

Atlanta Environmental Management, Inc.

Newsletter



Solid Waste Definition Revised to Encourage Recycling

U.S. EPA, Washington, D.C.
(Oct. 7, 2008)

A final rule under the Resource Conservation and Recovery Act streamlines regulation of hazardous secondary materials when they are recycled by reclamation. EPA's regulation maintains strong protection of human health and the environment by limiting the streamlined requirements to specific, legitimate recycling activities.

This rule establishes two self-implementing exclusions from the definition of solid waste for certain hazardous secondary materials that are legitimately recycled. One exclusion streamlines management requirements for hazardous secondary materials legitimately reclaimed under the control of the generator. The other exclusion streamlines requirements for hazardous secondary materials that are transferred for legitimate reclamation, pro-

vided certain conditions are met. The rule also contains a procedure for applying for a case-by-case non-waste determination. Finally, the rule also includes provisions for assessing the "legitimacy" of hazardous secondary material recycling practices under the new exclusions.

The rule excludes materials from the federal hazardous waste system that are:

- generated and legitimately reclaimed under the control of the generator
- generated and transferred to another company for legitimate reclamation under specific conditions, or determined by EPA or an authorized state to be non-wastes on a case-by-case basis via a petition process.

The rule also contains a provision to determine which recycling activities are legitimate under the new exclusions and

non-waste determinations. These exclusions are not available for materials that are considered inherently waste-like or that are used in a manner constituting disposal or are burned for energy recovery.

With regard to recycling, the existing definition classifies some materials, but not others, as wastes when they are recycled. This final rule is intended to modify the existing definition to exclude some additional hazardous secondary materials that are recycled from being regulated as solid (and therefore hazardous) wastes. The rule also contains provisions for assessing the "legitimacy" of hazardous secondary material recycling practices under the new exclusions.

If you have any questions regarding this final rule, please contact Janet Hart or Leona Miles at AEM at tel. (404) 329-9006.

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EPA Seeks Additional Review, Extends Effective Date of Oil SPCC Requirements

Washington, D.C.
(Jan. 30, 2009)

Consistent with the Office of Management and Budget's January 21, 2009, memorandum regarding regulatory review, EPA is extending by 60 days the effective date of the December 5, 2008, Oil Spill Prevention, Control and Countermeasure (SPCC) final rule.

The amendments will now become effective on April 4, 2009.

On December 5, 2008, EPA published in the Federal Register a rule to amend the SPCC regulations. The regulations contain requirements for oil spill prevention, preparedness, and response to prevent oil discharges to navigable waters and adjoining shorelines. Through the December regulation, EPA sought to encourage greater compliance with the

SPCC regulations by clarifying regulatory requirements, tailoring requirements to particular industry sectors, and streamlining certain requirements for facility owners or operators subject to the rule.

In addition to extending the effective date, EPA is also providing a 30-day public comment period for the December 5, 2008, SPCC final rule. Although the agency will accept public comment on all aspects of this rule, EPA is particularly interested in comment on the requirements for produced water containers at oil production facilities and the criteria for identification of qualified oil production facilities eligible to self-certify their SPCC plans. In addition, EPA is requesting public comment on the 60-day extension of the effective date of the December 5, 2008, final rule. Comments are

due 30 days after the date of publication in the Federal Register.

The agency is also reviewing the dates by which owners or operators of facilities must prepare or amend their SPCC plans and implement the plans. EPA intends to address these compliance dates in a separate notice.

Neither this extension nor the December 5, 2008, final rule removes any regulatory requirement for owners or operators of facilities that were in operation before August 16, 2002, to maintain an SPCC plan in accordance with the SPCC regulations.

For more information about SPCC regulations see <http://www.epa.gov/emergencies/spcc>

Technology Section: Constructed Wetlands for Water Treatment

The use of constructed wetlands, often referred to as "engineered wetlands," was initially developed for municipal wastewater treatment. Over the years, the design and operation of constructed wetlands has expanded to include the treatment of mine drainage, agricultural wastewater, industrial wastewater, storm water run-off, landfill leachate, and airport run-off. Although this is a viable technology, and often is the most cost-effective, the success of a constructed wetland is dependent on site-specific factors such as hydrology, native plant species, seasonal temperatures, and the optimum conditions for the efficient removal of contaminants in waste or surface water. Under the right conditions, constructed wetlands have been shown to be effective in removing organic and inorganic contaminants. The relatively inexpensive and passive nature of wetlands provides an often attractive cost-effective alternative for environmental remediation projects.

A successful constructed wetlands project is highly dependent on site-specific conditions that will vary from site to site. Treatment of municipal waste streams is usually designed to address the treatment, or mass reduction, of suspended solids, organic matter, pathogens, phosphates, and ammonia and organic nitrogen. Other types of wastewater may require treatment of the same contaminants in addition to other organic compounds or metals. In many cases a design may be based on a well characterized effluent including volume and waste stream loading. Other designs may be based on variable flow rates and effluent concentrations.

In many cases, a constructed wetland may be designed for one specific compound or substance, such as airplane de-icer fluid. The design of other systems, such as those intended for storm water run-off, may have to consider the potential for receiving a mixture of contaminants, with variable volumes of flow depending on the season of the year.

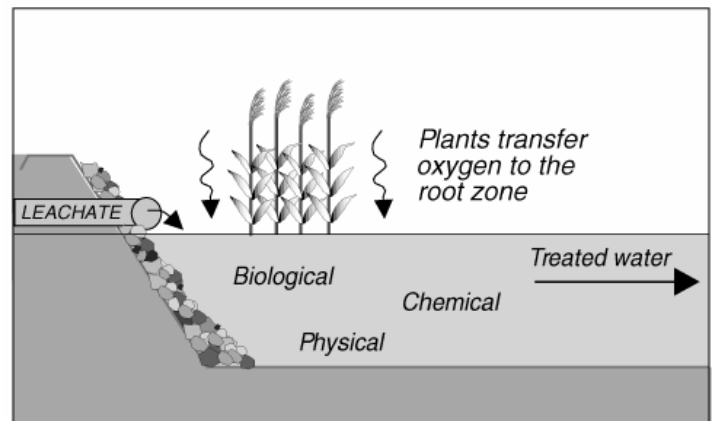
Constructed wetlands remove contaminants from wastewater or surface water through several mechanisms including sedimentation, microbial degradation, precipitation, and plant uptake. These processes are generally sufficient to remove most contaminants. Metals in a wetland may be sorbed to wetland soil or sediment, or they may be chelated or complexed with organic matter. Metals can precipitate out as sulfides and carbonates or may be uptaken by plants. Compounds in sediment, such as iron oxides, exhibit a preference for certain metals and can affect how efficiently a metal is adsorbed. Once a system has reached the limits of its adsorption capacity, removal rates will be greatly reduced for this process. However, after a system has reached its capacity for metal sorption, metal sulfide formation becomes the main method of metal removal. Sulfate-reducing bacteria oxidize organic matter and reduce sulfate to form hydrogen sulfide. Hydrogen sulfide reacts with metals to form metal sulfides, which precipitate. Compared to sediments, the uptake of metals by plants is not significant, but plants do support oxygenation and microbiological processes that contribute to metals removal.

Microorganisms in constructed wetlands degrade organic compounds through biodegradation. Organic compounds in the wastewater provide energy for microorganisms. Some organics are also degraded by plant uptake, and organics can sorb onto surfaces in the wetland, usually to plant debris. Organic compounds containing nitrogen sorb to surfaces in the wetland, and organic nitrogen is converted to ammonia. Ammonia can volatilize, can be exchanged with other cations in sediment, or can be

nitrified if oxygen is present. Nitrate is the form of nitrogen taken up by plants, so emergent plants use it during the growing season. Excess nitrate in an anaerobic system is reduced to N_2 and N_2O gases as a result of denitrification, which is the main mechanism of nitrate removal.

There are many factors that affect the ability of a constructed wetland to effectively remove contaminants, such as temperature and fluctuations in flow. Colder conditions reduce the rate at which a wetland is able to treat contaminants, and severe cold weather may render the wetland ineffective for treatment during some periods of the year. The effectiveness of a wetland can also be reduced if heavy flows overload the removal mechanisms in a wetland, and extreme dry conditions can damage plants that are the foundation of the wetland treatment concept. Alternative designs that incorporate these factors have been used to construct wetlands in a variety of climates.

Some constructed wetlands eventually reach their maximum level of effectiveness, and contaminants build up. The wetland will then be capable of only a very low level of treatment, and contaminants from wastewater may pass through the system. Thus it may be necessary to dredge the contaminated substrate and reconstruct the wetland.



Conceptual Wetland Treatment of Leachate

Testing effluent water from a wetland system is necessary in order to demonstrate the effectiveness of the system to remove contaminants and, in some cases, for regulatory compliance. Water from a constructed wetland treatment system cannot be discharged to waterways if it does not meet the required regulatory standards. In some cases, the constructed wetlands act as holding ponds for storm water overflow, which is then discharged into the natural watershed over time. Wetlands are often constructed adjacent to an existing stream or creek, which may be heavily polluted from years of receiving contaminated water. Clean discharge into these waterways is a crucial component to their restoration. Other constructed wetlands may be the final destination of wastewater, which will either evaporate or seep into the groundwater.

The design of constructed wetlands varies greatly in technique and in regard of site-specific conditions. If you have questions regarding the use of this technology, in general or for a specific application, please call Jeff Cook or Victor Owen at AEM at tel. (404) 329-9006 or contact them by e-mail at jeff-cook@aem-net.com or vowens@envrg.net.

Direct Final Rule on All Appropriate Inquiries

EPA published a direct final rule recognizing ASTM International's E2247-08 "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process for Forestland and Rural Property" as compliant with the All Appropriate Inquiries Regulation and allowing for its use to satisfy the statutory requirements for conducting all appropriate inquiries under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Amendment to Standards and Practices for All Appropriate Inquiries under CERCLA was published in the Federal Register on December 23, 2008 (Volume 73, Number 247).

EPA took direct final action to amend the Standards and Practices for All Appropriate Inquiries to reference a standard practice recently made available by ASTM International. This direct final rule amends the All Appropriate Inquiries Rule to reference ASTM International's E2247-08 "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process for Forestland or Rural Property" and allow for its use to satisfy the statutory requirements for conducting all appropriate

inquiries under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

This rule is effective on March 23, 2009, without further notice, unless EPA received adverse comment by January 22, 2009.

This action offers certain parties the option of using an available industry standard to conduct all appropriate inquiries at certain properties. Parties purchasing large tracts (greater than 120 acres) of forested land and parties purchasing large rural properties may use the ASTM E2247-08 standard practice to comply with the all appropriate inquiries requirements of CERCLA. This rule does not require any entity to use this standard. Any party who wants to claim protection from liability under CERCLA may follow the regulatory requirement of the All Appropriate Inquiries Final Rule at 40 CFR Part 312 or use the ASTM E1527-05 Standard Practice for Phase I Environmental Site Assessments to comply with the all appropriate inquiries provision of CERCLA.

Entities who are potentially affected by this action, or who may choose to use the newly referenced ASTM standard to

perform all appropriate inquiries, include public and private parties who, as bona fide prospective purchasers, contiguous property owners, or innocent landowners, are purchasing large tracts of forested lands or large rural properties and intend to claim a limitation on CERCLA liability in conjunction with the property purchase. In addition, any entity conducting a site characterization or assessment on a property that consists of large tracts of forested land or a large rural property with a brownfields grant awarded under CERCLA section 104(k)(2)(B)(ii) may be affected by this action.

With this action, EPA is establishing that parties seeking liability relief under CERCLA's landowner liability protections, as well as recipients of brownfields grants for conducting site assessments, will be considered to be in compliance with the requirements for all appropriate inquiries, as required in the Brownfields Amendments to CERCLA, if such parties comply with the procedures provided in ASTM E2247-08, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process for For-

estland or Rural Property." EPA determined that it is reasonable to promulgate this clarification as a direct final rule that is effective immediately, rather than delay promulgation of the clarification until after receipt and consideration of public comments.

The Agency notes that there are no significant differences between the regulatory requirements and the two ASTM standards. To facilitate an understanding of the slight differences between the All Appropriate Inquiries Final Rule, the ASTM E1527-05 Phase I Environmental Site Assessment Standard, and the ASTM E2247-08 "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process for Forestland or Rural Property," as well as the applicability of the E2247-08 standard to certain types of properties, EPA developed, and placed in the docket for today's action, the document "Comparison of All Appropriate Inquiries Regulation and ASTM E2247-08 Phase I Environmental Site Assessment Process for Forestland or Rural Property." The document provides a comparison of the federal regulation and the two ASTM standards.

EPA Moves Compliance Date for Aerosol Coatings Final Rule

In the December 24, 2008, Federal Register (Volume 73, Number 248), the U.S. EPA published a final rule revision that withdrew the direct final rule published on November 7, 2008.

The final rule moves the compliance date for aerosol coatings from January 1, 2009, to July 1, 2009, and requires that initial notification reports will be due on the compliance date, as opposed to 90 days in advance of the compliance date. These changes are necessary to allow EPA time to conduct rulemaking

to add compounds (and their associated reactivity factors) that are currently used in aerosol coatings but were not included on the list in Table 2 of the rule as promulgated on March 24, 2008, and to allow regulated entities sufficient time to develop initial notification reports based on the revised tables. Furthermore, making initial notification reports due on the compliance date will result in the aerosol coatings rule being more consistent with the requirements of other 40 CFR Part 59 rules,

thereby increasing clarity and avoiding confusion on the part of regulated entities. Finally, as discussed above, the rule as modified by today's action makes no substantive changes to the levels of control afforded by the March 24, 2008, rule.

The entities potentially affected by this proposed rule are the same entities that are subject to the Aerosol Coatings final rule. The entities affected by the Aerosol Coatings final rule include manufacturers, processors, distributors, importers of aerosol coatings for sale

or distribution in the United States, and manufacturers, processors, distributors, or importers who supply the entities listed above with aerosol coatings for sale or distribution in interstate commerce in the United States.

If you have any questions regarding the movement of the compliance date or requirements of the final rule related to aerosols, please contact Janet Hart or Leona Miles at AEM at tel. (404) 329-9006 or by e-mail at janet-hart@aem-net.com.

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AND ENGINEERING PROBLEMS!
PLEASE GIVE US THE
OPPORTUNITY TO WORK WITH YOU.**

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ABOUT US ...

AEM is a small, woman-owned business founded in 1988. Janet Hart, who has been President since 1988, continues to manage day-to-day operations that have led to our significant growth since inception and our continued success in the environmental market. Although company growth is an objective, it is our philosophy that growth is secondary to client service and quality. Put simply, the company's primary loyalty is to its clients, not to the growth of the company, unless growth provides for better client service. Building strong and lasting relationships with our clients is the most important thing that we can do to achieve our goals and ensure our future success.

AEM is committed to providing high-quality, cost-effective environmental services with a primary goal of client satisfaction. One quality that sets AEM apart from the competition is the personalized service and attention given to clients—the direct response to our clients' needs in a timely manner. We continuously work to improve the quality of our services to our clients.

AEM actively supports a number of charities including Doctors Without Borders, the U.S.O., the Antares Orphan Foundation, the Humane Society of the United States, and the Society for the Prevention of Cruelty to Animals.

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