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CHAPTER 102
SOLID WASTE MANAGEMENT

DIVISION IV
BENEFICIAL USE

6 **567—102.300(455B) Purpose.** The purpose of this division is to establish rules for determining
7 when the utilization of a solid by-product constitutes beneficial use rather than the disposal of solid
8 waste. Solid by-products determined by the department not to be a solid waste through a beneficial
9 use determination will not be subject to regulation as disposal of solid waste. This division
10 encourages the utilization of solid by-products, consistent with accepted engineering practices,
11 when such utilization improves, or at a minimum does not adversely affect, human health and the
12 environment.

13 **567—102.301(455B) Applicability and compliance.**

14 **102.301(1)** These rules establish a method for predetermination by the department that a
15 proposed utilization of a solid by-product will not be regulated as solid waste disposal when utilized
16 in the manner approved by the department. These rules apply to industrial, commercial, and
17 institutional generators and users or proposed users of solid by-products that before receiving a
18 beneficial use determination by the department were disposing of solid by-products as solid waste.
19 These rules encourage environmentally sound materials management practices to maximize the use
20 of recoverable materials and to foster resource recovery. The department reserves the authority to
21 modify or revoke any beneficial use determination authorized under these regulations.

22 **102.301(2)** These rules do not pertain to organic materials composting. For rules pertaining to
23 organic materials composting, see 567—Chapter 102, Division I.

24 **102.301(3)** These rules do not pertain to the land application of solid waste. For rules pertaining
25 to the land application of solid waste, see 567—Chapter 102, Division II.

26 **102.301(4)** These rules do not pertain to the beneficial use of waste tires. For rules pertaining
27 to the beneficial use of waste tires, see 567—Chapter 102, Division V.

28 **102.301(5)** These rules do not pertain to alternative cover material. For rules pertaining to
29 sanitary landfills utilizing or desiring to utilize solid by-products as alternative cover material, see
30 567—Chapter 101, Division II.

31 **102.301(6)** These rules do not apply to solid by-products that are directly incorporated into a
32 manufacturing process to make a commercial product. The use of a solid by-product as an
33 ingredient in an industrial process or as a substitute for a commercial product may not present a
34 greater threat of harm to human health and the environment than the use of the product or ingredient
35 for which the solid by-product is replacing.

36 **102.301(7)** Beneficial use determinations granted by the department before [*effective date of*
37 *the rule*], shall remain in effect unless specifically addressed by these rules or by written
38 notification pursuant to rule 567—102.307(455B).

39 **102.301(8)** The issuance of a beneficial use determination by the department affirms that the
40 proposed use is not subject to regulation as solid waste disposal to the extent the use and solid by-
41 product conforms to the beneficial use application and determination. The issuance of a beneficial
42 use determination by the department in no way relieves the generator or user of the responsibility
43 of complying with all other local, state, and federal statutes, ordinances, and rules or other
44 applicable requirements.

45 **102.301(9)** Respondents in actions to enforce these regulations, who raise a claim that a certain
46 solid by-product is not a solid waste, or is conditionally exempt from regulation, shall demonstrate
47 that there is a known market or disposition for the solid by-product, and that they meet the terms
48 of the exemption. Documentation (such as contracts showing that a second person or entity utilizes
49 the solid by-product as an ingredient in a production process) is needed to demonstrate that the

50 solid by-product is not a solid waste or is exempt from regulation.

51 **102.301(10)** To ensure that all solid by-product applications do not pose a threat to human
52 health and the environment, the department has the authority to determine if a proposed use is
53 beneficial and to approve or deny applications if such a benefit is not evident. Proposed beneficial
54 uses in which the primary purpose is as a land disposal mechanism, and any beneficial use would
55 be incidental in nature, will be denied in accordance with rule 567—102.308(455B).

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57 **567—102.302 (455B) Definitions.** For the purposes of this division, the definitions found in 567—
58 Chapter 100 shall apply in addition to the definitions set out in Iowa Code section 455B.301, which
59 shall be considered incorporated by reference.

60 **567—102.303(455B) Universally approved beneficial use determinations.** The following solid
61 by-products are hereby approved as the beneficial use of a solid by-product when utilized in the
62 specific manners listed provided that such utilization is in compliance with rules 567—
63 102.305(455B) and 567—102.306(455B). Unless an entity is otherwise notified by the department
64 pursuant to rule 567—102.307(455B), such utilization does not require further approval from the
65 department.

66 **102.303(1) Asphalt shingles.** Asphalt shingles that are certified, consistent with federal
67 regulations (Reference: Appendix E, Subpart E, 40 CFR Part 763, Section 1, Polarized Light
68 Microscopy), as not containing more than 1 percent asbestos may be used as follows:

- 69 a. Subbase for hard-surface pavement construction.
- 70 b. Road surfacing granular material.
- 71 c. Asphalt pavement material.

72 **102.303(2) Cement kiln dust.** Cement kiln dust may be used as follows:

- 73 a. Subbase for hard-surface pavement construction.
- 74 b. A soil conditioner pursuant to 21—Chapter 44 and the rules of the Iowa department of
75 agriculture and land stewardship.
- 76 c. A stabilizer for manure and waste sludge.
- 77 d. For soil stabilization purposes.
- 78 e. Structural fill or fill material.

79 **102.303(3) Coal combustion residual.**

80 a. Coal combustion fly ash, bottom ash or boiler slag may be used as follows:

- 81 (1) Subbase for hard-surface pavement construction.
- 82 (2) For soil stabilization purposes.
- 83 (3) Structural fill or fill material.

84 b. Coal combustion bottom ash or boiler slag may also be used as follows:

- 85 (1) Sandblasting or other abrasive.
- 86 (2) Granules for roofing shingles.
- 87 c. Coal combustion flue gas desulfurization, flue gas pollution control by-products, including,
88 but not limited to, lime, activated carbon and synthetic gypsum, may be used as follows:

- 89 (1) For soil stabilization purposes.
- 90 (2) Soil conditioner pursuant to 21—Chapter 44 or an agricultural liming material pursuant to
91 21—Chapter 43 and the rules of the Iowa department of agriculture and land stewardship.

92 **102.303(4) Foundry sand.** Foundry sand from steel and ferrous casting may be used as follows:

- 93 a. Leachate control drainage material at a sanitary landfill.
- 94 b. Subbase for hard-surface pavement construction.
- 95 c. Structural fill or fill material.
- 96 d. Emergency flood control use for sandbags.
- 97 e. Sandblasting or other abrasive.

98 **102.303(5) Glass.** Uncontaminated, unleaded glass may be used as follows:

- 99 a. Leachate control drainage material at a sanitary landfill.

- 100 b. Subbase for hard-surface pavement construction.
- 101 c. Structural fill or fill material.
- 102 d. Sandblasting or other abrasive.
- 103 e. Filter media.

104 **102.303(6) Gypsum and gypsum wallboard.** Gypsum and gypsum wallboard that have not been
105 treated to be water-resistant or flame-retardant may be used as a soil conditioner pursuant to 21—
106 Chapter 44 and the rules of the Iowa department of agriculture and land stewardship.

107 **102.303(7) Lime.** Lime produced as a by-product of public water supplies may be used as a soil
108 conditioner pursuant to 21—Chapter 44 or an agricultural liming material pursuant to 21—Chapter
109 43 and the rules of the Iowa department of agriculture and land stewardship.

110 **102.303(8) Lime kiln dust.** Lime kiln dust may be used as follows:

- 111 a. Subbase for hard-surface pavement construction.
- 112 b. A soil conditioner pursuant to 21—Chapter 44 or an agricultural liming material pursuant
113 to 21—Chapter 43 and the rules of the Iowa department of agriculture and land stewardship.
- 114 c. A stabilizer for manure and waste sludge.
- 115 d. For soil stabilization purposes.
- 116 e. Structural fill or fill material.

117 **102.303(9) Paper mill sludge.** Uncontaminated, dewatered paper mill sludge may be used as
118 follows:

- 119 a. A fuel or energy source.
- 120 b. Bulking agent or carbon source for composting.
- 121 c. Animal bedding.

122 **102.303(10) Rubble.** Uncontaminated rubble such as dirt, stone, brick, or similar inorganic
123 materials may be used for beneficial fill, landscaping, excavation, grading, or as a substitute for
124 conventional aggregate at places other than a sanitary disposal project. Asphalt, however, shall not
125 be approved for any of these uses if such use will cause the asphalt to be placed in a waterway or
126 wetland or any waters of the state, or within a floodplain.

127 **102.303(11) Sandblasting abrasives.** Sandblasting abrasives that do not contain lead-based
128 paint may be used as follows:

- 129 a. Subbase for hard-surface pavement construction.
- 130 b. Structural fill or fill material.

131 **102.303(12) Wastewater filter sand.** Wastewater filter sand free of pathogens may be used as
132 follows:

- 133 a. Subbase for hard-surface pavement construction.
- 134 b. Leachate control drainage material at a sanitary landfill.
- 135 c. Structural fill or fill material.

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137 **567—102.304(455B) Application requirements for beneficial use determinations.** Unless the
138 beneficial use is approved pursuant to rule 567—102.303(455B), applicants will need to submit the
139 following information on a form prescribed by the department. The department may request that
140 additional information be submitted in order to make a beneficial use determination. The
141 department may also require specific conditions on a beneficial use determination and issue a
142 temporary determination on a trial basis.

143 A generator, user, or proposed user of a solid by-product may apply to the department in writing
144 for a beneficial use determination. If the department finds the application information to be
145 incomplete, then it shall notify the applicant in writing of that fact and of the specific deficiencies
146 and return the application materials to the applicant within 30 days of such notification. The
147 applicant may reapply without prejudice.

148 **102.304(1)** The name, address, email, and telephone number of:

- 149 a. Owner of the site where the project will be located.
- 150 b. Applicant for the beneficial use determination.

- 151 c. Official responsible for the operation of the project.
- 152 d. Professional engineer (P.E.) licensed by the state of Iowa and retained for the project, if
- 153 any. The department may, at its sole discretion, require the applicant to retain a professional
- 154 engineer for the project or specific parts thereof in order to obtain a beneficial use determination.
- 155 e. Agency to be served by the project, if any.
- 156 f. Responsible official of agency to be served, if any.
- 157 **102.304(2)** Scaled map or aerial photograph locating the boundaries of the proposed beneficial
- 158 use site, if applicable, and identifying:
- 159 a. North and other principal compass points.
- 160 b. Section lines and other legal boundaries.
- 161 c. Zoning and land use within 750 feet.
- 162 d. Homes and buildings within 750 feet.
- 163 e. Haul routes to and from the site, including load limits or other restrictions on those routes.
- 164 **102.304(3)** A description of the solid by-product under review and its proposed use, including
- 165 the process that will be used to transport and handle the solid by-product, including any equipment.
- 166 **102.304(4)** The chemical and physical characteristics of the solid by-product under review.
- 167 **102.304(5)** A demonstration that there is a known or reasonably probable market for the
- 168 intended use of the solid by-product under review by providing one or more of the following:
- 169 a. A contract to purchase or utilize the solid by-product for the use proposed.
- 170 b. A description of how the solid by-product will be used.
- 171 c. A demonstration that the solid by-product complies with industry standards and
- 172 specifications for that product.
- 173 d. Applications submitted by persons other than the generator must be accompanied by written
- 174 consent for the proposed use from the generator.
- 175 e. Other documentation that a market for the solid by-product exists.
- 176 **102.304(6)** A demonstration that the proposed use of the solid by-product will not adversely
- 177 affect human health and the environment. On a form prescribed by the department, the
- 178 demonstration may include, but is not limited to, a toxicity characteristics leaching procedure
- 179 analysis and total metals testing of a representative sample of the solid by-product.
- 180 **102.304(7)** A solid by-product management plan pursuant to subrule 102.305(3).

181 **567—102.305(455B) Requirements for beneficial use determinations.**

- 182 **102.305(1)** *Solid by-products applied to land.* Unless otherwise approved by the department,
- 183 all beneficial uses, including those listed in rule 567—102.303(455B) other than uncontaminated
- 184 rubble and soil, shall meet the following requirements, if the beneficial use entails the solid by-
- 185 product being used as a fill material, structural fill, subbase for hard-surface pavement construction
- 186 or for soil stabilization purposes:
- 187 a. Leachate characteristics of the solid by-product to be measured by the toxicity
- 188 characteristics leaching procedure (TCLP, EPA Method 1311) and be consistent with federal
- 189 regulations (Reference: Table 1, Subpart C, 40 CFR 261, Maximum Concentration of Contaminants
- 190 for the Toxicity Characteristic).
- 191 b. Leachate characteristics of the solid by-product to be measured by the synthetic
- 192 precipitation leaching procedure (SPLP, EPA Method 1312) and shall be less than or equal to ten
- 193 times the maximum contaminant levels (MCL) for drinking water (Reference: Subpart G, 40 CFR
- 194 141, National Primary Drinking Water Regulations). Applicants may limit the SPLP analytes to
- 195 total metals for drinking water.
- 196 c. Total metals testing of the solid by-product (Total Metals, EPA Method 6010) shall comply
- 197 with the department's current statewide standards for soil pursuant to 567—Chapter 137. Levels
- 198 shall be consistent with the statewide standards for soil or the naturally occurring (i.e., background)
- 199 levels of the soil, whichever are greater.
- 200 d. The department may establish additional constituent standards from those outlined in this

201 rule, for a solid by-product. The department will review regulatory limits on a quarterly basis and
202 post updates to the department website. It is the responsibility of each generator, applicant and end-
203 user to ensure solid by-products comply with the most current regulatory limits.

204 *e.* The solid by-product shall produce a material that has a pH:

205 (1) Greater than or equal to 5 and less than or equal to 8 if the solid by-product may be used as
206 growing media either now or in the future.

207 (2) Greater than or equal to 5 and less than 12 if the solid by-product is specifically intended
208 not to be used as growing media either now or in the future. In this category, solid by-products with
209 a pH equal to or greater than 10 but less than 12 shall be used only in areas where direct physical
210 contact by humans for long periods of time is not expected to occur.

211 (3) For applications where only the surface may serve as growing media either now or in the
212 future, then at a minimum the top three feet shall have a pH greater than or equal to 5 and less than
213 or equal to 8. Solid by-products below the top three feet shall have a pH greater than or equal to 5
214 and less than or equal to 12.

215 *f.* The solid by-product shall not be placed in a waterway or wetland or any waters of the state
216 or extend below or within five feet of the high water table.

217 *g.* The solid by-product shall not be placed within the 100-year flood plain unless in
218 accordance with all local and department regulations, including rule 567—71.12(455B).

219 *h.* The solid by-product shall not be placed closer than 200 feet to a sinkhole or to a well that
220 is being used or could be used for human or livestock water consumption.

221 *i.* The solid by-product shall not be placed closer than 100 feet of any property line unless
222 written consent is obtained from the adjacent landowner(s).

223 *j.* The solid by-product shall not be putrescible.

224 *k.* Any project utilizing a solid by-product being applied to land, not including
225 uncontaminated rubble and soil, which has not received a beneficial use determination, shall be
226 presumed to constitute the illegal disposal of solid waste.

227 **102.305(2)** The department may make a determination that a solid by-product that has received
228 approval to be used beneficially, ceases to be a solid waste if it is used in accordance with the terms
229 and conditions of the beneficial use determination. Unless otherwise determined for the particular
230 solid by-product under review, the point at which a solid by-product ceases to be a solid waste
231 occurs when it is used in a manufacturing process to make a product, used as an effective substitute
232 for a commercial product, or used as a fuel for energy recovery.

233 **102.305(3)** *Solid by-product management plans.* Recipients of beneficial use determinations
234 granted pursuant to rule 567—102.304(455B) and those beneficial uses listed in subrule
235 102.305(1), shall develop and maintain a solid by-product management plan (SBMP) that satisfies
236 the following:

237 *a.* Lists the source(s) of the solid by-product.

238 *b.* Outlines procedures for periodic testing (not less than semiannually) of the solid by-product
239 to confirm the proposed use continues to be adequately protective of human health and the
240 environment, and that the solid by-product continues to possess the physical characteristics and
241 chemical properties which make it suitable for the approved beneficial use. Testing results from a
242 certified laboratory pursuant to 567—Chapter 83 are to be submitted as part of the SBMP on a form
243 prescribed by the department.

244 *c.* Provides a description of storage procedures including:

245 (1) Storage location(s).

246 (2) Maximum anticipated inventory, including dimensions of any stockpiles.

247 (3) Run-on and run-off controls, which may include a storm water National Pollutant Discharge
248 Elimination System (NPDES) permit.

249 (4) Management practices to minimize uncontrolled dispersion of the solid by-product.

250 (5) Maximum storage time, not to exceed six months unless authorized in writing by the
251 department.

252 **567—102.306(455B) Record-keeping and reporting requirements.** Recipients of beneficial use
253 determinations granted pursuant to rule 567—102.304(455B) and those beneficial uses listed in
254 subrule 102.305(1), shall comply with the following record-keeping and reporting requirements:

255 **102.306(1) Record keeping.** An entity subject to this rule must maintain all records related to
256 the solid by-product management plan for a minimum duration of five years after project
257 completion.

258 **102.306(2) Reporting.** Unless otherwise directed by the department, solid by-product
259 management plans are to be filed with the department’s central office as follows:

260 *a.* An entity subject to this rule shall submit to the department a copy of the solid by-product
261 management plan prior to reuse of the solid by-product, whenever that plan is revised, and within
262 60 days of the end of the calendar year, whichever is earlier.

263 *b.* An entity subject to this rule whose solid by-product is being applied to land pursuant to
264 subrule 102.305(1) shall also submit to the department the following information for each
265 beneficial use project or activity:

266 (1) The location of the project.

267 (2) The tons of solid by-product utilized for the project.

268 **567—102.307(455B) Revocation of beneficial use determinations.** The department may revoke
269 any beneficial use determination if it finds one or more of the following:

270 **102.307(1)** The matters serving as the basis for the department’s determination were
271 incomplete or incorrect or are no longer valid.

272 **102.307(2)** The department finds that there has been a violation of any law, rule, permit or
273 other authorization in its jurisdiction.

274 **102.307(3)** The department has reasonable cause to suspect, based upon information not
275 previously considered or available as part of the application, demonstrating that management of the
276 solid by-product under the approved beneficial use determination may present a significant risk to
277 or adverse affect on human health and the environment.

278 **102.307(4)** The solid by-product is used in a manner inconsistent with the terms under which
279 it was determined to no longer be a solid waste. The department may consider the placement,
280 dumping or other use of a solid by-product in a manner inconsistent with the beneficial use
281 determination to be illegal disposal of solid waste, and the applicant, generator, distributor, or end-
282 user may be subject to enforcement action by the department pursuant to Iowa Code section
283 455B.307.

284 **102.307(5)** The applicant has requested the revocation of the determination or other legal
285 grounds exist for such revocation.

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287 **567—102.308(455B) Denial of beneficial use determination applications.** For applications that
288 are found to be inconsistent with these regulations by the department, the following conditions
289 apply:

290 **102.308(1)** The department will notify the applicant in writing of the denial, including
291 supporting rationale within 90 days of receipt of application.

292 **102.308(2)** Solid by-products for which a beneficial use determination is denied by the
293 department are considered solid waste and remain subject to all applicable state and federal statutes,
294 ordinances, and regulations.

295 **102.308(3)** Applicants may appeal the denial of a beneficial use determination to the
296 department within 60 days of notification of denial. Such appeal shall be made in a manner
297 consistent with rule 561—7.4(17A,455A).

298 These rules are intended to implement Iowa Code subsection 455B.304(19).

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300 **567—102.309 to 102.399** Reserved.