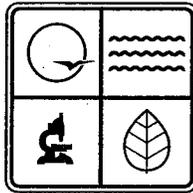


STATE OF MISSOURI  
DEPARTMENT OF NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION



PERMIT BOOK

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: **012007 - 016** Project Number: **2006-10-069**  
**095-0061**  
Owner: **APAC-Kansas, Inc.**  
Owner's Address: **7355 West 162<sup>nd</sup> Terrace**  
**P.O. Box 23910, Overland Park, KS 66283**  
Installation Name: **Kansas City Division, Sugar Creek Plant**  
Installation Address: **2031 North Courtney Road, Sugar Creek, MO 64054**  
Location Information: **Jackson County, S23, T50N, R32W**

Application for Authority to Construct was made for:

The modification of an existing stationary asphalt plant (095-0061). Asphalt is produced through a Drum Mix Dryer. The asphalt plant has a maximum hourly design rate (MHDR) of 400 tons per hour (tph). 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 (listed as attachments starting on page 2) are applicable to this permit.

JAN 25 2007

EFFECTIVE DATE

*James Kavanagh*  
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.** Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the 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 within 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 as provided in RSMo 643.075. If you choose to appeal, the Air Pollution Control Program must receive your written declaration within 30 days of receipt of this permit.

If you choose not to appeal, this certificate, the project review, 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 Department of Natural Resources has established the Outreach and Assistance Center to help in completing future applications or fielding complaints about the permitting process. You are invited to contact them at 1-800-361-4827 or (573) 526-6627, or in writing addressed to Outreach and Assistance Center, P.O. Box 176, Jefferson City, MO 65102-0176.

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 Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention Construction Permit Unit.

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Permit No.	
Project No.	2006-10-069

**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); by the Missouri Rules listed in Title 10, Division 10 of the Codes of State Regulations (specifically 10 CSR 10-6.060); by 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority"; by 10 CSR 10-6.010 "Ambient Air Quality Standards" and 10 CSR 10-6.060 subsections (5)(D) and (6)(A); and by control measures requested by the applicant, in their permit application, to reduce the amount of air pollutants being emitted, in accordance with 10 CSR 10-6.060 paragraph (6)(E)3. Furthermore, one or more of the Subparts of 40 CFR Part 60, New Source Performance Standards (NSPS), applies to this installation.*

1. Ambient Air Quality for Particulate Matter Less Than Ten Microns in Diameter (PM<sub>10</sub>)
  - A. The operator(s) for Kansas City division, Sugar Creek Plant's asphalt plant (095-0061) shall ensure, while operating at this site, that the ambient air impact of PM<sub>10</sub> at or beyond the nearest property boundary does not exceed 24.67 µg/m<sup>3</sup> in any 24-hour period.
  - B. To demonstrate compliance, the operator(s) shall maintain a daily record of material processed. Attachment A, Daily Ambient PM10 Impact Tracking Record, or other equivalent form(s), will be used for this purpose.
  
2. Annual Emission Limit of Nitrogen Oxides (NO<sub>x</sub>)
  - A. The operator(s) shall ensure that Kansas City division, Sugar Creek asphalt plant emits less than 40 tons of NO<sub>x</sub> into the atmosphere in any 12-month period.
  - B. To demonstrate compliance, the operator(s) shall maintain a daily record of material processed and NO<sub>x</sub>. Attachment B, *Monthly Nitrogen Oxides (NO<sub>x</sub>) Emissions Tracking Record*, or other equivalent form(s), will be used for this purpose
  
3. Pavement of Haul Road(s) and Vehicular Activity Area(s)
  - A. The operator(s) shall pave the specified haul roads and vehicular activity area(s) around the storage pile(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. The following haul road(s) and vehicle activity area(s) are to be paved: Haul Road #1 (EP07), Haul Road #2 (EP08), and Haul Road #3 (EP09) and the vehicle area around Stockpile (EP06)
  - B. Maintenance and/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. The operator(s) shall periodically water, wash and/or otherwise clean all of the paved portions of the haul road(s) and vehicular activity area(s) as necessary to achieve control of fugitive emissions from these areas while the plant is operating.
  
