



IOWA DEPARTMENT OF NATURAL RESOURCES

BENEFICIAL USE DETERMINATION APPLICATION FORM



Send completed applications with attached information to:

Iowa Department of Natural Resources
Land Quality Bureau
Solid Waste and Contaminated Sites Section
6200 Park Ave Ste 200
Des Moines IA 50321

For questions concerning this application please contact the Department at (515) 201-8272.

SECTION 1. CONTACT INFORMATION [IAC 567-108.5] Provide the name, address and telephone number for the following

Address of the site where the project will be located

Site Owner Name: Chris Linder Phone Number: 319-524-3455
Site Address: 2387 Johnson St. Rd. County: Lee
City: Keokuk State: IA Zip Code: 52632
1/4 of 1/4 of 1/4 Section 20 Township 65 N Range 5 [X] East [] West
(you may attach a legal description from your county assessor)

Beneficial Use Determination Applicant

Name: Brad Mills Phone Number: 319-526-8250
Site Address: 240 Royal Rd.
City: Keokuk State: IA Zip Code: 52632

Individual responsible for operation of the project

Name: Shawn Ferdig Phone Number: 319-520-1385
Site Address: 240 Royal Rd.
City: Keokuk State: IA Zip Code: 52632

Professional engineer (P.E.) licensed in the state of Iowa and retained for the design of the facility, if any

Name: N/A License #:
Site Address: Phone Number:
City: State: Zip Code:

Agency to be served by the project, if any

Name of Agency: N/A
Responsible Official: Phone Number:
Site Address:
City: State: Zip Code:

SECTION 2. FACILITY OPERATIONAL INFORMATION

A description of the solid by-product under review and its proposed use:

Used foundry sand to be used to fill and level ravines. The site will be covered with 6" inches of top soil and seeded with hay.

The chemical and physical characteristics of the solid by-product:

Silica sand of varying sizes.

A demonstration that there is a known or reasonably probable market for the intended use of the solid by-product:

This sand has been used to level other locations. Car lots and building have been constructed on this product. It has also been used to establish good highway frontage property.

A demonstration that the proposed use of the solid by-product will not adversely affect human health and environment:

The sand is tested to assure it will not be harmful.

SECTION 3. PERMIT APPLICATION CHECKLIST

Checking the appropriate boxes below certifies that the documents submitted in conjunction with this application form are complete and in compliance with the applicable chapters of the Iowa Administrative Code. If an application is found by the department to be incomplete, it may be denied and returned to the applicant.

Required Documents


- Solid By-product Management Plan [IAC 567 Chapter 108.5(6)]
- Site Map
- Solid By-product Analytical Results [IAC 567 Chapter 108.5]

SECTION 4. APPLICANT CERTIFICATION

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

I further certify that the construction and operation of the above described project will be in accordance with the plans, specifications, reports and related communications accepted by the Iowa Department of Natural Resources and on file in its office; and in accordance with conditions imposed in the determination issued by the Iowa Department of Natural Resources.

Signature:  Date: 3/12/25
Printed Name: Shawn Ferdig Title: Quality and Compliance Director



March 12, 2025

Solid By-Product Management Plan
For
Keokuk Steel Castings
2025

This management plan for Keokuk Steel Castings, a foundry subject to the "Beneficial Use Determination Rule", is for foundry sand generated at 240 Royal Road in Keokuk. Pending approval approximately 6,000 tons will be hauled to LCL Farms Inc's location at 2387 Johnson St. Rd. Keokuk, IA 52632. Another approximately 6,000 tons will be hauled to the same location in the 4th quarter of 2025. Approximately 6,000 tons will be added during the 2nd quarter of 2026. The estimated completion date of this project is June 2026. The following information is based on the requirements in Chapter 108 Beneficial Use Determination.

1. The source of the solid by-product, foundry sand, is the foundry at 240 Royal Road, Keokuk, IA.
2. Every quarter a sample of the sand is sent for testing to ensure that the chemical, pH and physical composition has not changed significantly.
3. A description of the storage procedures follows:
 - a. Sand not reclaimed is temporarily stored on the west side of the foundry.
 - b. The anticipated inventory will be 6000 tons.
 - c. The run-on and run-off controls are covered under our NPDES Permit with the addition of silt screen, rock and oil booms to prevent run-off.
 - d. To minimize the uncontrolled dispersion of the foundry sand, storage is isolated to two areas on the west side of the foundry.
 - e. Maximum storage will not exceed 6 months without authorization in writing from the DNR.
 - f. By-Product management will be in accordance with 567 IAC 108.6(1), (2) and 108.7(1), (2) and (3).


Shawn Ferdig

Date: 3/12/25

BENEFICIAL SAND USE PLAN - LCL FARMS SITE 1

Andrew Spray

KEOKUK STEEL CASTINGS 3972 Main Street, Keokuk, IA 52632

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Project Scope

Overview:

Keokuk Steel Casting will be providing foundry sand to LCL Farms with the purpose of leveling approximately three acres of property for agricultural use. The elevation of the targeted area ranges from 600 – 560 ft.

Clean Fill:

Clean fill material will be used to maintain the minimum five feet of separation between the foundry sand and the water table. Needed clean fill material is expected to vary between one to five feet.

Project Final Grades and Slopes:

To facilitate drainage and prevent ponding of water, upon completion of the project, the area filled will have a slope of 2%-5%, created in such a way to prevent top cover movement. Additionally, any existing drainage structures will be preserved to prevent erosion.

Top Cover:

Clean topsoil will be used as top cover and meet a minimum of six inches of depth for the layer. This top cover will be maintained with crop vegetation to prevent erosion. This maintenance shall include reseeding as necessary.

Expected Fill Volume:

By levelling the land to an expected elevation of 590 feet, the total foundry sand fill amount has been estimated at 18,000 tons. This operation is expected to take 1.5 years to complete, with 6,000 tons of sand being hauled to the site every six months. The anticipated completion date for the project is June 2026.

Maps

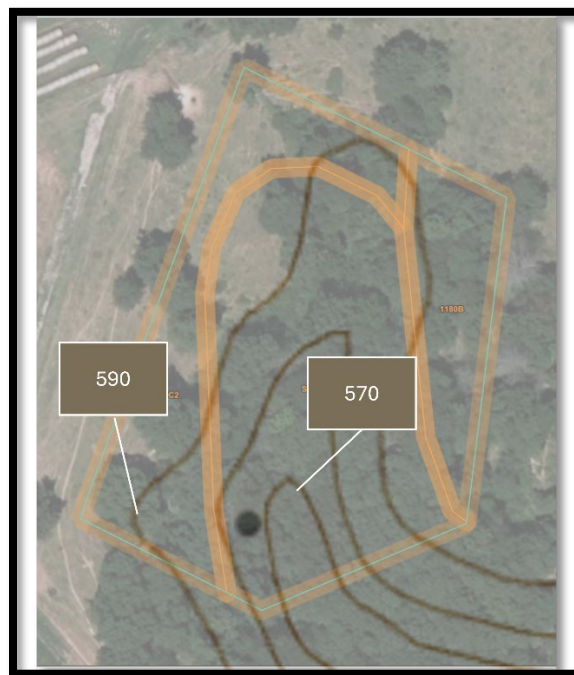
Fill Boundaries



Water Table



Elevation Map



Expanded Elevation Map



Depth to Water Table



Tables — Depth to Water Table — Summary By Map Unit				
Summary by Map Unit — Lee County, Iowa (IA111)				
Summary by Map Unit — Lee County, Iowa (IA111)				
Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
880C2	Clinton silt loam, terrace, 5 to 9 percent slopes, eroded	122	0.6	29.0%
1180B	Keomah silt loam, benches, 2 to 5 percent slopes	30	0.3	15.8%
S154G	Douds-Alvin-Tell Complex, 18 to 60 percent slopes	122	1.1	55.1%
Totals for Area of Interest			2.0	100.0%
Description — Depth to Water Table				
<p>"Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.</p> <p>This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.</p>				
Rating Options — Depth to Water Table				
<p>Units of Measure: centimeters</p> <p>Aggregation Method: Dominant Component</p> <p>Component Percent Cutoff: None Specified</p> <p>Tie-break Rule: Lower</p> <p>Interpret Nulls as Zero: No</p> <p>Beginning Month: January</p> <p>Ending Month: December</p>				

200ft Well Boundary

