

CSI - Ohio

The Common Sense Initiative

Business Impact Analysis

Agency Name: Ohio Environmental Protection Agency (Ohio EPA)

Regulation/Package Title: Residual Solid Waste Rules, OAC Chapter 3745-30

Rule Number(s): 3745-30-01, 3745-30-02, 3745-30-03, 3745-30-04, 3745-30-06, 3745-30-07, 3745-30-08, 3745-30-09, 3745-30-10, 3745-30-14, 3745-30-15

Date: September 12, 2014

Rule Type:

- | | |
|----------------------------------|---|
| <input type="checkbox"/> New | <input checked="" type="checkbox"/> 5-Year Review |
| <input type="checkbox"/> Amended | <input type="checkbox"/> Rescinded |

The Common Sense Initiative was established by Executive Order 2011-01K and placed within the Office of the Lieutenant Governor. Under the CSI Initiative, agencies should balance the critical objectives of all regulations with the costs of compliance by the regulated parties. Agencies should promote transparency, consistency, predictability, and flexibility in regulatory activities. Agencies should prioritize compliance over punishment, and to that end, should utilize plain language in the development of regulations.

Regulatory Intent

1. Please briefly describe the draft regulation in plain language.

Please include the key provisions of the regulation as well as any proposed amendments.

The residual waste rules in Ohio Administrative Code (OAC) Chapter 3745-30 contain requirements for landfills that can accept solid wastes from seven specific industrial categories. The waste streams from these industries are typically generated in large quantities and are generally homogeneous and of low toxicity. Coal burning operations, foundry operations, pulp and paper making operations, steel-

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making operations, gypsum processing plant operations, lime processing operations, and Portland cement operations make up the seven industries that are incorporated into the residual waste regulatory program. There are currently ten licensed residual waste facilities in Ohio.

OAC 3745-30 serves as alternative form of regulations for these industries. Residual waste is defined as a type of solid waste, and disposal is therefore mandated to occur at a licensed and permitted sanitary landfill facility under Chapter 3745-27 of the Ohio Administrative Code. These rules provide a separate regulatory program less stringent than the municipal solid waste landfill regulations as an alternative compliance option for the industry.

2. Please list the Ohio statute authorizing the Agency to adopt this regulation.

Ohio Revised Code (ORC) 3734.02 and 3734.12.

3. Does the regulation implement a federal requirement? Is the proposed regulation being adopted or amended to enable the state to obtain or maintain approval to administer and enforce a federal law or to participate in a federal program?

If yes, please briefly explain the source and substance of the federal requirement.

No.

4. If the regulation includes provisions not specifically required by the federal government, please explain the rationale for exceeding the federal requirement.

Not applicable.

5. What is the public purpose for this regulation (i.e., why does the Agency feel that there needs to be any regulation in this area at all)?

The purpose of this regulation is to fulfill the requirements of ORC 3734.02 and ORC 3734.12 which require the director to adopt rules governing solid waste facilities in order to ensure that the facilities will be located, maintained, and operated, and will undergo closure and post-closure care, in a sanitary manner so as not to create a nuisance, cause or contribute to water pollution, or create a health hazard. The residual waste landfill rules provide Ohio industries with an alternative to disposal of wastes into municipal solid waste landfills through this chapter of solid waste disposal regulations for landfills that handle exclusive waste streams.

6. How will the Agency measure the success of this regulation in terms of outputs and/or outcomes?

The Agency will measure the success of these regulations through the number of Ohio industries seeking to establish and operate residual waste landfills, continued compliance with the rules, and minimal occurrences of nuisance, fire or health hazards, or air or water pollution resulting from the operation of residual waste landfills.

Development of the Regulation

7. Please list the stakeholders included by the Agency in the development or initial review of the draft regulation.

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If applicable, please include the date and medium by which the stakeholders were initially contacted.

Ohio EPA contacted stakeholders on the solid waste electronic mailing listserv list on January 19, 2012. These interested parties were notified of the Early Stakeholder Outreach period that began January 19, 2012 and ran through February 29, 2012.

8. What input was provided by the stakeholders, and how did that input affect the draft regulation being proposed by the Agency?

Ohio EPA received a general objection to retaining the Chapter 3745-30 rules without change from the Ohio Utility Group during the outreach period. The Ohio Utility Group asserts that a determination of “no change” is inappropriate at this time and mentions that the residual waste landfill rules meet or exceed U.S. EPA-proposed rules.

It is the uncertainty of these *proposed* federal rules and efforts on federal legislation on disposal of coal combustion residuals that Ohio EPA believes supports a determination to retain Chapter 3745-30 without change at this time. The U.S. EPA-proposed rules are unique in that they propose different approaches in the establishment of the federal rules. U.S. EPA sought comment regarding establishment under authority of Subtitle C (hazardous waste) versus Subtitle D (solid waste). U.S. EPA received numerous and diverse public comment on the proposed coal combustion residual rules and has not yet taken a position or any steps towards finalizing these proposed rules. This still unresolved issue may involve significant changes to Ohio statute. In the Early Stakeholder Outreach released in January 2012, Ohio EPA noted:

“However, DMWM is aware of federal proposed coal combustion residual management rules and federal legislation which have the potential to impact OAC Chapter 3745-30. Given the potential of new federal rules which could impact Ohio’s residual solid waste program, DMWM is suggesting filing a notice of “no change” and delaying revisions to OAC Chapter 3745-30 at this time. DMWM believes this approach would be the better use of Agency and stakeholder resources given the potential of future federally-driven changes.”

A significant factor in Ohio EPA’s preliminary determination to retain the rules without change is that Chapter 3745-30 is overdue for the ORC 119.032 five-year review. Ohio EPA has committed to the Joint Committee on Agency Rule Review (JCARR) to file an ORC 199.032 determination on these rules by November 2014. The understanding is that if Ohio EPA does not file a determination by that date, JCARR may recommend the adoption of a concurrent resolution invalidating the rules. Invalidation of Chapter 3745-30 would have a significant adverse impact on those companies and operators of currently permitted and licensed residual waste landfills. These landfills would need to comply with the more stringent industrial waste landfill rules in Chapter 3745-29 or be subject to the more stringent municipal solid waste landfill rules in Chapter 3745-27.

The Ohio Utility Group provided four areas as examples to demonstrate why they describe it as critical that Ohio EPA assess the economic impact of these rules.

- It was accurately noted by the Ohio Utility Group that there are more residual waste siting criteria than hazardous waste rule requirements. This is because Ohio’s landfill rules are based on appropriate geologic settings as a fundamental safeguard for ground water and surface water protection should engineering components lose integrity and fail. Ohio’s class III residual waste landfill design commonly used for coal combustion residual disposal is less

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stringent than the rule requirements for Ohio hazardous waste, solid waste or industrial waste landfills.

- The Ohio Utility Group noted that the residual waste rules include additional requirements such as soil size, moisture content, slope stability, liner thickness, and hydrostatic uplift and a flexible membrane liner beyond what is specified in the U.S. EPA-proposed rules for coal combustion disposal facilities. Ohio EPA notes that U.S. EPA rules are proposed but not yet final, and there still may be significant changes in final federal rules. Ohio EPA's experience has been that the current residual waste requirements in OAC 3745-30 reflect sound engineering for the construction of a consistent quality liner that will maintain its integrity under anticipated stress and time. These requirements are generally consistent throughout Ohio's solid waste landfill rules.
- The Ohio Utility Group notes that the Ohio EPA requirement of six waste characterization samples and annual sample is apparently greater than the State of Indiana's one sample. Review of Indiana's rules for coal combustion waste show that no prior waste characterization sampling is required for disposal into an Indiana type I industrial landfill. However, Indiana regulation does require prior and subsequent waste characterization sampling [section 4 paragraph (d) of 329 Indiana Administrative Code 10-9-4 Restricted waste sites waste criteria] for disposal at an Indiana restricted waste site type II, III, or IV.

The purpose of waste characterization sampling is to ensure that residual waste goes to the landfill designed with the minimum appropriate safeguards. Ohio's less stringent class III residual waste landfill design is commonly used for coal combustion residual disposal. OAC Rule 3745-30-03 requires a minimum number of seven samples. Statistical analysis of this minimum number and a high degree of variability in the concentration of a parameter at or near a parameter's maximum allowable concentrations may necessitate more samples. The class III residual waste landfill is designed for homogeneous waste that is below maximum allowable concentrations for parameters listed in Appendix I of OAC Rule 3745-30-04.
- The Ohio Utility Group mentions the double-cased leachate pipeline requirement outside the limits of the residual waste placement as an example for the need of more flexibility. In practice, the Agency has demonstrated flexibility having approved the use single-cased pipelines on a project-specific basis.

Ohio EPA did not receive objections to retaining the Chapter 3745-30 rules without change from any other industrial processing companies or residual waste landfill operators subject to Chapter 3745-30.

In consideration of the broad nature of Ohio Utility Group early stakeholder comments, balanced with the uncertainty of U.S. EPA-proposed rules and the potential consequences of invalidation of Chapter 3745-30 rules, Ohio EPA intends to seek additional interested party comments on a preliminary determination to retain the residual waste rules without change. Ohio EPA will request that interested parties comment on the retention of Chapter 3745-30 rules without change and identify those specific rule requirements, suggestions or alternatives, as well as provide more detailed information quantifying the adverse impacts of the requirement for Agency consideration.

9. What scientific data was used to develop the rule or the measurable outcomes of the rule? How does this data support the regulation being proposed?

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The twelve rules in the residual waste landfill chapter were initially developed by Ohio EPA in 1992 to establish landfill siting, design, construction, operation, environmental monitoring, closure, post-closure care, and financial assurance requirements specific to the landfill disposal of wastes from the following industrial operations:

- Wastes generated by fuel burning operations which burn as fuel primarily coal: air pollution control wastes, water pollution control wastes, and other similar wastes.
- Wastes generated from foundry operations: air pollution control dust, wastewater treatment plant sludge, unspent foundry sand, spent foundry sand, and other foundry wastes.
- Wastes generated from pulp and paper-making operations: wastewater treatment plant sludge, lime mud, lime grit, sawdust, wood chips, bark, hydropulper rejects, and other paper-making wastes.
- Wastes generated from steel-making operations: air pollution control dust, wastewater treatment plant sludge, dust from steel processing and finishing operations, water softening sludge, flux material, and other steel-making wastes.
- Wastes generated from gypsum processing plant operations: gypsum wallboard waste, paper surface preparation dust, wastewater treatment plant sludge, and other gypsum processing wastes.
- Wastes generated from lime processing operations: air pollution control dust and/or sludge, and other lime processing wastes.
- Wastes generated from Portland cement operations: air pollution control dust and other processing wastes.

All of the Chapter 3745-30 rules were amended in 2002 (two rules) and 2003 (ten rules). In 2004, three rules were again amended. In adopting and amending the Chapter 3745-30 rules, scientific data on the characteristics of these industrial process wastes was used to tailor the residual waste landfill requirements to those potential human health, safety, and environmental impacts posed by the landfilling of these wastes. Much of the waste characterization data used in the development of Chapter 3745-30 was provided by these industries. Established scientific and engineering data consistent with data for landfills was used to develop Chapter 3745-30.

The residual solid waste landfill chapter provides companies an option to use or establish a landfill tailored to the dedicated disposal of these specific types of industrial wastes. Without Chapter 3745-30, the option is limited to the more stringent general OAC Chapter 3745-29 industrial solid waste landfill or more stringent OAC Chapter 3745-27 municipal solid waste landfill.

When the residual waste rules were amended August 15, 2003, the Ohio Utility Group appealed the legal and scientific basis of various siting restrictions to the Environmental Review and Appeals Commission (ERAC). The Ohio Utility Group challenged whether the siting criteria in OAC 3745-30-06(H)(2)(d) and (H)(4)(d) were reasonable and lawful. After conducting a hearing, which included the scientific basis of several of the siting criteria, ERAC ruled August 8, 2008 that the director acted lawfully and reasonably in adopting the rule. On May 12, 2009, the Tenth Appellate District Court of Appeals upheld the ERAC decision.

10. What alternative regulations (or specific provisions within the regulation) did the Agency consider, and why did it determine that these alternatives were not

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appropriate? If none, why didn't the Agency consider regulatory alternatives?

As stated in the answer to Question 1, OAC Chapter 3745-30 is a form of alternative regulations in that it provides generators of specified industrial process wastes with a landfill option tailored to the characteristics of the wastes. Chapter 3745-30 provides a less stringent option than either the industrial solid waste landfills Chapter 3745-29 or the federal-based municipal solid waste landfill rules. Within Chapter 3745-30 are provisions providing flexibility or waivers providing approval mechanisms for alternative requirements. The objective of Chapter 3745-30 was to provide Ohio industries the option to establish residual waste landfill facilities that primarily dispose of an exclusive waste stream without having to also comply with the entire set of federal requirements specific to municipal solid waste landfills.

As outlined in the answer to Question 8, upon consideration of the broad nature of Ohio Utility Group early stakeholder comments balanced with the uncertainty of U.S. EPA-proposed rules and the potential consequences of invalidation of Chapter 3745-30 rules, Ohio EPA intends to seek additional interested party comments on a preliminary determination to retain the residual waste rules without change. Ohio EPA will request that interested parties comment on the retention of Chapter 3745-30 rules without change and identify those specific rule requirements, suggestions or alternatives, as well as provide more detailed information quantifying the adverse impacts of the requirement for Agency consideration.

11. Did the Agency specifically consider a performance-based regulation? Please explain.

Performance-based regulations define the required outcome, but don't dictate the process the regulated stakeholders must use to achieve compliance.

In 1992, the residual waste rules in OAC Chapter 3745-30 were adopted as set of performance-based regulations. A solid waste disposal facility that qualifies as a residual waste facility and exclusively disposes of homogeneous and characterized waste streams has the option to utilize a tailored landfill design in lieu of industrial solid waste landfills or federal-based municipal solid waste landfill designs. The rules do require appropriate construction related testing and calculations; such as soil size, moisture content, slope stability, liner thickness, and hydrostatic uplift, to demonstrate achievement of the performance standards.

As outlined in the answer to Question 8, upon consideration of the broad nature of Ohio Utility Group early stakeholder comments balanced with the uncertainty of U.S. EPA-proposed rules and the potential consequences of invalidation of Chapter 3745-30 rules, Ohio EPA intends to seek additional interested party comments on a preliminary determination to retain the residual waste rules without change. Ohio EPA will request that interested parties comment on the retention of Chapter 3745-30 rules without change and identify those specific rule requirements, suggestions or alternatives, as well as provide more detailed information quantifying the adverse impacts of the requirement for Agency consideration.

12. What measures did the Agency take to ensure that this regulation does not duplicate an existing Ohio regulation?

Ohio EPA reviewed our own regulations and performed a search of regulations from other agencies to determine if duplication was being made. To our knowledge, Ohio EPA is not duplicating another existing Ohio regulation.

13. Please describe the Agency’s plan for implementation of the regulation, including any measures to ensure that the regulation is applied consistently and predictably for the regulated community.

Because these rules are already effective and Ohio EPA is to file a determination to retain these rules without change, the Agency plans to continue the current efforts to ensure consistent and predictable rule implementation.

Adverse Impact to Business

14. Provide a summary of the estimated cost of compliance with the rule. Specifically, please do the following:

a. Identify the scope of the impacted business community;

The scope of the impacted business community includes the ten licensed and permitted residual waste facilities in Ohio and any companies that may submit a Chapter 3745-30 permit-to-install application for a residual waste landfill.

b. Identify the nature of the adverse impact (e.g., license fees, fines, employer time for compliance); and

The residual waste landfill chapter provides Ohio industries with an option to establish and operate an alternative landfill to a municipal or industrial solid waste landfill. If the industry chooses to establish and operate a residual waste landfill, the nature of the adverse impact includes design and construction standards; siting criteria to avoid incompatible land uses (e.g. parks, residences, streams); costs including permit fees, annual license fees, and possibly fines for non-compliance; time for recordkeeping for the purpose of applying disposal fees and compliance with the regulations; costs and time for housekeeping to avoid nuisances and preparing contingencies in the event of an emergency; and costs to clean up the facility upon closure, including financial assurance so as not to burden the taxpayer. It should be noted that all of Ohio’s licensed residual waste landfills do not pay any disposal fees since the landfill only disposes of waste generated by the landfill owner.

c. Quantify the expected adverse impact from the regulation.

The adverse impact can be quantified in terms of dollars, hours to comply, or other factors; and may be estimated for the entire regulated population or for a “representative business.” Please include the source for your information/estimated impact.

An Ohio industry choosing to establish and operate a residual waste landfill can anticipate the cost of compliance to be less than that required of a municipal or industrial solid waste landfill. Although there is a cost of compliance associated with these rules, any estimate must account for a range of significant variables. The cost will naturally vary depending on the landfill size, design, location, and underlying geology. Costs associated with residual waste landfills would be very similar, though slightly less, than the costs associated with municipal solid waste landfills. The following information is based upon estimates provided by an Ohio municipal solid waste industry association.

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Permit costs for developing an engineering package for a lateral expansion range from \$750,000 to \$1,000,000 excluding hydrogeological investigations. Hydrogeological investigations add an additional \$50,000 - \$250,000 for a simple vertical expansion, \$250,000 to \$1,000,000 for a simple lateral expansion or new facility, and \$2,000,000 for a complex lateral expansion with complex hydrogeological/siting criteria issues. Setback demonstrations for the demonstration that the facility meets the siting criteria are around \$500 per acre. Construction costs for a sanitary landfill facility range from \$250,000 to \$1,000,000 per acre, with an average of \$400,000 acre.

Additional costs are incurred for the monitoring of ground water at the facility. Initial well installation ranges from \$5,000 to \$10,000 per well. Background sampling, analytical analysis, and reporting also runs about \$5,000 to \$10,000 per well. Routine costs, including annual sampling, statistics, and associated reporting costs around \$1,200 to \$2,500 per well, while wells in assessment monitoring can be up to \$3,500 per well. Miscellaneous plan revisions, demonstrations, re-sampling, and Agency correspondence can range from \$2000 to \$10,000 per year. Finally, assessment plans, investigations, reports, and corrective measures plans have a variable cost from \$50,000 to \$100,000.

It is important to note that many of these costs are incurred over the life of the facility which is determined by the owner and operator of the residual waste facility depending on operational practices and landfill capacity. Beyond the permit necessary to establish the residual waste landfill, the costs associated with subsequent permit applications is dependent upon the owner and operator's need to expand or modify the facility.

15. Why did the Agency determine that the regulatory intent justifies the adverse impact to the regulated business community?

ORC 3734.02 requires the Director of Ohio EPA to draft rules for solid waste facilities that ensure that the facilities will be located, maintained, and operated, and will undergo closure and post-closure care, in a sanitary manner so as not to create a nuisance or cause or contribute to pollution of the land, water, or air. Since 1992, Chapter 3745-30 has provided a more flexible, performance-based approach for exclusively disposing of specific high volume industrial waste types of known homogeneity and characteristics in tailored residual waste landfills. The adverse impact these rules create on business is lessened compared to use or establishment of Chapter 3745-29 industrial waste landfills or Chapter 3745-27 municipal solid waste landfill rules.

The January 13, 2004 [DSIWM Guidance Number 0540: Comparison of Municipal, Industrial, and Residual Solid Waste Programs](#) outlines to what extent Chapter 3745-30 lessens the adverse impact, particularly regarding the disposal of coal combustion residuals in class III residual waste facilities. The minimum isolation distance from the bottom of the liner system to the uppermost aquifer is five feet for class III residual waste landfills while ten feet is required for class II and fifteen feet for class I residual and all industrial and municipal solid waste landfills. Chapter 3745-30 provides two alternatives for a Class III residual waste landfill liner system. Landfill operators may choose to construct an eighteen inch thick recompacted soil liner overlain with a flexible synthetic liner or a three foot thick recompacted liner without any flexible synthetic liner. Liner systems for class II and I residual waste landfills and all industrial and municipal solid waste landfills are required to have three to five feet of recompacted soil liner and a flexible synthetic liner.

The 2004 Guidance: *Comparison of Municipal, Industrial, and Residual Solid Waste Programs* also identifies various other Chapter 3745-30 rule requirements that have a lessened adverse impact on

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businesses justified by the class of landfill's design and exclusive disposal of industrial waste of demonstrated homogeneity and characteristics that do not exceed a maximum allowable concentration. These include differences in the need for daily cover, explosive gas monitoring, and financial assurance for corrective action. The rules tailor the length of post-closure care and ground water monitoring parameters to specific class landfills and type of residual waste.

Chapter 3745-30 is an optional set of regulations for those landfills that dispose of residual wastes. Permit applicants also have the option of landfill regulation under the industrial waste landfill Chapter 3745-29 and the municipal solid waste landfill Chapter 3745-27. Ohio EPA supports retaining Chapter 3745-30 without change at this time of uncertainty given the proposed federal coal combustion residual landfill rules. Ohio EPA also supports filing a determination to retain the residual waste rules without change to avoid the potential consequences of invalidation of Chapter 3745-30 rules due to a late filing.

Regulatory Flexibility

16. Does the regulation provide any exemptions or alternative means of compliance for small businesses? Please explain.

An owner or operator of a residual waste facility subject to the regulations contained in Ohio Administrative Code 3745-30 is provided various means of alternative compliance. The rules contain many areas where alternatives acceptable to the director are written into rule. Rule 3745-30-15: "Variances" provides a mechanism to obtain director approval of alternative means of compliance. The director also has exemption authority under ORC section 3734.02(G) under which exemptions and alternative means of compliance may be considered.

17. How will the agency apply Ohio Revised Code section 119.14 (waiver of fines and penalties for paperwork violations and first-time offenders) into implementation of the regulation?

The director or the approved health department will evaluate the applicability of ORC section 119.14 to residual waste facilities regulated under OAC Chapter 3745-30 when assessing fines and penalties for paperwork violations and first-time offenders.

18. What resources are available to assist small businesses with compliance of the regulation?

Ohio EPA's Division of Materials and Waste Management (DMWM) and approved local health departments offer general solid waste management regulatory assistance. DMWM staff offer technical assistance to permit applicants and facility operators. DMWM maintains numerous documents and resources through an extensive DMWM website.

In addition, Ohio EPA's Office of Compliance Assistance and Pollution Prevention (OCAPP) is a non-regulatory program that provides information and resources to help small businesses comply with environmental regulations. OCAPP also helps customers identify and implement pollution prevention measures that can save money, increase business performance and benefit the environment. Services of the office include a toll-free hotline, on-site compliance and pollution prevention

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assessments, workshops/training, plain-English publications library and assistance in completing permit application forms. Additional information is available at: <http://epa.ohio.gov>.

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