



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: 012014-011

Project Number: 2013-11-050
Installation Number: 510-2560

Parent Company: GP Recycling LLC

Parent Company Address: 5 North Market Street, St. Louis, MO 63102

Installation Name: GP Recycling, LLC

Installation Address: 101 Ferry St., St. Louis, MO 63147

Location Information: City of St. Louis County, Land Grant 01342/02041

Application for Authority to Construct was made for a metal recovery screen, dryer, conveyors, cyclone and baghouse. 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.

JAN 28 2014

EFFECTIVE DATE

Kyna 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 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.

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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."

GP Recycling, LLC
City of St. Louis County, Land Grant 01342/02041

1. Control Device Requirement-Baghouse
 - A. GP Recycling, LLC shall control emissions from the rotary dryer, ASTEC CORETEM dryer (F2.4) using a baghouse 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. These gauges or meters shall be located such that Department of Natural Resources' employees may easily observe them.
 - 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. GP Recycling, LLC 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.
 - E. GP Recycling, LLC shall maintain a copy of the baghouse manufacturer's performance warranty on site.
 - F. GP Recycling, LLC 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.

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SPECIAL CONDITIONS:

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

2. Record Keeping and Reporting Requirements
 - A. GP Recycling, LLC 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. These records shall include MSDS for all materials used.
 - B. GP Recycling, LLC 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: 2013-11-050
Installation ID Number: 510-2560
Permit Number:

GP Recycling, LLC
101 Ferry St.
St. Louis, MO 63147

Complete: December 30, 2013

Parent Company:
GP Recycling LLC
5 North Market Street
St. Louis, MO 63102

City of St. Louis, Land Grant 01342/02041

REVIEW SUMMARY

- GP Recycling, LLC has applied for authority to construct a metal recovery screen, dryer, conveyors, cyclone and baghouse.
- HAP emissions are expected from the proposed equipment. HAPs of concern from this process are below de minimus.
- None of the New Source Performance Standards (NSPS) apply to the installation.
- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment.
- The cyclone and baghouse are being used to control the PM, PM₁₀, 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 pollutants are below de minimis levels.
- This installation is located in City of St. Louis, a nonattainment area for the 8-hour ozone standard and the PM_{2.5} standard 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. The installation's major source level is 250 tons per year for all non-attainment pollutants 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.
- 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 DESCRIPTION

GP Recycling, LLC operates a recycling facility that processes automotive scrap residue (ASR) to remove metals present in the residue. In the initial Permit 082012-013, GP Recycling, LLC constructed the original facility that is divided into three plants, the screening plant, the quad plant, and the fines plant.

The following New Source Review permits have been issued to GP Recycling, LLC from the Air Pollution Control Program.

Table 1: Previously Issued Construction Permits

Permit Number	Description
082012-013	This permit was issued for the installation of an automotive scrap residue (ASR) recycling facility that processes ASR to remove metals.

PROJECT DESCRIPTION

This project adds equipment in the fines plant between EP-F2 (Conveyor 2 to Conveyor 3) and EP-F3 (Conveyor 3 to Feeder Pan 4). GP Recycling, LLC intends to install new screening and drying equipment with associated conveyors as part of its existing operation. This equipment will be used to reduce the amount of moisture in the automotive scrap residue during the fines plant portion of the facility. The system components include the following:

Table 2: Project Emission Points and Equipment List

Emission Point ID	Equipment Description	MHDR
EP-F2.1	Conveyor	40 tph
EP-F2.2	Trommel Screen	40 tph
EP-F2.3	Conveyor	40 tph
EP-F2.4	ASTECC CORETEM rotary dryer (process emissions)	40 tph
EP-F2.5	Conveyor	40 tph
EP-F2.6	Natural gas combustion emissions from rotary dryer	25mmBtu/hr

Automotive scrap residue (ASR) is conveyed to the trommel screen. The material that

falls through the screens in the new trommel is fed into the dryer, dried, and continues through the rest of the line to pull out the metal. The material that falls out of the end of the trommel is either run through the other processes or sent to the landfill, depending on what it is. GP Recycling, LLC sorts these components and sells the metal (aluminum, copper, brass, and ferrous metals). They dispose the rest (glass, rock, wood and other pieces of trash) in a landfill. The rotary dryer is a 35' long x 7' diameter ASTEC CORETEN similar to the ones used in asphalt production. It is fired by a 25 MMBtu/hr natural gas burner. The process emissions from the rotary dryer will be vented through a cyclone and a baghouse.

