

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: **082007-014** Project Number: 2006-01-059

Parent Company: George's Incorporated

Parent Company Address: P.O. Drawer G, Springdale, AR 72765

Installation Name: George's Inc. Poultry Feed Mill

Installation Address: Rt.1, P.O. Box 1454, Cassville, MO 65625

Location Information: Barry County, S2, T23N, R28W

Application for Authority to Construct was made for:

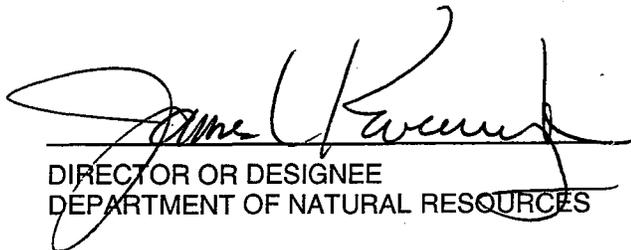
A new 130 ton per hour (tph) Maximum Hourly Design Rate (MHDR) poultry feed manufacturing plant. The plant consists of five (5) distinct (receiving, grinding, batching/mixing, pelleting and loadout) process systems to manufacture poultry feed. This installation has two (2) boilers rated at 500 Horsepower (Hp) or 20 million Btu/hr that can burn propane or natural gas. This review was conducted in accordance with Section (6), 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.

AUG 15 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.

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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."

George's Inc. Poultry Feed Mill
Barry County, S2, T23N, R28W

1. Operational Fuel Limitations
 - A. George's, Inc., Poultry Feed Mill shall burn only natural gas or propane in the two(2) 500 Hp (21 million btu/hr) Boilers (EP-14 and EP-15).
 - B. No other fuels are authorized.
2. Pollution Control Equipment (EP-12 and EP-13)
 - A. The cyclones associated with the equipment in this permit must be in operation all times when the equipment is in operation. The control equipment shall be operated and maintained in accordance with the manufacturer's specifications.
 - B. George's, Inc., Poultry Feed Mill shall maintain an operating and maintenance log for the control equipment which shall include the following:
 - 1.) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions;
 - 2.) Maintenance activities, with inspection schedule, repair actions, and replacements, etc;
 - 3.) A written record of regular inspection schedule, the date and results of all inspections including any actions or maintenance activities that result from that inspection; and,
 - 4.) George's, Inc., Poultry Feed Mill shall maintain all records required by this permit for not less than five (5) years and shall make them available immediately to any Missouri Department of Natural Resources' (MDNR) personnel upon request.
3. George's, Inc., Poultry Feed Mill shall control emissions from EP-01 to EP-11, EP-16 and EP-17 using baghouses as specified in the permit application. The baghouses 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 MDNR employees may easily

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SPECIAL CONDITIONS:

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

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

- a. George's, Inc., Poultry Feed Mill shall monitor and record the operating pressure drop across the baghouses at least once every 24 hours. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.
- b. Conveyors, screws, elevators, and other material handling equipment shall be covered to control fugitive dust emissions and to maintain a negative pressure when connected to a baghouse. No visible emission is the standard that must be maintained for material handling equipment.
- c. George's, Inc., Poultry Feed Mill 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, replacements, etc.

Table 1: Pollution Control Equipment Applicable to Special Condition 2 and 3.

Device Number and Description	Emission Point	Control Efficiency
123, Baghouse (bin vent filter)	EP-01	99
124, Baghouse (bin vent filter)	EP-02	99
127, Baghouse (bin vent)	EP-03	99
129, Baghouse (bin vent)	EP-04	99
130, Baghouse (bin vent)	EP-05	99
131, Baghouse (bin vent)	EP-06	99
132, Baghouse (bin vent)	EP-07	99
325, Baghouse	EP-08	99
331, Baghouse (bin vent)	EP-09	99
428, Baghouse (bin vent)	EP-10	99
432, Baghouse (bin vent)	EP-11	99
527, Cyclones 3H52	EP-12	85
627, Cyclones 3H52	EP-13	85
470, Baghouse (bin vent)	EP-16	99
325, Baghouse	EP-17 (Rail Car Loading)	99

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SPECIAL CONDITIONS:

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

4. Restriction of Odors

- A. If a continued situation of demonstrated nuisance odors exists in violation of 10 CSR 10-3.090, the Director may require through written notice George's Inc., Poultry Feed Mill to submit a corrective action plan within ten (10) days adequate to timely and significantly mitigate the odors. George's Inc., Poultry Feed Mill shall implement any such plan immediately upon its approval by the Director. Failure to either submit or implement such a plan shall be in violation of this permit.

5. Pavement of Vehicular Activity Area(s)

- A. George's, Inc., Poultry Feed Mill shall pave the specified vehicular activity area(s) around the load in and load out area(s) with materials such as asphalt, concrete, and /or other material(s) after receiving approval from the Program. The Pavement will be applied in accordance with Industry standards for such pavement so as to achieve control of fugitive emissions while the plant is operating.
- B. Maintenance an/or repair of the surfaces 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.
- C. George's, Inc., Poultry Feed Mill shall periodically water, wash, sweep and /or otherwise clean all of the paved portions vehicular activity area(s) as necessary to achieve control of fugitive emissions from these area(s) while the plant is operating.
- D. George's, Inc., Poultry Feed Mill will pave the affected vehicular activity area(s) within 30 days after the commencement of the plant's operations at this site. This 30-day deadline can be extended upon approval of the Director.

6. Haul roads silt loading shall not exceed 2.8 grams/meter²

- A. The permittee shall develop, maintain, and implement a Fugitive Dust Control Plan (FDCCP) to control emissions from haul roads to comply with Special Condition 6.
- B. Compliance with the silt loading limitation in Special Condition 6 shall be demonstrated by conducting a series of initial silt loading performance tests conducted at least once per quarter of the first year the plant is operational. The silt loading tests shall be conducted in accordance with ASTM-C-136 method. A summary of this method is found in Appendix C of AP-42.
- C. For each day of operation, the owner or operator shall conduct a survey of the plant property and haul roads to determine if visible fugitive emissions

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SPECIAL CONDITIONS:

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

are being generated and leaving plant property. Documentation of all corrective actions and daily surveys shall be maintained in a log.

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

Project Number: 2006-01-059
Installation ID Number: 009-0066
Permit Number:

George's Inc. Poultry Feed Mill
Rt.1, P.O. Box 1454
Cassville, MO 65625

Complete: January 19, 2006
Reviewed: April 26, 2007

Parent Company:
George's Incorporated
P.O. Drawer G
Springdale, AR 72765

Barry County, S2, T23N, R28W

REVIEW SUMMARY

- George's, Inc., Poultry Feed Mill has applied for authority to construct a new 130 ton per hour (tph) Maximum Hourly Design Rate (MHDR) poultry feed manufacturing plant. The plant consists of five (5) distinct (receiving, grinding, batching/mixing, pelleting and loadout) process systems to manufacture poultry feed. This plant has two (2) boilers rated at 500 Horsepower each (20 million btu/hr) and can burn propane or natural gas.
- Hazardous Air Pollutant (HAP) emissions are not expected from the proposed equipment.
- New Source Performance Standards (NSPS) apply to the boilers (EP-14 and EP-15) in this permit. They are subject to 40 CFR Part 60 Subpart A (general provision) and Subpart Dc – Standards of performance for small Industrial – Commercial – Institutional Steam Generating Units since they are constructed after June 9, 1989 and the applicability date for Subpart Dc and its rated heat input capacity exceeds 10 million btu/hr.
- NSPS Subpart DD, Standards of Performance for Grain Elevators, applies to each affected facility at any grain terminal elevator or any grain storage elevator. The facility is not a grain terminal elevator since by definition 40 CFR 60.301(c), a grain terminal elevator does not include grain elevators located at animal food manufacturers (feed mill). The facility is not a grain storage elevator since by definition 40 CFR 60.301(f), a grain storage elevator includes only grain elevators located at any wheat flour mill, wet corn mill, dry corn mill (human consumption), rice mill or soybean oil extraction plant with a permanent grain storage capacity of 35,200 m³ (1 million bushels). The proposed feed mill is not included in the definition of a grain storage elevator and the total grain storage capacity at the proposed feed mill is 723,000 bushels which is less than the 1 million bushels required for grain storage elevators under Subpart DD.

- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) or currently promulgated Maximum Achievable Control Technology (MACT) regulations apply to the proposed equipment.
- Cyclones, baghouses, and a liquid coating process (animal fat is sprayed on the feed) are being used to control the particulate matter less than 10 microns in diameter (PM₁₀) emissions from the equipment in this permit.
- This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of particulate matter less than ten (10) microns in diameter PM₁₀ are above de minimis levels.
- This installation is located in Barry 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].
- Ambient air quality modeling was performed for this review.
- Emissions testing is not required for the source.
- An Intermediate Operating Permit is required for this installation within 30 days of equipment startup.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Springdale, Arkansas based George's is a fully integrated poultry operation. The company established a poultry processing plant and a hatchery near Cassville in 1987. Chicken broilers processed at the Missouri plant are distributed to major fast food chains, grocery food chains, independent grocery stores and institutional customers in the Midwest and western United States. The company is expanding its operation by building a new feed manufacturing plant that will be supplied feed grain by its area growers and producers and increase demand for local agriculture products. The application submitted is to construct a new 130 ton per hour (tph) Maximum Hourly Design Rate (MHDR) poultry feed manufacturing plant. The raw materials used are corn, rice, soy meal, phosphate, limestone, salt, lysine, methionine, fat, and propionic acid. The plant consists of five (5) distinct (receiving, grinding, batching/mixing, pelleting and loadout) process systems to manufacture poultry feed.

The site will need an intermediate operating permit. The PM₁₀ emissions are above de minimus level, but below major source thresholds. The new plant is located ¼ of a mile

south of intersection of Highway 37 and Highway W in Barry County. The plant will produce poultry feed.

No permits have been issued to George's, Inc., Poultry Feed Mill from the Air Pollution Control Program as this is a new installation.

PROJECT DESCRIPTION

The plant consists of five (5) distinct (receiving, grinding, batching/mixing, pelleting and loadout) process systems to manufacture poultry feed. Receiving of raw feed ingredients will be delivered by bulk trucks and by rail car. The emissions from the receiving is indirectly controlled by way of the process flow by venting to EP-03 (baghouse). The equipment. The ingredients will include #2 yellow corn, soy meal, rice hulls, rendered protein products, salt, powdered limestone phosphate, liquid animal fat, and liquid choline. Rail cars and trucks delivering these dry bulk ingredients will unload into below grade pits. The ingredients will be moved by conveyor and bucket elevator for storage in silos and bins. Two of the storage silos (bin 301 and bin 201) have a baghouse connected. These bins are EP-01 and EP-02, respectively. Tankers with liquid raw materials will be pumped into storage tanks. Pneumatic tankers use air pumps to unload into bins in the mill. Pneumatic ingredients include salt and limestone. EP-04, 05, 06, and 07 have baghouses to control emission from the pneumatic truck unloading.

Grinding of the stored whole grains are transferred from storage silos via conveyor and bucket elevator to three (3) hammermills. The emissions from the three hammermills are controlled by the baghouse at EP-08. The hammermills break the whole grain into smaller particles, ultimately becoming corn meal. The corn meal is then transferred by bucket elevator to bins in the mill structure to be used as a feed ingredient for the batching and mixing process.

Various feed stocks are conveyed from overhead bins to a hopper scale. The amount of each ingredient is predetermined and the weight is computer monitored. When a batch is weighed up and ready, the scale hopper is discharged into a mixer. Two of the scales have baghouses connected to control emissions and the third scale is vented to the silos which have baghouses EP-04, 05, 06, and 07 connected to it. In the mixer, the batch of feed is mixed into a homogenous state and liquid ingredients are added. The mixed feed is then moved via conveyor and bucket elevator to bins ready for the next process (pelleting). The bucket and elevator are indirectly connected vented to the baghouse at EP-16.

The plant has two (2) boilers rated at 500 horsepower (20 Million btu/hr) to produce steam. The mixed feed is now conveyed from the storage bins to the conditioning chamber, where steam is added and the feed becomes a mash. This mash is mixed thoroughly with paddles in preparation for pelleting. The mash exits the conditioners and enters the pellet mill. In the pellet mill, the soft hot mash is forced through a die and formed into cylinder shaped pellets which are 10/64 inch in diameter by approximately

½ inch long. The pellets then enter the cooler/dryer. In the cooler/dryer a fan pulls ambient air through the bed of pellets. This process removes the moisture and heat from the pellets. A conveyor and bucket elevator then moves the feed to a liquid coating process. In the liquid coating process, animal fat is sprayed on the feed at about a 2% by weight of the feed. The finished feed is then conveyed to the final storage bins for loadout.

In the loadout system, the manufactured feed is discharged from the bins (by gates) into a hopper scale in 3 ton increments. These drafts are loaded into compartmentalized trucks, which deliver the feed to the local growers.

EMISSIONS/CONTROLS EVALUATION

The emission factors and control efficiencies used in this analysis were obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, section number 9.9, Grain Processing (3/03). The 70% control efficiency of the liquid coating process (fat sprayed on the feed) was estimated based on engineering judgement on similar processes. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year.) The following table provides an emissions summary for this project.

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory De Minimis Levels	Existing Potential Emissions	Existing Actual Emissions	Potential Emissions of the Application	New Installation Conditioned Potential
PM ₁₀	15.0	N/A	N/A	116.98**	N/A
SO _x	40.0	N/A	N/A	0.2	N/A
NO _x	40.0	N/A	N/A	38.28	N/A
VOC	40.0	N/A	N/A	0.99	N/A
CO	100.0	N/A	N/A	15.16	N/A
HAPs	10.0/25.0	N/A	N/A	0.34	N/A

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

** When the liquid coating process is used (animal fat sprayed on the feed) the PM₁₀ PTE of the application is 57.25 tons.

A series of bin vent filters, baghouses, cyclones and design controls minimize particulate matter emissions from the installation. Particulate matter emissions are controlled via bin vents and baghouses until the pellet process; cyclones will control PM emissions from the pellet and extrusion areas. PM emissions were calculated using assigned values of 99 percent control on the baghouses and 85 percent on the cyclones. Loadout emissions in the receiving and shipping area are calculated using the maximum material throughput rate multiplied by the AP-42 factor provided in Section 9.9. Boiler emissions are calculated based on natural gas and propane heat capacity.

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 particulate matter PM₁₀ are above de minimis levels.

APPLICABLE REQUIREMENTS

George's, Inc., Poultry Feed Mill 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
- *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
- *New Source Performance Regulations*, 10 CSR 10-6.070 – *New Source Performance Standards (NSPS) for Industrial-Commercial-Institutional Steam*

AMBIENT AIR QUALITY IMPACT ANALYSIS

The ambient air quality impact analysis (AAQIA) must be completed for any air contaminant that exceeds the *de minimis* emission levels outlined in 10 CSR 10-6.020 subsection (3)(A) Table 1. The following table lists the air contaminants, rates of emission and their associated *de minimis* levels:

Table 3: Ambient Air Quality Impact Analysis (AAQIA)

Air Pollutants	De Minimis Level (tons/year)	Georges' Potential Emissions (tons/year)	AAQIA Necessary
PM ₁₀	15.0	116.98	Yes
SO _x	40.0	0.2	No
NO _x	40.0	38.28	No
CO	100.0	15.16	No

Based upon emission estimates provided by George's Incorporated Poultry Feed Mill, PM₁₀ exceed the *de minimis* levels, thereby triggering the requirement to perform a comprehensive air quality analysis.

The AAQIA was performed to determine the impact of PM₁₀ emissions at or beyond the property boundary of the proposed George's Poultry Feed Mill facility. Additional impacts on visibility, growth, soils, plants and animals were also evaluated within the Class II area surrounding the facility. Please refer to Attachment A, the April 11, 2007 memorandum from Dawn Froning of the Air Quality Analysis Section, entitled, "*Ambient Air Quality Impact Analysis (AAQIA) for George's Poultry Feed Mill – 12/15/06 Submittal.*" The results from the department's Air Pollution Control program verification run were used to evaluate compliance with the PM₁₀ standards. These results indicate that no violations of the PM₁₀ standard would occur with a maximum annual concentration of 3.83 µg/m³ and a 24 hour maximum of 28.11µg/m³.

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.

Timothy Paul Hines
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- April 11, 2007 memorandum from Dawn Froning of the Air Quality Analysis Section, entitled, "*Ambient Air Quality Impact Analysis (AAQIA) for George's Poultry Feed Mill – 12/15/06 Submittal*."
- The Application for Authority to Construct form, dated January 01, 2006, received January 19, 2006, designating George's, Inc., Poultry Feed Mill as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Southwest Regional Office Site Survey.

Mr. Craig Coberley
Vice President
George's Inc. Poultry Feed Mill
P.O Box 1454
Cassville, MO 65625

RE: New Source Review Permit - Project Number: 2006-01-059

Dear Mr. Coberley:

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 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 me at (573) 751-4817, or you may write to me at the Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102.

Thank you,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale
New Source Review Unit Chief

KBH: thk

Enclosures

c: Southwest Regional Office
PAMS File: 2006-01-059
Permit Number: