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: 112010-003
Project Number: 2010-10-024
Installation ID: PORT-0673

Parent Company: N. B. West Contracting Co.
Parent Company Address: 1035 North Service Road East, Suite B, Sullivan, MO 63080
Installation Name: N. B. West Contracting Co.
Installation Address: 18502 Superior Road, Waynesville, MO 65583
Location Information: Pulaski County (S31, T36N, R11W)

Application for Authority to Construct was made for:

The installation of a new portable asphalt plant. 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.

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 devises shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Departments’ Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant sources(s). 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 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 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.
GENERAL 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.”

1. Equipment Identification Requirement
   N. B. West Contracting Co. shall maintain easily read permanent markings on each component of the plant. These markings shall be the equipment's serial number or a company assigned identification number that uniquely identifies the individual component. These identification numbers must be submitted to the Air Pollution Control Program no later than 15 days after start-up of the portable asphalt plant.

2. Relocation of Portable Asphalt Plant
   A. N. B. West Contracting Co. shall not be operated at any location longer than 24 consecutive months.

   B. A complete “Portable Source Relocation Request” application must be submitted to the Air Pollution Control Program prior to any relocation of this portable Asphalt plant.
      1) If the portable asphalt plant is moving to a site previously permitted, and if the circumstances at the site have not changed (e.g. the site was only permitted for solitary operation and now another plant is located at the site), then the application must be received by the Air Pollution Control Program at least seven days prior to the relocation.
      2) If the portable asphalt plant is moving to a new site, or if circumstances at the site have changed, then the application must be received by the Air Pollution Control Program at least 21 days prior to the relocation. The application must include written notification of any concurrently operating plants.

3. Annual Emission Limit – Carbon Monoxide (CO)
   A. N. B. West Contracting Co. shall emit less than 100.0 tons of CO in any 12-month period from the entire installation.

   B. N. B. West Contracting Co. shall demonstrate compliance with special condition 3.A using Attachment A or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form.

4. Record Keeping Requirement
   N. B. West Contracting Co. shall maintain all records required by this permit for not less than five years and shall make them available to any Missouri Department of Natural Resources’ personnel upon request.
5. Reporting Requirement
N. B. West Contracting Co. shall report to the Air Pollution Control Program Enforcement Section P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any exceedances of the limitations imposed by this permit.
SITE SPECIFIC 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.”

PORT ID Number: PORT-0673
Site ID Number: 169-0041
Site Name: Waynesville
Site Address: 18502 Superior Road Waynesville, MO 65583
Site County: Pulaski County (S31, T36N, R11W)

1. Best Management Practices Requirement
   N. B. West Contracting Co. shall control fugitive emissions from all of the haul roads and vehicular activity areas at this site by performing Best Management Practices as defined in Attachment AA.

2. Ambient Air Impact Limitation
   A. N. B. West Contracting Co. shall not cause an exceedance of the National Ambient Air Quality Standard (NAAQS) for particulate matter less than ten microns in aerodynamic diameter (PM$_{10}$) of 150.0 µg/m$^3$ 24-hour average in ambient air.

   B. N. B. West Contracting Co. shall demonstrate compliance with special condition 2.A using Attachment B or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form. N. B. West Contracting Co. shall account for the impacts from other sources of PM$_{10}$ as instructed in Attachment B.

3. Annual Emission Limit
   A. N. B. West Contracting Co. shall emit less than 40.0 tons of SO$_x$ in any 12-month period from the entire installation.

   B. N. B. West Contracting Co. shall demonstrate compliance with special condition 3.A using Attachment C or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form.

4. Control Device Requirement-Baghouse
   A. N. B. West Contracting Co. shall control emissions from the drum dryer (EP-4) using baghouses as specified in the permit application.
SITE SPECIFIC SPECIAL CONDITIONS:
The permittee is authorized to construct and operate subject to the following special conditions:

B. 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 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. N. B. West Contracting Co. 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.

E. N. B. West Contracting Co. shall maintain an operating and maintenance log for the baghouses and drum filters 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. Minimum Distance to Property Boundary Requirement
The primary emission point shall be located at least 1,100 feet from the nearest property boundary.
N. B. West Contracting Co.  
18502 Superior Road  
Waynesville, MO 65583  

Parent Company:  
N. B. West Contracting Co.  
1035 North Service Road East, Suite B  
Sullivan, MO 63080  

Pulaski County (S31, T36N, R11W)  

PROJECT DESCRIPTION  

N. B. West Contracting Co. proposes to install a new portable asphalt plant with an initial location in Pulaski County (S31, T36N, R11W). The plant has a MHDR of 250 tons per year and will be powered through primary electrical power. There are currently three (3) stationary plants permitted at the site: Mid County Materials rock washing plant (169-0035), Mid County Materials rock crushing plant (169-0035) and Freedom Ready Mix concrete plant (169-0038). The applicant will use one of the methods described in Attachment AA, “Best Management Practices,” to control emissions from haul roads and vehicular activity areas. The initial location is an attainment area for all criteria pollutants.  

This installation is 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 counted toward major source applicability. No previous permits have been issued to N. B. West Contracting Co. from the Air Pollution Control Program.  

TABLES  

The table below summarizes the emissions of this project. The potential emissions of the process equipment, which excluded emissions from haul roads and wind erosion, are site specific and should not vary from site to site. Potential Emissions of the Application includes emissions from haul roads and wind erosion. The facility has two plant-wide emissions limit: A site-specific SO\textsubscript{x} limit of 40 tons per year and a general CO limit of 100 tons per year. The SO\textsubscript{x} limit applies only to the initial site in Pulaski County (S31, T36N, R11W) while the CO limit applies to the emissions at all the sites that the plant relocates to during the year. For example, if the facility operates at the Pulaski County site and emits 40 tons in six (6) months, it may relocate to another site and be allowed another 40 tons at the new site. However, if the facility emits 80 tons of CO in six (6) months at the Pulaski County site, it will only be allowed 20 tons of CO during the next six (6) month regardless of which site the portable plant relocates to. The 40.0 tons per year SO\textsubscript{x} limit was set to avoid screen modeling at the initial site. The 100.0 tons per year CO limit was set because
portable plants are not permitted to emit more than 100 tons per year of any air pollutant. The potential emissions were calculated assuming continuous operation (8760 hours per year).

Table 1: Emissions Summary (tons per year)

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<th></th>
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<th></th>
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<tr>
<td>PM$_{10}$</td>
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<td>39.01</td>
<td>65.53</td>
<td>24.21</td>
<td>45.13</td>
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<td>SO$_x$</td>
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<td>108.12</td>
<td>108.12</td>
<td>&lt;40.0</td>
<td>75.06</td>
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<td>NO$_x$</td>
<td>40.0</td>
<td>60.66</td>
<td>60.66</td>
<td>22.11</td>
<td>41.93</td>
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<td>52.67</td>
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<td>145.23</td>
<td>145.23</td>
<td>52.24</td>
<td>&lt;100.0</td>
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<td>Lead Compounds</td>
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<td>Total HAPs</td>
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<td>13.04</td>
<td>4.68</td>
<td>8.97</td>
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</table>

1 does not include site specific haul road and wind erosion emissions.
2 Includes site specific haul road and wind erosion emissions.
3 Polycyclic Organic Matter.
4 Screening Model Action Level (SMAL)
5 10.0 tons per year for each individual HAP. 25.0 tons per year for combined HAPs.

Table 2: Ambient Air Quality Impact Analysis

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>1NAAQS/RAL (µg/m$^3$)</th>
<th>Averaging Time</th>
<th>2Maximum Modeled Impact (µg/m$^3$)</th>
<th>Limited Impact (µg/m$^3$)</th>
<th>Background (µg/m$^3$)</th>
<th>3Daily Limit (tons/day)</th>
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<tr>
<td>2PM$_{10}$ (separate)</td>
<td>150.0</td>
<td>24-hour</td>
<td>73.8</td>
<td>24.6</td>
<td>125.4</td>
<td>2,000</td>
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<tr>
<td>POM</td>
<td>0.16</td>
<td>Annual</td>
<td>0.056</td>
<td>0.029</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

1 National Ambient Air Quality Standards (NAAQS) and Risk Assessment Level (RAL)
2 Modeled impact at maximum capacity with controls
3 Indirect limit based on compliance with NAAQS.
4 Operation with other plants that are not owned by N. B. West Contracting Co.
5 Annual POM standard is 10 times the annual RAL (0.016 µg/m$^3$)

The plant’s asphalt dryer was modeled using the SCREEN3 screen modeling software. The stack characteristics entered into the model are listed in Table 3.