EMISSIONS/CONTROLS EVALUATION

Although no emission factors were identified for calculating emissions from handling ASR, emission factors were selected similar to those used in Permit 082012-013. Two sources from AP-42 *Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources*, Fifth Edition, Section 11.19.2, "Crushed Stone Processing and Pulverized Mineral Processing," August 2004 were selected. The units selected were: Conveyor Transfer Point (SCC 3-05-020-06) and Screening (SCC 3-05-020-02).

The process PM, PM₁₀, and PM_{2.5} emissions from ASTEC CORETEM rotary dryer are controlled by a cyclone and baghouse. This dryer is similar to ones used in asphalt production, therefore the controlled emission factor from AP-42, Table 11.1-3, "Hot Mix Asphalt Plants", April 2004 was used. The PM_{2.5} emission factor for the rotary dryer was derived by adding the condensable and filterables from AP-42, Table 11.1-3 (0.012 condensable PM) and Table 11.1-4 (0.0029 filterable PM_{2.5} fabric filter).

The combustion emissions for the dryer were calculated using the emission factors from AP-42, Section 1.4 "Natural Gas Combustion," July 1998.

The following table provides an emissions summary for this project. Existing potential emissions were taken from Permit 082012-013. Existing actual emissions are not available since the facility has not operated a full calendar year until 2013. The installation's 2013 EIQ has not been submitted as of this permit application. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year).

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions ^a	Existing Actual Emissions	Potential Emissions of the Application	New Installation Conditioned Potential
PM	25.0	47.7	N/A	11.94	59.64
PM ₁₀	15.0	<15.0	N/A	6.95	21.95
PM _{2.5}	10.0	2.59	N/A	5.53	8.12
SO _x	40.0	N/A	N/A	0.06	0.06
NO _x	40.0	N/A	N/A	10.74	10.74
VOC	40.0	N/A	N/A	0.59	0.59
CO	100.0	N/A	N/A	9.02	9.02
GHG (CO ₂ e)	75,000 / 100,000	N/A	N/A	12,960.75	12,960.74
GHG (mass)	0.0 / 100.0 / 250.0	N/A	N/A	12,882.84	12,882.84
HAPs	10.0/25.0	N/A	N/A	0.20	0.20

N/A = Not Applicable

^aPermit 082012-013

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 de minimis levels.

APPLICABLE REQUIREMENTS

GP Recycling, LLC shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved.

GENERAL REQUIREMENTS

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

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

Kathy Kolb
New Source Review Unit

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated November 22, 2013, received November 22, 2013, designating GP Recycling LLC as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.

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	
CFR	Code of Federal Regulations	National Emissions Standards for Hazardous Air Pollutants
CO	carbon monoxide	NO_x	nitrogen oxides
CO₂	carbon dioxide	NSPS	New Source Performance Standards
CO_{2e}	carbon dioxide equivalent	NSR	New Source Review
COMS	Continuous Opacity Monitoring System	PM	particulate matter
CSR	Code of State Regulations	PM_{2.5}	particulate matter less than 2.5 microns in aerodynamic diameter
dscf	dry standard cubic feet	PM₁₀	particulate matter less than 10 microns in aerodynamic diameter
EQ	Emission Inventory Questionnaire	ppm	parts per million
EP	Emission Point	PSD	Prevention of Significant Deterioration
EPA	Environmental Protection Agency	PTE	potential to emit
EU	Emission Unit	RACT	Reasonable Available Control Technology
fps	feet per second	RAL	Risk Assessment Level
ft	feet	SCC	Source Classification Code
GACT	Generally Available Control Technology	scfm	standard cubic feet per minute
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. Cap Grossman
President
GP Recycling, LLC
5 North Market Street
St. Louis, MO 63102

RE: New Source Review Permit - Project Number: 2013-11-050

Dear Mr. Grossman:

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 amended operating permit is necessary for continued compliance. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

If you have any questions regarding this permit, please do not hesitate to contact Kathy Kolb, 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:kk1

Enclosures

c: St. Louis Regional Office
PAMS File: 2013-11-050

Permit Number: