Missouri Department of NATURAL RESOURCES
dnr.mo.gov
Eric R. Greitens, Governor
Carol S. Comer, Director

APR 1 0 2018

Mr. Kenneth Voss
Missouri Department of Transportation
Central Office
105 W. Capitol Avenue
Jefferson City, Missouri 65102

Dear Mr. Voss:

This letter is a follow up to the Missouri Department of Natural Resources' July 25, 2017, letter from Steven Feeler to Michael Pace, Chairman of the Missouri Highways and Transportation Commission. We are pleased to inform you that our staffs have effectively worked together to resolve the issues identified in that letter, in particular the steel grit and blast residue management from bridge sites.

Management of this material is subject to the Missouri Hazardous Waste Management Law and Regulations, unless the generator determines it is exempt from regulation. It is our understanding that the Missouri Department of Transportation (MoDOT) desires to manage the steel grit from blasting operations as an exempt material and has provided a contract with The Doe Run Company, along with further verification from The Doe Run Company, substantiating that the material can be accepted and managed as an exempt material.

On behalf of the Missouri Department of Natural Resources, I appreciate your staff's efforts to resolve this matter and MoDOT's ongoing efforts to ensure compliance of its contractors. Should you have questions regarding this letter or wish to discuss further, please contact me at (573) 522-9644.

Sincerely,

DIVISION OF ENVIRONMENTAL QUALITY

Carey Bridges

Carey Bridges, RG
Deputy Director

CB:jjd

Enclosures:
MoDNR Letter dated July 25, 2017
MoDOT/Doe Run Contract
Doe Run Validation – Mark Yingling E-mail

Recycled paper

c: Mr. Buck Brooks, MoDOT (via email)
Mr. John Jurgensmeyer, MoDNR (via email)
Ms. Erin Lepper, MoDNR (via email)
Mr. Richard Moore, MoDOT (via email)
Mr. Eric Schroeter, MoDOT (via email)

Missouri Department of NATURAL RESOURCES
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Eric R. Greitens, Governor
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July 25, 2017

Mr. Michael B. Pace
Chairman
Missouri Highways and Transportation Commission
Missouri Department of Transportation
Central Office
105 W. Capitol Avenue
Jefferson City, MO 65102

Dear Mr. Pace:

I am reaching out to you and the Missouri Department of Transportation (MoDOT) to provide the Missouri Department of Natural Resources' (MoDNR) position regarding some current MoDOT perceptions and practices and to ask for your assistance in encouraging them to strive for compliance. Department staff conducted a total of four hazardous waste compliance inspections at MoDOT bridge paint removal/repainting projects on July 13, 2016; November 3, 2016; and two on November 9, 2016. On August 10, 2016 and December 15, 2016 respectively, MoDNR issued Notices of Violation to MoDOT and their contractors as co-generators of regulated solid waste for violations of hazardous waste laws and regulations at all four projects.

Prior to work beginning on the Highway 63 bridge in Jefferson City, a representative from MoDOT approached MoDNR staff and informed us that due to the high levels of heavy metals in the bridge paint and the contractor's desire to utilize a reusable steel grit abrasive that a Missouri Resource Recovery certificate would be necessary. Resource recovery (RR) is the extraction of a usable material from a hazardous waste, in this case extracting steel grit from the abraded paint waste. The RR certificate was needed because the generated solid waste from paint removal would exceed the regulatory levels for lead making it a hazardous waste. Reclaiming material from hazardous waste requires a facility specific hazardous waste permit or RR certificate. On July 13, 2016, MoDNR inspected the Highway 63 bridge project and documented 59 hazardous waste violations. During follow-up responses and meetings MoDOT was unable to document compliance with Missouri Hazardous Waste Laws and Regulations.

MoDNR contacted MoDOT to provide proactive compliance assistance for future bridge projects and to offer recommendations for compliance actions that could be taken before a project began in the interest of preventing future violations. An initial meeting was held on

December 16, 2016, and MoDOT representatives stated that they would comply with the laws and regulations on all future bridge projects. Since then MoDOT has not yet demonstrated compliance.