4. Moisture Content Testing of Storage Piles Requirement
  - A. The moisture content of the stockpiled rock will reduce particulate emissions. Kansas City division, Sugar Creek Plant claimed the moisture content of the stored rock to be greater than or equal to 1.5 wt.%, which shall be verified by testing.
  - B. Testing shall be conducted according to approved methods, such as those prescribed by the *American Society for Testing Materials (ASTM D-2216 or C-566)*, EPA AP-42 Appendix C.2, or other method(s) approved by the Director.
  - C. The operator may obtain a copy of the test results of the inherent moisture content from the supplier(s) of the aggregate. Otherwise, the operator shall obtain test samples from each shipment of untested aggregate. The written analytical report shall include the raw data and moisture content (wt.%) of each sample, the test date, and the original signature of the individual performing the test. Within 30 days of completion of the required tests, the report shall be filed on-site or at the APAC Kansas Sugar Creek main office.
  - D. If the moisture content result of the first test is less than 1.5 wt.%, a second test must be performed within 30 days. If the result of the second test is less than 1.5 wt.%, Kansas City division, Sugar Creek Plant shall apply for a new construction permit to account for the revised information and install wet spray devices on the affected units.

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Project No.	2006-10-069

**SPECIAL CONDITIONS:**

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

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5. Baghouse(s) Control System Requirements
  - A. Kansas City division, Sugar Creek Plant shall install and operate baghouse(s) to restrict the emission of particulate matter. The baghouse(s) must be used whenever these units are in operation. The baghouse(s) shall be installed on the following units: Drum Dryer (EP02) and Mineral Filler Silo.
  - B. The Kansas City division, Sugar Creek Plant shall install instruments to monitor the operating pressure drop across the baghouse. All instruments and control equipment shall be calibrated, maintained and operated according to the manufacturer's preventive maintenance recommendations. The operator(s) shall check and record the pressure drop across the baghouse filter once per operating day during silo loading. The baghouse operating pressure drop shall be maintained between 1" to 6" of water column.
  - C. The operator(s) shall conduct and document a quarterly inspection and maintenance of the baghouse for structural component failures, for leaks and wear, and for the cleaning sequence of the baghouse. Replacement bags shall be kept on hand at all times to replace defective bags (The bags shall be made of fibers appropriate for the operating conditions expected to occur). All inspections, corrective actions, and instrument calibrations shall be recorded.
6. Prohibition Against Concurrent Operations Without Further APCP Review  
The Kansas City Division, Sugar Creek asphalt plant (095-0061) site is prohibited from operating whenever any other plant(s) are located at this site.
7. Restriction on Minimum Distance to Nearest Property Boundary  
The primary emission point of the asphalt plant, which is the stack of the drum mix dryer (EP02), shall be located at least 1200 feet from the nearest property boundary whenever it is operating at this site.
8. Record Keeping Requirement  
The operator(s) 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' personnel upon request.
9. Reporting Requirement  
The operator(s) shall report to the Air Pollution Control Program (APCP) Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after any exceedances of the limitations imposed by this permit.
10. Superseding Condition  
The conditions of this permit supersede all special conditions found in the previously issued construction permit(s) from the Air Pollution Control Program (Permit Number 072005-022) and all of its amendments and relocations.

# TECHNICAL REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT

## PROJECT DESCRIPTION

The installation submitted a request to make the following changes as indicated below, which were to take place on the existing Permit 072005-022, in order to increase the maximum permissible daily throughput. The applicant requested a new evaluation to be done to reflect the new changes while maintaining the same ambient air limit of 24.67 µg/m<sup>3</sup> which was carried on from previously issued Permit number 032002-012. The new evaluation was done based on following changes and assumptions:

1. Number of conveyors are 3
2. Asphalt heater MHDR is 0.0100
3. Screen 3 value is 3.3
4. Removal of gen set from calculations as the plant runs on pole power
5. Addition of 4 TPH on mineral filler silo emission point
6. Size of stockpile area is 5 acres
7. haul roads are three road types
8. Correct cold aggregate moisture content from 3.6% to 1.5% at each storage pile individually
9. Adjust default haul road silt content % from .84% to 8.3% (silt test results included)
10. Adjust baghouse default control % from 99.0% to 99.96% (stack test summary included)

Hot Mix Asphalt (HMA) is composed of non-metallic aggregate, sand, mineral filler and other materials with liquid asphaltic cement. These materials are mixed and heated/dried in the drum dryer. Processed HMA is delivered as sellable product. The emission points are listed in the attached spreadsheet summary. This installation is classified under the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2, Item 27]. The installation is located in Jackson County, an attainment area for all criteria air pollutants.

