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: 062020-004  Project Number: 2020-02-047
Installation Number: 019-0039

Parent Company: Hubbell Inc.
Parent Company Address: 40 Waterview Drive, Shelton, CT 06484
Installation Name: Hubbell Power Systems, Inc.
Installation Address: 210 North Allen Street, Centralia, MO 65240
Location Information: Boone County, S10, T51N, R11W

Application for Authority to Construct was made for:
Installation of an additional Zinc Recovery System. 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.

__________________________________________________________
Director or Designee
Department of Natural Resources

__________________________
June 3, 2020
Effective Date
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 Enforcement and Compliance Section of 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 Enforcement and Compliance Section of the Department’s Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available within 30 days of actual startup. Also, you must notify the Department’s 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 the permit application and this permit and permit review shall be kept at the installation address and shall be made available to Department’s 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 using the contact information below.

Contact Information:
Missouri Department of Natural Resources
Air Pollution Control Program
P.O. Box 176
Jefferson City, MO 65102-0176
(573) 751-4817

The regional office information can be found at the following website:
http://dnr.mo.gov/regions/
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 to 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 (3)(E). “Conditions required by permitting authority.”

Hubbell Power Systems, Inc.
Boone County, S10, T51N, R11W

1. Control Device Requirement-Baghouse
   A. Hubbell Power Systems, Inc. shall control emissions from the zinc reclaim ash handling (EU GAL-13) using a baghouse as specified in the permit application.
   
   B. The baghouse shall be operated and maintained in accordance with the manufacturer's specifications.
   
   C. The baghouse shall be equipped with a gauge or meter, which indicates the pressure drop across the control device. This gauge or meter shall be located such that Department of Natural Resources’ employees may easily observe it.
   
   D. Replacement filters for the baghouse 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).
   
   E. Hubbell Power Systems, Inc. shall monitor and record the operating pressure drop across the baghouse at least once every 24 hours. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.
   
   F. Hubbell Power Systems, Inc. shall maintain a copy of the baghouse manufacturer’s performance warranty on site.
   
   G. Hubbell Power Systems, Inc. shall maintain an operating and maintenance log for the baghouse 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.
SPECIAL CONDITIONS:
The permittee is authorized to construct and operate subject to the following special conditions:

2. Record Keeping and Reporting Requirements
Hubbell Power Systems, Inc. shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources’ personnel upon request.
Hubbell Power Systems, Inc. has applied for authority to install an additional Zinc Recovery System (EU GAL-12, 13, & 14).

The application was deemed complete on February 27, 2020.

Minimal HAP emissions are expected from EU GAL-14 through the burning of natural gas.

None of the NESHAPs, MACTs or NSPSs apply to this installation.

- MACT DDDDD – *Industrial, Commercial, and Institutional Boilers and Process Heaters* does not apply to the Zinc Recovery Oven EU GAL-14, because Hubbell Power Systems, Inc. is not a major source facility.

- MACT GGGGGG - *Primary Nonferrous Metals Area Sources—Zinc, Cadmium, and Beryllium* does not apply to the permitted equipment, because Hubbell does not qualify as a *primary zinc production facility*, as zinc is not produced directly from zinc sulfide ore concentrates.

A baghouse is being used to control the PM, PM$_{10}$, and PM$_{2.5}$ emissions from the equipment in this permit.

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 criteria pollutants are below de minimis levels.

This installation is located in Boone County, an attainment/unclassifiable area for all criteria pollutants.

This installation is not 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 not counted toward major source applicability.

- Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels.

- Emissions testing is not required for the equipment as a part of this permit. Testing may be required as part of other state, federal or applicable rules.

- The Zinc Recovery System (EU GAL-12, 13, & 14) shall be included in the Intermediate Operating Permit Renewal. Project #2016-11-024 currently under review by the Air Pollution Control Program. Information for this equipment has been submitted as a modification to the current Intermediate Operating Permit Application.

- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

As a corporate structure, all personnel are employed by Hubbell Power Systems (HPS), but there are three distinct business units (BU) – Civil & Construction Products (Allen St. & East St. Plants, 019-0039 & 019-0006, respectively), Safety Products (Plastics, 019-0038), and the Distribution Center (DC, 019-0064) operating in Centralia, MO. Wilson St. is only a storage warehouse. No activity that generates emissions generally occurs there. All three BUs now operate under the same chain of command leading to the corporate office.

Up until 2010, the East St. facility was a separate business unit from other Centralia operations with the primary products being switchgear and re-closers. These product lines were transferred to Alabama and Mexico. Since that time the Allen St. facility has been able to utilize East St. welding equipment that was not transferred. Currently East St. operations are in support of Allen St. operations and considered part of the Civil and Construction Business Unit.

In a letter dated October 15, 2019 the Air Pollution Control Program determined the Allen and East street facilities of Hubbell Inc. in Centralia, MO are one installation for air permitting purposes. The other business units are separate.

The following New Source Review permits have been issued to Hubbell Power Systems, Inc. East Street and Allen Street Complexes from the Air Pollution Control Program.
Table 1: NSR History

<table>
<thead>
<tr>
<th>Project ID</th>
<th>Permit Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP201911014</td>
<td>012020-010</td>
<td>Installation of a paint hook burnoff furnace</td>
</tr>
<tr>
<td>AP201906041</td>
<td>112019-007</td>
<td>Installation of a new grillage cell</td>
</tr>
<tr>
<td>AP201710023</td>
<td>112017-016</td>
<td>Plasma cutting</td>
</tr>
<tr>
<td>AP201510066</td>
<td>052015-008C</td>
<td>Add dip tank</td>
</tr>
<tr>
<td>AP201508017</td>
<td>052015-008B</td>
<td>Modify process for dip tank</td>
</tr>
<tr>
<td>AP201505048</td>
<td>052015-008A</td>
<td>PTE changes</td>
</tr>
<tr>
<td>AP201503110</td>
<td>052015-008</td>
<td>Install TDG equipment</td>
</tr>
<tr>
<td>AP200301013</td>
<td>032003-016</td>
<td>Melting pot</td>
</tr>
<tr>
<td>AP200212075</td>
<td>112002-018A</td>
<td>Clarify drum filters</td>
</tr>
<tr>
<td>AP200208013</td>
<td>112002-018</td>
<td>Galvanizing kettle</td>
</tr>
<tr>
<td>EX199912054</td>
<td>032000-010</td>
<td>Solder pot</td>
</tr>
<tr>
<td>EX03800039012</td>
<td>0797-023</td>
<td>2 mil BTU natural gas annealing furnace</td>
</tr>
<tr>
<td>EX03800039011</td>
<td>1296-004</td>
<td>Electric induction furnace</td>
</tr>
<tr>
<td>EX03800006010</td>
<td>1096-008</td>
<td>Add oven and paint booth</td>
</tr>
<tr>
<td>EX03800039010</td>
<td>0396-010</td>
<td>Addition of welder and electric furnace</td>
</tr>
<tr>
<td>EX03800039009</td>
<td>0894-008</td>
<td>Change fluid in wire forming degrease/acid etch tank and ventilation</td>
</tr>
<tr>
<td>EX03800039008</td>
<td>0693-023</td>
<td>Combo rotary drum/belt washer water heater and drying oven</td>
</tr>
<tr>
<td>EX03800039006</td>
<td>0992-003</td>
<td>Production process for poleline, hardware, and earth anchoring products</td>
</tr>
<tr>
<td>EX03800039007</td>
<td>1192-017</td>
<td>Rotary sand screen, 6 soldering stations, 10 plasma arc cutters</td>
</tr>
<tr>
<td>EX03800039009</td>
<td>1092-008</td>
<td>Heat treatment equipment, scrap preheat furnace, and 20 plasma arc cutters</td>
</tr>
<tr>
<td>EX03800039008</td>
<td>0992-006</td>
<td>DC/gasoline powered welder</td>
</tr>
<tr>
<td>EX03800039006</td>
<td>0992-005</td>
<td>Bead blaster, coating process modification, hood and vent sulfur pot</td>
</tr>
<tr>
<td>EX03800039007</td>
<td>0892-001</td>
<td>Forging furnace and plasma arc pipe cutter</td>
</tr>
<tr>
<td>EX03800006005</td>
<td>0692-002</td>
<td>4 furnaces, heat treating oven, auto gritter, ink spray and flow coating</td>
</tr>
</tbody>
</table>

PROJECT DESCRIPTION

Hubbell Power Systems, Inc. is installing a second Metalulics Zinkoff Recovery (MZR) System (Pyrotek MZR-750) at the Allen Street building. The MZR system will serve to recover zinc from the galvanizing process. Process metals will be heated in the MZR system to temperatures of around 990°F at a rate of up to 400,000 BTU/hr through the burning of natural gas. As the housing unit inside the furnace of the MZR rotates, a blade will keep the zinc from sticking or burning. After a cycle of time of approximately 3 hours, the process will yield zinc ash skimmings that can be readily reused or sold. The MZR system will be capable of producing 220 lb/hr of zinc skimmings. This unit will be identical to the existing emission unit EU GAL-11.

Removing the leftover zinc material from the housing unit will emit a small portion of it into the air as PM10, but it will be controlled by a baghouse.

Hubbell Power Systems, Inc. will control PM emissions using a baghouse in order to keep PM, PM10, and PM2.5 below de mimimis levels.

Table 2: Project Emission Units

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Description</th>
<th>MHDR</th>
<th>Control Device</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU GAL-12</td>
<td>Zinc Reclaim Combustion</td>
<td>400,000 BTU/hr</td>
<td>N/A</td>
</tr>
<tr>
<td>EU GAL-13</td>
<td>Zinc Ash Handling</td>
<td>220lb/hr</td>
<td>Baghouse</td>
</tr>
<tr>
<td>EU GAL-14</td>
<td>Zinc Reclaim Oven</td>
<td>220lb/hr</td>
<td>N/A</td>
</tr>
</tbody>
</table>
EMISSIONS/CONTROLS EVALUATION


Emissions for EU GAL-13 Zinc Ash Handling were based off the similar PM$_{10}$ emission factor for coal handling (0.01 lb/ton). Because of the differences between coal and zinc, a conservative safety factor was added, leading to an emission factor of 0.05 lb/ton.

EU GAL-13 emissions will be controlled by pre-existing baghouse CD GAL-S9. Ash handling will be controlled with a conservative 95% efficiency for PM, PM$_{10}$, and PM$_{2.5}$, which coincides with the efficiency accredited to the baghouses controlling the zinc galvanizing on site. It was assumed that all PM$_{10}$ was also PM$_{2.5}$ for the purposes of calculations due to the nature of zinc ash.

Hubbell Power Systems, Inc. have had two recent permits (#012020-010 for a paint hook burn off furnace and #112019-007 for a new grillage cell), but the MZR system is considered a different project. The grillage cell functions to cut, grind, and weld sheet metal at the East Street building and the paint hook burn off furnace functions to remove paint and paint vapors from metal at the East Street building. Neither are part of Hubbell’s galvanizing unit. The MZR system only functions to recover zinc from the output of the galvanizing unit located at the Allen Street building, and thus can be operated independently of the paint hook burn off furnace and grillage cell.

The following table provides an emissions summary for this project. Existing potential emissions were taken from Permit 012020-010. Existing actual emissions were taken from the installation’s 2019 EIQ. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year).

Table 3: Emissions Summary (tpy)

<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>N/D</td>
<td>N/D</td>
<td>2.47</td>
<td>N/D</td>
</tr>
<tr>
<td>PM$_{10}$</td>
<td>15.0</td>
<td>203.7</td>
<td>15.04</td>
<td>2.47</td>
<td>206.17</td>
</tr>
<tr>
<td>PM$_{2.5}$</td>
<td>10.0</td>
<td>155.4</td>
<td>13.47</td>
<td>2.47</td>
<td>157.87</td>
</tr>
<tr>
<td>SO$_x$</td>
<td>40.0</td>
<td>0.2</td>
<td>0.07</td>
<td>1.0 x 10$^{-3}$</td>
<td>0.20</td>
</tr>
<tr>
<td>NO$_x$</td>
<td>40.0</td>
<td>154.5</td>
<td>26.67</td>
<td>0.17</td>
<td>154.67</td>
</tr>
<tr>
<td>VOC</td>
<td>40.0</td>
<td>96.9</td>
<td>21.81</td>
<td>0.01</td>
<td>96.91</td>
</tr>
<tr>
<td>CO</td>
<td>100.0</td>
<td>24.9</td>
<td>10.06</td>
<td>0.14</td>
<td>25.04</td>
</tr>
<tr>
<td>HAPs</td>
<td>10.0/25.0</td>
<td>57.4</td>
<td>3.08</td>
<td>3.2 x 10$^{-3}$</td>
<td>57.40</td>
</tr>
</tbody>
</table>

N/A = Not Applicable; N/D = Not Determined
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 PM$_{10}$ are conditioned below de minimis levels.

APPLICABLE REQUIREMENTS

Hubbell Power Systems, Inc. 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

- Operating Permits, 10 CSR 10-6.065
- Start-Up, Shutdown, and Malfunction Conditions, 10 CSR 10-6.050
- Submission of Emission Data, Emission Fees and Process Information, 10 CSR 10-6.110
  - Per 10 CSR 10-6.110(4)(B)2.B(II) and (4)(B)2.C(II) a full EIQ is required for the first full calendar year the equipment (or modifications) approved by this permit are in operation.
- 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

- No New Source Performance Regulations (NSPS), Maximum Achievable Control Technologies (MACT), or National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations apply to the equipment in this permit.
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*, it is recommended that this permit be granted with special conditions.

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated February 20, 2020, received February 27, 2020, designating Hubbell Inc. as the owner and operator of the installation.
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
CO......... 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
PM₁₀ ........ particulate matter less than 2.5
microns in aerodynamic diameter
PM₁₀₀ .... 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
SDS .......... Safety Data Sheet
SIC .......... Standard Industrial Classification
SIP .......... State Implementation Plan
SMAL ...... Screening Model Action Levels
SOₓ .......... sulfur oxides
SO₂ .......... sulfur dioxide
SSM ...... Startup, Shutdown & Malfunction
tph .......... tons per hour
tpy .......... tons per year
VMT .......... vehicle miles traveled
VOC .......... Volatile Organic Compound
June 3, 2020

Elise Schoonmaker
Environmental Manager
Hubbell Power Systems, Inc.
210 North Allen Street
Centralia, MO 65240

RE: New Source Review Permit - Project Number: 2020-02-047

Dear Elise Schoonmaker:

Enclosed with this letter is your permit to construct. Please study it carefully and refer to Appendix A for a list of common abbreviations and acronyms used in the permit. Also, note the special conditions 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 and your new source review permit application are 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.

This permit may include requirements with which you may not be familiar. If you would like the department to meet with you to discuss how to understand and satisfy the requirements contained in this permit, an appointment referred to as a Compliance Assistance Visit (CAV) can be set up with you. To request a CAV, please contact your local regional office or fill out an online request. The regional office contact information can be found at the following website: http://dnr.mo.gov/regions/. The online CAV request can be found at http://dnr.mo.gov/cav/compliance.htm.

If you were adversely affected by this permit decision, you may be entitled to pursue an appeal before the administrative hearing commission pursuant to Sections 621.250 and 643.075.6 RSMo. To appeal, you must file a petition with the administrative hearing commission within thirty 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 administrative hearing commission, whose contact information is: Administrative Hearing Commission, United States Post Office Building, 131 West High Street, Third Floor, P.O. Box 1557, Jefferson City, Missouri 65102, phone: 573-751-2422, fax: 573-751-5018, website: www.oa.mo.gov/ahc
If you have any questions regarding this permit, please do not hesitate to contact Dakota Fox at the Department of Natural Resources’ Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Susan Heckenkamp
New Source Review Unit Chief

SH:dfa

Enclosures

c: Northeast Regional Office
   PAMS File: 2020-02-047

Permit Number: 062020-004