ARIZONA DEPARTMENT
OF
ENVIRONMENTAL QUALITY

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Waste Programs Division – Solid Waste Rule Development Process
Stakeholder Workshop on Articles 9 and 8
February 5, 2008

NOTES

A stakeholder workshop to obtain input and review possible modifications to articles 9 and 8 of the draft Solid Waste Rule was held on February 5, 2008. The workshops was conducted using the draft rule text dated 9-10-07. The draft rule text can be found at: http://www.azdeq.gov/environ/waste/solid/download/swrule_091007.pdf

The stakeholder comments are noted below. Italicized comments were recorded from comment cards and other written comments submitted by stakeholders. A list of attendees is attached to this document.

Overview of Article 9
Martha Seaman reviewed possible draft rule text changes made in response to stakeholder input regarding Articles 9. Draft language and changes under consideration are provisional during informal discussions such as these; all rule language is subject to the decisions that need to be made before formally proposing the rule.

Presentation highlights and information from agency staff members included:

- Article 9 includes changes that parallel changes made in other articles.
- In choosing a definition for composting, language used in other jurisdictions was considered.
- We added a definition for in-vessel processing.
- The liquid waste definitional change reflects the need to consider only solid waste.
- It is not the intent for the definition of composting to include wastewater treatment. Wastewater treatment is exempt from solid waste.
- We have added and clarified exemptions in R18-13-901(C).
- We would appreciate suggestions for a definition of mulching.
- Typically, concerns arise regarding moving the waste off-site to be handled.
- Learning sites and flood plains will be addressed at the end of this process.
- Some language is written to address the fact that no permit is needed in some cases.
- We will fully review ARS § 49-701(29)(m) to determine whether all agricultural products are exempt from being considered solid waste.
- In line two of R18-13-903(A)(2) we will change the language to “sewage sludge” using ARS § 49-255 as the source for the definition.

- Biosolids include sewage sludge so long as they do not contain hazardous waste and other similar items.
- The changes made to "workpad" in R18-13-903(A)(3) will appear throughout the rule.

Stakeholder comments and questions follow.

Definitions

- Composting – Insert "anaerobic" before biological.
- Composting – Seems to cover wastewater treatment. Not all wastewater treatment is exempt from solid waste.
- Composting – *In the State of Ohio, there are 4 classifications for compost. Class 1 is for MSW compost and Class 2 includes food waste and sewage sludge. I currently operate a Class 1 facility using a windrow style operation. We compost "fines" which are items in the waste stream 2" in size of smaller. In our case, "fines" are mixed with coarsely ground wood and yard waste. It is currently the only Class 1 facility in the State. We received a waiver to exclude a building as Ohio's regs too contemplated in-vessel or in-building type facilities. This site has been in operation since about 1998 and has always operated in compliance. Currently, the OEPA is actually trying to encourage the construction and operation of more class 2 facilities. Most if not all of the class 2 facilities are windrow style. Most of the regulatory and industry standards that I see relate to compost product quality. From my experience, windrow size for MSW, food waste, or sewage sludge compost operations should not exceed a size of 7' high by 14' wide. When the windrows get too big, it becomes difficult for air to convect through the windrows causing them to go anaerobic and create an ammonia-like odor. The compost pad should be hard surface and have proper slope and drainage so as to prevent ponding water; another source of odor as well as water infiltration, or water run off. Last, some quantity of finished compost or additional bulking material such as course wood should be maintained on site to be combined in the windrows if required as a biofilter or bulking agent to reduce odors. Please understand that a poorly run windrow style compost facility that receives only yard waste such as grass and leaves can have very foul odors and cause problems (i.e. Lake County, Illinois) while a well-run windrow style compost facility using MSW or sewage sludge can operate without problems or public outcry. Likewise, a poorly run in-vessel system can be odiferous as well (Portland, Oregon).*
- In-vessel processing – There are a number of facilities that do not require in-vessel processing. This is a very expensive requirement.
- Liquid waste – Liquid waste may include only one cup of liquid.
- Sewage sludge composted indoors must meet aerobic conditions for composting.
- There is a problem in defining solid waste to include liquids, and defining liquid waste to contain solid waste. A solution might be to exclude the treatment of liquids.

Article 9

- *Which facilities are plan approval and which ones are self-cert under Article 9? No matrix for article 9.*
- *Where would composting at Community Gardens fit in this regulatory scheme?*

- *My concern with the draft compost regulations is what seems to be a requirement that Municipal Solid Waste be composted only in-vessel. I have toured countless facilities in Europe and also in the US that compost portions of the MSW stream that successful compost using a windrow system. Odors and vectors are well controlled as are storm water run-on and run-off. Normally in Europe, the design factor that dictates in-vessel vs. windrow is rainfall. If rainfall is greater than 1500mm per year, the compost facility is placed under roof. Less than 1500mm per year does not require a roof.*

Section
R18-13-901

- I agree with the language regarding processing vegetative waste into mulch.
- The Carbon-Nitrogen ratio defines mulch vs. compost. A CN ratio of less than or equal to 16:1 is compost. A CN ratio greater than this ratio is mulch. Mulch is a state of maturity of the pile. BBC offers information on this subject.
- The city of Phoenix does chipping and grinding of vegetative waste and pallets. We would like to be able to mulch pallets and used lumber.
- ADOT specifies a 20:1 ratio. 16:1 might be too restrictive. There are varied viewpoints regarding the use of the CN ratio as the defining item.
- I would hate to see a specific ratio included in rule. This could lead to additional testing costs.
- The language here on vegetative waste would address the concerns of the Arizona Nursery Association.
- *We believe that agriculture is still exempt from your rule making process, however, if we are mistaken or if it is the committees intention to change that exemption please explain that to us.*

R18-13-901(A) – There is no provision for post-closure financial assurance.

R18-13-901(C)(8)

- Is there a definition of feedstock? What does this include – manure, dead animals?
- This would be a concern to the county.
- Because there is no feedstock available in some areas, it must be railed in. I don't want this to limit our ability to compost.
- Suggest changing the "and" to "or" after "generated."
- Isn't this a product when used, not a waste?
- If it is sold, or has economic value, it is a product.
- Some growers can utilize raw manure, while others must use processed or pelletized product.
- Instead of being generated, composted, and used all on one farm, we want to be able to utilize other farms.
- All crop residues are exempt from the definition of solid waste facility.
- We thought (C)(8) was intended to prevent leasing a corner of farmland for composting.

R18-13-901(C)(10)

- *Please make sure to define mulch as it relates to the new exemption in R18-13-901(C)(10).*
- *Proposed mulch definition: Mulch refers to a ground-up vegetative matter with a CN ratio higher than 20:1.*
- Is mulch out of the rule?

R18-13-902

- Requiring siting criteria goes beyond statute. See ARS § 49-767 and ARS § 49-772.
- Is there any reason biosolids must be processed in-vessel? We could reduce energy usage by taking advantage of the sun.
- Enclosing our facilities would drive up costs to municipalities to compost biosolids. The other option is to fill up landfills with biosolids.
- Performance standards could be added to this section, such as requiring a hard surface pad, run-on/run-off conditions, maintaining aerobic conditions, monitoring windrows, and maintaining a specific CN ratio.
- A lot of indoor facilities have outdoor curing piles.
- We maintain high standards including turning five times within a 15-day period, maintaining at least 131 degrees Fahrenheit for 15 days, and testing for fecal evidence, salmonella, and heavy metals. This is not the case with a municipal solid waste site.
- What is the intent with MSW and biosolids inside a building?
- With proper design standards, outdoor windrows can be acceptable.
- The distinction here is in-vessel (materials in a container, not a building) vs. inside.
- The preemptive standard for land application of biosolids is 40 CFR 503.
- Have to define aeration in biosolids composting. Suggest eliminating this section. With proper BMPs, there will not be odors.
- Should state the purpose of this section and let owners decide how to accomplish the objective.
- Should an owner/operator want more specificity, they can opt to go through plan approval.
- The changes to R18-13-904(C)(7)(c) are less restrictive, similar to changes made by Utah.
- *Are biosolids regulations pre-empted by the CWA, which has defined land application standards under 40 CFR 503 in the absence of an EPA approved state plan? EPA approval may be necessary.*

R18-13-902(B)(2)

- This is more restrictive than federal requirements. In Arizona, a half-mile from floodplain restriction is very drastic and onerous.
- If designed correctly, the floodplain/wetland is not an issue.
- Should use the U.S. COE definition for wetland.
- This rule would prohibit a composting facility on wetlands, whereas there is currently a process to allow for this activity.
- *U.S. COE has a permit program for "wetlands." Facilities should not be restricted in "wetlands."*

- Need to consider existing facilities vs. new facilities, i.e. a school could build too close to my facility and I would have to make expensive changes or close down.

R18-13-903(A)(2)

- What types of materials will be required to be composted in-vessel?
- The majority of states allow for indoor composting, not just in-vessel.
- May need to define sewage treatment sludge. Is that biosolids?
- If I am governed under Article 10, I now am governed under Article 9 as well.
- What is accomplished by mandating in-vessel?
- USDA is looking at a one-mile buffer between raw manure handling and certain farming operations.

R18-13-903(A)(3)

- How do you demonstrate compliance with your pad? I would have to hire a consultant.
- I don't believe surface water quality standards would be applicable to a pad.
- I urge that you adopt simple standards. Inspectors won't know what to do with this language. Prefer "a concrete or similar hard surface" vs. a performance standard.
- A berm assists in surface water run-on/run-ff, not a pad.
- Is this section covered under multisector stormwater permits?
- What is "low-permeability?"
- Need more specific language.
- A permeability standard is not testable in the real world.
- "Low or adequate permeability" is subjective. Best professional practice should be used for subjective areas.
- This section will make inspection difficult.
- Should define leachate.
- *Leachate should be defined as focused on liquids penetrating and emerges through the solid waste. Liquids, stormwater, dust control water "coming in contact" should not be leachate.*

R18-13-904

(A) – Why should septage and grease waste trap treatment be prohibited? This should be under plan approval.

(A)(1) – *Septage. There isn't a definition of septage in the definitions section. There is one for sewage. Consider clarification that raw sewage is prohibited while sewage treatment sludge is not.*

(B)(1) – *Please provide what criteria to use to make the non-hazardous determination, i.e., 40 CFR 261.*

(B)(2) – It is more hazardous to put cotton gin trash into a container because it will catch fire.

(B)(2) – Is Class A reclaimed water a liquid waste?

(B)(2) – A container does not have to be completely enclosed.

(C) – Can waste tires still be used as a bulking agent?

R18-13-905

(A)(1) – *Manufacturer's specifications and operating procedures should be limited to equipment directly used in the composting operation. As discussed in previous meetings, only a portion of a site may be a regulated "facility."*
(A)(4) – *What is meant by "quality" of additive material?*
(B) – Time and temperature requirements should be for pathenogenic waste only.
(C)(3) – *For clarification, add citation for Contingency Plan A.A.C. R18-13-412.*
(C)(4) – This is more restrictive than landfills.
(C)(5) – Some by-products are not solid waste and can be beneficially reused. By-products should have to meet the definition of solid waste to be applicable here.
(C)(6) – *Remove the second part of the sentence, after "or …." . This sets the outside limit.*
(C)(6) – I assume this covers the waste coming in, not the cure piles.
(C)(6) – I reuse oversized particles or bulking agents for more than one year.
(C)(6) – Once material is on-site, it may be retained for a year.
(C)(6) – Use of the language "in-coming waste" would solve this issue.
(C)(7)(c) – Breakout pile vs. windrow. A windrow is turned.
(C)(7)(c) – If this section is to address biosolids, it should be 131 degrees F, 15 days, turned five times within the 15-day period.
(C)(7)(c) – Temperature does not have to be specified unless there is a pathogen being addressed.
(C)(8)(a) – Organic materials will reheat under certain conditions. What is the purpose of this section? Suggest "reheat" language is removed.
(C)(8)(b) – Sharp particles" are an issue in Arizona regarding some plant materials.

R18-13-906

(A)(2) – Backfilling doesn't make sense here. Ponds often need to remain on-site after closure.
(A)(3) – This is subjective and is covered through air quality.
(B) – This is onerous.
(B) – There is no post-closure requirement.

Facilitator Theresa Gunn obtained stakeholder consensus on the following items:

- Section R18-13-901 (C)(8) – The language change from "and" to "or" is preferred.
- Section R18-13-901 (C)(8) – Changing "on-site" to "on farmland" is preferred.

Overview of Article 8 Proposal

Seaman explained that the agency is considering developing a new approach to this section in response to stakeholder concerns. Possible changes include:

- Treatment and recycling combined into one article.
- An applicability section to identify facilities of concern.
- Determination of whether different requirements can be applied to facilities of no concern or lesser concern, i.e. balers at retail operations, and neighborhood collection site roll-offs.
- The agency is looking at ways to address exemptions.

Stakeholder comments and questions included:

- I would urge caution that recycling is not at the same level as a significant treatment operation.
- A lot of recycling is incidental at a site.
- Should see some RCRA exclusions.
- Clarify when an item is considered solid waste for recycling.
- Hazardous material should not have more lenient treatment than non hazardous waste.
- It is vital to provide "safe harbor" regulations for recycling.
- Someone who sells recycling by-products should not be subject to recycling rules
- I suggest five tiers:
  - Compactors (fewest rules)
  - Transfer facility (since volume reduction could be considered treatment)
  - Recycling
  - True Treatment (biofuels)
  - Thermal (waste-to-energy)
- Drop boxes should not be considered a facility. Locations should be part of the consideration of a facility.
- There is a difference between treatment activities as part of an on-site operation vs. the commercial waste management facility.
- If the "treatment" is ancillary to the operation, regulations may inhibit these positive activities.
- Need to consider generator facilities differently.

Stakeholders agreed that the new approach under consideration was preferred.

Comments On Other Articles

Definitions

- *Recycling – The definition for "Recycling" found on page 13 is particularly limiting with regard to the recycling of materials for their calorific value. I believe that this limitation is detrimental to Arizonans as some residual materials can be recovered exclusively for their calorific value which is a higher and better use than placing these materials into a landfill. Such use should be encouraged by ADEQ rather than discouraged. To my understanding, only NRC has proposed such limitations in their definition while the USEPA, the Solid Waste Association of North America (SWANA), the Ohio EPA, and a plethora of others do not impose such limitation. NRC is a non-profit membership organization who's goals and mission differs from that of ADEQ. I believe it is in Arizonan's interest to reduce the state's reliance on landfills. The recovery of materials for calorific value should not be confused with Waste to Energy. If a material has value in the form of calorific value (i.e. plastic, wood, residual fiber), it can be processed and recycled for valuable consideration as a fuel feed stock. Such fuel or "Engineered Fuel" has an economic value. Waste to energy by comparison, has a primary purpose of reducing solid waste volume. It is designed to combust solid waste – not an engineered fuel for which solid waste does not have a value. An industrial boiler by comparison, has a primary purpose of generating heat and it is designed to consume solid, liquid, or gaseous fuel. I have attached a copy of*

the Ohio EPA's definition of recycling below which was modeled after the USEPA definition. I have also attached a copy of SWANA's definitions (T-0) to this email for your reference. For all of these reasons, I urge ADEQ to eliminate the language in the last sentence of its current draft definition as follows: "but does not include incineration of other similar processes."

OPEA Definition of Recycling: "Recycling" means the process of collecting, sorting, cleansing, treating, and reconstituting solid waste that would otherwise be disposed in a solid waste disposal facility and returning reconstituted materials to commerce as commodities for use or exchange.

- *Rubbish – I believe that it is very important for the definition of Rubbish or Solid Waste to include the words "unwanted." The current ADEQ Draft definition includes language that more closely represents a list of recyclables rather than Rubbish or Solid Waste. I have attached a copy of the Ohio EPA's definition of recycling below which was modeled after the USEPA definition. I have also attached a copy of SWANA's definitions (T-0) to this email for your reference. I suggest that ADEQ adopt similar language to alleviate any confusion with regard to Rubbish and Recyclables.*

  Ohio Definition of Solid Waste: "Solid waste" means such unwanted residual solid or semisolid material, including but not limited to, garbage, scrap tires, combustible and noncombustible material, street dirt and debris, as results from industrial, commercial, agricultural, and community operations, excluding earth or material from construction, mining, or demolition operations, or other waste materials of the type that normally would be included in demolition debris, nontoxic fly ash and bottom ash, including at least ash that results from combustion of coal, biomass fuels, and ash that results from the combustion of coal in combination with scrap tires where scrap tires comprise not more than fifty per cent of heat input in any month, spent nontoxic foundry sand, and slag and other substances that are not harmful or inimical to public health, and includes, but is not limited to, garbage, scrap tires, combustible and noncombustible material, street dirt, and debris. Solid waste does not include any material that is an infectious waste or a hazardous waste.

Article 10

- *In general, recycling is very different than solid waste and therefore, I believe its regulations should be reflective of the recycling industry rather than the solid waste industry. It seems that the current draft regs attempt to cut and paste solid waste regulations into the recycling sections. It may be easier to just start fresh attempting to maintain some form of regulations over recycling operations while at the same time, keeping the regulations streamlined to encourage additional recycling.*
- *Recycling Facilities: Siting Criteria – I do not see any scientific reason for the location restriction placed on recycling facilities with respect to the proximity to learning sites. Also, it would seem that local zoning and building codes would appropriately address wetland issues so that further ADEQ regulation would not be required.*

- *Recycling Facilities Design and Construction Standards – Recycling facilities should not be required to design for incoming waste.*
- *Grandfathering provisions – How will ADEQ address recycling facilities already in existence? There should be some grandfathering provisions for facilities in operation prior to the passage of the new regulations. Certainly Arizona needs more recycling facilities, not fewer so it would seem to make little sense to require the closure of existing facilities that do not meet the new regs.*
- *How will ADEQ address end users of recyclables? A paper mill for example – stores bales of paper much like a MRF. A steel scrap processor stores bales of steel much like a MRF. Will they be regulated in the same fashion or does ADEQ intend to only regulate MRFs and drop off centers? What about end users that store recyclables such as grocery stores, big box retailers, and large commercial office buildings? Will they be subject to the new regulations with regard to their operation of balers and the storage of their bales of material or only MRFs?*

Section
R-18-13-1006

- *Operational Plan for Recycling Facilities requires Recycling Facilities to develop an operational plan in accordance with A.A.C. R-18-13-404. I have reviewed that section and I believe that it is inappropriate for a recycling facility. This section was clearly written for solid waste disposal facilities. I suggest that if ADEQ wishes to require an operational plan, it should be based on criteria vital to the regulation of recycling facilities, not waste disposal facilities as they are in fact quite different. Here is a review of the 18 listed items in R-18-13-404:*

    1. *A recycling facility is not a solid waste facility.*
    2. *Run on and Run off is not spelled out but I assume that the Draft Regs anticipate this to be storm water run on and run off. This is not a paramount issue for recyclables as toxic leachate should not be produced if water comes in contact with plastic, metal, or fiber as it would be if water comes in contact with MSW.*
    3. *Waste identification and screening is not an issue since a recycling facility does not accept waste. Any MSW received at a recycling facility is incidental to the amount of recyclables it receives.*
    4. *This section will be difficult for rural counties to achieve with recycling drop off centers*
    5. *This should be controlled by building/zoning code already*
    6. *Not an issue since recycling facilities do not accept solid waste. There is no food for vectors*
    7. *no comment*
    8. *no comment*
    9. *Standards for closure are well defined in R-18-13-1007. Since the scope of Closure for a recycling facility is so limited in scope, it may not be necessary to have an operational plan since closure is not part of the everyday operation.*
    10. *The financial obligation is so limited in a recycling facility that it perhaps can be handled in a different fashion.*

11. *This section seems more appropriate for a landfill or transfer station as opposed to a recycling facility since a recycling facility does not accept waste. Any MSW received at a recycling facility is incidental to the amount of recyclables it receives.*
12. *This section specifically discusses wastes – not recyclables.*
13. *What specifically does ADEQ intend for a recycling facility to monitor for? Again this is very different than a landfill.*
14. *Such corrective actions do not apply to recycling facilities.*
15. *A recycling facility does not have solid waste handling equipment, leachate systems, gas collection systems, etc. Therefore, this section does not apply.*
16. *Such a plan as contemplated in this section does not apply since a recycling facility is not designed to accept waste.*
17. *no comment*
18. *This section clearly does not apply as many recycling facilities have on-site learning areas.*

Attendees and those participating via conference call included:

Joe Abate, NSWMA
Harlan Agnew, Pima County Attorney
John T. Barlow, Arizona Strip Landfill Corp.
Dave Bearden, WMI
Christina Betz, City of Glendale
William Black, City of Mesa
Pat Bourque, City of Flagstaff
Dean Cooke, Arizona Strip Landfill Corp.
Curtis Cox, Arizona Attorney General's Office
Barton Day, Bryan Cave LLP
Jeff Drumm, City of Tucson -- E.S.
Houssam B. Eljerdi, Pima County
Karen Gaylord, Salman Lewis & Weldon
Cheryl Goar, Arizona Nursery Association
Krista Gooch, W.L. Gore & Associates, Inc.
Tiffany Ground, AZ Dept of AG
Chuck Hamstra, City of Phoenix
Larry Hawke, Pima County DEQ
Diane Hernandez, Hickmans Egg Ranch
Billy Hickman, Hickmans Egg Ranch
Thomas Hillmer, APS
Wilson Hughes, City of Tucson -- E.S.
Neil Karnes, Graham County
Lorrie Loder, Synagro
David Merdick, Paul Rovey Dairy
Matt Morales, City of Flagstaff
Donna Moran, Town of Gilbert
Karl Moyers, Santa Cruz County
Connie Murray, Envirosure for Metal Management
Daniel Musgrove, Universal Entech, LLC
Randy Phillips, Coconino County Health Dept.
Mark Prein, APS
Carlos Ramirez, Dept. of AG
Ken Robinson, City of Flagstaff
Catalina Sanchez, City of Tucson -- E.S.
Chris Schlabaugh, City of Chandler SWS
Sheree Sepulveda, City of Chandler
LesShipley, Civano Nursery
Stephen Smith, Hydro Geo Chem, Inc.
Lisa Spahr, Eng. & Env. Consultants, Inc.
Jacqueline Strong, City of Chandler
Marguerite Tan, PFFJ
Steve Viny, Norton Environmental
David Wallis, Gallagher & Kennedy
Joelle Wirth, Coconino Co. Health Dept.