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5/2/2016

John T. Therriault, Clerk  
Illinois Pollution Control Board  
State of Illinois Center, Suite 11-500  
100 W. Randolph St.  
Chicago IL 60601

RE: Docket R16-7 RCRA Subtitle C (Hazardous Waste) Update, USEPA Amendments  
(January 1, 2015 through June 30, 2015)

The Dow Chemical Company (Dow) appreciates the opportunity to submit these comments on the above-referenced Illinois Pollution Control Board (IPCB) proposed rule ("Proposed Rule"), which updates the state's rules to meet the requirements of the federal Resource Conservation and Recovery Act (RCRA), including adoption of new federal definition of solid waste. While states must adopt regulations that meet the minimum standards of the federal RCRA program in order to maintain RCRA authorization, there are a number of areas within the proposed regulations that the state should clarify or where additional compliance flexibility can be built in without impacting authorization.

Our comments reflect the proposed rules as published in Volume 40, Issue 12 of the Illinois Register dated 3/18/2016 and accessed through the IPCB's docket portal.

Where federal (EPA) citations are given as reference to IL regulations, please use the proposed IL equivalent citation.

Dow respectfully submits the following comments to request such clarifications and changes.

If you have any questions, please contact Dave Miklos at [dmiklos@dow.com](mailto:dmiklos@dow.com) or 708-317-5786 or Kim Harvey at [harveykl@dow.com](mailto:harveykl@dow.com) or 985-783-4175, to discuss.



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## I. Definitions

Please add the following definitions to provide additional clarity of the changes to the 35 Ill. Adm. 720 and 721 Codes. All of the terms below are used in various citations of this rule, but are not properly defined. Not including specific definitions may lead to confusion on meeting the rule's intent from both generators and regulators as they will form their own definitions of these terms, which may or may not be consistent.

1. *Analogous Product*--a product made of raw materials or made by competing companies with similar specifications for which a hazardous secondary material substitutes.
2. *Analogous Raw Material*—a material for which a hazardous secondary material substitutes and which serves the same function and has similar physical and chemical properties as the hazardous secondary material.
3. Intermediates generated in industry can be used immediately at the same location or later at the same or different locations via closed or open pipe to manufacture a desired product. These intermediates are not treated as solid waste nor are they considered the result of a recycling process. Rather, they are steps in the process and are not regulated by this rule. Therefore it's important to define this difference in the rule. Dow suggests to add the following definition:
  - a. *Intermediate*—as used in 35 Ill. Adm. Code 720.130-143, *Intermediate* is a substance formed as a stage in the manufacture of a desired end-product.
4. *Widely-recognized Commodity Standards and Specifications* – includes those standards and specifications that are publicly available; e.g., in safety data sheets (SDSs), on-line vendor specifications, sales literature, and the like.
  - a. See Item XV below for more details on this request.

## II. IPCB should remove the first sentence of 721.104(a)(24).

The first sentence of 721.104(a)(24) (*Hazardous secondary materials transferred for off-site recycling.*) implies that direct reuse applications (recycling) would fall under the scope of this exemption, which is not the scope or intent of this exemption, and would place additional requirements such as notification and legitimacy documentation. Direct



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reuse applications are already exempt without the additional criteria attached, and were not changed by EPA. Dow requests IPCB remove this added sentence.

### **III. Presumption of Legitimacy for the Pre-2008 Exclusions**

The Federal Rule states that sham recycling is prohibited and that all recycling must be legitimate and must meet the four legitimacy factors, including material that is recycled pursuant to pre-2008 exclusions. A review of the damages cases considered by EPA shows that “of the 250 damage cases evaluated in the 2014 environmental problems study, 229 (or approximately 92%) were from reclamation activities of off-site third party recyclers.” (Reference 80 FR 1739). Further, the Preamble and guidance (reference 80 FR 1739 – 1741) state that:

- EPA is not altering or amending the pre-2008 recycling exclusions;
- EPA is not requiring facilities that use pre-2008 exclusions to submit or even maintain documentation of compliance with legitimacy factors;
- EPA conducted significant legitimacy analysis during promulgation of the pre-2008 exclusions and did not find damage resulting from the use of these exclusions; and
- EPA believes that so long as the conditions of the pre-2008 exclusions are met, then the subject material is legitimately recycled and meets the legitimacy factors.

Over time, Dow is concerned that these fundamental findings by EPA will be lost if not clarified. A future interpretation that documentation is required would not be consistent with the intent as described in the preamble. Included in this correspondence is a list of the preamble sites that support this clarification of the rule. As such, Dow requests that IPCB add a Board Note to §720.143 supporting a “presumption” of legitimacy for the pre-2008 exclusions and also suggest adding the bullets above to the same Board Notes to provide additional clarity to this fact.

### **IV. Documentation and Legitimacy Related to Recycling Involving Return to Process or Processes**

Both the requirements for a legitimacy demonstration with regard to recycle and the documentation required as included in 40 CFR 260.43(4)(ii) and subsequently in 35 IAC 720.143(4)(B)(ii) require clarification. Specifically, EPA repeatedly states in the preamble and in the rule reference above that “. . . the product of the recycling process is



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comparable to a legitimate product or intermediate if . . . the hazardous secondary materials being recycled are returned to the original process or processes from which they were generated to be reused (*e.g.*, closed loop recycling)." (*See* 80 FR 1739).

Regarding widely accepted manufacturing processes that support EPA's sustainability initiatives, EPA states in its [Frequently Asked Questions document dated March 31, 2015](#):

"The DSW rule advances the goals of sustainable materials management in a number of ways. In particular, the DSW rule is structured to recognize the legitimacy of in-process recycling and commodity-grade recycled products such as metals commodities, thus aligning the RCRA regulations with the best industry practices to conserve resources."

In response to Question 6 in the FAQ Document cited above, EPA further states the following:

"Specifically, recycling meets Factor 4 with no testing or further demonstration of meeting this legitimacy factor required under any of the following circumstances:

1. The hazardous secondary materials are returned to the original process or processes from which they were generated, such as in concentrating metals in minerals processing,
2. The recycled product meets widely-recognized commodity specifications and there is no analogous product made from raw materials (such as scrap metal being reclaimed into metal commodities). For specialty products such as specialty batch chemicals or specialty metal alloys, customer specifications would be sufficient,
3. The recycled product has an analogous product made from virgin materials, but meets widely-recognized commodity specifications which address the hazardous constituents (such as spent solvents being reclaimed into solvent products). (This is in contrast to #2, where the specifications do not need to specifically address the hazardous constituents), or



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4. The person recycling has the necessary knowledge, such as knowledge about the incoming hazardous secondary material and the recycling process, to be able to demonstrate that the product of recycling does not exhibit a hazardous characteristic and contains hazardous constituents at levels comparable to or lower than those in products made from virgin materials.

Again, EPA believes that the above statements will apply to the majority of recycling and thus, the need to test in order to determine compliance with Factor 4 will be infrequent.”

Dow would like to also clarify that the pre-2008 recycle exclusions referenced in 40 CFR 260.43(4)(ii) and subsequently 35 IAC 720.143(4)(B)(ii) is not limited to “closed loop recycle” as the e.g. in the rule is simply a list of recycle examples that is not exhaustive. EPA has confirmed in several meetings with industry that the criterion applies to more recycling scenarios than closed-loop recycling.

To provide clarification to this issue, Dow requests that IPCB provide the following regulatory clarification to the 720.143 Board Notes: “Closed-loop recycling is an example of a manufacturing process where the hazardous secondary material is returned to the original process from which it was generated (80 Fed. Reg. 1728). The reference in proposed 35 Ill. Adm. Code 720.143(a)(4)(B)(ii) to hazardous secondary materials returned to the original process is not limited to closed-loop recycling, (80 Fed. Reg. 1697) nor must the hazardous secondary material be returned to the same unit in which it was generated. For the purposes of proposed 35 Ill. Adm. Code 720.143(a)(4)(B)(ii), a hazardous secondary material is returned to the original process if it is returned to the same production process or processes where it was generated; if it is returned to other production processes from which it was derived; if it is returned via closed-loop or open-loop; if it is returned from on-site or off-site; if it is returned from second, third, or later generation use of the hazardous secondary material, product, or intermediate; or if it is returned as part of the long-established recycling of such hazardous secondary material in connection with the manufacturing or use, both on-site and off-site, of a product or intermediate made with the hazardous secondary material. Production process or processes include those activities that tie directly into the manufacturing operation or those activities that are the primary operation at the establishment. (80 Fed. Reg. 1697, 1728, 1729, 1731).”

These long-standing recycling examples would meet the legitimacy criteria without additional analyses or statistical demonstration or documentation as all such materials



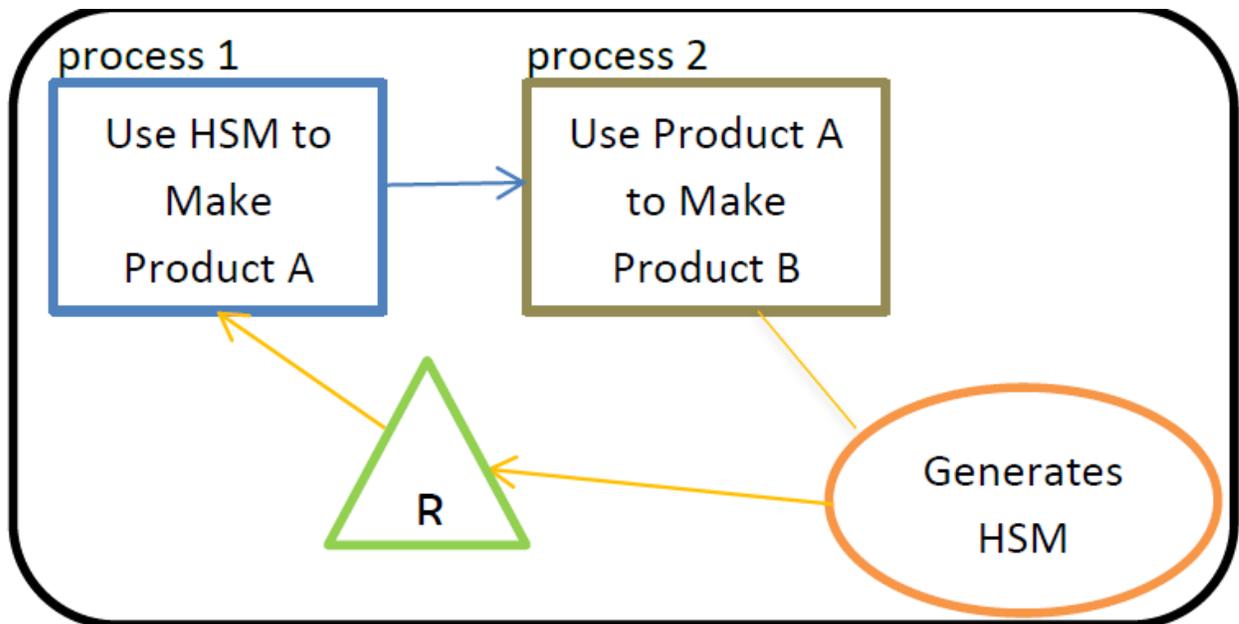
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would be non-analogous. That is, if the hazardous secondary materials are being returned to the original production process/processes, then there is no analogous product and legitimacy factor 4 is met.

Dow understands that an inspector may want to understand the recycling involved and could submit any information requested for clarification, but no documentation would be required to be maintained onsite prior to the inquiry.

Generic examples of common chemical industry practices of recycled HSMs accomplished with equipment representing a significant expenditure of capital to make commodity grade chemicals as described previously are as follows:

**EXAMPLE 1:** Manufacturer of Product A uses Product A **onsite** to make Product B and generates a characteristic by-product HSM. The HSM is reclaimed (via pipe or container) to make Product A which is subsequently used to make Product B etc.

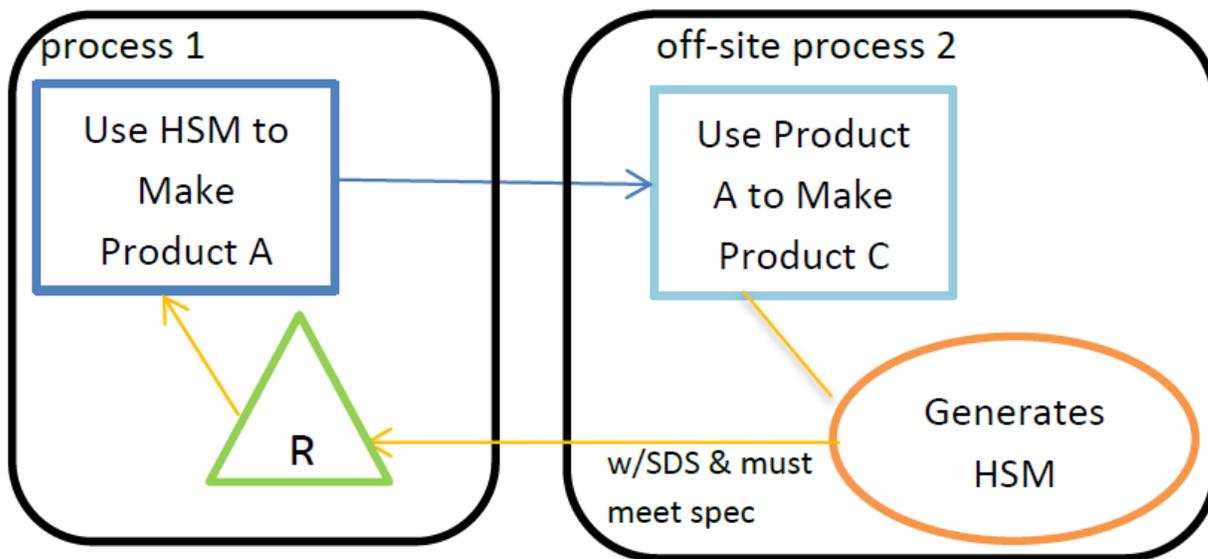


**EXAMPLE 2a:** Manufacturer of Product A sends product A to another of its plant sites which uses Product A as an ingredient in its manufacturing process and generates an HSM which is sent back to the original manufacturing site to be recycled and reused.



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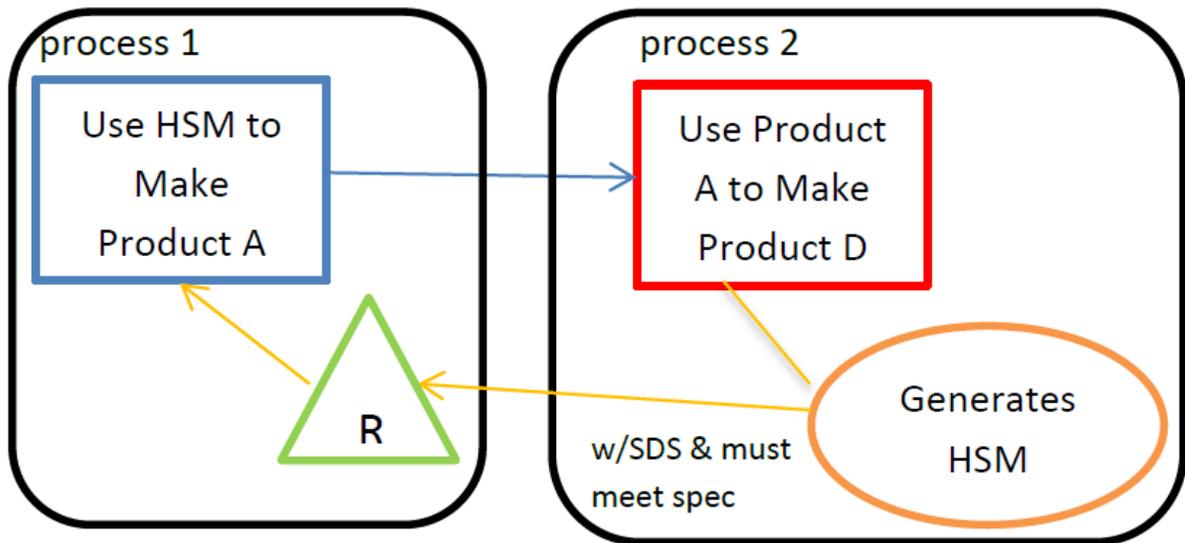
**EXAMPLE 2b:** the subsequent plant site is a subsidiary company of the original manufacturer.





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**EXAMPLE 3:** Manufacturer of product A sells product A to a customer. The customer generates a HSM as described in Examples 1 and 2 and sends the HSM back to the manufacturer of Product A to be recycled. This arrangement is covered by an exclusivity contract and is a long-standing process.



Because these practices represent the recycling of HSMs that are not solid wastes in accordance with pre-2008 exclusion found at 40 CFR 261.2(c)(3) Table, Dow understands that these examples do not represent the management of a solid waste. Rather, this is understood to be a widely accepted manufacturing practice as the characteristic by-product is to be reclaimed and reused in a major manufacturing process and is, therefore, not a solid waste and under the new definition of solid waste does not require any additional legitimacy demonstration or associated documentation. However, Dow provides these examples to show some 'returned to the original process' scenarios being used by industry.

## V. Clarification of the New Speculative Accumulation Recordkeeping Requirements

There have been many cases where the application of the speculative accumulation requirements has been misapplied. Therefore, guidance would be beneficial to the regulated community and the agency to ensure common understanding of these requirements.



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The speculative accumulation rule only requires a generator/recycler to take an inventory on January 1 of each year (or another start date) of how much HSM (of its HSM that is subject to the speculative accumulation limits) it has by weight or volume in inventory waiting to be recycled and then to show that within a year thereafter, 75% of the inventory has been recycled or transferred off-site for recycling (See 40 CFR 261.1(c)(8)). This demonstration is normally shown by the generator/recycler calculating and identifying the initial inventory and then showing after a year through its shipping or processing records how much of that inventory was recycled or sent off-site for recycling.

Dow requests that IPCB include 721.101(c)(8) Board Notes to clarify that the record showing the first date of accumulation is not information that is necessary to determine whether there has been speculative accumulation under 721.101(c)(8). For example, an HSM that is labeled as having been onsite for more than a year is not being speculatively accumulated so long as 75% of the HSM that is subject to the speculative accumulation condition and that was in inventory at the beginning of the previous year has been recycled or sent off-site for recycling by the end of the previous year.

**VI. IPCB should clarify where the speculative accumulation requirements at §261.1(c)(8) apply with the exemptions or exclusions.**

It is not clear where the speculative accumulation requirements are applicable by virtue of the new requirement, 261.2(g) referring to 260.43. The legitimacy requirements apply to all exemptions thus potentially the speculative accumulation requirements apply to all recycling. The specific application of the speculative accumulation rule is detailed in the final rule preamble where speculative accumulation was promulgated; therefore, we request that the IPCB include Board Notes, where applicable, clarifying where these speculative accumulation requirements are not applicable, per 50 FR 635, January 4, 1985 and EPA's FAQ 11 for 2015 DSW as shown below to avoid any confusion.

Materials subject to the following exemptions or exclusions are not subject to the speculatively accumulation requirements:

- (i) §261.4(a)(13)/261.2 Table 1 [scrap metal].
- (ii) §261.6(a)(3)(ii) [scrap metal].
- (iii) §261.2.(c)(4) Table 1 [commercial chemical products].
- (iv) §261.6(a)(3)(i) [industrial ethyl alcohol].



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(v) §261.6(a)(3)(iii)-(iv) [fuels produced from the refining of oil-bearing hazardous waste].

(vi) §261.4(b)(2)(i) [growing and harvesting of agricultural crops].

(vii) §261.4(b)(2)(ii) [raising of animals, including animal manures].

(viii) §262.4(b)(3) [mining overburden returned to the mine site].

(ix) §261.4(b)(12) [used chlorofluorocarbon refrigerants from totally enclosed heat transfer equipment].

(x) §261.4(b)(14) [used oil re-refining distillation bottoms that are used as feedstock to manufacture asphalt products].

(xi) §261.4(a)(8) [closed loop recycling with reclamation] – (regulation has independent time and re-use criteria).

(xii) §261.2(e)(1)(iii) [closed loop recycling without reclamation] (regulation does not have any time-use criteria because this is non-waste).

(xii) §261.4(a)(26) [solvent wipes] - (regulation has independent time and re-use criteria).

**VII. IPCB should clarify the analogous product comparison as stated in the proposed language.**

Dow requests that IPCB clarify in the 720.143 Board Notes what meets legitimacy 260.43(a)(4)(i)(analogous product comparison). Analogous products or intermediates should include common products or intermediates found in wide-spread markets, which may be secondary markets; such markets typically are well-known, recognized, established, mature, and large.

If a chemical product made from hazardous secondary material has an analogous product made from raw materials and does not exhibit a hazardous characteristic that the analogous product does not and the concentration of hazardous constituents are comparable to those in analogous products, the fourth legitimacy factor is met (§260.43(a)(4)(i)). For example, weak acid by-products that are concentrated into stronger acids and undergo extensive QA/QC processes to assure the quality of the concentrated acids



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**VIII. IPCB should clarify what constitutes a valid comparison to meet the analogous constituent comparison requirement.**

Dow requests that IPCB clarify in the 720.143 Board Notes what constitutes a valid comparison to meet the §260.43(a)(4)(i)(B) criterion due to that one company does not know whether another company produces an analogous product or intermediate made from virgin materials.

Specifically, we recommend IPCB add the following comparisons to the Board Notes for Factor 4 (260.43(a)(4)(i)(B)) purposes:

- the HSM that is being recycled directly (i.e., without reclamation) versus the virgin raw material or ingredient that the HSM is replacing;
- the HSM after reclamation that is being recycled versus the virgin raw material or ingredient that the reclaimed HSM is replacing;
- the product/intermediate that results from recycling the HSM versus the product/intermediate that results from using the virgin raw material or ingredient that the HSM is replacing;
- the product/intermediate that results from recycling the HSM versus a substitute product/intermediate that is made without the HSM by a different company or by the same company at a different site or through a different process.

**IX. IPCB should clarify that the documentation, certification, and notice requirements only apply to pre-2008 exclusions when the product comparison must be completed under §260.43(a)(4)(iii).**

Dow requests IPCB clarify in the §720.143 Board Notes that:

- A. Documentation for pre-2008 exclusions, documentation is required only when the product comparison must be completed under §260.43(a)(4)(iii) as supported by the EPA preamble as shown below. (In such case, documentation, certification, and notice are required.)
- B. Except as noted in A above, pre-2008 exclusions are not subject to the notification requirements of the IL equivalent of §260.42.
- C. Except as noted below, materials subject to the pre-2008 exclusions do not have to be contained, as defined in §260.10. Hazardous secondary materials that have no analogous raw material, even if subject to one or more of the pre-2008 exclusions, must be contained.



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## **EPA PREAMBLE SUPPORT FOR PRESUMPTION OF LEGITIMACY FOR PRE-2008 EXCLUSIONS**

**80 FR 1720 (Jan. 13, 2015)**

Today, we are codifying that the legitimate recycling provision applies to all hazardous secondary materials that are excluded or exempted from Subtitle C regulation because they are recycled and that it also applies to recyclable hazardous wastes that remain subject to the hazardous waste regulations. However, instead of changing the language of each recycling exclusion or exemption to include the requirement as we proposed in the 2011 DSW proposal, we have instead added language in 261.2(g) that specifically prohibits sham recycling to ensure that all recycling, including recycling under the pre-2008 exclusions is legitimate (i.e., real recycling). We have determined that documentation of legitimacy is not necessary or required for the pre-2008 recycling exclusions and exemptions, except in the rare case where the recycling is legitimate, but does not meet factor 4.

EPA has examined in depth a number of waste-specific and industry-specific recycling activities and has promulgated specific regulatory exclusions or provisions that address the legitimacy of these practices in much more specific terms than the general legitimacy factors as described in 40 CFR 260.43.

EPA expects that the vast majority of recycling being performed under these existing exclusions is currently being undertaken conscientiously and would be considered legitimate under the new legitimacy provision with no further action required on the part of the company. If a company is meeting the conditions of its exclusion while managing the hazardous secondary material responsibly and using it to make a legitimate product, that company would not have to change any of its existing business practices or otherwise take action to show that its recycling meets the legitimacy factors. EPA is not requiring documentation of compliance with the four legitimacy factors, except in the case where the recycling does not meet factor 4 on its face, but the facility believes that its recycling operation is nonetheless legitimate. Many of the measures companies take in order to meet the terms of the conditions exclusions or to follow best management practices are the same actions that indicate that a recycling process is legitimate. These measures and business practices were generally evaluated as part of the original legitimacy determination by the agency, and therefore employment of those



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or similar practices indicated legitimate recycling as addressed by the original legitimacy determinations.

**80 FR 1721 - 1722 (Jan. 13, 2015)**

The conditions developed for the recycling exclusions in 261.4(a) were found to be necessary under material-specific rulemakings that determined when the particular hazardous secondary material in question is not a solid waste. When EPA originally made the decision that these materials are not solid waste, the Agency took into account the relevant factors about the hazardous secondary materials, including how the material was managed and what toxic chemicals were present. If the facility is complying with the terms of the exclusion and following industry best practices to engage in legitimate recycling activity, this would generally not raise questions as to its legitimacy. All these examples support EPA's determination that most current recycling under existing exclusions is legitimate, and that companies complying with the conditions of the exclusions would generally not need to take action to show that their recycling meets the legitimacy factors . . . . EPA acknowledges that, in establishing a specific exclusion, we have already determined in the rulemaking record that the specific recycling practice is excluded from the definition of solid waste provided all the conditions of the rule are met.

**80 FR 1730 (Jan. 13, 2015)**

We did not intend to cause facilities that are legitimately recycling to revisit their practices or for state agencies to revisit past legitimacy determinations.

**80 FR 1735 (Jan. 13, 2015)**

The final rule does not supersede any of the pre-2008 solid waste exclusions or other prior solid waste determinations or variances, including determinations made in letters of interpretation or inspection reports. If a hazardous secondary material has been determined not to be a solid waste for whatever reason, such a determination remains in effect, unless the authorized state decides to revisit the regulatory determination under their current authority.



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**80 FR 1736 (Jan. 13, 2015)**

The codification of the prohibition of sham recycling (261.2(g)), and the definition of legitimate recycling (260.43) being finalized today will not impose any new requirements on persons recycling under the pre-2008 recycling exclusions, except in the case where the product of the recycling process (1) has levels of hazardous constituents that are not comparable to or lower than those in a legitimate product (i.e., are significantly elevated) or (2) is unable to be compared to a legitimate product and the product of the recycling process is not a widely recognized commodity (e.g., scrap metal) and is not returned to the original production process (e.g., closed loop recycling). In this case, the person performing the recycling must conduct the necessary analysis and prepare documentation stating why the recycling is still legitimate.

**80 FR 1753 (Jan. 13, 2015)**

We also agree with those commenters who pointed out that we generally looked at the legitimacy of the recycling activity when we promulgated the material-specific or industry specific exclusions and, therefore, we are not requiring facilities to revisit past legitimacy determinations.

[T]he Agency is clarifying that it does not intend for current recycling legitimacy determinations to change due to the codification of the legitimacy factors. We consider the factors we are finalizing today to be consistent with the criteria in the Lowrance Memo and previous preamble statements on legitimate recycling. Therefore, we generally do not anticipate that implementing agencies will revisit past legitimacy determinations. If recycling was considered legitimate under the Lowrance Memo, its status should not change as a result of today's rule. To make its intent more clear, the Agency is codifying a prohibition against sham recycling in 261.2(g) instead of adding a provision in each of the pre-2008 exclusions and exemptions referring to the legitimacy provision in 260.43. This codification will give implementing agencies a clear regulatory statement that can be used to enforce against sham recyclers, yet not require the vast majority of recyclers that are performing legitimate recycling under the pre-2008 exclusions and exemptions to revisit previously-made legitimacy determinations.

Any existing legitimate recycling determination should not change due to the codification of the legitimacy factors...Regarding the existing exclusions and exemptions in the regulations, EPA acknowledges that, in establishing a specific exclusion or exemption, we have already determined in the rulemaking record that the specific



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recycling practice is excluded from the definition of solid waste provided all the conditions of the rule are met.

**80 FR 1755 (Jan. 13, 2015)**

[T]he Agency has determined that, for purposes of the existing pre-2008 exclusions and exemptions, documentation is not required, unless the facility has determined it is legitimately recycling, but does not meet Factor 4. In the vast majority of cases, recycling under the existing exclusions is legitimate and documentation is not necessary. The agency has previously acknowledged the legitimacy of these recycling practices when it first promulgated the material-specific and industry-specific exclusions and exemptions, when at that time it took into consideration the legitimacy of the recycling practices. After review of the public comment, the Agency has determined that routine documentation of legitimacy is an unnecessary burden for persons legitimately recycling under the pre-2008 recycling exclusions and exemptions.

**X. IPCB should clarify that the Verified Recycler requirements found in 40 CFR §261.4(a)(24) do not apply to pre-2008 exclusions.**

Dow requests that IPCB clarify in the 721.104 Board Notes that the verified recycler requirements do not apply to the pre-2008 exclusions as supported by EPA's comments below from "2015 Definition of Solid Waste Final Rule Frequent Questions March 31, 2015" document.

**Verified Recycler Exclusion**

The rule replaces the 2008 "transfer-based" exclusion with an exclusion for hazardous secondary materials sent to a verified recycler for reclamation. Under this new exclusion, generators who want to recycle their hazardous secondary materials without having them become hazardous wastes must send their materials to either a RCRA-permitted reclamation facility or to a verified recycler of hazardous secondary materials who has obtained a solid waste variance from EPA or the authorized state. (Note: The requirement that a recycling facility be verified applies to recycling of those materials that would otherwise be regulated as hazardous waste, and does not apply to materials excluded prior to 2008, such as scrap metal).



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**XI. IPCB should clarify that one or more releases from a container do not mean that the storage unit no longer meets the “contained” standard.**

Dow requests IPCB clarify in the appropriate 721.104 Board Notes that if a facility has one or more releases from a container that does not impact compliance with the “contained” standard. As supported by DSW FAQs, No. 13, p. 9 and EPA Definition of Solid Waste (DSW) Rule Summary for May 19, 2015 meeting with representatives of ACC, NAM, et al. (May 19th Summary), EPA agreed that a discreet release would not presumptively negate the ability of the hazardous secondary material to meet the “contained” standard. However, a release could be considered a factor in a determination of whether the “contained” standard is met.

**XII. IPCB should clarify that a facility does not need to meet §§264/265 Subpart J requirements to meet the “contained” standard.**

Dow requests IPCB clarify in the Board Notes that a facility does not need to meet §§264/265 Subpart J requirements to meet the “contained” standard. As EPA has stated in the 2015 Definition of Solid Waste Final Rule Frequent Questions March 31, 2015 document, Question 13, “the contained standard does not require a specific type of management unit like a container. It is a performance-based standard whose specific technical requirements would depend on the type of material that is being managed.

For example, for a material like scrap metal, which is a solid material whose hazardous constituents are generally immobile and is unlikely to be carried off by the wind, an uncovered pile placed on the ground could be considered “contained.””

**XIII. IPCB should clarify the meaning of 260.43(a)(4)(iii).**

Dow requests IPCB modify the regulatory text to clarify that this phrase is referring to the product made using recycled material and not from recycled product. The way it is currently written could lead to confusion.

Phrase (260.43(a)(4)(iii)): ...or other relevant considerations which show that the recycled product does not contain levels of hazardous constituents that pose a significant human health or environmental risk... Dow suggests the following change:

“...or other relevant considerations which show that the product of the *recycling process* does not contain levels of hazardous constituents that pose a significant human health or environmental risk...”



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**XIV. IPCB should clarify what is required for the evaluation requirements for legitimacy factor 4.**

Dow requests IPCB clarify in the §720.143 Board Notes the level of documentation that would be required to support legitimacy factor 4. EPA states in the rule that both knowledge and testing may be used; however, additional guidance would be beneficial for the regulated community. The following is some suggested language.

- A. Testing is not generally required under §260.43. As with any solid and hazardous waste determination, a person may use knowledge of the materials he uses, the hazardous secondary material, product, or intermediate he recycles, and of the recycling process to make legitimate recycling determinations.
- B. Specifically, recycling meets legitimacy factor 4 of §260.43 with no testing or further demonstration of meeting this legitimacy factor required under any of the following circumstances:
  1. The hazardous secondary materials are returned to the original process or processes from which they were generated, such as in concentrating metals in minerals processing.
  2. The recycled product meets widely-recognized commodity specifications and there is no analogous product made from raw materials (such as scrap metal being reclaimed into metal commodities). For specialty products such as specialty batch chemicals or specialty metal alloys, customer specifications would be sufficient.
  3. The recycled product has an analogous product made from virgin materials, but meets widely-recognized commodity specifications which address the hazardous constituents (such as spent solvents being reclaimed into solvent products). (This is in contrast to #2 above where the specifications do not need to specifically address the hazardous constituents.)
  4. The person recycling has the necessary knowledge, such as knowledge about the incoming hazardous secondary material and the recycling process, to be able to demonstrate that the product of recycling does not exhibit a hazardous characteristic and contains hazardous constituents at levels comparable to or lower than those in products made from virgin materials.



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Dow believes that the above statements will apply to the majority of recycling and thus, the need to test in order to determine compliance with legitimacy factor 4 of §260.43 will be infrequent.

C. If the hazardous secondary materials are being returned to the original production process, then there is no analogous product and legitimacy factor 4 of §260.43 is met. The person conducting the recycling does not need to do any further analysis for the purpose of determining compliance with this factor. For example, recycling that takes place under the closed loop recycling exclusion at §261.4(a)(8) is an example of manufacturing that consistently includes the hazardous secondary material being returned to the original process from which it was generated and that would therefore automatically meet legitimacy factor 4 of §260.43. Another example includes primary metals production where hazardous secondary materials are returned to the production process to ensure that all the valuable metals are extracted from the ore. This would be another process that would meet legitimacy factor 4 of §260.43 with no further analysis needed.

**XV. IPCB should clarify what would be included in the scope of “widely-recognized commodity standards and specifications”.**

Dow requests IPCB provide the following guidance in §720.143 Board Notes or create a new definition in §720.110 on what constitutes “widely-recognized commodity standards and specifications.”

A. For the purposes of §260.43(a)(4)(i)(B), widely-recognized commodity standards and specifications include those standards and specifications that are publicly available; e.g., in safety data sheets (SDSs), on-line vendor specifications, sales literature, and the like. Dow considers the following scenarios to be valid comparisons for the purpose of §260.43(a)(4)(i)(B):

1. the hazardous secondary material that is being recycled directly (i.e., without reclamation) as compared to the virgin raw material or ingredient that the hazardous secondary material is replacing;
2. the hazardous secondary material after reclamation that is being recycled as compared to the virgin raw material or ingredient that the reclaimed hazardous secondary material is replacing;



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3. the product/intermediate that results from recycling the hazardous secondary material as compared to the product/intermediate that results from using the virgin raw material or ingredient that the hazardous secondary material is replacing;
  4. the product/intermediate that results from recycling the hazardous secondary material as compared to a substitute product/intermediate that is made without the hazardous secondary material by a different company or by the same company at a different site or through a different process.
- B. If a chemical product made from a hazardous secondary material has no analogous product made from raw materials, the fourth legitimacy factor is met if the product meets widely recognized standards (§260.43(a)(4)(ii)(A)). For example, recycled methanol that is integrated into the production of a certain polymer when that polymer is a recognized commodity, or oil-bearing secondary materials used to make petroleum products.

**XVI. IPCB should clarify that a facility could reorder the steps for review for legitimacy factor 4 presented in 260.43(a)(4)(i) & (ii).**

Dow requests that IPCB clarify in §720.143 Board Notes that a facility could switch the order for review of legitimacy factor 4 of (i)-(analogous) and (ii) – (return to the generator and commodity specifications) to help the generator more effectively determine if it meets one of the simpler criteria before undertaking more complex reviews. This clarification does not change the stringency of the requirements simply the order

**XVII. IPCB should clarify when legitimacy factor 4 determination is completed.**

Dow requests that IPCB clarify in §720.143 Board Notes that the product of the recycling process is comparable to a legitimate product or intermediate if the requirements of paragraph (a)(4)(i) or (ii) or (iii) of this section (260.43(a)(4)) are met. Once the requirements of one of these subparagraphs are met, there is no need to determine whether the requirements of any other of these subparagraphs are also met



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**XVIII. IPCB should clarify what is meant by “Pre-2008 Exclusions”.**

Dow requests that IPCB clarify in an appropriate Board Note or as a definition that for pre-2008 Exclusions this means the exclusions from the definition of solid waste and hazardous waste exemptions in effect prior to EPA’s 2008 promulgation of revisions to the definition of solid waste to exclude certain hazardous secondary materials from hazardous waste regulation in 73 Fed. Reg. 64668, et seq., October 30, 2008, effective December 29, 2008.

**XIX. Support of removing the term “land-based units” from 721.104(a)(23).**

Dow supports the removal of the term “land-based units” from 721.104(a)(23). Keeping this term as written would severely restrict its scope, thus ability of the regulated community to use it.