Statement of Basis and Purpose
and
Responsiveness Summary

January 13, 2005

The Arkansas Pollution Control and Ecology Commission initiated a proposal to revise APC&EC Regulation No. 23, *Hazardous Waste Management*, at its regular meeting on September 23, 2004, under docket number 04-008-R.

A public hearing was held at Little Rock on November 4, 2004 to receive comments on the following proposed revisions. No comments were received at the public hearing, however four parties submitted written comments prior to the close of the comment period on November 19, 2004.

The following summarizes the Commission's basis and purpose in promulgating the enclosed regulatory changes, and the Department's response to comments on these proposals made on the administrative record.

Proposed Federal Revisions

The proposed rule would adopt the provisions of a federal regulatory change promulgated at 68 FR 44665, July 30, 2003 (Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Recycled Used Oil Management Standards).

Comment:

One commenter stated that "40 CFR 761.3, cited in the federal revision, does not refer to used oil, only waste oil. Used oil is not defined at 761.3 - only waste oil is. There is no definition of used oil under the current definitions found at 761.3. This omission has been pointed out to EPA before but no action has been taken. A more correct (but not particularly helpful reference would be (as defined in 40 CFR 761)." [Commenter states that] "… this is not a very good solution to the problem but if someone goes to 761.3 looking for a definition of used oil, they'll come up empty. They need to dig deeper into 761 to see the distinction between used and waste oil. Obviously, used oil has not been declared a waste when managed under the used oil regulations."

ADEQ Response :

The contested phrase in the proposed revision reads:

"(i) *Used oil containing PCBs.* Used oil containing PCBs (as defined at 40 CFR 761.3) at any concentration less than 50 ppm is subject to the requirements of this Section unless, because of dilution, it is regulated under 40 CFR Part 761…"

The parenthetical reference in this citation refers to the definition of polychlorinated biphenyls ("PCBs") codified at 40 CFR 761.3, not to the definition of used oil, which is

codified at 40 CFR and Regulation No. 23 § 279.1. Such a reference is appropriate in that the Commission no longer specifically defines or establishes a special regulatory requirement for the management of PCBs and PCB-containing wastes in Regulation No. 23, but defers to the federal standards pursuant to the Toxic Substances Control Act and codified at 40 CFR 761.

No change is made to the regulatory language as proposed at Section 279.10(i).

Proposed State-Only Revisions:

1. To make an editorial revision to Section 262.13(f) to correct usage and grammar.

No comments were received on the record concerning this proposal. No change is made to the regulatory language as proposed at Section 262.13(f).

2. To amend Section 264.140 to provide that post-closure contingency planning and financial assurances for post-closure care and third party liability should apply to open burn/open detonation (OB/OD) waste management units where soil and/or groundwater contamination has been identified as a result of the operations of said unit.

Background and Discussion:
Both interim status and permitted hazardous waste treatment, storage, and disposal facilities (TSDFs) are required to develop a plan for closing their facilities when they no longer treat, store, or dispose of hazardous waste. Facility closure requirements are potentially costly. To assure that funds are available to pay for closure, TSDFs are required to meet certain financial assurance requirements. Owners and operators of land disposal facilities, as well as other facilities where all contamination cannot be removed following closure of the facility, are also required to establish a plan and financial assurance for post-closure care to ensure that any remaining wastes or contamination does not pose an appreciable threat to human health or the environment. During the post-closure care period, activities are conducted, such as maintenance and ground-water monitoring, to preserve the integrity of the disposal system and detect releases of hazardous wastes or hazardous substances.

The RCRA regulations also require owners and operators of land disposal and land treatment facilities to maintain third-party liability coverage for bodily injury and property damage due to sudden and non-sudden accidents which may arise from operation of the facility until the facility has accomplished clean closure.

In the initial establishment of the hazardous waste regulations in 1980, EPA designated specific types of facilities and waste management units as needing to provide for post-closure care when hazardous wastes (or their treated residues) were to be left in place

following the closure of a unit, and/or where hazardous substance contamination could not be completely removed upon closure of the facility or unit.

Since the initial promulgation of the closure and post-closure regulations, a number of new types of waste management facilities have been brought under regulation, and it is sometimes ambiguous as to whether contingency post-closure plans are appropriate when bringing them under the control of a permit or other controlling authority. Among these waste management units are open burn/open detonation sites, used for the disposal of energetic wastes from ammunition manufacture and the aerospace industry. These sites are often found to be contaminated with perchlorate and other toxic constituents resulting from the energetic wastes treated in these units. Where this contamination has affected the local groundwater, treatment and remediation is often time-consuming, and difficult to achieve at the time of closure of the waste management unit.

In promulgating the financial assurance regulations in April, 1982, EPA believed liability regulations are desirable for several reasons. First, the liability requirements assure that funds will be available for third parties seeking compensation for bodily injury and property damage arising from accidental occurrences resulting from the operation of hazardous waste management facilities. Second, without liability coverage, many commenters to EPA stated that there will be lessened public confidence in and greater opposition to the siting of proposed and existing hazardous waste management facilities. Third, whereas financial assurance requirements for closure, post-closure, and corrective action activities serve to protect human health and the environment by ensuring funds will be available for the completion of these activities in the event the facility owner or operator becomes insolvent, third-party liability these regulations are protective of human health and the environment in that they have the potential for inducing improved design and operation of the facility resulting from the incentive of lower insurance premiums and the oversight that insurers provide over facility operations.

The Commission's regulations for RCRA financial assurance closely parallel those promulgated by EPA. Existing State and federal regulations require owners and operators of specific types of waste management units to maintain third-party liability coverage for bodily injury and property damage due to sudden and non-sudden accidents which may arise from operation of the facility until the facility has accomplished clean closure. All of these specified activities involve management of hazardous wastes on or in the land. However, language prescribing post-closure contingency planning and financial assurances often does not address new types of waste management units added to the RCRA universe since the financial assurance provisions were promulgated, such as open burn/open detonation miscellaneous units. Soil and groundwater contamination is commonly found in association with past operation of these units, requiring that they be addressed in the same manner as a closing land treatment unit. In negotiating permits and enforcement orders, ADEQ often encounters strong resistance in incorporating financial assurance requirements for clean-ups of waste management units where post-closure and/or third-party liability requirements are not explicitly prescribed. Extending nonsudden third-party liability requirements to these types of waste management units

will ensure that these units operate with the same or similar degree of protection as required for similar land-based units.

Environmental Benefit Economic Impact Analysis: This rule was identified in the Petition to Initiate Rulemaking as a "more stringent" rule, however upon further consideration based on comments received during the public comment period the characterization in the petition was incorrect. The proposed rule provides for requirements that are "equivalent" to federal requirements as explained further in this Responsiveness Summary (see ADEQ response to Comment 2A below). Nonetheless, the analysis set forth below is included to comply with the statutory provisions set out at A.C.A. § 8-4-201(b)(1)(B) and the Commission's Regulation No. 8.3.5.2 since the Proposed Rule identified this provision as a "more stringent" rule.

As of July 1, 2004, these proposed requirements would affect five facilities:

Facility	Type Unit	Estimated Cost	Permit Renewal
Aerojet	OB/OD	~$3.2 million[1]	2004 (final draft)
Armtec	OB/OD	N/A	2003
Austin Powder	OB/OD	N/A	2004
Lockheed Martin	OB/OD	N/A	2004 (draft pending)
Pine Bluff Arsenal	OB/OD	Exempt	Interim status

Each facility listed above currently has a RCRA permit, or in the case of Aerojet, a draft permit has been completed and submitted to public notice and comment. Lockheed Martin has submitted a request for permit renewal which is currently being processed. Compliance with such a RCRA permit during its term is considered compliance, for purposes of RCRA enforcement, with Subtitle C of RCRA and the Arkansas Hazardous Waste Management Act (Reg. 23 § 270.4(a)). This provision means that an owner and operator complies with the requirements specified in the permit, rather than with the corresponding regulations as promulgated in Regulation No. 23 § 264. Known as the "permit-as-a-shield" provision of RCRA, a permitted facility is generally not affected by newly promulgated regulations which affect the scope of its permitted units and operations with the exception of compliance with new revisions to the land disposal restriction (LDR) requirements at Reg. 23 § 268 and the air emission standards addressed by Reg. 23 § 264 Subsections AA, BB, and CC. Consequently this revision would not affect existing permitted facilities until their permits are updated and renewed at the end of their current term, and the existing permitted facilities would incur no additional costs until that time.

In the same manner, facilities currently implementing facility-wide corrective action under the provisions of their RCRA permit (required in all Arkansas permits issued since 1991) have in most cases addressed contamination resulting from the operation of these units and from other sources. It is not contemplated to require facilities which have already effectively implemented corrective action and provided compliant financial

[1] Estimated total cost of corrective actions covered by existing financial assurances – breakout for post-closure and liability not separately available. This is not considered to be an additional cost created by any revision in this proposal.

assurance for the same to post additional assurances solely for the purpose of the proposed rule.

For newly-regulated facilities, the individual costs for financial assurance mechanisms vary by the type of instrument used, and with the credit rating and perceived financial stability of the affected facility. These costs are typically not disclosed to the Department, nor are they required to be. Based on a local survey of what facilities were paying for financial assurance in Arkansas in 1999/2000, ADEQ staff derived general estimates of financial assurance costs at that time, and when we applied these in enforcement actions a couple of years ago, we obtained during the course of negotiations additional information as to costs at that time. These estimates of costs to financially assure under Regulation No. 23 in Arkansas (at least during the years of 1999/2000) are summarized below:

Financial Test/Corporate Guarantee: No additional cost in capital outlay to the company, though they incur approximately $10,000 to $15,000 per year in professional fees to prepare the audited annual financial statements and the certified accountants' review. Ten facilities currently use this mechanism, one of which (Aerojet) would be affected by this revision. Based on estimates from their 2003 submittals and consolidated financial statements, the affected facility would continue to pass the financial test under these requirements, incurring no additional costs save for preparation of the necessary supporting cost estimates.

Most other facilities typically use a trust fund, letter of credit, performance/surety bond, or insurance to meet their financial assurance obligations; or a combination of these instruments. A company can mix and match any of the following instruments together to meet their total requirement for assurance; if the financial test or corporate guarantee is selected, these two methods can't be used in combination with any other mechanism to meet closure, post-closure, corrective action, or equivalent costs.

Generally, the costs of such cash instruments are based on a percentage of the face value of the instrument or the amount of coverage provided. Post-closure costs can vary widely based upon the type and number of units to be closed, and the scope of sampling and monitoring that must be conducted. An approximate range of costs for a single post-closure unit runs from $15,000 to $30,000 per year, or from $450,000 to $900,000 aggregate over a 30-year period – the amount for which the facility is required to provide financial assurance.

Trust funds require the company to set aside or sequester an amount of cash equal to the total cost of the project. For RCRA permits the pay-in is typically spread over the ten-year period of the first permit, after this time the trust must be fully funded and the facility need only make sure they adjust the fund to cover any increases in the cost estimate. For all currently-permitted facilities in Arkansas, shift to a trust fund would require that the trust be fully-funded at the time the mechanism is changed, making this a very unattractive and last choice option. Financial institutions serving as trustees charge an annual maintenance fee for managing the trust, which must also be paid by the granting facility.

Letters of Credit typically cost between 1% to 2% of the face value of the letter of credit, for each year that the letter is kept in effect. More financially solvent companies pay approximately a 1 to 1.5% rate, average to weak companies would pay closer to the 2% rate. Letter of Credit costs would thus range between $10,000 to $20,000 per million dollars to be assured, per year that the letter is effective. For example, for a five-year project costing $3.5 million, the letter of credit cost would be 3.5 x $20,000 x 5 years = $350,000 to the facility, in addition to the costs for liability insurance. The remaining affected facilities in this instance, Armtec, Austin Powder, and Lockheed-Martin, each use this mechanism to cover their existing financial assurance requirements, and would presumably continue to do so to cover any post-closure requirements imposed.

Performance/Surety Bonds require the company to put up some sort of capitalization or collateral in proportion to the amount to be bonded. Costs of capital here are something around the 6% range (as of early 2000). This would require approximately $60,000 per million dollars to be assured, times the number of years we hold the bond. Since the collapse of Frontier Insurance in 2000 and the increased liability awareness resulting from the New York terrorist attacks, bonds of this type have become more expensive and increasingly difficult to procure. No Arkansas facilities currently use this mechanism.

Insurance is currently the most expensive solution for industry, and the least desired solution for the Department in that in recent experience, states have to sue the insurance company to get paid, regardless of the terms of the policy, and the insurers typically claim some amount of deductible, either on the face of the policy, or in reimbursement from the insured facility. The facility pays a premium, and for financially weak companies, they must often put up some sort of collateral in proportion to the risk insured. For example, one company with facilities in multiple states was required to put up an average of 30% collateral (in addition to their premiums) when it filed bankruptcy in the summer of 2000, with certain of its high risk facilities requiring 100% collateral. In general figures, one may count on an annual premium of 10 to 15% of the assured cost of the remedial action per year that the policy is in effect. This number goes higher the closer the insured facility is to bankruptcy. The aforementioned multi-state company purchased its most recent insurance policy (for $450,000 in coverage) for $13,500 annual premium.

Costs to individual facilities will vary widely depending upon the scope of work to be performed as well as other factors, but the above will allow for a rough case-by-case estimate of costs. With the possible exception of Lockheed Martin, for whom a draft for permit renewal will be prepared in early 2005, this revision will have little or no effect on currently permitted facilities. Lockheed-Martin has a permit renewal currently pending, but at the time of this analysis, previously operated OB/OD units had undergone "clean closure" and no other contamination has been specifically identified as the result of operating the open burn/open detonation unit. Therefore, the Department assesses that this proposal would have no additional financial impact to the Lockheed-Martin East Camden facility.

There is no additional cost to the Department for enforcement. This regulation does not add a new fee, nor increase an existing fee.

The minimal additional costs incurred to existing facilities is considered to be well offset in comparison to the increased protection offered to human health and the environment through improved design and more careful management encouraged by the liability requirements, as discussed in more detail in the "Background and Discussion" section, above..

Public Comments:

Comment 1.
One commenter requested clarification of the proposed rule's application in cases where the landowner and the operator of an OB/OD facility are different parties. Commenter owns an industrial park where parcels of land are leased to tenant operators who in turn operate under RCRA permits. Historically, ADEQ, as well as U.S. EPA, has recognized that tenant operators in these cases are primarily responsible for compliance with the RCRA regulations and permit requirements and conditions. All enforcement actions initiated against such tenant operators for alleged noncompliance have been brought against the tenant alone, not the landowner. Where financial assurance has been required as a permit condition, ADEQ has required such assurance only from the tenant/operator, and has not required separate or supplemental assurances from the landowner. Commenter requests clarification that the new requirements set forth in this proposed change will continue to be implemented consistently with ADEQ's prior interpretation of these regulations; e.g., that financial assurance obligations will be the responsibility of the tenant operators, and that ADEQ will look to the landowner to satisfy those obligations only in the event that a tenant operator becomes insolvent or otherwise incapable of satisfying its obligations under RCRA.

ADEQ Response:
ADEQ does not plan to alter its previous interpretation or implementation of the financial assurance provisions for RCRA permits. Regulation No. 23, Sections 264 and 265, Subsections H require that the owner or the operator of a facility prepare and update cost estimates and to furnish compliant financial assurances. EPA specifically addressed this issue when it published the RCRA hazardous waste regulations on May 19, 1980. EPA stated "EPA will regard compliance by either owner or operator with any given obligation under the permit as sufficient for both of them. EPA anticipates that in most cases the operator will take the lead role in complying with all but the few conditions that only the owner can satisfy." (45 FR 33295, May 19, 1980). In cases where the landowner and the facility operator are different persons both parties are bound by the permit, however, ADEQ holds the operator (tenant) as having the primary responsibility to ensure compliance with permit conditions and other regulatory requirements.

