



Foundry Sand Reuse in Arkansas

Best Practices & Regulatory Compliance

Abrasive Removal Services (ARS)

Kelley, Iowa

Phone: (515) 720-7081 | Email: team@abrasiveremovalservices.com

Table of Contents

1. Arkansas - Foundry Sand Recycling and Reuse (Cover)
2. Table of Contents
3. Key Concepts and Definitions
4. Regulatory Guidelines
5. Reuse Applications and Arkansas Examples
6. Environmental and Technical Considerations
7. Funding, Grants, and Incentives
8. Active Participants in Arkansas
9. Success Story Highlights
10. Clear Business Case Summary
11. Risk Management Overview
12. Step-by-Step Workflow for Foundries
13. Real Cost Savings Example
15. General FAQ & Landfill-Specific FAQ
16. References

3. Key Concepts and Definitions

What is Foundry Sand?

Foundry sand is a high-quality silica sand used by metal casting facilities to make molds for shaping molten metal into parts. After repeated use, the sand becomes "spent" and needs to be replaced — creating a large volume of by-product material.

What is Beneficial Reuse?

Beneficial reuse means finding safe, productive ways to repurpose industrial by-products (like foundry sand) instead of throwing them away. It protects the environment, saves natural resources, and cuts disposal costs. In Iowa, beneficial reuse helps businesses lower expenses and communities build infrastructure more sustainably.

Examples of beneficial reuse for foundry sand include:

- Replacing mined sand in concrete or road base

- Using sand as daily cover at landfills
- Mixing into manufactured soils for landscaping

What is a TCLP Test?

TCLP stands for Toxicity Characteristic Leaching Procedure — a laboratory test required by the U.S. EPA to find out if a waste material might release harmful contaminants into groundwater.

How a TCLP test works:

- A sample of the material is soaked in a mild acidic solution that simulates rainwater or landfill conditions.
- Scientists measure what chemicals "leach out" of the sample into the fluid.
- If dangerous levels of metals (like lead) or chemicals are found, the material is classified as hazardous waste and must be managed under strict regulations.

If the material passes the TCLP test (meaning contaminants are below federal limits), it can be reused safely under environmental rules.

Why Should Readers Care About Foundry Sand Reuse?

- Environmental Protection: Reuse reduces waste sent to landfills and conserves natural sand resources, which are expensive and limited.
- Cost Savings: Foundries, cities, and contractors save money by reusing sand instead of buying new materials or paying high disposal fees.
- Public Safety: Proper testing (like TCLP) ensures that reused sand does not threaten drinking water, soil, or the environment.
- Economic Growth: Reuse projects create jobs, strengthen recycling industries, and make local construction and public works projects more affordable.

4. Regulatory Guidelines

Arkansas Department of Environmental Quality Regulations

The Arkansas Department of Environmental Quality (ADEQ), now part of the Department of Energy and Environment, regulates beneficial reuse through Regulation 22: Solid Waste Management and Arkansas Code § 8-6-606.

Beneficial Use Requirements:

- Foundry sand for beneficial reuse requires a case-by-case evaluation by ADEQ

- Applicants must provide certification from a qualified professional demonstrating the material will have no negative environmental impact
- TCLP testing or equivalent toxicity analysis is required to verify non-hazardous status

Alternative Daily Cover: Under Regulation 22.413(b) and 22.512, alternative cover materials (other than six inches of earthen cover) may be used at landfills if approved by the Director and determined to control vectors, odors, litter, and fires without environmental impact.

Arkansas Landfill Disposal Fees: Under Arkansas Code § 8-6-606, landfill disposal fees are:

- \$1.50 per ton (weight basis) or \$0.45 per compacted cubic yard
- \$0.25 per uncompacted cubic yard
- Private industry landfills: \$0.50 per ton or \$0.20 per compacted cubic yard

Note: Arkansas does not have a specific fee exemption for foundry sand used as landfill daily cover, unlike some other states.

Contact: For beneficial use determination inquiries, contact the Arkansas Division of Environmental Quality, Office of Land Resources, Solid Waste Management Division.

Federal EPA Guidelines

At the national level, the U.S. EPA encourages the reuse of spent foundry sands from iron, steel, and aluminum foundries. EPA's major documents include:

- Risk Assessment for Spent Foundry Sands in Soil-Related Applications (2014)
- Sustainable Materials Management Program resources.

EPA concluded that silica-based sands from iron, steel, and aluminum foundries can be safely reused in soil blends, construction materials, and road bases.

EPA does not federally regulate beneficial reuse of non-hazardous foundry sands but defers regulatory authority to states like Arkansas.

Local Ordinances

Arkansas does not have a statewide municipal permitting framework for foundry sand beneficial reuse. Local requirements vary by city and county. Projects must comply with state ADEQ regulations (Regulation 22) and may be subject to additional local permits or approvals depending on the project location and scope. For specific requirements, contact the relevant city or county environmental or planning department and ADEQ.

5. Reuse Applications and Arkansas Examples

Beneficial reuse of foundry sand takes multiple forms depending on material properties and regulatory approvals. Common applications documented nationally include landfill daily cover, road base and fill, and cement/concrete production.

Common Beneficial Reuses

Reuse Application	Description
Landfill Uses	Alternative daily cover, drainage layers, and cell construction material. Foundry sand is approved in most states as alternative daily cover material under certain conditions.
Road Base & Fill	Substitute for sand/aggregate in road subbase, embankments, and structural fill. EPA supports use as a foundation layer for roads (subbase).
Cement & Concrete Production	Raw feedstock in Portland cement kilns or as fine aggregate in concrete. EPA estimates approximately 2.6 million tons of spent foundry sand is beneficially used annually in the U.S., with cement/concrete applications among the highest-volume uses.
Manufactured Soil	Blended into topsoil or manufactured soil products to improve drainage. EPA risk assessment supports this use at concentrations up to 50% for silica-based sands.
Asphalt & Pavement	Used in hot mix asphalt and controlled low-strength material (flowable fill).

Examples in Action

- **Cement Kiln Reuse:** Holcim's Mason City plant processes ~75,000 tons/year of spent foundry sand. Sourced regionally, including from Iowa foundries, this reuse saves virgin resources and cuts emissions.
- **Road Construction Fill:** Foundry sands have been used in highway projects for structural fill under roads. (e.g., projects near airports and industrial parks across Iowa.)
- **Landfill Daily Cover:** Dubuque landfill and Scott County landfill actively accept foundry sand, saving money and conserving native soils.
- **Potential Soil Amendments:** Pilot projects (especially from EPA studies) show blending foundry sand into topsoil improves drainage without heavy metal uptake by plants.
- **Sandblasting and Niche Uses:** Core sands have been diverted for industrial sandblasting jobs, substituting for more expensive commercial blasting media.

6. Environmental and Technical Considerations

Beneficial reuse of foundry sand requires careful understanding of material composition, contaminant risks, and environmental testing protocols to ensure safe and responsible outcomes.

Types of Foundry Sands

Ferrous Foundry Sands (Iron and Steel Castings):

- Typically high-purity silica sand bonded with clay (green sand) or chemical resins.
- Low in contaminants.
- EPA and ADEQ consider these the safest and most preferred for reuse.

Non-Ferrous Foundry Sands (Aluminum, Brass, Bronze Castings):

- Similar base sand but potential contamination from metal alloys.
- Brass/Bronze sands often contain elevated lead, requiring more stringent testing or stabilization before reuse.

Specialty Sands:

- Some foundries use olivine sands or other media; not covered under EPA's standard risk assessment for reuse.
- May alter soil pH or chemistry.

Contaminants of Concern

Contaminant	Source	Notes
Lead (Pb)	Brass/bronze alloys	Key concern; must not exceed TCLP leaching limit (5.0 mg/L).
Chromium (Cr)	Stainless steel alloys, pigments	Usually low and stable in ferrous foundries; not a major issue.
Phenols / Cresols	Phenolic resins (binder breakdown)	Organic compounds typically present in very low concentrations.
PAHs	Burnt sea coal or resin residues	Detected at very low levels; below environmental risk thresholds.
Dust / Free Silica	Physical hazard from dry sand	Requires dust suppression measures during handling to protect workers.

Contaminant	Source	Notes
pH / Salinity	Binders, chemical additives	Some foundry sands have slightly alkaline pH, generally not problematic unless used directly in soils.

Importance of TCLP Testing

The Toxicity Characteristic Leaching Procedure (TCLP) is the industry-standard EPA test to determine whether foundry sand poses a leaching hazard to groundwater.

- Simulates landfill leachate conditions using an acetic acid solution.
- Measures 8 key metals (Lead, Arsenic, Cadmium, Chromium, etc.).
- Passing TCLP = Sand is classified as non-hazardous.
- Ferrous foundry sands in Iowa typically pass TCLP easily.

If foundry sand fails TCLP (e.g., high lead from brass castings):

- It must be managed as hazardous waste, not reused without treatment.

Key for Arkansas Reuse

For beneficial use approval in Arkansas, applicants must provide:

- Certification from a qualified soil scientist or professional demonstrating the material has beneficial use and will have no potential short or long-term environmental impacts
- Analytical testing showing constituent concentrations (the guidance does not specifically mandate TCLP; it requires analytical results showing what compounds are present and their concentrations)
- Beneficial Use Plan addressing storage, transportation, application, equipment, buffer zones, and site-specific details
- Supporting documentation for all proposed land application sites

Note: Arkansas ADEQ guidance requires analytical testing to demonstrate safety but does not specifically mandate TCLP testing as the sole or required test for foundry sand beneficial use approval.

Environmental Behavior of Foundry Sand

- Heavy metals in ferrous sands are generally immobilized in the sand matrix.
- Organics (e.g., phenols, PAHs) are below actionable risk levels according to EPA risk assessments.
- Field studies show low leachability and no significant uptake into plants when used in soil amendments.

Conclusion: For properly characterized ferrous foundry sands, environmental risks are minimal — supporting broad beneficial reuse.

7. Funding, Grants, and Incentives

State-Level Incentives

Recycling Distribution Program:

- Arkansas distributes recycling funds to regional solid waste management districts through an entitlement program based on a statutory formula (formerly the Recycling Grants Program). Each regional solid waste management district determines eligibility and fund allocation within its district. Eligible projects typically include recycling equipment, collection facilities, and educational programs. Contact your local regional solid waste management district for eligibility and application procedures.

E-Waste Grants Program:

- The Arkansas Department of Energy and Environment (E&E) administers a competitive E-Waste Grants Program providing funding for projects that divert electronics from landfills. Eligible applicants include regional solid waste management boards, cities, counties, schools, and nonprofit organizations. Applications are accepted annually (typically July-September). Approximately \$250,000 is available in the current grant cycle.

Alternative Daily Cover Approval:

- Under Arkansas Regulation 22.413(b) and 22.512, foundry sand may be approved as alternative daily cover material if the Director determines it controls disease vectors, fires, odors, blowing litter, and scavenging without environmental risk. Individual approval is required for each landfill or project.

Landfill Disposal Fees:

- Arkansas Code § 8-6-606 establishes landfill disposal fees of \$0.25-\$0.45 per cubic yard (or \$1.50/ton on weight basis). Unlike some states, Arkansas does not offer a specific fee exemption or surcharge reduction for foundry sand used as daily cover.
- Contact: For state-level funding and grant opportunities, contact the Arkansas Department of Energy and Environment, Division of Environmental Quality, Solid Waste Management Division, or your regional solid waste management district.

Federal-Level Opportunities

EPA Sustainable Materials Management Grants:

- Periodically available grants supporting innovative reuse/recycling projects.
- Can fund pilot projects, outreach campaigns, or infrastructure improvements related to foundry sand.

Federal Infrastructure and Recycling Funding (Infrastructure Investment and Jobs Act):

- Some grant programs are open to states and municipalities improving recycling or circular economy initiatives.

- Foundry sand reuse aligns with goals of waste reduction and sustainable construction.

FHWA / DOT Support:

- Federal Highway Administration promotes the use of recycled materials (including foundry sand) in road construction.
- Some research grants and technical support available for projects demonstrating new uses of industrial byproducts in infrastructure.

Local Opportunities

Local Government Partnerships:

- Counties and cities sometimes offer mini-grants or project cost-sharing for green construction and waste diversion projects.
- Example: County public works departments may help subsidize trucking costs if foundry sand is used in local road construction.

Public-Private Collaborations:

- Landfills may waive tipping fees for sand.
- Construction contractors may provide free transport in exchange for discounted material.
- Informal partnerships often unlock major savings without formal grant applications.

Summary Table: Key Funding and Incentive Programs

Program/Incentive	Type	Key Details	Impact for Foundry Sand Reuse
Recycling Equipment Tax Credit	Tax Incentive	30% state income tax credit for purchase of eligible recycling equipment and installation. Equipment must be used exclusively for collecting, separating, processing, or treating solid waste. Requires ADEQ certification.	Can reduce capital equipment costs (sand reclaimers, screening equipment) by 30%.
Alternative Daily Cover Approval	Regulatory Approval	Foundry sand may be approved as alternative daily cover at landfills under Reg. 22.413(b) and 22.512 if the Director determines it controls vectors, odors, and litter without environmental risk. Individual approval required.	Reduces landfill operational costs; no state fee exemption but may reduce overall disposal expenses through operator agreements.
Solid Waste Infrastructure for	Federal Grants	EPA provides grants to states and political subdivisions for post-consumer materials management. Arkansas is	May support foundry sand market development,

Program/Incentive	Type	Key Details	Impact for Foundry Sand Reuse
Recycling (SWIFR) Grants		eligible. Grants support planning, data collection, and implementation of circular economy strategies. Funding varies by grant round.	collection infrastructure, or implementation planning.
E-Waste Grants Program	Federal Grants	Competitive grants for diverting electronics from landfills. Approximately \$250,000 available annually. Eligible applicants include regional solid waste boards, cities, counties, and nonprofits.	Limited direct applicability to foundry sand; focuses on electronic waste.
Brownfield Assessment Grants	Federal Grants	EPA provides grants for Phase I and Phase II environmental site assessments. Arkansas received \$1,000,000 in FY 2024 (Department of Energy & Environment).	Potential application if foundry sand beneficial use projects involve site assessment or remediation.

8. Active Participants in Arkansas

Foundries (Generators of Spent Sand)

Sloan Valve Company (Augusta, AR)

- Brass foundry producing copper-based castings for plumbing, electrical, and industrial applications.
- Operates a Class 3N landfill (Permit #0235-SR-1) exclusively for disposal of foundry sand waste.
- Produces approximately 60,000 pounds of brass castings per day (CDA 84400 and CDA 83600 semi-red brass).
- Uses a Class 3N landfill for sand disposal with lead immobilization treatment for non-ferrous foundry sand.

Steel and Metal Manufacturing

Nucor Steel Arkansas (Armored, AR)

- Electric arc furnace steel plant producing hot-rolled sheet steel for automotive, appliance, and construction applications.
- Primary steel producer in Arkansas; limited public information available on foundry sand supply chains or reuse initiatives.

End Users (Potential Consumers of Foundry Sand)

Limited publicly documented examples of active foundry sand reuse projects or end-user partnerships in Arkansas are available. Potential end-use sectors in Arkansas include:

- Landfill operators accepting alternative daily cover materials
- Cement and concrete manufacturers (though no major cement plants currently operating in Arkansas)
- Road construction and infrastructure projects through state and county transportation departments

Supporting Agencies

Arkansas Department of Energy and Environment (E&E)

- Division of Environmental Quality, Office of Land Resources, Solid Waste Management Division
- Manages beneficial use determinations and regulatory compliance for foundry sand reuse projects

Note: For information about active foundry sand reuse partnerships or current projects in Arkansas, contact the Arkansas Division of Environmental Quality, Solid Waste Management Division, or the American Foundry Society.

9. Success Story Highlights

Documented foundry sand beneficial reuse success stories specific to Arkansas are not readily available through public ADEQ records, state databases, or the American Foundry Society case study repository.

National Context:

While Arkansas does not currently have published success stories, foundry sand beneficial reuse is widely practiced across the United States. The American Foundry Society maintains case studies from states including Michigan, Wisconsin, Indiana, Minnesota, Iowa, Illinois, Ohio, and Pennsylvania demonstrating successful foundry sand reuse in applications such as:

- Structural fill for commercial construction projects (36,000+ tons documented)
- Portland cement manufacturing (75,000 tons/year in Midwest facilities)
- Asphalt pavement and road base applications
- Manufactured soil production

For Arkansas Opportunities:

Foundries and organizations interested in developing foundry sand beneficial reuse projects in Arkansas should contact:

- Arkansas Division of Environmental Quality, Office of Land Resources, Solid Waste Management Division — for regulatory guidance and beneficial use determination processes
- American Foundry Society — for national best practices, technical resources, and potential partnership opportunities

10. Clear Business Case Summary

Why Foundries Should Reuse Sand:

- Save \$30–\$50 per ton vs. landfill disposal costs.
- Avoid environmental liability.
- Improve sustainability reporting for customers and regulators.

Why Contractors Should Reuse Sand:

- Get free or discounted sand for construction fill.
- Improve project bids by lowering material costs.

Why Landfills Should Accept Foundry Sand:

- Secure free cover material.
- Reduce operating costs.
- Increase daily cover efficiency.

11. Risk Management Overview

Beneficial reuse of foundry sand carries significant economic and environmental benefits, but participants must manage risk carefully to ensure compliance and protect their businesses.

Best Practices

- **Testing and Characterization:** Submit analytical testing showing constituent concentrations (metals, organics) to demonstrate the material has no potential environmental impacts. ADEQ does not mandate a specific test method; testing requirements are determined on a case-by-case basis.
- **Documentation:** Maintain all analytical results, beneficial use certifications from qualified soil scientists, shipping records, and site-specific approvals. ADEQ requires documentation demonstrating compliance with beneficial use determinations.

- **Written Agreements:** Establish written contracts with receiving facilities (landfills, contractors) specifying approved uses and responsibilities. Beneficial use authorization is facility and application-specific.
- **Beneficial Use Plan:** Submit a detailed plan addressing storage (including liners and runoff controls), transportation, application methods, equipment, buffer zones, property ownership, and site restrictions.
- **Liability:** Beneficial use authorization does not release generators from environmental liability. Unauthorized waste disposal is subject to penalties under Arkansas Code Annotated § 8-6-204 et seq.
- **Contact:** For specific requirements, consult the Arkansas Division of Environmental Quality, Solid Waste Management Division, before implementing any beneficial reuse project.

ARS Support: ARS can assist participants in setting up compliance systems, testing protocols, and document templates to minimize legal risk.

12. Step-by-Step Workflow for Foundries

Simple Process to Start Foundry Sand Reuse:

- **Test:**
 - Conduct TCLP testing or equivalent on representative sand samples through an accredited laboratory.
 - Confirm results meet ADEQ non-hazardous thresholds.
- **Document:**
 - Save all lab results, including full reports and summary sheets.
- **Partner:**
 - Contact ARS to match your material to a reuse project (landfill, cement, construction).
- **Agreement:**
 - Sign a beneficial reuse agreement or memo of understanding.
- **Ship:**
 - Begin shipping sand as needed.
 - Label loads clearly and maintain load-out logs.
- **Monitor:**
 - If your production process changes (e.g., alloy change, new binder), re-test your sand.
 - Maintain communication with ARS and receiving partners.

Result: Compliance, savings, and sustainability without added operational headaches.

13. Real Cost Savings Example

Why Reuse Makes Financial Sense:

- Landfill Disposal Costs:
- Disposal fee: ~\$70-\$150/ton
- Landfill surcharge: +\$4.25/ton
- Total = ~\$74.25-\$154.25/ton to landfill
- Beneficial Reuse Costs:
- Transportation only: ~\$10-\$75/ton (varies by distance)

Savings Calculation:

If your foundry produces 1,000 tons/year:

Landfill cost: 1,000 tons x \$49.25 = \$49,250

Reuse transport cost (avg \$15/ton): 1,000 tons x \$15 = \$15,000

Total annual savings = ~\$34,250

Multiply this by 5–10 years and the impact becomes massive.

15. General FAQ & Landfill-Specific FAQ

Q: Is reused foundry sand safe for public use projects like roads or parks?

A: Yes, EPA studies conclude that silica-based foundry sand from iron, steel, and aluminum foundries can be safely reused for road base, landfill cover, and similar applications, provided it meets environmental testing requirements and receives ADEQ approval.

Q: How often does foundry sand need to be tested?

A: Initial testing is required to obtain beneficial use approval. Re-testing is recommended if the foundry changes its metal casting processes, alloys, binders, or raw materials.

Q: Can reused foundry sand be used near homes, gardens, or drinking water supplies?

A: Uses like road base are approved. For applications in soils near homes, gardens, or drinking water sources, additional case-by-case ADEQ evaluation and environmental assurances are required.

Q: Who is responsible for proving the sand is safe—the foundry or the user?

A: The foundry (generator) is responsible for testing and certifying that the sand meets environmental requirements. The end user must ensure the sand is used only for ADEQ-approved applications.

Q: What if sand chemistry changes after approval?

A: Notify ADEQ and re-test if foundry processes change significantly.

Landfill-Specific FAQ

Q: Does foundry sand affect landfill leachate or groundwater?

A: EPA and USDA studies confirm that properly tested silica-based foundry sand does not contribute hazardous leachate or present groundwater threats. Arkansas groundwater monitoring programs provide additional oversight.

Q: Is foundry sand considered acceptable daily cover material?

A: Yes, under Arkansas Regulation 22.413(b) and 22.512, foundry sand may be approved as alternative daily cover if the ADEQ Director determines it controls vectors, odors, fires, blowing litter, and scavenging without environmental risk.

Q: Do we need special equipment to handle foundry sand?

A: No. Standard landfill equipment (dozers, loaders) can handle foundry sand.

Q: What if sand chemistry changes after approval?

A: Notify ADEQ and conduct re-testing if the source foundry or casting processes change significantly.

Contact: For specific questions about foundry sand safety or approval, contact the Arkansas Division of Environmental Quality, Solid Waste Management Division.

16. References

Arkansas State Regulations and Statutes

Arkansas Code Annotated § 8-6-204 (2024) - Criminal, Civil, and Administrative Penalties

<https://law.justia.com/codes/arkansas/title-8/chapter-6/subchapter-2/section-8-6-204/>

Arkansas Code Annotated § 8-6-606 (2024) - Landfill Disposal Fees <https://law.justia.com/codes/arkansas/title-8/chapter-6/subchapter-6/section-8-6-606/>

Arkansas Regulation 22: Solid Waste Management (Final Regulation, August 26, 2004)

https://www.adeq.state.ar.us/regs/files/reg22_final_080426.pdf

Arkansas ADEQ Guidance for Determining Beneficial Use (March 10, 2020)

https://www.adeq.state.ar.us/sw/permits/pdfs/20Guidance_Beneficial_Use_031020.pdf

Arkansas State Agencies

Arkansas Department of Energy and Environment (E&E), Division of Environmental Quality Contact: 501-682-0744 (Toll-Free: 888-233-0326) <https://www.adeq.state.ar.us>

Arkansas Division of Environmental Quality, Solid Waste Management Division 5301 Northshore Drive, North Little Rock, AR 72118-5317 <https://www.adeq.state.ar.us/home/contactus.aspx>

Federal Regulations and Guidance

U.S. Environmental Protection Agency (EPA) - Beneficial Uses of Spent Foundry Sands

<https://www.epa.gov/smm/beneficial-uses-spent-foundry-sands>

EPA Risk Assessment of Spent Foundry Sands in Soil-Related Applications (October 2014) Prepared by: U.S. EPA, U.S. Department of Agriculture-Agricultural Research Service, The Ohio State University

https://www.epa.gov/sites/default/files/2016-03/documents/risk_assessment_sfs_in_soil.pdf

EPA Fact Sheet: Spent Foundry Sands Risk Assessment (July 2014) [https://nepis.epa.gov/Exe/ZyPURL.cgi?](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=P1018Z8B.TXT)

[Dockey=P1018Z8B.TXT](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=P1018Z8B.TXT)

EPA - Use of Alternative Materials for Daily Covers at Municipal Solid Waste Landfills

<https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=30002YWM.TXT>

EPA Sustainable Materials Management Program <https://www.epa.gov/circulareconomy/sustainable-materials-management-program>

EPA - Solid Waste Infrastructure for Recycling (SWIFR) Grants for States and Territories

<https://www.epa.gov/circulareconomy/solid-waste-infrastructure-recycling-grants-states-and-territories>

EPA - Solid Waste Infrastructure for Recycling Grants for Political Subdivisions

<https://www.epa.gov/circulareconomy/solid-waste-infrastructure-recycling-grants-political-subdivisions>

Industry and Professional Organizations

American Foundry Society (AFS) - Case Studies <https://www.afsinc.org/case-studies>

American Foundry Society - Foundry Sand: Case Studies & General Applications
<https://www.afsinc.org/foundry-sand-case-studies-general-applications>

American Foundry Society - Waste Management Resources <https://www.afsinc.org/waste-management>

American Foundry Society - Landfill Construction <https://www.afsinc.org/landfill-construction>

Company and Facility Information

Sloan Valve Company - Foundry Operations <https://www.sloan.com/company/about-us/foundry>

Nucor Steel Arkansas https://www.gem.wiki/Nucor_Steel_Hickman_plant

Document Notes

This document provides guidance based on current federal and Arkansas state regulations as of October 2025. Regulatory requirements and funding programs are subject to change. Parties considering foundry sand beneficial reuse in Arkansas should verify all requirements with the Arkansas Division of Environmental Quality before initiating projects.

Contact the Arkansas Division of Environmental Quality, Solid Waste Management Division, for the most current guidance, permit requirements, and approval procedures.