**Table 1. Other Permits Issued for This Facility**

Permit Number	Completed	Description
0789-001	07-07-1989	Section 5 and 6
0390-006	03-23-1990	Section 5 and 6
OP2001-018	02-26-2001	Basic operating permit
032002-012	03-21-2002	Section 5 and 6
032002-012A	09-19-2002	IR Correction and Amendments
072003-014	07-24-2003	IR Correction and Amendments
072003-014A	12-18-2003	Extended Temporary Permit
072005-022	07-11-2005	Section 6

## EMISSIONS EVALUATION

Criteria air pollutants will be emitted from this operation. The main air pollutants of concern are PM<sub>10</sub>, CO, and NO<sub>x</sub>. The potential emissions were calculated from the maximum hourly design rate (MHDR) of the equipment, appropriate emission factors, control device efficiencies, and the limiting operating hours at MHDR. The sources of the emission factors and control efficiencies are listed in the section "Permit Documents". Based on the conditioned potential emissions, the operation is considered a minor source under 10 CSR 10-6.060 section (6).

The asphalt plant has an annual emission limit of less than 40 tons of Nitrogen Oxides (NO<sub>x</sub>) in any 12-month period. A composite NO<sub>x</sub> emission factor was developed for the asphalt plant. The composite emission factor is incorporated into the monthly record keeping table, Attachment B. If the conditioned potential emissions of NO<sub>x</sub> were 40 tons per year or greater, then the operation would be considered a major source under 10 CSR 10-6.060 section (7) or (8).

**Table 2: Emissions Summary (tons per year)**

Air Pollutant	Regulatory De Minimis Levels	Existing Potential Emissions	Existing Actual Emissions (EIQ)	Potential Emissions of the Application	**New Installation Conditioned Potential	Emission Factor (lb/ton)
PM <sub>10</sub>	15.0	N/A	N/A	73.00	30.02	N/A
SO <sub>x</sub>	40.0	N/A	N/A	22.43	9.22	N/A
<b>NO<sub>x</sub></b>	<b>40.0</b>	<b>N/A</b>	<b>N/A</b>	<b>97.24</b>	<b>&lt;40</b>	<b>0.0555</b>
VOC	40.0	N/A	N/A	56.07	23.06	N/A
CO	100.0	N/A	N/A	227.98	93.76	N/A
HAPs	10.0/25.0	N/A	N/A	6.87	2.82	N/A

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

\*\* Conditioned potential based on daily production limit from ambient impact analysis. Other pollutants proportionately reduced.

### **AMBIENT AIR QUALITY IMPACT ANALYSIS**

Screening tools were used to evaluate the ambient air impact of the hourly emissions from this operation. The ambient impact was evaluated at a distance of 1200 feet to the nearest property boundary. The ambient impact at this site shall not exceed 24.67 µg/m<sup>3</sup> of PM<sub>10</sub> at or beyond the nearest property boundary in any single 24-hour period. 24.67 µg/m<sup>3</sup> was established based on the site location within an increment baseline area in order to demonstrate compliance with the increment standard.

The screening tools were used to develop an ambient impact factor for the asphalt plant. This ambient impact factor is incorporated into the daily record keeping table, Attachment A.

**Table 3: Ambient Air Analysis of PM<sub>10</sub>, 24-Hour Averaging Time**

Operation	Ambient Impact Factor (µg/m <sup>3</sup> ton)	* Modeled Impact (µg/m <sup>3</sup> )	Daily Production Limit (tons)
1. Solitary	0.0005817	24.67	8,028

\* The applicant requested a new evaluation to be done to reflect the new changes while maintaining the same ambient air limit of 24.67 µg/m<sup>3</sup>, which was established based on the site location within 50 kilometers from installation which is subject to PSD permit and only allowed 5.33 µg/m<sup>3</sup>. 24.67 is a total of 4.67 µg/m<sup>3</sup> and 20 µg/m<sup>3</sup> from Haul Roads and Stockpiles.

### **APPLICABLE REQUIREMENTS**

The owner is subject to compliance with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements.

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
- *Operating Permits*, 10 CSR 10-6.065
- An Operating Permit application is required for this installation within 30 days of equipment startup.
- *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
- *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
- None of the New Source Performance Standards (NSPS) apply to the proposed equipment.
- 40 CFR Part 60 Subpart "I", *Standards of Performance for Hot Mix Asphalt Facilities*, of the New Source Performance Standards (NSPS)
- The National Emission Standards for Hazardous Air Pollutants (NESHAPs) and the currently promulgated Maximum Achievable Control Technology (MACT) regulations do not apply to the proposed equipment.

## **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.

\_\_\_\_\_  
Samer AL-Shoukhi  
Environmental Engineer

\_\_\_\_\_  
Date

## **PERMIT DOCUMENTS**

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, designating APAC-Kansas, Inc. as the owner and operator of the installation.
- Environmental Protection Agency (EPA) AP-42, *Compilation of Air Pollutant Emission Factors; Volume I, Stationary Point and Area Sources, Fifth Edition*.
- Noyes Data Corp. book, Orlemann, et al.1983, *Fugitive Dust Control*.
- EPA Factor Information Retrieval (FIRE) Version 6.21.
- Spreadsheet calculations of potential-to-emit and ambient impact.
- Kansas City Regional Office Site Survey.
- Best Management Practices





Mr. Daniel S. Jones  
EHS Manager  
APAC-Kansas, Inc.  
7355 West 162<sup>nd</sup> Terrace  
PO Box 23910  
Overland Park, KS 66283

RE: New Source Review Permit - Project Number: 2006-10-069

Dear Mr. Jones:

Enclosed with this letter is your New Source Review permit. Please review your permit carefully and note the special conditions, if any, and the requirements in your permit.

Operation in accordance with the conditions and requirements in your permit, the New Source Review application submitted for project 2006-10-069, and your amended operating permit, if required, is necessary for continued compliance. Please review your amended operating permit, as it will contain all applicable requirements for your asphalt plant, including any special conditions from your New Source Review permit.

The section of the permit entitled "Technical Review of Application for Authority to Construct" should not be separated from the main portion of your permit. The entire permit must be retained in your files. 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, please contact me at (573) 751-4817, or write to the Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102. Thank you for your attention to this matter.

Sincerely,

**AIR POLLUTION CONTROL PROGRAM**

Kendall B. Hale.  
New Source Review Unit Chief

KBH: sak

Enclosures

c: Kansas City Regional Office  
PAMS File 2006-10-069  
Permit Number:

**MISSOURI DEPARTMENT OF NATURAL RESOURCES  
FOLDER TRANSMITTAL ROUTING SHEET**

**Document #:  
Division Log #:  
Program Log #:**

**DEADLINE: January 18, 2006**

**Penalty for Missing Deadline: \$**

APAC Kansas, Inc Sugar Creek

Project No. 2006-10-069

Originator: \_\_\_\_\_

Telephone: 573-751-4817

Date: \_\_\_\_\_

Typist:  
Linda B.

File Name/Path: P:\APCP\Permits\Users\Samer Al-Shoukhi\Initial Review Files\Asphalt\90 days asphalt\APAC Kansas Reno Division, Sugar Creek  
Asphalt plant\2006-10-069\2006-10-069 APAC Kansas Sugar Creek.doc

**FOR SIGNATURE APPROVAL OF:**

DNR Director    DNR Deputy Director    Division Director    Division Deputy Director    Other: Leanne J. Tippet

**PROGRAM APPROVAL:** Approved by: \_\_\_\_\_ Program: ACPD \_\_\_\_\_ Date: \_\_\_\_\_

Other Program Approval (Section/Unit): \_\_\_\_\_ Date: \_\_\_\_\_

Comments: \_\_\_\_\_

**ROUTE TO:**

**DIVISION DIRECTOR APPROVAL:** \_\_\_\_\_ Date: \_\_\_\_\_

Comments: \_\_\_\_\_

**FINANCIAL REVIEW – DIVISION OF ADMINISTRATIVE SUPPORT:**

DAS Director: \_\_\_\_\_ Date: \_\_\_\_\_

**Fee Worksheet Received By:** \_\_\_\_\_ Date: \_\_\_\_\_

Accounting: \_\_\_\_\_ Date: \_\_\_\_\_

Budget: \_\_\_\_\_ Date: \_\_\_\_\_

General Services: \_\_\_\_\_ Date: \_\_\_\_\_

Internal Audit: \_\_\_\_\_ Date: \_\_\_\_\_

Purchasing: \_\_\_\_\_ Date: \_\_\_\_\_

Comments: \_\_\_\_\_

**LEGAL REVIEW:**

General Counsel: \_\_\_\_\_ Date: \_\_\_\_\_

AGO: \_\_\_\_\_ Date: \_\_\_\_\_

Comments: \_\_\_\_\_

**DEPARTMENT DIRECTOR APPROVAL:** \_\_\_\_\_ Date: \_\_\_\_\_

Comments: \_\_\_\_\_

**NOTARIZATION NEEDED**

INITIALS/DATE