Table 3: SCREEN3 Input Parameters

<table>
<thead>
<tr>
<th>Equipment Description</th>
<th>Stack Height (m)</th>
<th>Stack Inside Diameter (m)</th>
<th>Stack Gas Exit Velocity (m/s)</th>
<th>Stack Gas Exit Temperature (K)</th>
<th>Dispersion Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dryer</td>
<td>10.06</td>
<td>0.91</td>
<td>33.01</td>
<td>422.04</td>
<td>Rural</td>
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</table>
EMISSIONS CALCULATIONS

Emissions for the project were calculated using emission factors found in the United States Environmental Protection Agency (EPA) document AP-42 Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources, Fifth Edition (AP-42).

Emissions from the drum mix asphalt plant were calculated using emission factors from AP-42, Section 11.1 “Hot Mix Asphalt Plants,” April 2004. Sulfur oxide (SOx) emissions were calculated using the SO2 and SO3 emission factors from AP-42, Section 1.3 “Fuel Oil Combustion,” September 1998 and assuming half of the sulfur up to 0.1 pound per ton of product is absorbed into the product. The asphalt plant is controlled by a baghouse, so the fabric filter controlled emission factor was used to calculate PM10 emissions. Emissions from plant load-out were calculated using predictive equations found in AP-42 Table 11.1-14. Default values were used for asphalt volatility and mix temperature. Emissions from the asphalt heater were calculated using emission factors from AP-42, Section 1.3. Emissions from aggregate handling were calculated using emission factors from AP-42, Section 11.19.2 “Crushed Stone Processing and Pulverized Mineral Processing,” August 2004. The uncontrolled emission factors were used because the inherent moisture content of the crushed rock is less than 1.5% weight.

Emissions from haul roads and vehicular activity areas were calculated using the predictive equation from AP-42, Section 13.2.2 “Unpaved Roads,” November 2006. A 90% control efficiency is applied to the emission calculations for the use of BMPs. Emissions from load-in and load-out of storage piles were calculated using the predictive equation from AP-42, Section 13.2.4, “Aggregate Handling and Storage Piles,” November 2006. The moisture content of the aggregate is 0.7% by weight. Emissions from wind erosion of storage piles were calculated using an equation found in the Air Pollution Control Program’s Emissions Inventory Questionnaire Form 2.8, “Storage Pile Worksheet.”

AMBIENT AIR QUALITY IMPACT ANALYSIS

An ambient air quality impact analysis (AAQIA) was performed to determine the impact of the pollutants listed in Table 2. The Air Pollution Control Program requires an AAQIA of PM10 for all asphalt, concrete and rock-crushing plants regardless of the level of PM10 emissions if a permit is required. An AAQIA is required for other pollutants if their emissions exceed their respective de minimis or screening model action level (SMAL). For these pollutants, the emissions that trigger an AAQIA are the site-specific conditioned potential emissions if the plant is portable. The AAQIA was performed using the Air Pollution Control Program’s generic nomographs and when appropriate the EPA modeling software SCREEN3. For each pollutant that was modeled, the maximum concentration that occurs at or beyond the site boundary was compared to the National Ambient Air Quality Standard (NAAQS) or Risk Assessment Level (RAL) for the pollutant. If during continuous operation the modeled concentration of a pollutant is greater than the applicable NAAQS or RAL, the plant’s production is limited to ensure compliance with the standard. In cases where the plant is providing material for a highway project, the ambient impact is evaluated in accordance with a memorandum issued by the Air Pollution Control Program titled “Permitting Asphalt/Concrete Plants for Temporary Highway Projects,” dated April 10, 2000.
This memorandum states that air quality should be analyzed at the nearest residence or location where the public could reasonably expect to be found instead of all ambient air. This practice generally allows for a less restrictive daily production level while protecting the public.

This plant uses BMPs to control emissions from haul roads and vehicular activity areas, so emissions from these sources were not included in the PM$_{10}$ AAQIA. Instead they were addressed as a background concentration of 20 µg/m$^3$ of PM$_{10}$ in accordance with the Air Pollution Control Program’s BMPs interim policy.

OPERATING SCENARIOS

The plant is permitted to operate with other plants located at the site as long as the NAAQS is not exceeded.

- When plants that are owned by N. B. West Contracting Co., which are referred to as same owner plants, are located at the site, N. B. West Contracting Co. must calculate the daily impact of each plant and limit the total impact of all plants below the NAAQS.

- When plants that are not owned by N. B. West Contracting Co., which are referred to as separate owner plants, are located at the site, N. B. West Contracting Co. must account for the impacts of these plants as a background concentration and add it to the total impact of all plants owned by N. B. West Contracting Co. that are operating at the site. This total is limited below the NAAQS. N. B. West Contracting Co. will limit the total impact of all plants they own and operate at the site to 24.6 µg/m$^3$ when any plants they do not own are located at the site. N. B. West Contracting Co. is not permitted to operate with any plants that are not owned by N. B. West Contracting Co. that has a combined separate owner background greater than 105.4 µg/m$^3$.

Since there are already two stationary plants owned by Mid County Materials, LLC at the site, the scenarios where the facility only operates by itself and where the facility operates with only plants owned by N.B. West Contracting Co. are not needed and are not included as part of this permit.

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 all pollutants are conditioned below major levels.
APPLICABLE REQUIREMENTS

N. B. West Contracting Co. 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 June 1 for the previous year's emissions.

- No Operating Permit is required for this installation.

- 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

- 40 CFR 60 Subpart I, "Standards of Performance for Hot Mix Asphalt Facilities" applies to the equipment.

- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) or National Emission Standards for Hazardous Air Pollutants for Source Categories (MACTS) apply to the proposed equipment.

- Restriction of Emission of Sulfur Compounds, 10 CSR 10-6.260
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.

Chia-Wei Young
Environmental Engineer

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated October 13, 2010, received October 14, 2010, designating N. B. West Contracting Co. as the owner and operator of the installation.

### Attachment A: CO Annual Emissions Tracking Sheet

N. B. West Contracting Co. PORT-0673  
Project Number: 2010-10-024  
Permit Number:  

#### Site Information:
- **Site Name:** Waynesville Site  
- **Site Address:** 18502 Superior Road, Waynesville, MO 65583  
- **Site County:** Pulaski County (S13, T36N, R11W)

This sheet covers the period from ________________ to ________________ (Copy as needed)  

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<th>Month</th>
<th>Production (tons)</th>
<th>Emission Factor (lb/ton)</th>
<th>Monthly Emissions(^1) (lbs)</th>
<th>Monthly Emissions(^2) (tons)</th>
<th>12-Month Total Emissions(^3) (tons)</th>
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\(^1\) Multiply the monthly production by the emission factor.  
\(^2\) Divide the monthly emissions (lbs) by 2,000.  
\(^3\) Add the monthly emissions (tons) to the sum of the monthly emissions from the previous eleven (11) months. A total of less than **100.0 tpy** is necessary for compliance.
### Attachment B: Ambient Impact Tracking Sheet

**N. B. West Contracting Co. PORT-0673**  
**Project Number: 2010-10-024**

**Site Name:** Waynesville Site  
**Site Address:** 18502 Superior Road, Waynesville, MO 65583  
**Site County:** Pulaski County (S13, T36N, R11W)

This sheet covers the period from ___________ to ______________ (Copy as needed)

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<td>Impact Factor (µg/m³/ton)</td>
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<td></td>
<td>0.0123</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>105.4</td>
<td>20.0</td>
</tr>
<tr>
<td></td>
<td>0.0123</td>
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<td>20.0</td>
</tr>
<tr>
<td></td>
<td>0.0123</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>105.4</td>
<td>20.0</td>
</tr>
</tbody>
</table>

¹Calculate the impact for PORT-0673 by multiplying the daily production by the impact factor.  
²Input the impact for any plants owned by N. B. West Contracting Co. that are operating on the site.  
³Calculate the total impact by adding the applicable impacts and background. Include the separate owner plant impact if a plant that is not owned by N. B. West Contracting Co. is located at the site. A total of 150.0 µg/m³ or less is necessary for compliance.
## Attachment C: SOx Annual Emissions Tracking Sheet

**N. B. West Contracting Co. PORT-0673**  
**Project Number: 2010-10-024**  
**Permit Number:**

**Site Name:** Waynesville Site  
**Site Address:** 18502 Superior Road, Waynesville, MO 65583  
**Site County:** Pulaski County (S13, T36N, R11W)

This sheet covers the period from ____________ to ____________ (Copy as needed)  
(Month, Day Year)  (Month, Day Year)

<table>
<thead>
<tr>
<th>Month</th>
<th>Production (tons)</th>
<th>Emission Factor (lb/ton)</th>
<th>Monthly Emissions¹ (lbs)</th>
<th>Monthly Emissions² (tons)</th>
<th>12-Month Total Emissions³ (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example</td>
<td>20,000</td>
<td>0.09876</td>
<td>2,400.0</td>
<td>1.2</td>
<td>14.46</td>
</tr>
</tbody>
</table>

¹Multiply the monthly production by the emission factor.  
²Divide the monthly emissions (lbs) by 2,000.  
³Add the monthly emissions (tons) to the sum of the monthly emissions from the previous eleven months. A total of less than 40.0 tons per year is necessary for compliance.
Attachment AA: Best Management Practices

Haul roads and vehicular activity areas shall be maintained in accordance with at least one of the following options when the portable plant is operating.

1. **Pavement**
   A. 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.
   B. 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.
   C. 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.

2. **Application of Chemical Dust Suppressants**
   A. The operator shall apply a chemical dust suppressant (such as magnesium chloride, calcium chloride, lignosulfonates, etc.) to unpaved areas.
   B. The quantities of the chemical dust suppressant shall be applied and maintained in accordance with the manufacture’s recommendation (if available) and in sufficient quantities to achieve control of fugitive emissions from these areas while the plant is operating.
   C. 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.

3. **Application of Water-Documented Daily**
   A. 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.
   B. Precipitation may be substituted for watering if the precipitation is greater than one quarter of one inch and is sufficient to control fugitive emissions.
   C. 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.
   D. 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 rational for not watering (e.g. freezing conditions or not operating).
   E. 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.

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1For purposes of this document, Control of Fugitive Emissions means to control particulate matter that is not collected by a capture system and visible emissions to the extent necessary to prevent violations of the air pollution law or regulation. (Note: control of visible emission is not the only factor to consider in protection of ambient air quality.)
<table>
<thead>
<tr>
<th>Description</th>
<th>MHDR Units</th>
<th>MHDR Units</th>
<th>2PM\textsubscript{10} EF</th>
<th>EF Units</th>
<th>Control Eff.%</th>
<th>Emissions (lb/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate Handling Bins</td>
<td>190.00</td>
<td>tons</td>
<td>0.00110</td>
<td>Lbs/ton</td>
<td>0.00</td>
<td>0.21</td>
</tr>
<tr>
<td>Aggregate Handling Conveyor</td>
<td>380.00</td>
<td>Tons</td>
<td>0.00110</td>
<td>Lbs/ton</td>
<td>0.00</td>
<td>0.42</td>
</tr>
<tr>
<td>Scalping Screen</td>
<td>190.00</td>
<td>Tons</td>
<td>0.00870</td>
<td>Lbs/ton</td>
<td>0.00</td>
<td>1.65</td>
</tr>
<tr>
<td>Drum Dryer - #4 Fuel Oil</td>
<td>200.00</td>
<td>Tons</td>
<td>6.500000</td>
<td>Lbs/ton</td>
<td>99.65</td>
<td>4.60</td>
</tr>
<tr>
<td>Silo Loading</td>
<td>200.00</td>
<td>Tons</td>
<td>0.00059</td>
<td>Lbs/ton</td>
<td>0.00</td>
<td>0.12</td>
</tr>
<tr>
<td>Plant Loadout</td>
<td>200.00</td>
<td>Tons</td>
<td>0.00052</td>
<td>Lbs/ton</td>
<td>0.00</td>
<td>0.10</td>
</tr>
<tr>
<td>Asphalt Heater - #4 Fuel Oil</td>
<td>0.0047</td>
<td>Mgal/hr</td>
<td>5.84280</td>
<td>Lbs/Mgal</td>
<td>0.00</td>
<td>0.03</td>
</tr>
<tr>
<td>Storage Pile - Load In MC 0.7</td>
<td>190.0000</td>
<td>Tons</td>
<td>0.01200</td>
<td>Lbs/ton</td>
<td>0.00</td>
<td>2.28</td>
</tr>
<tr>
<td>Storage Pile - Load Out MC 0.7</td>
<td>190.00</td>
<td>Tons</td>
<td>0.01200</td>
<td>Lbs/ton</td>
<td>0.00</td>
<td>2.28</td>
</tr>
<tr>
<td>Storage Pile - Wind Errosion</td>
<td>1.00</td>
<td>Acres</td>
<td>0.08917</td>
<td>Lbs/Acre.hr</td>
<td>0.00</td>
<td>0.09</td>
</tr>
<tr>
<td>Storage Pile - Vehicular Activity</td>
<td>0.60</td>
<td>VMT</td>
<td>2.289732</td>
<td>Lbs/VMT</td>
<td>90.00</td>
<td>0.14</td>
</tr>
<tr>
<td>Haul Road Customer</td>
<td>6.25</td>
<td>VMT</td>
<td>2.03084</td>
<td>Lbs/VMT</td>
<td>90.00</td>
<td>1.27</td>
</tr>
</tbody>
</table>

\(^1\) Maximum Hourly Design Rate (MHDR)
\(^2\) Emission Factor (EF)