

23 January 2015

Mr. Craig Haddad  
General Manager  
Material Sampling Technologies, LLC  
800 Central Street  
North Smithfield, RI 02896

Dear Mr. Haddad:

The Department of Environmental Management, Office of Air Resources has reviewed and approved your request for the installation of air pollution control equipment at your facility located at 800 Central Street, North Smithfield, RI.

Enclosed is a minor source permit issued pursuant to our review of your application (Approval No. 2276).

If there are any questions concerning this permit, please contact me at 401-222-2808, extension 7415 or at [stephen.stamand@dem.ri.gov](mailto:stephen.stamand@dem.ri.gov).

Sincerely,

Stephen G. St. Amand  
Air Quality Specialist  
Office of Air Resources

cc: North Smithfield Building Official

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS  
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR RESOURCES

MINOR SOURCE PERMIT

MATERIAL SAMPLING TECHNOLOGIES, LLC

APPROVAL NO. 2276

Pursuant to the provisions of Air Pollution Control Regulation No. 9, this minor source permit is issued to:

*LKQ Precious Metals Inc. d/b/a Material Sampling Technologies, LLC*

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For the following:

*Installation of a Tri-Mer<sup>®</sup> Corporation packed bed scrubber, Model No. V/F-18-48, to treat Nitric Acid (HNO<sub>3</sub>) and Hydrochloric Acid (HCl) emissions from the laboratory fume hood.*

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Located at: *800 Central Street, North Smithfield, RI*

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**This permit shall be effective from the date of its issuance and shall remain in effect until revoked by or surrendered to the Department. This permit does not relieve *Material Sampling Technologies, LLC* from compliance with applicable state and federal air pollution control rules and regulations. The design, construction and operation of this equipment shall be subject to the attached permit conditions and emission limitations.**

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Douglas L. McVay, Chief  
Office of Air Resources

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Date of issuance

**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS  
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR RESOURCES**

Permit Conditions and Emission Limitations

**MATERIAL SAMPLING TECHNOLOGIES, LLC**

**APPROVAL NO. 2276**

**A. Emission Limitations**

1. Hydrochloric Acid (HCl)

- a. HCl emissions generated from the laboratory fume hood shall be reduced by 99% or greater before discharge to the atmosphere.
- b. The total quantity of HCl emissions discharged to the atmosphere from the facility shall not exceed 700 pounds in any consecutive 12-month period.

2. Nitric Acid (HNO<sub>3</sub>)

- a. HNO<sub>3</sub> emissions generated from the laboratory fume hood shall be reduced by 93% or greater before discharging to the atmosphere.
- b. The total quantity of HNO<sub>3</sub> emissions discharged to the atmosphere from the facility shall not exceed 30 pounds in any consecutive 12-month period

3. Opacity

There shall be no visible emissions from the scrubber exhaust. Where the presence of uncombined water is the only reason for failure to meet this requirement, such failure shall not be a violation of this requirement.

4. Odors

Any air contaminant or combination of air contaminants discharged to the atmosphere from the facility shall not create an objectionable odor beyond the property line of this facility. Odor evaluations shall be conducted according to the provisions of Air Pollution Control Regulation No. 17.

**B. Operating Requirements**

1. HCl and HNO<sub>3</sub> emissions generated from the laboratory fume hood shall be captured, contained and routed to the wet scrubber for treatment prior to discharge to the atmosphere.

2. The owner/operator shall maintain and operate the wet scrubber in accordance with the manufacturer's operating procedures and good air pollution control practice.

**C. Monitoring**

1. The pH of the scrubbing liquid shall be monitored continuously and checked a minimum of once per day and the date, time, and measurement shall be recorded.
2. The pressure drop across the wet scrubber shall be monitored continuously and checked a minimum of once per day and the date, time, and measurement shall be recorded.
3. The scrubbing liquid flow rate shall be monitored continuously and checked a minimum of once per day and the date, time, and measurement shall be recorded.
4. The monitoring devices used for the measurement of pH, pressure drop and flow rate shall be calibrated periodically consistent with the manufacturer's recommendations.

**D. Recordkeeping and Reporting**

1. The owner/operator shall maintain the following records:
  - a. All records of the pH, pressure drop and scrubbing liquid flow rate measurements for the wet scrubber.
  - b. Records of all maintenance performed on the wet scrubber and monitoring equipment.
  - c. Records of the occurrence, duration and cause (if known) of each malfunction of process equipment, control equipment and monitoring equipment that could result in HCl or HNO<sub>3</sub> emissions in excess of permit limits.
2. The owner/operator shall, on a monthly basis, no later than 15 days after the first of the month, determine the total quantity of HCl and HNO<sub>3</sub> discharged to the atmosphere from the facility for the previous 12-month period. The owner/operator shall keep records of this determination and provide such records to the Office of Air Resources upon request.
3. The owner/operator shall notify the Office of Air Resources, in writing, within 15 days of the determination, whenever the total quantity of HCl discharged to the atmosphere exceeds 700 pounds for the previous twelve months.
4. The owner/operator shall notify the Office of Air Resources, in writing, within 15 days of the determination, whenever the total quantity of HNO<sub>3</sub> discharged to the atmosphere exceeds 30 pounds for the previous twelve months.

5. The owner/operator shall notify the Office of Air Resources, in writing, of the date of initial startup of the wet scrubber no later than 15 days after startup.
6. The owner/operator shall notify the Office of Air Resources of any anticipated noncompliance with the terms of this permit or any other applicable air pollution control rules and regulations.
7. The owner/operator shall notify the Office of Air Resources, in writing, of any noncompliance with the terms of this permit within 30 calendar days of becoming aware of such occurrence and supply the Director with the following information:
  - a. The name and location of the facility;
  - b. The subject source(s) that caused the noncompliance with the permit term;
  - c. The time and date of the first observation of the incident of noncompliance;
  - d. The cause and expected duration of the incident of noncompliance;
  - e. The estimated rate of emissions (expressed in lbs/hr or lbs/day) during the incident and the operating data and calculations used in estimating the emission rate.
  - f. The proposed corrective actions and schedule to correct the conditions causing the incidence of noncompliance.
8. The owner/operator shall notify the Office of Air Resources in writing of any planned physical or operational change to any equipment that would:
  - a. Change the representation of the facility in the application.
  - b. Alter the applicability of any state or federal air pollution rules or regulations.
  - c. Result in the violation of any terms or conditions of this permit.
  - d. Qualify as a modification under APC Regulation No. 9.

Such notification shall include:

- Information describing the nature of the change.
- Information describing the effect of the change on the emission of any air contaminant.
- The scheduled completion date of the planned change.

Any such change shall be consistent with the appropriate regulation and have the prior approval of the Director.

9. All records required in this permit shall be maintained for a minimum of five years after the date of each record and shall be made available to representatives of the Office of Air Resources upon request.

#### **E. Malfunctions**

1. The owner/operator may seek to establish that a malfunction of any air pollution control system that would result in noncompliance with any of the terms of this permit or any other applicable air pollution control rule and regulations was due to unavoidable increases in emissions attributable to the malfunction. To do so, the owner/operator must demonstrate to the Office of Air Resources that:
  - a. The malfunction was not attributable to improperly designed equipment, lack of preventative maintenance, careless or improper operation or operator error;
  - b. The malfunction is not part of a recurring pattern indicative of inadequate design, operation or maintenance;
  - c. Repairs were performed in an expeditious fashion. Off-shift labor and overtime should be utilized, to the extent practicable, to ensure that such repairs were completed as expeditiously as practicable.
  - d. All possible steps were taken to minimize emissions during the period of time that repairs were performed.
  - e. Emissions during the period of time that the repairs were performed will not:
    - (1) Cause an increase in the ground level ambient concentration at or beyond the property line in excess of that allowed by Air Pollution Control Regulation No. 22 and any Calculated Acceptable Ambient Levels; and
    - (2) Cause or contribute to air pollution in violation of any applicable state or national ambient air quality standard.
  - f. The reason that it would be impossible or impractical to cease the source operation during said period.
  - g. The owner/operator's actions in response to the excess emissions were documented by properly signed, contemporaneous operating logs or other relevant evidence.

This demonstration must be provided to the Office of Air Resources within two working days of the time when the malfunction occurred and contain a description

of the malfunction, any steps taken to minimize emissions and corrective actions taken.

The owner/operator shall have the burden of proof in seeking to establish that noncompliance was due to unavoidable increases in emissions attributable to the malfunction.

**F. Other Permit Conditions**

1. To the extent consistent with the requirements of this permit and applicable federal and state laws, the facility shall be designed, constructed and operated in accordance with the representation of the facility in the permit application.
2. There shall be no by-passing of the scrubber during times when HCl and HNO<sub>3</sub> emissions are being generated.
3. Employees of the Office of Air Resources and its authorized representative shall be allowed to enter the facility at all times for the purpose of inspecting any air pollution source, investigating any condition it believes may be causing air pollution or examining any records required to be maintained by the Office of Air Resources.
4. The owner/operator shall cease using the laboratory hood in the event of a malfunction of the scrubber that results in, or that could result in, emissions in excess of the permit limits. The processes shall remain shut down until the malfunction has been identified and corrected.
5. At all times, including periods of startup, shutdown and malfunction, the owner/operator shall, to the extent practicable, maintain and operate the facility in a manner consistent with good air pollution control practice for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this permit have been achieved. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Office of Air Resources, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures and inspection of the source.