

June 17, 2024

SHAWN FERDIG
QUALITY MANAGER
KEOKUK STEEL CASTINGS
240 ROYAL ROAD
KEOKUK IA 52632

**Re: Beneficial Use Determination (BUD) Authorization
Spent Foundry Sand – Beneficial Fill Material
DNR ID #56-BUD-02-24**

Dear Mr. Ferdig:

This correspondence serves as the Iowa Department of Natural Resources' (DNR) notice of approval to beneficially use spent foundry sand from Keokuk Steel Castings' facility in Keokuk, as beneficial fill material at the property located at 3534 Highway 218 in Keokuk, IA. This determination is authorized from June 17, 2024 to January 1, 2026, and is granted based upon Keokuk Steel Castings' February 28, 2024 application submission ([Doc #110056](#) and [Doc #110155](#)).

Future requests for modification, or approval of additional solid by-products to be utilized as beneficial fill material at the above-referenced project location, shall be made under the DNR ID # referenced above. Please note that this determination contains conditions that may require a response or action by you, which if not properly complied with, may prompt enforcement action by the DNR.

Should you have any questions, please contact me at [\(515\) 201-8272](tel:515-201-8272) or Chad.Stobbe@dnr.iowa.gov.

Sincerely,



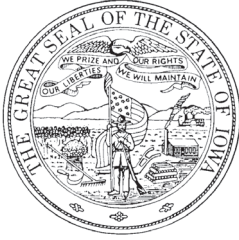
Digitally signed by Chad A.
Stobbe
Date: 2024.06.17 13:22:57 -05'00'

Chad A. Stobbe
Environmental Specialist Senior
Land Quality Bureau

Enclosures (2)

Cc: Leon Ewart, Owner
Ewart's Fab & Custom Cutting
3534 Highway 218
Keokuk, IA 52632

Iowa DNR Field Office #6, Washington



IOWA DEPARTMENT
OF NATURAL RESOURCES

BENEFICIAL USE DETERMINATION



IOWA DEPARTMENT OF NATURAL RESOURCES

- I. DNR ID Number: **56-BUD-02-24**
- II. End-User:
Name: Leon Ewart, Owner
Address: Ewart's Fab & Custom Cutting
3534 Highway 218
Keokuk, IA 52632
Email: leon@ewarts.com
Phone: (319) 524-6336

Project Location: Part of 3534 Highway 218 (Parcel ID [#041521101000310](#))
Keokuk, IA 52632
- III. By-Product Generator:
Name: Brad Mills, Owner
Address: Keokuk Steel Castings
240 Royal Road
Keokuk, IA 52632
Email: bradmillsia@gmail.com
Phone: (319) 526-8250
- IV. Responsible Official:
Name: Shawn Ferdig, Quality Manager
Address: Keokuk Steel Castings
240 Royal Road
Keokuk, IA 52632
Email: sferdig@keokuksteel.com
Phone: (319) 520-1385
- V. Issuance Date: June 17, 2024
- VI. Expiration Date: January 1, 2026
- VII. Issued by:  Digitally signed by
Chad A. Stobbe
Date: 2024.06.17
13:24:20 -05'00'

Chad A. Stobbe
Environmental Services Division

VIII. General Conditions

- 1) The above-named End-User, in cooperation with the By-Product Generator, is hereby authorized to operate a beneficial reuse project at the described project location in conformance with Iowa Code Section 455B, the applicable administrative rules existing at the time of issuance, and any subsequent new administrative rules, which may be duly adopted, and the conditions within this determination.
- 2) The issuance of this beneficial use determination in no way relieves the End-User or By-Product Generator of the responsibility for complying with all other local, state, and federal statutes, ordinances, and rules or other requirements applicable to the filling and ongoing maintenance of the project location.
- 3) No legal or financial responsibility arising from the operation of an approved project shall attach to the State of Iowa or the DNR due to the issuance of this beneficial use determination.
- 4) This authorization applies to the Solid Waste program and does not constitute an approval by all DNR program areas. Any additional approvals for the use of an authorized by-product(s) as a fill material shall be obtained from the appropriate programs within the DNR prior to use.
- 5) No provision in this beneficial use determination or the approved Solid By-Product Management Plan (SBMP), constitutes a waiver from 567 IAC 108 or the Code of Iowa. Any conflict between a provision of this determination or referenced documents and Iowa rules or statutes shall be resolved in favor of the duly adopted rules and statutes.
- 6) Beneficial use of an authorized by-product(s) for any purpose not universally approved in 567 IAC 108.4(455B,455D), or at any other location than stipulated within this determination, shall receive prior written approval from the DNR to be covered under 567 IAC 108.
- 7) A request for renewal shall be made on a form provided by the DNR and filed at least ninety (90) days before the expiration of the current determination. The DNR may request that additional information be submitted in order to make a renewal decision. The DNR may renew the determination if, after a review and inspection of the project location and its compliance history, the DNR finds that the End-User and By-Product Generator are in compliance with 567 IAC 108 and this determination.
- 8) The DNR may revoke this beneficial use determination if it determines that the management of an authorized by-product(s) may present a significant risk to or adverse effect on human health or the environment, or if a good-faith effort to maintain compliance is not being made. In addition, the placement, dumping or other use of an authorized by-product in a manner inconsistent with this determination may be considered illegal disposal, and the By-Product Generator and End-User may be subject to enforcement action by the DNR as appropriate and as allowed by Iowa law.
- 9) Failure to comply with Iowa Code Chapter 455B, or any rule of order promulgated pursuant thereto, or any or all provisions of this beneficial use determination may result in: 1) a civil penalty of up to \$5,000 for each day of violation, pursuant to Iowa Code section 455B.307, and 2) the

suspension or revocation of this beneficial use determination pursuant to 567 IAC 108.11(455B,455D).

IX. Special Conditions

- 1) Beneficial fill activities utilizing up to 24,000 tons of the solid by-product(s) referenced below shall be limited to the project location as described above. Clean fill shall be added as necessary to maintain a minimum five feet separation between the high water table and the beneficial fill material ([Doc #110155](#)).
- 2) The following by-product(s) from the specified generator(s) has been authorized as fill material at the above-referenced project location:
 - a. **Keokuk Steel Castings (KSC).** Only spent foundry sand generated by the KSC facility located in Keokuk, IA, and as characterized relative to the Toxicity Characteristics Leaching Procedure (TCLP-EPA method 1311), Synthetic Precipitation Leaching Procedure (SPLP-EPA method 1312) and RCRA Total Metals contaminant levels provided in the March 28, 2024 testing ([Doc #109834](#)), is approved as fill material under this authorization. All spent foundry sand destined for the project location shall be managed in accordance with the special conditions expressed herein.
 - b. *[Reserved]*
- 3) At no time shall an authorized by-product(s) exhibit free liquids, toxic or hazardous properties, nor shall any hazardous waste, as defined by [Iowa Code section 455B.411](#), be accepted at this project location as fill material. Unless otherwise stipulated, all approved by-products **shall be analyzed quarterly** by the By-Product Generator for the following:
 - a. Toxicity Characteristics Leaching Procedure (TCLP - EPA Method 1311): Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium and Silver.
 - b. Synthetic Precipitation Leaching Procedure (SPLP - EPA Method 1312): Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Copper, Fluoride, Lead, Mercury, Selenium and Thallium.
 - c. Resource Conservation and Recovery Act (RCRA) Total Metals (EPA Methods 6010, 6020, 7470, 7471): Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium (Note: If Total Chromium \geq 210 mg/kg, further analysis shall be conducted to determine hexavalent and trivalent results), Cobalt, Copper, Fluoride, Lead, Lithium, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Thallium, Vanadium and Zinc.

Please note that Iowa law (i.e., [567 IAC 83](#), [Iowa Code section 455B.113](#)) requires laboratories reporting environmental data to the DNR be certified for the methods and parameters being measured. This certification process is in cooperation with the [State Hygienic Laboratory](#) (SHL) at the University of Iowa. Please also note that pursuant to [567 IAC 137.5\(10\)](#), the toxicity values, absorption factors for dermal exposure to soils, and promulgated standards that are a basis for statewide standards are subject to periodic revision.

- 4) At no time shall an authorized by-product(s) exceed the TCLP and SPLP regulatory levels in 567 IAC 108; nor shall any authorized by-product(s) have any RCRA Total Metals contaminant level resulting in an unacceptable risk level as determined by the Iowa Cumulative Risk Calculator using the “Site Worker” exposure scenario. Iowa Law (567 IAC 137.10(7)) allows for the application of cumulative risk criteria in lieu of compliance with specific standards for individual contaminants in soil. The application of the Site Worker exposure scenario is appropriate in this application given the engineering controls in place at the project location, which keep human exposure to the by-product(s) to a minimum.
- a. Any analytical exceedance, including any exceedance of a Statewide Standard, shall be reported to the DNR, and the End-User, in writing within ten (10) business days of receiving the results from the laboratory.
 - b. Upon a By-Product Generator’s receipt of a laboratory report that denotes a regulatory exceedance, excluding RCRA Total Metals exceedances that do not result in an unacceptable risk level as determined by the Iowa Cumulative Risk Calculator using the “Site Worker” exposure scenario, beneficial fill activities utilizing that by-product(s) shall immediately cease until retesting of a representative sample confirms it is within applicable regulatory standards.
 - c. Any authorized by-product(s) that fails to comply with the regulatory limits expressed above shall be refused by the End-User as fill material, and alternative management options implemented immediately (e.g., disposal in a sanitary landfill) by the By-Product Generator.
 - d. Beneficial use of any by-product that fails to comply with a regulatory limit expressed above will result in a Notice of Violation (NOV) issued to the By-Product Generator. If additional information regarding a cited violation is discovered, or if further violations occur, the DNR may reconsider its position and take subsequent enforcement action as appropriate and as allowed by Iowa law (e.g., determination revocation).
 - e. Prior to resuming beneficial reuse of an authorized by-product(s) that failed to comply with a regulatory limit expressed above, the By-Product Generator shall notify the DNR and End-User in writing of a return to regulatory compliance. This written notification shall include the applicable certified laboratory report(s) and associated Analytical Testing Report(s), and contain a narrative discussion regarding the circumstances surrounding the documented exceedance (e.g., conclusion as to why the exceedance occurred, steps being taken to minimize the probability of any future exceedance, how the by-product was managed in the interim). Upon review and concurrence that the submitted information documents a return to regulatory compliance, the DNR will promptly notify the By-Product Generator and End-User in writing, that beneficial reuse of the referenced by-product may resume.

To ensure that the By-Product Generator is able to maintain regulatory compliance, the authorized by-product(s) that failed to comply with a regulatory limit expressed above shall undergo supplemental testing (i.e., exceeding parameter and test method) for the following quarter. This monthly testing will ensure the By-Product Generator is able to maintain compliance with applicable regulatory limits, ensuring such reuse applications do not adversely affect human health and the environment.

- f. If there has been a verified release of contaminants, the DNR reserves the right to place specific conditions upon the End-User, including, but not limited to, the establishment of an environmental covenant pursuant to [Iowa Code Chapter 455I](#).
 - g. The DNR reserves the right, at its sole discretion, to increase the frequency of by-product testing, pursuant to Special Condition #3, if any authorized by-product fails to comply with applicable regulatory limits.
- 5) Each By-Product Generator shall submit to the DNR, copies of the quarterly certified laboratory reports, and a summary of each report's results using current DNR Form 542-0652 titled, "Solid By-Product Management Plan - Analytical Testing Report." The reports will be due March 1st, June 1st, September 1st and December 1st for the quarters ending February 28th, May 31st, August 31st and November 30th respectively.
 - 6) Each By-Product Generator shall submit for DNR approval, an annual Solid By-Product Management Plan (SBMP) in accordance with 567 IAC 108.6(2) and 567 IAC 108.7(455B,455D). The SBMP submittal shall be provided to the DNR by March 1st each year.
 - 7) The stockpiling of an authorized by-product(s) for beneficial fill purposes at the project location is not authorized under this determination.
 - 8) Any residual solid waste, such as garbage, refuse or rubbish as defined in [Iowa Code section 455B.301](#), that may be commingled with the authorized by-product(s), shall be removed prior to placement as fill material at the project location.
 - 9) All necessary measures (e.g., terraces, silt fences and geo-fabrics) shall be employed as necessary to prevent and minimize soil erosion and fugitive dust migration resulting from excavation, transport, and filling activities at the project location. Any site erosion that occurs during filling activities, and after completion of final cover, shall be promptly corrected by the End-User.
 - 10) At no time shall the top three (3) feet of final fill material have any total metal contaminant levels above the [Statewide Standards for Contaminants in Soil](#) as defined in 567 IAC 137. The final six (6) inches shall consist of clean topsoil as final cover to reclaim the area and must be in place within ninety (90) days of completion of beneficial fill activities.
 - 11) The reclamation project shall be closed and maintained by the End-User in a manner that will:
 - a. Control, minimize or eliminate to the maximum extent feasible, post-closure infiltration of liquids into the deposited material and releases of material or contaminated runoff to the ground or surface waters or to the atmosphere;

- b. Preclude the probability of future impoundment of water or sediment. All diversion and drainage structures must be maintained to prevent run-on and runoff erosion, or other damage to the final cover;
- c. Include measures that provide for slope stability to prevent the sloughing or movement of the final cover system. The integrity and effectiveness of the final cover system must be maintained by making repairs as necessary to correct the effects of settling, subsidence, erosion, ponding or other damaging events; and
- d. Minimize the need for further maintenance of the beneficial fill area. The vegetative cover shall be reseeded as necessary by the End-User to maintain good vegetative growth. Any invading vegetation whose root system could damage the final cover shall be removed or destroyed as soon as possible.

Upon completion of beneficial fill activities:

- e. A notation shall be filed with the county recorder showing in perpetuity, for the purposes of title abstract, the existence of a beneficial fill project consisting of the above-referenced by-product(s). The End-User shall submit a copy of the executed notation to the DNR within ninety (90) days of completion of beneficial fill activities.

12) The DNR's Central Office in Des Moines, IA and Field Office #6 in Washington, IA, shall be notified in writing of impending completion of beneficial fill activities so that project closure activities may be observed to confirm compliance with the conditions defined under this determination.

Appendix A

(Responsible Official Certification)

I do herein swear that I am duly authorized representative of the entity below and I am authorized to execute this document. I understand that this authorization supersedes and replaces any previous authorization issued by the DNR for this specific reuse project and site. I further certify that the operation of the above-described project, as applicable, will be in accordance with the plans, specifications, reports and conditions imposed within this beneficial use determination and 567 IAC 108.

By-Product Generator (Applicant): **Keokuk Steel Castings**

Name: Brian Miller

Signature: [Handwritten Signature]

Title: President Date: 6-10-24

By-Product End-User: **Ewart's Fab & Custom Cutting**

Name: LEON C EWART

Signature: [Handwritten Signature]

Title: Owner Date: 6-10-2024