Hazardous waste regulations require that each solid waste that is not exempt must receive a determination to show whether or not the waste is hazardous. The regulations allow this determination to be made by knowledge of the process generating the waste or by testing and several MoDOT, MoDNR staff meetings covered this topic. MoDOT has reported they will use generator knowledge for this determination. However, to our knowledge, MoDOT has minimal records on what type of paint was used on maintenance projects, when and where, and the maintenance projects themselves are not all clearly documented. Without foundational knowledge of the waste constituents and processes, a generator must rely on analytical testing. For this, a representative sample of the waste at the site must be obtained. The MoDNR has made numerous requests for MoDOT's sampling and evaluation protocol, but has not yet received this information. Because there are potentially varying paint schemes and waste-altering factors on a bridge (e.g., different formulations, spot painting, weathering extent, blast media used), variable waste streams are likely to be generated. For this reason, MoDNR has requested a waste analysis plan (WAP) from MoDOT and the Department has not received this information.

MoDOT has claimed that "regardless of the outcome of that [waste] determination" the solid waste meets the exemption listed at 40 CFR 261(e)(ii). For this waste to be exempt MoDOT will have to validate the claim that the waste generated is an effective substitute for a commercial product. MoDNR's expressed concern is that a waste stream comprised of a minimal amount of steel grit and waste paint chips is unlikely comparable to commercial fluxing material that it is claimed to replace. MoDNR has requested verbally and in writing that MoDOT validate this claim with "facts, evidence, chemical data, peer reviewed technical documentation, etc."; but has not yet received this information. It is illegal to transport hazardous waste on public roadways without a MoDOT-issued Missouri hazardous waste transporter license. Some MoDOT staff overseeing the Highway 63 project last summer were not aware of this requirement and the transporter used did not posess such a license. MoDOT and MoDNR staff have since discussed options concerning the transportation of hazardous waste from bridge projects. MoDNR has explained the regulations and offered compliant alternatives. For example, MoDOT currently possesses a valid Missouri Hazardous Waste Transporters License, has trucks available, and facilities capable of becoming compliant short term storage. We are unsure as to why MoDOT staff do not see this as a viable alternative and no other option has been offered for consideration.

As generators or co-generators of hazardous waste, MoDOT personnel and their contractors associated with some aspects of waste management must be trained in basic hazardous waste

management requirements. Following the multiple inspections and follow-up discussions MoDNR has concerns with MoDOT's familiarity with the regulations that apply to its hazardous waste operations. We are unsure as to the additional training that will be provided to staff working on hazardous waste generating projects.

In response to the compliance delays, MoDNR consulted staff of the U.S. Environmental Protection Agency (USEPA) Region 7 to assure that we are not applying regulations any more stringently than that agency. Most of MoDNR's regulations were adopted by reference directly from the federal regulations and to retain authorization to enforce such regulations in the state, we can apply these no less stringently than USEPA. The attached e-mail contains USEPA's response to MoDOT's questions and concerns.

We'd appreciate all the encouragement you could give staff to ensure compliance. If you would like a complete set of regulations please let us know and we can put together whatever you would like. If you wish to discuss or set up a conference please contact me at (573) 751-0763, through the mail at the Missouri Department of Natural Resources, Division of Environmental Quality, P.O. Box 176, Jefferson City, MO 65102-0176, or via e-mail at steve.feeler@dnr.mo.gov. We are always willing to discuss solutions for compliance with generators and look forward to working with and aiding MoDOT in this regard.

Sincerely,

DIVISION OF ENVIRONMENTAL QUALITY

Steven Feeler
Deputy Division Director
Division of Environmental Quality

SF:ebh

Enclosure

c: Mr. Patrick K. McKenna, Director, MoDOT
Mr. Buck Brooks, MoDOT (Via E-mail)
Mr. Bill Fanska, MoDNR, Hazardous Waste Program, Permits Section (Via E-mail)
Mr. Eric Schroeter, MoDOT (Via E-mail)
Ms. Gayle Unruh, MoDOT (Via E-mail)

CCO Form: GS09
Approved: 07/05 (BDG)
Revised: 05/14 (AR)
Modified:

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
CONTRACT SERVICES AGREEMENT

THIS AGREEMENT is entered into by The Doe Run Resources Corporation DBA The Doe Run Company (hereinafter, "Contractor") and the Missouri Highways and Transportation Commission (hereinafter, "Commission").

WITNESSETH:

WHEREAS, the Commission has selected the Contractor to perform non-professional services in the nature of Paint Chip Reclamation for hazardous waste and/or exempted non-hazardous waste as specified in 40 CFR 261.2(e)(1). The material will generally be composed of any of the following, or any combination thereof: arsenic, barium, cadmium, chromium, lead, selenium, iron, silica or silver. In addition, this Agreement will serve as documentation of claims that materials are not solid waste or are conditionally exempt from regulation as required in 40 CFR 261.2(f), for the Commission and Commission's bridge contractors and,

WHEREAS, the Contractor represents that it is qualified in its field of expertise to competently provide such services.

NOW, THEREFORE, in consideration of the mutual promises, covenants, and representations contained herein, the parties agree as follows:

(1) SCOPE OF SERVICES:

(A) The services covered by this Agreement shall include furnishing all personnel and the equipment, material and all other things necessary for the reclamation of paint chips.

(B) The specific services to be provided by the Contractor are set forth in Exhibit I to this Agreement, titled "Scope of Services and Pricing Page," which is attached hereto and made a part of this Agreement, also referenced in SFS 7-170131RW. In addition, the Contractor shall comply with Exhibit II to this Agreement, titled "General Terms and Conditions and Special Terms and Conditions," which is attached hereto and made part of this Agreement.

(2) ADDITIONAL SERVICES: The Commission reserves the right to direct additional services not described in Exhibit I as changed or unforeseen conditions may require. Such direction by the Commission shall not be a breach of this Agreement. In

CCO Form: GS09
Approved: 07/05 (BDG)
Revised: 05/14 (AR)
Modified:

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take such action with respect to any subcontract as the Commission may direct as a means of enforcing such provisions, including sanctions for noncompliance.

(8) DISPUTES UNDER THIS AGREEMENT: The Commission's representative will decide all questions which may arise as to the quality, quantity, and acceptability of services performed by the Contractor and as to the rate of progress of the services; all questions which may arise as to the interpretation of the plans and specifications; all questions as to the acceptable fulfillment of the Agreement on the part of the Contractor; the proper compensation for performance or breach of the Agreement; and all claims of any character whatsoever in connection with or growing out of the services of the Contractor, whether claims under this Agreement or otherwise. The Commission representative's decisions shall be conclusive, binding and incontestable.

(9) SUCCESSORS AND ASSIGNS: The Commission and the Contractor agree that this Agreement and all agreements entered into under the provisions of this Agreement shall be binding upon the parties hereto and their successors and assigns.

(10) INDEMNIFICATION: The Contractor shall defend, indemnify and hold harmless the Commission, including its members and department employees, from any claim or liability whether based on a claim for damages to real or personal property or to a person for any matter relating to or arising out of the Contractor's performance of its obligations under this Agreement.

(11) VENUE: It is agreed by the parties that any action at law, suit in equity, or other judicial proceeding to enforce or construe this Agreement, or regarding its alleged breach, shall be instituted only in the Circuit Court of Cole County, Missouri.

(12) AUDIT OF RECORDS: The Contractor must maintain all records relating to this Agreement, including but not limited to invoices, payrolls, etc. These records must be available at all reasonable times at no charge to the Commission and/or its designees or representatives during the period of this Agreement and any extension thereof, and for three (3) years from the date of final payment made under this Agreement.

(13) WORK PRODUCT: All documents, reports, exhibits, etc. produced by the Contractor at the direction of the Commission and information supplied by the Commission shall remain the property of the Commission.

(14) CONFIDENTIALITY: The Contractor shall not disclose to third parties confidential factual matter provided by the Commission except as may be required by statute, ordinance, or order of court, or as authorized by the Commission. The Contractor shall notify the Commission immediately of any request for such information.

(15) SOLE BENEFICIARY: This Agreement is made for the sole benefit of the parties hereto and nothing in this Agreement shall be construed to give any rights or

benefits to anyone other than the Commission and the Contractor.

(16) AMENDMENTS: Any change in this Agreement, whether by modification or supplementation, must be accomplished by a formal contract amendment approved and signed by representatives of the Contractor and Commission, respectively, each of whom being duly authorized to execute the contract amendment on behalf of the Contractor and Commission, respectively.

(17) ASSIGNMENT: The Contractor shall not assign, transfer or delegate any interest in this Agreement without the prior written consent of the Commission.

(18) BANKRUPTCY: Upon filing for any bankruptcy or insolvency proceeding by or against the Contractor, whether voluntarily, or upon the appointment of a receiver, trustee, or assignee, for the benefit of creditors, the Commission reserves the right and sole discretion to either cancel this Agreement or affirm this Agreement and hold the Contractor responsible for damages.

(19) CANCELLATION: The Commission may cancel this Agreement at any time for a material breach of contractual obligations or for convenience by providing the Contractor with written notice of cancellation. Should the Commission exercise its right to cancel the contract for such reasons, cancellation will become effective upon the date specified in the notice of cancellation sent to the Contractor.

(20) COMMISSION REPRESENTATIVE: The Commission's Wetland Coordinator is designated as the Commission's representative for the purpose of administering the provisions of this Agreement. The Commission's representative may designate by written notice other persons having the authority to act on behalf of the Commission in furtherance of the performance of this Agreement.

(21) SECTION HEADINGS: All section headings contained in this Agreement are for the convenience of reference only and are not intended to define or limit the scope of any provision of this Agreement.

(22) LAW OF MISSOURI TO GOVERN: This Agreement shall be construed according to the laws of the state of Missouri. The Contractor shall comply with all local, state and federal laws and regulations relating to the performance of this Agreement.

(23) CONTRACT PERIOD: The initial contract period is from the date of contract execution through February 28, 2020.

(24) RENEWAL INFORMATION: The contract shall not bind, not purport to bind, the Commission for any contractual commitment in excess of the original contract period. The Commission shall have the right, at its sole option, to extend the contract for one (1), three year period, or any portion thereof. In the event that the Commission exercises its options to extend the contract, such extension must be accomplished by a formal contract amendment approved and signed by representatives of the Contractor

and Commission, respectively, each of whom being duly authorized to execute the contract amendment on behalf of the Contractor and Commission, respectively.

IN WITNESS WHEREOF, the parties have entered into this Agreement on the date last written below:

Executed by the Contractor the 21 day of MARCH, 2017.

Executed by the Commission the 28 day of March, 2017.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

By Kathryn D. Harris

Title: Assistant Chief Engineer

ATTEST:

Secretary to the Commission

APPROVED AS TO FORM:

Bryce Gamble

Commission Counsel

The Doe Run Resouces Corporation

By D. Magdis

Title: DIRECTOR - RAW MATERIALS

ATTEST:

Title: Corporate Attorney

APPROVED AS TO FORM:

Title: Corporate Attorney

SCOPE OF SERVICES AND PRICING PAGE

SFS 7-170131RW
Paint Chip Reclamation

Recycling Agreement

The Doe Run Resources Corporation DBA The Doe Run Company (DRC) agrees to accept for recycling, paint materials (which may generally be composed of any of the following constituents, or any combination thereof: arsenic, barium, cadmium, chromium, lead, selenium, iron, silica or silver) supplied by Missouri Highway & Transportation Commission (Commission) and the Commission's bridge contractors according to the following terms and conditions.

Material

The following material is exempted per 40 CFR 261.2(c)(1)(ii) as a hazardous waste when used as a substitute for a commercial product:

Item 1 - Silica sand abrasive grit with paint chips.
Item 2 – Steel abrasive grit with paint chips.

The following material is not exempted per 40 CFR 261.2(e)(1) and must be managed and shipped as a hazardous waste:

Item 3 –Paint chips with no abrasive grit.
Item 4 –Contaminated tarps and personal protective equipment (PPE) materials.

Only material stated in Item 1 through Item 4 will be accepted for Paint Chip Reclamation. Material must not contain any stabilizer agents, i.e. BLASTOX.

Quantity

As available

Packaging

- Item 1 - Silica sand abrasive grit will be shipped in covered, leak proof, 55-gallon steel drums, stacked and secured to wooden pallets or skids. Silica sand grit may also be shipped in covered, leak proof, self-dumping roll off containers.

- Item 2 - Steel abrasive grit will be shipped in covered, leak proof, 55-gallon steel drums stacked and secured to wooden pallets or skids.

- Item 3 - Paint chips without abrasive grit will be shipped in covered, leak proof, 55-gallon steel drums. The drums will have secured metal lids and will be stacked and secured to wooden pallets or skids.

- Item 4 Contaminated tarps and PPE (Personal Protective Equipment) will be shipped in covered, leak proof, 55-gallon steel drums. The drums will have secured metal lids and

will be stacked and secured to wooden pallets or skids. This material may also be shipped in covered cardboard boxes stacked and secured to wooden pallets or skids.

Labeling

- Item 1 & 2 packaged in drums will be labeled with the name of the shipper and the product description. Each drum shall also have a Class 9 D.O.T. label.
- Item 3 & 4 will be labeled with hazardous waste labels. Each drum will be stacked on a wooden pallet or skid in such a way so the labels face outward.

Packaging, Labeling and Transportation

Arranged for and paid by MHTC or a MHTC subcontractor.

F.O.B.

Boss, Missouri

Recycling Fees

Item 1:	$180.00/drum – Silica Sand in drums
Item 1:	$225.00/short ton – Silica Sand in bulk
Item 2:	$175.00/drum – Steel Grit in drums
Item 3:	$200.00/drum –Paint Chips without abrasive grit
Item 4:	$200.00/drum –Contaminated Tarps and PPE
Item 4:	$400.00/box –Contaminated Tarps and PPE in cubic yard cardboard boxes

Term of Agreement

Date of contract execution through February 28, 2020

Regulatory Status

Item 1 and Item 2 material will be used as an iron or silica substitute in DRC's blast furnace. As such, Item 1 and Item 2 are exempted from the Resources Conservation and Recovery Act (RCRA) per 40 CFR 261.2(e)(1) as a commercial substitute. DRC shall provide a Certificate of Recycling to the Commission upon completion of processing for all of the above Items listed in the Materials Section of this document.

Shipping Documents

For material managed exempt from RCRA Hazardous Waste regulations all shipments must include a bill of lading.

For shipments managed as Hazardous Waste, MHTC to provide with each shipment a Hazardous Waste Manifest and Land Ban Form (if required).

Miscellaneous

Containers to be void of all other materials including but not limited to construction debris, solvents, flammables, aluminum, magnesium, aerosol cans, rags and any ferrous or non-ferrous metals larger than one inch cubed.

DRC reserves the right to reject any shipments not consistent with the facility's physical, storage or regulatory capabilities.

Delivery

DRC to be notified at least two (2) business days prior to delivery.

Subject: FW: MDNR/MoDOT Meeting
Attachments: Effective Substitute Criteria.pdf

From: Yingling, Mark [mailto:myingling@doerun.com]
Sent: Friday, February 16, 2018 1:52 PM
To: Bridges, Carey <carey.bridges@dnr.mo.gov>
Cc: Mark Yingling <myingling@doerun.com>
Subject: RE: MDNR/MoDOT Meeting

Carey,
As you are aware, the paint removal process for large metal structures often utilizes steel abrasive grit or silica sand abrasive grit. My understanding is that Missouri DOT currently utilizes a process for bridge paint removal using a steel abrasive grit blasting operation. I've included a link to a YouTube video that shows how the operation works - https://www.youtube.com/watch?v=GDcS91XcQcQ. This process allows for reuse of the steel abrasive grit. Note there are a number of points where material may be removed from the system, a coarse mechanical screening, a magnetic separation and a baghouse. I understand that, as required of all generators, Missouri DOT has performed an appropriate waste characterization to determine how to manage the material removed from the system consistent with its obligation under RCRA.
The material removed from the system, comprised in large part of the blasting media, is received by the Buick Resource Recycling Facility (BRRF), a TSD facility, and utilized as a substitute for some portion of the steel / iron routinely utilized as a fluxing agent in the furnace. In instances where some or all of the paint is lead-based, there is an additional benefit of recovery of the lead from the material. Similarly, when Missouri DOT utilizes silica sand abrasive grit, the material generated from the blasting operations is received by BRRF and utilized as a substitute for some portion of the silica routinely utilized as a fluxing agent in the furnace. I should note, however, that I have been informed that the use of silica sand abrasive grit in these blasting operations generates more material and that a large influx of silica sand abrasive grit (as opposed to steel abrasive grit) could impact BRRF's ability to utilize CRT glass (also utilized in place of silica as a fluxing agent).
If I can be of further assistance please do not hesitate to call me.

Sent via the Samsung GALAXY S® 5, an AT&T 4G LTE smartphone
-------- Original message --------
From: "Bridges, Carey" <carey.bridges@dnr.mo.gov>
Date: 2/15/18 6:32 PM (GMT-05:00)
To: "Yingling, Mark" <myingling@doerun.com>
Subject: RE: MDNR/MoDOT Meeting

Hi Mark,
I wanted to follow up on our phone call last week regarding the MoDOT material. You said that you could provide us with information regarding the material being an effective substitute for commercial chemical product so that we could review and use it to make our decision. I haven't received anything from you yet, so I'm including an attachment that includes the type of information/proposed criteria that would be helpful in our evaluation. This isn't specifically required, but I thought it might be a helpful guidance in preparing your information and expediting our review.

I understand that MoDOT is hoping to begin this work by the end of this month, so your timely response is much appreciated! I look forward to hearing from you.