



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:

012016-002

Project Number: 2015-11-032

Installation Number: 077-0234

Parent Company: NorthStar Battery Company, LLC

Parent Company Address: 4000 Continental Way, Springfield, MO 65803

Installation Name: NorthStar Battery Company, LLC – Plant #1

Installation Address: 4000 Continental Way, Springfield, MO 65803

Location Information: Greene County, S3, T29N, R21W

Application for Authority to Construct was made for:

Installation of a post burner. This review was conducted in accordance with Section (5) of 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.

Alana L. Hess

Prepared by
Alana Hess
New Source Review Unit

Kyra L. Rowe

Director or Designee
Department of Natural Resources

JAN 08 2016

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. The 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' Southwest Regional Office 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 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(12)(A)10. "Conditions required by permitting authority."

NorthStar Battery Company, LLC – Plant #1
Greene County, S3, T29N, R21W

1. **Superseding Condition**
The conditions of this permit supersede Special Condition 2 found in Construction Permit 082013-001C previously issued by the Missouri Air Pollution Control Program.
2. **Control Device Requirement - Baghouse**
 - A. NorthStar Battery Company, LLC – Plant #1 shall control emissions from 1m Post Burner using Baghouse #1 as specified in the permit application.
 - B. The baghouse shall be operated and maintained in accordance with the manufacturer's specifications. The baghouse shall be equipped with a gauge or meter, which indicates the pressure drop across the control device. The gauge or meter shall be located such that Department of Natural Resources' employees may easily observe it.
 - C. 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).
 - D. NorthStar Battery Company, LLC – Plant #1 shall ensure the proper operation of Baghouse #1 by complying with §63.11423(b)(2)(i) and (ii).
 - E. NorthStar Battery Company, LLC – Plant #1 shall maintain an operating and maintenance log for the baghouses 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.
3. **Emission Limitation**
NorthStar Battery Company, LLC – Plant #1 shall limit the emissions of Lead Compounds (20-11-1) from the emission points listed in Tables 1 and 2 to less than or equal to the rates listed in the tables. The permittee shall also adhere to the lead emission limitations at §60.372.

SPECIAL CONDITIONS:

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

Table 1: Controlled Emission Points

Emission Point	Emission Unit	Description	Control Device	Stack Height (ft)	Stack Inside Diameter (ft)	Stack Gas Exit Velocity (ft/s)	Stack Gas Exit Temp. (°F)	Lead Emission Limit (lb/hr)
1	1a	44,000 lb Pre-Stage Lead Pot	Baghouse #2	36.00	5.96	65.51	79.27	1.59E-02
	1b	20,000 lb Chill Cast						
	1c	Pasting						
	1d	Pasting Take-off						
	1f	Auto Stacking (4)	Baghouse #1					
	1g	Compression Station						
	1h	Cast-on Strap (Electric Leadpot)						
	1i	Short Check (Repair Station)						
	1j	Heat Seal						
	1k	Chem Lab						
	1m	Post Burner						
3	3a	Auto Stacking (4)	Baghouse #3	35.01	4.00	73.63	92.67	6.39E-03
	3b	Remelt Pot (Electric)						
	3c	QA Teardown						
	3d	Die Cleaning						
4	4	Lead Oxide Load/Unload Dock	Baghouse #4	13.68	1.66	102.15	85.30	1.43E-03
5a	5a	Lead Oxide Silo #1	HEPA Filter #1	37.93	0.67	61.02	81.83	1.87E-04
5b	5b	Lead Oxide Silo #2	HEPA Filter #2	37.43	0.67	64.14	74.83	1.87E-04
5c	5c	Lead Oxide Silo #3	HEPA Filter #3	37.34	1.04	16.29	108.33	1.87E-04
5d	5d	Lead Oxide Silo #4	HEPA Filter #4	36.42	1.04	15.72	99.67	1.87E-04
6	6	Central Vacuum System #1	Baghouse #6	30.38	0.50	101.87	155.63	2.10E-04
7a	7a	Paste Mixing #4	Wet Scrubber #1	33.17	1.15	47.57	82.77	4.40E-04
7b	7b	Paste Mixing #3	Wet Scrubber #2	33.01	1.15	51.00	68.03	4.40E-04
7c	7c	Paste Mixing #2	Wet Scrubber #3 and HEPA Filter	40.00	1.42	30.72	Ambient	3.42E-05
7d	7d	Paste Mixing #1	Wet Scrubber #4 and HEPA Filter	40.00	1.42	27.13	Ambient	2.11E-05
10	10	Central Vacuum System #2	Baghouse #10	31.27	1.17	17.88	196.00	2.11E-04

SPECIAL CONDITIONS:

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

Table 2: Uncontrolled Emission Points

Emission Point	Emission Unit	Description	Stack Height (ft)	Stack Inside Diameter (ft)	Stack Gas Exit Velocity (ft/s)	Stack Gas Exit Temp. (°F)	Lead Emission Limit (lb/hr)
9a	9a	Curing/Drying Oven #1	31.76	1.17	15.09	99.00	3.75E-04
9b	9b	Curing/Drying Oven #18	32.91	1.17	14.47	130.33	3.75E-04
9c	9c	Curing/Drying Oven #17	33.33	1.17	13.95	153.67	3.75E-04
9d	9d	Curing/Drying Oven #16	33.17	1.17	21.11	160.33	3.75E-04
9e	9e	Curing/Drying Oven #15	32.84	1.17	22.49	164.00	3.75E-04
9f	9f	Curing/Drying Oven #14	33.23	1.17	14.76	161.00	3.75E-04
9g	9g	Curing/Drying Oven #13	33.17	1.17	19.39	162.67	3.75E-04
9h	9h	Curing/Drying Oven #12	33.23	1.17	10.84	159.00	3.75E-04
9i	9i	Curing/Drying Oven #7	31.92	1.17	17.96	152.67	3.75E-04
9j	9j	Curing/Drying Oven #8	31.92	1.17	11.47	152.67	3.75E-04
9k	9k	Curing/Drying Oven #9	31.43	1.17	14.49	161.67	3.75E-04
9l	9l	Curing/Drying Oven #10	31.50	1.17	18.90	164.67	3.75E-04
9m	9m	Curing/Drying Oven #11	31.59	1.17	13.74	140.33	3.75E-04
9n	9n	Curing/Drying Oven #5	31.00	1.17	18.24	156.00	3.75E-04
9o	9o	Curing/Drying Oven #4	31.76	1.17	15.18	159.33	3.75E-04
9p	9p	Curing/Drying Oven #3	31.66	1.17	15.13	163.00	3.75E-04
9q	9q	Curing/Drying Oven #2	32.25	1.17	15.56	160.33	3.75E-04
9r	9r	Curing/Drying Oven #25	30.31	1.17	23.24	151.67	3.75E-04
9s	9s	Curing/Drying Oven #20	30.74	1.17	9.68	158.00	3.75E-04
9t	9t	Curing/Drying Oven #19	31.33	1.17	18.92	153.00	3.75E-04
9u	9u	Curing/Drying Oven #6	29.43	1.17	16.35	148.33	3.75E-04
9v	9v	Curing/Drying Oven #21	30.91	1.17	24.84	138.33	3.75E-04
9w	9w	Curing/Drying Oven #22	30.91	1.17	21.84	159.67	3.75E-04
9x	9x	Curing/Drying Oven #23	30.84	1.17	10.62	121.00	3.75E-04
9y	9y	Curing/Drying Oven #24	31.00	1.17	11.24	154.00	3.75E-04

4. Record Keeping and Reporting Requirements
NorthStar Battery Company, LLC – Plant #1 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.
5. Performance Testing
 - A. The permittee shall demonstrate compliance with the lead emission limitations in Special Condition 3 by conducting stack testing in accordance with the procedures in 10 CSR 10-6.030 *Sampling Methods for Air Pollution Sources* and §60.374. Stack testing previously conducted in February of 2002 on EP-1, EP-4, EP-5a, EP-5b, EP-6, EP-7a, and EP-7b may be used to demonstrate compliance with the emission limitations in Special Condition 3. Stack testing previously conducted in August of 2013 on EP-3, EP-5c, EP-5d, EP-10, and all Curing/Drying Ovens (EP-9a – EP-9y) may be used to demonstrate compliance with the emission limitations in Special Condition 3. Stack testing previously conducted in March of 2015 on EP-7c and EP-7d may be used to demonstrate compliance with Special Condition 3.
 - B. NorthStar Battery Company, LLC – Plant #1 may be required to conduct additional performance testing on EP-1 to demonstrate compliance with §60.372(b) per §63.11423(c)(1).

SPECIAL CONDITIONS:

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

- C. A completed Proposed Test Plan Form (enclosed) shall be submitted to the Air Pollution Control Program 30 days prior to the proposed test date so that the Air Pollution Control Program may arrange a pretest meeting, if necessary, and assure that the test date is acceptable for an observer to be present. The Proposed Test Plan may serve the purpose of notification and shall be approved by the Director prior to conducting the required emission testing.
 - D. Two copies of a written report of the performance test results shall be submitted to the Director within 30 days of completion of any required testing. The report shall include legible copies of the raw data sheets, analytical instrument laboratory data, and complete sample calculations from the required U.S. EPA Method for at least one sample run.
 - E. The test report is to fully account for all operational and emission parameters addressed both in the permit conditions as well as in any other applicable state or federal rules or regulations.
6. The permittee shall notify the Air Pollution Control Program before initial startup of any modifications to the facility design that could impact the release parameters or lead emission rates as specified in the Memorandum from the Modeling Unit titled, "Ambient Air Quality Impact Analysis (AAQIA) for Northstar Battery Company, LLC – Plant #1 – Post Burner Project". In the event the Air Pollution Control Program determines that the changes are significant, the permittee shall submit an updated AAQIA to the Air Pollution Control Program that continues to demonstrate compliance with the RAL.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW

Project Number: 2015-11-032

Installation ID Number: 077-0234

Permit Number:

Installation Address:

NorthStar Battery Company, LLC – Plant #1
4000 Continental Way
Springfield, MO 65803

Parent Company:

NorthStar Battery Company, LLC
4000 Continental Way
Springfield, MO 65803

Greene County, S3, T29N, R21W

REVIEW SUMMARY

- NorthStar Battery Company, LLC has applied for authority to install 1m Post Burner at Plant #1.
- The application was deemed complete on November 12, 2015.
- HAP emissions are expected from the proposed equipment. Lead emissions will occur from the welding of posts onto the battery work cell. Lead emissions will be controlled by Baghouse #1 and are limited by §60.372(a)(6) to 0.000437 gr/dscf. HAP emissions will also occur from the combustion of natural gas by the burner. Individual HAP emissions from the combustion of natural gas are below each individual HAPs' respective SMAL.
- 40 CFR Part 60, Subpart KK – *Standards of Performance for Lead-Acid Battery Manufacturing Plants* is applicable to 1m Post Burner. The post burner meets the definition of other lead-emitting operation at §60.371 and is required to meet a lead limit of 0.000437 gr/dscf by §60.372(a)(6). As multiple lead emitting facilities are being vented to Baghouse #1, NorthStar Battery Company, LLC – Plant #1 will comply with the equivalent standard for the total exhaust stream from Baghouse #1 which was calculated according to §60.372(b) to be 0.000245 gr/dscf. Performance testing may be required by §63.11423(c)(1).
- 40 CFR Part 63, Subpart P – *National Emission Standards for Hazardous Air Pollutants for Lead Acid Battery Manufacturing Area Sources* is applicable to 1m Post Burner.
- Baghouse #1 is being used to control lead and other particulate emissions from 1m Post Burner.
- 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 below the de minimis levels. A permit was required as potential emissions of the project exceed the Lead SMAL.

- This installation is located in Greene County, an attainment 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 performed to determine the ambient impact of lead emissions.
- Emissions testing is not required to demonstrate compliance with this permit, but may be required to demonstrate compliance with §60.372(b).
- NorthStar Battery Company, LLC – Plant #1 will remain a basic state installation. The installation of 1m Post Burner constitutes an off-permit change. The issuance of this permit is considered contemporaneous notice; therefore, no further notice is necessary. NorthStar Battery Company, LLC – Plant #1 shall include the special conditions of this permit in all subsequent operating permit renewals.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

NorthStar Battery Company, LLC operates two lead acid battery production plants in Springfield, MO. The two plants are considered separate installations as they are not located on one or more contiguous or adjacent properties. Plant #1 was designed as a 600,000 batteries per year plant and began construction under Permit 1100-221D. An expansion occurred in 2013 under Permit 082013-001 increasing battery production to 780,000 batteries per year.

Lead is received in the form of solid blocks. These blocks are melted and cast into plates. Lead oxide is combined with the plates by the pasters. The pasted plates are stacked to form the battery cell. The cells are sent to natural gas-fired curing ovens. After curing, the cells are soldered together and placed in cases. The cases are filled with acid and charged. The installation is an existing minor source of lead. The emission points are listed in Tables 1 and 2.

The following New Source Review permits have been issued to NorthStar Battery Company, LLC – Plant #1 by the Air Pollution Control Program.

Table 3: Permit History

Permit Number	Description
1100-221D	Construction of a 600,000 batteries per year lead-acid battery production plant
082013-001	Increase battery production to 780,000 batteries per year
082013-001A	Amendment to update AAQIA with as-built stack parameters
082013-001B	Amendment to require HEPA filters for EP-7c and EP-7d
082013-001C	Amendment to update AAQIA with as-built stack parameters for EP-7c and EP-7d

PROJECT DESCRIPTION

NorthStar Battery Company, LLC has requested to install 1m Post Burner at Plant #1. The post burner will be located at the end of the production process to weld posts onto the battery work cells to meet the design specifications of a new product. The plant is bottlenecked by their drying/curing capacity; therefore, the post burner will not increase the production rate of Plant #1. The post burner will emit pollutants from the welding process and from the combustion of natural gas in the burner.

EMISSIONS/CONTROLS EVALUATION

Process particulate emissions were calculated using emission factors for three-process operations in AP-42 Table 12.15-2. Special Condition 2 requires emissions from 1m Post Burner be controlled by Baghouse #1; therefore, emissions from the welding process were given 99% control efficiency. Process lead emissions were calculated using the maximum air flow rate of 1280 cfm and the NSPS KK limit of 0.000437 gr/dscf.

The natural gas burner has an MHDR of 0.112 MMBtu/hr. Emission factors for the combustion of natural gas used in this analysis were obtained from the EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 1.4 “Natural Gas Combustion” (July 1998).

The following table provides an emissions summary for this project. Existing potential emissions were taken from NSR Permit 082013-001. Existing actual emissions were taken from the installation’s most recent full EIQ, 2014. Potential emissions of the application represent the potential of the post burner, assuming continuous operation (8760 hours per year).

Table 4: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2014 EIQ)	Potential Emissions of the Application	New Potential Emissions of the Installation
PM	25.0	6.96	N/A	0.73	7.69
PM ₁₀	15.0	6.51	0.54	0.67	7.18
PM _{2.5}	10.0	6.51	0.54	0.67	7.18
SO _x	40.0	0.08	N/D	0.0003	0.08
NO _x	40.0	12.85	3.29	0.05	12.85
VOC	40.0	0.71	0.18	0.003	0.71
CO	100.0	10.80	2.77	0.04	10.84
HAPs	25.0	0.38	0.06	0.02	0.40
Lead	0.6 ¹	0.14	0.06	0.02	0.15
Hexane	10.0 ²	0.23	N/D	0.001	0.23

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

¹ The lead SMAL is 0.01 tons per year.

² The hexane SMAL is 10 tons per year.

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 below the de minimis levels. A permit was required as potential emissions of the project exceed the Lead SMAL.

APPLICABLE REQUIREMENTS

NorthStar Battery Company, LLC – Plant #1 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

- 10 CSR 10-6.065 *Operating Permits*
- 10 CSR 10-6.110 *Submission of Emission Data, Emission Fees and Process Information*
 - NorthStar Battery Company, LLC – Plant #1 shall submit a full EIQ for the 2016 calendar year.
- 10 CSR 10-6.165 *Restriction of Emission of Odors*
- 10 CSR 10-6.170 *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*
- 10 CSR 10-6.220 *Restriction of Emission of Visible Air Contaminants*

SPECIFIC REQUIREMENTS

- 10 CSR 10-6.070 *New Source Performance Regulations*
 - 40 CFR Part 60, Subpart KK – *Standards of Performance for Lead-Acid Battery Manufacturing Plants* is applicable to 1m Post Burner.
- 10 CSR 10-6.075 *Maximum Achievable Control Technology Regulations*
 - 40 CFR Part 63, Subpart PPPPPP – *National Emission Standards for Hazardous Air Pollutants for Lead Acid Battery Manufacturing Area Sources* is applicable to 1m Post Burner.
- 10 CSR 10-6.400 *Restriction of Emission of Particulate Matter From Industrial Processes* is not applicable to 1m Post Burner as Special Condition 2 is a federally enforceable requirement for a baghouse. Baghouses achieves greater than 90% particulate control; therefore, 1m Post Burner is exempt from this regulation per 10 CSR 10-6.400(1)(B)15.

AMBIENT AIR QUALITY IMPACT ANALYSIS

Ambient air quality modeling was performed to determine the ambient impact of lead compounds. Modeling was performed using the EPA modeling software AERMOD. Modeling was required as project potential lead emissions exceed the SMAL of 0.01 tons per year. The results of the modeling analysis are summarized in Table 5. The installation is limited to the lead emission rates they proposed as modeling inputs per Special Condition 3.

Table 5: Ambient Air Quality Impact Analysis Summary

Pollutant	Modeled Impact ($\mu\text{g}/\text{m}^3$)	RAL ($\mu\text{g}/\text{m}^3$)	Time Period
Lead Compounds (20-11-1)	0.4979	2	8-hr
Lead Compounds (20-11-1)	0.2578	0.357	24-hr
Lead Compounds (20-11-1)	0.0678	0.07	Annual

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060 *Construction Permits Required*, I recommend 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 November 9, 2015, received November 12, 2015, designating NorthStar Battery Company, LLC as the owner and operator of the installation.
- Ambient Air Quality Impact Analysis for Northstar Battery Company, LLC – Plant #1 – Post Burner Project (December 2015).

APPENDIX A

Abbreviations and Acronyms

%	percent	m/s	meters per second
°F	degrees Fahrenheit	Mgal	1,000 gallons
acfm	actual cubic feet per minute	MW	megawatt
BACT	Best Available Control Technology	MHDR	maximum hourly design rate
BMPs	Best Management Practices	MMBtu	Million British thermal units
Btu	British thermal unit	MMCF	million cubic feet
CAM	Compliance Assurance Monitoring	MSDS	Material Safety Data Sheet
CAS	Chemical Abstracts Service	NAAQS ...	National Ambient Air Quality Standards
CEMS	Continuous Emission Monitor System	NESHAPs	National Emissions Standards for Hazardous Air Pollutants
CFR	Code of Federal Regulations	NO_x	nitrogen oxides
CO	carbon monoxide	NSPS	New Source Performance Standards
CO₂	carbon dioxide	NSR	New Source Review
CO_{2e}	carbon dioxide equivalent	PM	particulate matter
COMS	Continuous Opacity Monitoring System	PM_{2.5}	particulate matter less than 2.5 microns in aerodynamic diameter
CSR	Code of State Regulations	PM₁₀	particulate matter less than 10 microns in aerodynamic diameter
dscf	dry standard cubic feet	ppm	parts per million
EQ	Emission Inventory Questionnaire	PSD	Prevention of Significant Deterioration
EP	Emission Point	PTE	potential to emit
EPA	Environmental Protection Agency	RACT	Reasonable Available Control Technology
EU	Emission Unit	RAL	Risk Assessment Level
fps	feet per second	SCC	Source Classification Code
ft	feet	scfm	standard cubic feet per minute
GACT	Generally Available Control Technology	SDS	Safety Data Sheet
GHG	Greenhouse Gas	SIC	Standard Industrial Classification
gpm	gallons per minute	SIP	State Implementation Plan
gr	grains	SMAL	Screening Model Action Levels
GWP	Global Warming Potential	SO_x	sulfur oxides
HAP	Hazardous Air Pollutant	SO₂	sulfur dioxide
hr	hour	tph	tons per hour
hp	horsepower	tpy	tons per year
lb	pound	VMT	vehicle miles traveled
lbs/hr	pounds per hour	VOC	Volatile Organic Compound
MACT	Maximum Achievable Control Technology		
µg/m³	micrograms per cubic meter		

Mr. Carlos Estrada
General Manager/COO
NorthStar Battery Company, LLC – Plant #1
4000 Continental Way
Springfield, MO 65803

RE: New Source Review Permit - Project Number: 2015-11-032

Dear Mr. Estrada:

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, your new source review permit application, and with your basic 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 were adversely affected by this permit decision, you may be entitled to pursue an appeal before the administrative hearing commission pursuant to §§621.250 and 643.075.6 RSMo. To appeal, you must file a petition with the administrative hearing commission 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 Administrative Hearing Commission, Truman State Office Building, P.O. Box 1557, Jefferson City, Missouri 65102, website: www.oa.mo.gov/ahc.

If you have any questions regarding this permit, please do not hesitate to contact Alana Hess, at the Department of Natural Resources' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Susan Heckenkamp
New Source Review Unit Chief

SH:ahl

Enclosures

c: Southwest Regional Office
PAMS File: 2015-11-032

Permit Number: