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**DEQ AIR QUALITY PROGRAM**  
1410 N. Hilton, Boise, ID 83706  
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DEPARTMENT OF ENVIRONMENTAL QUALITY **General Information Form GI**  
STATE AIR QUALITY PROGRAM  
Revision 7  
2/18/10

Please see instructions on page 2 before filling out the form.

**All information is required. If information is missing, the application will not be processed.**

IDENTIFICATION	
1. Company Name	2. Facility Name:
MotivePower, Inc., a Wabtec Company	MotivePower, Inc.
3. Brief Project Description:	Request for permit revision to relocate Component Shop bead blast enclosure and revise method of demonstrating compliance with paint solids content.
FACILITY INFORMATION	
4. Primary Facility Permit Contact Person/Title	Art Anderson EH&S Manager
5. Telephone Number and Email Address	208-947-4821 aanderson@wabtec.com
6. Alternate Facility Contact Person/Title	Brandi Williams Safety Specialist
7. Telephone Number and Email Address	208-947-2958 bswilliams@wabtec.com
8. Address to Which the Permit Should be Sent	4600 Apple Street
9. City/County/State/Zip Code	Boise                      Ada                      ID                      83716
10. Equipment Location Address (if different than the mailing address above)	
11. City/County/State/Zip Code	
12. Is the Equipment Portable?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
13. SIC Code(s) and NAICS Code	Primary SIC: 3743                      Secondary SIC: 379                      NAICS: 33651
14. Brief Business Description and Principal Product	Manufactures and remanufactures diesel electric locomotives and locomotive components.
15. Identify any adjacent or contiguous facility that this company owns and/or operates	MotivePower Truck and Engine Annex, 2100 Braniff Street, Boise, ID
16. Specify the reason for the application	<input type="checkbox"/> Permit to Construct (PTC) <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p><b>For Tier I permitted facilities only:</b> If you are applying for a PTC then you must also specify how the PTC will be incorporated into the Tier I permit.</p> <input type="checkbox"/> Incorporate the PTC at the time of the Tier I renewal  <input type="checkbox"/> Co-process the Tier I modification and PTC  <input type="checkbox"/> Administratively amend the Tier I permit to incorporate the PTC upon your request (IDAPA 58.01.01.209.05.a, b, or c)           </div> <input type="checkbox"/> Tier I Permit <input type="checkbox"/> Tier II Permit <input type="checkbox"/> Tier II/Permit to Construct
CERTIFICATION	
In accordance with <b>IDAPA 58.01.01.123</b> (Rules for the Control of Air Pollution in Idaho), I certify based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete.	
17. Responsible Official's Name/Title	Mark S. Warner Vice President and General Manager
18. Responsible Official's Signature	 Date: 7/13/11
19. <input checked="" type="checkbox"/> Check here to indicate that you would like to review the draft permit prior to final issuance.	

July 11, 2011

Mr. Bill Rogers  
Permit Coordinator  
Air Quality Program Office – Application Processing  
Idaho Dept. of Environmental Quality  
1410 North Hilton  
Boise, Idaho 83706 – 1255

Re: MotivePower, Inc.  
Permit No. P-2009.0097  
Application for Permit Revision  
AGI Project No. 99092-006

Dear Mr. Rogers:

American Geosciences, Inc., (AGI) is requesting two permit revisions to P-2009.0097 (dated 11-11-2010) on behalf of our client, MotivePower, Inc. The first request is to revise the method of demonstrating compliance with particulate matter emission rates from painting operations. The second request involves relocating a bead blasting enclosure. Both requests are described in detail below.

### **PAINT SOLIDS CONTENT**

**Background:** The facility's permit contains a limit on the solids content of any individual paint product used at the facility (Permit Item 29). This limit is designed to ensure that the particulate matter emission rates (which were used in the air quality analysis dispersion model) are not exceeded. Paint manufacturers are increasingly formulating products with the goal of reducing or eliminating VOC content. As VOC contents are decreased, the result is often an increase in solids contents. Of fifteen potential new paint products reviewed by our staff this year for use at the MotivePower facility, four were above the permitted solids content limit of 8.16 lbs/gal. This trend in the paint industry, although welcomed from an environmental perspective, will limit MotivePower's ability to operate if the current method of demonstrating compliance is retained. **The facility is not requesting a change in permitted emission rates.** MotivePower is requesting to revise the permit requirement for paint solids content from a limit on any individual paint to a limit on the weighted average of the paints used. The revised method would still ensure that the emission rates are below those used in the air dispersion model.

**Emission Rate Calculations:** The permitted particulate matter emission rates (lbs/hr) were calculated for each of the six paint shops by the following method:

Daily Usage (total gal paint/day) at the shop \* Maximum Solids Content (lbs solids/gal paint) \* (1-Transfer Efficiency) \* (1-Control Efficiency) / 24 hours/day

where the Daily Usage is the total gallons of all paint products used at the shop and the Maximum Solids Content is 8.16 lbs/gal. Each paint shop has a permitted maximum daily usage and these maximums were used to calculate particulate emissions for each paint shop.

**Requested Revision:** MotivePower is requesting to ensure compliance with the permitted particulate matter emission rates by keeping records to demonstrate that the daily weighted average (dwa) solids content at each of the six paint shops is below 8.16 lbs/gal paint. The method to be employed for calculating the daily weighted average solids content is provided in the example below:

Example Paint Shop

<u>Paint</u>	<u>Daily Usage (gal)</u>	<u>Solids Content (lbs. solids/gal paint)</u>
Product 1	10	8.5
Product 2	50	8.3
Product 3	100	3.5

$$\text{Solids Content (dwa)} = [(10 \times 8.5) + (50 \times 8.3) + (100 \times 3.5)] / [10 + 50 + 100] = 5.3 \text{ lbs/gal}$$

The facility has permitted maximum daily paint usage limits at each shop and the maximum usage was used in the emission rate calculations. The facility is required to keep records of the daily usage at each paint shop. Compliance with the particulate matter emission rates can therefore be assured as long as the daily weighted average solids content is less than or equal to 8.16 lb/gal and the daily use is less than or equal to the permitted limits.

The suggested permit revisions are as follows.

- Remove “The solids content of a paint product shall not exceed 8.16 lb/gal” from Permit Item 29.
- Add the following requirement to each of the six paint shops (Permit Items 45, 53, 62, 70, 78, 86):  
“The daily weighted average (dwa) solids content of all paint products sprayed at the shop in one day shall not exceed 8.16 lb/gal.”
- Add the following recordkeeping requirement to each of the six paint shops (Permit Items 48, 56, 65, 73, 81, 90):  
“The daily weighted average (dwa) solids content of all paint products sprayed at the shop in one day in lbs/gal to demonstrate compliance with the solids content limit.

**RELOCATON OF BEAD BLASTING ENCLOSURE**

**Background:** The facility is requesting to relocate the Bead Blast Enclosure located in the Component Shop to the Strip-Wash-Blast-Paint (SWBP) shop. The proposed location would be adjacent to the existing blast booth in the SWBP shop and would discharge to the SWBP blast booth’s control device (filter bank) for additional treatment before exhausting. **This change would result in a decrease in permitted emissions rates.** This relocation and additional treatment constitutes a change to the permitted emissions unit; however the ambient impacts are not expected to exceed the applicable significant contribution levels. Prior consultation with Idaho Department of Environmental Quality (documentation

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enclosed) has determined that a modeling demonstration would not be required given the reduced emission rates provided below.

**Emission Rate Calculations:** The relocated blast booth will operate as it did in the Component Shop with the same usage rate of blast media and the same baghouse – yielding the same estimated emissions based on the AP-42 Section 13.2.6 emission factor:

$$(960 \text{ lb media/hr}) * (0.69 \text{ lb PM}_{10}/1000 \text{ lb media}) = 0.6642 \text{ lb PM}_{10}/\text{hr}$$

The exhaust from the unit will be ducted to the inlet of the SWBP blast booth filter bank where it will be further treated. The manufacturer's listed control efficiency for the filter bank is 99.999% down to 0.5 micron. The PTC application for the SWBP Shop conservatively uses 99.9% control efficiency for emission calculations. This additional treatment would yield the following final emission rate:

$$(0.6642 \text{ lb PM}_{10}/\text{hr}) * (1 - 0.999) = \mathbf{0.00066 \text{ lb PM}_{10}/\text{hr}}$$

The PM<sub>2.5</sub> emissions are estimated to be 10% of the PM<sub>10</sub> emissions. Thus, the PM<sub>2.5</sub> emission rates are as follows.

$$(0.00066 \text{ lb PM}_{10}/\text{hr}) * (0.1 \text{ lb PM}_{2.5}/ \text{lb PM}_{10}) = \mathbf{0.000066 \text{ lb PM}_{2.5}/\text{hr}}$$

$$(0.000066 \text{ lb PM}_{2.5}/\text{hr}) * (8760 \text{ hr/yr}) / (2000 \text{ lb/ton}) = \mathbf{0.00029 \text{ tpy of PM}_{2.5}}$$

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This application for permit revision contains three additional documents: an updated Form GI signed by MotivePower's responsible official to acknowledge the truth, accuracy and completeness of this request, and an email communication from DEQ which indicates significance modeling will not be required, and a check in the amount of \$1000 for the required fee. We appreciate the Department's cooperation in this matter. Please contact me at 724-733-7000 or [lmcshea@amergeo.com](mailto:lmcshea@amergeo.com) with any questions or comments that you may have as you review the enclosed material.

Sincerely,

AMERICAN GEOSCIENCES, INC.

Lori McShea  
Environmental Engineer

lm/tdw

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| enclosures:  
Check – MotivePower, \$1000  
Form GI  
DEQ Email Document – Darrin Mehr dated 6/28/2011

cc: Art Anderson, EH&S Manager, MotivePower, Inc.  
Eric Clark, IDEQ Permit Engineer  
Darrin Mehr, IDEQ Air Quality Analyst