

## Part 115 Beneficial Use Statute Provisions

### IMPLEMENTATION

- Q1: How do I petition the DEQ to have a material declared inert, source/site separated, low-hazard industrial waste, or beneficial use by-product?
- A1: *A petitioning process similar to that in the former Rule 118 will be added to the Part 115 rules as part of the conforming rule amendments under development. Until those rule amendments are promulgated, it is recommended that petitions follow the general framework under the former Rule 118 to help ensure that all relevant information is included (see attachment 1).*
- Q2: Do self-declared inertness determinations under former Rule 114(2)(g) (which was rescinded on September 16, 2014) remain in effect until forfeited by the generator?
- A2: *Yes. The generator notifications in accordance with the self-declared inertness provisions, which were all acknowledged by the DEQ, satisfy the provisions under Section 11553(9).*
- Q3: How will the current generic exemptions that have been issued by the DEQ be affected by the new beneficial use provisions?
- A3: *The generic exemptions will remain in effect in accordance with the continuing provisions of Section 11553(9). A generator who is currently operating under one of those generic exemptions may continue to do so. Generators who are not currently operating under one of those generic exemptions may choose to do so after the effective date of the new provisions (September 16, 2014), as well.*
- Q4: Can a generator of a material that is listed as a beneficial use by-product in Part 115 petition the DEQ for uses other than those for which the material is listed?
- A4: *Yes. The generator may also petition the DEQ under Section 11553 for other beneficial uses not specifically identified in Section 11502(8). In addition, the generator may petition the DEQ to designate the material as a compostable material, site or source separated material, inert, or low-hazard industrial waste.*
- Q5: What conditions are placed on beneficial use by-products that are allowed to be used as a construction material at licensed landfills under Beneficial Use 4?
- A5: *There are numerous requirements in the Part 115 Rules that pertain to construction materials at licensed landfills. In addition, under Section 11551(f), the use must be for a legitimate beneficial purpose other than simply a means to discard the material, and the use must be according to generally accepted engineering, industrial, or commercial standards.*

## LAND APPLICATION

- Q6: What responsibilities does a generator or broker have for ensuring that the maximum pollutant load rate for beneficial use 3 under Section 11551(1)(h) is not exceeded?
- A6: *The generator or broker (whichever entity registers the product with MDARD) shall be responsible for providing a label or invoice that is provided to the end user containing directions for use that include an application rate indicating the maximum lbs/acre/year of material that can be applied.*
- Q7: Who is responsible to have a material registered or licensed as a fertilizer, soil conditioner or liming material with MDARD for beneficial use 3 under Section 11551(7)?
- A7: *MDARD would let either the generator or broker apply for registration or licensing.*
- Q8: Does the end user get a copy of the use directions for a beneficial use by-product for beneficial use?
- A8: *Yes. The end user must be provided with direction for use of a registered or licensed fertilizer, soil conditioner, or liming agent.*
- Q9: If the end user applies a beneficial use by-product for beneficial use 3 contrary to directions, are they liable for any potential cleanup?
- A9: *The end user may be responsible or liable under Part 201 if there is a release that results from the misuse of a beneficial use byproduct. Under Section 20101(mm)(vii), a release would not occur from the use of a beneficial use by-product in accordance with Part 115.*
- Q10: How would the DEQ or MDARD know which requirements apply to sugar beet soils that are land applied?
- A10: *There are two locations where sugar beet soils are listed: 11502(7)(l) and 11506(1)(n). It may be difficult to determine which set of conditions apply. The burden of proof to verify the moisture level and that it meets one of the three categories below is on the generator. If there is no documentation to verify one of those three categories is met, then the material is a solid waste and enforcement falls under DEQ.*
- a. *Sugar beet soils that have less than 35% moisture are not solid waste if registered under Part 85. (MDARD)*
  - b. *Sugar beet soils are beneficial use by-products and not a solid waste when they are applied at agronomic rate, compliant with GAAMPS, create no nuisance conditions, are not impacting groundwater, and are registered as a beneficial use product 3 under Part 85. The generator of the material must inform the end user of their obligations under either of the exemptions listed above. (MDARD)*
  - c. *Sugar beet soils with an existing AUA. (DEQ)*
- Q11: Which waste materials will MDARD oversee for land application?
- A11: *Under Part 115, MDARD will oversee the land application of the 12 materials identified in Section 11502(8) for beneficial use 3, which include:*
- a. *coal bottom ash*
  - b. *wood ash*
  - c. *pulp and paper mill ash*
  - d. *mixed wood ash*
  - e. *cement kiln dust*
  - f. *Lime kiln dust*
  - g. *foundry sand*
  - h. *pulp and paper mill material*
  - i. *dewatered concrete grinding slurry*
  - j. *lime softening residuals*
  - k. *soil washed from sugar beets*
  - l. *segregated flue gas desulfurization material.*

Q12: Can materials other than those listed for beneficial use 3 be approved for land application?

A12: *Yes. The DEQ can approve other materials for land application as compostable material, non-detrimental material, or source separated material under Section 11553. In addition, current written authorizations by the DEQ for land application will continue until they expire or are forfeited as provided in Section 11553(9).*

Q13: What are the testing requirements to use a Beneficial Use By-Product for Beneficial Use 3?

A13: *MDARD has developed a [testing protocol](#) that can be found at [www.michigan.gov/mdard-licensing](http://www.michigan.gov/mdard-licensing), select "Agricultural Products," then "Michigan Fertilizer and Liming Information."*

Q14: What criteria will MDARD use for parameters that are not contained in Section 11551(1)(h)?

A14: *MDARD will evaluate materials based on the Part 201 residential direct contact criteria for any additional parameters of concern.*

## TESTING AND CRITERIA

Q15: Foundry sand is listed as a beneficial use by-product. Is it expected that each waste stream (i.e. shakeout, shot blast, cores, molding sand, air pollution control dust, etc.) will be tested individually or is the testing required on a composite of all the various streams generated by each foundry?

A15: *It is the responsibility of the generator to determine whether or not his sands meet the designation of a beneficial by-product. If the generator has knowledge that all of the individual sand waste streams are very similar, then he can collect a representative sample of the mixture for beneficial by-product determination testing. If he does not know for certain that the individual components are similar, or if he is unsure, it is best to test each of the individual sand waste streams initially to determine whether or not it is appropriate to combine them for subsequent characterization purposes. Ultimately the responsibility for proper characterization of the foundry sand is the responsibility of the generator.*

Q16: Can the MDEQ consider for approval as a beneficial use byproduct or inert material a material that leaches contaminants above the most restrictive of the health based drinking water standard, the aesthetic criteria, or the groundwater/surface water interface (GSI) criteria?

A16: *Yes. While Section 11553(3)(e)(ii) and 11553(5)(c) require that the material cannot form an unacceptably contaminated leachate, under Sections 11553(4) and (6), the MDEQ may consider other criteria that are protective of public health and the environment for that material and use. An unacceptably contaminated leachate would be one that exceeds either the Part 201 generic residential groundwater drinking water criteria (which include both health-based and aesthetic criteria) or surface water quality standards under Part 31 (which include the GSI criteria)*

Q17: Can the MDEQ consider for approval as a beneficial use byproduct or inert material a material that poses a direct contact health hazard to humans?

A17: *Yes. While Section 11553(3)(e)(i) and 11553(5)(b) require that the material cannot pose a direct contact health hazard to humans, under Sections 11553(4) and (6), the MDEQ may consider other criteria that are protective of public health and the environment for the material and use. For example, a means to eliminate this pathway, such as clean cover and deed restrictions, may be a consideration.*

Q18: How is the GSI criteria developed?

A18: *A calculation is performed based on either the pH or hardness of a potential receiving surface water body. The [excel spreadsheet for this calculation](#) (see Footnote (G) GSI/ GSIPC Calculation) can be found under **Operational Memoranda and Guidance** (Cleanup Criteria Requirements) at [www.michigan.gov/deqlandcleanup](http://www.michigan.gov/deqlandcleanup) (select "Site Investigation and Remediation.")*

Q19: What parameters currently have GSI criteria that are dependent on pH or hardness of the receiving surface water body?

A19: *Acetate, acetic acid, barium, beryllium, cadmium, chromium (III), copper, lead, manganese, nickel, zinc, and pentachlorophenol.*

Q20: Since the GSI criteria for a number of parameters are based on the hardness or pH of any potential body of water that may be near a site where beneficial use by-products, inert material, source separated materials, etc. are used, is there a way to use default hardness values based on location in Michigan as a starting point to calculate the GSI criteria?

A20: *Yes, the following hardness values may be used as a starting point to determine the GSI criteria.*

- a. *Any discharges directly to any of the Great Lakes in the Lower Peninsula (Lake Michigan, Lake Huron, or Lake Erie), a hardness value of 100 mg/l would be a conservative hardness value.*
- b. *A regional hardness value for the entire Upper Peninsula would be 50 mg/l.*
- c. *A regional hardness value for the upper portion of the Lower Peninsula north of a line crossing the state from approximately where M-46 crosses the state, a hardness value of 100 mg/l would be a conservative value.*
- d. *A regional hardness value for the lower portion of the Lower Peninsula south of a line crossing the state from approximately where M-46 crosses the state, a hardness value of 150 mg/l would be appropriate.*

Q21: What would the GSI criteria look like using the default hardness numbers from above?

A21: *Yes, the following hardness values may be used as a starting point to determine the GSI criteria.*

Parameter	GSI (µg/l) Hardness = 50 mg/l	GSI (µg/l) Hardness = 100 mg/l	GSI (µg/l) Hardness = 150 mg/l	Residential health based drinking water standard (µg/l)	Aesthetic criteria (µg/l)
<i>Barium</i>	<i>210</i>	<i>440</i>	<i>670</i>	<i>2,000</i>	<i>NA</i>
<i>Beryllium</i>	<i>0.41</i>	<i>2.4</i>	<i>6.7</i>	<i>4</i>	<i>NA</i>
<i>Cadmium</i>	<i>1.3</i>	<i>2.2</i>	<i>3</i>	<i>5</i>	<i>NA</i>
<i>Chromium (III)</i>	<i>42</i>	<i>74</i>	<i>100</i>	<i>100</i>	<i>NA</i>
<i>Copper</i>	<i>5</i>	<i>9</i>	<i>13</i>	<i>1,000</i>	<i>1,400</i>
<i>Lead</i>	<i>12</i>	<i>21</i>	<i>29</i>	<i>4</i>	<i>NA</i>
<i>Manganese</i>	<i>1,100</i>	<i>2,000</i>	<i>2,800</i>	<i>860</i>	<i>50</i>
<i>Nickel</i>	<i>29</i>	<i>52</i>	<i>73</i>	<i>100</i>	<i>NA</i>
<i>Zinc</i>	<i>66</i>	<i>120</i>	<i>170</i>	<i>2,400</i>	<i>NA</i>

Q22: If a contaminant leaches from a material in excess of the default GSI (from Q21), is it possible to use site specific pH or hardness to calculate the allowable GSI?

A22: *Yes, you may use site specific criteria from receiving water adjacent to where a waste material could be used.*

Q23: If a contaminant leaches above the default GSI or site specific GSI (using the calculation from Q20 and Q21) is it still possible to use a material?

A23: *Yes, you may be able to get a mixing zone determination that may allow contaminants to leach in excess of the calculated GSI criteria based on the specific criteria of a potential receiving body of water. To explore this option, contact Christine Alexander at 517-284-4670.*

## OTHER

Q24: Can pavement or broken concrete produced by a beneficial use by-product be an inert material?

A24: *Yes. While Subsection 11551(6) limits the use of beneficial use by-products to the same roadway in which they were originally used, pavement and broken concrete specifically are inert under Subsection 11504(2)(e), regardless of whether they were produced from virgin materials or beneficial use by-products.*

Q25: Can concrete and brick containing lead-based paint be used as an inert material or beneficial use by-product under 11504(2)(e)(ii), or 11553(3), (4), (5), or (6)?

A25: *Yes. The DEQ can consider, on a case-by-case basis, petitions to exempt materials coated with lead-based paint. The DEQ will also consider issuing a generic exemption at a later date if sufficient analytical information is generated from multiple petitions. One method historically used to demonstrate that the material meets the inert criteria was a mass balance calculation on the total amount of lead paint compared to the total amount of painted material.*

Q26: What amount of fly ash or economizer ash can be present in bottom ash used for cold weather road abrasive in 11506(1)(r)?

A26: *Fly ash or economizer ash content is not limited, but the mixture must meet MDOT standards.*

Q27: What are the differences in land applying paper mill sludge under:

- a self-declaration under old rule 114?
- an agricultural use approval (AUA) under rule 111?
- the beneficial use statute?

A27: *The following chart shows differences between the various approval pathways.*

Required Information/Action	Self-Declared <sup>1</sup>	AUA	Ben Use By-Product
Sludge testing	X	X	X
Application at agronomic rates	X	X	X
Annual reporting	X <sup>2</sup>	X	X
Petition DEQ for approval		X	
Register sludge with MDARD			X
Notify adjacent land owners and township of land application	X <sup>2</sup>	X	
Maintain isolation distance for application from property lines, surface water, roads, etc.	X <sup>2</sup>	X	
Verify exempt from creating a "facility" under Part 201 if done in accordance with Part 115			X
Site details, including plat map, address for use, latitude, longitude, owner's name, etc.	X <sup>2</sup>	X	

<sup>1</sup> These self-declared designations are no longer available to generators but those in place remain in place until forfeited by the generator.

<sup>2</sup> Some self-declaration petitions for approval include these items.

Q28: The new legislation lists stamp sands as a beneficial use by-product appropriate for use in asphalt/concrete, as fill material under an impervious surface, or as cold weather road abrasive. Are historical piles and deposits of stamp sands in violation of the speculative accumulation and other storage requirements under Subsection 11551(1)?

A28: *No. The storage requirements would apply when the stamp sands are removed from their historical disposal locations and intended for beneficial use 1 or 2. The storage requirements are not applicable to stamp sands used as a cold weather road abrasive.*

Q29: What materials have limits on the period of storage?

A29: *The following materials have limits on the period of storage:*

- *Beneficial use by-products under Section 11551(b)*
- *Source separated materials under Section 11506(6)*
- *Yard clippings under Section 11521(4)(c)(iii)*
- *Low-hazard industrial waste stored at the site of generation in uncontained waste piles under Rule 129(2)(a)*

Q30: Who determines if testing is required on soils under 11504(2)(c)(i)?

A30: *The owner of a property makes this decision for upland soils based on knowledge of the property.*

Q31: Who determines if testing is required of dredged sediments under 11504(2)(c)(i)?

A31: *The testing of dredged sediments is addressed in the MDEQ's Dredge Sediment Review policy and procedure Number 09-018 found at [www.michigan.gov/documents/deg/deg-policy-09-018\\_414753\\_7.pdf](http://www.michigan.gov/documents/deg/deg-policy-09-018_414753_7.pdf) (currently being revised to comply with the beneficial use statute).*

Q32: Can two or more listed beneficial use by-products be mixed during use?

A32: *Mixing two or more beneficial use by-products for the same use is not prohibited. However, the mixture must still satisfy all applicable requirements for that beneficial use (e.g., Section 11551 requires that they be used in accordance with generally accepted engineering, industrial, or commercial standards).*