	ETHYLENE GLYCOL	107-21-1	10		Y	N
BENZYL CHLORIDE	100-44-7	0.1		Y	N	DIAMINOTOLUENE, [2,4-]	95-80-7	0.02		Y	N	ETHYLENE GLYCOL MONOBUTYL ETHER (Delisted)	111-76-2				
BERYLLIUM COMPOUNDS		0.008	J	N	Y	DIAZOMETHANE	334-88-3	1		Y	N	ETHYLENE GLYCOL MONOHEXYL ETHER	112-25-4	5	P	Y	N
BERYLLIUM SALTS		2E-05	J	N	Y	DIBENZ(A,H)ANTHRACENE	53-70-3	0.01	V	Y	N	ETHYLENE IMINE [AZIRIDINE]	151-56-4	0.003		Y	N
BIPHENYL, [1,1-]	92-52-4	10	V	Y	N	DIOXINS/FURANS		6E-07	D,V	Y	N	ETHYLENE OXIDE	75-21-8	0.1		Y	N
BIS(CHLOROETHYL)ETHER	111-44-4	0.06		Y	N	DIBENZOFURAN	132-64-9	5	V	Y	N	ETHYLENE THIOUREA	96-45-7	0.6		Y	Y
BIS(CHLOROMETHYL)ETHER	542-88-1	0.0003		Y	N	DIBROMO-3-CHLOROPROPANE, [1,2-]	96-12-8	0.01		Y	N	FORMALDEHYDE	50-00-0	2		Y	N
BROMOFORM	75-25-2	10		Y	N	DIBROMOETHANE, [1,2-]	106-93-4	0.1		Y	N	GLYCOL ETHER (ETHYLENE GLYCOL ETHERS)		5	P	Y	N
BROMOMETHANE	74-83-9	10		Y	N	DIBUTYL PHTHALATE	84-74-2	10		Y	Y	GLYCOL ETHER (DIETHYLENE GLYCOL ETHERS)		5	P	Y	N
BUTADIENE, [1,3-]	106-99-0	0.07		Y	N	DICHLOROBENZENE, [1,4-]	106-46-7	3		Y	N	HEPTACHLOR	76-44-8	0.02		Y	N
BUTOXYETHANOL ACETATE, [2-]	112-07-2	5	P	Y	N	DICHLOROBENZIDENE, [3,3-]	91-94-1	0.2	V	Y	Y	HEXACHLOROBENZENE	118-74-1	0.01		Y	N
BUTYLENE OXIDE, [1,2-]	106-88-7	1		Y	N	DICHLOROETHANE, [1,1-]	75-34-3	1		Y	N	HEXACHLOROBUTADIENE	87-68-3	0.9		Y	N
CADMIUM COMPOUNDS		0.01	K	N	Y	DICHLOROETHANE, [1,2-]	107-06-2	0.8		Y	N	HEXACHLOROCYCLOHEXANE, [ALPHA-]	319-84-6	0.01	F	Y	N
CALCIUM CYANAMIDE	156-62-7	10		Y	Y	DICHLOROETHYLENE, [1,1-]	75-35-4	0.4		Y	N	HEXACHLOROCYCLOHEXANE, [BETA-]	319-85-7	0.01	F	Y	N
CAPROLACTAM (Delisted)	105-60-2					DICHLOROMETHANE	75-09-2	10		N	N	HEXACHLOROCYCLOHEXANE, [DELTA-]	319-86-8	0.01	F	Y	N
CAPTAN	133-06-2	10		Y	Y	DICHLOROPHENOXY ACETIC ACID, [2,4-]	94-75-7	10	C	Y	Y	HEXACHLOROCYCLOHEXANE, [TECHNICAL]	608-73-1	0.01	F	Y	N

APPENDIX B: Table of Hazardous Air Pollutants and Screening Model Action Levels (May 2012, Revision 10)

