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: 08 2008-007
Project Number: 2008-04-022

Parent Company: Kawasaki Heavy Industries Ltd.
Parent Company Address: 1-1 Kawasaki-Cho, Akashi, Japan
Installation Name: Kawasaki Motors Manufacturing Corporation
Installation Address: 28147 Business Highway 71, Maryville, MO 64468
Location Information: Nodaway County, S31, T64, R35

Application for Authority to Construct was made for:
The installation of a crankshaft machining line #7 and a cylinder head machining line #8 that will emit Volatile Organic Compounds (VOCs) from the oils used (emission point MMF). An aluminum die casting machine (DCF12) with a Maximum Hourly Design Rate (MHDR) of 0.435 tons of metal produced per hour and an aluminum alloy melting furnace (DCF11) with a natural gas MHDR of 2472 standard cubic feet per hour will also be installed. This review was conducted in accordance with Section (5), 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 12 2008

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 sources(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)
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:             Project Number: 2008-04-022
Parent Company:            Kawasaki Heavy Industries Ltd.
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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.
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.”

Kawasaki Motors Manufacturing Corporation
Nodaway County, S31, T64, R35

1. Superseding Condition
   A. Special conditions 1. A. B. and C. found in the previously issued construction permit number 112000-010 from the Air Pollution Control Program is superseded.

   B. Special conditions 1. A., B., and C. found in the previously issued construction permit number 092007-011 from the Air Pollution Control Program is superseded.

2. Emission Limitations
   A. Kawasaki Motors Manufacturing Corporation shall emit less than 250 tons of Volatile Organic Compounds (VOCs) from the entire installation in any consecutive 12-month period.

   B. Kawasaki Motors Manufacturing Corporation shall emit less than ten (10.0) tons individually or twenty-five (25.0) tons combined of Hazardous Air Pollutants (HAPs) from the entire installation in any consecutive 12-month period.

   C. Kawasaki Motors Manufacturing Corporation shall emit less than 250 tons of Carbon Monoxide (CO) from the entire installation in any consecutive 12-month period.

   D. Kawasaki Motors Manufacturing Corporation shall emit less than 3.0 tons of Fluorides from the entire installation in any consecutive 12-month period.

   E. Kawasaki Motors Manufacturing Corporation must determine the total amount of VOC, HAPs, CO, and Fluorides emitted from the installation. Attachment A, B, C, and D or equivalent forms approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Conditions 2.A, 2.B, 2.C, and 2.D.
SPECIAL CONDITIONS:

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

F. Kawasaki Motors Manufacturing Corporation 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. These records shall include Material Safety Data Sheets (MSDS) for all materials used at the installation.

G. Kawasaki Motors Manufacturing Corporation shall report to the Air Pollution Control Program’s Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after the end of the month during which the records from Special Condition Number 2.E indicate that the source exceeds the limitation of Special Conditions Number 2.A, 2.B, 2.C, and 2.D.
REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW
Project Number: 2008-04-022
Installation ID Number: 147-0023
Permit Number:

Kawasaki Motors Manufacturing Corporation
28147 Business Highway 71
Maryville, MO 64468

Parent Company:
Kawasaki Heavy Industries Ltd.
1-1 Kawasaki-Cho
Akashi, Japan

Nodaway County, S31, T64, R35

REVIEW SUMMARY

• The installation of crankshaft machining line #7, cylinder head machining line #8 and
  an aluminum Die Casting machine with a Maximum Hourly Design Rate (MHDR) of
  0.435 tons of metal charged and a melting furnace with a natural gas MHDR of 2472
  standard cubic feet per hour.

• Hazardous Air Pollutant (HAP) emissions are not expected from the proposed
  equipment. The HAP limit in this permit is to correct and remove the equipment limit
  found in permit number 112000-010, as it was redundant when an installation wide
  HAP limit was applicable.

• None of the New Source Performance Standards (NSPS) apply to the proposed
  equipment.

• 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.

• No air pollution control equipment is being used in association with the new
  equipment.

• This review was conducted in accordance with Section (5) of Missouri State Rule
  10 CSR 10-6.060, Construction Permits Required. Potential emissions of PM_{10} are
  below de minimis levels by limiting fluoride emissions.

• This installation is located in Nodaway 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),
• Ambient air quality modeling was performed to determine the ambient impact of PM$_{10}$.

• Emissions testing is not required for the source.

• A revision to the Part 70 Operating permit application is required for this installation within 1 year of equipment startup.

• Approval of this permit is recommended with special conditions.

**INSTALLATION DESCRIPTION**

Kawasaki Motors Manufacturing Corporation operates a gasoline engine manufacturing installation in Maryville, Missouri, (Nodaway County). Kawasaki Motors builds engines ranging from 4.5 horsepower (hp) up to 35.0 hp. These engines are primarily used in walk-behind lawn mowers, riding lawn mowers and all-terrain vehicles.

Kawasaki Motors Manufacturing Corporation is not considered an existing major source for construction permitting because of the 250-ton limit established in Permit # 092005-001 and 062007-004. For New Source Review purposes, it is considered a minor source. The installation submitted a Part 70 State Operating Permit application (Project Number: 2006-03-047) on March 09, 2006.

The following projects for Kawasaki Motors Manufacturing Corporation have been processed by the Air Pollution Control Program.

Table 1: Previous Permit Projects

<table>
<thead>
<tr>
<th>Permit Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>092007-011</td>
<td>2007-05-059 Endurance testing Facility</td>
</tr>
<tr>
<td>062007-004</td>
<td>2006-10-085: Use of aviation fuel</td>
</tr>
<tr>
<td></td>
<td>2006-09-062: Use of aviation fuel-applicability determination</td>
</tr>
<tr>
<td>092005-001A</td>
<td>2006-04-058: Amendment remove conditions</td>
</tr>
<tr>
<td>No Permit Required</td>
<td>2006-03-045: Die casting and crankcase machining</td>
</tr>
<tr>
<td></td>
<td>2006-03-047: Part 70 Operating Permit Amendment</td>
</tr>
<tr>
<td></td>
<td>2005-10-020: Update Part 70 Operating Permit</td>
</tr>
<tr>
<td>092005-001</td>
<td>2005-05-106: Install four new processes</td>
</tr>
<tr>
<td></td>
<td>2004-11-068: Intermediate Operating Permit Amendment</td>
</tr>
<tr>
<td>012005-002</td>
<td>2004-10-003: Add two small engine assembly lines</td>
</tr>
<tr>
<td>032004-006</td>
<td>2003-10-049: Installation of a machining operation</td>
</tr>
<tr>
<td>No Permit Required</td>
<td>2003-06-036: Engine testing exhaust fans</td>
</tr>
<tr>
<td></td>
<td>2003-05-092: Intermediate Operating Permit Amendment</td>
</tr>
<tr>
<td>082003-011</td>
<td>2003-05-091: Installation of an engine assembly line</td>
</tr>
<tr>
<td></td>
<td>2003-02-097: Applicability, permit required for new lines.</td>
</tr>
<tr>
<td></td>
<td>2002-06-097: Intermediate Operating Permit application</td>
</tr>
<tr>
<td></td>
<td>2002-05-002: Correction or amendment change retaining compound.</td>
</tr>
<tr>
<td>No Permit Required</td>
<td>2001-05-090: 680cc LPG engines.</td>
</tr>
<tr>
<td>No Permit Required</td>
<td>2001-03-092: Installation of natural gas engines.</td>
</tr>
</tbody>
</table>
Permit Number | Description
--- | ---
062001-001 | 2001-02-113: Installation of a wet vacuum impregnation system to seal porosity in aluminum parts
112000-010 | 2000-09-054: Installation of two (2) gasoline engine assembly lines
0699-024 | 1999-03-119: Installation of an assembly line for building internal combustion engines and installation of an electrode position paint system
0598-012 | 1998-02-022: Addition of a wet paint booth and a process heater
147-0023-020 | Intermediate Operating Permit Application
0897-034 | 147-0023-017: Installation of a gasoline engine assembly line
0797-005 | 3340-0023-017: Installation of four (4) machining lines and six (6) heating/ventilation units
0494-009 | 3340-0023-016: Installation of an aluminum die casting machine and a machine process
0493-011 | 3340-0023-015: Installation of two (2) aluminum die casts and melting furnaces
0193-001 | 3340-0023-011: Installation of a powder paint booth
1291-004 | 3340-0023-009: Addition of chromate aluminum parts
3340-0023-008: Amendment to 0791-001
0791-001 | 3340-0023-007: Installation of gasoline engine assembly line and aluminum scrap furnaces
1190-004 | 3340-0023-006: Addition of connecting rod machine line and injection molding
0890-001 | 3340-0023-005: Installation of aluminum die cast engines

Kawasaki Motors Manufacturing Corporation has had several permitting actions take place over a relatively short period of time. Kawasaki Motors Manufacturing Corporation asserts that production is expanded to be consistent with demand and need for new engines, as decided by the parent company, Kawasaki Heavy Industries Ltd. Although several projects involve machining, the parts made serve different purposes, and so, should not be considered together.

**PROJECT DESCRIPTION**

Kawasaki proposes to install three new processes at (147-0023) the gasoline engine manufacturing installation at this time.

**Crankshaft Machining Line #7**
The crankshaft machining line will primarily machine FH680V crankshafts but will also be capable of machining 4240 series and FX850V crankshafts. These crankshafts are made of ductile iron. Coolants, lubricants and cutting oils will be used in the process recorded in emission point MMF. The applicant determined their maximum usage of coolants, lubricants and oils at the installation to have an MHDR of 0.01 tons per hour.

**Cylinder Head Machining Line #8**
The machining line will primarily machine FH680V aluminum cylinder heads. Coolants, lubricants and cutting oils will be used in this process. The applicant determined their maximum usage of coolants, lubricants and oils at the installation to have an MHDR of 0.01 tons per hour.

**Aluminum Alloy #6 melting furnace and a new die cast machine**
The melting furnace supplies molten aluminum metal for the die casting machine. The die cast machine is used for making small engine parts. The melting furnace will be
natural gas fired and rated at 2.39 Million Btu/hr. The throughput of aluminum alloy will be approximately 2505.6 tons per year.

Hydrogen fluoride (HF) which is also known as hydrofluoric acid is considered a HAP. Hydrogen fluoride is not considered a PM. HF HAP emissions and fluoride (F\(^-\)) emissions are a concern for this project because of the use of fluxes. Fluxes that contain fluoride (F\(^-\)) a reduced form of fluorine (F) may react with moisture to form HF. Both organic and inorganic compounds containing the element fluorine are considered fluorides. HF is an inorganic fluoride.

The compounds in the fluxes submitted in the application that contain fluoride are potassium fluoro-silicate (K\(_2\)SiF\(_6\) synonym; potassium sillicofluoride) and potassium aluminum fluoride (KAlF\(_4\)). Two fluxes were submitted for this review Flux SF-350 contains both compounds at 40 and 10 percent by weight and Flux 206 only contains potassium aluminum fluoride at 10 percent by weight.

However, the addition of fluoride flux generating HF (HAP emissions) and/or fluoride emissions is not well understood. Part of the action of the fluorides in the flux is thought to be due to the liberation of fluorine, which attracts silicates and dirt. Because of agitation, the oxides and the dirt rise to the top of the molten metal were they can be skimmed off. HF is very reactive and very corrosive. Corrosive damage is typically not observed.

A small amount of HF emissions could easily exceed the Screen Modeling Action Level (SMAL) of 0.1 tons (200 pounds) per year requiring this installation to show compliance with the Risk Assessment Levels for HF. Another permitting concern with the use of the flux is the specific de minimis level that exists for fluorides at 3.0 tons per year. Exceeding this value will make the installation a minor source for fluorides. This PTE 3.0 ton per year de minimis level is found in Table 1 De Minimis Emission levels per 10 CSR 10 -6.020 Definitions and Common Reference Tables. The de minimis level for fluorides is also the SMAL value for fluoride. This installation uses two types of flux a wall cleaner flux and injection flux. The wall cleaner is formulated to remove aluminum oxide which typically accumulates at the metal line of the melting furnace and injection flux which are used to remove impurities in the metal. Many factors that control metal casting quality are out of the metal caster’s control and the flux addition rate often depends on these factors. Casting requirements, metal alloy selected, the casting process selected, and the actual casting solidification process selected tends to determine the fluxing rate. Metal quality depends on control of two factors hydrogen content and metal inclusions. Melting in air high temperatures, humidity, oxide covered charge particles, returns, trim gates and runners and sand system debris all contribute to metal impurities and determines the fluxing rate. Table 2 lists the amount used since 2003 to 2007.

The installation reports the fluorides released through the use of the flux in all die cast machines (emission point DCMFCE17) as particulate matter and not as a HAP. For this project, this amount of PM is considered to be fluoride. Assuming all of the fluoride is emitted as a PM is a conservative assumption, but may not be fully correct. Realistically, we do not have a method to calculate how much HAP is emitted as HF or

- 8 -
how much fluoride is formed. Counting all of the emission from the flux as fluoride, without counting any as the HAP HF appears to be a reasonable assumption given the well-documented process.

Presently, the total amount of flux used in 2007 was divided between the 8 die cast machines. That number is multiplied by the percent fluoride in the flux and becomes the annual amount.

Table 2: EIQ submittal for Emission Point DCFMFC17

<table>
<thead>
<tr>
<th>Year</th>
<th>Tons of PM (Fluorides) per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>1.44</td>
</tr>
<tr>
<td>2006</td>
<td>2.21</td>
</tr>
<tr>
<td>2005</td>
<td>3.15</td>
</tr>
<tr>
<td>2004</td>
<td>1.43</td>
</tr>
<tr>
<td>2003</td>
<td>1.26</td>
</tr>
</tbody>
</table>

From Table 2, it can be seen that in 2005 the amount was not below the 3.0 tons per year de minimis level for fluorides. The use of fluxes with fluorine or HF emissions has not been addressed in other Kawasaki permits. The amount of flux required depends on a number of factors as defined previously. The PTE of fluorine emissions is 7.884 tons per year based on the maximum rate MHDR of emission point DCFMFC17 Fugitive chemicals emitted fluxing furnace of 0.009 tons per hour of fluoride used for 8760 hours. Because the fluoride PTE exceeds the amount of 3.0 tons per year de minimis level for fluorides, a limit was placed on the amount of fluorides emitted to less than 3 tons per year. When that portion of the PM$_{10}$ PTE that is fluoride is lowered to the 3 ton per year limit, it eliminates the need for PM$_{10}$ modeling to determine increment consumption, NAAQs modeling, and compliance with the risk assessment levels (RAL) if the SMAL value for fluorides was exceeded.

The installation indicated that the existing #6 die cast machine and the associated melting furnace permitted in 0493-011 would be removed. The installation indicated that this was not a debottlenecking operation. The MHDR of the new die cast machine is estimated to run at 80 percent efficiency and is based on 40 parts per hour at a rate of 24 hours per day 5 days a week 48 weeks per year.

The potential to emit calculation for VOCs (emission point MMF) for the machining lines was calculated by taking the MHDR of total product through the machining lines dividing out the percent of the amount of each VOC containing product to obtain the potential to emit of each VOC containing product.

The installation has an existing VOC limit of 250 tons per rolling 12 month period and a 10 ton individual HAP and a 25 ton combined HAP limit per 12 month period. The equipment installed in this permit is considered to be part of the installation wide limits. The Special Condition 1. A. B. and C. in Permit # 112000-010 required that the HAPs for the individual assembly lines 6 and 7 be recorded. Kawasaki Motors Manufacturing Corporation will show compliance with the Special Conditions 1. A. B. and C. in permit number 112000-010 by following the special conditions listed in this permit.
EMISSIONS/CONTROLS EVALUATION

Potential VOC emissions from machining (MMF) were determined based on historical usage and a conservative estimate of increased usage for the proposed processes (installation total potential machining oil usage of 50,000 gallon annually). Calculations were done using a mass balance and the assumption that all of the VOCs contained in the machining oils will be emitted to the ambient air. The maximum rate for all machining lines is 0.01 tons per hour. The annual consumption rate of cutting fluid and washing fluids (0.3985 tons per year) was determined by the applicant. The rate was divided by 8760 to determine an hourly rate for this process of 0.000045 tons per hour.

Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year). Existing potential for the remaining pollutants was taken from Permit No. 092007-011. Existing actual emissions were taken from the applicant’s 2007 Emissions Inventory Questionnaire (EIQ) submittal. The following table provides an emissions summary for this project.

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)**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PM$_{10}$</td>
<td>15.0</td>
<td>30.07</td>
<td>8.05</td>
<td>16.11</td>
<td>11.23**</td>
</tr>
<tr>
<td>SO$_x$</td>
<td>40.0</td>
<td>23.93</td>
<td>0.22</td>
<td>0.0</td>
<td>N/A</td>
</tr>
<tr>
<td>NO$_x$</td>
<td>40.0</td>
<td>&lt;40</td>
<td>22.98</td>
<td>0.02</td>
<td>&lt;40</td>
</tr>
<tr>
<td>VOC</td>
<td>40.0</td>
<td>&lt;250</td>
<td>122.20</td>
<td>0.66</td>
<td>&lt;250</td>
</tr>
<tr>
<td>CO</td>
<td>100.0</td>
<td>&lt;250</td>
<td>125.71</td>
<td>0.0</td>
<td>&lt;250</td>
</tr>
<tr>
<td>Fluorides</td>
<td>3.0</td>
<td>N/D</td>
<td>N/A</td>
<td>7.88</td>
<td>&lt;3.0</td>
</tr>
<tr>
<td>HAPs</td>
<td>10.0/25.0</td>
<td>&lt;10.0/25.0</td>
<td>3.35</td>
<td>N/A</td>
<td>&lt;10.0/25.0</td>
</tr>
</tbody>
</table>

N/A = Not Applicable; N/D Not Determined
* Existing potential emissions totals are taken from Permit 092007-011 with Project Number: 2007-05-059.
** Based on limiting the PM$_{10}$ portion that is fluoride from the fluxes.

PERMIT RULE APPLICABILITY
This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required.*
Kawasaki Motors Manufacturing Corporation shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved.

GENERAL REQUIREMENTS

- Submission of Emission Data, Emission Fees and Process Information, 10 CSR 10-6.110
  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.

- 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

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), 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

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated April 01, 2008, received April 07, 2008, designating Kawasaki Heavy Industries Ltd. as the owner and operator of the installation.


- Kansas City Regional Office Site Survey.
Attachment A  
VOC and CO Monthly Compliance Worksheet  
Kawasaki Motors Manufacturing Corporation Nodaway County, S31, T64, R35  
Project Number: 2008-04-022 Installation ID Number: 147-0023

<table>
<thead>
<tr>
<th>Emission Point</th>
<th>Usage Units</th>
<th>Usage Amt.</th>
<th>VOC Emission Factor</th>
<th>CO Emission Factor</th>
<th>VOC (lb)</th>
<th>CO (lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Gasoline Emission Point</td>
<td>gallons</td>
<td>76.5000</td>
<td>0.3939 lb/gal</td>
<td>8.151 lb/gal</td>
<td>30.1334</td>
<td>623.5515</td>
</tr>
<tr>
<td>AET1</td>
<td>gallons</td>
<td></td>
<td></td>
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<tr>
<td>AET2</td>
<td>gallons</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>AET3</td>
<td>gallons</td>
<td></td>
<td></td>
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<tr>
<td>AET4</td>
<td>gallons</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AET5</td>
<td>gallons</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AET6</td>
<td>gallons</td>
<td></td>
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<td>ASTC</td>
<td>gallons</td>
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</tr>
</tbody>
</table>

Some Emission Points need to be segmented for calculation

(lb/2000) Attachment A Total Tons

Note: The VOC content of reclaimed VOC material transferred to a contract reclamation service can be subtracted from the VOC total. A 12-Month rolling CO emission total of CO of less than or equal to 250.0 tons indicates compliance.
### Attachment B

#### VOC Monthly Compliance Worksheet

<table>
<thead>
<tr>
<th>Point</th>
<th>Product</th>
<th>Part #</th>
<th>VOC %</th>
<th>Density(lb/gal)</th>
<th>Usage-Gal</th>
<th>VOCs-lbs</th>
<th>Container Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMF</td>
<td>Example (cutting oil)</td>
<td>H1957</td>
<td>54.00%</td>
<td>7.6200</td>
<td>41.2500</td>
<td>169.7355</td>
<td>55 gal drum</td>
</tr>
</tbody>
</table>

Total VOC tons

Attachment A + Attachment B Combined Total Tons:

Attachment A VOC total is added to the total of Attachment B. All VOC emissions from the site must be counted. A 12-Month rolling VOC emission total of all VOC emissions at the installation of less than or equal to 250.0 tons indicates compliance.
Attachment C  
HAP Monthly Compliance Work Sheet  
Kawasaki Motors Manufacturing Corporation  
Nodaway County, S31, T64, R35  
Project Number 2008-04-022  
Installation ID Number 147-0023

For Month__________ Year__________

<table>
<thead>
<tr>
<th>(A)</th>
<th>(B)</th>
<th>(C)</th>
<th>(D)</th>
<th>(E)</th>
<th>(F)</th>
<th>(G)</th>
<th>(H)</th>
</tr>
</thead>
<tbody>
<tr>
<td>D times E Times F</td>
<td>G times 0.005</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HAP Chemical</th>
<th>CAS #</th>
<th>Product</th>
<th>Gallons used</th>
<th>% HAP</th>
<th>Sp Gr</th>
<th>Lbs of HAPs</th>
<th>Tons of HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Benzene</td>
<td>71-43-2</td>
<td>Cleaning solution</td>
<td>15</td>
<td>&lt;0.5%</td>
<td>0.7100</td>
<td>0.5325</td>
<td>0.0026</td>
</tr>
</tbody>
</table>

Monthly Total Tons: 

12 month Rolling Cumulative Tons: 

A rolling 12-Month HAP emission total of all HAPs emissions at the installation of less than or equal to 10 tons individually HAP or 25 tons combined HAP indicates compliance.
### Attachment D
**Fluoride Monthly Compliance Work Sheet**
Kawasaki Motors Manufacturing Corporation  
Nodaway County, S31, T64, R35  
Project Number 2008-04-022  
Installation ID Number 147-0023

For Month__________ Year__________

<table>
<thead>
<tr>
<th>Flux Chemical</th>
<th>Pounds used per month.</th>
<th>Fluoride compounds in flux</th>
<th>Weight Percent of fluoride compound to FLUX chemical</th>
<th>Weight Percent of Fluoride in compound</th>
<th>Pounds of fluorine (Column B times Column D times Column E)</th>
<th>Tons of fluorine (Column F divided by 2000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example SF-350</td>
<td>1500</td>
<td>Potassium Aluminum Fluoride</td>
<td>0.10</td>
<td>0.253</td>
<td>37.95</td>
<td>0.018975</td>
</tr>
<tr>
<td>Example SF-350</td>
<td>1500</td>
<td>Potassium Fluorosilicate</td>
<td>0.40</td>
<td>0.245</td>
<td>147</td>
<td>0.0735</td>
</tr>
<tr>
<td>Example SF-206</td>
<td>3000</td>
<td>Potassium Aluminum Fluoride</td>
<td>0.10</td>
<td>0.253</td>
<td>75.9</td>
<td>0.03795</td>
</tr>
</tbody>
</table>

**Monthly Total Tons:** 0.13043

A rolling 12-Month Fluorine emission total of all fluorine emissions at the installation of less than or equal to 3 tons indicates compliance.

Note: The weight percent of fluorine in potassium aluminum fluoride (KAlF₄) is the molecular weight of Fluorine divided by the molecular weight of potassium aluminum fluoride $\frac{36}{142} = 0.253$. The same method is used for potassium silicofluoride $\frac{54}{220} = 0.245$.
Ms. LeAnne Ebrecht  
Environmental Technician  
Kawasaki Motors Manufacturing Corporation  
28147 Business Highway 71  
Maryville, MO 64468

RE:  New Source Review Permit - Project Number: 2008-04-022

Dear Ms. Ebrecht:

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 amended 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 Tim Hines at the department’s Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or by telephone at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale  
New Source Review Unit Chief  

KBH:thl

Enclosures

  c:  Kansas City Regional Office  
PAMS File 2008-04-022  
Permit Number