



Early Stakeholder Outreach — Beneficial Use: The “Co-Product” Concept

Ohio EPA invites stakeholder input on a concept intended to distinguish between the beneficial use of an industrial by-product versus the production of a product (co-product).

Why is the Agency seeking Early Stakeholder Outreach?

There is increasing interest in the beneficial use of industrial by-products currently disposed of in landfills. The Agency has been working with stakeholders since 2012 to explore development of rules and procedures for beneficial use of industrial by-products to replace the current Integrated Alternative Waste Management Project (IAWMP) and Land Application Management Plan (LAMP) processes. For information regarding this effort, please see the Early Stakeholder Outreach tab of the [DMWM Rules webpage](#).

Several stakeholders suggested there be recognition within the regulatory system that:

*“...certain industrial by-products **are not “wastes”** and are therefore exempt or excluded from further regulation. These materials include thosethat are not “unwanted” by the generator and are sold in a commercially reasonable manner in the stream of commerce.”*

Up to this point in time, the Agency’s consideration of a comprehensive regulatory beneficial use program focused on the beneficial use of nonhazardous secondary materials or by-products and the circumstances of use under which such materials were no longer considered wastes. The Agency is now turning attention to the stakeholders’ suggestion that nonhazardous secondary materials sold in a commercially reasonable manner in commerce are not wastes; in essence, these secondary materials should be viewed as products.

What input is the Agency seeking?

To facilitate exploration of this suggestion, stakeholders are invited to provide suggestions and give input regarding the attached document “*Concept Paper: Co-product under ORC Chapter 3734*”.

To facilitate stakeholder consideration of this concept, the Agency will host a stakeholder meeting between 1:00 to 3:00 pm on May 21, 2014. Participation is available by WebEx or by meeting attendance at Ohio EPA’s Columbus office. To ensure that we have facilities to accommodate participation and allot meeting time appropriate to areas of stakeholder interest, please register on-line at <https://www.surveymonkey.com/s/5-21-14BUmeeting>. Please indicate the document of interest, provide the number of participants, email addresses, and whether attending the meeting or participating by WebEx no later than May 14, 2014.

How can I provide input?

The Agency is seeking stakeholder input on the proposed concept included in this document.

When preparing your comments, be sure to:

- explain your views as clearly as possible;
- describe any assumptions used;
- provide any technical information and/or data used to support your views;
- provide specific examples to illustrate your views; and
- offer suggestions and alternatives.

Written comments will be accepted through close of business June 9, 2014. Please submit input to:

Michelle Braun

P.O. Box 1049

Columbus, OH 43216-1049

michelle.braun@epa.ohio.gov

What if I have questions?

Please contact Dan Harris at 614-728-5377 or daniel.harris@epa.ohio.gov.

What's the next step?

After the comment deadline, Ohio EPA will evaluate the input and facilitate additional stakeholder engagement as needed to further explore the concept.

How can I track the Agency's consideration of this concept?

Stakeholders are encouraged to sign up for the Agency's electronic mailing list which provides automatic updates about various topics. Registered users of the Beneficial Use mailing list will receive progress updates and be notified when new information is posted. To sign up, go to ohioepa.custhelp.com/ci/documents/detail/2/subscriptionpage.

Concept Paper: Co-product under ORC Chapter 3734

Division of Materials and Waste Management

Background: Ohio's current nonhazardous waste management rules do not establish a mechanism for recognizing when an item, which is no longer useful for its initial intended purpose, or a nonhazardous secondary material generated from an industrial process may have commercial value to the generator of the material for reuse, recycling, or other purposes. In addition, current rules do not establish a method for recognizing when a secondary material that is not utilized by the generator may still have commercial value to another party. DMWM is considering developing a comprehensive regulatory beneficial use program intended to acknowledge when secondary materials have commercial value to generators or third parties in order to avoid regulating such materials as "wastes" requiring appropriate disposal.

The purpose of this CONCEPT PAPER is to continue the exploration of concepts with stakeholders for future program development. The concepts expressed in this paper are not complete, have not been thoroughly reviewed by Ohio EPA, and are subject to change. The discussion is not intended to be a description of any existing regulations or represent any final position of Ohio EPA.

Regulators often work from a historically-based presumption that secondary materials that are not the intended product resulting from an industrial or manufacturing process have no intrinsic market value or direct use. Observations often reinforce and make obvious this presumption that such secondary materials are not a product. Management of a secondary material for further processing to reclaim or recycle¹ some attribute of the material for its value is demonstration that the material itself is not a product. Speculative accumulation is an indicator of low secondary material value. Failure to manage the secondary material in a manner that retains the material's value is a strong indicator that the secondary material is a waste. Illegal disposal of waste² is often evidenced as placement on the land or into waters, burning, abandonment, or discard.

The Division of Materials and Waste Management (DMWM) acknowledges that many industrial or manufacturing facilities are seeking to become "zero landfill" or "sustainable" operations by focusing on reclaiming a material's secondary value or locating and developing direct uses of previously disposed materials. There are companies that seek to reclaim the value of secondary materials or market secondary materials for different direct uses. The increasing recognition that our regulatory approach needs to adjust has been the initiative of Ohio EPA's on-going discussion with numerous stakeholders regarding a beneficial use program. This paper describes another concept for exploration as part of the overall development of a beneficial use

program. A secondary material may contain its own inherent unique value, be further used in commerce and, in some incidences, come to be considered product-like. For the purposes of discussion, it is referred to here as the “co-product” concept.

The “Co-product” concept: Several stakeholders suggested there be recognition within the regulatory system that:

*“...certain industrial by-products **are not “wastes”** and are therefore exempt or excluded from further regulation. These materials include thosethat are not “unwanted” by the generator and are sold in a commercially reasonable manner in the stream of commerce.”*

Up to this point in time, DMWM’s consideration of a comprehensive regulatory beneficial use program focused on the beneficial use of nonhazardous secondary materials or by-products and the circumstances of use under which such materials were no longer considered wastes. DMWM is now turning attention to the stakeholders’ suggestion that nonhazardous secondary materials sold in a commercially reasonable manner in commerce are not wastes; in essence, these secondary materials should be viewed as co-products³.

First, what is a Product? When one thinks about the general characteristics of a product, a number of aspects come to mind. These may include:

- The product serves a recognized and demonstrable purpose(s);
- The product is produced from a designed industrial/manufacturing process in which input materials and product quality is monitored and controlled;
- The product has to meet established product specifications and quality control standards;
- The revenue generated from the sale of the product helps sustain the economic viability of the company;
- The quality and integrity of the product is protected from deterioration and is maintained during handling, storage and transportation;
- The product is secured from theft;
- Sale of the product is available to the general public;
- Product safety and limitations have been evaluated/investigated;
- The product has established use and precaution warnings;
- Product adverse impacts to human health and the environment have been evaluated and are known,
- Product rejection rate is low; and
- The producer insures the product inventory.

It is product aspects, like those listed above, that DMWM could use to build a regulatory mechanism by which a nonhazardous secondary material can be classified as a co-

product. However, such a classification would not render the co-product immune from being classified as a waste should circumstances warrant such a conclusion. Any product can become a waste; the switch in classification is evident by the actions of the product owner. A product becomes a waste when it is no longer wanted by the owner as evidenced by the management of the material. Indicators that the product has become unwanted include: it is abandoned, discarded, burned for destruction, disposed, thrown away, dumped, used in excess, inappropriately used, stored in excess or for an extended length of time or used in a manner that imparts no value.

Co-product demonstration: A co-product is more than a nonhazardous secondary material that might or could be used in a specific application or a material that is used in a limited amount as compared to the large amounts generated annually. A co-product is, in essence, a quality market valued material managed as a valued commodity not unlike the primary product of the industrial/manufacturing process. It is a demonstrated valued commodity evidenced by its management and use.

The concept involves recognition of the demonstration or vigorous dismissal, as necessary, when facts prove disposal, discard, or insufficient utilization of the material is occurring. Under the concept, the material simply is not a waste.....yet. At some point, the value of any product, commodity or co-product may be spent or simply devalued. It then fails to meet this concept's performance standards and becomes a waste.

DMWM suggests that the criteria for demonstrating a nonhazardous secondary material should be classified as a co-product should be set high. The criteria for the demonstration would be established in rule. The concept is that a provider (which may be envisioned as the first person who presents the material as a co-product to the general public) conducts an assessment to demonstrate that the nonhazardous secondary material is a co-product. Below are possible criteria or documentation the provider of a nonhazardous secondary material should meet in order to make the co-product demonstration.

- Discussion of the type and use(s) of the co-product;
- Discussion of the historic use(s) and management of the co-product;
- Explanation of the useful purpose(s) of the co-product;
- The degree to which the market for the co-product is guaranteed;
- The amount of co-product generated each year by the producer compared to the amount of nonhazardous secondary material sold each year;
- Projected annual co-product rejection rate;
- The estimated amount of co-product sold annually and the estimated annual revenue received;

- How the co-product production process is monitored and controlled to ensure that accepted co-product quality and material specifications are met;
- How the co-product is managed and stored to preserve and protect material integrity and material specifications;
- The degree of further processing the co-product requires after generation and prior to sale;
- How the co-product is managed and stored to minimize release to the environment;
- The concentration of each constituent reasonably expected to be present in the nonhazardous secondary material that may be harmful to human health and the environment; and
- Other relevant information.

Implementation and programmatic components: DMWM offers the following initial thoughts for discussion on how this concept might be implemented.

- Since the nonhazardous waste management system is focused on disposal facilities and prevention of open dumping and burning, the co-product demonstration process would apply to co-products placed into a body of water or onto the ground, and burned in an open area or type of chamber not otherwise authorized in rules. Other uses of co-products, such as use in other manufacturing processes or recycled would not need to conduct a co-product demonstration⁴.
- The co-product demonstration may be provider and co-product specific and mostly self-implementing by the provider of the co-product. The provider may be the person who first claims and represents the nonhazardous secondary material as a co-product to another person or the general public. Also, the provider may be the actual producer of the nonhazardous secondary material or a distributor.
- The provider would need to notify DMWM of its determination and submit documentation demonstrating how all co-product criteria are met in its situation. DMWM is thinking that the provider would not need to wait for a DMWM response or obtain any acceptance or approval prior to the use of the co-product. No DMWM approval would be necessary since it is neither an exemption nor exclusion but an assertion established under rule that the material is a co-product. However, DMWM would have the ability to object to the assertion or request additional information. Furthermore, the provider has an ongoing responsibility to ensure that attainment of the co-product criteria is continuously maintained.
- The management and handling of the material is subject to all applicable federal, state and local rules. Ohio EPA would retain the enforcement authority to cite

violations of open dumping or open burning based on observations of the actual handling of the material regardless of a co-product determination.

- The co-product demonstration would only apply to nonhazardous secondary materials. This is because Ohio's hazardous waste rules have a long established recycling program, including an informal co-product approach, for classifying a hazardous secondary material as not being a waste.
- Eligible nonhazardous secondary materials are those generated from an engineered manufacturing/industrial production process that is monitored and controlled such that the secondary material quality and specification can be maintained. *[While material of uncertain or unmaintained quality would not be a co-product, by-product beneficial use authorization by permit or rule may be an option.]*
- With regards to product safety, it is the responsibility of the co-product provider to evaluate and document the safety of the product. Ohio's product liability laws would apply to the co-product and those who distribute it in the same manner as any other product. DMWM would not evaluate the product for safety or personal harm issues. However, we would question the use of a nonhazardous secondary material that contained harmful constituents not expected to be present in a similar product or contained constituents at levels greater than a similar product. DMWM's potential screening of the constituents in the co-product is only a general evaluation of probable harm the product may impose on human health and the environment and not an evaluation of product safety.

New Terms: Several new terms have been introduced in this paper to help present this concept of "Co-product." Below are DMWM's meanings of these terms as used in this paper.

- Secondary material is any material that is not the primary product of a manufacturing or commercial process, and can include post-consumer material, off-specification commercial chemical products or manufacturing chemical intermediates, post-industrial material, and scrap that has yet to be identified as a solid, hazardous, industrial or other waste, or a co-product.
- Nonhazardous secondary material is a secondary material that, when unwanted, would not be identified as a hazardous waste.
- Hazardous secondary material is a secondary material that, when discarded, meets the definition of a listed or characteristic hazardous waste as defined in OAC rule 3745-51-03.

- Co-product means a nonhazardous secondary material that is manufactured along with a different product and meets the expectations of a product by being saleable, revenue producing, quality controlled and protected from loss.
- By-product means a nonhazardous secondary material that is historically undesirable and commonly disposed; it has limited potential for use; it is generated in amounts that exceed the amounts that can be used or it requires significant processing in order to be used.

Join the discussion: You are welcomed to follow and participate in the discussion on the development of a beneficial use regulatory program by:

- ✓ Accessing Ohio EPA's [early stakeholder outreach page on beneficial use](http://www.epa.state.oh.us/dmwm/dmwmnonhazrules.aspx) at: <http://www.epa.state.oh.us/dmwm/dmwmnonhazrules.aspx>.
- ✓ Signing up for [listserv notification of available beneficial use information](http://ohioepa.custhelp.com/ci/documents/detail/2/subscriptionpage) at: <http://ohioepa.custhelp.com/ci/documents/detail/2/subscriptionpage>.
- ✓ Participating in Ohio EPA scheduled stakeholder WebEx meetings (listserv notice is given on upcoming meetings and posted on the [early stakeholder outreach page on beneficial use](http://www.epa.state.oh.us/dmwm/dmwmnonhazrules.aspx)).
- ✓ Contacting DMWM to ask questions or share perspectives. For the "Co-product" concept, you may contact Dan Harris at 614-728-4819 or Daniel.harris@epa.ohio.gov or Karen Hale at 614-644-2927 or Karen.hale@epa.ohio.gov.

¹Recycling as used in the solid waste program is defined in the context of established recycling commodity markets as reconstituted materials, such as: metal, paper, plastics, etc. Placement of materials into a body of water or onto the ground and burning in an open area or type of chamber not otherwise authorized in rules and claiming it is recycling is not the intended concept and would likely be presumed as disposal. [Reference: OAC 3745-27-01(R)(1).]

²Ohio Revised Code 3734.01(E) defines solid wastes "...means such unwanted residual solid or semisolid material as results from industrial, commercial, agricultural, and community operations, excluding...".

³The concept of a co-product is distinct from that of a by-product. DMWM has been discussing concepts for a beneficial use by-product regulatory program with stakeholders since before 2011. While a by-product can be useful and marketable, it may often be managed and disposed as a waste. In a general sense, a by-product might be distinguished from a co-product in that a by-product is a secondary product derived from a manufacturing process, treatment process, or chemical reaction that is not the primary product or service being produced. A by-product is an output that is minor in quantity or value when compared to the main products. By-products typically are not inventoried or separately accounted for and reported as income. The markets for a by-product may be insufficient to use the quantity being produced with the consequence that the material is otherwise managed and disposed.

⁴The current solid waste regulatory system was established to ensure the proper disposal of wastes and prevent unregulated disposal such as open dumping and open burning. Therefore, a clear focus is to prevent the placement of solid wastes into a body of water or onto the ground and burning in an open area or type of chamber not otherwise

authorized in rules. It is when secondary materials generated from an industrial process are placed into water, on the ground, or burned, that the questions of open dumping and open burning arise. This is particularly an issue when the perception may be that the secondary material is generally being managed as a waste and disposed at licensed solid waste disposal facilities. [References: ORC 3734.01(F) "Disposal"; ORC 3734.01(H) "Open burning"; and ORC 3734.01(I) "Open dumping.]"

Draft Concept