Chemical	CAS #	SMAL (tons/yr)	Group ID	VOC	PM
HEXACHLOROCYCLOPENTADIENE	77-47-4	0.1		Y	N
HEXACHLOROETHANE	67-72-1	5		Y	N
HEXAMETHYLENE,-1,6-DIISOCYANATE	822-06-0	0.02		Y	N
HEXAMETHYLPHOSPHORAMIDE	680-31-9	0.01		Y	N
HEXANE, [N-]	110-54-3	10		Y	N
HYDRAZINE	302-01-2	0.004		N	N
HYDROGEN CHLORIDE	7647-01-0	10		N	N
HYDROGEN FLUORIDE	7664-39-3	0.1		N	N
HYDROQUINONE	123-31-9	1		Y	N
INDENO(1,2,3CD)PYRENE	193-39-5	0.01	V	Y	N
ISOPHORONE	78-59-1	10		Y	N
LEAD COMPOUNDS		0.01	Q	N	Y
LINDANE [GAMMA-HEXACHLOROCYCLOHEXANE]	58-89-9	0.01	F	Y	N
MALEIC ANHYDRIDE	108-31-6	1		Y	N
MANGANESE COMPOUNDS		0.8	R	N	Y
MERCURY COMPOUNDS		0.01	S	N	N
METHANOL	67-56-1	10		Y	N
METHOXYCHLOR	72-43-5	10	V	Y	Y
METHOXYETHANOL, [2-]	109-86-4	10	P	Y	N
METHYL CHLORIDE	74-87-3	10		Y	N
METHYL ETHYL KETONE (Delisted)	78-93-3				
METHYL HYDRAZINE	60-34-4	0.06		Y	N
METHYL IODIDE	74-88-4	1		Y	N
METHYL ISOBUTYL KETONE	108-10-1	10		Y	N
METHYL ISOCYANATE	624-83-9	0.1		Y	N
METHYL METHACRYLATE	80-62-6	10		Y	N
METHYL TERT-BUTYL ETHER	1634-04-4	10		Y	N
METHYLCYCLOPENTADIENYL MANGANESE	12108-13-3	0.1	R	N	Y
METHYLENE BIS(2-CHLOROANILINE), [4,4-]	101-14-4	0.2	V	Y	Y
METHYLENEDIANILINE, [4,4-]	101-77-9	1	V	Y	N
METHYLNAPHTHALENE, [2-]	91-57-6	0.01	V	Y	N
MINERAL FIBERS		0	T	N	Y
NAPHTHALENE	91-20-3	10	V	Y	N
NAPHTHYLAMINE, [ALPHA-]	134-32-7	0.01	V	Y	N
NAPHTHYLAMINE, [BETA-]	91-59-8	0.01	V	Y	N
NICKEL CARBONYL	13463-39-3	0.1	U	N	Y
NICKEL COMPOUNDS		1	U	N	Y
NICKEL REFINERY DUST		0.08	U	N	Y
NICKEL SUBSULFIDE	12035-72-2	0.04	U	N	Y
NITROBENZENE	98-95-3	1		Y	N
NITROBIPHENYL, [4-]	92-93-3	1	V	Y	N
NITROPHENOL, [4-]	100-02-7	5		Y	N
NITROPROPANE, [2-]	79-46-9	1		Y	N
NITROSODIMETHYLAMINE, [N-]	62-75-9	0.001		Y	N
NITROSOMORPHOLINE, [N-]	59-89-2	1		Y	N
NITROSO-N-METHYLUREA, [N-]	684-93-5	0.0002		Y	N
OCTACHLORONAPTHALENE	2234-13-1	0.01	V	Y	N
PARATHION	56-38-2	0.1		Y	Y
PCB [POLYCHLORINATED BIPHENYLS]	1336-36-3	0.009	X	Y	Y
PENTACHLORONITROBENZENE	82-68-8	0.3		Y	N
PENTACHLOROPHENOL	87-86-5	0.7		Y	N
PHENOL	108-95-2	0.1		Y	N
PHENYLENEDIAMINE, [PARA-]	106-50-3	10		Y	N
PHOSGENE	75-44-5	0.1		Y	N
PHOSPHINE	7803-51-2	5		N	N
PHOSPHOROUS (YELLOW OR WHITE)	7723-14-0	0.1		N	N
PHTHALIC ANHYDRIDE	85-44-9	5		Y	N
POLYCYLIC ORGANIC MATTER		0.01	V	Y	N
PROPANE SULTONE, [1,3-]	1120-71-4	0.03		Y	Y
PROPIOLACTONE, [BETA-]	57-57-8	0.1		Y	N
PROPIONALDEHYDE	123-38-6	5		Y	N
PROPOXUR [BAYGON]	114-26-1	10		Y	Y
PROPYLENE OXIDE	75-56-9	5		Y	N
PROPYLENEIMINE, [1,2-]	75-55-8	0.003		Y	N
QUINOLINE	91-22-5	0.006		Y	N
QUINONE	106-51-4	5		Y	N
RADIONUCLIDES		Note 1	Y	N	Y
SELENIUM COMPOUNDS		0.1	W	N	Y
STYRENE	100-42-5	1		Y	N
STYRENE OXIDE	96-09-3	1		Y	N
TETRACHLORODIBENZO-P-DIOXIN,[2,3,7,8]	1746-01-6	6E-07	D,V	Y	Y
TETRACHLOROETHANE, [1,1,2,2-]	79-34-5	0.3		Y	N
TETRACHLOROETHYLENE	127-18-4	10		N	N
TITANIUM TETRACHLORIDE	7550-45-0	0.1		N	N
TOLUENE	108-88-3	10		Y	N
TOLUENE DIISOCYANATE, [2,4-]	584-84-9	0.1		Y	N
TOLUIDINE, [ORTHO-]	95-53-4	4		Y	N
TOXAPHENE	8001-35-2	0.01		Y	N
TRICHLOROBENZENE, [1,2,4-]	120-82-1	10		Y	N
TRICHLOROETHANE, [1,1,1-]	71-55-6	10		N	N
TRICHLOROETHANE, [1,1,2-]	79-00-5	1		Y	N
TRICHLOROETHYLENE	79-01-6	10		Y	N
TRICHLOROPHENOL, [2,4,5-]	95-95-4	1		Y	N
TRICHLOROPHENOL, [2,4,6-]	88-06-2	6		Y	N
TRIETHYLAMINE	121-44-8	10		Y	N
TRIFLURALIN	1582-09-8	9		Y	Y
TRIMETHYLPENTANE, [2,2,4-]	540-84-1	5		Y	N
URETHANE [ETHYL CARBAMATE]	51-79-6	0.8		Y	N
VINYL ACETATE	108-05-4	1		Y	N
VINYL BROMIDE	593-60-2	0.6		Y	N
VINYL CHLORIDE	75-01-4	0.2		Y	N
XYLENE, [META-]	108-38-3	10	G	Y	N
XYLENE, [ORTHO-]	95-47-6	10	G	Y	N
XYLENE, [PARA-]	106-42-3	10	G	Y	N
XYLENES (MIXED ISOMERS)	1330-20-7	10	G	Y	N

Legend

Group ID	Aggregate Group Name
A	Asbestos
B	Cresols/Cresylic Acid (isomers and mixtures)
C	2,4 - D, Salts and Esters
D	Dibenzofurans, Dibenzodioxins
E	4, 6 Dinitro-o-cresol, and Salts
F	Lindane (all isomers)
G	Xylenes (all isomers and mixtures)
H	Antimony Compounds
I	Arsenic Compounds
J	Beryllium Compounds
K	Cadmium Compounds
L	Chromium Compounds
M	Cobalt Compounds
N	Coke Oven Emissions
O	Cyanide Compounds
P	Glycol Ethers
Q	Lead Compounds (except elemental Lead)
R	Manganese Compounds
S	Mercury Compounds
T	Fine Mineral Fibers
U	Nickel Compounds
V	Polycyclic Organic Matter
W	Selenium Compounds
X	Polychlorinated Biphenyls (Aroclors)
Y	Radionuclides

Notes

Note 1	The SMAL for radionuclides is defined as the effective dose equivalent to 0.3 millirems per year for 7 years exposure associated with a cancer risk of 1 in 1 million

Mr. Dale Eichmeyer
Engineer
Independent Stave Company
P.O. Box 104
Lebanon, MO 65536

RE: New Source Review Permit - Project Number: 2016-01-012

Dear Mr. Eichmeyer:

Enclosed with this letter is your permit to construct. Please study it carefully and refer to Appendix A for a list of common abbreviations and acronyms used in the permit. Also, note the special conditions 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 were adversely affected by this permit decision, you may be entitled to pursue an appeal before the administrative hearing commission pursuant to Sections 621.250 and 643.075.6 RSMo. To appeal, you must file a petition with the administrative hearing commission within thirty 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 administrative hearing commission, whose contact information is: Administrative Hearing Commission, United States Post Office Building, 131 West High Street, Third Floor, P.O. Box 1557, Jefferson City, Missouri 65102, phone: 573-751-2422, fax: 573-751-5018, website: www.oa.mo.gov/ahc.

If you have any questions regarding this permit, please do not hesitate to contact Ryan Schott, at the Department of Natural Resources' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Susan Heckenkamp
New Source Review Unit Chief

SH:rsj

Enclosures

c: Southwest Regional Office
PAMS File: 2016-01-012

Permit Number: