

NOTICES OF FINAL RULEMAKING

The Administrative Procedure Act requires the publication of the final rules of the state's agencies. Final rules are those which have appeared in the *Register* first as proposed rules and have been through the formal rulemaking process including approval by the Governor's Regulatory Review Council. The Secretary of State shall publish the notice along with the Preamble and the full text in the next available issue of the *Arizona Administrative Register* after the final rules have been submitted for filing and publication.

NOTICE OF FINAL RULEMAKING

TITLE 18. ENVIRONMENTAL QUALITY

CHAPTER 8. DEPARTMENT OF ENVIRONMENTAL QUALITY WASTE MANAGEMENT

PREAMBLE

- | | |
|------------------------------------|---------------------------------|
| 1. <u>Sections Affected</u> | <u>Rulemaking Action</u> |
| R18-8-260 | Amend |
| R18-8-261 | Amend |
| R18-8-262 | Amend |
| R18-8-263 | Amend |
| R18-8-264 | Amend |
| R18-8-265 | Amend |
| R18-8-266 | Amend |
| R18-8-268 | Amend |
| R18-8-270 | Amend |
| R18-8-271 | Amend |
| R18-8-273 | Amend |
- 2. The specific authority for the rule making, including both the authorizing statute (general) and the statutes the rules are implementing (specific):**
Authorizing Statutes: A.R.S. §§ 41-1003 and 49-104
Implementing Statutes: A.R.S. § 49-922
- 3. The effective date of the rules:**
Date filed with the Secretary of State.
- 4. List all previous notices appearing in Register addressing the rules:**
- | | |
|-------------------------------|--|
| Notice of Docket Opening | 4 A.A.R. page 2847 (October 2, 1998) |
| Notice of Docket Opening | 4 A.A.R. page 4185 (December 18, 1998) |
| Notice of Proposed Rulemaking | 5 A.A.R. page 2218 (July 16, 1999) |
- 5. The name and address of agency personnel with whom persons may communicate regarding the rule:**
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Arizona Administrative Register
Notices of Final Rulemaking

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6. An explanation of the rule, including the agency's reasons for initiating the rule:

Table of Contents

- A. Incorporations by Reference.**
- B. Descriptions of the federal rules incorporated by reference.**
- C. State-initiated changes.**

THE EXPLANATION OF THE RULE

A. Incorporations by Reference.

The Arizona Department of Environmental Quality (ADEQ) is amending the state's hazardous waste rules to incorporate the text of federal regulations for re-authorization by the EPA. The state's hazardous waste rules are generally comprised of the federal regulations authorized by Subtitle C of the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984, which are incorporated by reference. The hazardous waste rules are well established and have been effective since 1984. This year's amendments mostly cover changes in the federal regulations promulgated between July 2, 1997 and July 1, 1998.

Modifications to the text incorporated by reference are intended to make the language consistent with state terminology, and not make a substantive change to the content. For example, the federal regulations incorporated by reference refer to the "EPA", the implementing agency, but since Arizona is authorized to implement and enforce the program contained in the incorporated regulations, "EPA" is usually replaced with "ADEQ" when referring to the implementing agency. Because the changes to the federal regulations are generally to tailor the language to ADEQ, the changes to the incorporated text are not intended to have additional impact beyond the federal regulation.

A change made in the rules by the incorporations by references is to replace July 1, 1997 with July 1, 1998 in subsection (A) of most sections. Subsection (A) of sections R18-8-260, R18-8-261, R18-8-262, R18-8-263, R18-8-264, R18-8-265, R18-8-266, R18-8-268, R18-8-270, R18-8-271, and R18-8-273 incorporates by reference the federal regulations published in 40 CFR 124, 260 through 266, 268, 270, 271 and 273 as of July 1, 1998 with certain exceptions.

Incorporating the federal regulations will keep Arizona's hazardous waste management program funded by EPA and in compliance with A.R.S. § 49-922. EPA requires that Arizona be re-authorized to manage the federal hazardous waste program instead of the EPA administering the program in Arizona. ADEQ received final RCRA authorization in 1985 and continues to apply for re-authorization to comply with changes to federal regulations. Adoption of federal regulations also promotes compliance uniformity among states. Most of the federal regulations incorporated by reference in this rulemaking are required for re-authorization.

In addition to incorporating the federal changes, this rule making makes 7 state initiated changes; 6 of these changes are mostly editorial rather than substantive. The substantive change amends R18-8-273 to provide for the removal of mercury containing arc tubes from universal waste lamps.

Arizona Administrative Register
Notices of Final Rulemaking

Before these rules were published as proposed rules in the Arizona Administrative Register, the Arizona Mining Association (AMA) submitted 5 position papers to ADEQ concerning issues regarding the Phase IV Land Disposal Restrictions (LDR) (see Rule # 8 below). These position papers involved reverts; used refractory brick; point of generation, storage, and production; uniquely associated status for various materials generated in the primary minerals industry; and exclusions for mineral processing secondary materials and reuse of substitute commercial product. In general, the AMA's concerns are that, while EPA's Phase IV LDR rules appear technically correct, the rules are vague in several respects, due in part to the lack of definitions for such terms as production and secondary material, and how to clearly distinguish regulated storage from unregulated generation or production under the Phase VI LDR rule. In addition, EPA's clarifications and guidance offered in the preamble to the LDR rule do not sufficiently address mineral processing activities.

In response to the mineral processing secondary materials exclusion portion of the Phase IV LDR, ADEQ determined that the rule needs further clarification and guidance from EPA. Therefore, ADEQ did not incorporate the "mineral processing secondary materials exclusion" section of the Phase IV LDR rule in this rulemaking. Instead, ADEQ will seek further clarifications and guidance from EPA to help resolve the contentious issues. ADEQ anticipates adopting the mineral processing secondary materials exclusion portion of this rule in the next hazardous waste rulemaking package.

B. Descriptions of the federal rules incorporated by reference.

A description of the rules which have been incorporated by reference follows.

1. Rule Title: Land Disposal Restrictions Phase III--Emergency Extension of the K088 National Capacity Variance. EPA is extending the current national capacity variance for spent potliners from primary aluminum production (Hazardous Waste Number K088) for 3 months. Thus, K088 wastes may be land disposed without being treated to meet Land Disposal Restrictions (LDRs) treatment standards until October 8, 1997, three months from the current treatment standards effective date of July 8, 1997. EPA is taking this action because it now appears that sufficient treatment capacity exists which is capable of achieving the treatment standards promulgated by EPA on March 8, 1996. The process provides substantial treatment of spent potliners and minimizes the threats posed by land disposal of these wastes, and the treatment and disposal capacity provided for the waste will be protective of human health and the environment because it will occur at Subtitle C units. This action is being taken by EPA to provide time for generators to make contractual and other logistical arrangements relating to treatment capacity. This rule can be found at 62 FR 37694, July 14, 1997.
2. Rule Title: Second Emergency Revision of the Land Disposal Restrictions Treatment Standards for Listed Hazardous Wastes From Carbamate Production. This second emergency revision extends the time the alternative carbamate treatment standards are in place by 1 additional year. EPA is taking this action because analytical problems associated with the measurement of constituent levels in carbamate waste residues have not yet been resolved. This rule can be found at 62 FR 45568, August 28, 1997.
3. Rule Title: Clarification of Standards for Hazardous Waste Land Disposal Restriction Treatment Variances. This rule finalizes clarifying amendments to the rule authorizing treatment variances from the national LDRs treatment standards. It adopts EPA's interpretation that a treatment variance may be granted when treatment of waste to the level or by the method specified in the regulations is not appropriate, under either technical or environmental circumstances. In addition, this rule withdraws the proposal to reissue the treatment variance granted to Citgo Petroleum under the clarified standard. This rule can be found at 62 FR 64504, December 5, 1997.
4. Rule Title: Hazardous Waste Treatment, Storage, and Disposal Facilities and Hazardous Waste Generators: Organic Air Emission Standards for Tanks, Surface Impoundments, and Containers. Previously, EPA promulgated standards (59 FR 62896) to reduce organic air emissions from certain hazardous waste management activities to levels protective of human health and the environment. These air standards are known as the "subpart CC" standards and are designed to control organic emissions from certain tanks, containers, and surface impoundments (including tanks and containers at generators' facilities) used to manage hazardous waste capable of releasing organic waste constituents at levels which can harm human health and the environment. In response to public comments and inquiries since the publication of the final standards on December 6, 1994, this rule makes clarifying amendments to certain regulatory text, and clarifies certain preamble language contained in previous documents for this rule making. This rule can be found at 62 FR 64636, December 8, 1997.
5. Rule Title: National Emission Standards for Hazardous Air Pollutants for Source Category: Pulp and Paper Production; Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards: Pulp, Paper, and Paperboard Category. In this rule, EPA is excluding from RCRA regulations condensates derived from the overhead gases from kraft mill steam strippers used to comply with 40 CFR 63.446(e). Without this exclusion, these condensates would be regulated under RCRA because they exhibit the ignitability characteristic, and the boilers burn-

Arizona Administrative Register
Notices of Final Rulemaking

ing these condensates for fuel would be subject to emissions standards in 40 CFR 266, subpart H. EPA has determined that RCRA regulation of the rectification and combustion of the condensate is not appropriate or necessary. The rectification practice would not increase environmental risk, would reduce secondary environmental impacts, and would provide a cost savings. Moreover, the burning of condensate will not increase the potential environmental risk over the burning of the steam stripper vent gases before condensation. The scope of this exemption is limited to combustion at the facility generating the condensate. Note: This exclusion is part of a much larger rule that affects both effluent guidelines and air emission standards for specified sections of the pulp and paper industry. This rule can be found 63 FR 18504, April 15, 1998.

6. Rule Title: Organobromine Production Wastes; Identification and Listing of Hazardous Waste; Land Disposal Restrictions; Listing of CERCLA hazardous Substances. Reportable Quantities. This rule adds K140 and U408 hazardous waste codes to the current lists found in 40 CFR 261, as well as modifies the land disposal treatment standards for hazardous waste in 40 CFR 268 to include these new wastes. The effect of listing these wastes will subject them to stringent management and treatment standards under RCRA and to emergency notification requirements for releases of hazardous substances to the environment (CERCLA and EPCRA). In addition, EPA has made a final determination not to list as hazardous 10 waste streams from the production of Bromochloromethane, ethyl bromide, tetrabromobisphenol A, 2,4,6-tribromophenol wastewaters, octabromodiphenyl oxide, and decabromobisphenyl oxide. This rule can be found at 63 FR 24596, May 4, 1998 and 63 FR 35147, June 29, 1998, which corrects technical errors in the final regulations.

7. Rule Title: Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Recycled Used Oil Management Standards. This rule clarifies: 1) when used oil contaminated with PCBs is regulated under the used oil management standards and when it is not, 2) that the requirements applicable to releases of used oil apply in States not authorized for the RCRA base program, 3) that mixtures of CESQG wastes and used oil are subject to the used oil management standards irrespective of how the mixture is to be recycled, and 4) that an initial marketer of used oil that meets the used oil fuel specifications need only keep a record of a shipment of used oil to the facility to which the initial marketer delivers the used oil. This rule also amends the three incorrect references to the pre-1992 used oil specifications in the revisions which address hazardous waste fuel produced from, or oil reclaimed from, oil bearing hazardous wastes from petroleum refining operations. [Note: This rule affects 40 CFR 261 and 279; however, since 40 CFR 279 is incorporated by statute into Arizona law, only that portion of this rule which applies to 40 CFR 261 will be incorporated into the Arizona hazardous waste rules]. This rule can be found at 63 FR 24963, May 6, 1998 and 63 FR 33780, July 14, 1998 which makes technical corrections, removing 3 amendments made by the May 6, 1998 rule.

8. Rule Title: Land Disposal Restrictions Phase IV: Final Rule Promulgating Treatment Standards for Metal Wastes and Mineral Processing Wastes; Mineral Processing Secondary Materials and Bevill Exclusion Issues; Treatment Standards for Hazardous Soils, and Exclusion of Recycled Wood Preserving Wastewaters. This rule promulgates Land Disposal Restrictions treatment standards for metal-bearing wastes, including toxicity characteristic metal wastes, and hazardous wastes from mineral processing. The set of standards applied to these wastes is the universal treatment standards which are based upon the performance of the Best Demonstrated Available technologies for treating these, or similar, wastes. This rule also revises the universal treatment standards for twelve metal constituents, which means that listed and characteristic wastes containing one or more of these constituents may have to meet different standards than they currently do. In regard to wastes and secondary materials from mineral processing, EPA is amending the rules to define which secondary materials from internal processing are considered to be wastes and potentially subject to LDRs. The intended effect is to encourage safe recycling of mineral processing secondary materials by reducing regulatory obstacles to recycling, while ensuring that hazardous wastes are properly treated and disposed. EPA is also finalizing decisions on a set of mineral processing waste issues which courts have remanded to EPA. These include retaining the TCLP as the test for identifying the toxicity characteristic for mineral processing wastes, and readdressing the regulatory status of a number of miscellaneous mineral processing wastes. This rule also amends the LDRs treatment standards for soil contaminated with hazardous waste; the purpose being to create standards which are more technically and environmentally appropriate to contaminated soils than those which currently apply. Finally, this rule excludes from the definition of solid waste certain shredded circuit boards in recycling operations, as well as certain materials reused in wood preserving operations. This rule can be found at 63 FR 28556, May 26, 1998 and at 63 FR 31266, June 8, 1998 which makes 1 editorial correction to the final regulations.

NOTE: There are numerous unresolved issues (definition of reverts; reuse of used refractory bricks; uniquely associated concept, point of generation, and production; and reclamation of alternate feedstocks vs. reuse of effective substitutes for commercial products; etc.) between the Arizona Mining Association and EPA concerning the mineral processing secondary materials exclusion for which EPA has indicated that further clarifications and guidance will be provided shortly. Therefore, ADEQ has decided not to incorporate the mineral processing secondary materials exclusion portion of this rule in this rulemaking until further clarification and guidance are received from EPA.

Arizona Administrative Register
Notices of Final Rulemaking

9. Rule Title: Hazardous Waste Combustors; Revised Standards; Final Rule-Part 1: RCRA Comparable Fuel Combustion Units; Notification of Intent To Comply; Waste Minimization and Pollution Prevention Criteria for Compliance Extensions. This rule finalizes some elements of the April 19, 1996 EPA revisions for air emission standards for certain hazardous waste combustion units. These elements include a conditional exclusion from RCRA for fuels that are produced from a hazardous waste but are comparable to some currently used fossil fuels; a new RCRA permit modification provision is intended to simplify changes to existing RCRA permits when adding air pollution control equipment or making other changes in equipment or operation needed to comply with the upcoming air emissions standards; notification requirements for sources that intend to comply with the final rule; and allowances for extensions to the compliance period to promote the installation of cost effective pollution prevention technologies to replace or supplement emission control technologies for meeting the emission standards. This rule can be found at 63 FR 33782, June 19, 1998.

10. Rule Title: Hazardous Waste Recycling; Land Disposal Restrictions.

The EPA is amending the final rule (63 FR 28556, May 26, 1998), which, in part, amended the Land Disposal Restriction (LDR) treatment standards for metal-bearing hazardous wastes exhibiting toxicity. EPA is amending the rule as it applies to zinc micronutrient fertilizers which are produced from these toxicity characteristic wastes. The EPA is taking this action because it appears that the new treatment standards are not well suited for zinc micronutrient fertilizers, and also could result in greater use of zinc fertilizers containing relatively higher concentrations of hazardous constituents. The EPA expects to develop a more consistent and comprehensive approach to regulating hazardous waste-derived fertilizers, and currently intends to leave this amendment in place until those new regulations are adopted. In the interim, the fertilizers affected by this amendment would remain subject to the previous treatment standards for toxic metals. This rule can be found at 63 FR 46332, August 31, 1998.

11. Rule Title: Emergency Revision of the Land Disposal Restrictions (LDRs) Treatment Standards for Listed Hazardous Wastes from Carbamate Production. This rule revises the waste treatment standards applicable to 40 waste constituents associated with the production of carbamate wastes. The rule sets final alternative treatment standards for 7 specific carbamate waste constituents for which there are no available analytical standards. This action extends indefinitely the alternative treatment standards for the 7 hazardous waste constituents and deletes the treatment standard for 1 additional constituent for which available analytical methods have not been shown to achieve reliable measurements. This rule also deletes these 8 waste constituents as underlying hazardous constituents. In addition, because the temporary alternative standards for 40 carbamate waste constituents expire automatically on August 26, 1998, this rule also amends the Code of Federal Regulations to clarify that numerical treatment standards for these 32 carbamate waste constituents will once again be effective. The rule is necessary to allow generators the ability to identify all underlying hazardous constituents reasonably expected to be present in their wastes at the point of generation, and to allow waste treaters to certify that wastes have been treated in compliance with applicable land disposal restrictions. Faced with the inability to demonstrate waste and treatment residual content through analytical testing, these facilities face potential curtailment of operations.

Given the need for the regulated community to adjust its testing and compliance programs for the 32 constituents for which numerical treatment standards are being reinstated, the EPA is extending the current set of alternative treatment standards for these 32 constituents (and concomitantly delaying the effectiveness of the corresponding portion of this rule) for six months from the date of publication. This rule can be found at 63 FR 47410, September 4, 1998.

12. Rule Title: Characteristic Slags Generated From Thermal Recovery of Lead by Secondary Lead Smelters; Land Disposal Restrictions; Final Rule; Extension of Compliance Date. The EPA is issuing an extension of the compliance date until November 26, 1998 for a limited portion of the Phase IV Final Rule (63 FR 28556, May 26, 1998), which, in part, amended the Land Disposal Restriction (LDR December 29, 1998) treatment standards for metal-bearing hazardous wastes exhibiting the toxicity characteristic. EPA is extending the date for treatment standards only for secondary lead slags exhibiting the toxicity characteristic for one or more metals that are generated from thermal recovery of lead-bearing wastes (principally batteries). The EPA is taking this action due to be short-term logistical difficulties resulting in a temporary shortage of available treatment capacity for these particular wastes. In the interim, the slags affected by this extension remain subject to the treatment standards for toxicity characteristic metals promulgated in the Third Final Rule (55 FR 22520; June 1, 1990) and codified at 40 CFR 268.40. This rule can be found at 63 FR 48124, September 9, 1998.

C. State-initiated changes.

1. The State is amending R18-8-261(I) to make an editorial correction to its amendment of 40 CFR § 261.6(a)(3)(iv) and (v). Reference to "A.R.S. § 49-801(A)(5)" is replaced with "A.R.S. § 49-801" to comply with the most recent update of the Arizona Revised Statutes pertaining to used oil management which incorporates by reference 40 CFR 279.

2. The State is amending R18-8-266(B) to make an editorial correction to its amendment of 40 CFR § 266.100(b)(1). Reference to "A.R.S. § 49-815" is replaced with "A.R.S. § 49-818" to comply with the most recent update of the Arizona Revised Statute pertaining to used oil.

3. The State is amending R18-8-262(F), R18-8-264(G) and R18-8-265(G) to make editorial corrections to its amendment of 40 CFR § 262.23(a)(4), § 264.71(a)(4), and § 265.71(a)(4). References to "R18-8-262(H), R18-8-264(H), and R18-8-265(H)" is replaced with "R18-8-262(I), R18-8-264(I), and R18-8-265(I)," respectively.

4. The State is amending R18-8-264(C), R18-8-265(C), and R18-8-270(C) to make editorial corrections to its amendment of 40 CFR § 264.1(g)(8)(i)(D), §265.1(c)(11)(i)(D), and § 270.1(c)(3)(i)(D). In all of these subsections a telephone number was corrected.

5. The State is amending R18-8-273(F) and (H) to provide for the removal of mercury containing arc tubes from universal waste lamps. The rule change encourages generators and other universal waste handlers to manage mercury-containing lamps in a manner designed to reduce the total amount of hazardous waste sent off site. Universal waste lamps include a class of lamps called high intensity discharge (HID) lamps. A HID lamp consists of a glass bulb, surrounding a glass tube which contains mercury vapor. The HID lamp frequently terminates at a screw-on base, shaped similarly to the base of a typical household incandescent bulb. The outer bulb does not contain any mercury vapors; therefore, it is possible to separate the outer bulb from the inner tube without releasing any mercury.

Safe removal of the outer, uncontaminated glass from a the universal waste lamp is an environmentally sound practice for several reasons: it reduces the amount universal waste transported off site which reduces management cost, and it separates clean glass and metal from the inner component that contains hazardous material (i.e., mercury vapor) which promotes recycling.

The rule change requires a person treating HID lamps to comply with workplace safety requirements, found in the OSHA regulations, and it requires that a containment system be in place to collect any contaminated components which protects human health and the environment. It is emphasized that this rule does not apply to universal waste lamps where the outer bulb contains vapors that meet any of the hazardous waste characteristics or may be a listed hazardous waste. Further, HID lamps in which the handler suspects the inner tube has been compromised must not be disassembled, and must be handled as a whole lamp.

The rule is deemed to be consistent with ADEQ's current hazardous waste rules. ADEQ has already adopted a similar provision contained in the Federal universal waste rules for mercury-containing thermostats, with similar protective measures. EPA has approved ADEQ's hazardous waste rules including those universal waste provisions. Considering the environmental benefits to be gained from the safe management practices covered in the rule, it is expected that EPA will not object to this rule change.

6. The state is amending R-18-8-264(L) to make an editorial correction to 40 CFR § 264.143(h) and § 264.145(h). The reference to the removal of the 3rd sentence in each citation is replaced with a sentence in each citation to correct the deletion of the requirement of submitting evidence of financial assurance and to require each facility located in this state to submit evidence of financial assurance to the Director. This is to clarify that facilities located in this state are to submit evidence of financial assurance to ADEQ rather than to the Regional Administrator of Region 9.

7. The state is amending R-18-8-265(M) to make an editorial correction to 40 CFR § 265.143(g) and § 265.145(g). The reference to the removal of the 3rd sentence in each citation is replaced with a sentence in each citation to correct the deletion of the requirement of submitting evidence of financial assurance and to require each facility located in this state to submit evidence of financial assurance to the Director. This is to clarify that facilities located in this state are to submit evidence of financial assurance to ADEQ rather than to the Regional Administrator of Region 9.

7. A reference to any study that the agency relied on in its evaluation of or justification for the rule and where the public may obtain or review the study, all data underlying each study, any analysis of the study and other supporting material:

Not Applicable.

8. A showing of good cause why the rule is necessary to promote a statewide interest if the rule will diminish a previous grant of authority of a political subdivision of this state:

Not Applicable.

9. The summary of the economic, small business, and consumer impact:

A. Rule Identification

This is a hazardous-waste rulemaking, known colloquially as the 1997-98 amendments to the hazardous waste management rules, codified in the A.A.C. as follows:

Arizona Administrative Register
Notices of Final Rulemaking

Title 18.	Environmental Quality
Chapter 8.	Department of Environmental Quality, Waste Management
Article 2.	Hazardous Wastes §§ 261 through 273

This EIS assesses 15 federal rules incorporated by reference (see Table 1). However, the preamble describes 12 rules. This difference is because the preamble combines the following: (1) technical corrections in 63 FR 35147 to a previously published rule in 63 FR 24596 (preamble rule 6, but rules 6a and 6b in the EIS); (2) amendments in 63 FR 37780 to a previously published rule in 63 FR 24963 (preamble rule 7, but rules 7a and 7b in the EIS); and (3) editorial correction (word omission) in 63 FR 31266 to a previously published rule in 63 FR 28556 (preamble rule 8, but rules 8a and 8b in the EIS).

The complete EIS is available from ADEQ or the Office of the Secretary of State, Public Services Division. It includes the sets of “notes” to Tables 1 and 2, as well as the complete set of endnotes (17) to the EIS.

B. Background Information

ADEQ updates hazardous waste rules annually to be eligible for Resource Conservation and Recovery Act (RCRA) reauthorization. This is necessary for ADEQ to maintain authorization by the Environmental Protection Agency (EPA) to administer the federal hazardous waste program in lieu of the EPA. A notion prevails that businesses generally prefer the state to be the primary agency implementing regulations instead of the federal government. This may be due to the belief by many owners and operators that they will be treated more fairly and granted increased flexibility by ADEQ.

Maintaining authorization to administer the hazardous waste program also enables ADEQ to remain in compliance with A.R.S. § 49-922, which requires ADEQ to adopt rules that provide for a program “equivalent to and consistent with” federal law for hazardous waste regulations. Consequently, federal rule changes are being incorporated into the state’s program as identical requirements. Thus, no changes in costs or benefits accruing to businesses impacted in Arizona have been identified as a result of this rulemaking (see Appendices A and B).

Because the state merely is adopting federal requirements to maintain RCRA authorization for a state program that is equivalent to EPA’s, it could be argued that it is not necessary to quantify or monetize impacts. Technically, the EPA is the senior partner in the relationship of authorized state programs and any impacts may not be considered incremental to Arizona industries. Furthermore, the EPA may act as the enforcer even in states with authorized programs. Nevertheless, ADEQ has attempted to describe the impacts using federal information in absence of specific-state data (see part III. and Tables 1 and 2).

In addition to incorporating changes in federal law, published as final rules in the *Federal Register* (FR) between July 2 of a year and July 1 of the following year, ADEQ is making 7 state-initiated changes. None of these state-initiated changes will impose costs. Six of these changes consist merely of editorial changes, while 1 change consists of amendments to A.A.C. R18-8-273(F) and (H). This change will allow generators and universal waste handlers to remove mercury-containing arc tubes from universal waste lamps. Universal waste lamps include a class of lamps called high intensity discharge lamps. ADEQ expects that this change potentially could encourage recycling and reduce the total amount of hazardous waste sent off-site. The results should generate cost-savings benefit to generators and waste handlers, as well as creating environmental benefits to the public.

C. EIS Introduction

This EIS contains a summary of the analysis of federal rules adopted by reference and their impacts on a national level. Adoption of these federal rules will impact some of the state’s businesses, but for the most part, ADEQ expects these impacts to be beneficial due to cost-saving benefits and rule clarifications. Statements about expected impacts to Arizona’s industries are based on the assumptions identified in Appendix A. However, specific impacts and the ratio of benefits to costs in Arizona are unknown. General statements about national impacts are presented in Appendix B, “Potential National Impacts.”

Table 1 describes the purpose and impact of each rule, as well as the location of the published final rule in the FR and the effective date. A rule is identified by the consecutive number shown in parentheses in the first column of each row. The last column of this table contains brief comments about the potential impacts nationally and to Arizona’s businesses.

Table 2, likewise, identifies each rule, except that rules 6b and 8b have been omitted because they only correct errors, and provide a description of the general type of facilities impacted. For example, the EPA anticipates that rule 8a potentially could impose costs to the industries listed in column 2, but the national net benefit is expected to be about \$6 million annually. Cost-saving benefits, for example, are associated with the new soil treatment standards because

Arizona Administrative Register
Notices of Final Rulemaking

the requirements are less stringent. Nationally, the EPA estimates these benefit to be \$25 million annually.¹ Increased compliance costs are anticipated as a result of newly identified wastes and media contaminated with these wastes.

The federal requirements being incorporated by reference into Arizona's program, can be categorized into 4 types of rules, although some can fit into more than a single type. The 4 types are those that do the following: (1) Correct errors, such as technical amendments or omissions; (2) Clarify ambiguities or interpret existing regulations; (3) Impose no costs either because there probably are no affected entities in Arizona or the rule provides cost-saving benefits (exclusions, extensions, reductions, or less stringent requirements); and (4) Impose costs.

ADEQ expects that 11 rules should impose no costs, while only 2 rules potentially could do so (rules 8a and 9). Additionally, 7 of these rules either clarify or correct errors. Potentially, many of the rules which impose no costs and those which do impose costs could provide cost-saving benefits to Arizona businesses. But even if this rulemaking imposes costs, it does not mean that overall costs will exceed probable benefits. While some businesses may experience increased compliance costs, others may experience decreased costs, or some combination thereof. Potential benefits include increased compliance options, less burdensome requirements, and reduced risks to human health and the environment. In fact, the EPA anticipates that central tendency and high-end hypothetical individual cancer and non-cancer risks could be decreased in a number of mineral processing facilities (rule 8a). In addition, this rule might result in reduced ecological risk and natural resource damage (see 63 FR 28632). However, it is unknown what this impact could mean to Arizona's workforce, inhabitants, or to its biosphere.

D. Potential Entities Impacted in Arizona

Based on the illustrations of potential entities impacted in Tables 1 and 2, the following classes of persons could be impacted by this rulemaking: hazardous waste generators, T.D. facilities (treatment, storage, and disposal), transporters, commercial testing laboratories, consultants, contractors, suppliers, ADEQ (implementing agency), and public. These classes include a wide variety of entities from recyclers, smelters, refiners, manufacturers, and treaters to combustors, blenders, pulp mills, remediation companies, and mineral processing industries. Additionally, these entities include both private and public owners/operators.

Potentially, some of these entities could be affected in varying degrees both within a specific class and from one class to another. In some cases, only large scale facilities may be impacted. For example, the EPA claims that rule 9 primarily will affect large-scale facilities, but it should provide cost-saving benefits over current requirements. Thus, any negative impacts of this rule in Arizona probably can be dismissed (see 63 FR 33818-33819).

E. Overview of Impacts

ADEQ expects some Arizona businesses to experience increased compliance costs and others to experience cost-saving benefits, or both. Net benefits, or at least in the short-term, might not exceed compliance costs in all cases. However, for many businesses, ADEQ expects no significant impacts to occur. Benefits could accrue as a result of exclusions, extensions, reductions, or otherwise more lenient, less burdensome, or less stringent requirements. Part of these benefits could accrue from increased compliance alternatives and greater flexibility.

Additionally, this rulemaking is expected to improve the protection of human health and the environment in some instances and maintain it in others. It does this, in part, by minimizing potential threats to human health and the environment. ADEQ also expects this rulemaking to improve the efficiency of hazardous waste management in Arizona. In addition to the general public being impacted in a positive manner, some consumers potentially might be negatively affected by increased costs due to compliance costs being passed-on to them. Overall, ADEQ expects probable benefits to exceed probable costs of this rulemaking.

The social cost of this rulemaking is the sum of business compliance costs (real-resource costs or pretax compliance burdens), government regulatory costs, opportunity costs (foregone benefits), adjustment costs for displaced resources (due to job losses and facility closures), market costs, and other business and administrative costs. The social cost is expected to be relatively minimal. This expectation is not only due to the high probability of net benefits exceeding costs, but to the fact that Arizona does not have an extensive number of businesses that could be impacted by these rules, except for mineral processing industries and other businesses that could be impacted by rule 8a. In addition, compliance by businesses should not result in deadweight-welfare losses. This is because ADEQ does not anticipate any type of reduction in industry output. Hence, no net losses in consumers' and producers' surpluses are anticipated.

A social benefit, although an EPA grant paid by federal tax payers, is the approximate \$1.5 million which ADEQ receives annually to administer the state's hazardous waste program. This represents a benefit because the regulated industry (hazardous waste generators and T.D. facilities) are mandated to comply with federal and state requirements. These requirements, including design, performance, and operational standards, are established to prevent health haz-

Arizona Administrative Register
Notices of Final Rulemaking

ards and environmental contamination. However, a person could argue that grant monies, operating as a program subsidy or "transfer" from one government entity to another, should not be included in social benefits.

F. Overview of Primary and Secondary Impacts

ADEQ does not expect this rulemaking to impact short- or long-run employment, production, or industrial growth in Arizona. This includes both private and public facilities. There is no reason to believe that price, profitability, or capital availability will be affected. Furthermore, because ADEQ expects no facility closures, reductions in output, or increases or decreases in employment, no transitional employment problems, including reemployment, are expected to occur. Finally, ADEQ expects that this rulemaking will not have an impact on state revenues.

For some industries, consulting expenditures for consulting services and capital requirements may be necessary for these owners/operators to comply with the federal requirements incorporated into the state's hazardous waste program. In most cases, the impact probably will be minimal. But due to the potential for some of these rules to impose real-resource costs upon certain industries, some revenues may be affected. However, expenditures by industry will represent revenues for service providers (consultants, contractors, and suppliers).

Other economic changes in secondary employment, energy, international trade, regional impacts, or supply and demand are not anticipated to occur as a result of this rulemaking. Impacts to ADEQ's program should be effectively handled by its current personnel without any additional staffing requirements.

G. Cost-Effectiveness Analysis (CEA)

Although actual impacts could vary from one business to another, ADEQ expects that various industries and the public could receive benefits. However, the assessment of impacts in this section is limited to rules 4, 5, 8a, 9, 10, and 11. But ADEQ expects only rules 8a and 9 to generate costs, but even those costs could be off-set by cost-saving benefits. It is unknown if any Arizona businesses will be affected by rules 5, 7a, 7b, 9, 10, 11, and 12. Furthermore, ADEQ did not receive any comments about costs to Arizona's businesses.

The following types of businesses potentially could be impacted (either positively or negatively) by this rulemaking:

(1) Businesses that treat or dispose of hazardous waste subject to permitting requirements or that accumulate hazardous waste on-site in RCRA permit-exempt tanks or containers (rule 4). This rule imposes no costs, but it increases compliance alternatives, reduces the overall information-keeping burden, clarifies certain provisions, and makes some regulatory provisions more lenient. Standards were established to reduce organic air emissions for certain hazardous waste activities to levels protective of human health and the environment. ADEQ expects certain Arizona businesses to benefit.

(2) Pulp and paper businesses (SIC codes 261 and 262) that seek an exclusion for condensates derived from overhead gases from kraft mill steam strippers, provided they combust the condensate at the mill where it is generated (rule 5). This rule imposes no costs. Without this exclusion, condensates would be regulated under RCRA because they exhibit the ignitability characteristic. ADEQ expects this to generate a cost-saving benefit to a business that would seek this exemption.

(3) Businesses that generate toxicity characteristic (TC) metal hazardous wastes, characteristic mineral processing waste, or any hazardous waste required to meet the land disposal restrictions (LDR) treatment standard for the 12 metals (rule 8a; also refer to note #4 to Table 2 and notes #9 and #10 to Table 1). The EPA also is revoking the listing for 5 remanded waste listings. If these wastes do exhibit a characteristic of a hazardous waste, they will be subject to hazardous waste regulations, including the waste mixture rule.

Entities impacted by rule 8a could include the following: businesses that process primary minerals, chemical manufacturers, pharmaceutical producers, paint producers, steel mills, motor vehicle parts manufacturers, blast furnaces, metal plating/polishing facilities, and aircraft parts and equipment industries. Other businesses include T.D. facilities that treat or dispose of TC metal hazardous wastes, characteristic mineral processing wastes, and other metal-bearing hazardous wastes; private or public businesses remediating sites containing hazardous soil; businesses that generate, store, or recycle secondary materials from primary mineral processing (copper smelters, gold refiners, and other primary metals producers that return waste streams to units for additional recovery); businesses that generate and reclaim drippage and wastewaters on-site from wood preserving industries (SIC code 2491); businesses that recycle certain circuit boards; and businesses that store or recycle mercury-containing waste lamps. Thus, this rule imposes significant costs nationally, but it also provides for benefits, which are expected to exceed costs by \$6 million (see note #5 to Table 1). ADEQ expects some Arizona businesses to experience cost-saving benefits while others may encounter increased compliance costs.

(4) Generators, transporters, combustors, some hazardous waste treaters, and 3rd party blenders involved in the comparable/syngas fuels exclusion, as well as any business that stores these fuels. Potential combustors include: industrial

Arizona Administrative Register
Notices of Final Rulemaking

furnaces and utility boilers, hazardous waste incinerators (commercial or on-site facilities), cement kilns, light weight aggregate kilns, combustion turbines, and boilers. Petroleum refineries also may seek an exemption for the output of gasification operations (known as syngas). Other businesses include generators and T.D. facilities involved in RCRA permit modification and waste minimization and pollution prevention (rule 9). This rule imposes no costs, but it does create a public reporting burden nationally, which is estimated at over \$5 million annually. This rule mainly will impact large-scale facilities, but it should provide cost-saving benefits compared to current requirements. ADEQ expects some Arizona businesses potentially could be impacted, but with benefits exceeding costs.

(5) Businesses that produce zinc micronutrient fertilizers from TC wastes (rule 10). This rule imposes no costs. It is likely to positively impact human health and the environment (refer to note #6 to Table 1). ADEQ expects Arizona businesses, if any, involved in producing this type of fertilizer would benefit.

(6) Businesses that generate carbamate production wastes and waste treaters (rule 11). This rule imposes no costs. It very likely will provide greater flexibility for compliance with treatment standards. It minimizes potential threats to human health and the environment by ensuring that effective treatment will occur without delay (treated by a BDAT before being land disposed). It also eliminates a potential for halting production of certain carbamate pesticides. ADEQ expects that Arizona businesses, if any, involved in producing this type of waste should benefit.

Because it is not possible to monetize the costs and benefits to Arizona businesses and other classes of persons, a traditional cost-benefit analysis cannot be done. However, costs and benefits identified in this EIS should help industries to assess potential impacts to them. Although benefits are expected to accrue to several types of businesses in terms of compliance savings, other businesses are expected to be impacted by increased costs.

As previously stated, ADEQ expects some Arizona businesses to experience increased compliance costs and others to experience cost-saving benefits, or both. Net benefits, or at least in the short-term, might not exceed compliance costs in all cases. However, for many businesses, ADEQ expects no significant impacts to occur. In addition, the public is expected to benefit from improved protection of human health and the environment and improved program management, but benefits are not expected to accrue uniformly. As previously stated, ADEQ expects probable benefits to outweigh probable costs of this rulemaking.

H. General Impact on Small Businesses and Reduction of Impacts

Although ADEQ data do not identify facilities classified as small businesses, hazardous waste program staff estimate 80-90% of the 900 SQGs and 90% of the 1,200 CESQGs could be classified as small businesses. Unlike the other generators, only a small proportion of the 200 LQGs and probably none of the 39 T.D. facilities would be considered small businesses. As a result of this apportionment, approximately 80% of the 2,339 generators would be classified as small businesses. However, ADEQ estimates that the majority, by far, will be unaffected by this rulemaking, including the 1,200 CESQGs. Approximately 60 SQGs, 70 CESQGs, 20 LQGs, and 10 T.D. facilities represent government entities, including schools. Probably none of these government entities will be impacted.

From an EPA perspective, few, if any, small entities should be adversely affected by this rulemaking. This is because most of the federal requirements that ADEQ is adopting by reference do not impose costs or economic impacts on businesses, either small or large (see Tables). Table 1 provides information about national impacts and potential affects to Arizona businesses (see also appendices). As a result, this rulemaking might not have a significant economic impact to a substantial number of small businesses. However, if small businesses were to experience an adverse impact, it probably would be due to rules 8a and 9. Because rule 9 primarily affects large-scale facilities and the fact that it provides cost-saving benefits, probably no small business will be adversely impacted by this rule. Rule 8a may be the exception.

The EPA has identified general impacts upon small businesses expected to accrue from rule 8a, although the impacts probably would not be significant (see 63 FR 28633). In some cases, no impacts are expected. For example, no businesses should be affected that generate or treat toxicity characteristic (TC) metal wastes because these wastes generally are treated to below universal treatment standard (UTS) levels. In addition, TC metal wastes with organic underlying hazardous constituents (UHCs) are not prevalent, but if present, they rarely would require incineration. Hence, this rule should not result in increased costs from incineration.

Rule 8a is expected to generate compliance costs to some small businesses. The EPA identified 24 mineral processing facilities in the U.S. (owned by 22 businesses), but they are not expected to experience compliance costs that exceed 1% of reported revenues. In addition, 34-93 small businesses undergoing remediation of TC metal contaminated soils and sediments with organic UHCs could be impacted. However, the EPA estimated that only 2 firms could incur compliance costs that would exceed 1% of reported revenues. The EPA also identified 10 secondary small businesses that produce zinc fertilizers, but only 2 firms in the U.S. produce a hazardous waste-derived fertilizer. Only 1 of these firms potentially could incur a significant economic impact.

Arizona Administrative Register
Notices of Final Rulemaking

ADEQ is sensitive to the concerns of small businesses and the impact this rulemaking could have upon them. Accordingly, ADEQ has considered each of the methods prescribed in A.R.S. § 41-1035 for reducing the impact on small businesses. Likewise, ADEQ has considered each of the methods prescribed in A.R.S. § 41-1055(B)(5)(c). For example, A.R.S. § 41-1035 requires agencies implementing rules to reduce the impacts on small businesses by using certain methods where legal and feasible. Methods that may be used include the following: (1) exempt them from any or all rule requirements, (2) establish performance standards which would replace any design or operational standards, or (3) institute reduced compliance or reporting requirements. The latter method could be accomplished by establishing less stringent requirements, consolidating or simplifying them, or by setting less stringent schedules or deadlines.

ADEQ could not provide additional regulatory relief for small businesses beyond what was built-in by the federal requirements. ADEQ has no authority to exempt a small business, or even establish a less stringent standard or schedule for it, or any business as a matter of fact, from compliance or reporting requirements. Pursuant to A.R.S. § 49-922(A), the state's hazardous waste program must be "equivalent to and consistent with the federal hazardous waste regulations promulgated pursuant to subtitle C of the federal act." In addition, the state's nonprocedural program standards must not be more stringent than or conflict with federal regulations. Under these conditions, ADEQ cannot provide additional relief to small businesses because it would not be legal or feasible. If ADEQ deviates from these rulemaking provisions, it would jeopardize EPA authorization to administer the federal hazardous waste program in Arizona, which, in addition to other negative impacts, could mean a loss of approximately \$1.5 million annually.

I. Alternative Rulemaking Provisions

ADEQ could not find any less costly or less intrusive rule provisions of achieving the goals and objectives of this rulemaking. The reason is that these rules mainly represent the adoption of federal requirements (see parts B, C, and H).

Table 1. Federal Rules Incorporated into Arizona's Rules and Their Anticipated Impacts

Federal Rule	Effective Date of Rule	Purpose of Rule	Impact of Rule (U.S. and Arizona)
(#1) 62 FR 37694 14 July 1997 (40 CFR 268) (Rule is effective)	7 July 1997	Extends national capacity variance for spent potliners from primary aluminum production (K088) for 3 months (until 8 October 1997). ¹	Imposes no costs. It represents a cost-savings benefit nationally. Because there probably are no SIC code 3334 businesses in Arizona that generate spent potliners, no impact is expected to occur in Arizona. Additionally, the extension has expired.
(#2) 62 FR 45568 28 August 1997 (40 CFR 268, 271) (Rule is effective)	21 August 1997	Extends alternative LDR treatment standards for carbamate production wastes for 1 more year (until 26 Aug. 1998), and the inclusion of carbamate waste constituents on the UTS list at 40 CFR 268.48.	Imposes no costs. It represents a cost-savings benefit nationally. If treated by a specified technique, it is not required to measure compliance with treatment levels. It is unknown if any Arizona businesses have been affected. However, the relevance is moot because the extension has expired (see rule #11).

Arizona Administrative Register

Notices of Final Rulemaking

<p>(#3) 62 FR 64504 5 December 1997 (40 CFR 268)</p> <p>(Rule is effective)</p>	<p>5 December 1997</p>	<p>Clarifies standards by codifying the current EPA interpretation of existing LDR treatability variance language.</p>	<p>Imposes no costs. Since EPA merely adopted its longstanding interpretation of when a variance may be granted, no incremental impact, either nationally or locally, is expected.</p>
<p>(#4) 62 FR 64636 8 December 1997 (40 CFR 264, 265, 270)</p> <p>(Rule is effective)</p>	<p>8 December 1997</p>	<p>Makes technical amendments to final subparts AA, BB, and CC rules to clarify and interpret, as well as to make various corrections. EPA promulgated standards to reduce organic air emissions from certain hazardous waste management activities to levels that protect human health and the environment. The standards are referred to as “subpart CC” standards.²</p>	<p>Imposes no costs. Since EPA clarified the rule’s intent and made certain amendments, the impact has been beneficial by eliminating regulatory overlap between RCRA and CAA regulations, as well as providing cost-saving benefits to the regulated community (increased compliance alternatives and certain provisions more lenient). Certain types of Arizona businesses are expected to benefit.</p>
<p>(#5) 63 FR 18504 15 April 1998 (40 CFR 261)</p> <p>(Rule is effective when Arizona’s rule is effective)</p>	<p>15 June 1998</p>	<p>Grants an exclusion for condensates derived from overhead gases from kraft mill steam strippers, but only if it is combusted at the mill generating the condensates.³</p>	<p>Imposes no costs. Nationally, it represents a cost-savings benefit. There may be 1 or 2 industries involved in the pulping process in Arizona (SIC codes 261 and 262), but it is unknown if any will seek an exclusion. Although the impact is expected to be positive, it is unknown what it will mean to Arizona businesses.</p>

Arizona Administrative Register

Notices of Final Rulemaking

<p>(#6a) 63 FR 24596 4 May 1998 (40 CFR 261, 268, 271)</p> <p>(Rule is effective)</p>	<p>4 November 1998</p>	<p>Lists 2 organobromine production wastes as hazardous and sets LDRs prohibitions and treatment standards. Only 2 firms in southern Arkansas produce 95% of organobromine chemicals manufactured in the U.S.⁴</p>	<p>Imposes minimal costs nationally (less than \$100,000/yr). This industry is limited by the location of underground bromide-bearing brine deposits. Because the industry is geographically limited, no impacts are expected in Arizona, unless entities respond to a spill. However, because ADEQ deems the probability of a spill occurring to be low, no impact from this rule is anticipated.</p>
<p>(#6b) 63 FR 35147 29 June 1998 (40 CFR 268, 271)</p> <p>(Rule is effective)</p>	<p>29 June 1998</p>	<p>Corrects technical errors in final rule published 4 May 1998 (effective 4 November 1998) in 63 FR 24596.</p>	<p>Imposes no costs either nationally or locally (see rule #6a).</p>
<p>(#7a) 63 FR 24963 6 May 1998 (40 CFR 261, 279)</p> <p>(Rule is effective when Arizona's rule is effective)</p>	<p>6 July 1998</p>	<p>Corrects technical errors and clarifies ambiguities to existing used oil management standards (includes 8 amendments).</p>	<p>Generally, imposes no costs, but if it does, they are expected to be de minimis. It is unknown if any local businesses will be affected.</p>
<p>(#7b) 63 FR 37780 14 July 1998 (40 CFR 261, 279)</p> <p>(Rule is effective when Arizona's rule is effective)</p>	<p>14 July 1998</p>	<p>Removes 3 amendments to the used oil management standards in final rule published 6 May 1998 (effective 6 July 1998) in 63 FR 24963, and restores the prior regulatory text.</p>	<p>Imposes no costs. Possible minor benefits may accrue to some facilities. If any Arizona businesses will be affected, the impact is not expected to be incremental since prior regulatory language was restored (see rule #7a).</p>

Arizona Administrative Register

Notices of Final Rulemaking

<p>(#8a) 63 FR 28556 26 May 1998 (40 CFR 261, 266, 268, 271)</p> <p>(Most rule provisions will be in effect when Arizona's rules are effective, but some currently are in effect)</p>	<p>24 August 1998 The latest Phase IV rule in a series of LDR rules (see 63 FR 28558-28559)</p>	<p>Establishes LDR treatment standards for metal wastes, mineral processing wastes, mineral processing secondary materials; treatment standards for hazardous soils; and provides for certain exclusions. The new soil treatment standards are less stringent than the standards currently required for previously regulated soils, which should provide cost-saving benefits to some entities.⁵</p>	<p>Imposes significant costs nationally, but EPA expects overall cost-saving benefits to exceed these costs by an estimated \$ 6 million. Even if some entities will experience cost-saving benefits, others may encounter higher operating costs for compliance (costs for newly identified wastes and media contaminated with these wastes). Overall, EPA expects reduced risks to human health and the environment, including ecological risk reduction and reduced natural resource damages. Potentially, some Arizona businesses could experience cost-saving benefits, but others could encounter increased compliance costs.</p>
<p>(#8b) 63 FR 31266 8 June 1998 (40 CFR 268)</p> <p>(Editorial corrections to a previously published rule)</p>		<p>Corrects an omission of a word in amendatory instruction #19 (Table 1 to Appendix VII) in the final rule published 26 May 1998 (effective 24 August 1998) in 63 FR 28556 on page 28751.</p>	<p>Imposes no costs either nationally or locally (see rule #8a).</p>
<p>(#9) 63 FR 33782 19 June 1998 (40 CFR 261, 270)</p> <p>(Rule is effective when Arizona's rule is effective)</p>	<p>19 June 1998</p>	<p>Finalizes some elements of the proposed air emissions standards (19 April 1996) for certain hazardous waste combustion units. The remaining issues will be addressed in future rules.⁶</p>	<p>Although it imposes no costs, it does create an incremental public reporting and record keeping burden, but only to affected entities, which is estimated at \$5 million per year nationally. This rule mainly affects large-scale facilities, but it does provide cost-saving benefits compared to current requirements. Certain local businesses could benefit with potential benefits exceeding administrative costs.</p>

Arizona Administrative Register
Notices of Final Rulemaking

<p>(#10) 63 FR 46332 31 August 1998 (40 CFR 268)</p> <p>(Rule is effective)</p>	<p>21 August 1998</p>	<p>Amends LDR treatment standard for zinc micronutrient fertilizers (recycling) in the final rule published 26 May 1998 (effective 24 August 1998) in 63 FR 28556 by providing an administrative stay. The affected fertilizers (produced from TC wastes) will remain subject to previous treatment standards before the Phase IV requirements.⁷</p>	<p>Imposes no costs. Provides a cost benefit nationally. It is likely to positively impact human health and the environment. This impact is due to the potential decrease in the use of K061-derived fertilizers and other zinc fertilizers (D004-D011) that may contain higher levels of contaminants. It is unknown if any local businesses will be affected by this amendment (see rule #8a).</p>
<p>(#11) 63 FR 47410 4 September 1998 (40 CFR 268)</p> <p>(Rule is effective)</p>	<p>26 August 1998 (note that temporary alternative waste constituents expire automatically on 26 August 1998)</p>	<p>Revises waste treatment standards for 40 waste constituents associated with the production of carbamate wastes. For the 8 specific carbamate waste constituents, it sets alternative treatment standards for 7 and deletes 1; it reinstates numerical treatment standards for the 32 other carbamate waste constituents. It also provides 6 months for testing and analysis of the 32 waste constituents (numerical standards reinstated).⁸</p>	<p>Imposes no costs. Provides greater flexibility for compliance with treatment standards. It minimizes potential threats to human health and the environment by ensuring that effective treatment will occur without delay (treated by a BDAT before being land disposed). It also eliminates a potential for halting production of certain carbamate pesticides. It is unknown if any local businesses will be affected.</p>
<p>(#12) 63 FR 48124 9 September 1998 (40 CFR 268)</p> <p>(Rule is effective)</p>	<p>28 August 1998</p>	<p>Provides a 3-month extension (until 26 November 1998) for the treatment standards to be effective for secondary lead slags exhibiting the TC for 1 or more metals that are generated from thermal recovery of lead-bearing wastes (mainly batteries).⁹</p>	<p>Imposes no costs. Provides for compliance flexibility for resolving short-term logistical difficulties for secondary lead (SIC code 3341). This rule only affects the date of compliance and not the means of compliance. However, the relevance is moot because the extension has expired (see rule #8a).¹⁰</p>

Source: Federal Registers (FRs) as indicated in the first column. *County Business Patterns 1995: Arizona* (Oct. 1997) also was used to check some data by industry type. Notes to this table have not been included in this EIS summary. Refer to the full EIS in ADEQ's docket file.

APCD=air pollution control devices; BDAT=best demonstrated available technology; CAA=Clean Air Act; Cd=cadmium; LDR=land disposal restrictions; MACT=maximum achievable control technology; PAH=polycyclic aromatic hydrocarbons; Pb=lead; RCRA=Resource Conservation and Recovery Act; SIC codes 3334=primary production of

Notices of Final Rulemaking

aluminum, 261=pulp mills, 2491=wood preserving industries, 3341=secondary smelting and refining of nonferrous metals; TC=toxicity characteristic; TCLP=toxicity characteristic leaching procedure; T.D.=treatment, storage, and disposal; UHCs=underlying hazardous constituents; and UTS=universal treatment standard.

Arizona Administrative Register
Notices of Final Rulemaking

Table 2. Potential Entities Impacted Nationally by Federal Rules

Federal Rule	Facility Type (General)	Potential Industry Example
(#1) Extends national capacity variance for spent potliners until October 8, 1997 (LDR Phase III).	Facilities that generate spent potliners from the production of aluminum (K008 hazardous waste).	Industries engaged in the primary production of aluminum (SIC code 3334).
(#2) Extends alternative LDR treatment standards for carbamate production wastes for 1 additional year (Phase III), or until 26 August 1998. It provides for a temporary alternative means to comply.	Facilities that generate carbamate production wastes (includes constituents on the UTS list at 40 CFR 268.48). T.D. facilities.	Industries that generate carbamate production wastes (from carbamate pesticide manufacturing). Entities that become subject to the requirements of the LDR program (does not impose additional burdens).
(#3) Clarifies standards by codifying current EPA interpretation of existing LDR treatability variance language.	Businesses or facilities that treat waste and request a variance from LDR treatment standards due to inappropriate LDR treatment standards. Wastes generated during remediation could include RCRA corrective action, CERCLA cleanup, and cleanup under state programs. ¹	Various industries, including remediation companies, that apply for treatability variances for wastes, for example, contaminated soil or wastewater, washes, surface impoundments, and remediation wastes (solid and hazardous wastes, all media, and debris).
(#4) Makes technical amendments and clarifies the regulatory text of final standards; interprets those standards; clarifies preamble language in previous FR documents; and corrects errors.	Generators and T.D. facilities.	Industries that treat or dispose of hazardous waste subject to permitting requirements (including portable equipment), or that accumulate hazardous waste on-site in RCRA permit-exempt tanks or containers.
(#5) Grants an exclusion from RCRA requirements for condensates derived from overhead gases from kraft mill steam strippers.	Pulp and paper facilities. Boilers.	Pulp, paper, and paperboard mills that combust the condensate at the mill (SIC codes 261 and 262). Boilers burning these condensates.
(#6a) Lists 2 organobromine production wastes as hazardous and modifies the LDR treatment standards to include these wastes.	Entities that handle the waste stream or the commercial chemical product. This industry is limited by the location of underground bromine-bearing brine deposits, e.g., 2 firms in southern Arkansas account for 95% of all organobromine chemicals produced in the U.S. Entities responding to releases of either K140 or U408.	Industries that generate the waste solids and filter cartridges from the production of 2,4,6-tribromophenol (K140) or the product (U408), and T.D. facilities. Although most organobromine chemicals are sold as flame retardants, a small volume is used as reagent chemicals and pharmaceutical intermediates. State and local emergency planning entities and the National Response Center (federal).

Arizona Administrative Register

Notices of Final Rulemaking

(#7a) Corrects technical errors and clarifies ambiguities to existing used oil management standards (consists of 8 amendments).	Facilities involved with recycled used oil. ²	Generators, distributors, transporters, processors, refiners, and burners (CESQG if wastes are mixed with used oil).
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Arizona Administrative Register
Notices of Final Rulemaking

<p>(#7b) Removes 3 of the 8 amendments to the use oil management standards direct final rule published 6 May 1998 (63 FR 24963) and reinstates the prior regulatory requirements in effect.³</p>	<p>Facilities involved with recycled used oil.</p>	<p>Generators, distributors, transporters, processors, refiners, and burners.</p>
<p>(#8a) Promulgates LDR treatment standards for TC metal hazardous wastes, characteristic mineral processing wastes, other metal-bearing wastes. It also clarifies that a previous exclusion for hazardous waste regulation for recycled shredded circuit boards applies to whole circuit boards under certain conditions.</p>	<p>Generators that produce TC metal hazardous wastes (D004-D011), characteristic mineral processing waste, or any hazardous waste required to meet the LDR treatment standard for the 12 metals.⁴</p> <p>T.D. facilities.</p> <p>Entities managing hazardous soil.</p> <p>Facilities that generate, store, or recycle secondary materials from primary mineral processing.</p> <p>Facilities that preserve wood.</p> <p>Facilities that recycle circuit boards.</p>	<p>Primary mineral processing, chemical manufacturers, pharmaceutical producers, paint producers, steel mills, motor vehicle parts manufacturers, blast furnaces, metal plating/polishing industries, and aircraft parts and equipment.</p> <p>Industries that treat or dispose of TC metal hazardous wastes, characteristic mineral processing wastes, and other metal-bearing hazardous wastes.</p> <p>Private or public parties remediating sites containing hazardous soil.</p> <p>Copper smelters, gold refiners, and other primary metals producers that return waste streams to units for additional recovery.</p> <p>Industries that generate and reclaim drippage and wastewaters on-site from the wood preserving industries (SIC code 2491).</p> <p>Industries that recycle certain circuit boards.</p>

Arizona Administrative Register

Notices of Final Rulemaking

<p>(#9) Finalizes elements of the proposed air emissions standards that will affect certain generators and other entities.</p>	<p>Generators, transporters, combustors and T.D. facilities involved in the comparable/syngas fuels exclusion. This exclusion represents the first phase in addressing the “clean fuels” issue.⁵</p> <p>Generators, and T.D. facilities involved in any of the following: RCRA permit modifications, notification of intent to comply, and waste minimization and pollution prevention incentives.⁶</p>	<p>Generators seeking a conditional exemption from RCRA, and some hazardous waste treaters; transporters, 3rd party blenders, combustors, and any entity that stores these fuels. Potential combustors include: industrial furnaces and utility boilers, hazardous waste incinerators (commercial or on-site facilities), cement kilns, light weight aggregate kilns, combustion turbines, and boilers. Petroleum refineries also may seek an exemption for syngas (output of gasification operations).</p> <p>Facility owners/operators and T.D. facilities that modify facility design or operations to meet MACT standards, that notice their intent to comply, and that incorporate waste minimization measures.</p>
<p>(#10) Amends LDR treatment standard for zinc micronutrient fertilizers (recycling).</p>	<p>Facilities that manufacture fertilizers.</p>	<p>Producers of zinc micronutrient fertilizers (produced from TC wastes).</p>
<p>(#11) Revises waste LDR treatment standards for 40 waste constituents associated with the production of carbamate wastes. Does not create additional regulatory requirements.</p>	<p>Facilities that generate carbamate production wastes.</p> <p>T.D. facilities.</p>	<p>Industries that generate carbamate production wastes (from carbamate pesticide manufacturing).</p> <p>Waste treaters (they must certify that wastes have been treated to LDR standards).</p>
<p>(#12) Extends the compliance date for secondary lead slags exhibiting the TC for 1 or more metals that are generated from thermal recovery of lead-bearing wastes (mainly batteries).</p>	<p>Facilities that generate secondary lead slags.</p> <p>T.D. facilities and transporters.</p>	<p>Industries (smelters) that generate secondary lead slags as byproducts (SIC code 3341).</p> <p>Commercial treaters and transporters of crushed slag (the slag must be crushed to be successfully stabilized).</p>

Source: 62 FR 37694; 62 FR 45569-45571; 62 FR 64504-64505, 64507; 62 FR 64636; 62 FR 18504, 18635; 63 FR 24596-24597, 24623; 63 FR 35147; 63 FR 24963-24965, 24969; 63 FR 37780-37782; 63 FR 28559; 63 FR 31266; 63 FR 33783-33785, 33792-33796, 33799-33813, 33818-33819; 63 FR 46332-46333; 63 FR 47419-47414. This table includes entities likely to be impacted, but it is not intended to be exhaustive. Although the table excludes commercial laboratories, some will be impacted by certain rules. Notes to this table have not been included in this EIS summary. Refer to the full EIS in ADEQ’s docket file.

BDAT=best demonstrated available treatment; CERCLA=Comprehensive Environmental Response, Compensation, and Liability Act; CESQG=conditionally exempt small quantity generators; LDR=land disposal restrictions; MACT=maximum achievable control technology; PCB=polychlorinated biphenyls; RCRA=Resource Conservation and Recovery Act; TC=toxicity characteristic; T.D.=treatment, storage, and disposal; UHCs=underlying hazardous constituents; and UTS=universal treatment standard.

Arizona Administrative Register
Notices of Final Rulemaking

Appendix A

EIS Assumptions

- (1) There are no businesses engaged in the primary production of aluminum and which generate spent potliners (SIC code 3334), but even if there were, the extension for the national capacity variance expired in October of 1997 (rule 1).
- (2) There may be 1 or 2 businesses involved in the pulping process (SIC codes 261 and 262), and it is unknown if any will seek an exclusion for condensates derived from overhead gases, but if they do, it will represent a cost-savings benefit (rule 5).
- (3) Although there are no businesses that manufacture organobromine chemicals, and hence, no waste solids and filter cartridges (K140) or the product (U408) would be generated, state or political subdivisions of the state could be impacted if they were to respond to a release of either K140 or U408. However, for this EIS the impact is not considered because of a perceived low probability of a release actually occurring in Arizona (rule 6a).
- (4) There may be a few businesses involved in the production of zinc micronutrient fertilizers, but it is unknown if these fertilizers are produced from toxicity characteristic (TC) wastes, but if they are, the "administrative stay" will represent a cost-savings benefit because the fertilizers would remain subject to previous treatment standards before this Phase IV rule (rule 10).
- (5) Businesses generating TC metal wastes associated with stabilization are not expected to be negatively impacted (rule 8a). No incremental costs or benefits are expected to be generated.
- (6) Businesses generating TC metal wastes that contain organic underlying hazardous constituents (UHCs) are not expected to be negatively impacted. This is because these wastes (including foundry sands) often are treated to universal treatment standard (UTS) levels using bona fide treatment reagents, such as portland cement (rule 8a).
- (7) Businesses involved with contaminated soils which exhibit a characteristic for TC metals, including soils containing newly identified mineral processing wastes, and that do not contain UHCs, are not expected to be negatively impacted (rule 8a).² This is because rule 9a amends the land disposal restrictions (LDR) treatment standards for these soils; hence, generators and treaters will benefit from these alternative treatment standards. Treatment standards should be more technically and environmentally appropriate as a result of this change.
- (8) Businesses generating newly identified wastes and media contaminated with these wastes (rule 8a). This is because this rule establishes LDR treatment standards for metal wastes, mineral processing wastes, and mineral processing secondary materials. Businesses could include primary metal producers (copper smelters), treaters and disposers of TC metal hazardous wastes, characteristic mineral processing wastes, and other metal-bearing hazardous wastes. Refer to part VII., item (3), part VIII., Tables 1 and 2, and Appendix B, item (1). Although specific impacts are unknown, ADEQ expects some businesses to be negatively impacted by this rule. The net affect of rule 8a, however, is expected to generate cost-saving benefits (see Table 1 and Appendix B).³
- (9) Many businesses will not be impacted because the rules merely clarify, correct, or interpret existing requirements, or rule extensions have expired (rules 1, 2, 3, 4, 6b, 7a, 8b, and 12).

Appendix B

Potential National Impacts

- (1) Because this rule prohibits the land storage of mineral processing residues below the high-volume threshold before being recycled, annualized compliance costs could reach \$10 million. This estimate is based on the need for owners/operators to purchase new units and to upgrade existing storage units. It also includes the estimated cost of transferring some mineral processing residues from recycling to disposal (increased costs) and from disposal to recycling (decreased costs). The actual economic impact will depend on current storage and management practices of mineral processing residues before being recycled.

Arizona Administrative Register
Notices of Final Rulemaking

According to the EPA, 29 mineral commodity sectors nationally could be affected by rule 8a. This includes approximately 136 facilities that generate 118 streams of newly identified mineral processing secondary materials.⁴ However, economic impacts might not be substantial for some mineral processing sectors, depending on the current storage and management of mineral processing residues before being recycled. Other mineral processing sectors could experience substantial compliance costs for building new storage facilities or upgrading existing ones.

Also, before the effective date of rule 8a, wastes that were characteristic but which did not fail the extraction procedure (EP) were classified as newly identified wastes and were not subject to the land disposal restrictions (LDR) requirements; metals that were characteristic due to failing the toxicity characteristic leaching procedure (TCLP) and the EP, were subject to treatment standards at levels equal to the toxicity characteristic (TC) levels. But TC levels normally are higher than those treatment levels for which threats posed by land disposal of the wastes are minimized. Thus, treatment to levels lower than the characteristic levels will now be required. As a result of this rule, businesses should experience increased compliance costs.

- (2) Because TC hazardous metal contaminated soils which contain organic underlying hazardous constituents (UHCs) that will require additional treatment over that received in the baseline, annualized compliance costs to owners/operators are estimated at \$3 million. However, this is expected to occur mainly at voluntary cleanups and Superfund sites.
- (3) Because owners/operators of manufactured gas plants (MGPs) may have to select remedies that are alternatives to asphalt, brick, or concrete recycling, annualized compliance costs of \$6.2 million are expected to occur. The EPA estimates that compliance costs to business sales for MGP site cleanups will be < 1%. MGP contaminated soils represent a category of contaminated media that was not previously subject to LDR treatment standards.⁵
- (4) Because the EPA does not consider the use of iron filings to be a legitimate and effective treatment reagent (nonferrous foundries), the estimated cost of \$11.7 million to come into compliance is not considered an incremental cost. The estimated cost for switching treatment reagents from iron filings to portland cement is expected to represent < 1% of industry revenues and < 6% of industry profits.
- (5) Because the final Phase IV rule creates an information collection burden, the estimated cost to the private sector is about \$944,000 over 3 years.⁶
- (6) Because the new soil treatment standards are less stringent than what have been required, cost-saving benefits of \$25 million are expected to accrue annually.

Endnotes

- ¹ The EPA expects no incremental cost to accrue from contaminated soils that exhibit a characteristic for toxicity characteristic (TC) metals, including soils containing newly identified mineral processing wastes, but do not contain organic underlying hazardous constituents (UHCs). These soils will be subject to new treatment standards that are less stringent than the current land disposal restrictions (LDR) treatment standards for contaminated soils. Refer to 63 FR 28631.
- ² Newly identified mineral processing wastes represent mineral processing wastes which exhibit a characteristic, are not excluded from RCRA by the Bevill Amendment, and are not excluded from being solid wastes due to recycling.
- ³ The EPA expects rule 8a to generate a net benefit of \$6,000,000 annually in the U.S. As stated in this EIS, ADEQ cannot forecast what the overall net benefit, if any, will be to Arizona's businesses. The overall benefit anticipated by EPA is based on an annual savings of \$25,000,000 from the new soil treatment standards less compliance costs of 19,200,000 identified in Appendix B, items (1) through (3).
- ⁴ The EPA estimates the following volumes of waste potentially may be affected: 22,000,000 tons of newly identified mineral processing secondary materials; 1,300,000 tons of contaminated soil containing coal tar and other wastes from manufactured gas plants (MGPs); 165,000 tons per year of soil and sediment contaminated with toxicity characteristic (TC) metals; and 90,000 tons per year of previously regulated contaminated soils (63 FR 28630).
- ⁵ The EPA believes that some costs may accrue to manufactured gas plant (MGP) cleanups involving the use of MGP soils in land applied recycling (hot or cold mix asphalt, brick, and concrete). It is possible that owners/operators will choose alternative remedies not subject to rule 8a (in-situ treatment or co-burning).

Arizona Administrative Register
Notices of Final Rulemaking

⁶ This burden includes time and financial resources to generate, maintain, retain, and disclose or provide information to or for a federal agency.

10. A description of the changes between the proposed rules, including supplemental notices, and final rules (if applicable):

Changes between the proposed rules and the final rules were minimal. ADEQ made technical changes suggested by the Office of the Secretary of State and the Governor's Regulatory Review Council.

11. A summary of the principal comments and the agency response to them:

The agency received no comments on the proposed rules.

12. Any other matters prescribed by statute that are applicable to the specific agency or to any specific rule or class of rules.

Not applicable.

13. Incorporations by reference and their location in the rules:

Federal Citation	State Citation
40 CFR 260	R18-8-260
40 CFR 261, Including Federal Register Vol. 63, p. 37780, 7/14/98	R18-8-261
40 CFR 262	R18-8-262
40 CFR 263	R18-8-263
40 CFR 264	R18-8-264
40 CFR 265	R18-8-265
40 CFR 266	R18-8-266
40 CFR 268, Including Federal Register Vol 63, p. 46332, 8/31/98; p. 47410, 9/4/98; and p. 48124, 9/9/98	R18-8-268
40 CFR 270	R18-8-270
40 CFR 124	R18-8-271
40 CFR 273	R18-8-273

14. Was this rule previously adopted as an emergency rule?

No.

15. The full text of the rules follows:

TITLE 18. ENVIRONMENTAL QUALITY

**CHAPTER 8. DEPARTMENT OF ENVIRONMENTAL QUALITY
WASTE MANAGEMENT**

ARTICLE 2. HAZARDOUS WASTES

Section

- R18-8-260. Hazardous Waste Management System: General
- R18-8-261. Identification and Listing of Hazardous Waste
- R18-8-262. Standards Applicable to Generators of Hazardous Waste
- R18-8-263. Standards Applicable to Transporters of Hazardous Waste
- R18-8-264. Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
- R18-8-265. Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
- R18-8-266. Standards for the Management of Specific Hazardous Wastes and Specific Hazardous Waste Management Facilities
- R18-8-268. Land Disposal Restrictions
- R18-8-270. The Hazardous Waste Permit Program

Arizona Administrative Register
Notices of Final Rulemaking

- R18-8-271. Procedures for Permit Administration
- R18-8-273. Standards for Universal Waste Management

ARTICLE 2. HAZARDOUS WASTES

- R18-8-260. Hazardous Waste Management System: General
 - A. Federal and state statutes and regulations cited in these rules are those adopted as of July 1, ~~1997~~1998, unless otherwise noted. 40 CFR 124, 260 through 266, 268, 270 and 273 or parts thereof, are adopted by reference when so noted. Federal statutes and regulations that are cited within 40 CFR 124 and 260 through 270 that are not adopted by reference may be used as guidance in interpreting federal regulatory language.
 - B. No Change
 - C. All of 40 CFR 260 and the accompanying appendix, as amended as of July 1, ~~1997~~1998, (and no future editions), with the exception of §§ 260.1(b)(4) through (6), 260.20(a), 260.21, 260.22, 260.30, 260.31, 260.32, and 260.33, are incorporated by reference and modified by the following subsections of R18-8-260 and are on file with the Department of Environmental Quality (DEQ) and the Office of the Secretary of State.
 - D. No Change
 - 1. No Change
 - 2. No Change
 - a. No Change
 - i. No Change
 - ii. No Change
 - b. No Change
 - i. No Change
 - ii. No Change
 - iii. No Change
 - iv. No Change
 - c. No Change
 - i. No Change
 - ii. No Change
 - iii. No Change
 - d. No Change
 - i. No Change
 - ii. No Change
 - iii. No Change
 - e. No Change
 - i. No Change
 - (1) No Change
 - (2) No Change
 - ii. No Change
 - (1) No Change
 - (2) No Change
 - iii. No Change
 - (1) Change
 - (2) No Change
 - (3) No Change
 - (4) No Change
 - f. No Change
 - i. No Change
 - ii. No Change
 - iii. No Change
 - iv. No Change
 - v. No Change
 - E. No Change
 - 1. No Change
 - 2. No Change
 - 3. No Change
 - 4. No Change
 - 5. No Change
 - 6. No Change
 - 7. No Change

Arizona Administrative Register
Notices of Final Rulemaking

- 8. No Change
- 9. No Change
- 10. No Change
- 11. No Change
- 12. No Change
 - a. No Change
 - b. No Change
 - c. No Change
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 - f. No Change
 - g. No Change
 - h. No Change
 - i. No Change
- 13. No Change
- 14. No Change
- 15. No Change
- 16. No Change
- 17. No Change
- 18. No Change
- 19. No Change
- 20. No Change
- 21. No Change
- 22. No Change
 - a. No Change
 - b. No Change
- 23. No Change
- 24. No Change
- 25. No Change
- 26. No Change
- 27. No Change
- 28. No Change
- 29. No Change
- 30. No Change
- 31. No Change
- 32. No Change
- F. No Change
 - 1. No Change
 - 2. No Change
 - 3. No Change
 - a. No Change
 - b. No Change
 - 4. No Change
 - 5. No Change
 - 6. No Change
 - a. No Change
 - b. No Change
 - 7. No Change
- G. No Change
- H. No Change
- I. No Change
- J. No Change
- K. No Change
- L. No Change
- M. No Change
 - 1. No Change
 - 2. No Change
 - 3. No Change

Arizona Administrative Register
Notices of Final Rulemaking

R18-8-261. Identification and Listing of Hazardous Waste

- A. All of 40 CFR 261 and accompanying appendices, as amended as of July 1, ~~1997~~1998 (and no future editions), with the exception of §§ 261.5(j), 261.4(a)(16) intro through 261.4(a)(16)(vi), and 261.4(b)(7)(iii), are incorporated by reference and modified by the following subsections of R18-8-261 and are on file with the DEQ and the Office of the Secretary of State. In addition, all amendments to Part 261 at 63 FR 37780, July 14, 1998, are incorporated by reference and on file with the DEQ and the Office of the Secretary of State.
- B. No Change
- C. § 261.2, entitled “Definition of solid waste”, paragraphs (c)(3), (c)(4)/Table, and (e)(1)(iii) are amended as follows:
(c)(3) Delete the following phrase at the end of the sentence: “(except as provided under 40 CFR 261.4(a)(15)). Materials noted with a “-” in column 3 of Table 1 are not solid waste when reclaimed (except as provided under 40 CFR 261.4(a)(15))”.
(c)(4)/Table Delete the following phrase in the third column heading: “(except as provided in 261.4(a)(15) for mineral processing secondary materials)”.
(e)(1)(iii) Delete the following sentence at the end of the paragraph: “Where materials are generated and reclaimed within the primary mineral processing industry, the conditions of the exclusion at 261.4(a)(15) apply”.
- ~~C.D.~~No Change
~~D.E.~~No Change
~~E.F.~~No Change
~~F.G.~~No Change
~~G.H.~~No Change
~~H.I.~~No Change
- I.J. § 261.6, entitled “Requirements for recyclable materials”, paragraphs (a)(1) through (a)(3) are amended as follows:
- (a)(1)Hazardous wastes that are recycled are subject to the requirements for generators, transporters, and storage facilities of paragraphs (b) and (c) of this section, except for the materials listed in paragraphs (a)(2) and (a)(3) of this section. Hazardous wastes that are recycled [shall] be known as “recyclable materials.”
- (2) The following recyclable materials are not subject to the requirements of this section but are regulated under [40 CFR 266, subparts C, F, G, and H (as incorporated by R18-8-266)] and all applicable provisions in parts 270 and 124 of this Chapter [(as incorporated by R18-8-270 and R18-8-271)]:
- (i) Recyclable materials used in a manner constituting disposal (subpart C);
- (ii) Hazardous wastes burned for energy recovery in boilers and industrial furnaces that are not regulated under [40 CFR 264 or 265, subpart O (as incorporated by R18-8-264 and R18-8-265)] (subpart H);
- (iii) Recyclable materials from which precious metals are reclaimed (subpart F);
- (iv) Spent lead-acid batteries that are being reclaimed (subpart G).
- (3) The following recyclable materials are not subject to regulation under [40 CFR 262 through 266, 268, 270, or 124 (as incorporated by R18-8-262 through R18-8-266, R18-8-268, R18-8-270, and R18-8-271)] and are not subject to the notification requirements of section 3010 of RCRA:
- (i) Industrial ethyl alcohol that is reclaimed except that, unless provided otherwise in an international agreement as specified in § 262.58:
- (A) A person initiating a shipment for reclamation in a foreign country, and any intermediary arranging for the shipment, [shall] comply with the requirements applicable to a primary exporter in §§ 262.53, 262.56 (a)(1)-(4), (6), and (b), and 262.57, export such materials only upon consent of the receiving country and in conformance with the EPA Acknowledgment of Consent as defined in subpart E of part 262, and provide a copy of the EPA Acknowledgment of Consent to the shipment to the transporter transporting the shipment for export;
- (B) Transporters transporting a shipment for export may not accept a shipment if [the transporter] knows the shipment does not conform to the EPA Acknowledgment of Consent, [shall] ensure that a copy of the EPA Acknowledgment of Consent accompanies the shipment and [shall] ensure that [the EPA Acknowledgment of Consent] is delivered to the [subsequent transporter or] facility designated by the person initiating the shipment.
- (ii) Scrap metal that is not excluded under § 261.4(a)(13);
- (iii) Fuels produced from the refining of oil-bearing hazardous wastes along with normal process streams at a petroleum refining facility if such wastes result from normal petroleum refining, production, and transportation practices (this exemption does not apply to fuels produced from oil recovered from oil-bearing hazardous waste, where such recovered oil is already excluded under § 261.4(a)(12) (as incorporated by R18-8-261);
- (iv)(A) Hazardous waste fuel produced from oil-bearing hazardous wastes from petroleum refining, production, or transportation practices, or produced from oil reclaimed from such hazardous wastes, where such hazardous wastes are reintroduced into a process that does not use distillation or does not produce products from crude oil so long as the resulting fuel meets the used oil specification under [A.R.S. § 49-801(A)(5)] and so long as no other hazardous wastes are used to produce the hazardous waste fuel;

- (B) Hazardous waste fuel produced from oil-bearing hazardous waste from petroleum refining[,] production, and transportation practices, where such hazardous wastes are reintroduced into a refining process after a point at which contaminants are removed, so long as the fuel meets the used oil fuel specification under [A.R.S. § 49-801(A)(5)]; and
- (C) Oil reclaimed from oil-bearing hazardous wastes from petroleum refining, production, and transportation practices, which reclaimed oil is burned as a fuel without reintroduction to a refining process, so long as the reclaimed oil meets the used oil fuel specification under [A.R.S. § 49-801(A)(5)]; and
- (v) Petroleum coke produced from petroleum refinery hazardous wastes containing oil by the same person who generated the waste, unless the resulting coke product exceeds one or more of the characteristics of hazardous waste in part 261, subpart C [(as incorporated by R18-8-261)].

J.K. No Change

K.L. No Change

L.M. No Change

M.N. No Change

R18-8-262. Standards Applicable to Generators of Hazardous Waste

- A. All of 40 CFR 262 and the accompanying appendix, as amended as of July 1, ~~1997~~1998, (and no future editions), are incorporated by reference and modified by the following subsections of R18-8-262, and are on file with the DEQ and the Office of the Secretary of State.
- B. No Change
 - 1. No Change
 - 2. No Change
 - 3. No Change
- C. No Change
- D. No Change
- E. No Change
- F. § 262.23, entitled "Use of the manifest", paragraph (a) is amended by adding the following:
[(4) Submit one (1) copy of each manifest to the DEQ in accordance with R18-8-262(~~H~~)I.]
- G. No Change
- H. No Change
- I. No Change
 - 1. No Change
 - 2. No Change
- J. No Change
- K. No Change
- L. No Change
- M. No Change

R18-8-263. Standards Applicable to Transporters of Hazardous Waste

- A. All of 40 CFR 263, as amended as of July 1, ~~1997~~1998, (and no future editions), is incorporated by reference ~~a~~ and modified by the following subsections of R18-8-263, and on file with the DEQ and the Office of the Secretary of State.
- B. No Change
- C. No Change
- D. No Change
- E. No Change

R18-8-264. Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities

- A. All of 40 CFR 264 and accompanying appendices, as amended as of July 1, ~~1997~~1998, (and no future editions), with the exception of §§ 264.1(d) and (f), 264.149 - 264.150, and 264.301(l), are incorporated by reference, and modified by the following subsections of R18-8-264, and are on file with the DEQ and the Office of the Secretary of State.
- B. No Change
- C. § 264.1, entitled "Purpose, scope, and applicability", paragraph (g)(8)(i)(D) is amended as follows:
(D) An immediate threat to human health, public safety, property, or the environment, from the known or suspected presence of military munitions, other explosive material, or an explosive device, as determined by an explosive or munitions emergency response specialist as defined in 40 CFR 260.10. [The DEQ Emergency Response Unit shall be notified as soon as possible, using the 24-hour number (602)207-2330 or (800)~~324-5677~~ 234-5677, extension 2330.]
- D. No Change
 - 1. No Change
 - 2. No Change
- E. No Change
- F. No Change

- G. § 265.71, entitled "Use of manifest system", paragraph (a)(4) is amended as follows:
Within 30 days after the delivery, send a copy of the manifest to the generator [and submit 1 copy of each manifest to the DEQ, in accordance with R18-8-265~~(H)~~ (D)]; and
- H. No Change
- I. No Change
 - 1. No Change
 - 2. No Change
- J. No Change
- K. No Change
- L. §§ 264.143, entitled "Financial assurance for closure", paragraph (h), and 264.145, entitled "Financial assurance for post-closure care", paragraph (h), are amended by ~~deleting the following from the 3rd sentence in each citation: "If the facilities covered by the mechanism are in more than 1 Region, identical evidence of financial assurance must be submitted to and maintained with the Regional Administrators of all such Regions."~~ replacing the third sentences in each citation with the following: "Evidence of financial assurance must be submitted to and maintained with the Director for those facilities located in Arizona."
- M. No Change
- N. No Change
- O. No Change
 - 1. No Change
 - 2. No Change
 - 3. No Change
 - 4. No Change
 - 5. No Change
 - 6. No Change

R18-8-265. Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities

- A. All of 40 CFR 265 and accompanying appendices, as amended as of July 1, ~~1997~~1998 (and no future editions), with the exception of §§ 265.1(c)(2), 265.1(c)(4), 265.149, 265.150, and 265.430, are incorporated by reference and modified by the following subsections of R18-8-265, and are on file with the DEQ and the Office of the Secretary of State.
- B. No Change
- C. § 265.1, entitled "Purpose, scope, and applicability", paragraph (c)(11)(i)(D) is amended as follows:
(D) An immediate threat to human health, public safety, property, or the environment, from the known or suspected presence of military munitions, other explosive material, or an explosive device, as determined by an explosive or munitions emergency response specialist as defined in 40 CFR 260.10. [The DEQ Emergency Response Unit shall be notified as soon as possible, using the 24-hour number (602)207-2330 or (800)~~324-5677~~ 234-5677, extension 2330.]
- D. No Change
 - 1. No Change
 - 2. No Change
- E. No Change
- F. No Change
- G. § 265.71, entitled "Use of manifest system", paragraph (a)(4) is amended as follows:
Within 30 days after the delivery, send a copy of the manifest to the generator [and submit 1 copy of each manifest to the DEQ, in accordance with R18-8-265~~(H)~~ (D)]; and
- H. No Change
- I. No Change
- J. No Change
- K. No Change
 - 1. No Change
 - 2. No Change
 - 3. No Change
- L. No Change
- M. §§ 265.143, entitled "Financial assurance for closure", paragraph (g), and 265.145, entitled "Financial assurance for post-closure care", paragraph (g), are amended by ~~deleting the following from the 3rd sentence in each citation: "If the facilities covered by the mechanisms are in more than 1 Region, identical evidence of financial assurance must be submitted to and maintained with the Regional Administrators of all such Regions."~~ replacing the third sentences in each citation with the following: "Evidence of financial assurance must be submitted to and maintained with the Director for those facilities located in Arizona."

Arizona Administrative Register
Notices of Final Rulemaking

R18-8-266. Standards for the Management of Specific Hazardous Wastes and Specific Hazardous Waste Management Facilities

- A. All of 40 CFR 266 and accompanying appendices as amended as of July 1, ~~1997~~1998 (and no future editions), are incorporated by reference and are on file with the DEQ and the Office of the Secretary of State.
- B. § 266.100, entitled "Applicability" paragraph (b) is amended as follows:
 - (b) The following hazardous wastes and facilities are not subject to regulation under this subpart:
 - (1) Used oil burned for energy recovery that is also a hazardous waste solely because it exhibits a characteristic of hazardous waste identified in subpart C of part 261 [(as incorporated by R18-8-261)] of this Chapter. Such used oil is subject to regulations under [A.R.S. §§ 49-810 through ~~49-815~~49-818] rather than this subpart;
 - (2) No Change
 - (3) No Change
 - (4) No Change

R18-8-268. Land Disposal Restrictions

All of 40 CFR 268 and accompanying appendices, as amended as of July 1, ~~1997~~1998 (and no future editions), with the exception of Part 268, Subpart B, are incorporated by reference and are on file with the DEQ and the Office of the Secretary of State. In addition, all amendments to Part 268 as amended at 63 FR 46332, August 31, 1998; 63 FR 47410, September 4, 1998; and 63 FR 48124, September 9, 1998, are incorporated by reference and on file with the DEQ and the Office of the Secretary of State.

R18-8-270. The Hazardous Waste Permit Program

- A. All of 40 CFR 270, as amended as of July 1, ~~1997~~1998 (and no future editions), with the exception of §§ 270.1(a), 270.1(c)(1)(i), 270.3, 270.10(g)(1)(i), 270.60(a) and (b), and 270.64, is incorporated by reference and modified by the following subsections of R18-8-270 and is on file with the DEQ and the Office of the Secretary of State.
- B. No Change
 - 1. No Change
 - a. No Change
 - b. No Change
 - c. No Change
 - 2. No Change
 - a. No Change
 - b. No Change
- C. § 270.1, entitled "Purpose and scope of these regulations", paragraph (c)(3)(i)(D) is amended as follows:
 - (D) An immediate threat to human health, public safety, property, or the environment, from the known or suspected presence of military munitions, other explosive material, or an explosive device, as determined by an explosive or munitions emergency response specialist as defined in 40 CFR 260.10. [The DEQ Emergency Response Unit shall be notified as soon as possible, using the 24-hour number (602)207-2330 or (800)~~324-5677~~234-5677, extension 2330.]
- D. No Change
- E. No Change
- F. No Change
- G. No Change
 - 1. No Change
 - a. No Change
 - b. No Change
 - c. No Change
 - d. No Change
 - 2. No Change
 - 3. No Change
 - a. No Change
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 - c. No Change
 - 4. No Change
 - 5. No Change
 - 6. No Change
 - a. No Change
 - b. No Change
 - 7. No Change
 - a. No Change
 - b. No Change
 - c. No Change

- d. No Change
- e. No Change
- f. No Change
- g. No Change
- h. No Change
- i. No Change
- j. No Change
- 8. No Change
- 9. No Change
- H. No Change
- I. No Change
- J. No Change
- K. No Change
- L. No Change
- M. No Change
- N. No Change
- O. No Change
- P. No Change
- Q. No Change

R18-8-271. Procedures for Permit Administration

- A. All of 40 CFR 124 and the accompanying appendix as amended as of July 1, ~~1997~~1998, (and no future editions), relating to HWM facilities, with the exception of §§ 124.1(b) through (e), 124.2, 124.4, 124.16, 124.20 and 124.21, are incorporated by reference and modified by the following subsections of R18-8-271 and are on file with the DEQ and the Office of the Secretary of State.
- B. No Change
- C. No Change
- D. No Change
- E. No Change
- F. No Change
- G. No Change
- H. No Change
- I. No Change
- J. No Change
- K. No Change
- L. No Change
- M. No Change
- N. No Change
- O. No Change
- P. No Change
- Q. No Change
- R. No Change
- S. No Change
- T. No Change

R18-8-273. Standards for Universal Waste Management

- A. All of 40 CFR 273, as amended as of July 1, ~~1997~~1998 (and no future editions), is incorporated by reference and modified by the following subsections of R18-8-273 and are on file with the DEQ and the Office of the Secretary of State.
- B. No Change
- C. No Change
 - 1. No Change
 - a. No Change
 - b. No Change
 - 2. No Change
 - a. No Change
 - b. No Change
- D. No Change
- E. No Change
- F. § 273.13, entitled "Waste management" is amended by adding paragraph (d) as follows:

Arizona Administrative Register
Notices of Final Rulemaking

- (d) Universal waste lamps. A small quantity handler of universal waste shall manage universal waste lamps in a way that prevents releases of any universal waste or component of any universal waste to the environment, as follows:
- (1) A small-quantity handler shall manage universal waste lamps in a way that minimizes lamp breakage. The small-quantity handler shall:
 - (i) Contain unbroken lamps in packaging that will minimize breakage during normal handling, and
 - (ii) Contain broken lamps in packaging that will minimize releases of lamp fragments and residues.
 - (2) A small-quantity handler of universal waste lamps shall immediately contain all releases of residues from hazardous waste lamps.
 - (3) A small-quantity handler of universal waste lamps shall determine whether any materials (that is, mercury, residues, or other solid wastes) resulting from the release exhibit a characteristic of hazardous waste, and if so, shall manage the waste in accordance with all applicable requirements in 40 CFR 260 through 272 (as incorporated by R18-8-260 through R18-8-271).
 - (4) If the mercury, residues, or other solid waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state, or local solid waste regulations.
 - (5) A small quantity handler of universal waste may remove mercury-containing arc tubes from universal waste lamps if the handler:
 - (i) Removes the arc tubes in a manner designed to prevent breakage of the arc tubes;
 - (ii) Removes the arc tubes only over or in a containment device (for example, a tray or pan sufficient to contain any mercury released from an arc tube in case of breakage);
 - (iii) Ensures that a mercury clean-up system is readily available to immediately transfer any mercury resulting from spills or leaks from broken arc tubes from the containment device to a container that meets the requirements of 40 CFR 262.34 (as incorporated by R18-8-262);
 - (iv) Immediately transfers any mercury resulting from spills or leaks from broken arc tubes from the containment device to a container that meets the requirements of 40 CFR 262.34 (as incorporated by R18-8-262);
 - (v) Ensures that the area in which arc tubes are removed is well ventilated and monitored to ensure compliance with applicable OSHA exposure levels for mercury;
 - (vi) Ensures that employees removing arc tubes are thoroughly familiar with proper waste mercury handling and emergency procedures, including transfer of mercury from containment devices to appropriate containers;
 - (vii) Stores removed arc tubes in closed, non-leaking containers that are in good condition and are no greater than 5 gallons in size; and
 - (viii) Before shipment, minimizes empty space in containers either by the addition of packing material on top of the arc tubes or by filling the containers to minimize the empty space.

G. No Change

H. § 273.33, entitled "Waste management" is amended by adding paragraph (d) as follows:

- (d) Universal waste lamps. A large-quantity handler of universal waste shall manage universal waste lamps in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:
- (1) A large-quantity handler shall manage universal waste lamps in a way that minimizes lamp breakage. The large-quantity handler shall:
 - (i) Contain unbroken lamps in packaging that will minimize breakage during normal handling, and
 - (ii) Contain broken lamps in packaging that will minimize releases of fragments and residues.
 - (2) A large-quantity handler of universal lamps shall immediately contain all releases of residues from hazardous waste lamps.
 - (3) A large-quantity handler of universal waste lamps shall determine whether any materials (that is, mercury, residues, or other solid wastes) resulting from the release exhibit a characteristic of hazardous waste, and if so, shall manage the waste in accordance with all applicable requirements in 40 CFR 260 through 272 (as incorporated by R18-8-260 through R18-8-271).
 - (4) If the mercury, residues, or other solid waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state, or local solid waste regulations.
 - (5) A large quantity handler of universal waste may remove mercury-containing arc tubes from universal waste lamps if the handler:
 - (i) Removes the arc tubes in a manner designed to prevent breakage of the arc tubes;
 - (ii) Removes the arc tubes only over or in a containment device (for example, a tray or pan sufficient to contain any mercury released from an arc tube in case of breakage);
 - (iii) Ensures that a mercury clean-up system is readily available to immediately transfer any mercury resulting from spills or leaks from broken arc tubes from the containment device to a container that meets the requirements of 40 CFR 262.34 (as incorporated by R18-8-262);
 - (iv) Immediately transfers any mercury resulting from spills or leaks from broken arc tubes from the containment device to a container that meets the requirements of 40 CFR 262.34 (as incorporated by R18-8-

262):

- (v) Ensures that the area in which arc tubes are removed is well ventilated and monitored to ensure compliance with applicable OSHA exposure levels for mercury;
- (vi) Ensures that employees removing arc tubes are thoroughly familiar with proper waste mercury handling and emergency procedures, including transfer of mercury from containment devices to appropriate containers;
- (vii) Stores removed arc tubes in closed, non-leaking containers that are in good condition and are no greater than 5 gallons in size; and
- (viii) Before shipment, minimizes empty space in containers either by the addition of packing material on top of the arc tubes or by filling the containers to minimize the empty space.

- I. No Change
- J. No Change

NOTICE OF FINAL RULEMAKING

TITLE 18. ENVIRONMENTAL QUALITY

**CHAPTER 13. DEPARTMENT OF ENVIRONMENTAL QUALITY
SOLID WASTE MANAGEMENT**

PREAMBLE

- 1. Sections Affected**

Article 25	<u>Rulemaking Action</u>
R18-13-2501	New Article
	New Section
- 2. The specific authority for the rulemaking, including both the authorizing statutes (general) and the statutes the rules are implementing (specific):**

Authorizing Statutes: A.R.S. §§ 41-1003 and 49-104

Implementing Statutes: A.R.S. §§ 49-833(C)
- 3. The effective date of the rules:**

Date filed with the Secretary of State.
- 4. A list of all previous notices appearing in the Arizona Administrative Register:**

Notice of Docket Opening	4 A.A.R. 1349-1350, June 12, 1998
Notice of Docket Opening	5 A.A.R. 1234, April 30, 1999
Notice of Proposed Rulemaking	5 A.A.R. 2348, July 23, 1999
- 5. The name and address of agency personnel with whom persons may communicate regarding the rulemaking:**

Name:	Deborah K. Blacik or Martha L. Seaman
Address:	Arizona Department of Environmental Quality
	Rule Development Section, M0836A-829
	3033 North Central Avenue
	Phoenix, AZ 85012
Telephone Number:	(602) 207-2223, (800) 234-5677 ext 2223 (AZ only)
Fax Number:	(602) 207-2251
TTD Number:	(602) 207-4829
- 6. An explanation of the rule, including the agency's reasons for initiating the rule:**

The recycling emblem was created as a result of the solid waste recycling act of 1990. The act required that the Arizona Department of Environmental Quality (ADEQ) establish a state recycling emblem and use it to help increase public awareness of recycling programs and the potential for reducing waste. This rulemaking satisfies the statutory requirement that the recycling emblem be adopted by rule.

Arizona Administrative Register
Notices of Final Rulemaking

To create a recycling emblem, ADEQ held a statewide contest in 1991 through the public and private school districts giving students an opportunity to offer graphic renditions for a state recycling emblem. More than 800 entries were received and evaluated. Of those received, the 24 finalists were evaluated by the Arizona recycling advisory committee (ARAC) and ADEQ recycling program staff to determine the winning entry. The original winning entry, produced by Ian Morrison, a Grand Canyon University student, was an emblem with a saguaro cactus with two arrows.

The ARAC is established by state law at A.R.S. § 49-837(D). The director of ADEQ appoints the committee members. The membership consists of two representatives from private solid waste collection businesses, two representatives from solid waste recycling businesses, four representatives from political businesses, four representatives from political subdivisions which have implemented recycling and source reduction programs, of which at least one of whom resides in a county having a population of fewer than 500,000 persons, and one representative of the general public. The members of the ARAC are intended to represent the entire state of Arizona.

The ARAC modified the emblem to include the universally accepted recycling symbol of three arrows following each other. In addition, the ARAC decided the emblem appeared incomplete without a slogan. Slogan ideas were suggested; the ARAC and the recycling program staff agreed upon the present official state recycling emblem with the two ovals containing the slogan, "Arizona Cares – Reduce – Reuse – Recycle." ADEQ generally uses a green Saguaro cactus on a white background with a blue outer oval as its preferred colors for the emblem.

ADEQ has used this modified emblem as the official state recycling emblem since 1991. The emblem wraps the three arrows of the universal recycling symbol around a saguaro cactus. A double oval frame surrounds the emblem and bears the slogan, Arizona Cares – Reduce – Reuse – Recycle.

The emblem was registered as a trademark with the State of Arizona on August 30, 1994, effective until August 30, 2004. The trademark may be used in any variety of sizes and colors including black and white.

The ADEQ's recycling program staff established minimum guidelines for public use of the recycling emblem. Any organization or person that is interested in promoting recycling is welcome to use the symbol without any ADEQ approval. Use of the emblem is voluntary. The ADEQ's recycling program staff has incorporated the emblem in projects that have been funded through the Recycling Fund either by grant or contract. Because the statute requires that the emblem be used to increase public awareness, ADEQ's focus has been to use the emblem to promote education about the benefits of recycling.

An organization or person that is interested in using the recycling emblem in promoting recycling education is able to obtain either a printed copy or an electronic version of the emblem by calling ADEQ at 1-800-234-5677, extension 4133 or 602-207-4133.

A commenter orally noted that the Saguaro cactus may not be an appropriate symbol to use for a state emblem as it is not indigenous to all areas of the state and, in fact, it cannot survive in most regions of Arizona. This would appear to make the emblem represent only one region of Arizona. The Department does not now recall what considerations were used by ARAC to conclude that the saguaro cactus was the best symbol submitted in the contest. The saguaro cactus, however, has long been associated in the public's mind with Arizona and its bloom was declared the territorial flower in 1901 and the state flower in 1931.

The rule sets forth the following:

1. A description of the recycling emblem.
2. The use of the recycling emblem as a tool to promote education about recycling.
3. How an organization or person that is interested in using the emblem can obtain a copy of the emblem from the Department.

7. Reference to any study that the agency proposes to rely on in its evaluation of or justification for the rule and where the public may obtain or review the study, all data underlying each study, any analysis of the study, and other supporting material.

None.

8. A showing of good cause why the rule is necessary to promote a statewide interest if the rule will diminish a previous grant of authority of a political subdivision of this state:

Not applicable.

9. The summary of the economic, small business and consumer impact:

Implementation of this rule will not result in a compliance burden to any class of person or a regulatory burden on ADEQ. The use of this emblem is voluntary and it does not require any approval from ADEQ. A person or entity may

Notices of Final Rulemaking

obtain the emblem in either an electronic or printed format. It may be used in any color or size although ADEQ prefers the cactus to be green on a white background with a blue outer oval.

According to ADEQ records, 15 requests have been made to obtain the official recycling emblem during the past 2 years. Although increased requests potentially could result from implementing this rule, the future impact on ADEQ is expected to be de minimis.

ADEQ expects the benefits of this rule to exceed costs. The use of this emblem should help increase public awareness about the benefits of recycling. Increased recycling could lead to reduced waste. Consequently, ADEQ anticipates no adverse impacts on any class of person, such as private and public businesses, small businesses, political subdivisions of this state, ADEQ, or consumers.

10. A description of the changes between the proposed rules, including supplemental notices, and final rules (if applicable):

The agency clarified that a blue double oval frame and lettering for the emblem are preferred.

11. A summary of the principal comments and the agency response to them:

The agency received no comments regarding this rule after it was proposed.

12. Any other matters prescribed by statute that are applicable to the specific agency or to any specific rule or class of rules.

Not applicable.

13. Incorporations by reference and their location in the rules.

Not applicable.

14. Was this rule previously adopted as an emergency rule?

No.

15. The full text of the rules follows:

TITLE 18. ENVIRONMENTAL QUALITY

**CHAPTER 13. DEPARTMENT OF ENVIRONMENTAL QUALITY
SOLID WASTE MANAGEMENT**

ARTICLE 25. RECYCLING

Section

R18-13-2501.

Recycling Emblem Description and Usage

ARTICLE 25. RECYCLING

R18-13-2501.

Recycling Emblem Description and Usage

- A.** The Department's official state recycling emblem wraps the 3 arrows of the universal recycling symbol around a saguaro cactus. A double oval frame surrounds the emblem and bears the slogan, Arizona Cares – Reduce – Reuse – Recycle.
- B.** The purpose of the emblem is to increase public awareness of recycling programs and the potential for reducing waste. Any organization or person that is interested in promoting recycling may use the emblem without receiving approval from the Department. An organization or person can obtain either a printed copy or electronic version of the emblem from the Department by calling the Recycling and Data Management Unit at 1-800-234-5677, extension 4133 or 602-207-4133.
- C.** The emblem may be used in any variety of sizes and colors including black and white. The preferred colors are a green cactus on a white background with a blue double oval frame and lettering. The emblem appears as follows:

