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: 12 2015-001
Project Number: 2013-12-026
Installation Number: 510-0405

Parent Company: Associated Rack Corporation
Parent Company Address: 70 Athens Drive, Mount Joliet, TN 37122
Installation Name: Able Rack Company
Installation Address: 6800 North Broadway, St. Louis, MO 63147
Location Information: City of St. Louis, MO

Application for Authority to Construct was made for:

The permitting of an existing rack manufacturing and coatings facility. 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.

DEC 01 2015
EFFECTIVE DATE

Karee L. Moore
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 these air contaminant sources. 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 these air contaminant sources.

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 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 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.

1. Operational Requirements for the Burn-off Oven
   A. Able Rack Company shall burn exclusively natural gas in the burn-off oven (EP-01)
   B. Able Rack Company shall use a direct-flame afterburner to control emissions from the burn-off oven. The afterburner shall be operated at a temperature of at least 1,400 degrees with more than a one-half (1/2) second residence time to ensure a minimum combustion efficiency of 99.9%.
   C. The burn-off oven shall be equipped with a continuous recorder, with digital readout, which is able to monitor, display, and record the temperature in the second combustion chamber to an accuracy of plus or minus two percent (2%).

2. HAP Emission Limits
   A. Able Rack Company shall emit less than 10.0 tons of Hydrogen Chloride (HCl) in any consecutive 12-Month period from the entire installation. The only equipment expected to emit HCl is the burn-off oven.
   B. Attachments A, or equivalent forms such as electronic forms, shall be used to demonstrate compliance with Special Conditions 2.A. The equivalent forms shall use the same emission factors and calculation methods as Attachments A.

3. Control Device Requirements – Dust Collector
   A. Able Rack Company shall control emissions from the blasting equipment EP-04) using a booth equipped with dust collectors as specified in the permit application.
   B. The dust collectors shall be operated and maintained in accordance with the manufacturer’s specifications. The dust collectors 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 Department of Natural Resources’ employees may easily observe them.
   C. Replacement filters for the dust collectors shall be kept on hand at all
SPECIAL CONDITIONS:
The permittee is authorized to construct and operate subject to the following special conditions:

- The filters shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance)

D. Able Rack Company shall monitor and record the operating pressure drop across the dust collectors at least once every 24 hours while the blasting booth is in operation. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.

E. Able Rack Company shall maintain a copy of the dust collector manufacturer's performance warranty on site.

F. Able Rack Company shall maintain an operating and maintenance log for the dust collectors 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 replacement, etc.

4. Record Keeping and Reporting Requirements
A. Able Rack Company 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. These records shall include SDS for all materials used.

B. Able Rack Company shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than 10 days after the end of the month during which any record required by this permit show an exceedance of a limitation imposed by this permit.
REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW
Project Number: 2013-12-026
Installation ID Number: 510-0405
Permit Number:

Able Rack Company
6800 North Broadway
St. Louis, MO 63147

Parent Company:
Associated Rack Corporation
70 Athens Drive
Mount Joliet, TN 37122

City of St. Louis

REVIEW SUMMARY

• Able Rack Company has applied to permit an existing rack manufacturing and coatings facility.

• HAP emissions are expected from the combustion of natural gas, from the welding operation, and from the incineration of plastisol in the burn-off oven. HAPs of concern are HCl, dioxins, furans, and PCBs from the burn-off oven.

• None of the New Source Performance Standards (NSPS) apply to the installation.
  ➢ Subpart E, Standards of Performance for Incinerators, does not apply to the burn-off oven because the oven does not burn solid wastes as defined in this subpart.
  ➢ Subpart CCCC, Standards of Performance for Commercial and Industrial Solid Waste Incineration Units for Which Construction is Commenced After November 30, 1999 or for Which Modification or Reconstruction is Commenced After June 1, 2001, does not apply to the burn-off oven because a burn-off oven is not considered an incinerator in this subpart.
  ➢ Subpart EEEE, Standards for Performance for Other Solid Waste Incineration Units for Which Construction is Commenced After December 9, 2004, or for Which Modification or Reconstruction is Commenced on or After June 16, 2006, does not apply to the burn-off oven because it is not considered an “other solid waste incineration unit” as defined in this subpart.

