



## 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: **122013-002**

Project Number: 2013-08-007  
Installation Number: 133-0028

Parent Company: Rolwing Moxley AG

Parent Company Address: 1 Mill Street, Charleston, MO 63834

Installation Name: Rolwing Moxley AG

Installation Address: 1 Mill Street, Charleston, MO 63834

Location Information: Mississippi County, S8, T26N, R16E

Application for Authority to Construct was made for:  
Construction of equipment at a country grain elevator that was installed between June, 2011 through August, 2013. This review was conducted in accordance with Section (6), 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.

12-3-2013

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 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 start up 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.

*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."*

Rolwing Moxley AG  
Mississippi County, S8, T26N, R16E

1. PM<sub>10</sub> Emission Limitation
  - A. Rolwing Moxley AG shall emit less than 15.0 tons of PM<sub>10</sub> in any consecutive 12-month period from the entire installation (see Table 1).
  - B. Attachment A or equivalent forms, such as electronic forms, approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Conditions 1.A.
2. Haul roads and vehicular activity areas shall be maintained in accordance with at least one of the following options when the plant is operating.
  - A. Pavement
    - 1.) The operator shall pave the area with materials such as asphalt, concrete or other materials approved by the Air Pollution Control Program. The pavement will be applied in accordance with industry standards to achieve control of fugitive emissions while the plant is operating.
    - 2.) Maintenance and repair of the road surface will be conducted as necessary to ensure that the physical integrity of the pavement is adequate to achieve control of fugitive emissions from these areas while the plant is operating.
    - 3.) The operator shall periodically wash or otherwise clean all of the paved portions of the haul roads as necessary to achieve control of fugitive emissions from these areas while the plant is operating.
  - B. Application of Chemical Dust Suppressants
    - 1.) The operator shall apply a chemical dust suppressant (such as magnesium chloride, calcium chloride, lignosulfonates, etc.) to unpaved areas.
    - 2.) The quantities of the chemical dust suppressant shall be applied and maintained in accordance with the manufacturer's recommendation (if available) and in sufficient quantities to achieve control of fugitive emissions from these areas while the plant is operating.
    - 3.) The operator shall record the time, date and the amount of material applied for each application of the chemical dust suppressant agent on the above areas. The operator shall keep these records with the plant for not less than five (5) years and make these records available to Department of Natural Resources personnel upon request.

C. Application of Water-Documented Daily

- 1.) The operator shall apply water to unpaved areas. Water shall be applied at a rate of 100 gallons per day per 1,000 square feet of unpaved or untreated surface area while the plant is operating.
- 2.) Precipitation may be substituted for watering if the precipitation is greater than one quarter of one inch and is sufficient to control fugitive emissions.
- 3.) Watering may also be suspended when the ground is frozen, during periods of freezing conditions when watering would be inadvisable for traffic safety reasons, or when there will be no traffic on the roads.
- 4.) The operator shall record the date, volume of water application and total surface area of active haul roads or the amount of precipitation that day. The operators shall also record the rationale for not watering (e.g. freezing conditions or not operating).
- 5.) The operator shall keep these records with the plant for not less than five (5) years, and the operator shall make these records available to Department of Natural Resources personnel upon request.

3. Record Keeping and Reporting Requirements

- A. Rolwing Moxley AG 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. These records shall include MSDS for all materials used.
- B. Rolwing Moxley AG 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 show an exceedance of a limitation imposed by this permit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE  
SECTION (6) REVIEW

Project Number: 2013-08-007  
Installation ID Number: 133-0028  
Permit Number:

Rolwing Moxley AG  
1 Mill Street  
Charleston, MO 63834

Complete: August 20, 2013

Parent Company:  
Rolwing Moxley AG  
1 Mill Street  
Charleston, MO 63834

Mississippi County, S8, T26N, R16E

REVIEW SUMMARY

- Rolwing Moxley AG has applied for authority to construct equipment at a country grain elevator that was installed between June, 2011 through August, 2013.
- HAP emissions are not expected from the proposed equipment.
- None of the New Source Performance Standards (NSPS) apply to the installation.
- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment.
- No air pollution control equipment is being used in association with the new equipment.
- This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM<sub>10</sub> are conditioned below de minimis levels. Potential emissions of PM remains at minor source levels.
- This installation is located in Mississippi 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.
- Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels. There are no modeling requirements for PM.

- Emissions testing are not required for the equipment.
- No Operating Permit is required for this installation.
- Approval of this permit is recommended with special conditions.

## INSTALLATION/PROJECT DESCRIPTION

Rolwing Moxley AG., Inc. was established in 1949 with a concrete elevator with two receiving legs, 2 pits (combined MHDR of 6,000 bushels per hour) and a concrete silo with 270,000 bushels of storage. The concrete elevator has a dust cyclone to remove the dust out of the headhouse and pit area. Between 1949 thru 1977, Rolwing Moxley built three 18,000 bushel steel grain bins (Tanks 10, 11, and 12) and one 135,000 bushel steel grain bin (Tank 13). The elevator had one load spout located on the west side of the concrete elevator.

In June 2011, Rolwing Moxley AG installed a new receiving pit and receiving leg capable of moving 10,000 bushels per hour (300 tph). They also installed a 142,000 bushel steel grain bin (Tank 14) with a truck unloading drag capable of moving 6,000 bushels per hour. This bin is equipped with an unloading side spout.

In August 2012, Rolwing Moxley AG installed a 75,000 bushel steel grain bin (Tank 15). This bin is tied to the original internal grain handling equipment that was installed pre 1977.

In August 2013, Rolwing Moxley AG completed an upgrade to their internal handling equipment. An enclosed Hutchison drag was installed on Tank 15. A Hutchison drag was installed under Tanks 11 and 13 that unloads into a new truck loading drag capable of moving 8,500 bushels per hour. A drag was installed under Tank 12 with the capability of moving 5,500 bushels per hour.

Rolwing Moxley AG has a network of haul roads with an entrance from Main Street heading east approaching the inbound scales and circling around the property to either Pit 1/Pit 2 or Pit 3. The shipping pattern follows the same route to the loadout spout of the bins, then to the outbound scales and then exiting the property to the west. The haul roads are constructed of limestone and dust emissions are controlled by spraying Lignop 10 by P & W Trucking Dust Suppress. It is applied twice a year and then a water wagon is used to rewet it in order to reactivate the suppressant.

On June 7, 2013, Rolwing Moxley AG received a Letter of Warning from the Air Pollution Control Program concerning dust from their facility and the air regulations that apply. It was found at that time that the 2011 through 2013 construction did not have Construction Permit from Air Pollution Control Program. The facility did not have an Operating Permit and never filled out an Emission Inventory Questionnaire (EIQ). The Letter of Warning required Rolwing Moxley AG to submit an application for Authority to Construct for the construction done between June, 2011 through August, 2013 or otherwise be subject to a Notice of Violation (NOV). All of the other equipment was

constructed prior to May 13, 1982 as stated in 10 CSR.6.060 (6)(E)3 and considered to be “grandfathered” and was not affected by the newer equipment.

Rolwing Moxley AG, Inc. requested a 15 ton per year PM<sub>10</sub> limit for the entire installation. Therefore the potential emissions of the grandfathered existing installation were evaluated as part of this review.

### PROJECT DESCRIPTION

The project will include the previous construction of Receiving Pit 3 with a MHDR of 10,000 bushels per hour (300 tph), grain handling equipment, Bins/Tanks 14 and 15, grain handling equipment, loadout, and associated haul roads. Below is a table that describes the equipment at this facility. EP1 is two pits rated at 3,000 bushels each. Only one truck can unload over the two pits at a time. Therefore, their MHDR was combined for calculating the emissions.

Table 1: Equipment List for the Rolwing Moxley AG facility at Charleston

Equipment ID	Equipment Description	MHDR
EP 1	Pit 1/Pit 2	6,000 bushels per hour (3,000 + 3,000) (210 tph)
EP2	Pit 3	10,000 bushels per hour (300 tph)
EP3	Grain Handling Equipment	510 tph
EP4	Bins (Tanks)	510 tph
EP5	Loadout	510 tph
EP6	Haul Roads	510 tph

### EMISSIONS/CONTROLS EVALUATION

The emission factors used in this analysis were obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 9.9.1 *Grain Elevators and Processes* May 2003 and Section 13.2.2 *Unpaved Roads* November 2006.

The following table provides an emissions summary for the entire installation which includes this project. Although there were three projects that were constructed over a three year period, they are being considered one project due to the close time frame that they occurred. Although the bins construction project would be below de minimis, the construction of Pit 3 was above de minimis and needed a construction permit. Rolwing Moxley AG requested a 15 ton per year PM<sub>10</sub> limit for the entire installation. Therefore the potential emissions of the existing installation were evaluated as part of this review. Existing potential emissions and existing actual emissions were not available since there are no previous permits or EIQ. Potential emissions of the facility represent the potential of the entire facility, assuming continuous operation (8760 hours per year).

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2012 EIQ)	Potential Emissions of the Facility	New Installation Conditioned Potential
PM	25.0	N/D	N/A	674.79	41.64
PM <sub>10</sub>	15.0	N/D	N/A	243.09	<15.0
PM <sub>2.5</sub>	10.0	N/D	N/A	47.59	2.94
SO <sub>x</sub>	40.0	N/D	N/A	N/A	N/A
NO <sub>x</sub>	40.0	N/D	N/A	N/A	N/A
VOC	40.0	N/D	N/A	N/A	N/A
CO	100.0	N/D	N/A	N/A	N/A
GHG (CO <sub>2</sub> e)	75,000 / 100,000	N/D	N/A	N/A	N/A
GHG (mass)	0.0 / 100.0 / 250.0	N/D	N/A	N/A	N/A
HAPs	10.0/25.0	N/D	N/A	N/A	N/A

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

The existing licensed grain storage capacity Rolwing Moxley AG according to the Missouri Department of Agriculture licensed grain dealer/warehouse database was listed at 467,000 bushels. This is less than 2.5 million bushels, therefore the installation is not defined as a grain terminal elevator under 10 CFR 60, Subpart DD, *Standards of Performance for Grain Elevators*. The installation does not include a wheat flour mill, wet corn mill, dry corn mill (human consumption), rice mill, or soybean oil extraction plant. Therefore the installation is not defined as a grain storage elevator under NSPS Subpart DD.

Prior to 1977, a cyclone was installed on the grandfathered receiving pit and grain handling equipment. The purpose of the cyclone at that time was to control dust build-up that could cause dust explosions and also improve grain quality. It was not install as an air pollution control device and therefore not used in the calculations.

This project was evaluated with a MHDR of 510 tph based on a bottleneck of the receiving pits. Pit 1/Pit 2 has a MHDR of 6,000 bushels per hour (210 tph) and Pit 3 has a MHDR of 10,000 bushels per hour (300 tph), therefore a combined MHDR of 510 tph.

Grain will be received and shipped by straight and hopper trucks. It is expected that the majority of the trucks used will be hopper trucks. The grain receiving (EP-6) emissions were calculated using the scenario of 50% hopper trucks and 50% straight trucks because the grain received from straight trucks have a higher emission rate. Likewise, the receiving/shipping haul roads (EP-10) emissions were calculated using the same 50/50 split because straight trucks typically haul less than hopper trucks requiring more trips, thus greater VMTs. This conservative method avoids a special condition and record keeping for amount of grain that was received by straight/hopper trucks. Rolwing Moxley AG, Inc. applies a chemical dust suppressant to their haul roads and therefore a control efficiency of 90% was applied to the haul road emissions.

## PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM<sub>10</sub> are conditioned below de minimis levels, and the indirectly conditioned PM remains above the de minimis level, but below major source levels.

## APPLICABLE REQUIREMENTS

Rolwing Moxley AG 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.

### GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
- No Operating Permit is required because Rolwing Moxley AG voluntary took a facility wide 15 ton per year PM<sub>10</sub> de minimis limit.
- *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. The storage bin vents' potential emission rate of 7.5 pounds per hour of PM is less than 69.19 lbs/hr (Process Rate Rule), and therefore complies with this regulation.

## STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

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Kathy Kolb  
New Source Review Unit

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Date

### PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated August 16, 2013, received August 2, 2013, designating Rolwing Moxley AG as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.



## APPENDIX A

### Abbreviations and Acronyms

<b>%</b> .....	percent	<b>m/s</b> .....	meters per second
<b>°F</b> .....	degrees Fahrenheit	<b>Mgal</b> .....	1,000 gallons
<b>acfm</b> .....	actual cubic feet per minute	<b>MW</b> .....	megawatt
<b>BACT</b> .....	Best Available Control Technology	<b>MHDR</b> .....	maximum hourly design rate
<b>BMPs</b> .....	Best Management Practices	<b>MMBtu</b> ....	Million British thermal units
<b>Btu</b> .....	British thermal unit	<b>MMCF</b> .....	million cubic feet
<b>CAM</b> .....	Compliance Assurance Monitoring	<b>MSDS</b> .....	Material Safety Data Sheet
<b>CAS</b> .....	Chemical Abstracts Service	<b>NAAQS</b> ...	National Ambient Air Quality Standards
<b>CEMS</b> .....	Continuous Emission Monitor System	<b>NESHAPs</b>	
<b>CFR</b> .....	Code of Federal Regulations	.....	National Emissions Standards for Hazardous Air Pollutants
<b>CO</b> .....	carbon monoxide	<b>NO<sub>x</sub></b> .....	nitrogen oxides
<b>CO<sub>2</sub></b> .....	carbon dioxide	<b>NSPS</b> .....	New Source Performance Standards
<b>CO<sub>2e</sub></b> .....	carbon dioxide equivalent	<b>NSR</b> .....	New Source Review
<b>COMS</b> .....	Continuous Opacity Monitoring System	<b>PM</b> .....	particulate matter
<b>CSR</b> .....	Code of State Regulations	<b>PM<sub>2.5</sub></b> .....	particulate matter less than 2.5 microns in aerodynamic diameter
<b>dscf</b> .....	dry standard cubic feet	<b>PM<sub>10</sub></b> .....	particulate matter less than 10 microns in aerodynamic diameter
<b>EQ</b> .....	Emission Inventory Questionnaire	<b>ppm</b> .....	parts per million
<b>EP</b> .....	Emission Point	<b>PSD</b> .....	Prevention of Significant Deterioration
<b>EPA</b> .....	Environmental Protection Agency	<b>PTE</b> .....	potential to emit
<b>EU</b> .....	Emission Unit	<b>RACT</b> .....	Reasonable Available Control Technology
<b>fps</b> .....	feet per second	<b>RAL</b> .....	Risk Assessment Level
<b>ft</b> .....	feet	<b>SCC</b> .....	Source Classification Code
<b>GACT</b> .....	Generally Available Control Technology	<b>scfm</b> .....	standard cubic feet per minute
<b>GHG</b> .....	Greenhouse Gas	<b>SIC</b> .....	Standard Industrial Classification
<b>gpm</b> .....	gallons per minute	<b>SIP</b> .....	State Implementation Plan
<b>gr</b> .....	grains	<b>SMAL</b> .....	Screening Model Action Levels
<b>GWP</b> .....	Global Warming Potential	<b>SO<sub>x</sub></b> .....	sulfur oxides
<b>HAP</b> .....	Hazardous Air Pollutant	<b>SO<sub>2</sub></b> .....	sulfur dioxide
<b>hr</b> .....	hour	<b>tph</b> .....	tons per hour
<b>hp</b> .....	horsepower	<b>tpy</b> .....	tons per year
<b>lb</b> .....	pound	<b>VMT</b> .....	vehicle miles traveled
<b>lbs/hr</b> .....	pounds per hour	<b>VOC</b> .....	Volatile Organic Compound
<b>MACT</b> .....	Maximum Achievable Control Technology		
<b>µg/m<sup>3</sup></b> .....	micrograms per cubic meter		

Mr. Joey Cogdill  
Manager  
Rolwing Moxley AG  
PO Box 475  
Charleston, MO 63834

RE: New Source Review Permit - Project Number: 2013-08-007

Dear Mr. Cogdill:

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 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 Kathy Kolb, 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:kk1

Enclosures

c: Southeast Regional Office  
PAMS File: 2013-08-007

Permit Number: