



Department of Natural Resources

Five-Year Rule Review Worksheet

Phase 2 - Part C

BASIC INFORMATION

Date Part C Review Concluded: December 1, 2014

Reviewer Name(s): Chad Stobbe, Susan Johnson, Theresa Stiner, Amie Davidson

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Chapter¹ Number: Chapter 108

Chapter Name: Beneficial Use Determinations: Solid By-Products As Resources And Alternative Cover Material

1. DOES THIS CHAPTER² DO THE JOB IT SETS OUT TO DO?

1a. Is this chapter effective at protecting the health, welfare, and safety of lowans and our natural resources?

Yes

No

(check or circle)

1b. Explain how the chapter protects the health, welfare, and safety of lowans and our natural resources.

The intent of this administrative chapter was to encourage the beneficial use of solid by-products in order to preserve resources, conserve energy, and reduce or eliminate the need to dispose of solid by-products in sanitary landfills. Furthermore, the purpose of this administrative chapter was to encourage to the maximum extent possible, consistent with accepted engineering practices, 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. Prior to beneficial use of a solid by-product, there is minimum testing required to

¹ If the Phase 1 Worksheet addresses a portion of a chapter, rather than a whole chapter, then this follow-up worksheet should address the same portion of the chapter (e.g. rule or rules, paragraph, etc.).

² Throughout this worksheet, the word "chapter" is meant to apply to the chapter or portion of a chapter to which the worksheet applies.

characterize the solid by-product.

However, a concern being raised is whether the appropriate level of initial solid by-product characterization is being undertaken. This potential inadequate evaluation may be resulting in a lack of appropriate environmental controls and oversight, which should not be construed as achieving the statutory obligations of Iowa Code section 455B.304(19) in the least restrictive manner. In these instances the precautionary principle is applicable. The precautionary principle states that if an action has a suspected risk of causing harm to the public or to the environment, in the absence of scientific consensus that the action or policy is harmful, the burden of proof that it is not harmful falls on those taking an action. In this context the proponent of an activity (i.e. beneficial use), rather than the public, should bear the burden of proof.

2. IS THERE LEGAL AUTHORITY FOR THIS CHAPTER?

2a. Is the chapter intended to implement any **state statutes**?

Yes No (check or circle)

If this chapter is intended to implement any state statutes, then answer questions 2b and 2c. If not, then proceed to question 2d.

2b. Provide citations for the specific provisions of the Iowa Code implemented by this chapter.

At the conclusion of this administrative chapter there is a chapter implementation sentence that states, "These rules are intended to implement Iowa Code sections 455B.304 and 455D.4."

[Iowa Code section 455B.304](#) - 455B.304(1) and 455B.304(19)

[Iowa Code section 455D.4](#) - 455D.4(1) and 455D.4(2)

2c. Provide a narrative summary of how the state statutes are implemented by this chapter.

The provisions of this administrative chapter directly implement the statutory obligations expressed in Iowa Code section 455B.304(19), which states in part, "The commission shall adopt rules for determining when the utilization of a solid by-product, including energy recovery, constitutes beneficial use rather than the disposal of solid waste." In addition, while there are specific rules within this administrative chapter that have direct statutory authority, many requirements are based upon the broad authority given under Iowa Code section 455B.304(1) to adopt rules for the proper administration of Division IV "Solid Waste Disposal," Part 1 "Solid Waste." Iowa Code sections 455D.4(1) and (2) also speak to the State's policy of waste volume reduction programs and the development of new uses and markets for recycled goods which this administrative chapter supports.

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2d. Does the chapter implement any **federal statutes or regulations**?

Yes No **(check or circle)**

If this chapter is intended to implement any federal statutes or regulations, then answer questions 2e and 2f. If not, then proceed to question 3.

2e. Provide citations for the specific provisions of federal statutes and regulations implemented by this chapter.

Not Applicable

2f. Provide a summary of how federal statutes and regulations are implemented by this chapter.

Not Applicable

3. DOES THE CHAPTER GO BEYOND FEDERAL LEGAL REQUIREMENTS?

3a. Is this chapter more stringent than federal statutory or regulatory requirements?

Yes No Not Applicable **(check or circle)**

If the answer is "yes," then answer question 3b. If not, then proceed to question 4.

3b. Provide a narrative statement regarding how this chapter is more stringent than required by federal statutes and regulations, and a short justification of why it is more stringent.

Not Applicable

4. DOES THIS CHAPTER HAVE UNINTENDED CONSEQUENCES?

4a. Does the chapter result in the equitable treatment of those required to comply with it?

Yes No **(check or circle)**

4b. Provide a narrative summary of your response.

The beneficial use program expressed within 567 IAC 108 is primarily voluntary. In most instances, there is no Iowa Code prohibition upon the use of certain solid by-products in a beneficial manner. However, for a particular application of a solid by-product to be authorized by the DNR as a beneficial use and not disposal of a waste, the provisions of this administrative chapter must be adhered to.

A case could be made that an inequitable regulatory burden is being placed upon generators of solid by-products that are being utilized as raw materials in the manufacture of commercial products pursuant to 567 IAC 108.4, (i.e. universally approved). These solid by-products should

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be treated similar to any other raw commodity that is used in a manufacturing process for which the DNR has no regulatory oversight. Raw materials which have similar properties but are not generated through recycling, are not subject to the requirements of 567 IAC 108. This could create a disincentive to the use of recycled materials.

Furthermore, foundry sand and coal combustion by-product generators that utilize their solid by-products pursuant to 567 IAC 108.4 have been singled out and required to comply with certain record-keeping and reporting requirements that are not placed upon other solid by-product generators (e.g. lime kiln dust, wastewater filter sand); unless their solid by-product is being used as beneficial fill material. Because of this discrepancy in who's required to comply with the record-keeping and reporting requirements of this chapter, there are many universally approved beneficial use projects that the DNR is never made aware of.

4c. Does the chapter result in the inequitable treatment of anyone affected by the chapter but not required to comply with it?

Yes No **(check or circle)**

4d. Provide a narrative summary of your response.

Industries and businesses that comply with the requirements of 567 IAC 103, "Sanitary Landfills: Coal Combustion Residue" are inequitably treated when compared to large-scale mine reclamation projects disposing of identical materials without comparable environmental protections and controls required by 567 IAC 103.

4e. Are there known negative unintended consequences of this chapter?

Yes No **(check or circle)**

If the answer is "yes," then answer question 4f. If not, then proceed to question 5.

4f. Specifically state the nature of any negative unintended consequences.

This administrative chapter's fill material provisions in 567 IAC 108.6(1) were never intended to encompass large-scale reclamation projects, however over time, various mine reclamation activities have been authorized by the DNR. Whether placement in an open pit quarry or in a engineered landfill disposal cell, these management activities are virtually identical, except for the level of environmental controls and site design requirements placed upon sanitary landfills prior to by-product placement. By not specifying more clearly the limitations upon solid by-products used as fill material, the DNR created an unintended regulatory conflict that potentially circumvents applicable landfill regulations (i.e. 567 IAC Chapters 103 and 115).

As stated in the response to question 4b above, generators of solid by-products that are utilized in the manufacture of a commercial product should not be bound to the provisions of 567 IAC 108. Rather, these solid by-products should be treated similar to any other raw commodity that is used in a manufacturing process for which the DNR has no regulatory oversight.

567 IAC 108.8 identifies those solid by-products, when used as an alternative cover material,

are considered universally approved. The premise behind universally approved beneficial use determinations (BUD) is that they do not require further approval from the DNR when used in the manner specified. However, sanitary landfills are required to first amend their landfill permits by notifying the DNR of their intent to utilize solid by-products at least 30 days prior to actual utilization. Therefore, being classified as a universally approved alternate cover material does nothing to streamline the permit amendment process for this by-product application.

5. CAN THE GOALS OF THE CHAPTER BE ACHIEVED IN A MORE EFFICIENT OR STREAMLINED MANNER?

5a. Is the chapter broader than necessary to accomplish its purpose or objective?

Yes No (check or circle)

5b. Provide a narrative summary of your response.

In certain instances, the regulations of this administrative chapter can be considered overly broad. For example, this administrative chapter specifies through its universally approved beneficial use determinations those solid by-products that can be used as raw materials in the manufacture of some other product. This should not be for the DNR to determine, but rather for the industry utilizing these solid by-products in lieu of other raw materials. Another example is the inclusion of alternative cover material provisions within 567 IAC 108, which are more appropriate for inclusion within the applicable sanitary landfill chapter(s).

5c. Is the purpose of this chapter achieved in the least restrictive manner?

Yes No (check or circle)

5d. Provide a narrative summary of your response.

As stated in the response to question 4b above, generators of solid by-products that are utilized in the manufacture of a commercial product should not have requirements placed upon them pursuant to 567 IAC 108. Rather, these solid by-products should be treated similar to any other raw commodity that is used in a manufacturing process for which the DNR has no regulatory oversight.

In addition, because of the lack of detail regarding certain universally approved beneficial uses (e.g. a soil stabilizer for construction purposes, a soil amendment pursuant to 567-Chapter 121 and the rules of the Iowa department of agriculture and land stewardship or a compost amendment), there is uncertainty from both the DNR and the applicant regarding whether certain minimum requirements have been met. While this could be construed as being less restrictive, this lack of clarity further complicates the implementation of these regulatory requirements, likely resulting in less diversion through beneficial use applications.

Furthermore, a concern raised is whether the appropriate level of initial by-product characterization is occurring. This potential inadequate evaluation may be resulting in a lack of

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appropriate environmental controls and oversight, which should not be construed as achieving the statutory obligations of Iowa Code section 455B.304(19) in the least restrictive manner.

5e. What, if any, reasonable and practical alternatives to this chapter are available by the agency?

Given the deficiencies of the current administrative chapter and the opportunities noted below in response to 10b, the question here isn't whether this chapter can be achieved through an alternative approach, but rather can it be constructed in a more clear and concise manner such that adequate assessment is made to ensure such utilization improves, or at a minimum does not adversely affect, human health and the environment.

5f. How do the economic and social costs of various alternatives to this chapter, if known, appear to compare to the known economic costs of this chapter?

If appropriate waste characterization has occurred, there are significant economic and environmental savings (e.g. emissions offset from virgin materials, avoided disposal costs, lower purchase price) to the generator and end user alike, which can be attributed to beneficially using materials currently destined for disposal. The acknowledgement here is that this administrative chapter, as currently drafted, likely does not adequately characterize all waste streams prior to beneficial use. And it is this waste characterization and identification of applicable environmental controls that will result in an associated cost of compliance. In addition, social and economic benefits may only be truly realized so long as there is adequate assurance that human health and the environment will not be negatively impacted by its use.

5g. Do the known economic costs of the chapter outweigh the known economic and social benefits?

From the DNR's perspective, the costs of this administrative chapter likely outweigh the benefits. This position is in part due to the lack of information submitted to the DNR with regard to those solid by-products universally approved pursuant to 567 IAC 108.4. Only those universally approved beneficial uses involving coal combustion by-products and foundry sand are required to submit reporting to the DNR. If not required to report, the DNR has no way of knowing what beneficial use activities are taking place, unless there has been a complaint filed.

There is also uncertainty as to whether sufficient research and evaluation was conducted for each universally approved beneficial use to warrant its adoption into administrative law. Furthermore, there is no mechanism in this administrative chapter to re-evaluate universally approved beneficial uses to account for changes in technology and ongoing environmental assessment (e.g. Coal Combustion Products Partnership Website removal). Lastly, there are concerns regarding solid by-products being used as beneficial fill at quarry/mine reclamation projects, and whether those same solid by-products should be regulated pursuant to an applicable sanitary landfill chapter (e.g. 567 IAC Chapters 103 or 115).

In all instances, solid by-product generators should compare the avoided costs of disposal at a sanitary landfill to the costs associated with expanded by-product characterization and beneficial use.

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6. DOES THE CHAPTER AFFECT BUSINESS OR INDUSTRY?

6a. Does the chapter affect businesses operating in Iowa?

Yes No (check or circle)

If the answer is "yes," then answer questions 6b through 6i as applicable. If not, then proceed to question 6f.

6b. What kinds of businesses are affected by this chapter?

The primary industries that utilize this administrative chapter for the management of significant volumes of solid by-products are the electric generation and metal foundry sectors. However, there are several other industrial sectors (e.g. water treatment, cement manufacturing, gypsum mining) that manage sizeable volumes of their by-products through allowances granted by this administrative chapter. Some of these industries rely upon beneficial use to manage significant portions of their waste stream, which equates to significant savings in avoided management/disposal costs.

6c. Does this chapter create a burden for businesses?

Yes No (check or circle)

6d. Explain your response to question 6c.

This administrative chapter does not create a burden for businesses. Encouraging 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, not only creates new business opportunities, but often results in alternative management options that prove economically advantageous to the generator and the end user alike.

If the answer to question 6c is "yes," then answer question 6e. If not, then proceed to questions 6f through 6i.

6e. If this rule does create a burden for businesses, what options are available to address those burdens?

Not Applicable

6f. Do industry standards affect the subject matter of this chapter?

Yes No (check or circle)

If the answer is "yes," answer questions 6g through 6i as applicable. If not, proceed to question 7.

6g. Have industry standards changed since the adoption of this chapter?

Yes No (check or circle)

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If the answer is "yes," answer questions 6h and 6i. If not, proceed to question 7.

6h. What industry standards have changed since the adoption of this chapter?

In 2010 the U.S. Environmental Protection Agency (EPA) proposed minimum federal standards to regulate the management and disposal of coal combustion residue. Additional research and case findings pertaining to the beneficial use of coal combustion residue by the U.S. EPA will provide states with further guidance on sound applications and associated environmental controls to protect human health and the environment. It should be noted that both of EPA's co-proposals (RCRA Subtitle D & Subtitle C) state that that disposal of coal combustion residue in large scale fill operations is not considered a beneficial use. U.S. EPA has stated that their goal is to complete the coal combustion residue rulemaking by the end of 2014 (12-19-14 consent decree deadline).

In addition, the emergence of waste-to-energy and other waste conversion technologies in Iowa has renewed emphasis upon "higher order" uses of materials when compared to disposal in a sanitary landfill. This emphasis is echoed in the enabling statute for this beneficial use chapter when it states in part, "The commission shall adopt rules for determining when the utilization of a solid by-product, including energy recovery, constitutes beneficial use rather than the disposal of solid waste."

A fundamental concern is that increasing environmental controls (e.g. emissions control devices) being required of waste generators will result in elevated contaminant levels in the resulting waste streams. As a result, the initial characterization that was the basis for inclusion as a universally approved beneficial use may no longer be representative of the material(s) being generated. This administrative chapter does not allow for re-evaluation of universally approved solid by-products to account for these changes in waste generation.

6i. Would revision of the chapter be useful in implementing the purposes of the chapter in light of any industry standard revisions? (Cite the portions of the chapter that could be revised.)

As stated in the response to question 6h above, depending upon the outcome of those efforts at the federal level to regulate the management of coal combustion residue, states will need to update their beneficial use and landfill rules accordingly.

7. DOES THIS CHAPTER AFFECT JOB CREATION?

7a. Does the chapter affect job creation?

Yes No (check or circle)

If the answer is "yes," then answer questions 7b and 7c. If not, then proceed to question 8.

7b. If this chapter affects job creation, in what manner does that occur?

Not Applicable

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7c. If this chapter is required by state or federal statutes, or federal regulations, how has the department minimized negative job impacts?

Not Applicable

8. IS THERE ANY DOCUMENTATION OR PAPERWORK REQUIRED BY THIS CHAPTER?

8a. Is there any documentation or paperwork required by this chapter?

Yes No (check or circle)

If documentation or paperwork is required, then answer questions 8b through 8e. If not, then proceed to question 9.

8b. What is the purpose of the documentation or paperwork?

The rules within this administrative chapter that require the submittal of paperwork pertain to minimum BUD application requirements and subsequent reporting. A case could be made that the reporting requirements should apply to all beneficial uses, including those universally approved (beyond coal combustion by-products and foundry sand). In addition, a case could be made that the BUD application requirements are inadequate with regard to minimum analytical testing (e.g. frequency and specific testing methods) and environmental controls (e.g. location restrictions, site owner consent, groundwater monitoring).

For those required to submit an annual solid by-product management plan (i.e. all recipients of BUDs granted pursuant to IAC 567 108.5 and coal combustion by-product and foundry sand beneficial uses listed in 567 IAC 108.4), this reporting requires the entity to identify storage locations, management practices employed, maximum inventories, storm water controls, and continued by-product testing to ensure chemical and physical composition has not significantly changed.

8c. Who reviews the paperwork required by the chapter?

DNR central office program staff and field office staff review BUD applications, annual reports and site inspection reports to ensure compliance with regulations and to ensure such activities are protective of human health and the environment. Expanding the waste characterization and reporting requirements would further assist the DNR in making sound determinations, and ensuring continued compliance with human health and the environment at the forefront, not avoided disposal costs.

8d. How is the documentation or paperwork required by this chapter informative or useful for the public?

Because all paperwork is made public, it provides transparency and a level playing field for all required to comply with this administrative chapter. The minimum BUD application and reporting requirements of this administrative chapter provide the DNR and the public with

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information on who, what and how solid waste materials are being beneficially used. This information also serves as the basis of information to include in each facility's BUD. These application requirements are vital to the BUD review process to ensure solid waste management activities are adequately protective of human health and the environment.

8e. How, if possible, can the documentation or paperwork requirements be reduced?

As with any administrative chapter, there are opportunities to streamline certain application and reporting provisions (e.g. online submittals); however, additional detail is needed to clarify essential requirements, thereby reducing applicant confusion and ensuring adequate evaluation and environmental controls are taken into consideration for all beneficial uses.

An area of this administrative chapter that could be revised pertains to alternative cover provisions; specifically the process one must go through prior to actual utilization of a by-product. These provisions seem more appropriate for inclusion within a sanitary landfill chapter(s).

9. DO OTHER STATE AGENCIES REGULATE THE ISSUES ADDRESSED BY THIS CHAPTER?

9a. Do any other state agencies regulate any issue(s) addressed by this chapter?

Yes No (check or circle)

If the answer is "yes," then answer questions 9b to 9e. If not, then proceed to question 10.

9b. If other state agencies regulate any issue(s) addressed by this chapter, provide the name of each agency, a description of how each agency is involved, and specify the subject matter regulated by each agency.)

The Iowa Department of Agriculture and Land Stewardship (IDALS) regulates the reclamation of mines and quarries pursuant to Iowa Code Chapter 208 and 27 IAC 60. While the ultimate authority regarding what constitutes final reclamation is that of IDALS, approval of certain materials for beneficial fill at these sites has been a part of 567 IAC 108.

IDALS also regulates the application of materials as liming agents, soil conditioners and fertilizers pursuant to 21 IAC 43 and Iowa Code chapter 201A. As there are several solid by-products listed in 567 IAC 108.4 (e.g. lime, gypsum and gypsum wallboard, wood ash, cement and lime kiln dusts) as universally approved as a soil amendment pursuant to 567 IAC 121, this raises concerns about dual regulation and conflicting requirements. Many of the solid by-products regulated under 567 IAC 108 provide some level of agronomic or physical benefit to soil, which may make them eligible for regulation under IDALS's fertilizer and soil conditioner program. If these solid by-products are being marketed and sold as a fertilizer or soil conditioner, they perhaps should be regulated by IDALS rather than using 567 IAC 108.

9c. Is there a need for more than one set of rules?

Yes No (check or circle)

If the answer is "yes," then proceed to question 9d. If not, then proceed to question 9e.

9d. If any other state agencies regulate any issue(s) addressed by this chapter and one or more of the other sets of rules are necessary, explain why.

IDALS's mine reclamation requirements pertain to the final grading of affected land, seeding, maintaining a bond to cover reclamation, and equipment removal prior to certification of completion. In addition, IDALS's reclamation requirements exempt stockpiles, processing areas, pit floors and highwalls from meeting specified slopes, so there is nothing in their regulations that require these quarries be filled. As such, IDALS's reclamation requirements do not address the approval of materials other than overburden to be used as fill material at these sites.

9e. If this chapter or a portion thereof is duplicative, explain how and why.

The fill material provisions in 567 IAC 108.6(1) were likely never intended to encompass large-scale fill projects, however over time, various reclamation activities have been authorized. Whether placement in an open pit quarry or in an engineered disposal cell, these management activities are virtually identical, except for the level of environmental controls and site design requirements prior to by-product placement. The fundamental question is whether those solid by-products approved as beneficial fill for quarry reclamation purposes are in effect disposal under the guise of beneficial use. A case could be made that through this administrative chapter, the state is providing a means to circumvent applicable industrial landfill regulations for the management of certain wastes streams by classifying it as reclamation.

10. IS THE CHAPTER USER FRIENDLY?

10a. Is the chapter written and organized in a clear and concise manner so that those to whom it applies can readily understand it?

Yes No (check or circle)

If the answer is "no," then answer question 10b. If not, then proceed to question 11.

10b. If not, explain what changes can be made to improve readability, eliminate ambiguity, or increase understanding. Be specific, to the extent possible.

While this administrative chapter may have met the needs at the time it was drafted, this chapter requires additional detail and revision to account for current solid waste management practices and solid waste streams. This administrative chapter was developed to provide entities with sound applications for their solid by-products when they could be used as a substitute for another raw material. However over time, new industrial processes and associated waste streams have emerged that are not adequately accounted for, and the latitude for the DNR to adequately characterize these waste streams is not currently provided

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for.

There are a number of opportunities to improve upon the organization and readability of the provisions within this administrative chapter, which could ultimately increase the amount of material diverted from disposal. Some examples of these confusing, conflicting or inadequate provisions and potential opportunities have been indicated below (in no particular order):

- The provisions of Applicability and Compliance in 567 IAC 108.2 are unclear. The provisions of 567 IAC 108.2(2) through (4) state that these rules do not apply to 567 IAC Chapters 121, 104 and 105; however, for solid by-products that are either land-applied, processed or composted, a variance from some or all of the requirements of these applicable administrative chapters may be gained through receipt of a beneficial use determination from the DNR. These subrules are confusing as they start by indicating that this chapter is not applicable to these activities, however a variance to the requirements of those chapters may be granted through a beneficial use determination. It seems more appropriate that if certain provisions of those permitting chapters are not applicable to a given activity being proposed, then the variance process in 561 IAC 10 should be followed, rather than through a beneficial use determination. This rule appears to create a scenario where land application, composting and solid waste processing operations are to be regulated pursuant to their respective chapters and 567 IAC 108, while also specifically excluding 567 IAC 108 as not being applicable.
- Subrule 108.2(6) states in part, “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.” This subrule implies that the beneficial use determinations granted by the DNR are to specifically relieve the generator and user(s) of solid waste requirements indicated in the determination. However, the beneficial use determinations historically granted by the DNR do the opposite in that they indicate what they are authorized to do. The DNR has often cited the provisions in 567 IAC 108.5 that the DNR may request that additional information be submitted in order to make a beneficial use determination, and that the DNR may also require specific conditions on a beneficial use determination and issue a temporary beneficial use determination on a trial basis. Further discussion and clarification are needed with regard to this provision.
- The administrative chapter’s stated purpose indicates that the utilization of solid by-products “at a minimum does not adversely affect, human health and the environment.” While needlessly filling up landfill air space is a concern, is a solid by-product that has no added value to a manufacturing process, product, or agronomic value or physical benefit to soil really providing any “benefit” that warrants authorization under this administrative chapter? It seems at times the “benefit” of avoided disposal cost to the

generator is more apparent than the “benefit” to a process or product. The DNR must retain the right to deny a beneficial use determination application if the proposed beneficial use is determined to have the primary purpose as a means of disposal, and any beneficial use would be incidental in nature.

- Perhaps the most conflicting development is the use of various universally approved solid by-products (i.e. coal combustion residue, foundry sand) for the reclamation of mines and quarries under the stance of beneficial fill. This activity is analogous to landfill disposal and has subsequently created conflicting regulatory scenarios, with vastly different environmental controls and oversight, depending upon whether it’s called a beneficial fill project pursuant to 567 IAC 108 or it is called an industrial monofill pursuant to 567 IAC 103 or 567 IAC 115. If quarry reclamation projects are retained within a final beneficial use chapter, perhaps owners should be required to have a qualified groundwater scientist conduct a soil and hydrogeologic investigation, and develop a Hydrologic Monitoring System Plan comparable to that required of sanitary landfills. Given the unique geology and hydrogeology at these quarry sites, this monitoring would document whether these long-term large-scale filling activities are impacting groundwater.
- Basic testing requirements (i.e. SPLP and Total Metals) are only explicitly required for beneficial fill projects, even though these minimum testing requirements should be applied to all BUD projects to ensure solid by-product applications will not adversely affect human health and the environment and that appropriate environmental controls are considered. The DNR has too often relied upon “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,” to ensure adequate by-product evaluations and controls are employed.
- While 567 IAC 108.5 provides the DNR with the authority to “request that additional information be submitted in order to make a beneficial use determination,” this is only applicable to beneficial uses determinations not classified as universally approved or solid by-products utilized as alternative cover material. As such, the DNR has limited authority to require supplemental testing to ensure the utilization of solid by-products will not have an adverse impact on human health and the environment. The only criteria that is implied for all beneficial uses is that the solid by-products “are composed of materials suitable for disposal as solid waste in a sanitary landfill.” Per 567 IAC 108.3, “Suitable for disposal as solid waste in a sanitary landfill” means that the material is in compliance with all state and federal rules and regulations pertaining to what may be disposed of in an Iowa sanitary landfill. Such materials are at a minimum nonhazardous and nonradioactive, are solid or semisolid, and do not contain free liquids pursuant to the Paint Filter Liquids Test (Reference: 40 CFR 258.28). Just because a solid by-product

passes the “hazardous waste” litmus test, it shouldn’t mean that its incorporation into a beneficial use application is appropriate. Additional authority should be provided for in 567 IAC 108 to allow additional by-product evaluation when deemed appropriate by the DNR to ensure its proposed use is protective of human health and environment.

- It’s unclear what analytical testing is required to be submitted to the DNR. 567 IAC 108.5(5) states, “A demonstration that the proposed use of the solid by-product will not adversely affect human health or the environment. The demonstration may include, but is not limited to, a toxicity characteristic leaching procedure (TCLP, EPA Method 1311) analysis and total metals testing of a representative sample of the solid by-product.” “May” is not “shall” and this opens the issue of adequate/appropriate testing up for debate on each individual BUD application.
- This administrative chapter states that the DNR may request additional information be submitted in order to make a beneficial use determination, and outlines the requirements for the DNR to revoke a determination. However, there are no provisions within this administrative chapter that outline the criteria with which to deny a beneficial use determination application; especially when it’s apparent that any “benefit” would be incidental in nature. Therefore, it needs to be clarified that the DNR has the right to deny a beneficial use determination application if the proposed beneficial use is determined to have the primary purpose as a means of disposal.
- It’s confusing to have several solid by-products be indicated as universally approved for alternative cover material at a sanitary landfill, but then be required to amend such material into the sanitary landfill permit at least 30-days prior to use. Either it’s universally approved and requires no further approval from the DNR, or it’s not universally approved and it needs to go through the sanitary landfill permit amendment process. Regardless, the requirements pertaining to alternative cover authorization may be more appropriate if located within a sanitary landfill chapter(s) rather than the beneficial use chapter.
- The DNR does not have the authority in statute to exempt alternative cover material from the goal progress calculation. 567 IAC 108.10 states, “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.” This provision should be removed or the authority obtained in Iowa Code to continue this practice.
- Iowa Code section 455B.304(19) provides an exemption from the state tonnage fee for “materials approved for beneficial use at a sanitary landfill.” 567 IAC 108.4(6)“g” states that foundry sand is universally approved as an “alternate cover material at a sanitary landfill pursuant to 567-108.8(455B,455D).” 567 IAC 108.8(5) states, “Foundry sand may

be mixed with soil in a 50/50 volume” to be a universally approved beneficial use determination for alternative cover. However, Iowa Code section 455B.310(9) places additional requirements upon sanitary landfills. Specifically, “Sanitary landfills shall use foundry sand as a replacement for earthen material, if the foundry sand is generated by a foundry located within the state and if the foundry sand is provided to the sanitary landfill at no cost to the sanitary landfill.” There appears to be a conflict on when the tonnage fee exemption applies and in how sanitary landfills are required to manage foundry sand. Perhaps the second sentence of this code provision should be struck to remove the ambiguity.

- Universally approved BUDs were made for select solid by-products in order to expedite their use when such use did not adversely affect human health or the environment. However, the vagueness of some of the universally approved beneficial use descriptions (e.g. soil stabilization for construction purposes, fill material) often results in confusion by applicants and poses enforcement concerns for the DNR. At times, generators either knowingly or unknowingly justified the use of their by-product under these applications when what was actually occurring was akin to disposal. As stated prior, there are also related concerns as to whether sufficient evaluation was completed prior to the inclusion of some universally approved beneficial uses, as changing processes and environmental controls have (and will into the future) likely impacted the level of contaminants within the resulting solid by-products.
- Perhaps written notice should be provided to the owner(s) of property on which a solid by-product will be beneficially used (e.g. fill material, soil stabilization for construction purposes), which provides a description of where the solid by-product will be placed, including but not limited to, a scaled map or aerial photograph that shows the boundaries of the areas where the solid by-product will be used. This will provide the end user with an opportunity to voice any concerns prior to use, and will ensure all parties are in agreement regarding its application. In addition, written acknowledgement or authorization of the proposed project could be sought from local authorities, such as the planning and zoning department of that local jurisdiction.
- It should be clarified that unless otherwise determined for a particular solid by-product under review, the point at which that solid by-product ceases to be a solid waste occurs when it is used in a manufacturing process to make a product or used as an effective substitute for a commercial product or used as a fuel for energy recovery; provided the solid by-product is used in a manner consistent with the terms and conditions of the issued BUD.
- Applications for a BUD submitted by persons other than the waste generator should be accompanied by written consent for the proposed use from the generator. The DNR has at times issued BUDs to entities that were not the actual waste generator (e.g. quarry

reclamation projects), as required in 567 IAC 108.5.

- Perhaps each generator of a solid by-product that has received a written BUD and that seeks approval to continue use of the solid by-product beneficially should be required to submit a detailed solid by-product re-assessment for DNR review. Any authorization resulting from this re-assessment could then be issued for a longer period of time (e.g. 3 years rather than the current 1 year authorization), unless otherwise specified by conditions set forth in the approved determination.
- It should be clarified that a representative sample(s) of each industrial solid by-product should be re-characterized whenever there is a change in the process that generates said by-product. The DNR often concludes that a change in a process or inputs has occurred from the resulting testing submitted as part of the annual solid by-product management plan. Given the amount of time (and tonnage) that could lapse between initial testing and when a change has been identified by the DNR, a re-characterization is justified anytime a process change is made to ensure regulatory limits for contaminants are not exceeded.
- IAC 567 108.4(14)“b” states that petroleum-contaminated soils that have been decontaminated to the satisfaction of the DNR pursuant to 567 IAC 120 may be used as fill material pursuant to 567 IAC 108.6(1) and as alternative cover material pursuant to 567 IAC 108.8. If the position of the DNR is that petroleum-contaminated soils that have been remediated to 567 IAC 120 standards are “clean soil,” then there should not be limitations upon which subsequent uses are allowed. If the petroleum-contaminated soils are now “clean,” it’s no longer a solid waste with which the DNR has regulatory oversight.
- The provisions of this administrative chapter directly implement the statutory obligations expressed in Iowa Code section 455B.304(19), which states in part, “The commission shall adopt rules for determining when the utilization of a solid by-product, including energy recovery, constitutes beneficial use rather than the disposal of solid waste.” However, energy recovery is not defined, and as a result, is open to much debate as to what it covers. Further dialogue with industry and interested parties is needed to provide context and clarification regarding this statutory provision.

11. ARE THE CITATIONS IN THE CHAPTER ACCURATE?

11a. If this chapter contains Iowa Code citations, are those citations proper and current?

Yes No Not Applicable **(check or circle one option)**

If the answer is “no,” then answer question 11b. If not, then proceed to question 11c.

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11b. If not, list and explain the corrections that need to be made to the Iowa Code citations.

Not Applicable

11c. If this chapter contains federal statutory citations, are those citations proper and current?

Yes No Not Applicable **(check or circle one option)**

If the answer is "no," then answer question 11d. If not, then proceed to question 11e.

11d. If not, list and explain the corrections that need to be made to the federal statutory citations.

Not Applicable

11e. If this chapter contains federal regulatory citations, are those citations proper and current?

Yes No Not Applicable **(check or circle one option)**

If the answer is "no," then answer question 11f. If not, then proceed to question 11g.

11f. If not, list and explain the corrections that need to be made to the federal regulatory citations.

Not Applicable

11g. If this chapter contains internal cross-reference citations, are those citations correct and current?

Yes No Not Applicable **(check or circle one option)**

If the answer is "no," then answer question 11h. If not, then proceed to question 11i.

11h. If not, list and explain the corrections that need to be made to the internal cross-references.

Not Applicable

11i. If the chapter contains cross-reference citations to other chapters, are those citations correct and current?

Yes No Not Applicable **(check or circle one option)**

If the answer is "no," then answer question 11j. If not, then proceed to question 11k.

11j. If not, list and explain the corrections that need to be made to the cross-references to other chapters or outside sources.

Not Applicable

11k. If this chapter contains website references, are those website references necessary, correct and current?

Yes No Not Applicable **(check or circle one option)**

If the answer is "no," then answer question 11l. If not, then proceed to question 11m.

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11l. List and explain any necessary corrections to the website references.

Not Applicable

11m. If the chapter contains addresses and phone numbers, are the addresses and phone numbers necessary, correct and current?

Yes No Not Applicable **(check or circle one option)**

If the answer is "no," then answer question 11n. If not, then proceed to question 11o.

11n. List and explain any corrections that need to be made to the addresses and phone numbers contained in the chapter.

Not Applicable

11o. If the chapter contains adoptions by reference, are those adoptions by reference correct and current?

Yes No Not Applicable **(check or circle one option)**

If the answer is "no," then answer question 11p. If not, then proceed to question 11q.

11p. List and explain any corrections that need to be made to update adoptions by reference.

Not Applicable

11q. If the chapter contains DNR-created documents adopted by references, are those document references necessary, correct and current?

Yes No Not Applicable **(check or circle one option)**

If the answer is "no," then answer question 11r. If not, then proceed to question 12.

11r. List and explain any corrections that need to be made to update the DNR-created document references.

Not Applicable

12. WHAT PUBLIC GROUPS ARE AFFECTED BY THE CHAPTER?

12a. List any stakeholder groups, workgroups, public groups or other public participants impacted by the issues in the chapter.

Potential interested parties: Iowa Society of Solid Waste Operations (ISOSWO), Association of Business and Industry (ABI), Farm Bureau, Iowa Utility Association (IUA), Iowa Department of Agriculture and Land Stewardship (IDALS), Iowa Limestone Producers Association (ILPA), Iowa Board of Regents, Iowa Department of Transportation (IDOT), Iowa Solid Waste Comprehensive Planning Areas, Iowa Environmental Council (IEC), Plains Justice, Sierra Club – Iowa Chapter, Iowa Recycling Association (IRA), Iowa League of Cities, Iowa State Association of Counties (ISAC), County Environmental Health Sanitarians, Entities with current Beneficial Use Determinations.

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12b. If any stakeholders have already been included in a review process for this chapter during the past five years, state the names of those stakeholder groups, workgroups, public groups, or other public participants, and explain the nature of their involvement.

External stakeholder feedback has not been sought in the past five years regarding revisions to this administrative chapter.