• None of the NESHAPs apply to this installation.

• Subpart XXXXXX, National Emission Standards for Hazardous Air Pollutant Area Source Standards for Nine Metal Fabrication and Finishing Source Categories, of the MACT applies to the installation.
The following MACT regulations do not apply to the proposed equipment.

- Subpart MMMM, *National Emission Standards for Hazardous Air Pollutants: Surface Coating of Miscellaneous Metal Parts and Products*, of the MACT does not apply to this installation because the plastisol coatings do not contain any HAPs., although HCl, dioxins, furans, and PCBs are generated during the incineration process.
- Subpart HHHHHH, *National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources*, of the MACT does not apply to the installation because the installation does not perform spray application of coatings.

An afterburner is being used to control the emissions from the burn-off oven. However, it is also an emissions source.

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants are conditioned below de minimis levels.

This installation is located in the City of St. Louis, a nonattainment area for PM$_{2.5}$ and the 8-hour ozone standards and an attainment area for all other criteria pollutants.

This installation is not on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. Due to its nonattainment status, the major source level for PM$_{2.5}$, VOC, and NO$_X$ is 100 tpy. The installation's major source level is 250 tpy for all other criteria pollutants. Fugitive emissions are not counted toward major source applicability.

Ambient air quality modeling was performed on dioxins/furans because potential emissions of the application are greater than the screening model action levels.

Emissions testing is not required for the equipment as a condition of this permit.

A Basic Operating Permit application is required for this installation within 30 days of equipment startup.

Approval of this permit is recommended with special conditions.

**INSTALLATION/PROJECT DESCRIPTION**

Able Rack Company manufactures racks for plating and coating facilities. The installation performs metal fabrication (steel, copper, stainless steel and aluminum). Equipment at the site include welders, an abrasive blasting system, a primer dip tank, a plastisol dip tank, a curing oven and a burn-off oven. Existing racks are received at the facility and processed in an oven to burn-off plastisol which contains polyvinylchloride. They are then dip coated with a low-solids MEK-thinned primer, pre-heated to 425 °F, dip coated in plastisol at approximately 1/8 inch thickness, and then baked to cure the plastisol.
The installation submitted an application to the Air Pollution Control Program to increase the usage of the primers in the dip tank from 35 gallons per year to 50 gallons per year. However, during the review of this project, it was determined that the increase of primer usage itself does not require a construction permit. This installation has never been issued a state construction permit and therefore, does not have any limits prohibiting the use of more than 35 gallons of primer per year. The installation has a source registration permit (SR08.010) issued by the City of St. Louis that had usage limits for the dip tank, but source registration permits are not considered state construction permits and therefore, are not federally enforceable. However, it was also discovered that there is a burn-off oven at the facility which has potential HCl emissions greater than the major source level of 10 tons per year. Therefore, the entire installation would need a construction permit. Furthermore, the plastisol burn-off oven is considered an incinerator according to Missouri state rules and all incinerators in Missouri are required to obtain a construction permit (10 CSR 10-6.060(1)(B)).

The oven has a 1 MMBtu/hr burner in the process chamber and a 1 MMBtu/hr burner in the afterburner.

The installation has been issued, from the St. Louis Health Department, numerous Source Registration Permits, some of which has limits on the amount of solvent and primer that can be used at the facility. These permits are administered by the City of St. Louis, are not considered state-issued permits, and are not federally enforceable.

The installation was issued a Basic Operating Permit (OP07014) in 2012. However, MACT Subpart XXXXXX was not listed as an applicable standard in the permit. Therefore, the facility is required to submit an amendment to the Basic Operating Permit within 30 days of permit issuance to add Subpart XXXXXX to its Basic Operating Permit.

EMISSIONS/CONTROLS EVALUATION

Emissions from the entire installation were calculated to determine permit applicability. The equipment at the installation include a burn-off oven with an afterburner, a curing oven with an afterburner, a primer dip tank with cover, a sandblasting unit with a dust collector, and welding units. There is also a dip tank for plastisol.

The curing of the plastisol should not emit any regulated pollutants as the chlorine should remain in the plastisol. Incinerating the plastisol in the burn-off oven will create HCl, dioxin, furan, and PCB emissions. HCl emissions from the incineration of plastisol were calculated using emission factors derived from a stack test performed on another plastisol burn-off oven at an Associated Rack facility in Grand Rapids, MI. The test was performed on just one batch of plastisol coatings and the one-hour runs were conducted at different times during the batch. Therefore, the results show a decrease in HCl emissions during the batch. For the first hour, emissions were determined to be 4.74 lb/hr, while further into the process, the emissions were determined to be 0.35 and 0.10 lb/hr. However, there is no data on the level of emissions between the one-hour runs. Furthermore, the tests were performed on only one batch run and not an average of
multiple runs. For a conservative evaluation, it was assumed that the emissions are 4.74 lb/hr during the entire batch time, which is 10 hours. An emission factor (0.223 lb HCl/lb plastisol burned) was derived by taking the 4.74 lb/hr and scaling the emissions up to 10 hours of batch time and dividing by the total amount of plastisol used for the test (213 lb). Calculations show that potential emissions of HCl are greater than the major source level of 10.0 tons per year and the facility is limited in this permit to less than 10.0 tons per year of HCl to avoid being a major source of HAPs.

Dioxin and Furan emissions were calculated using emission factors from EPA document EPA-450/4-84-014o, “National Dioxin Study Tier 4 – Combustion sources, Final Test Report – Site 6 Wire Reclamation incinerator WRI – A,” April, 1987. The emission factors in the EPA document were based on raw materials containing only 1 to 3 % wires coated with PVC. Therefore, the emission factors were scaled up to account for 100% of wires coated with PVC. Furthermore, the tests had an average of 13% coating and 87% wiring by weight, so the emission factors were also scaled up to reflect 100% PVC. The dioxin and furan emissions were calculated to be greater than the Screening Model Action Levels, and modeling was performed to determine its ambient impact. Results show that the ambient impact of dioxin and furans are less than ten times the Risk Assessment Level (RAL).

The PCB emissions were calculated using emissions data from the technical paper, “Variables Affecting Emissions of PCDD/Fs from Uncontrolled Combustion of Household Waste in Barrels,” May, 2003. The tests in this paper were based on using 1% or 7.5% PVC in the waste, so the data was scaled up to reflect 100% PVC.

The burner for the burn-off oven is rated at 1 MMBtu/hr and the burner for the burn-off oven afterburner is rated at 1 MMBtu/hr. The curing oven has a 0.4 MMBtu/hr burner and its afterburner is rated at 0.8 MMBtu/hr. The combustion units at the installation uses natural gas, and emissions were calculated using emission factors from EPA document AP-42, Compilation of Air Pollutant Emission Factors, Fifth Edition, Chapter 1.4, Natural Gas Combustion, (7/98). Emissions expected from combustion include PM$_{2.5}$, PM$_{10}$, PM, SO$_x$, NO$_x$, VOC, CO, CO$_2$, N$_2$O, CH$_4$, and HAP. GHG-mass emissions were calculated by adding the CO$_2$, N$_2$O, and CH$_4$ emissions. GHG-CO2e emissions were calculated by multiplying the CO$_2$, N$_2$O, and CH$_4$ emissions by their respective Global Warming Potentials (GWP) and summing the results.

Emissions from the primer tank were calculated using mass balances. Emissions expected from the primers include toluene, butanol, and 2-ethoxyethanol, which are both VOC and HAP. The installation was unable to give an accurate maximum coating usage for the tank and therefore, assumptions were made to calculate worst-case emissions. The facility suggested, in its application, that a few ounces of primer would be used per part and that it takes a minute or two to coat each part. For the mass balance calculations, it was assumed that it took 3 ounces and 2 minutes to coat each item. In 8,760 operating hours, the facility can then coat 262,800 items. The total volume needed to coat these items would be 6,159 gallons, which is much higher than the 50 gallons per year the company expects to use.

Emissions expected from welding include PM$_{2.5}$, PM$_{10}$, PM, chromium (Cr), chromium VI (Cr (VI)), nickel (Ni) and manganese (Mn). The MHDR from welding were calculated by
doubling the historical usage and scaling it up to 8,760 hours per year. All emissions, except for Cr(VI), were calculated using emission factors in AP-42, Chapter 12.19, *Electric Arc Welding*, (1/95). Cr(VI) emissions were calculated assuming that 2.05% of the chrome fumes are Cr(VI). This number is taken from the paper, *Study of Chromium in Gas Metal Arc Welding Fume*, (6/98).

PM$_{2.5}$, PM$_{10}$, and PM emissions are expected from the sandblasting equipment. Emissions were calculated using emission factors from AP-42, Chapter 13.2.6, *Abrasive Blasting*, (9/97). According to the company, the sandblaster can use approximately 5-10 lbs of 54 grit aluminum oxide per item and it takes as little as 5-10 minutes to blast an item. To be conservative, the calculations are based 15 lb of abrasive media usage and 5 minutes of blasting time per item. A dust collector is used to control emissions from the blasting operation. Although emissions calculations show that installation-wide emissions without the dust collector are below the de minimis levels, this permit still requires the use of the dust collectors because the facility needs the dust collectors to be exempt from Missouri State Rules, 10 CSR 10-6.400, *Restriction of Emission of Particulate Matter from Industrial Processes*. The potential emissions of the sandblasting booth were calculated using the control emission factors.

The following table provides an emissions summary for this project. Existing potential emissions are emissions from the entire installation, including the burn-off oven. Existing actual emissions were taken from the installation’s 2013 EIQ. Potential emissions of the application represent the potential of the entire installation, assuming continuous operation (8760 hours per year).

**Table 1: 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</td>
<td>25.0</td>
<td>0.68</td>
<td>N/D</td>
<td>0.68</td>
<td>N/A</td>
</tr>
<tr>
<td>PM$_{10}$</td>
<td>15.0</td>
<td>0.68</td>
<td>0.005</td>
<td>0.68</td>
<td>N/A</td>
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<tr>
<td>PM$_{2.5}$</td>
<td>10.0</td>
<td>0.68</td>
<td>N/D</td>
<td>0.68</td>
<td>N/A</td>
</tr>
<tr>
<td>SOx</td>
<td>40.0</td>
<td>0.008</td>
<td>N/D</td>
<td>0.008</td>
<td>N/A</td>
</tr>
<tr>
<td>NOx</td>
<td>40.0</td>
<td>1.37</td>
<td>0.006</td>
<td>1.37</td>
<td>N/A</td>
</tr>
<tr>
<td>VOC</td>
<td>40.0</td>
<td>24.23</td>
<td>1.00</td>
<td>24.23</td>
<td>N/A</td>
</tr>
<tr>
<td>CO</td>
<td>100.0</td>
<td>1.15</td>
<td>0.003</td>
<td>1.15</td>
<td>N/A</td>
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<tr>
<td>GHG (CO$_2$e)</td>
<td>75,000</td>
<td>1,658.8</td>
<td>N/D</td>
<td>1,658.8</td>
<td>N/A</td>
</tr>
<tr>
<td>GHG (mass)</td>
<td>250.0</td>
<td>1,649.0</td>
<td>N/D</td>
<td>1,649.0</td>
<td>N/A</td>
</tr>
<tr>
<td>Toluene</td>
<td>10.0</td>
<td>9.66</td>
<td>N/D</td>
<td>9.66</td>
<td>N/A</td>
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<td>Butanol</td>
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<td>4.83</td>
<td>N/D</td>
<td>4.83</td>
<td>N/A</td>
</tr>
<tr>
<td>2-Ethoxyethanol</td>
<td>10.0</td>
<td>4.83</td>
<td>N/D</td>
<td>4.83</td>
<td>N/A</td>
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<tr>
<td>HCl</td>
<td>10.0</td>
<td>53.61</td>
<td>N/D</td>
<td>53.61</td>
<td>&lt;10.0</td>
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<td>Dioxins/Furans</td>
<td>1.6 x 10$^{-7}$</td>
<td>N/D</td>
<td>N/D</td>
<td>7.3 x 10$^{-7}$</td>
<td>N/A</td>
</tr>
<tr>
<td>PCB</td>
<td>0.009</td>
<td>N/D</td>
<td>N/D</td>
<td>5.97 x 10$^{-8}$</td>
<td>N/A</td>
</tr>
<tr>
<td>HAPs</td>
<td>10.0/25.0</td>
<td>19.36</td>
<td>0.0013</td>
<td>19.36</td>
<td>N/A</td>
</tr>
</tbody>
</table>

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

Note 1: SMAL
PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, Construction Permits Required. Potential emissions of all pollutants are conditioned below de minimis levels.

APPLICABLE REQUIREMENTS

Able Rack Company 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
- 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 10-6.165

SPECIFIC REQUIREMENTS

- Restriction of Emission of Sulfur Compounds, 10 CSR 10-6.260
  ➢ This rule does not apply to combustion equipment that uses exclusively pipeline grade natural gas as defined in 40 CFR 72.2 or liquefied petroleum gas as defined by the American Society for Testing and Materials (ASTM), or any combination of these fuels.
- Control of Emissions From Industrial Surface Coating Operations, 10 CSR 10-5.330
  ➢ Applies if actual emissions of VOC from the surface coating operation are at least three (3) tons per twelve (12)-month rolling period, before consideration of controls.

AMBIENT AIR QUALITY IMPACT ANALYSIS

The HAP modeling analysis involves two phases: (1) a preliminary analysis and (2) a full impact analysis. The preliminary analysis models only the potential emissions from the project that exceed the SMAL. If the ambient impact from the project is less than
the significant impact level (SIL), which is 4% of the RAL, then the full impact analysis is not required. For a full impact analysis, equipment from the entire installation, including equipment that is not part of this project, is taken into account. For some HAPs, an installation is allowed to emit up to 10 times that of the RAL. Dioxin and Furans belong to this group.

For this project, the preliminary analysis and the full impact analysis are the same because the project involves all of the equipment currently at the installation. Results show that the ambient impact from the project will be greater than the SIL and the RAL, but not 10 times the RAL. The modeling analysis was performed using AERSCREEN.

### Table 2: Ambient Impact Analysis For Dioxins/Furans

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Modeled Impact (pg/m³)</th>
<th>SIL (pg/m³)</th>
<th>10x RAL (pg/m³)</th>
<th>Time Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dioxins/Furans</td>
<td>0.251</td>
<td>0.0012</td>
<td>0.3</td>
<td>Annual</td>
</tr>
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</table>

**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 without special conditions.

Chia-Wei Young
New Source Review Unit

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated December 18, 2013, received December 20, 2013, designating Able Rack Company as the owner and operator of the installation.
### Attachment A – HCl Compliance Worksheet

Able Rack Company  
City of St. Louis, MO  
Project Number: 2013-12-026  
Installation ID Number: 510-0405  
Permit Number: _____________

This sheet covers the period between ________________ and _______________ (Month, Year)     (Month, Year)

<table>
<thead>
<tr>
<th>Month</th>
<th>Monthly Plastisol Burned (lb)</th>
<th>Emission Factor (lb HCl/lb Plastisol)</th>
<th>Monthly HCl Emissions (lb)</th>
<th>Monthly HCl Emissions (tons)</th>
<th>Total 12-Month HCl Emissions (tons)</th>
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<tr>
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<td>0.2225</td>
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</tbody>
</table>

Note 1: Emission factor can be changed upon conducting a performance test and having the results confirmed by the Enforcement Unit of the Air Pollution Control Program.  
Note 2: Monthly HCl Emissions (lb) calculated by multiplying Monthly Plastisol Burned (lb) by the Emission Factor (lb HCl/lb Plastisol)  
Note 3: Monthly HCL Emissions (tons) calculated by dividing the Monthly HCl Emissions (lb) by 2,000 lb/ton  
Note 4: Total 12-Month HCl Emissions (tons) calculated by summing the Monthly HCl emissions (tons) of the previous 12 months. A total less than 10.0 tons indicates compliance.
APPENDIX A

Abbreviations and Acronyms

% ............ percent
°F ............ degrees Fahrenheit
acfm .......... actual cubic feet per minute
BACT .......... Best Available Control Technology
BMPs .......... Best Management Practices
Btu .......... British thermal unit
CAM .......... Compliance Assurance Monitoring
CAS .......... Chemical Abstracts Service
CEMS .......... Continuous Emission Monitor System
CFR .......... Code of Federal Regulations
csf .......... carbon monoxide
CO2 .......... carbon dioxide
CO2e .......... carbon dioxide equivalent
COMS .......... Continuous Opacity Monitoring System
CSR .......... Code of State Regulations
dscf .......... dry standard cubic feet
EIQ .......... Emission Inventory Questionnaire
EP .......... Emission Point
EPA .......... Environmental Protection Agency
EU .......... Emission Unit
fps .......... feet per second
ft .......... feet
GACT .......... Generally Available Control Technology
GHG .......... Greenhouse Gas
gpm .......... gallons per minute
gr .......... grains
GWP .......... Global Warming Potential
HAP .......... Hazardous Air Pollutant
hr .......... hour
hp .......... horsepower
lb .......... pound
lbs/hr .......... pounds per hour
MACT .......... Maximum Achievable Control Technology
µg/m³ .......... micrograms per cubic meter
m/s .......... meters per second
Mgal .......... 1,000 gallons
MW .......... megawatt
MHDR .......... maximum hourly design rate
MMBtu .......... Million British thermal units
MMCF .......... million cubic feet
MSDS .......... Material Safety Data Sheet
NAAQS .......... National Ambient Air Quality Standards
NESHAPs .......... National Emissions Standards for Hazardous Air Pollutants
NOx .......... nitrogen oxides
NSPS .......... New Source Performance Standards
NSR .......... New Source Review
PM .......... particulate matter
PM₂.₅ .......... particulate matter less than 2.5 microns in aerodynamic diameter
PM₁₀ .......... particulate matter less than 10 microns in aerodynamic diameter
ppm .......... parts per million
PSD .......... Prevention of Significant Deterioration
PTE .......... potential to emit
RACT .......... Reasonable Available Control Technology
RAL .......... Risk Assessment Level
SCC .......... Source Classification Code
scfm .......... standard cubic feet per minute
SIC .......... Standard Industrial Classification
SIP .......... State Implementation Plan
SMAL .......... Screening Model Action Levels
SOx .......... sulfur oxides
SO₂ .......... sulfur dioxide
tph .......... tons per hour
tpy .......... tons per year
VMT .......... vehicle miles traveled
VOC .......... Volatile Organic Compound
Mr. Don Bauer  
Engineering Manager  
Able Rack Company  
6800 North Broadway  
St. Louis, MO 63147

RE: New Source Review Permit - Project Number: 2013-12-026

Dear Mr. Bauer:

In December, 2013, the Air Pollution Control Program received an application from you to increase the usage of the primer used in the dip tank from 35 gallons to 50 gallons. The Air Pollution Control Program has evaluated the request from your installation and discovered the following.

1. The facility has never been issued a permit from the Missouri Air Pollution Control Program and therefore, does not have any special conditions limiting the use of the primer in the dip tank to 35 gallons. Therefore, the increase in primer usage does not require a permit.

2. Potential emissions of HCl at the installation are greater than the de minimis level of 10 tpy. Therefore, a construction permit is required for the entire installation.

The above descriptions notwithstanding, the installation has received numerous Source Registration Permits from the City of St. Louis. Some of these Source Registration Permits have limits on the solvent and primer usage. However, these permits are not state issued permits and therefore, are not federally enforceable. Instead, they are administered by the St. Louis Health Department. Your facility should contact the St. Louis Health Department to see if these limits are still being enforced.

Enclosed is your permit to construct for the entire installation. Please study it carefully and refer to Appendix A for a list of common abbreviations and acronyms used in the permit. 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 operating permit is necessary for continued compliance. The reverse side of your permit certificate has information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Susan Heckenkamp  
New Source Review Unit Chief  
SH:cyl

Enclosures

c: St. Louis Regional Office  
PAMS File: 2013-12-026  
Permit Number: