567 IAC Chapter 102, Division IV – Beneficial Use (Final Draft, February 2025)

**The purpose of this document is to identify proposed revisions and to indicate where amendments have been incorporated within the proposed rulemaking. For ease of use, the DNR is focusing on substantive revisions within this document, and will not individually highlight all minor revisions made for solely for clarification purposes.*

Subject	Rule Citation	Existing Rule	Proposed Rule Citation	Proposed Rule	Iowa Code Citation	Notes/Discussion
Purpose	108.1	**567—108.1(455B,455D) Purpose.** The purpose of this chapter is to establish rules for determining when a solid by-product is a resource and not a solid waste. Solid by-products determined by the department not to be a solid waste through a beneficial use determination may not be subject to all sanitary disposal project (SDP) permitting requirements. Furthermore, the purpose of this chapter is to encourage the utilization of solid by-products as resources when such utilization improves, or at a minimum does not adversely affect, human health and the environment	102.300	**567—102.300(455B) Purpose.** The purpose of this division is to establish rules for determining when the utilization of a solid by-product constitutes beneficial use rather than the disposal of solid waste. Solid by-products determined by the department not to be a solid waste through a beneficial use determination will not be subject to regulation as disposal of solid waste. This division encourages the utilization of solid by-products, consistent with accepted engineering practices, when such utilization improves, or at a minimum does not adversely affect, human health and the environment.	§455B.304(19)	Minor revisions are being proposed to align with the statutory authority granted in Iowa Code subsection 455B.304(19). From the 5-year regulatory review process, DNR Legal clarified that participation within this program is "voluntary" in that Iowa Law does not expressly prohibit reuse activities outside of a beneficial use determination, nor does it mandate that a beneficial use determination be obtained.
Applicability and compliance	108.2	**567—108.2(455B,455D) Applicability and compliance.** **108.2(1)** These rules apply to industrial, commercial, and institutional generators and users or proposed users of solid by-products and to sanitary landfills utilizing or desiring to utilize alternative cover material. These rules apply to solid by-products that before receiving a beneficial use determination by the department were being disposed of as solid waste. These rules do not apply to solid by-products that have already been disposed of as solid waste by the generator. **108.2(2)** These rules do not pertain to the land application of solid waste. For rules pertaining to the land application of solid waste, see 567—Chapter 121. However, for solid by-products that are land-applied pursuant to 567—Chapter 121, a variance from some or all of the requirements of 567—Chapter 121 may	102.301	**567—102.301(455B) Applicability and compliance.** **102.301(1)** These rules establish a method for predetermination by the department that a proposed utilization of a solid by-product will not be regulated as solid waste disposal when utilized in the manner approved by the department. These rules apply to industrial, commercial, and institutional generators and users or proposed users of solid by-products that before receiving a beneficial use determination by the department were disposing of solid by-products as solid waste. These rules encourage environmentally sound materials management practices to maximize the use of recoverable materials and to foster resource recovery. The department reserves the authority to modify or revoke any beneficial use determination authorized under these regulations.	§455B.304(19)	While current legislative authority requires rules be developed, fundamentally changing how this program is administered (e.g., from a beneficial use determination to guidance) would require more substantive changes than afforded the DNR via the EO10 process. Subrule 102.301(1) is being proposed to clarify the statutory directive of the reuse program and the DNR's oversight. Subrules 102.301(2) through (5) are being proposed to clarify those DNR permitting programs and activities that are excluded from this division. The primary change is the transfer of alternative daily covered provision to 567—Chapter 101, Division II (MSWLF units).

		be gained through receipt of a beneficial use determination from the department. **108.2(3)** These rules do not pertain to solid waste processing operations pursuant to 567—Chapter 104. However, for solid by-products that are processed pursuant to 567—Chapter 104, a variance from some or all of the requirements of 567—Chapter 104 may be gained through receipt of a beneficial use determination from the department. **108.2(4)** These rules do not pertain to solid waste composting pursuant to 567—Chapter 105. However, for solid by-products that are composted pursuant to 567—Chapter 105, a variance from some or all of the requirements of 567—Chapter 105 may be gained through receipt of a beneficial use determination from the department. **108.2(5)** Beneficial use determinations granted by the department before April 23, 2003, shall remain in effect unless specifically addressed by these rules or by written notification pursuant to 567—108.11(455B,455D). **108.2(6)** The issuance of a beneficial use determination by the department relieves the generator and user(s) of all Iowa solid waste requirements specifically noted in the written determination. Requirements that may be relieved by a beneficial use determination may include rules, SDP permits, and permit conditions and variances. Solid by-products that have not received a beneficial use determination by the department are subject to all of Iowa's regulations pertaining to solid waste. The issuance of a beneficial use determination by the department in no way relieves the generator or user of the responsibility of complying with all other local, state, and federal statutes, ordinances, and rules or other applicable requirements.		**102.301(2)** These rules do not pertain to organic materials composting. For rules pertaining to organic materials composting, see 567—Chapter 102, Division I. **102.301(3)** These rules do not pertain to the land application of solid waste. For rules pertaining to the land application of solid waste, see 567—Chapter 102, Division II. **102.301(4)** These rules do not pertain to the beneficial use of waste tires. For rules pertaining to the beneficial use of waste tires, see 567—Chapter 102, Division V. **102.301(5)** These rules do not pertain to alternative cover material. For rules pertaining to sanitary landfills utilizing or desiring to utilize solid by-products as alternative cover material, see 567—Chapter 101, Division II. **102.301(6)** These rules do not apply to solid by-products that are directly incorporated into a manufacturing process to make a commercial product. The use of a solid by-product as an ingredient in an industrial process or as a substitute for a commercial product may not present a greater threat of harm to human health and the environment than the use of the product or ingredient for which the solid by-product is replacing. **102.301(7)** Beneficial use determinations granted by the department before *[effective date of the rule]*, shall remain in effect unless specifically addressed by these rules or by written notification pursuant to rule 567—102.307(455B). **102.301(8)** The issuance of a beneficial use determination by the department affirms that the proposed use is not subject to regulation as solid waste disposal to the extent the use and solid by-product conforms to the beneficial use application and determination. The issuance of a beneficial use		Subrule 102.301(6) is being proposed to exclude solid by-products utilized in the manufacture of a commercial product from the need to comply with this division…to constitute beneficial use rather than the disposal of solid waste. These materials should be treated similar to any other raw commodity used in a manufacturing process for which the DNR has no regulatory oversight. End-users should be the sole entity to dictate whether a non-hazardous by-product can be used within their manufacturing process and that it meets industry standards for such use. The DNR has no data to support that the inclusion of these "raw material" applications within this division are resulting in greater adoption or expanded markets. Most of these applications are already standard industry practice and their inclusion herein provides no value-added benefit. Proposed subrule 102.301(7) is a continuation of current subrule 108.2(5) in that it grandfathers in prior issued determinations, allowing them to continue till their expiration date unless issues arise that warrant revocation pursuant to proposed rule 567—102.307(455B). Subrule 102.301(8) is being proposed to more accurately state the conditions of determination issuance. Current subrule 108.2(6) is fairly ambiguous, making program implementation confusing and unnecessarily difficult. Subrule 102.301(9) is being proposed to reiterate that the burden of proof falls to the individual or entity proposing to use a solid by-product to demonstrate that such reuse is not disposal of solid waste under the guise of beneficial reuse.

				determination by the department in no way relieves the generator or user of the responsibility of complying with all other local, state, and federal statutes, ordinances, and rules or other applicable requirements. **102.301(9)** Respondents in actions to enforce these regulations, who raise a claim that a certain solid by-product is not a solid waste, or is conditionally exempt from regulation, shall demonstrate that there is a known market or disposition for the solid by-product, and that they meet the terms of the exemption. Documentation (such as contracts showing that a second person or entity utilizes the solid by-product as an ingredient in a production process) is needed to demonstrate that the solid by-product is not a solid waste or is exempt from regulation. **102.301(10)** To ensure that all solid by-product applications do not pose a threat to human health and the environment, the department has the authority to determine if a proposed use is beneficial and to approve or deny applications if such a benefit is not evident. Proposed beneficial uses in which the primary purpose is as a land disposal mechanism, and any beneficial use would be incidental in nature, will be denied in accordance with rule 567—102.308(455B).		Subrule 102.301(10) is being proposed to reiterate the programmatic authority granted to the DNR under Iowa Code subsection 455B.304(19) to adopt rules for determining when the utilization of a solid by-product constitutes beneficial use rather than the disposal of solid waste. The fundamental cornerstone of the program is to ensure any such reuse does not pose a threat to human health and the environment.
Definitions	108.3	**567—108.3(455B,455D) Definitions.** For the purposes of this chapter, the following terms shall have the meaning indicated in this chapter. The definitions set out in Iowa Code section 455B.301 shall be considered to be incorporated verbatim in these rules.	102.302	**567—102.302 (455B) Definitions.** For the purposes of this division, the definitions found in 567—Chapter 100 shall apply in addition to the definitions set out in Iowa Code section 455B.301, which shall be considered incorporated by reference.	§455B.304(19) & §455B.301	All definitions are being reevaluated against statutory definitions in Iowa Code section 455B.301 and consolidated within a single administrative chapter. Pursuant to the EO10 directive, statutory definitions shall be stand-alone and no longer duplicated within administrative chapters. Proposed 567 IAC 100 will provide general definitions applicable to Title VIII (solid waste management and disposal) of the commission's

						rules and general conditions of solid waste disposal. To that end, the following beneficial use definitions will be moved to proposed 567 IAC 100: 1) Alternative cover material 2) Beneficial use 3) Beneficial use determination 4) Fill material 5) Soil stabilization 6) Solid By-product 7) Structural fill 8) Subbase for hard-surface pavement construction 9) Suitable for disposal as solid waste in a sanitary landfill
Universally approved beneficial use determinations	108.4	**567—108.4(455B,455D) Universally approved beneficial use determinations.** The following solid by-products may be utilized as resources in the specific manners listed provided that such utilization is in compliance with 567—108.6(455B,455D) and 567—108.7(455B,455D). Unless a user is otherwise notified by the department pursuant to 567—108.11(455B,455D), such utilization does not require further approval from the department. **108.4(1)** *Alumina.* Alumina may be used as a raw material in the manufacture of cement or concrete products. Alumina includes refractory brick for the purpose of this subrule. **108.4(2)** *Asphalt shingles.* Asphalt shingles that are certified, consistent with federal regulations (Reference: Appendix E, Subpart E, 40 CFR Part 763, Section 1, Polarized Light Microscopy), as not containing more than 1 percent asbestos may be used as follows: *a.* Raw material in the manufacture of asphalt products.	102.303	**567—102.303(455B) Universally approved beneficial use determinations.** The following solid by-products are hereby approved as the beneficial use of a solid by-product when utilized in the specific manners listed provided that such utilization is in compliance with rules 567—102.305(455B) and 567—102.306(455B). Unless an entity is otherwise notified by the department pursuant to rule 567—102.307(455B), such utilization does not require further approval from the department. **102.303(1)** *Asphalt shingles*. Asphalt shingles that are certified, consistent with federal regulations (Reference: Appendix E, Subpart E, 40 CFR Part 763, Section 1, Polarized Light Microscopy), as not containing more than 1 percent asbestos may be used as follows: *a.* Subbase for hard-surface pavement construction. *b.* Road surfacing granular material. *c.* Asphalt pavement material.	§455B.304(19)	Building upon the revisions to remove “Raw material” universally-approved applications, there are “Alternative cover material” applications that will be moved to 567 IAC 101, Division II (MSWLFs), and reuse applications that the DNR no longer supports (e.g., CCR bottom ash used for “Traction agent for surfaces used by vehicles”). There are also materials that will either be moved to different divisions (e.g., Waste tires) or materials that no longer require inclusion (e.g., Soil, including Petroleum Contaminated Soil (PCS)). Uncontaminated soil is “Rubble” and not regulated as solid waste, and as for the management of PCS that has been remediated to current 567—Chapter 120 standards will be addressed within proposed 567 IAC Chapter 102, Division III. Two decades have passed since revisions were last made to this chapter, and the DNR is more

		b. Subbase for hard-surface road construction. *c.* Road surfacing granular material. *d.* Alternative cover material at a sanitary landfill pursuant to 567—108.8(455B,455D). **108.4(3)** *Cement kiln dust.* Cement kiln dust may be used as follows: *a.* Raw material in the manufacture of absorbents. *b.* Raw material in the manufacture of cement or concrete products. *c.* Subbase for hard-surface road construction. *d.* A soil amendment pursuant to 567—Chapter 121 and the rules of the Iowa department of agriculture and land stewardship or a compost amendment. *e.* A stabilizer for manure and waste sludge. *f.* A soil stabilizer for construction purposes. *g.* Fill material pursuant to 108.6(1). **108.4(4)** *Coal combustion by-products.* *a.* Coal combustion fly ash and flue gas desulfurization by-products may be used as follows: (1) Raw material in manufactured gypsum, wallboard, plaster, or similar product. (2) Raw material in manufactured calcium chloride. (3) Raw material in the manufacture of absorbents. (4) Fill material pursuant to 108.6(1). (5) Alternative cover material at a sanitary landfill pursuant to 567—108.8(455B,455D). *b.* Coal combustion fly ash or bottom ash or boiler slag may be used as follows: (1) Raw material in the manufacture of cement or concrete products. (2) Raw material to be used in mineral recovery. (3) Raw material in the manufacture of asphalt products. (4) Raw material in plastic products. (5) Subbase for hard-surface road construction. (6) Soil stabilization for construction purposes. (7) Fill material pursuant to 108.6(1).		**102.303(2)** *Cement kiln dust.* Cement kiln dust may be used as follows: *a.* Subbase for hard-surface pavement construction. *b.* A soil conditioner pursuant to 21—Chapter 44 and the rules of the Iowa department of agriculture and land stewardship. *c.* A stabilizer for manure and waste sludge. *d.* For soil stabilization purposes. *e.* Structural fill or fill material. **102.303(3)** *Coal combustion residual.* *a.* Coal combustion fly ash, bottom ash or boiler slag may be used as follows: (1) Subbase for hard-surface pavement construction. (2) For soil stabilization purposes. (3) Structural fill or fill material. *b.* Coal combustion bottom ash or boiler slag may also be used as follows: (1) Sandblasting or other abrasive. (2) Granules for roofing shingles. *c.* Coal combustion flue gas desulfurization, flue gas pollution control by-products, including, but not limited to, lime, activated carbon and synthetic gypsum, may be used as follows: (1) For soil stabilization purposes. (2) Soil conditioner pursuant to 21—Chapter 44 or an agricultural liming material pursuant to 21—Chapter 43 and the rules of the Iowa department of agriculture and land stewardship. **102.303(4)** *Foundry sand.* Foundry sand from steel and ferrous casting may be used as follows: *a.* Leachate control drainage material at a sanitary landfill. *b.* Subbase for hard-surface pavement construction. *c.* Structural fill or fill material. *d.* Emergency flood control use for sandbags.		cautious regarding unencapsulated uses and those uses where material is being placed on, or incorporated into the ground. It's these applications that pose the greatest risk to public health and the environment, and their inclusion with the listing of universally-approved applications needs to be because it was thoroughly evaluated. If a material cannot meet this benchmark, then it shouldn't be included within the listing of universally-approved applications.

		(8) Alternative cover material at a sanitary landfill pursuant to 567—108.8(455B,455D). *c.* Coal combustion bottom ash may also be used as follows: (1) Traction agent for surfaces used by vehicles. (2) Sandblasting abrasive. **108.4(5)** *Compost.* Cured or finished compost, as defined in 567—Chapter 105, is not solid waste and may be used for any purpose recognized by the U.S. Composting Council or the department. 108.4(6) Foundry sand. Foundry sand may be used as follows: *a.* Raw material in the manufacture of asphalt products. *b.* Raw material in the manufacture of cement or concrete products. *c.* Leachate control drainage material at a sanitary landfill. *d.* Subbase for hard-surface road construction. *e.* Fill material pursuant to 108.6(1). *f.* Emergency flood control use for sandbags. *g.* Alternative cover material at a sanitary landfill pursuant to 567—108.8(455B,455D). **108.4(7)** *Glass.* Uncontaminated, unleaded glass may be used as follows: *a.* Raw material in the manufacture of asphalt products. *b.* Fill material pursuant to 108.6(1). *c.* Sandblasting or other abrasive. *d.* Leachate control drainage material at a sanitary landfill. *e.* Filter media. *f.* Subbase for hard-surface road construction. *g.* Alternative cover material at a sanitary landfill pursuant to 567—108.8(455B,455D). **108.4(8)** *Gypsum and gypsum wallboard.* *a.* All gypsum and gypsum wallboard may be used as follows:		*e.* Sandblasting or other abrasive. **102.303(5)** *Glass.* Uncontaminated, unleaded glass may be used as follows: *a.* Leachate control drainage material at a sanitary landfill. *b.* Subbase for hard-surface pavement construction. *c.* Structural fill or fill material. *d.* Sandblasting or other abrasive. *e.* Filter media. **102.303(6)** *Gypsum and gypsum wallboard.* Gypsum and gypsum wallboard that have not been treated to be water-resistant or flame-retardant may be used as a soil conditioner pursuant to 21—Chapter 44 and the rules of the Iowa department of agriculture and land stewardship. **102.303(7)** *Lime.* Lime produced as a by-product of public water supplies may be used as a soil conditioner pursuant to 21—Chapter 44 or an agricultural liming material pursuant to 21—Chapter 43 and the rules of the Iowa department of agriculture and land stewardship. **102.303(8)** *Lime kiln dust.* Lime kiln dust may be used as follows: *a.* Subbase for hard-surface pavement construction. *b.* A soil conditioner pursuant to 21—Chapter 44 or an agricultural liming material pursuant to 21—Chapter 43 and the rules of the Iowa department of agriculture and land stewardship. *c.* A stabilizer for manure and waste sludge. *d.* For soil stabilization purposes. *e.* Structural fill or fill material. **102.303(9)** *Paper mill sludge.* Uncontaminated, dewatered paper mill sludge may be used as follows: *a.* A fuel or energy source.		

		(1) Raw material in the manufacture of absorbents. (2) Raw material in the manufacture of other gypsum products, wallboard, plaster, or similar products. (3) Alternative cover material at a sanitary landfill pursuant to 567—108.8(455B,455D). *b.* Gypsum and gypsum wallboard that have not been treated to be water-resistant or flame-retardant may be used as a calcium additive for agricultural use or soil amendment pursuant to 567—Chapter 121 or a compost amendment. **108.4(9)** *Lime.* Lime produced as a by-product of public water supplies may be used as follows: *a.* A soil amendment pursuant to 567—Chapter 121 and the rules of the Iowa department of agriculture and land stewardship or a compost amendment. *b.* Raw material in the manufacture of calcium carbonate or similar substance. **108.4(10)** *Lime kiln dust.* Lime kiln dust may be used as follows: *a.* Raw material in the manufacture of absorbents. *b.* Raw material in the manufacture of cement or concrete products. *c.* Subbase for hard-surface road construction. *d.* A soil amendment pursuant to 567—Chapter 121 and the rules of the Iowa department of agriculture and land stewardship or a compost amendment. *e.* A stabilizer for manure and waste sludge. *f.* A soil stabilizer for construction purposes. *g.* Fill material pursuant to 108.6(1). **108.4(11)** *Paper mill sludge.* Uncontaminated, dewatered paper mill sludge may be used as follows: *a.* A fuel or energy source. *b.* Bulking agent or carbon source for composting. *c.* Animal bedding. *d.* Raw material in the manufacture of absorbents. *e.* Alternative cover material at a sanitary landfill pursuant to 567—108.8(455B,455D).		*b.* Bulking agent or carbon source for composting. *c.* Animal bedding. **102.303(10)** *Rubble.* Uncontaminated rubble such as dirt, stone, brick, or similar inorganic materials may be used for beneficial fill, landscaping, excavation, grading, or as a substitute for conventional aggregate at places other than a sanitary disposal project. Asphalt, however, shall not be approved for any of these uses if such use will cause the asphalt to be placed in a waterway or wetland or any waters of the state, or within a floodplain. **102.303(11)** *Sandblasting abrasives.* Sandblasting abrasives that do not contain lead-based paint may be used as follows: *a.* Subbase for hard-surface pavement construction. *b.* Structural fill or fill material. **102.303(12)** *Wastewater filter sand.* Wastewater filter sand free of pathogens may be used as follows: *a.* Subbase for hard-surface pavement construction. *b.* Leachate control drainage material at a sanitary landfill. *c.* Structural fill or fill material.		

		108.4(12) *Rubble.* Uncontaminated rubble such as concrete, brick, asphalt pavement, soil and rock may be used for fill, landscaping, excavation or grading or as a substitute for conventional aggregate. Asphalt, however, shall not be used for any of the aforementioned uses if the use will cause the asphalt to be placed in a waterway or wetland or any waters of the state or within the high water table. **108.4(13)** *Sandblasting abrasives.* Sandblasting abrasives that do not contain lead-based paint may be used as follows: *a.* Raw material in the manufacture of cement or concrete products. *b.* Raw material in the manufacture of asphalt products. *c.* Subbase for hard-surface road construction. *d.* Raw material in the manufacture of abrasive products. *e.* Fill material pursuant to 108.6(1). *f.* Alternative cover material at a sanitary landfill pursuant to 567—108.8(455B,455D). **108.4(14)** *Soil, including petroleum-contaminated soil.* *a.* Uncontaminated soil may be used for fill, landscaping, excavation or grading, or other suitable purpose. *b.* Petroleum-contaminated soils that have been decontaminated to the satisfaction of the department pursuant to 567—Chapter 120 may be used as follows: (1) Fill material at the original excavation site pursuant to 108.6(1). (2) Alternative cover material at a sanitary landfill pursuant to 567—108.8(455B,455D). **108.4(15)** *Tires.* This chapter does not pertain to tires other than those used as alternative cover material pursuant to 567—108.8(455B,455D). Refer to				

		567—Chapter 117 for rules regarding the beneficial use of tires. **108.4(16)** *Wastewater filter sand.* Wastewater filter sand may be used as follows: *a.* Fill material pursuant to 108.6(1). *b.* Subbase for hard-surface road construction. **108.4(17)** *Wood.* Uncontaminated, untreated or raw wood may be used as follows: *a.* A fuel or energy source. *b.* Bulking agent for composting. *c.* Mulch. *d.* Animal bedding. *e.* Raw material in the manufacture of paper products, particle board, or similar materials. **108.4(18)** *Wood ash.* Ash from the combustion of uncontaminated, untreated or raw wood may be used as follows: *a.* A soil amendment pursuant to 567—Chapter 121. *b.* A carbon source for composting. *c.* Raw material in the manufacture of cement or concrete products. *d.* Fill material pursuant to 108.6(1).				
Application requirements for beneficial use determinations other than alternative cover material	108.5	**567—108.5(455B,455D) Application requirements for beneficial use determinations other than alternative cover material.** Unless the beneficial use is approved pursuant to 567—108.4(455B,455D), the applicant shall submit the following application information to the department. The department may request that additional information be submitted in order to make a beneficial use determination. The department may also require specific conditions on a beneficial use determination and issue a temporary beneficial use determination on a trial basis. The generator of a solid by-product may apply to the department in writing for a beneficial use determination. If the department finds the application information to be incomplete, then it shall notify the	102.304	**567—102.304(455B) Application requirements for beneficial use determinations.** Unless the beneficial use is approved pursuant to rule 567—102.303(455B), applicants will need to submit the following information on a form prescribed by the department. The department may request that additional information be submitted in order to make a beneficial use determination. The department may also require specific conditions on a beneficial use determination and issue a temporary determination on a trial basis. A generator, user, or proposed user of a solid by-product may apply to the department in writing for a beneficial use determination. If the department finds the application information to be	§455B.304(19)	Revisions to the application requirements in proposed rule 567—102.304(455B) aim to clarify who may apply for a determination and what minimum information is needed for the DNR to make a beneficial use determination. The DNR retains the authority to request additional information, however the inclusion of a scaled map/aerial photograph delineating the boundaries of the proposed reuse site will ensure a clear understanding of the project's scope. Based upon prior experience, the DNR proposes a provision that requires applications submitted by persons other than the generator, be

		applicant in writing of that fact and of the specific deficiencies and return the application materials to the applicant within 30 days of such notification. The applicant may reapply without prejudice. **108.5(1)** The name, address, and telephone number of: *a.* Owner of the site where the project will be located. *b.* Applicant for the beneficial use determination. *c.* Official responsible for the operation of the project. *d.* Professional engineer (P.E.) licensed by the state of Iowa and retained for the project, if any. The department may, at its sole discretion, require the applicant to retain a professional engineer for the project or specific parts thereof. *e.* Agency to be served by the project, if any. *f.* Responsible official of agency to be served. **108.5(2)** A description of the solid by-product under review and its proposed use. **108.5(3)** The chemical and physical characteristics of the solid by-product under review and of each type of proposed product. **108.5(4)** A demonstration that there is a known or reasonably probable market for the intended use of the solid by-product under review by providing one or more of the following: *a.* A contract to purchase or utilize the solid by-product for the use proposed. *b.* A description of how the solid by-product will be used. *c.* A demonstration that the solid by-product complies with industry standards and specifications for that product. *d.* Other documentation that a market for the solid by-product exists. **108.5(5)** A demonstration that the proposed use of the solid by-product will not adversely affect human		incomplete, then it shall notify the applicant in writing of that fact and of the specific deficiencies and return the application materials to the applicant within 30 days of such notification. The applicant may reapply without prejudice. **102.304(1)** The name, address, email, and telephone number of: *a.* Owner of the site where the project will be located. *b.* Applicant for the beneficial use determination. *c.* Official responsible for the operation of the project. *d.* Professional engineer (P.E.) licensed by the state of Iowa and retained for the project, if any. The department may, at its sole discretion, require the applicant to retain a professional engineer for the project or specific parts thereof in order to obtain a beneficial use determination. *e.* Agency to be served by the project, if any. *f.* Responsible official of agency to be served, if any. **102.304(2)** Scaled map or aerial photograph locating the boundaries of the proposed beneficial use site, if applicable, and identifying: *a.* North and other principal compass points. *b.* Section lines and other legal boundaries. *c.* Zoning and land use within 750 feet. *d.* Homes and buildings within 750 feet. *e.* Haul routes to and from the site, including load limits or other restrictions on those routes. **102.304(3)** A description of the solid by-product under review and its proposed use, including the process that will be used to transport and handle the solid by-product, including any equipment. **102.304(4)** The chemical and physical characteristics of the solid by-product under review.		accompanied by written consent for the proposed use from the generator.

		health or the environment. The demonstration may include, but is not limited to, a toxicity characteristics leaching procedure (TCLP, EPA Method 1311) analysis and total metals testing of a representative sample of the solid by-product. **108.5(6)** A solid by-product management plan pursuant to 108.6(2).		**102.304(5)** A demonstration that there is a known or reasonably probable market for the intended use of the solid by-product under review by providing one or more of the following: *a.* A contract to purchase or utilize the solid by-product for the use proposed. *b.* A description of how the solid by-product will be used. *c.* A demonstration that the solid by-product complies with industry standards and specifications for that product. *d.* Applications submitted by persons other than the generator must be accompanied by written consent for the proposed use from the generator. *e.* Other documentation that a market for the solid by-product exists. **102.304(6)** A demonstration that the proposed use of the solid by-product will not adversely affect human health and the environment. On a form prescribed by the department, the demonstration may include, but is not limited to, a toxicity characteristics leaching procedure analysis and total metals testing of a representative sample of the solid by-product. **102.304(7)** A solid by-product management plan pursuant to subrule 102.305(3).		
Requirements for beneficial uses other than alternative cover material	108.6	**567—108.6(455B,455D) Requirements for beneficial uses other than alternative cover material.** **108.6(1)** *Solid by-products beneficially used as fill material.* All beneficial uses, including those listed in 567—108.4(455B,455D) other than rubble and soil, shall meet the following requirements, unless a variance is granted in writing by the department for a specific location, if the beneficial use entails the solid by-product's being used as fill material: *a.* Leachate characteristics of the solid by-product shall be measured by the synthetic precipitation leaching procedure (SPLP, EPA Method 1312) and shall	102.305	**567—102.305(455B) Requirements for beneficial use determinations.** **102.305(1)** *Solid by-products applied to land*. Unless otherwise approved by the department, all beneficial uses, including those listed in rule 567—102.303(455B) other than uncontaminated rubble and soil, shall meet the following requirements, if the beneficial use entails the solid by-product being used as a fill material, structural fill, subbase for hard-surface pavement construction or for soil stabilization purposes:	§455B.304(19)	For most beneficial use applications, other than fill material, the lone environmental benchmark is that the solid by-product needs to be "Suitable for disposal in a sanitary landfill," which is just another way of saying that it cannot be hazardous and must be a solid (no free liquids). This is a very low environmental bar to meet, which doesn't adequately characterize the material for reuse, especially given most reuse applications do not mandate environmental controls be implemented.

		be less than or equal to ten times the maximum contaminant levels (MCL) for drinking water. Foundry sand and coal combustion by-products may limit the SPLP analytes to total metals for drinking water. *b.* Total metals testing results, which shall include thallium, shall be consistent with the department's statewide standards for soil pursuant to 567–Chapter 137. Arsenic levels shall be consistent with the statewide standards for soil or the naturally occurring (i.e. background) arsenic levels of the soil, whichever are greater. *c.* The solid by-product shall produce a fill that has a pH: (1) Greater than or equal to 5 and less than or equal to 8 if the fill may be used as growing media either now or in the future. (2) Greater than or equal to 5 and less than 12 if the fill is specifically intended not to be used as growing media either now or in the future. In this category of fill, materials with a pH equal or greater than 10 but less than 12 shall be used only in areas where direct physical contact by humans for long periods of time is not expected to occur. (3) For deep fills where only the surface may serve as growing media either now or in the future, then at a minimum the top three feet shall have a pH greater than or equal to 5 and less than or equal to 8. Fill material below the top three feet shall have a pH greater than or equal to 5 and less than or equal to 12. *d.* The by-product shall not be placed in a waterway or wetland or any waters of the state or extend below or within five feet of the high water table. *e.* The by-product shall not be placed within the 100-year flood plain unless in accordance with all local and department regulations including rule 567—71.5(455B). *f.* The by-product shall not be placed closer than 200 feet to a sinkhole or to a well that is being used or		*a.* Leachate characteristics of the solid by-product to be measured by the toxicity characteristics leaching procedure (TCLP, EPA Method 1311) and be consistent with federal regulations (Reference: Table 1, Subpart C, 40 CFR 261, Maximum Concentration of Contaminants for the Toxicity Characteristic). *b.* Leachate characteristics of the solid by-product to be measured by the synthetic precipitation leaching procedure (SPLP, EPA Method 1312) and shall be less than or equal to ten times the maximum contaminant levels (MCL) for drinking water (Reference: Subpart G, 40 CFR 141, National Primary Drinking Water Regulations). Applicants may limit the SPLP analytes to total metals for drinking water. *c.* Total metals testing of the solid by-product (Total Metals, EPA Method 6010) shall comply with the department's current statewide standards for soil pursuant to 567—Chapter 137. Levels shall be consistent with the statewide standards for soil or the naturally occurring (i.e., background) levels of the soil, whichever are greater. *d.* The department may establish additional constituent standards from those outlined in this rule, for a solid by-product. The department will review regulatory limits on a quarterly basis and post updates to the department website. It is the responsibility of each generator, applicant and end-user to ensure solid by-products comply with the most current regulatory limits. *e.* The solid by-product shall produce a material that has a pH: (1) Greater than or equal to 5 and less than or equal to 8 if the solid by-product may be used as growing media either now or in the future. (2) Greater than or equal to 5 and less than 12 if the solid by-product is specifically intended not to		What's being proposed is that for those reuse applications where the solid by-product is being placed on, or incorporated into the ground, that robust testing be required. This includes the toxicity characteristics leaching procedure (TCLP), the synthetic precipitation leaching procedure (SPLP), and Total Metals testing, which most entities have been supportive of completing. This not only provides greater assurance that the solid by-product under review will not have a negative impact on human health and the environment, but also helps in marketing the material for reuse. Paragraph 102.305(1)"d" is being proposed to clarify that given the variability of solid by-products, the DNR reserves the right to establish additional constituent standards as part of a determination. The DNR also felt it was important to reiterate that the toxicity values, absorption factors for dermal exposure to soils, and promulgated standards are subject to periodic updating. Because of this, the DNR will review regulatory limits on a quarterly basis and it will be the responsibility of each generator, applicant and end-user to ensure compliance with the most current testing limits. Paragraph 102.305(1)"i" is being proposed to codify a standing policy that solid by-products not be placed closer than 100 feet of any property line unless written consent is obtained from the adjacent landowner(s). Subrule 102.305(2) is being proposed to clarify the point at which a solid by-product ceases to be a solid waste in line with the statutory purpose of the division…a solid by-product ceases to be a solid waste occurs when it is used in a

		could be used for human or livestock water consumption. *g.* The by-product shall not be putrescible. **108.6(2)** *Solid by-product management plans*. All recipients of beneficial use determinations granted pursuant to 567—108.5(455B,455D) and coal combustion by-product and foundry sand beneficial uses listed in 567—108.4(455B,455D) shall develop and maintain a solid by-product management plan that satisfies the following requirements: *a.* Lists the source(s) of the solid by-product. *b.* Lists procedures for periodic testing of the solid by-product to ensure that the chemical and physical composition has not changes significantly. *c.* Provides a description of storage procedures including: (1) Storage location(s). (2) Maximum anticipated inventory, including dimensions of any stockpiles. (3) Run-on and run-off controls, which may include a storm water National Pollutant Discharge Elimination System (NPDES) permit. (4) Management practices to minimize uncontrolled dispersion of the solid by-product. (5) Maximum storage time, not to exceed six months unless authorized in writing by the department.		be used as growing media either now or in the future. In this category, solid by-products with a pH equal to or greater than 10 but less than 12 shall be used only in areas where direct physical contact by humans for long periods of time is not expected to occur. (3) For applications where only the surface may serve as growing media either now or in the future, then at a minimum the top three feet shall have a pH greater than or equal to 5 and less than or equal to 8. Solid by-products below the top three feet shall have a pH greater than or equal to 5 and less than or equal to 12. *f.* The solid by-product shall not be placed in a waterway or wetland or any waters of the state or extend below or within five feet of the high water table. *g.* The solid by-product shall not be placed within the 100-year flood plain unless in accordance with all local and department regulations, including rule 567—71.12(455B). *h.* The solid by-product shall not be placed closer than 200 feet to a sinkhole or to a well that is being used or could be used for human or livestock water consumption. *i.* The solid by-product shall not be placed closer than 100 feet of any property line unless written consent is obtained from the adjacent landowner(s). *j.* The solid by-product shall not be putrescible. *k.* Any project utilizing a solid by-product being applied to land, not including uncontaminated rubble and soil, which has not received a beneficial use determination, shall be presumed to constitute the illegal disposal of solid waste. **102.305(2)** The department may make a determination that a solid by-product that has received approval to be used beneficially, ceases to		manufacturing process to make a product, used as an effective substitute for a commercial product, or used as a fuel for energy recovery. Subrule 102.305(3) is being proposed to clarify the requirements associated with the annual Solid By-Product Management Plan (SBMP) submission. Specifically, who is required to submit one and what constitutes “periodic testing” as it pertains to the application requirement to provide “a demonstration that the proposed use of the solid by-product will not adversely affect human health and the environment.” While most generators conduct quarterly testing of their solid by-product(s), the DNR wants to stipulate a minimum testing frequency of semi-annually. The DNR is of the position that a single annual sample is not sufficiently representative of a solid by-product to determine compliance with testing limits.

				be a solid waste if it is used in accordance with the terms and conditions of the beneficial use determination. Unless otherwise determined for the particular solid by-product under review, the point at which a solid by-product ceases to be a solid waste occurs when it is used in a manufacturing process to make a product, used as an effective substitute for a commercial product, or used as a fuel for energy recovery. **102.305(3)** *Solid by-product management plans.* Recipients of beneficial use determinations granted pursuant to rule 567—102.304(455B) and those beneficial uses listed in subrule 102.305(1), shall develop and maintain a solid by-product management plan (SBMP) that satisfies the following: *a.* Lists the source(s) of the solid by-product. *b.* Outlines procedures for periodic testing (not less than semiannually) of the solid by-product to confirm the proposed use continues to be adequately protective of human health and the environment, and that the solid by-product continues to possess the physical characteristics and chemical properties which make it suitable for the approved beneficial use. Testing results from a certified laboratory pursuant to 567—Chapter 83 are to be submitted as part of the SBMP on a form prescribed by the department. *c.* Provides a description of storage procedures including: (1) Storage location(s). (2) Maximum anticipated inventory, including dimensions of any stockpiles. (3) Run-on and run-off controls, which may include a storm water National Pollutant Discharge Elimination System (NPDES) permit. (4) Management practices to minimize uncontrolled dispersion of the solid by-product.		

				(5) Maximum storage time, not to exceed six months unless authorized in writing by the department.		
Record-keeping and reporting requirements for beneficial use projects other than alternative cover material	108.7	**567—108.7(455B,455D) Record-keeping and reporting requirements for beneficial use projects other than alternative cover material.** **108.7(1)** Any entity that engages in the beneficial use of a solid by-product, other than for alternative cover material, and that satisfies at least one of the following criteria shall comply with record-keeping and reporting requirements set forth in this rule: *a.* The entity has been granted a beneficial use determination pursuant to 567—108.5(455B,455D). *b.* The solid by-product is not rubble or soil and is being beneficially used as fill material. *c.* The solid by-product is a coal combustion by-product or foundry sand. **108.7(2)** Record keeping. Generators shall maintain all records related to the solid by-product management plan for a minimum duration of five years. **108.7(3)** Reporting. Reports shall be filed with the department's central office and the field office with jurisdiction over the generator as follows: *a.* Unless otherwise directed by the department, generators shall submit to the department a copy of the solid by-product management plan whenever that plan is revised or within 60 days of the end of the calendar year, whichever is earlier. *b.* Generators whose solid by-products are being beneficially used as fill material shall submit to the department within 60 days of the end of the calendar year the following information for each beneficial use project or activity: (1) The location of the project. (2) The tons of solid by-product utilized for the project.	102.306	**567—102.306(455B) Record-keeping and reporting requirements.** Recipients of beneficial use determinations granted pursuant to rule 567—102.304(455B) and those beneficial uses listed in subrule 102.305(1), shall comply with the following record-keeping and reporting requirements: **102.306(1)** *Record keeping*. An entity subject to this rule must maintain all records related to the solid by-product management plan for a minimum duration of five years after project completion. **102.306(2)** *Reporting.* Unless otherwise directed by the department, solid by-product management plans are to be filed with the department's central office as follows: *a.* An entity subject to this rule shall submit to the department a copy of the solid by-product management plan prior to reuse of the solid by-product, whenever that plan is revised, and within 60 days of the end of the calendar year, whichever is earlier. *b.* An entity subject to this rule whose solid by-product is being applied to land pursuant to subrule 102.305(1) shall also submit to the department the following information for each beneficial use project or activity: (1) The location of the project. (2) The tons of solid by-product utilized for the project.	§455B.304(19)	Currently only those applications utilizing Coal Combustion By-Products or Foundry Sand, or are utilizing a solid by-product as beneficial fill material, are required to report to the DNR. However, unless they've been issued an individual determination, the DNR has no way of knowing if they're conducting reuse pursuant to the Beneficial Use program. Pursuant to proposed rule 567—102.306(455B), entities issued an individual determination and those universally-approved applications where the solid by-product is being placed on, or incorporated into the ground (regardless of material), will be required to report annually. The justification behind this is that these reuse applications pose the greatest potential to adversely affect, human health and the environment. Again, as the DNR lacks the statutory authority to require determinations be obtained prior to using solid by-products beneficially, the DNR's ability to track whether these activities are being conducted and by whom is limited. Expansion of these requirements falls outside the directive of EO10 and would require a separate rulemaking.

Universally approved beneficial use determinations for alternative cover material	108.8	**567—108.8(455B,455D) Universally approved beneficial use determinations for alternative cover material.** Unless the landfill is otherwise notified pursuant to 567—108.11(455B,455D), the following alternative cover materials may be beneficially used as daily cover material at sanitary landfills in the manner and volume specified by sanitary landfill rules. However, sanitary landfills shall amend their sanitary landfill permits by notifying the department, and the department field office with jurisdiction over the facility, of their intent to utilize solid by-products pursuant to this rule at least 30 days prior to actual utilization of the by-products as alternative cover material. **108.8(1)** *Asphalt shingles*. Asphalt shingles that are certified, consistent with federal regulations (Reference: Appendix E, Subpart E, 40 CFR Part 763, Section 1, Polarized Light Microscopy), as not containing more than 1 percent asbestos and are ground to an average size of 3 inches or less in any dimension may be mixed with soil in a 50/50 volume. **108.8(2)** *Coal combustion by-products.* Coal combustion by-products may be mixed with soil in a 50/50 volume. **108.8(3)** *Compost.* One hundred percent cured or finished compost, and compost rejects, may be used. **108.8(4)** *Diatomaceous earth.* Diatomaceous earth may be mixed with soil in a 50/50 volume. **108.8(5)** *Foundry sand.* Foundry sand may be mixed with soil in a 50/50 volume. **108.8(6)** *Glass.* Glass that has been ground to an average size of ½ inch or less in any dimension may be mixed with soil in a 10 percent glass and 90 percent soil by volume mixture. **108.8(7)** *Gypsum and gypsum wallboard.* Gypsum and gypsum wallboard that have been ground to an average size of 3 inches or less in any dimension may be mixed with soil in a 50/50 volume.	NA	NA	§455B.304(19)	The alternative daily cover (ADC) provisions in current rules 567—108.8(455B,455D), 567—108.9(455B,455D) and 567—108.10(455B,455D) are being moved to proposed 567—Chapter 101, Division II for municipal solid waste landfill (MSWLF) units. At this time, I'm not aware of any planned changes to these ADC provisions, however any proposed revisions will be addressed within the MSWLF EO10 Workgroup and made available for public review and comment. The primary driver for this proposed change is that the ADC provisions only apply to MSWLFs, and the current process is confusing in that most materials are universally-approved, but then the sanitary landfill needs to give 30-days prior notice and have their permit amended before using the material. So having these requirements within the Division that applies to these types of units will help address confusion and aid in its implementation.

		108.8(8) *Paper mill sludge.* Uncontaminated, dewatered paper mill sludge may be mixed with soil in a 50/50 volume. **108.8(9)** *Sandblasting abrasive.* Sandblasting abrasive and residuals may be mixed with soil in a 50/50 volume. **108.8(10)** *Soil, including petroleum-contaminated soil.* Petroleum-contaminated soils that have been decontaminated to the satisfaction of the department pursuant to 567—Chapter 120 may be utilized. **108.8(11)** *Tire chips.* Tire chips that are an average size of 3 inches or less in any dimension may be mixed with soil in a 50/50 volume.				
Beneficial use determination application requirements for alternative cover material	108.9	**567—108.9(455B,455D) Beneficial use determination application requirements for alternative cover material.** Unless the alternative cover material beneficial use is approved pursuant to 567—108.8(455B,455D), the applicant shall submit the following application information to the department to amend the sanitary landfill permit. The department may request that additional information be submitted in order to make a beneficial use determination. The department may also require specific beneficial use determination conditions and issue a temporary beneficial use determination on a trial basis. If the department finds the application information to be incomplete, then it shall notify the applicant in writing of that fact and of the specific deficiencies and return the application materials to the applicant within 30 days of such notification. The applicant may reapply without prejudice. **108.9(1)** The name, address, and telephone number of: a. Owner of the site where the project will be located. *b.* Applicant for the beneficial use determination. *c.* Official responsible for the operation of the project.	NA	NA	§455B.304(19)	See comment above.

		d. Professional engineer (P.E.) licensed by the state of Iowa and retained for the project, if any. The department may, at its sole discretion, require the applicant to retain a professional engineer for the project or specific parts thereof. *e.* Agency to be served by the project, if any. *f.* Responsible official of agency to be served. **108.9(2)** A description of the proposed alternative cover material and whether it is to be used as daily, intermediate, or final cover. **108.9(3**) The chemical and physical characteristics of the alternative cover material. **108.9(4)** The proposed volume ratio of the alternative cover material(s) to soil or other alternative cover material(s). **108.9(5)** A demonstration that there is a known or reasonably probable suitability of the alternative cover material as cover material by providing previous case studies of the alternative cover material being utilized as cover material's or the following information: *a.* Information on the ability of the alternative cover material to reduce or maintain current odor levels. *b.* Information on the ability of the alternative cover material to reduce or deter vectors. *c.* Information on the ability of the alternative cover material to reduce or maintain the current risk of fire. *d.* Information on the ability of the alternative cover material to control litter and dust. *e.* Information on the ability of the alternative cover material to impede the infiltration of liquids and precipitation. *f.* Information on the ability of the alternative cover material to control landfill gas migration. *g.* Information on the ability of the alternative cover material to provide a safe and effective working surface. *h.* Information on the ability of the alternative cover material to provide effective growing media.				

		i. Other documentation that the alternative cover material is suitable for cover material. **108.9(6)** A demonstration that the proposed use of the alternative cover material will not adversely affect human health or the environment. The demonstration may include, but is not limited to, a toxicity characteristics leaching procedure (TCLP, EPA Method 1311) analysis of a representative sample of the alternative cover material.				
Beneficial use of alternative cover material and state goal progress	108.10	**567—108.10(455B,455D) Beneficial use of alternative cover material and state goal progress.** Alternative cover material placed at no more than the thickness required by sanitary landfill rules shall be exempt from landfill tonnage measurements used for state goal progress and waste diversion calculations.	NA	NA	§455B.304(19)	See comment above. Iowa Code subsection 455B.304(19) states in part, "Materials approved for beneficial use at a sanitary landfill shall be exempt from the tonnage fee imposed by section 455B.310 to the extent authorized by rule or permit."
Revocation of beneficial use determinations	108.11	**567—108.11(455B,455D) Revocation of beneficial use determinations.** The department may revoke any beneficial use determination given pursuant to this chapter if it finds one or more of the following: 1. The matters serving as the basis for the department's determination were incomplete or incorrect or are no longer valid. 2. The department finds that there has been a violation of any law, rule, permit or other authorization in its jurisdiction. 3. The department has reasonable cause to suspect a significant risk to or adverse effect on human health or the environment.	102.307	**567—102.307(455B) Revocation of beneficial use determinations.** The department may revoke any beneficial use determination if it finds one or more of the following: **102.307(1)** The matters serving as the basis for the department's determination were incomplete or incorrect or are no longer valid. **102.307(2)** The department finds that there has been a violation of any law, rule, permit or other authorization in its jurisdiction. **102.307(3)** The department has reasonable cause to suspect, based upon information not previously considered or available as part of the application, demonstrating that management of the solid by-product under the approved beneficial use determination may present a significant risk to or adverse effect on human health and the environment. **102.307(4)** The solid by-product is used in a manner inconsistent with the terms under which it was determined to no longer be a solid waste. The department may consider the placement, dumping	§455B.304(19)	Subrule 102.307(3) is being proposed to clarify the conditions upon which the DNR determines "reasonable cause to suspect" a significant risk to or adverse effect on human health or the environment. Subrule 102.307(4) is being proposed to codify that revocation is warranted if it's determined that a solid by-product is being used in a manner inconsistent with the approved beneficial use determination. When a determination is revoked, the material is no longer excluded from regulation as a solid waste, and is subject to enforcement action by the DNR as appropriate and as allowed by Iowa law. Subrule 102.307(5) is being proposed to address those instances where a beneficial use determination recipient desires to discontinue reuse activities prior to expiration. This subrule also addresses the DNR's ability to revoke a

				or other use of a solid by-product in a manner inconsistent with the beneficial use determination to be illegal disposal of solid waste, and the applicant, generator, distributer, or end-user may be subject to enforcement action by the department pursuant to Iowa Code section 455B.307. **102.307(5**) The applicant has requested the revocation of the determination or other legal grounds exist for such revocation.		determination when legal authority exists for such an enforcement action.
Denial of beneficial use determination applications	NA	NA	102.308	**567—102.308(455B) Denial of beneficial use determination applications.** For applications that are found to be inconsistent with these regulations by the department, the following conditions apply: **102.308(1)** The department will notify the applicant in writing of the denial, including supporting rationale within 90 days of receipt of application. **102.308(2)** Solid by-products for which a beneficial use determination is denied by the department are considered solid waste and remain subject to all applicable state and federal statutes, ordinances, and regulations. **102.308(3)** Applicants may appeal the denial of a beneficial use determination to the department within 60 days of notification of denial. Such appeal shall be made in a manner consistent with rule 561—7.4(17A,455A).	§455B.304(19)	Rule 567—102.308(455B) is being proposed to codify the process for when the DNR determines that beneficial use determination application denial is warranted. The decision to approve or disapprove a beneficial use determination application is completely discretionary by the DNR. A central component of the beneficial use program is to ensure proposed applications are legitimate and not just disposal under the guise of beneficial reuse. If there is no tangible benefit or specific project being proposed, or the by-product fails applicable environmental testing, the beneficial use determination application will be denied.