ADEQ would hold the landowner liable for closure, post-closure, and third-party liability costs only in the case where the operator/tenant has become insolvent or otherwise unable

to meet his financial assurance obligations, and where the operator's financial assurance instruments have also proven to be uncollectible.

Comment 2.
Commenter states that since this proposed revision is noted to be more stringent than the corresponding federal regulatory requirements, "the proposed OB-OD amendments should be rejected for two distinct reasons. First, ADEQ has failed to satisfy the statutory requirement of establishing the economic costs and environmental benefits of the proposed amendments. Whenever ADEQ petitions for the adoption of a regulation that is more stringent than federal regulations, Arkansas law requires the Department to establish the economic impact and environmental benefits of the requirement. Ark. Code Ann. § 8-4-201(b)(1)(B). ADEQ acknowledges that its proposed OB-OD amendments are more stringent than federal regulations, but the Department has made no meaningful attempt to satisfy its statutory burden of demonstrating the economic costs and environmental benefits of the proposal in advance of rulemaking. While the Department has provided the AEF with a volume of resources related the "how" of cost benefit analysis in general, documentation supporting the actual estimates by the agency of both the costs to the regulated community and the environmental benefits is sorely lacking. For instance, the economic impact statement accompanying the regulation indicates that the financial impact to the regulated community was not applicable, and the cost to ADEQ appears to reflect the total cost of operating the RCRA program. We do not believe that ADEQ has adequately accounted for either the direct costs of the regulatory changes (such as additional record keeping requirements) or indirect costs (such as economic impact to the state from erosion of plant values due to onerous ownership transfer requirements)."

ADEQ Response:
As the commenter notes, Act 1264 of 1993 and Act 1219 of 1997 established language at Arkansas Code, Ann. § 8-4-201(b)(1)(B), which requires that the Commission duly consider the economic impact and the environmental benefit of rules or regulations that are more stringent than Federal requirements on the people of the State of Arkansas, including those entities that will be subject to the regulation. The Commission was also required to "promptly initiate rulemaking required under subdivision (b)(1)(B);" said rulemaking was to "define the extent of the analysis to be performed;" and to "include a written report which shall be available for public review along with the proposed rule in the public comment period."

The Commission promulgated and adopted the provisions of A.C.A. § 8-4-201(b)(1)(B) in the Commission's Regulation No. 8, *Administrative Procedures*, in 1993. APC&EC Regulation No. 8.3.5.2, dated June 12, 2000, currently provides that:

3.5.2 Economic Impact/Environmental Benefit Analysis Required
(a) Prior to submitting for public notice a proposed regulation that is more stringent than federal requirements, the Commission shall cause to be prepared an analysis evidencing due consideration of the economic impact and environmental benefit of the regulation upon the state, including those entities that will be subject to the regulation. The

analysis shall be prepared by the proponent of the more stringent regulation based upon information reasonably available at the time of public notice. The impact/benefit analysis shall be available for comment during the comment period.

Pursuant to the provisions of Regulation No. 8, Environmental Benefit Economic Impact Analysis (hereafter EBEIA) is triggered by the proposal of "*…any rule, regulation, or change to a rule or regulation that is more stringent than federal requirements.*"

The phrase "more stringent" is not further defined by the statute. However, Regulation No. 8.3.5.3 defines "more stringent than federal requirements" as:

3.5.3. Definition of Regulation More Stringent Than Federal Requirements

A regulation that is "more stringent than federal requirements" is a regulatory standard, effluent limit, procedure, or other requirement which is more stringent than that which is expressly addressed by a federal regulation or presented as a minimum requirement for state program authorization.

In assessing the relative stringency of a newly-proposed regulation or a revision to an existing regulation in comparison to federal requirements, ADEQ staff employs a "litmus test" used by the U.S. Environmental Protection Agency (U.S. EPA) in assessing state rules and regulations for the purpose of delegating federal environmental programs for management and implementation at state level.

State environmental media programs which seek delegation or "authorization" of Federal programs must demonstrate and document to EPA that the corresponding State regulatory program is "fully equivalent to" and "no less stringent than" the applicable Federal program and its associated statutes and regulations. This analysis and assessment is accomplished in a rule-by-rule comparison between the specific Federal requirement and any corresponding State rules. For the purpose of delegation, corresponding state rules must at least be "equivalent to" or "no less stringent than" a specific Federal requirement. "*Equivalent to*" means that the State regulates at least the same universe of wastes, handlers, emissions, sources, etc. as the Federal program on at least a one to one correspondence. "*No Less Stringent Than*" means that each provision of the State statutes and regulations must be at least as stringent as the corresponding Federal requirement.

The set of Federal regulations establishes a "floor" or minimum baseline which State requirements must meet in order to regulate the same scope of activities or operations as a particular Federal environmental program. EPA recognizes that individual states may impose their own requirements, which may be "broader in scope" or "more stringent" than the corresponding requirement under a Federal media program, as long as these state-only provisions and their effects are "consistent" with the corresponding Federal program.

The term "*Broader in Scope*" addresses a state rule which 1) increases the regulated universe, (e.g. the types of facilities, handlers, or other affected persons, emissions, or waste streams); or 2) has no direct counterpart in a Federal requirement.

The term "*More Stringent*" addresses cases where imposition of a State-only requirement increases the degree of control or management from that required under a corresponding Federal requirement.

These are the terms which the Department must use when updating its program authorization authorities with the U.S. EPA, and so these are the phrases most commonly used when describing a newly-proposed or revised regulation.

Since 1993, the ADEQ Hazardous Waste Division staff has conscientiously complied with these provisions, analyzing each proposal for comparative stringency with existing state and federal requirements, and providing an assessment of the comparative environmental benefits and economic impact of each state-only rule that is more stringent than a corresponding federal requirement. For each of its proposals, the HWD provides its Statement of Basis and Purpose, required under Regulation No. 8 at the end of the rulemaking process, as well as at the beginning when a proposed regulation is submitted for public notice and comment. This Statement of Basis and Purpose contains a written assessment of the environmental benefits and economic impact to be derived on an item-by-item basis for each new state-only rule proposed.

In the case of Docket #04-008, an assessment of environmental benefit and economic impact was conducted in conjunction with the conception, drafting, and coordination of each revision, taking into account the regulated community in Arkansas and the perceived impact on these facilities over the next two years. (Two years is selected to coordinate with the financial impact statement the Legislative Council requires for evaluation of rulemaking proceedings and the EBEIA.) The reasoning and methodology used in the EBEIA is given in the above discussion of the proposed rule. A paragraph summarizing the results of this assessment, as well as for each individual rulemaking specified as being "more stringent," was included in the initial Statement and Basis of Purpose submitted to the Commission in the Petition to Initiate Rulemaking. The presence of this summarized finding was acknowledged by the Regulations Committee prior to its approval of the petition to proceed to public notice and comment.

Separate from the statutory requirements of A.C.A. § 8-4-201(b)(1)(B), the General Assembly's Legislative Council requires a Financial Impact Statement to be submitted with each newly proposed regulation or revised regulation submitted to the Legislative Council for review. This statement provides a quick reference to legislators of projected, aggregate costs of the proposed revisions over the next two years, as well as an estimate of the costs of implementing the associated regulatory program over the same time period. This document is used for budgetary purposes, not strictly for EBEIA.

In the case of the five existing facilities subject to RCRA permitting under the provisions of Regulation No. 23, Section 264, Subsection X (which addresses open burn/open

detonation units), all five facilities have existing RCRA permits which serve as a "shield" against most regulatory revisions to Section 264 during the term of that permit. One facility (Pine Bluff Arsenal) is a Federal installation and is therefore exempted from the requirement to demonstrate financial assurance. The remaining four facilities have either been recently re-permitted or are in the process of renewing their permits prior to the projected effective date of this proposed rule. The provisions of this proposed rule would not impact these permits until the next time they are renewed, which take place in the next decade.

ADEQ/HWD staff has conscientiously followed the requirements for EBEIA for all rulemaking petitions prepared since 1993. For this docket item, a paragraph summarizing the projected costs of each individual revision was appended to the narrative in the initial Statement of Basis and Purpose. The format used in this narrative was patterned after and is the same as used by a number of other States which conduct similar environmental benefit economic impact analyses.

The Commission believes that the ADEQ staff has complied with the published requirements of Regulation 8.3.5.2 in the development of the proposed rule, and acknowledges the commenters' concerns regarding the desire for more detailed instructions in Regulation No. 8 for conducting an EBEIA.

Comment 2A. "ADEQ's failure to examine the costs and benefits is particularly difficult to understand in the case of OB-OD because there are only a small handful of OB-OD units located in the State. AEF is aware of only a half dozen such facilities in the State. To the best of AEF's knowledge, most or all of these OB-OD units are already subject to RCRA permitting or other stringent environmental regulation. ADEQ's petition suggests that its proposed amendments are required because OB-OD units "are often found to be contaminated with perchlorate and other toxic constituents resulting from the energetic wastes treated in those units." See ADEQ Petition to Initiate Rulemaking at page 44. But ADEQ does not cite a single facility in the State of Arkansas with such problems; nor does the Department identify a single instance in which the Department's existing authority under current state laws and regulations has proven to be inadequate to resolve any environmental concerns. Under these circumstances, ADEQ's request to impose new regulations that are more stringent than federal requirements is unjustified and statutorily deficient."

ADEQ Response:
See response to Comment 2 above regarding the EBEIA.

The Commission's rules and regulations are intended to address threats to human health and the environment, and the Commission is not required to cite to actual impacts before promulgating regulations to protect human health or the environment.

ADEQ staff appreciates the Commenter's remarks in drawing their attention to the use of existing regulatory authority to fill the perceived gap in addressing the problem of establishing adequate financial assurances for these types of facilities.

In responding to the Commenter, ADEQ staff again reviewed the basis and purpose of this proposed revision. In the course of the review, the staff determined that sufficient regulatory authority already exists to require specific facilities, on a case-by-case basis, to provide additional financial assurances as may be warranted by the specific degree and duration of risk posed by the management of hazardous wastes at individual facilities or groups of facilities. Specifically, the provisions of Regulation No. 23 Section 264.147(d) provide that:

...

[264.147](d) Adjustments by the Director. ***If the Director determines that the levels of financial responsibility required by paragraph (a) or (b) of this section are not consistent with the degree and duration of risk associated with treatment, storage, or disposal at the facility or group of facilities, the Director may adjust the level of financial responsibility required under paragraph (a) or (b) of this section as may be necessary to protect human health and the environment.*** This adjusted level will be based on the Director's assessment of the degree and duration of risk associated with the ownership or operation of the facility or group of facilities. ***In addition, if the Director determines that there is a significant risk to human health and the environment from nonsudden accidental occurrences resulting from the operations of a facility that is not a surface impoundment, landfill, or land treatment facility, he may require that an owner or operator of the facility comply with paragraph (b) of this section.*** An owner or operator must furnish to the Director, within a reasonable time, any information which the Director requests to determine whether cause exists for such adjustments of level or type of coverage. Any adjustment of the level or type of coverage for a facility that has a permit will be treated as a permit modification under §§ 270.41(a)(5) and 124.5 of this regulation. [emphasis added]

Identical provisions are cited for waste management units subject to the interim status standards at Regulation No. 23, § 265.147(d).

The Commission's regulations for RCRA financial assurance closely parallel those promulgated by EPA, which have not been substantially revised or updated since 1982. Language prescribing post-closure contingency planning and financial assurance often does not address new types of waste management units added to the RCRA universe since that time, such as open burn/open detonation miscellaneous units. In negotiating enforcement orders, ADEQ often encounters strong resistance in incorporating financial assurance requirements for clean-up of waste management units where post-closure and/or liability requirements are not explicitly prescribed.

Continuing to rely upon existing authority provided at Regulation No. 23 Sections 264.147(d) and 265.147(d) would negate the need to move forward with this proposed regulatory change. Additionally, under these provisions, all regulated units would be subject to the same requirements, and the Department would be required make a finding

of significant risk in applying expanded financial assurance requirements on a case-by-case basis where warranted by the degree and duration of risk resulting from specific waste management operations.

In due consideration of the Commenter's remarks, the Commission will withdraw this provision from further action or consideration in this rulemaking process.

Comment 2B. "The second reason why the proposed OB-OD amendments should be rejected is that it is poorly drafted. It is unclear from the language proposed by the Department when the proposed OB-OD amendments would apply. The proposed amendments clearly do not apply to all OB-OD units. Instead, the amendments apply only to those OB-OD units "where soil and/or groundwater contamination has been identified as a result of operation of the unit." Unfortunately, this important qualifying phrase is filled with uncertainty. There is no definition of the terms "groundwater contamination" or "soil contamination." The word "contamination" seems to suggest that the concentration of a constituent in the soil or water must be elevated to a level that poses some risk of harm to human health or the environment. But there is no indication of how one determines what that level may be. Furthermore, there is no indication whether the determination is site-specific. For example, a level of constituents in one water body may be entirely acceptable from an environmental standpoint, but unacceptable in a different body of water that is more sensitive or subject to different uses. Similarly, a level of constituents in one soil setting may be entirely acceptable from an environmental standpoint, but unacceptable in a different type of soil setting. The difficulty in understanding the proposed OB-OD amendments is compounded by the fact that the "contamination" in question must be "identified as a result of operation of the unit." The phrase "identified as a result of" could have several different meanings. Presumably, it is an attempt at saying that the contamination must have been "caused by" operation of the OB-OD unit in question. Unfortunately, causation can also be a very slippery concept, particularly when dealing with groundwater impacts. Assuming for the sake of argument that some clear causal connection can be identified, the question still remains whether the OB-OD amendments would be triggered if the OB-OD unit caused only a minor or inconsequential portion of the relevant soil or groundwater contamination. Must the OB-OD unit be the sole cause of the contamination in question? Would the OB-OD amendments be triggered if the OB-OD unit was only a partial cause, or even a minor cause? Would the requirements of the OB-OD amendments apply only to that part of the soil or groundwater contamination actually caused by the OB-OD unit's operation? Against this background it is clear that the language of the OB-OD amendments is impermissibly vague and should be rejected."

ADEQ Response:
In response to Comment 2A, the Commission is withdrawing this proposal from further consideration. ADEQ will continue to rely upon existing regulatory provisions to deal with specific issues as they arise.

Comment 3.

Commenter objects to the proposed amendments to Regulation No. 23 that relate to open burn – open detonation units on grounds that:

1) Adoption of the proposed amendments would confuse and potentially disrupt the existing regulatory arrangements that have been carefully developed by ADEQ and the commenter; and

2) ADEQ has not identified any need that would justify deviating from the existing federal regulatory scheme in dealing with open burn – open detonation units.

Commenter additionally raised a series of questions concerning the impact of this proposed revision on their facility's existing RCRA permit and pending permit renewal.

Commenter objects in that ADEQ has not met the burden of assessing economic costs and environmental benefits that would result from adoption of the proposed OB/OD amendments.

ADEQ Response:

In response to Comment 2A, (See ADEQ response above) the Commission is withdrawing this proposal from further consideration. ADEQ will continue to rely upon existing regulatory provisions to deal with specific issues as they arise.

Conclusion: In response to Comment 2A, the Commission is withdrawing this proposal from further consideration, and will continue to rely upon existing regulatory provisions at Sections 264.147(d) and 265.147(d) to deal with specific cases as they may arise.

3. To revise and refine existing requirements for the use of insurance policies for RCRA financial assurance, specifically:

? To define "captive insurance," and clarify that captive insurance policies are inadequate to meet the requirements for compliant financial assurance under the provisions of Regulation No. 23, Sections 264 and 265, Subsections H. This is a more stringent provision than provided for under the current regulation, but is equivalent to current Federal program guidance concerning these types of policies;

? To require that when insurance is used as a mechanism to provide financial assurance under the provisions of Regulation No. 23, Sections 264 and 265, Subsections H, a copy of the insurance policy must be provided along with the currently required certificate of insurance. This is a more stringent provision than provided for under the current regulation; and

? To require that insurers issuing policies for financial assurance be recognized by the Arkansas Insurance Department, and be favorably

rated by an independent insurance company rater such as Standard and Poor's, Moody's, or A.M. Best. This is a more stringent provision than provided for under the current regulation.

Background and discussion:
Effective financial assurance mechanisms[1] are necessary to ensure that closure, post-closure, and corrective action activities will be conducted when needed to protect human health and the environment. In meeting these requirements, the owner or operator of a TSDF may take out an insurance policy to cover these costs. TSDFs are also required to establish financial assurance for bodily injury and property damage liabilities.

Financial assurance mechanism failures that occur when a facility owner or operator is insolvent can result in significant closure and post-closure delays, increasing the likelihood of environmental contamination and adverse human health effects. Moreover, when these failures occur, federal or state funds may have to be diverted from other public priorities since ADEQ (and ultimately the general public) would become financially responsible for closure and post-closure.

For a third party mechanism to be effective in providing financial assurance, there must be independence between the risk of facility failure and the risk that the company providing the mechanism will fail. In assessing acceptable means for providing such financial assurances in the early 1980s, EPA's calculations of third party mechanism risks assumed these risks were independent. However, EPA did not take into consideration cases where there is a lack of independence between risks of facility financial failure and third-party financial failure.

When a third party mechanism (such as a bond, letter of credit, insurance policy, or guarantee) is used to establish financial assurance, the risk of the facility's failure is transferred to the company providing the mechanism, and the public risk is that the facility will become insolvent and the third party mechanism will also fail. If the risks of failure are independent,[3] the risk to the public that a facility and the company providing the third party mechanism (such as a bank or insurance company) will be insolvent at the same time is lower than either the risk of facility insolvency or the risk of insolvency of the company providing the third party mechanism. For example, a TSDF might establish financial assurance with an insurance policy. The estimated risk, in this case, that the TSDF will become insolvent and the insurance company will fail at the same time is significantly lower than either the risk of TSDF insolvency alone or the risk of insurance company failure alone if the two risks are independent.

If TSDF insolvency and insurance company failure are not independent and are positively correlated, the overall risk increases and may be as high as the individual risk of TSDF insolvency. If the TSDF does not meet corporate financial test requirements, this overall risk could be higher than the failure risk presented by a facility which passes the corporate financial test

EPA believes that insurance policies issued by a "captive" insurance company do not provide an adequate level of assurance because it found no independence between facility

failure and failure of the mechanism. ADEQ staff concur with this belief. Most captive insurance companies are "pure" captives, e.g., wholly owned subsidiaries controlled by the parent company and established to insure the parent company or its other subsidiaries. Captive insurance policies have been used to establish financial assurance for a number of TSDFs outside Arkansas.

Even though the captive insurer may be a legally separate corporation, the financial strength of the captive is dependent upon the parent corporation. Therefore, the requirement that captives maintain a certain level of assets does not necessarily provide assurance of funds for closure and post-closure. For example, a significant portion of the assets of one captive insurer, established by a large waste management firm, was represented by a note receivable from the parent company. Because of the financial relationship between a captive insurance company and its parent corporation, A. M. Best, which provides ratings of insurance companies, evaluates captive insurers based on the financial strength of their parent company.

Therefore, the risk of insolvency of a captive insurance company and the risk of insolvency of a facility insured by that captive are not independent but instead are positively correlated. Since the failure of one is closely tied to the failure of the other, the assurance risk of using a captive insurance policy would be too high if the insured facility or the captive cannot pass the financial test. In addition to the higher potential risk in allowing a firm which cannot initially meet financial test requirements to use a captive to "self-insure," there is no annual review of the firm's financial condition by the state agency as there is for a financial test or corporate guarantee.

The basic purpose of insurance is to distribute risks among different parties. Typically an insurance company works to diversify its risks by insuring many entities. Independence of events is also important for diversifying insurance risks. For example, when an insurance company provides fire insurance for several buildings in one city block, it may be ruined if a large fire destroys all the buildings on the block. When captive insurance is used for RCRA financial assurance, there is no diversification of risks and no independence of the events of facility insolvencies because the facilities are all part of the same corporation.

The Internal Revenue Service has ruled that the "parent corporation and its domestic subsidiaries, and the wholly owned 'insurance' subsidiary [a captive insurance company] though separate corporate entities, represent one economic family with the result that those who bear the ultimate economic burden of loss are the same persons who suffer the loss…." A report issued by the Minnesota Pollution Control Agency (MPCA) listed several reasons for concern about captives. Because "the captive and the parent company are one of the same" and the "captive insurance company is not an independent entity or impartial third party," the MPCA's staff expressed the concern that captive insurance "may be nothing more than a promise to guarantee future coverage of financial assurance requirements."

Because the captive and its insured facility are members of the same economic family, a captive insurance policy establishes financial assurance in the same manner as the corporate financial test without safeguards, such as the $10 million tangible net worth, financial ratios, or bond rating requirements. The RCRA regulations do not specifically address the use of captive insurance for closure and post-closure financial assurance, although there are some regulatory requirements for insurance policies in general. An insurance policy established for closure and post-closure must contain a provision allowing assignment of the policy to a successor owner or operator of the facility. Captive insurance policies typically do not meet this requirement. States which license captive insurance companies usually restrict them from insuring companies outside of the corporate family. Therefore, captive policies do not meet all financial assurance regulations. In other state programs where captive insurance policies for closure and post-closure have been rejected, the issue of assignment of the policy was typically one of the reasons for denying the captive policy.

In August 2000, EPA submitted a proposed rule to the Office of Management and Budget which requires insurance companies issuing policies for RCRA financial assurance to have a high rating from insurance company raters. While this federal proposal has not been finalized, it has been the practice of ADEQ financial assurance staff to check policies submitted for RCRA financial assurance to determine whether the issuing insurance company is approved to write policies in Arkansas by the Arkansas Insurance Department. Today's proposal adds a qualification that insurers writing such policies be so approved by the Arkansas Insurance Department, as well as to have been favorably rated by an independent nationally recognized rating firm. The intent of this measure is to improve protection both to the insured owner and operator as well as to the general public and public treasury that insurance policies written for closure, post-closure, and corrective action activities as well as liability for sudden and/or non-sudden accidental occurrences provide reliable and sufficient coverage to these parties.

Environmental Benefit Economic Impact Analysis: In specifying that captive insurance is not acceptable for the purposes of RCRA financial assurance and requiring that insurers be favorably rated, these proposals are, on their face, more stringent than the corresponding federal rules. However these revisions simply codify practices that EPA and ADEQ have employed under the frame of "guidance" for some time, and do not incrementally affect the state's implementation of RCRA financial assurance requirements. In a survey of the policies currently in effect for third-party liability and closure in Arkansas, no captive insurers were identified. Regulations promulgated by the Arkansas Insurance Department require that policies written by captives be clearly identified as such on the cover pages of the policy, making it easier for affected facilities and ADEQ staff to monitor this issue.

The proposed regulation is not expected to have an adverse economic impact to the regulated facility owners and operators. There is no additional cost to the Department for enforcement. There will be no additional fees, nor will there be an increase in fees associated with this regulation. Impact of this revision is estimated to be cost-neutral.

Public Comments:
No comments were received on this proposed revision.

ADEQ Response:
No comments were received on the record concerning this proposal. No change is made to the regulatory language as proposed.

4. To require that a company seeking to use the corporate financial test or corporate guarantee submit, in addition to the chief financial officer's letter and certifications from an independent auditor, a copy of the company's consolidated financial statements, to include all notes and attachments. This is a more stringent provision than provided for under the current regulation.

Background and Discussion:
If a facility meets the criteria of the corporate financial test, it may satisfy its financial assurance obligations solely on the strength of its financial condition. Alternatively, a facility which is not able to meet corporate financial test criteria may arrange a corporate guarantee by demonstrating that its corporate parent, sibling corporation, or firm with a substantial business relationship with the owner or operator, meets the financial test requirements on its behalf.

RCRA regulations allow a facility which meets corporate financial test requirements to satisfy its financial assurance obligations solely on the strength of its financial condition and without establishing a third party mechanism or trust fund. Although there is some risk of failure for firms which pass the corporate financial test, the test is meant to reduce the risk to a low level by screening out firms with higher risks of failure. Since the risk of bankruptcy increases when a firm's net worth decreases, firms are required to have a minimum of $10 million in tangible net worth to pass the corporate financial test. In devising the criteria for the financial test in the early 1980s, EPA determined that firms with less than $10 million in tangible net worth went bankrupt four times more frequently than firms with tangible net worth greater than $10 million. Net worth is not the only corporate financial test requirement. Additional requirements include financial ratios or bond ratings, which make the test more difficult to pass than the net worth requirement alone.

The regulations also require annual updates of the financial test to determine whether or not a firm's financial health has deteriorated, as financial test may not be a good long-term predictor of solvency. In past experience, ADEQ staff has found a number of examples of facilities which had established financial assurance through the corporate financial test and in a later year no longer qualified. ADEQ may also require reports of a company's financial condition at any time during the year there is a reasonable belief that the owner or operator no longer meets the financial test requirements. State and federal regulations allow financial test requirements to be met on behalf of a TSDF through a

corporate guarantee by another firm, such as a corporate parent, sibling, or one that has a substantial business relationship with the TSDF. The firm providing the corporate guarantee becomes responsible for closure, post-closure, corrective action, and/or third party liability in the event of the permitted facility's financial failure.

A firm using the financial test to satisfy its obligations cannot guarantee it will have funds for closure and post-closure in the event that it becomes insolvent. For conducting closure, post-closure, and corrective action, the public bears the risk of the firm's insolvency. A facility which cannot pass the corporate financial test must establish an alternate mechanism because the facility's risk of financial failure, and therefore the public's risk, is too high.

In addition to the risks of company financial failures, there are financial assurance risks caused by difficulties in monitoring financial tests and corporate guarantees. Some of the complicating factors are economic changes in the waste management industry and general business, company mergers and acquisitions, difficulties in predicting the long term survivability of individual firms, and evaluating financial test submissions from firms with facilities in many states.

Corporate acquisitions may occur without the ADEQ being notified. Where the original acquired corporation may have provided a corporate guarantee, the new corporation might be unqualified or might be unwilling to provide a corporate guarantee.

A firm using the financial test must supply cost estimates for all facilities it is covering with the test mechanism. To verify cost estimates for facilities in other states, ADEQ typically must contact all other states where the firm operates permitted or interim status facilities. Significant resources are required to do this for every financial test submission.

Over the past five years, significant concern has arisen within EPA, other state programs, and ADEQ staff concerning the adequacy of the financial test in predicting a company's actual financial strength, specifically in the light of changes in the business and financial markets over the intervening twenty years since the test was devised, and recent scandals such as the Enron and WorldCom/MCI bankruptcies in 2002 and the complicity of nationally related accounting firms therein. Key areas of concern are the reliability of accounting information used in the test, and the reliability of the test conditions themselves as an accurate predictor of financial strength and stability. At the same time these concerns are being raised for financial assurances at facilities subject to Reg. No. 23 Sections 264 and 265, the idea of extending financial assurance requirements to other environmental remediation such as corrective action, Brownfield sites, and other clean-ups conducted under enforcement orders or consent agreements, etc. have compounded these issues

A 1997 change to the American Institute of Certified Public Accountants, Inc.'s *Statement on Auditing Standards* no longer permits independent auditors to express negative assurance (e.g., the regulatory-required statement that "no matter came to our attention which caused us to believe that the specified data should be adjusted.") A

federal revision to the financial assurance regulations has not been proposed; instead reviewing staff look for the auditor's description of the audit procedures performed, and the resultant findings, including whether or not any discrepancies were found in the comparison. In reviewing financial tests using these new standards, it is necessary to review the notes and in most cases, the entirety of the consolidated financial statements in order to achieve an informed opinion on the validity of the financial test.

Corporate financial reporting of environmental costs and liabilities in the financial test is governed by a set of practices and principles known as the Generally Accepted Accounting Principles, or "GAAP." These principles are set out in a body of rules, guidelines, and statements of positions issued by a number of organizations, including the Financial Accounting Standards Board (FASB), the American Institute of Certified Public Accountants, and the Securities and Exchange Commission (SEC). Despite the value of GAAP in setting a baseline for uniform and accurate financial reporting, the practices themselves are broadly written so as to cover a wide range of corporate financial needs. Key among these is a variety of methods in which environmental liabilities may be accrued, which in turn may facilitate a company in understating its total liabilities.

While EPA has proposed a number of changes to the financial test in order to better suit the current business economy, none of these revisions have been finalized, nor are they close to being finalized. As of July 2004, EPA's Environmental Financial Advisory Board was reviewing the current provisions of the financial test or the revision proposed in the 1991 draft Standardized Permit Rule was sufficient to provide adequate assurances given the changes in the financial and business markets since that time, and whether more specific standards should be established for environmental liability disclosures by companies seeking to use the financial test.

ADEQ staff reviewed a number of options to address concerns regarding the financial test, to include: 1) eliminating the financial test and corporate guarantee as an option for financial assurance; 2) strengthening the requirements for the financial test itself; and 3) developing more definitive guidance concerning the applicability of specific financial assurance mechanisms to specific circumstances.

Option 1 (eliminating the financial test) was closely considered, but ultimately rejected. The low cost of the financial test to facility owners and operators makes it one of the most attractive mechanisms in use. As of July 1, 2004, of 19 Arkansas facilities required to post RCRA financial assurance, 11 use the corporate financial test or the corporate guarantee.[2] Removing the financial test as an option would place a significant financial burden of regulated facilities who would then be required to post cash instruments for substantive liabilities. Additionally, while the Arkansas Hazardous Waste Management Act is silent on specific mechanisms for financial assurance, "self-insurance" is specifically allowed under the federal RCRA.

[2] The breakdown of mechanisms in use was: corporate financial test – 8; letters of credit – 5; corporate guarantee – 3; trust funds – 2; and insurance – 1.

Option 2 considered a number of means to tighten the requirements of the financial test, including a number of EPA proposals which would raise the requirement of a company's tangible net worth to $10 million plus the sum of the firm's environmental liabilities, to requiring a company to meet all three financial ratios (instead of the current requirement of two) or requiring a minimum bond rating of A3 or A- as rated by Standard and Poor's or Moody's respectively[3]. This approach was eventually abandoned as the staff was unable to prove that the tightened standards would be any better predictor than the current test.

Option 3, the selected option, aims to improve the reliability of information submitted in support of the financial test, and to streamline the review of these documents as submitted to the Department, by requiring that a complete copy of the company's consolidated financial statements, with all notes and attachments, be submitted as a part of the financial test. In addition, the Department developed standardized language in its RCRA permit modules to better outline and explain the options available for specific circumstances. The significant provision of this change simply requires that the applicant's consolidated financial statements be submitted as part of the financial test application, rather than being subsequently requested by the Department on a case-by-case basis.

In summarizing the provisions in the model permit language (not part of Regulation No. 23), the financial test requires that an applicant identify and categorize its "total liabilities," to include the sum of its environmental liabilities, as factors in computing the ratios for the financial test. For the financial strength of the company with respect to its environmental liabilities to be fairly assessed, the total sum of these liabilities must be considered. Using EPA's current *Interim Guidance on Financial Responsibility for Facilities Subject to RCRA Corrective Action*, ADEQ allows "phasing" financial assurance for corrective action, e.g. calculating corrective or remedial action costs incrementally, and posting financial assurance in the same manner, subject to approval by the Director, when a final Remedial Action Decision for corrective action at the facility has not yet been made or approved, in order to reduce the uncertainty of costs for which the permittee or facility owner or operator must provide financial assurance. Phased financial assurance for corrective action consists of two (2) phases: Phase I addresses the costs of investigating conditions at the facility, and evaluating the appropriate courses of remedial actions. Phase II includes the costs of designing appropriate corrective measures and implementing the selected remedy pursuant to the Remedial Action Decision Document (RADD), to include any necessary operations and maintenance (O&M) activities. Because all applicable costs and liabilities have not (or cannot) been determined under the phasing concept, the corporate financial test or corporate guarantee may not be used as mechanisms when financial assurance for corrective action is phased.

[3] APC&EC Regulation No. 23, Sections 264 and 265, subsections H refer to acceptable bond ratings by Standard & Poor's and Moody's as BBB or higher if rated by S&P, or Baa or higher if rated by Moody's. In recent years these rating companies have added suffixes of "+" or "-" to their ratings to indicate whether the bond is rated in the upper (+ or 1), median (no suffix, or 2) or lower (- or 3) third of all bonds rated under that category. Federal financial assurance regulations have not been revised since the rating companies instituted this practice, and it is EPA's and ADEQ's practice to consider bonds rated in the lower third (BBB- or Baa3) as if they were rated as BBB or Baa under the old rating scheme.

Environmental Benefit Economic Impact Analysis: Facilities and guarantors using the financial test already must prepare consolidated financial statements and submit them to an independent certified public accountant in order to prepare the financial test documents. This revision requires only that a copy of these statements be submitted in company with the annual submittal. No additional costs to the regulated facility is foreseen save for additional duplication and postage costs, based on the average size of current submittals, this will average approximately $20 per facility per year.

There is no estimated adverse economic effect upon industry by this proposed regulation, either immediate or long term. There will be no immediate adverse or beneficial economic effect on the public. The proposed regulations do not overlap or duplicate any regulations of another state or local governmental agency. With these proposed revisions, the Arkansas hazardous waste management regulations will continue to be consistent with the federal RCRA law and regulations. There is no additional cost to the agency for enforcement. This regulation does not add a new fee, nor increase an existing fee.

Comment 3A:

One commenter disagreed with ADEQ's proposal to require submission of all supporting documentation when a permittee seeks to provide financial assurance using the corporate financial test or corporate guarantee. Specifically, commenter believes that the discussion at page 51 of ADEQ's Petition to Initiate Rulemaking misstates the relevant law. However, commenter does not oppose the proposed amendment, even though the supporting discussion in the Department's petition is mistaken on the relevant law.

ADEQ Response:

As noted in the background and discussion for this proposed revision, both EPA and most authorized State environmental agencies share concerns that the 1970s/1980s business model on which the corporate financial test is based may be outdated and potentially ineffective in the current business environment. EPA has initiated a study via its Financial Assurance Review Board to re-visit the current financial test and corporate guarantee mechanisms to ensure they provide adequate assurances of financial stability. In all cases, both mechanisms are based on the company's most recent consolidated financial statements, and in exercising due diligence, state agencies reviewing financial test applications for sufficiency are cautioned to directly compare the figures cited in the chief financial officer's letter to the balance sheets and associated notes in the consolidated financial statements.

In due consideration and evaluation of the comments received, no change is made to the regulatory language as proposed.

5. To amend the provisions of Section 270.40(b) to require that upon change of ownership of a permitted treatment, storage, or disposal facility,

the new owner must establish compliant financial assurance not later than the effective date of the change of ownership or operational control of the facility. This is a more stringent provision than provided for under the current regulation.

Background and Discussion:
Regulation No. 23 Section 270.40 provides for the transfer of a RCRA permit from one facility owner/operator to another, provided that the new owner/operator submits a revised permit application to ADEQ no later than 90 days prior to the change of operational responsibility for the facility, as well as a written agreement between the old and new owners/operators specifying a date for the change of responsibility. The regulation currently allows the new owner/operator a six-month grace period in which to establish compliant financial assurance for closure, post-closure, corrective action, and/or liability for sudden and non-sudden accidental occurrences. The old operator must continue to provide compliant financial assurance for the facility until the new operator establishes new assurances.

Over the past five years, this has been a problem with nearly every transfer of a RCRA permit. The new owners/operators either delay or neglect obtaining financial assurance, which in turn requires that the former operators maintain their old coverage far longer than would otherwise be necessary. This costs the former operator the expense of maintaining cash instruments such as letters of credit, bonds, and insurance policies, in the case where assurances are maintained by trust funds, the former owners assets are encumbered and unavailable for use in current or future operations. Financial assurance for the average facility typically ranges from several hundred thousand to several million dollars, and the costs of maintaining financial assurance can be significant. Should the new owner or operator fail to provide compliant financial assurance within established deadlines, it is ADEQ's responsibility to terminate the permit for non-compliance, cash in the former owner's financial assurance, and use these funds to implement closure of the regulated waste management units.

This revision would require that upon transfer of a RCRA permit, compliant financial assurances be established as of the date of the transfer of responsibility of the permit. As the regulations require 90 days' notice prior to transferring responsibility, and the typical time frame for a facility to update, renew, or re-establish its financial assurances on an annual basis is typically 90 days in the longest case (e.g., the financial test, where documentation must be completed and submitted within 90 days of the close of the owner/operator's fiscal year), sufficient time is available to make the necessary arrangements to establish assurance for the facility's current cost estimate. The current cost estimate is required to be maintained on file at the facility, and should be presumed to be readily available for the new owner's information in developing the transition plan for change of facility ownership.

Environmental Benefit Economic Impact Analysis: Implementation of this revision would be more stringent than the current equivalent federal regulations. With these proposed revisions, the Arkansas hazardous waste management regulations will continue to be

consistent with the federal RCRA law and regulations. There is no additional cost to the agency for enforcement. This regulation does not add a new fee, nor increase an existing fee. There is no estimated adverse economic effect upon industry by this proposed regulation, either immediate or long term. There will be no immediate adverse economic effect on the public. It is not apparent that there will be any increased cost to the new owner, in that the new owner/operator is required to incur the financial obligations associated with his choice of financial assurance mechanisms as part and parcel of acquiring the facility; only the timing of this obligation is affected. Existing federal and state regulations require that the Department be notified no less than ninety (90) days prior to the effective date of a change in facility ownership, which is more lenient than the 60-day time frame allowed for a facility to replace a financial assurance instrument which for whatever reason has been invalidated. On the other side of the transaction, this revision will provide substantial relief for the former owner/operator in that he can expect a much more timely release of the assets encumbered to provide financial assurance, as well as avoid the costs of maintaining these assurances for the six months or more following relinquishment of his other responsibilities for the facility. Impact of this revision is estimated to be cost-neutral.

Public Comments:
No specific comments were received on this proposed revision.

ADEQ Response:
No comments were received on the record concerning this proposal. No change is made to the regulatory language as proposed.

6. To provide for the management of "consumer electronic items" (e.g., electronic wastes, to include items containing cathode ray tubes (CRTs), personal computers and computer components, audio or video players, videocassette (VCR) and digital videodisk (DVD) recorders and players, video cameras, facsimile or copying machines, telephones, cellular telephones, wireless paging devices, video game consoles, and similar items) under the universal waste management standards of Section 273. This provision is considered "broader in scope" than the provisions of the RCRA waste management program as currently authorized by the U.S. Environmental Protection Agency, yet would lessen the regulatory burden on generators of these consumer electronic wastes.

Background and Discussion
In response to a number of queries from the public and Arkansas industries, the Department proposed to provide for the management of electronic wastes, or "consumer electronic items," under the Universal Waste regulations at Regulation No. 23 § 273.

The Department proposes to list these wastes as "consumer electronic items," which may be used interchangeably with "electronic wastes," and would include personal computers and computer components, audio or video players, videocassette (VCR) and digital

videodisk (DVD) recorders and players, video cameras, facsimile or copying machines, telephones, cellular telephones, wireless paging devices, video game consoles, and similar items. The term “consumer electronic items” also addresses these same discarded items which arise from industrial, business, or governmental sources.

Under provisions of the universal waste rule, generators and universal waste handlers would not have to include these items toward the quantity of hazardous wastes which counts toward their status as large quantity, small quantity, or conditionally exempt generators; they would be allowed to accumulate these items for up to one year in order to achieve efficiency of transportation and shipment, and said shipment would not require the use of a hazardous waste manifest. Universal wastes still must be collected and accumulated so as to prevent a release to the environment, must be clearly labeled as universal wastes, and can only be shipped to another universal waste handler for aggregation, or to a destination facility for treatment, reclamation, and/or recycling.

"Destination facilities" are facilities that treat, dispose of, or recycle a particular category of universal waste and are subject all applicable requirements that apply to any hazardous waste treatment, storage and disposal facilities. (Regulation No. 23 § 273.9, 273.60.) Recycling facilities are excluded from the definition of universal waste "handlers". (See Regulation No. 23 § 273.6.) They are subject to normal hazardous waste management requirements. Under those requirements, storage prior to recycling is regulated and requires a permit. (See Regulation No. 23 § 261.6(c) (1).) Many types of recycling processes are largely exempt from regulation (see Regulation No. 23 § 261.6(d)); others (such as burning to recover energy or materials) are regulated and require permits.

Facilities that are just accumulating a universal waste, but not recycling, treating, or disposing of that waste category can use the less stringent universal waste requirements for handling that universal waste category.

The universal waste rule does not change the requirement for recycling facilities to get a RCRA storage permit if they store waste before they recycle it. Also if a recycling facility does not store universal wastes before processing them, they still have to comply with the requirements of Regulation No. 23 § 261.6(c)(2) according to Regulation No. 23 § 273.60(b)

Regulation No. 23 § 273.80 and 273.81 requires that the Department consider the following factors in designating a particular waste or category of wastes as a universal waste:

A. *The waste (or category of waste) as generated by a variety of generators is a listed or characteristic hazardous waste:* Many electronic items contain hazardous components – for example lead, mercury, and cadmium – in quantities that exceed the regulatory levels for characteristic hazardous wastes when disposed in landfills. Television picture tubes and computer cathode ray tubes (CRTs) contain an average of four pounds of lead, and can contain up to twice that amount depending on the size and manufacturer of the CRT. Mercury from electronic circuitry has been cited as a leading source of mercury releases

from municipal solid wastes. A major source of cadmium in environmental releases stems from the disposal of rechargeable nickel-cadmium (Ni-Cad) batteries, commonly used in laptop computers, cellular telephones, cameras, and video recorders. In addition to these toxic metals, plastics used in consumer electronics often contain bromine-based flame retardants. If improperly handled or disposed, these toxics can be released into the environment, posing a threat to human health.

B. *The waste (or category of waste) is not exclusive to a specific industry or group of industries, and is commonly generated by a wide variety of types of establishments*: Within the past ten years, consumer electronic items such as personal computers and computer components, audio or video players, videocassette (VCR) and digital videodisk (DVD) recorders and players, video cameras, facsimile or copying machines, telephones, cellular telephones, wireless paging devices, video game consoles, and similar items have become ubiquitous in both the private and business sectors. Most homes and businesses in Arkansas have at least one television, and a computer, as well as a large variety of other consumer electronic devices. The majority of Arkansas businesses rely upon electronics in their work. Consumer electronics are typically discarded with household garbage, or with municipal solid wastes.

C. *The waste (or category of waste) is generated by a large number of generators and is frequently generated in relatively small quantities by each generator:* On a national basis, it is estimated that approximately 1.5 million computers are disposed of each year, most of these eventually finding their way into landfills. Television sets are even more numerous, and are typically disposed in the same manner. The average generation ranges from the upgrade and replacement of a single computer or television, to wide scale replacements such as for business departments or sections, or schools. At this time there is no specific state or federal regulation that specifically governs the collection and handling of electronic wastes, so these items are managed in much the same manner as nonhazardous solid wastes. Hazardous wastes generated in households is not regulated, therefore residents can send their electronic wastes to a local landfill with other household items.

ADEQ strongly discourages landfill disposal of these items because of the potential environmental and health risks. Local landfills often monitor the flow of such household hazardous waste materials, and will not allow disposal of these items in the facility. Large-quantity generators of electronic wastes (e.g., businesses, governmental agencies, non-profit organizations, health care facilities, and other non-household generators) are typically subject to the hazardous waste management regulations due to the hazardous components contained in electronic wastes.

D. *Systems to be used for collecting the waste (including packaging, marking, and labeling practices) would ensure close stewardship of the waste:* Within the past year, a network for collecting and recycling electronic wastes has been growing within Arkansas and other MidSouth states to manage and properly reclaim or dispose of these items. A summary of these efforts and resources is available at http://www.adeq.state.ar.us/solwaste/branch_recycling/pdfs/ electronic_waste_03.pdf.

E. *The risk posed by the waste during accumulation and transport is relatively low compared to other hazardous wastes, and specific management standards would be protective of human health and the environment during accumulation and transport*. Hazardous components found in electronic wastes are typically encapsulated within the item (for example, the lead in CRTs is contained inside the glass that makes up the picture tube, mercury and other metals are blended into the solder and other circuitry, nickel, cadmium, and other metals are typically contained within the battery's case) so that the item is safe during routine handling. Upon disposal, however, breakage of the glass, rupture of the battery cases, or the action of leachate on metal and soldered circuitry can lead to the release of the hazardous components should the item be disposed in a landfill, or illicitly dumped. Ensuring that these waste items are collected and reclaimed or recycled greatly increases the protection of health and the environment over the current disposal practices.

F. *Regulation as a universal waste will increase the likelihood that the waste will be diverted from nonhazardous waste management systems to recycling, treatment, or disposal in compliance with the Hazardous Waste Management Act; Regulation as a universal waste will improve implementation of and compliance with the hazardous waste regulatory program:* The vast majority of these wastes are either landfilled, speculatively accumulated, or illicitly dumped because there is limited opportunity for proper reclamation, limited awareness of the hazards posed by these items, and little incentive to reclaim or recycle them. Their status as a characteristic hazardous waste is an additional disincentive which leads to their being speculatively accumulated in the anticipation that an inexpensive disposal option will come along. Designation as a universal waste will alleviate many of these barriers to proper waste management, and increased public outreach and awareness of the risks and disposal options will stimulate the business sector and is anticipated to further expand the availability of recycling and disposal options.

In considering the above factors, the Department believes that this waste stream meets the conditions for designation and management as universal wastes, and that a sufficient infrastructure now exists to provide for their management as such in a manner that is protective of human health and the environment.

Comment 4:

One commenter opposed implementation of a universal waste system for management of electronic wastes in favor of the eventual implementation and adoption of EPA's proposed exclusion from the definition of solid wastes for cathode ray tubes that are recycled under the provisions of that proposal (67 Fed. Reg. 40,507 (June 12, 2002)). Commenter asserts that the sooner EPA promulgates its regulation, the sooner there will be a national, uniform rule that addresses the electronic products -- CRTs -- that, by all measures, are of the greatest concern for regulation of electronic wastes. EPA's approach is to provide an exclusion from the definition of solid wastes in the hazardous waste regulations under the Resource Conservation and Recovery Act ("RCRA") for CRTs that

are recycled in accordance with the requirements of that proposal. Commenter encourages ADEQ to join in its support of EPA's proposed regulation.

Commenter recommends that Arkansas first consider an approach that makes use of conditional exclusions or exemptions, rather than a universal waste scheme. If Arkansas proceeds with development of a universal waste program for electronics, then commenter recommends adoption of the specific recommendations cited, which are designed to protect public health and the environment while facilitating the development and efficient operation of a responsible recycling industry for waste electronics.

Until a federal CRT regulation is adopted for CRTs and other electronic wastes that may test as hazardous, Commenter supports the use of programs other than a universal waste scheme that address electronic items destined for recycling. Compared to universal waste regulations, these programs are simpler, are less expensive to implement, and better set the stage for a uniform, national electronic waste regulatory scheme. Commenter provided a number of examples where other state waste management programs have taken alternative approaches to managing these wastes. For instance, under Ohio's hazardous waste provisions, used electronic equipment exhibiting a characteristic of hazardous waste is classified as a "characteristic by-product," which is not considered a waste when reclaimed. The Washington Department of Ecology has issued an interim enforcement policy under which the Department will refrain from enforcing portions of its "Dangerous Waste Regulations" with respect to CRTs and related electronic devices as long as certain recycling requirements are met. The Oregon Department of Environmental Quality has issued a CRT interim policy patterned after EPA's proposed CRT rule that excludes CRTs as solid waste provided they are recycled. Similarly, the South Carolina Department of Health and Environmental Control does not regulate CRTs when they are sent to recyclers. Commenter first and foremost recommends these approaches.

Commenter states that one of the overarching goals of universal waste programs is to encourage and facilitate responsible waste recycling. Consumer electronic items being shipped or stored prior to recycling are considered to be useable and useful equipment, not wastes. Recyclers will determine whether the electronic items can be resold, donated, repaired, or refurbished as a useful product, or dismantled to yield useable components. In storage and shipment, consumer electronic items destined for recycling do not pose a more significant hazard to the public or to the environment than items that are still in use. Thus, neither public health nor environmental reasons supports application of universal waste regulations to businesses, academic institutions, government agencies, and other "non-recycling" entities that send their electronic items for recycling. Allowing these entities to store and ship their consumer electronic items for recycling -- but not for disposal -- without being subject to universal waste regulations will both encourage responsible recycling and protect public health and the environment.

ADEQ Response:
In the summer of 2003, several representatives of Arkansas's industries approached ADEQ with a request to consider including cathode ray tubes under the state's existing

definition of "hazardous waste lamp," or investigating the possibility of providing a universal waste provision for CRTs and related electronic wastes. ADEQ declined to amend the definition for hazardous waste lamps because of the different nature and risks posed by CRTs (where the hazardous constituents are typically contained in the glass which makes up the tube) and hazardous lamps (where the constituents are typically contained gases or other materials inside an otherwise non-hazardous glass tube). ADEQ staff then began development of this proposal with a review and consideration of EPA's proposed conditional exclusion of CRTs, public noticed on June 12, 2002 at 67 FR 40507, as well as consideration of the specific exemptions from the definition of hazardous waste provided for a wide range of similar materials when these items are re-used, reclaimed, or recycled rather than being disposed.

Coordination with HQs, EPA staff indicated that the June, 2002 proposed rule was not on any sort of fast track, nor was it making significant progress through the rulemaking process. Additionally, EPA's proposed exclusion was limited to CRTs and specific mercury-containing items, whereas the electronic waste streams confronted by Arkansas industry included a wide variety of items, including CRTs, but also computers, cellular phones, and other consumer electronic items.

Additional coordination with regional waste management facilities indicated that appropriate facilities and management practices were in place to support a broad range of electronic wastes, however a degree of uncertainty existed with respect to hazardous components and the issue of managing, shipping, transporting, and treating hazardous wastes. Arkansas regulates conditionally exempt small quantity generators of hazardous wastes more stringently than provided for by the equivalent federal regulations. Whereas under the federal rules CESQGs may dispose of their hazardous wastes in municipal solid waste facilities, in Arkansas, these wastes typically must be manifested and shipped to a permitted RCRA Subtitle C treatment, storage, or disposal facility, and comply with appropriate management standards, to include land disposal restrictions (Regulation No. 23, § 262.35.) Even if the waste is reclaimed or recycled, under RCRA Subtitle C it must be managed as a hazardous waste until the point it enters the reclamation or recycling process. (Regulation No. 23, § 261.6(c)).

As the responsible rulemaking body, the Commission does not have exactly the same latitude as does the U.S. EPA in establishing state exemptions from the definition of solid waste which would be less stringent than the same standard currently enforced by EPA. As a State agency with federal authorization to implement nearly all parts of the federal hazardous waste management program, ADEQ is given a fair degree of latitude in interpreting its corresponding state regulations in a manner similar to EPA. The most effective management tool provided to authorized states in managing these ubiquitous types of wastes in an environmentally protective manner is the ability to expand upon the definition of universal wastes, provided that the process set out at 40 CFR 273 Subpart G is met. Given the wide variety of electronic wastes to be managed by Arkansas's industries, the Commission believes that it has selected the most appropriate approach to ensure that these wastes are managed with the most effective protection to human health and the environment, while strongly encouraging the re-use, reclamation, and recycling

of items which would otherwise be destined for disposal. Given that Arkansas regulates conditionally-exempt small quantity hazardous wastes more stringently than the corresponding federal provisions, the Commission believes that the regulatory and economic relief granted by inclusion of these items under the universal waste program will strengthen its efforts to drive these waste streams toward re-use, reclamation, and recycling.

The Commission and ADEQ remain cognizant of the pending EPA proposal for a conditional exemption of CRTs that are recycled (67 FR 40525-40528, June 12, 2002). Should that proposal be published as a final federal regulation, Arkansas's provision for managing CRTs as universal waste would then be more stringent with respect to the management of CRTs. The Commission and ADEQ would at that time evaluate and consider the new federal rule for adoption (with concurrent amendment of the universal waste provisions for consumer electronic items) as may be appropriate at that time.

Comment 4A. Under Arkansas' proposed universal waste regulation for electronics, a used consumer electronic item becomes a waste "on the date it is discarded." Commenter recommends that greater specificity be added to the provision to make clear that businesses, academic institutions, government agencies and other "non-recycling" entities can send their consumer electronic items to recyclers without triggering universal waste regulatory requirements. In addition, the regulations should not distinguish between used and unused consumer electronic items because the "non-recycling" entities that ship to recyclers and the recyclers themselves handle used and unused items similarly.

ADEQ Response:
ADEQ concurs with EPA's analysis at 67 FR 40511-40512 concerning when CRTs and similar or related items become "wastes," and in response to the Commenter's concerns, provides the following guidelines to be used in determining just when a particular consumer electronic item becomes a waste, and thus subject to waste classification and potentially, designation as a universal waste:

Household hazardous wastes: Households that dispose of CRT and other consumer electronic items are exempt from hazardous waste management requirements under Regulation No. 23 § 261.4(b)(1). They may therefore legally send their used computer and television monitors to any facility or collector for recycling or disposal without being subject to any hazardous waste regulation. Other facilities managing household hazardous waste (such as collectors, recyclers, or disposers) continue to be exempt from the hazardous waste requirements unless the household waste is mixed with other regulated hazardous waste.

Non-household facilities (e.g. CESQGs, SQGs, and LQGs): Non-household facilities with used CRTs or other consumer electronic items must comply with the applicable RCRA hazardous waste regulations. The user must first determine if his used electronic items are solid wastes. Following is a brief description of how solid waste determinations

for CRTs and other consumer electronic items are made under the existing State and federal regulations:

Reuse and repair of used Consumer Electronic Items: ADEQ and EPA have consistently taken the view that materials used and taken out of service by one person are not wastes if a second person puts them to the same type of use without first ''reclaiming'' them (Regulation No. 23 § 261.2(e), see also 50 FR 624, January 5, 1985).

Many consumer electronic items are taken out of service by both businesses and households not because they can no longer be used, but because users are upgrading their systems to take advantage of the rapid advances that have resulted in better and faster electronics. Businesses and organizations upgrading their computers often replace the entire computer system, including the monitors. A working consumer electronic item considered obsolete by one user is therefore likely to be capable of reuse, as is, by another user.

Many businesses and organizations that take consumer electronic items out of service do not have the specialized knowledge needed to determine whether the unit can be reused as is. Moreover, those entities often do not decide whether a particular item will, in fact, be reused. For example, many businesses and other organizations send used computers and televisions to resellers. Resellers often test used electronic items or otherwise decide if the items can be reused directly, if they can be reused after minor repairs, or if they must be sent for further processing or disposal. Because the typical original user usually lacks the specialized knowledge needed to decide the future of a particular consumer electronic item, ADEQ wishes to clarify that we do not consider a user sending a used consumer electronic item to a reseller for potential reuse to be a RCRA generator.

We additionally wish to clarify that used consumer electronic items undergoing repairs before resale or distribution are not being ''reclaimed,'' and are considered to be products ''in use'' rather than solid wastes. Resellers of used consumer electronic items generally test and identify equipment that can be resold or is economically repairable.

Sometimes the equipment is collected and redistributed for reuse with no repairs. If repairs are necessary, they typically consist of rewiring or replacing defective parts. Under these circumstances, the item would still be considered a commercial product rather than a solid waste. ADEQ and EPA believe that these repairs and replacement activities do not constitute waste management.

Unused Consumer Electronic Items sent for recycling. Sometimes electronics manufacturers ship unused items (usually off-specification CRTs) directly to glass processors who crush the CRTs and separate the glass components. Generally, the processor then sends the processed glass to a glass-to-glass recycler or to another recycling facility, such as a lead smelter. Although ADEQ could consider these activities to constitute "reclamation," neither EPA nor ADEQ regulate the reclamation of either listed or characteristic unused commercial chemical products (*see* 50 FR 14219, April 11, 1985). Unused consumer electronic items are considered to be the same as unused

commercial chemical products. Therefore, these materials are not solid wastes when sent for reclamation.

Used Consumer Electronic Items sent for recycling. Under the current RCRA regulations, used consumer electronic items sent directly to glass processors or other recyclers could be considered spent materials undergoing reclamation, and could therefore be solid wastes. If these solid wastes exhibit a hazardous characteristic, then they would be subject to management under RCRA Subtitle C, including those items which would be considered as conditionally-exempt small quantity hazardous wastes. The Commission is proposing in this case that the used items be managed as universal wastes pursuant to the rule as proposed.

Disposal. If a non-household entity decides to send used or unused consumer electronic items directly to a landfill or an incinerator for disposal, that entity would be considered the generator of a solid waste. The person making the decision must determine if the consumer electronic items exhibit a hazardous waste characteristic under Regulation No. 23 Section 261, Subsection C. He may either test the items or use process knowledge to make this determination. Many or most CRTs from color computer or television monitors exhibit the toxicity characteristic (TC) for lead. While data indicates that most CRTs from black and white monitors do not fail the TC, those that do are subject to all applicable hazardous waste management requirements. When a decision is made to dispose of hazardous waste consumer electronic items, the nonresidential user, reseller, or manufacturer must comply with all applicable hazardous waste generator requirements of Regulation No. 23 Section 262, including packaging and labeling, accumulation time or quantity limits, land disposal restriction notices, use of the hazardous waste manifest, recordkeeping and reporting, and use of a permitted RCRA treatment, storage, or disposal facility.

Some companies currently ship their waste consumer electronic items to hazardous waste landfills for disposal. Used consumer electronic items generated by a non-residential facility that fail the TC for lead must meet applicable land disposal restrictions (LDRs) before being placed in a land-based unit, such as a landfill. These restrictions do not apply to consumer electronic items generated by households, unless they are mixed with non-residential consumer electronic items. To meet LDRs, CRT glass and other circuitry must be treated so that the TCLP lead concentration does not exceed 0.75 mg per liter. This concentration level is generally achieved by crushing and stabilizing the glass through the addition of chemicals which reduce the solubility of lead when contacted by leachate.

The Commission intends this rule as a measure to support the diversion of used consumer electronic items which ultimately would have been destined for landfilling to processes where they will be re-used, reclaimed, or recycled, therefore the application of the "universal waste" label is focused at the point where these items would otherwise have been disposed, or would have to be forwarded for recycling as characteristic hazardous wastes, with the applicable restrictions.

Comment 4B. Commenter requests that as long as handlers manage electronic items in a manner that prevents breakage and the possible release of hazardous constituents, handlers should have flexibility in their management practices. While containment in actual containers or packages may be well-suited for lamps, the regulations for electronic items should not require such containment because it is not necessary for safe management of electronic items. Storage in a room and/or on a pallet may be an effective way to minimize breakage of electronic items. In addition, the regulations should use the phrase "not intact," rather than "broken," to distinguish CRTs with loose glass (not intact) from those with merely cracked glass (intact). "Broken" is ambiguous. Finally, the provision on sorting, mixing, and disassembling of consumer electronic items should recognize the difference between intentional and unintentional breakage of CRTs. If a handler accidentally drops a CRT while sorting, mixing, or disassembling consumer electronic items, the handler should not be out of compliance with the regulations.

ADEQ Response:
The Commission's proposed management standards for cathode ray tubes (CRTs) are similar to the State's universal waste management standards for lamps, with which most Arkansas universal waste handlers are already familiar. ADEQ staff also considered EPA's proposed management standards for CRTs under the conditional exemption plan, and sought to provide for a scheme that would meet the immediate need to provide a safe management plan for these wastes as well as to provide for a smooth transition to the EPA proposal, should that rule be promulgated in the future. The lack of distinction between intentional and non-intentional breakage of CRTs is deliberate. ADEQ does not distinguish between intentional or unintentional breakage for universal waste lamps, as the end result is the same – the broken lamps are less amenable to recycling and require extra handling, and the principal hazardous constituent in the item is released or mobilized. ADEQ considers crushing universal waste lamps to be treatment of hazardous waste, and impermissible for managing these items under the universal waste rules. While more stringent than the equivalent federal provisions, this particular rule strengthens the incentive to send these items through the recycling process in the form that destination facilities are best equipped to manage them, and reduces the exposure and potential risk to handlers' employees in crushing lamps or managing broken lamp debris.

The same principle was applied to the proposed management of electronic wastes, specifically CRTs, where the primary hazardous constituent remains in the glass once the CRT picture tube is broken or otherwise no longer intact. This concept is intended to deliver waste CRTs to the destination facility in a condition where they may be broken down under controlled conditions which minimize human exposure to any hazardous constituents, or the release of such constituents to the environment.

The Commission's proposal would apply to a much broader range of electronic wastes than CRTs and computer systems. Covered items would include small, battery-powered devices which do not lend themselves well to palletization, and for which containerization is entirely appropriate for containment and protection.

In due consideration and evaluation of the comments received, no change is made to the regulatory language as proposed.

Comment 4C. Commenter is pleased to see that ADEQ's proposed regulations allow handlers to disassemble consumer electronic items "to separate CRTs, batteries, circuit boards, or other components to facilitate the recycling or reclamation of these components." §§ 273.13(d)(3)(iii), 273.33(d)(3)(iii). The proposed regulations then require handlers to determine whether the components exhibit a characteristic of hazardous waste and, if so, to manage the components as hazardous waste.

HP recommends modifying this latter provision in two respects. First, the provision should expressly provide that handlers may decide to manage components as hazardous without determining whether they actually exhibit a characteristic of hazardous waste. Second, if components do exhibit a characteristic of hazardous waste or the handler decides to manage them as hazardous, the handler should be able to manage them as universal waste. Like ADEQ's proposed language, these options would protect public health and the environment. Unlike ADEQ's proposed language, however, they would facilitate efficient operation of recycling facilities for waste electronics by offering simpler, less expensive options to handlers.

ADEQ Response:
The Commission's intent in providing this standard was to encourage reclamation and recycling of these wastes, and to avoid stifling ongoing efforts to efficiently separate and reclaim components based on the nature and particular hazard posed by each.

The first provision requested by the commenter, to provide that handlers may decide to manage components as hazardous without determining whether they actually exhibit a characteristic of hazardous waste, is already in effect under the requirement of Regulation No. 23 § 262.11. This requirement – to make a hazard determination – is general; it applies whenever a decision is made to discard any waste. In lieu of performing specific tests, the generator may use his knowledge of the general characteristics of the waste and treat it as presumed to be hazardous.

The generator makes a hazard determination at the point where he determines a consumer electronic item to be a universal waste. As these electronic wastes typically contain a number of components which may be reclaimed or recycled more efficiently when disassembled or separated, each separated component is considered to be a newly-generated waste whose hazardous characteristics (or absence thereof) must again be individually considered.

For example, a computer monitor may be separated into several components: the CRT, the circuit boards contained inside, and the plastic housing. Once these materials are removed from the consumer electronic item, they become a newly generated waste subject to a hazardous waste determination. If they meet the criteria to be classified as a hazardous waste, they must be handled as hazardous waste; otherwise they must be

managed as a solid waste. The generator may apply knowledge-of-process to presume that the CRT from a color computer monitor will almost always fail the toxicity characteristic for lead. Removed circuit boards may also exhibit a hazardous characteristic for lead-based solder, however, a number of specific exemptions exist for electronic circuit boards. In 1992, EPA issued a memorandum to its EPA Regional Waste Management Directors stating that used whole circuit boards are considered to be scrap metal when sent for reclamation, and therefore exempt from regulation under RCRA. EPA also addressed printed circuit boards in the Land Disposal Restrictions Phase IV rulemaking (62 FR 25998, May 12, 1997), where it provided an exclusion from the definition of solid waste at 40 CFR 261.4(a)(14) for shredded circuit boards being reclaimed, provided they are stored in containers sufficient to prevent a release to the environment prior to recovery and provided they are free of mercury switches, mercury relays, nickel-cadmium batteries and lithium batteries. Subsequently, on May 26, 1998 (63 FR 28556), EPA clarified that the scrap metal exemption applies to whole used circuit boards that contain minor battery or mercury switch components and that are sent for continued use, reuse, or recovery.

Components separated from a universal waste consumer electronic item which continue to display a hazardous characteristic may continue to be managed as a universal waste, as they are considered to be "derived from" a universal waste, and continuing to manage these components as universal waste will continue to provide the same level of protection for human health and the environment as for the original assembled item.

To clarify the Commission's intention with respect to these separated components, the proposed regulatory language at §§ 273.13(d)(4)(i) and 273.33(d)(4)(i) is amended to read as follows:

> *(4) A small/large quantity handler of universal waste who disassembles consumer electronic items for the purpose of facilitating the recycling or reclamation of individual components of those items must determine whether those components and/or other solid waste resulting from the activities listed above exhibit a characteristic of hazardous waste identified in § 261, Subsection C.*
>
> *(i) If separated components of the consumer electronic items and/or other solid waste exhibits a characteristic of hazardous waste,* ***they may continue to be managed as a universal waste under the provisions of this Section. Otherwise, they are*** *subject to all applicable requirements of Sections 260 through 270 of this Regulation. The handler is then considered the generator of this hazardous waste and/or other waste and is subject to § 262 of this Regulation.*
>
> *(ii) If the separated component 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.*

Comment 4D. Commenter states that the generation of consumer electronic items for recycling often involves the storage and shipment of various types of electronic items (e.g., CRT displays, computer CPUs) in and through numerous states. ADEQ's proposed regulation should be amended in two respects to facilitate interstate shipment of universal waste electronic items.

First, ADEQ's proposed regulation specifies three phrases that may be used to label universal waste consumer electronic items or containers in which the consumer electronic items are contained: "Universal Waste - Consumer Electronic Items," "Electronic Wastes," or "Used Electronic Items." §§ 273.14(f), 273.34(f). Commenter recommends that, as in the federal universal waste regulation (40 C.F.R. §§ 273.14, 273.34), the words "Universal Waste" or "Waste" or "Used" should all be allowed as the first part of the phrase. The descriptive word(s) used after these terms should then be a word (or words) that is analogous to, or more specific than but subsumed within, the term "Electronics" in order to simplify the labeling requirement and facilitate compliance. Under this regulatory approach, "Universal Waste - Electronics," "Waste - Computer Monitors," and "Used - Circuit Boards," for example, would all be acceptable labels. This approach will facilitate interstate transportation of such items, although, as noted below, this approach will not ensure that the electronic items or containers will have labels that are appropriate for every state that has established electronic universal waste labeling requirements.

Second, labeling should not dictate extra segregation of material. For efficiency and/or due to space limitations, handlers often need to stage waste electronics in a designated area or in various container types. Handlers should be allowed to label an area of a building or a package, whichever is most convenient to the handler, rather than each item or each container. Also, because handlers may have some electronic items that are not hazardous or are not yet wastes, but which are essentially no different than electronic items that have been determined to be universal wastes, handlers should not be prohibited from having these "non-universal waste" electronic items staged in an area labeled for universal waste.

Alternatively, if Arkansas prefers to specify exact label language, commenter recommends adoption of a single label for all universal waste consumer electronic items that would be acceptable in all states with a universal waste program for electronics. This would facilitate both compliance with Arkansas's regulations and interstate transportation of universal waste electronic items. One example of a label that commenter's analysis indicates should operate nationwide is "Universal Waste - Cathode Ray Tubes (CRTs)/Electric Lamps/Used Consumer Electronic Items/Devices/Components."

ADEQ Response:
The Commission's key intent in identifying label information for these items is that the phrase "UNIVERSAL WASTE" be included in all labeling, in the same manner that all tanks or containers of hazardous waste must be uniformly labeled "HAZARDOUS WASTE" (or "USED OIL" in the case of materials managed under Regulation No. 23 § 279). Such labels should properly read, for example, "UNIVERSAL WASTE – ELECTRONIC WASTES" or "UNIVERSAL WASTE – USED ELECTRONIC ITEMS." The text of the final rule will be modified to remove this ambiguity.

Given the broad range of items covered by the term "consumer electronic items," ADEQ does not intend to limit handlers in properly labeling containers, provided that the phrase "UNIVERSAL WASTE" is prominently included on the label, along with the nature of the item or the content of the container. For example, a properly maintained container

labeled "UNIVERSAL WASTE – DISCARDED CELL PHONES" would not be cited for a labeling violation, provided that the container does have used, UW cellular phones in it.

The proposed management standards require that individual items (for example, computer monitors or computer desktop units) and bulk containers of universal waste to be labeled individually "UNIVERSAL WASTE." The Commenter's request to stage individual or bulk items in a labeled accumulation area or staging area cannot be accommodated. The Commission's intent is consistent with the other labeling requirements for hazardous and universal wastes in that specific waste items and bulk containers – not designated areas – are to be labeled to identify the nature and associated hazard of the wastes therein.

Consistent with its position on commingling different hazardous wastes, or commingling hazardous wastes and non-hazardous wastes, ADEQ strongly discourages commingling universal wastes and non-hazardous, non-universal wastes in the same accumulation area. Safe and proper management of the waste, and not necessarily the convenience to the handler, is the driving concern.

To clarify the Commission's intention with respect to labeling universal waste consumer electronic items or containers of these items, the proposed regulatory language at §§ 273.14(f) and 273.34(f) is amended to read as follows:

(f) Universal waste consumer electronic items (i.e., each item), or a container in which the consumer electronic items are contained, ***must be labeled or marked clearly with the phrase: "Universal Waste," followed by a description of the item or the items in the container – e.g., "Consumer Electronic Items", or "Electronic Wastes," or "Used Electronic Items;" etc.***

Conclusion. Following consideration of all comments made on the administrative record, the proposal submitted at paragraph 3(B) of the September 23, 2004 Petition to Initiate Rulemaking is withdrawn from further consideration, and the enclosed regulatory changes (revised pursuant to comments received, as noted above are submitted for adoption and incorporation into the Commission's Regulation No. 23, *Hazardous Waste Management*.

Mike Bates
Chief, Hazardous Waste Division

November 19, 2004

Mr. Doug Szenher
ADEQ
P.O. Box 8913
Little Rock, AR 72219-8913

Re: Comments on Reg. 23

Dear Mr. Szenher:

The Arkansas Environmental Federation is pleased to provide the following comments related to Reg. 23:

1. Changes are proposed at: 279.10 Applicability.

(i) Used oil containing PCBs. (New language) Used oil containing PCBs (as defined at 40 CFR 761.3) at any concentration.....

Used oil is not defined at 761.3 - only waste oil is. There is no definition of used oil under the current definitions found at 761.3. This omission has been pointed out to EPA before but no action has been taken. A more correct (but not particularly helpful reference would be (as defined in 40 CFR 761).

This is not a very good solution to the problem but if someone goes to 761.3 looking for a definition of used oil, they'll come up empty. They need to dig deeper into 761 to see the distinction between used and waste oil. Obviously, used oil has not been declared a waste when managed under the used oil regulations.

2. Paragraph 3(b) of ADEQ's Petition to Initiate Rulemaking to Amend Regulation No. 23 seeks to impose new regulatory obligations that are more stringent than federal requirements on open burn/open detonation units "where soil and/or groundwater contamination has been identified as a result of operation of the unit."

The proposed OB-OD amendments should be rejected for two distinct reasons. First, ADEQ has failed to satisfy the statutory requirement of establishing the economic costs and environmental benefits of the proposed amendments. Whenever ADEQ petitions for the adoption of a regulation that is more stringent than federal regulations, Arkansas law requires the Department to establish the economic impact and environmental benefits of the requirement. Ark. Code Ann. § 8-4-201(b)(1)(B). ADEQ acknowledges that its proposed OB-OD amendments are more stringent than federal regulations, but the Department has made no meaningful attempt to satisfy its statutory burden of demonstrating the economic costs and environmental benefits of the proposal in advance of rulemaking. While the Department has provided the AEF with a volume of resources related the "how" of cost benefit analysis in general, documentation supporting the actual estimates by the agency of both the costs to the regulated community and the environmental benefits is sorely lacking. For instance, the economic impact statement accompanying the regulation indicates that the financial impact to the regulated community was not applicable, and the cost to ADEQ appears to reflect the total cost of operating the RCRA program. We do not believe that ADEQ has adequately accounted for either the direct costs of the regulatory changes (such as additional record keeping requirements) or indirect costs (such as economic impact to the state from erosion of plant values due to onerous ownership transfer requirements).

ADEQ's failure to examine the costs and benefits is particularly difficult to understand in the case of OB-OD because there are only a small handful of OB-OD units located in the State. AEF is aware of only a half dozen such facilities in the State. To the best of AEF's knowledge, most or all of these OB-OD units

are already subject to RCRA permitting or other stringent environmental regulation. ADEQ's petition suggests that its proposed amendments are required because OB-OD units "are often found to be contaminated with perchlorate and other toxic constituents resulting from the energetic wastes treated in those units." See ADEQ Petition to Initiate Rulemaking at page 44. But ADEQ does not cite a single facility in the State of Arkansas with such problems; nor does the Department identify a single instance in which the Department's existing authority under current state laws and regulations has proven to be inadequate to resolve any environmental concerns. Under these circumstances, ADEQ's request to impose new regulations that are more stringent than federal requirements is unjustified and statutorily deficient.

The second reason why the proposed OB-OD amendments should be rejected is that it is poorly drafted. It is unclear from the language proposed by the Department when the proposed OB-OD amendments would apply. The proposed amendments clearly do not apply to all OB-OD units. Instead, the amendments apply only to those OB-OD units "where soil and/or groundwater contamination has been identified as a result of operation of the unit." Unfortunately, this important qualifying phrase is filled with uncertainty. There is no definition of the terms "groundwater contamination" or "soil contamination." The word "contamination" seems to suggest that the concentration of a constituent in the soil or water must be elevated to a level that poses some risk of harm to human health or the environment. But there is no indication of how one determines what that level may be. Furthermore, there is no indication whether the determination is site-specific. For example, a level of constituents in one water body may be entirely acceptable from an environmental standpoint, but unacceptable in a different body of water that is more sensitive or subject to different uses. Similarly, a level of constituents in one soil setting may be entirely acceptable from an environmental standpoint, but unacceptable in a different type of soil setting. The difficulty in understanding the proposed OB-OD amendments is compounded by the fact that the "contamination" in question must be "identified as a result of operation of the unit." The phrase "identified as a result of" could have several different meanings. Presumably, it is an attempt at saying that the contamination must have been "caused by" operation of the OB-OD unit in question. Unfortunately, causation can also be a very slippery concept, particularly when dealing with groundwater impacts. Assuming for the sake of argument that some clear causal connection can be identified, the question still remains whether the OB-OD amendments would be triggered if the OB-OD unit caused only a minor or inconsequential portion of the relevant soil or groundwater contamination. Must the OB-OD unit be the sole cause of the contamination in question? Would the OB-OD amendments be triggered if the OB-OD unit was only a partial cause, or even a minor cause? Would the requirements of the OB-OD amendments apply only to that part of the soil or groundwater contamination actually caused by the OB-OD unit's operation? Against this background it is clear that the language of the OB-OD amendments is impermissibly vague and should be rejected.

Thank you in advance for your consideration of these comments.

Sincerely,

Randy Thurman
Executive Director

LAW OFFICES

MITCHELL, WILLIAMS,
SELIG, GATES & WOODYARD, P.L.L.C.

425 WEST CAPITOL AVENUE, SUITE 1800
LITTLE ROCK, ARKANSAS 72201-3525
TELEPHONE 501-688-8800
FAX 501-688-8807

5414 PINNACLE POINT DRIVE, SUITE 500
ROGERS, ARKANSAS 72758-8131
TELEPHONE 479-273-9561
FAX 479-273-0527

1110 WEST B STREET, SUITE C
RUSSELLVILLE, ARKANSAS 72801
TELEPHONE 479-967-7050
FAX 479-967-7078

ALLAN GATES
DIRECT DIAL 501-688-8816
E-MAIL AGATES@MWSGW.COM

November 19, 2004

By Hand Delivery

Arkansas Department of Pollution Control & Ecology
8001 National Drive
Little Rock, AR 72209

Attn: David F. Kern

Re: Comments of Aerojet-General Corporation regarding Proposed Amendments to Regulation No. 23 (APCEC Docket No. 04-008-R)

Dear Sirs:

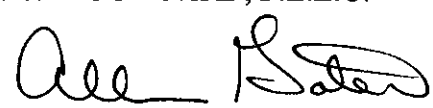
Enclosed you will find the comments of Aerojet-General Corporation regarding ADEQ's proposed amendments to Regulation No. 23.

In addition to submitting the attached comments, Aerojet wishes to state that it joins in the comment offered by the Arkansas Environmental Federation. Finally Aerojet wishes to note that it disagrees with the discussion offered by ADEQ in support of the proposed amendment that would require submission of all supporting documentation when a permittee offers its financial statements to demonstrate its financial strength under the existing financial assurance requirement. Specifically, Aerojet believes that the discussion at page 51 of ADEQ's Petition to Initiate Rulemaking misstates the relevant law. However, Aerojet does not oppose the proposed amendment, even though the supporting discussion in the Department's petition is mistaken on the relevant law.

If you have any questions regarding this matter, please do not hesitate to call me.

Respectfully yours,

MITCHELL, WILLIAMS, SELIG,
GATES & WOODYARD, P.L.L.C.

By 
Allan Gates

AG:gb
Enclosures

cc: (with comments)
Ellen Carpenter
Michael Bates

Summary of Comment

Aerojet-General Corporation objects to the proposed amendments to Regulation No. 23 that relate to open burn – open detonation units on grounds that:

1. Adoption of the proposed amendments would confuse and potentially disrupt the existing regulatory arrangements that have been carefully developed by ADEQ and Aerojet; and

2. ADEQ has not identified any need that would justify deviating from the existing federal regulatory scheme in dealing with open burn – open detonation units

Discussion

Aerojet-General Corporation is a major aerospace/defense contractor specializing in missile and space propulsion, and defense and armaments. Aerojet is a wholly owned subsidiary of GenCorp, a major technology-based manufacturing corporation which is listed on the New York Stock Exchange (NYSE symbol: GY). Aerojet operates manufacturing facilities in a number of states, including Arkansas. Aerojet's Arkansas operation is located in Highland Industrial Park, near East Camden, Arkansas. Aerojet's East Camden facility produces solid rocket propellants and motors, related components for rocket and missile systems, warheads and other ordnance, and the propellants for air bag systems. Aerojet acquired the East Camden operation in 2003 when it acquired most of the propulsion-related assets of Atlantic Research Corporation, the former operator of the facility.

Aerojet's East Camden facility includes an open burn unit, which is used for the treatment of off specification propellant and propellant contaminated trash. After its purchase of

the East Camden operation from Atlantic Research Corporation, Aerojet voluntarily entered into a consent administrative order with ADEQ. The CAO provided that Aerojet would continue the corrective action investigation and remedial efforts that were then underway at the East Camden facility. These corrective action measures include the investigation and remediation of contaminated groundwater. The CAO expressly reflected the parties' expectation that a new hazardous waste permit would soon be issued to Aerojet which would include comprehensive corrective action requirements, including requirements for financial assurance, and would supersede the CAO. On September 1, 2004, ADEQ issued the new hazardous waste permit in draft form and published notice inviting public comment. As expected, the draft permit includes comprehensive corrective action and financial assurance requirements that are intended to supersede the provisions of the CAO. On October 7, 2004, ADEQ held a public hearing on the draft hazardous waste permit for Aerojet. On October 21, 2004, the period for public comment on Aerojet's draft hazardous waste permit expired.

Aerojet is concerned about the potential effect of the proposed amendments to Regulation No. 23 that relate to OB/OD units on its East Camden operation and offers the following comments.

1. The Proposed OB/OD Amendments Would Confuse and Potentially Disrupt Existing Regulatory Arrangements that Have Been Carefully Developed Between Aerojet and ADEQ.

It is unclear whether ADEQ intends the proposed OB/OD amendments to apply to Aerojet. The proposed amendments state that they apply to:

> "Open burn/open detonation units where soil and/or groundwater contamination has been identified as a result of operation of the unit."

Aerojet's East Camden facility includes an open burn unit. Investigation of environmental conditions has identified groundwater contamination at the facility. It is currently believed that the groundwater contamination is attributable primarily to historical operations of a solid waste management unit known as the Washout Building. It is also believed, however, that some portion of the groundwater contamination may have been attributable to historical operations of the old open burn unit. These circumstances present difficult questions regarding the proposed OB/OD amendments. For example:

- Are the amendments inapplicable because the contamination was caused primarily by the Washout operations, and not the open burn unit?
- Are the amendments potentially applicable if the open burn unit contributed a small amount to the contamination, even if that amount is negligible or unquantifiable?
- If the amendments do apply, do they apply only to that portion of the groundwater contamination that may have been caused by the open burn unit?

These issues are not hypothetical questions for Aerojet. They represent real problems in understanding what the company would have to do to comply with the proposed amendments if they are adopted.

The confusion regarding the applicability of the proposed OB/OD amendments to Aerojet's facility is compounded by the fact that ADEQ proposed the amendments to Regulation No. 23 shortly after it issued Aerojet's draft hazardous waste permit. The draft permit issued by ADEQ on September 1, 2004 was based on the regulations then in effect. It is unclear whether Aerojet's draft permit will be issued by the Department in final form before the proposed OB/OD amendments are presented to the Commission for final action. The proposed OB/OD amendments appear to impose obligations that differ from the specific provisions of the draft permit. Once again, these circumstances present difficult questions:

- To the extent the OB/OD amendments differ from the draft permit, which will control?

• Will the provisions of the permit control until the permit is amended or it expires?

- Will the proposed amendments automatically supersede any conflicting or differing provisions of the permit?
- Who has the authority to make that decision?

- Does the Department make the decision because it is the entity authorized to issue the permit?

- Does the Commission make the decision because it is the entity authorized to adopt regulations?

- Even if Aerojet, the Department, and the Commission all agree on the appropriate answers to these questions, how will the company be able to protect itself from citizen suits or other claims by third parties who may disagree?

Another source of confusion posed by the OB/OD amendments involves the nature of the regulatory requirements intended. The explanation of the proposed amendments seems to suggest that contingency planning will be required under the OB/OD amendments that is not currently required under existing regulations, but it is not clear that the amendments to Regulation No. 23 address all of the appropriate regulatory sections necessary to accomplish this end. It is also unclear how the proposed amending language would apply in cases where there is already some form of regulatory jurisdiction that has been exercised by way of permitting or corrective action.

In light of the very serious potential for confusion, Aerojet asked the Department staff how the proposed OB/OD amendments would apply to Aerojet. Although Aerojet has had several extended discussions with the ADEQ staff and counsel regarding this subject, Aerojet has not been able to come to any clear understanding of the Department's views on these difficult questions. The only consistent thread that Aerojet has been able to derive from its discussions with the Department staff is that ADEQ apparently did not propose the OB/OD amendments

with any intent or desire to alter the existing regulatory arrangements between the Department and Aerojet.

Aerojet respectfully submits that the confusion that will be caused by the proposed OB/OD amendments will far outweigh any potential benefit they might achieve. As a consequence, Aerojet believes the proposed OB/OD amendments should be rejected, at least in their present form.

2. ADEQ Has Not Satisfied its Burden of Assessing the Economic Costs or Environmental Benefits that Would Result from Adoption of the Proposed OB/OD Amendments.

The statutes governing rulemaking proceedings by the Commission include a very strong policy preference against the adoption of state regulations that are more stringent than federal requirements unless the deviation from federal requirements is justified by a clearly articulated analysis of the economic costs and environmental benefits involved. Ark. Code Ann. § 8-4-201(b)(1)(B) provides that:

> "[P]rior to the submittal to public comment and review of any rule, regulation, or change to any rule or regulation that is more stringent than federal requirements, the commission shall duly consider the economic impact and the environmental benefit of such rule or regulation on the people of the State of Arkansas, including those entities that will be subject to the regulation."

APCEC Regulation No. 8 echoes this concern. Section 3.5.2 of Regulation No. 8 required the Department, as the proponent of the more stringent regulation, to prepare and submit an analysis of the economic costs and environmental benefits before the rulemaking commenced. This is required so that the public will have an opportunity to comment on the cost/benefit analysis. Section 3.5.4 then requires the Commission at the conclusion of the rulemaking to review all comments on the cost/benefit analysis and include in its decision a reasoned evaluation of the

relative costs and benefits. ADEQ's Petition to Initiate Rulemaking fails to provide the analysis of economic costs and environmental benefits required by the statute and Regulation No. 8.

On the question of environmental benefits, ADEQ's Petition to Initiate Rulemaking does not identify any OB/OD facilities that might justify adopting regulations which go beyond the existing federal hazardous waste regulatory requirements. To the best of Aerojet's knowledge, there are only six present or former OB/OD facilities located in the State of Arkansas:

- Pine Bluff Arsenal,
- the former BEI facility in the Highland Industrial Park,
- the Lockheed-Martin facility in the Highland Industrial Park,
- the Armtec facility in the Highland Industrial Park,
- the Austin Powder facility in the Highland Industrial Park, and
- the Aerojet facility in the Highland Industrial Park.

ADEQ's petition does not mention any of these facilities; nor does it suggest that conditions at any of these six facilities pose problems which cannot be appropriately resolved based on existing statutes and regulations. ADEQ's petition seems to suggest that the Departments has proposed the OB/OD amendments to deal with some unknown group of OB/OD units that have yet to be identified. Aerojet respectfully submits that any such fear is not well founded. Open burn and open detonation units are not common backyard operations. OB/OD units are features associated with the production of rocket propellants and similar energetic products. This type of product requires sophisticated manufacturing operations that would be easily identified. The Commission need not fear the possibility of unknown "Mom and Pop" operations with previously unidentified open bur/open detonation units. Certainly ADEQ's petition does not identify any basis for believing that one should fear the existence of such unidentified OB/OD facilities.

On the question of environmental benefit, ADEQ's Petition also fails to explain how the proposed amendments would result in improved environmental control. The OB/OD amendments are limited primarily to requiring post closure financial assurance and third party liability insurance. In Aerojet's case, the CAO and draft permit already call for financial assurance and third party liability insurance. To the extent the proposed OB/OD amendments might add to the existing requirements, ADEQ's petition does not explain why the existing financial assurance and third party liability requirements are inadequate. Nor does it explain why increased financial assurance could not be secured using the existing regulations if ADEQ felt the current assurances or insurance was inadequate.

On the question of economic costs, ADEQ's petition states only that "Actual costs will vary widely between affected facilities." See ADEQ Petition at p. 45. Since there are only six known OB/OD units located in the State, Aerojet respectfully submits that the law requires ADEQ to do more than say costs will vary. As noted above, Aerojet has inquired of the ADEQ staff about the potential impact of the proposed amendments on its facility. It is Aerojet's understanding from these discussions that the ADEQ staff is aware of the fact that there are only six known OB/OD units in the State, the six enumerated previously in this comment. It is also Aerojet's understanding that despite the very small number of potentially affected facilities, the Department has not attempted to determine whether its proposed OB/OD amendments would apply to the known facilities or what effect the amendments might have if they did apply. Certainly ADEQ's Petition does not provide any basis for the Commission to assess such costs, or for the public to comment on the issue.

Under these circumstances, the proposed amendments regarding OB/OD units should be rejected based on the Department's failure to comply with Ark. Code Ann. § 8-4-201(b)(1)(B) and Section 3.5 of Regulation No. 8. If the Department is satisfied that the need for the proposed amendments justifies the economic cost, the Department should be able to assemble the relevant information on costs and benefits and present it to the Commission in a new rulemaking proceeding. That would allow the public the opportunity to comment on the cost benefit assessment as Section 3.5 of Regulation No. 8 requires. It would also give the Commission a meaningful record on which to base its "reasoned evaluation" of costs and benefits, as required by Section 3.5.4 of Regulation No. 8.

Hewlett-Packard Company
8000 Foothills Blvd
Mail Stop RN
Roseville, CA 95747
www.hp.com

November 19, 2004

Via Email

David F. Kern
Media & Public Affairs Officer
Customer Service Division
Arkansas Department of Environmental Quality
8101 Interstate 30, P.O. Box 8913
Little Rock, AR 72219-8913

Re: Comments on Proposed Changes in Regulation No. 23, Hazardous Waste Management

Dear Mr. Kern:

Hewlett-Packard Company ("HP") appreciates the opportunity to review and comment on the proposed amendment by the Arkansas Department of Environmental Quality ("ADEQ") of Regulation No. 23.

Through operation of recycling facilities for electronic materials in the U.S. for the past 17 years, HP has gained significant practical, real-world experience in the recycling of computers and related electronic products. HP's recycling operations have received an award from the U.S. Environmental Protection Agency and praise from the environmental community. HP understands the importance of developing practical electronic recycling regulations that enhance the viability of recycling operations while protecting public health and the environment.

Based on this experience and perspective, HP offers the following general comments on management of electronic wastes and several specific suggestions for ADEQ's proposed regulations for universal waste consumer electronic items. Our recommendations are designed to facilitate efficient recycling of electronic wastes.

1. General Regulatory Approach

HP recommends active state support for EPA's proposed cathode ray tube ("CRT") regulation as the best first action that can -- and should -- be taken to develop a sound, practical approach to regulation of electronic wastes. *See* 67 Fed. Reg. 40,507 (June 12, 2002). The sooner EPA promulgates its regulation, the

sooner there will be a national, uniform rule that addresses the electronic products -- CRTs -- that, by all measures, are of the greatest concern for regulation of electronic wastes. EPA's approach is to provide an exclusion from the definition of solid wastes in the hazardous waste regulations under the Resource Conservation and Recovery Act ("RCRA") for CRTs that are recycled in accordance with the requirements of that proposal. HP encourages ADEQ to join HP in its support of EPA's proposed regulation.

Until a federal CRT regulation is adopted for CRTs and other electronic wastes that may test as hazardous, HP supports the use of programs other than a universal waste scheme that address electronic items destined for recycling. Compared to universal waste regulations, these programs are simpler, are less expensive to implement, and better set the stage for a uniform, national electronic waste regulatory scheme. For instance, under Ohio's hazardous waste provisions, used electronic equipment exhibiting a characteristic of hazardous waste is classified as a "characteristic by-product," which is not considered a waste when reclaimed.[1] The Washington Department of Ecology has issued an interim enforcement policy under which the Department will refrain from enforcing portions of its "Dangerous Waste Regulations" with respect to CRTs and related electronic devices as long as certain recycling requirements are met.[2] The Oregon Department of Environmental Quality has issued a CRT interim policy patterned after EPA's proposed CRT rule that excludes CRTs as solid waste provided they are recycled.[3] Similarly, the South Carolina Department of Health and Environmental Control does not regulate CRTs when they are sent to recyclers.[4]

EPA's proposed CRT regulation and these state policies recognize the unique characteristics of electronic wastes and encourage responsible recycling while ensuring full regulation for such wastes if they are hazardous and not being recycled. HP first and foremost recommends these approaches.

2. Recommendations for Specific Provisions of Regulation No. 23

If Arkansas decides to proceed with development of a universal waste regulatory scheme for electronic items, HP offers recommendations that reflect both HP's recycling experience and the unique characteristics of electronic wastes. Below are HP's specific recommended changes to Regulation No. 23 and reasons for

---

[1] *See* http://www.epa.state.oh.us/opp/recyc/comp-rc.html.
[2] *See* http://ecy.wa.gov/pubs/0204017.pdf.
[3] *See* http://deq.state.or.us/wmc/hw/policy/2002-P0-001.pdf.
[4] *See* http://www.scdhec.net/eqc/lwm/recycle/forms/crtfactsheet.pdf.

these changes. Attached is a redlined version of the edited provisions of Regulation No. 23.

2.A. Applicability (§ 273.6)

One of the overarching goals of universal waste programs is to encourage and facilitate responsible waste recycling. Consumer electronic items being shipped or stored prior to recycling are considered to be useable and useful equipment, not wastes. Recyclers will determine whether the electronic items can be resold, donated, repaired, or refurbished as a useful product, or dismantled to yield useable components.[5] In storage and shipment, consumer electronic items destined for recycling do not pose a more significant hazard to the public or to the environment than items that are still in use. Thus, neither public health nor environmental reasons supports application of universal waste regulations to businesses, academic institutions, government agencies, and other "non-recycling" entities that send their electronic items for recycling. Allowing these entities to store and ship their consumer electronic items for recycling -- but not for disposal -- without being subject to universal waste regulations will both encourage responsible recycling and protect public health and the environment.

Under Arkansas' proposed universal waste regulation for electronics, a used consumer electronic item becomes a waste "on the date it is discarded." HP recommends that greater specificity be added to the provision to make clear that businesses, academic institutions, government agencies and other "non-recycling" entities can send their consumer electronic items to recyclers without triggering universal waste regulatory requirements. In addition, the regulations should not distinguish between used and unused consumer electronic items because the "non-recycling" entities that ship to recyclers and the recyclers themselves handle used and unused items similarly.

HP recommends amending Section 273.6(c) as follows:

(c) Generation of consumer electronic waste: A used or unused consumer electronic item becomes a waste on the date the handler decides to discard it. For the purposes of Section 273 of this Regulation as it applies to consumer electronic items, a generator of universal waste who does not disassemble universal waste consumer electronic items or receive universal waste from other universal waste handlers, and who stores and ships universal waste consumer electronic items solely for the purpose of recycling and/or reclamation, is not a universal waste handler.

---

[5] See Section 2.C below for a discussion of electronic components.

2.B. Waste Management - Handling (§§ 273.13(d)/273.33(d))

As long as handlers manage electronic items in a manner that prevents breakage and the possible release of hazardous constituents, handlers should have flexibility in their management practices. While containment in actual containers or packages may be well-suited for lamps,[6] the regulations for electronic items should not require such containment because it is not necessary for safe management of electronic items. Storage in a room and/or on a pallet may be an effective way to minimize breakage of electronic items. In addition, the regulations should use the phrase "not intact," rather than "broken," to distinguish CRTs with loose glass (not intact) from those with merely cracked glass (intact). "Broken" is ambiguous. Finally, the provision on sorting, mixing, and disassembling of consumer electronic items should recognize the difference between intentional and unintentional breakage of CRTs. If a handler accidentally drops a CRT while sorting, mixing, or disassembling consumer electronic items, the handler should not be out of compliance with the regulations.

HP recommends that Sections 273.13(d)(1) and 273.33(d)(1) be modified as follows:

(1) A small quantity/large quantity handler of universal waste shall handle consumer electronic items in a manner that prevents breakage. If containers or packages are used, such containers or packages shall be structurally sound, adequate to prevent breakage, and compatible with the contents of the items. Such containers and packages must remain closed and must lack evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable circumstances. Universal waste consumer electronic items that are managed in a manner (e.g., stored in a room and/or on a pallet) that prevents breakage of the item and the possible release of hazardous constituents shall be considered to comply with this requirement.

(2) A small quantity/large quantity handler of universal waste must immediately clean up and place in a container any CRT that is not intact and must place in a container any CRT that shows evidence of breakage, leakage, or damage that could cause the release . . . .

(3) A small quantity/large quantity handler of universal waste may conduct the following activities as long as CRTs are intact or not intentionally broken . . . .

---

[6] It appears that the proposed "containment" requirement in the draft regulation for consumer electronic items is based on the regulatory requirement for lamps, because the language in both regulatory provisions is the same. *Compare* Proposed §§ 273.13(d)(1) and 273.33(d)(1) *with* §§ 273.13(d)(1) and 273.33(d)(1).

2.C. Waste Management - Disassembly (§§ 273.13(d)/273.33(d))

HP is pleased to see that ADEQ's proposed regulations allow handlers to disassemble consumer electronic items "to separate CRTs, batteries, circuit boards, or other components to facilitate the recycling or reclamation of these components." §§ 273.13(d)(3)(iii), 273.33(d)(3)(iii).[7] The proposed regulations then require handlers to determine whether the components exhibit a characteristic of hazardous waste and, if so, to manage the components as hazardous waste.

HP recommends modifying this latter provision in two respects. First, the provision should expressly provide that handlers may decide to manage components as hazardous without determining whether they actually exhibit a characteristic of hazardous waste. Second, if components do exhibit a characteristic of hazardous waste or the handler decides to manage them as hazardous, the handler should be able to manage them as universal waste. Like ADEQ's proposed language, these options would protect public health and the environment. Unlike ADEQ's proposed language, however, they would facilitate efficient operation of recycling facilities for waste electronics by offering simpler, less expensive options to handlers.

HP recommends amending Sections 273.13(4)(i) and 273.33(4)(i) as follows:

(4)(i) If the separated component of the consumer electronic item and/or other solid waste exhibit a characteristic of hazardous waste, or the handler decides to manage such component and/or other solid waste as hazardous, such component and/or other solid waste may continue to be managed as universal waste under this Regulation. If such component and/or solid waste is not managed as universal waste under this Regulation, it is subject to all applicable requirements of Sections 260 through 270. The handler is considered the generator of this hazardous waste and/or other waste and is subject to § 262 of this Regulation.

2.D. Labeling (§§ 273.14/273.34)

The generation of consumer electronic items for recycling often involves the storage and shipment of various types of electronic items (e.g., CRT displays, computer CPUs) in and through numerous states. ADEQ's proposed regulation

---

[7] Please note that the inclusion of Sections 273.13(d)(3) and 273.33(d)(3) necessitates the following amendment of the definition of "Universal Waste Handler" in Section 273.9: "(b) Does not mean: (1) A person who treats (except under the provisions of § 273.13(a), (c), or **(d)**, or § 273.33(a), (c), or **(d)**), disposes of, or recycles universal waste . . . ."

should be amended in two respects to facilitate interstate shipment of universal waste electronic items.

First, ADEQ's proposed regulation specifies three phrases that may be used to label universal waste consumer electronic items or containers in which the consumer electronic items are contained: "Universal Waste - Consumer Electronic Items," "Electronic Wastes," or "Used Electronic Items." §§ 273.14(f), 273.34(f). HP recommends that, as in the federal universal waste regulation (40 C.F.R. §§ 273.14, 273.34), the words "Universal Waste" or "Waste" or "Used" should all be allowed as the first part of the phrase. The descriptive word(s) used after these terms should then be a word (or words) that is analogous to, or more specific than but subsumed within, the term "Electronics" in order to simplify the labeling requirement and facilitate compliance. Under this regulatory approach, "Universal Waste - Electronics," "Waste - Computer Monitors," and "Used - Circuit Boards," for example, would all be acceptable labels. This approach will facilitate interstate transportation of such items, although, as noted below, this approach will not ensure that the electronic items or containers will have labels that are appropriate for *every* state that has established electronic universal waste labeling requirements.

Second, labeling should not dictate extra segregation of material. For efficiency and/or due to space limitations, handlers often need to stage waste electronics in a designated area or in various container types. Handlers should be allowed to label an area of a building or a package, whichever is most convenient to the handler, rather than each item or each container. Also, because handlers may have some electronic items that are not hazardous or are not yet wastes, but which are essentially no different than electronic items that have been determined to be universal wastes, handlers should not be prohibited from having these "non-universal waste" electronic items staged in an area labeled for universal waste.

HP recommends amending Sections 273.14(f) and 273.34(f) as follows:

(f) Individual universal waste consumer electronic items, or a container or pallet in or on which the universal waste consumer electronic items are contained, including containers or pallets that also contain items that are not universal waste, must be labeled or marked clearly with any one of the following phrases: "Universal Waste--Electronics," or "Waste--Electronics," or "Used--Electronics." The term "Electronics" may be replaced by a word (or words) that is analogous to, or more specific than but subsumed within, the term "Electronics" (e.g., "Televisions," "Cathode Ray Tubes," "Circuit Boards"). In lieu of labeling individual universal waste items or containers or pallets, a small quantity/large quantity handler may accumulate universal waste electronic items within a designated area demarcated by boundaries that are clearly labeled using one of the labels described above.

Alternatively, if Arkansas prefers to specify exact label language, HP recommends adoption of a single label for all universal waste consumer electronic items that would be acceptable in all states with a universal waste program for electronics. This would facilitate both compliance with Arkansas's regulations and interstate transportation of universal waste electronic items. One example of a label that HP's analysis indicates should operate nationwide is "Universal Waste - Cathode Ray Tubes (CRTs)/Electric Lamps/Used Consumer Electronic Items/Devices/Components."

Under this alternative, Sections 273.14(f) and 273.34(f) would be amended as follows:

(f) Individual universal waste consumer electronic items, or a container or pallet in or on which the universal waste consumer electronic items are contained, including containers or pallets that also contain items that are not universal waste, must be labeled or marked clearly with the following phrase: "Universal Waste--Cathode Ray Tubes (CRTs)/Electronic Lamps/Used Consumer Electronic Items/Devices/Components." In lieu of labeling individual universal waste items or containers or pallets, a small quantity/large quantity handler may accumulate universal waste electronic items within a designated area demarcated by boundaries that are clearly labeled using the label described above.

3. Conclusion

Thank you very much for considering our recommendations. I hope that the practical, real-world experience upon which HP bases its recommendations will make them useful to ADEQ in developing a sound management approach for electronics. As I noted at the outset, HP recommends that Arkansas first consider an approach that makes use of conditional exclusions or exemptions, rather than a universal waste scheme. If Arkansas proceeds with development of a universal waste program for electronics, then HP recommends adoption of the specific recommendations above, which are designed to protect public health and the environment while facilitating the development and efficient operation of a responsible recycling industry for waste electronics. Please feel free to call me if you have any questions.

Sincerely,

Jeff Kuypers

Jeff Kuypers
Associate Environmental Program Manager
Americas Product Take back

CC:
Renee Steins
Director, Americas Product Take back

Attachment

ATTACHMENT

Arkansas's Proposed Regulations as Revised by HP

§ 273.6 Applicability – Consumer electronic items.

(a) Consumer electronic items covered under this Section 273. The requirements of this section apply to persons managing consumer electronic items as described in § 273.9, except those listed in paragraph (b) of this section.

(b) Consumer electronic items not covered under this Section 273. The requirements of this section do not apply to persons managing the following consumer electronic items:

(1) Consumer electronic items that are not yet wastes under section 261 of this regulation as provided in paragraph (c) of this section.

(2) Consumer electronic items that are not hazardous waste. A consumer electronic item is a hazardous waste if it exhibits one or more of the characteristics identified in section 261, subsection C of this regulation.

(c) Generation of consumer electronic wastes.

~~(1)~~ A used or unused consumer electronic item becomes a waste on the date ~~it is discarded~~ the handler decides to discard it. For the purposes of Section 273 of this Regulation as it applies to consumer electronic items, a generator of universal waste who does not disassemble universal waste consumer electronic items or receive universal waste from other universal waste handlers, and who stores and ships universal waste consumer electronic items solely for the purpose of recycling and/or reclamation, is not a universal waste handler.

~~(2) An unused consumer electronic item becomes a waste on the date the handler decides to discard it.~~

§ 273.13 Waste Management

(d) Consumer electronic items. A small quantity handler of universal waste must manage waste consumer electronic items in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

(1) A small quantity handler of universal waste ~~must contain any waste~~shall handle consumer electronic ~~item in~~items in a manner that prevents breakage. If containers or packages ~~that are~~are used, such containers or packages shall be structurally sound, adequate to prevent breakage, and compatible with the contents of the items. Such containers and packages must remain closed and must lack evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable conditions. Universal waste consumer electronic items that are managed in a manner (e.g., stored in a room and/or on a pallet) that prevents breakage of the item and the possible release of hazardous constituents shall be considered to comply with this requirement.

(2) A small quantity handler of universal waste must immediately clean up and place in a container any CRT that is ~~broken~~not intact and must place in a container any CRT that shows evidence of breakage, leakage, or damage that could cause the release of lead or other hazardous constituents to the environment. Containers must be closed, structurally sound, compatible with the contents of the items and must lack evidence of leakage, spillage or damage that could cause leakage or releases of lead or other hazardous constituents to the environment under reasonably foreseeable conditions.

(3) A small quantity handler of universal waste may conduct the following activities as long as ~~cathode ray tubes~~CRTs are ~~not broken~~intact or not intentionally broken, and the casing of battery cells is not breached and remains intact and closed):
(i) sorting consumer electronic items by type;
(ii) mixing consumer electronic item types in one container;
(iii) disassembling consumer electronic items to separate CRTs, batteries, circuit boards, or other components to facilitate the recycling or reclamation of these components;
(4) A small quantity handler of universal waste who disassembles consumer electronic items for the purpose of facilitating the recycling or reclamation of individual components of those items must determine whether those components and/or other solid waste resulting from the activities listed above exhibit a characteristic of hazardous waste identified in § 261, Subsection C.
(i) If the separated component of the consumer electronic items and/or other solid waste exhibit a characteristic of hazardous waste, or the handler decides to manage such component and/or other solid waste as hazardous, such component and/or other solid waste may continue to be managed as universal waste under this Regulation. If such component and/or solid waste is not managed as universal waste under this Regulation, it is subject to all applicable requirements of Sections 260 through 270. The handler is considered the generator of this hazardous waste and/or other waste and is subject to § 262 of this Regulation.
(ii) If the separated component 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.

§ 273.14 Labeling/Marking
(f) ~~Universal~~Individual universal waste consumer electronic items ~~(i.e., each item)~~, or a container or pallet in which or on which the universal waste consumer electronic items are contained, including containers or pallets that also contain items that are not universal waste, must be labeled or marked clearly with any one of the following phrases: "Universal Waste – ~~Consumer Electronic Items", or "Electronic Wastes," or "Used Electronic Items . . . ."~~Electronics", or "Waste Electronics," or "Used Electronics." The term "Electronics" may be replaced by a word (or words) that is analogous to, or more specific than but subsumed within the term "Electronics" (e.g., "Televisions," "Cathode Ray Tubes," "Circuit Boards"). In lieu of labeling individual universal waste items or containers or pallets, a small quantity handler may accumulate universal waste electronic items within a designated area demarcated by boundaries that are clearly labeled using one of the labels described above.

Alternate § 273.14 Labeling/Marking
(f) ~~Universal~~Individual universal waste consumer electronic items ~~(i.e., each item)~~, or a container or pallet in which or on which the universal waste consumer electronic items are contained, including containers or pallets that also contain items that are not universal waste, must be labeled or marked clearly with ~~any~~

~~one of~~ the following phrase~~s~~: "Universal Waste – ~~Consumer Electronic Items", or "Electronic Wastes," or "Used Electronic Items . . . ."~~Cathode Ray Tubes (CRTs)/Electronic Lamps/Used Consumer Electronic Items/Devices/Components." In lieu of labeling individual universal waste items or containers or pallets, a small quantity handler may accumulate universal waste electronic items within a designated area demarcated by boundaries that are clearly labeled using the label described above.

§ 273.33 Waste Management

(d) Consumer electronic items. A large quantity handler of universal waste must manage waste consumer electronic items 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 of universal waste ~~must contain any waste~~shall handle consumer electronic ~~item in~~items in a manner that prevents breakage. If containers or packages ~~that are~~are used, such containers or packages shall be structurally sound, adequate to prevent breakage, and compatible with the contents of the items. Such containers and packages must remain closed and must lack evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable conditions. Universal waste consumer electronic items that are managed in a manner (e.g., stored in a room and/or on a pallet) that prevents breakage of the item and the possible release of hazardous constituents shall be considered to comply with this requirement.

(2) A large quantity handler of universal waste must immediately clean up and place in a container any CRT that is ~~broken~~not intact and must place in a container any CRT that shows evidence of breakage, leakage, or damage that could cause the release of lead or other hazardous constituents to the environment. Containers must be closed, structurally sound, compatible with the contents of the items and must lack evidence of leakage, spillage or damage that could cause leakage or releases of lead or other hazardous constituents to the environment under reasonably foreseeable conditions.

(3) A large quantity handler of universal waste may conduct the following activities as long as ~~cathode ray tubes~~CRTs are ~~not broken~~intact or not intentionally broken, and the casing of battery cells is not breached and remains intact and closed):

(i) sorting consumer electronic items by type;

(ii) mixing consumer electronic item types in one container;

(iii) disassembling consumer electronic items to separate CRTs, batteries, circuit boards, or other components to facilitate the recycling or reclamation of these components;

(4) A large quantity handler of universal waste who disassembles consumer electronic items for the purpose of facilitating the recycling or reclamation of individual components of those items must determine whether those components and/or other solid waste resulting from the activities listed above exhibit a characteristic of hazardous waste identified in § 261, Subsection C.

(i) If the separated component of the consumer electronic items and/or other solid waste exhibit a characteristic of hazardous waste, or the handler decides to manage such component and/or other solid waste as hazardous, such component and/or other solid waste may continue to be managed as universal

waste under this Regulation. If such component and/or solid waste is not managed as universal waste under this Regulation, it is subject to all applicable requirements of Sections 260 through 270. The handler is considered the generator of this hazardous waste and/or other waste and is subject to § 262 of this Regulation.
(ii) If the separated component 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.

§ 273.34 Labeling/Marking
(f) ~~Universal~~Individual universal waste consumer electronic items ~~(i.e., each item)~~, or a container or pallet in which or on which the universal waste consumer electronic items are contained, including containers or pallets that also contain items that are not universal waste, must be labeled or marked clearly with any one of the following phrases: "Universal Waste – ~~Consumer Electronic Items", or "Electronic Wastes," or "Used Electronic Items . . . ."~~Electronics", or "Waste Electronics," or "Used Electronics." The term "Electronics" may be replaced by a word (or words) that is analogous to, or more specific than but subsumed within the term "Electronics" (e.g., "Televisions," "Cathode Ray Tubes," "Circuit Boards"). In lieu of labeling individual universal waste items or containers or pallets, a large quantity handler may accumulate universal waste electronic items within a designated area demarcated by boundaries that are clearly labeled using one of the labels described above.

Alternate § 273.34 Labeling/Marking
(f) ~~Universal~~Individual universal waste consumer electronic items ~~(i.e., each item)~~, or a container or pallet in which or on which the universal waste consumer electronic items are contained, including containers or pallets that also contain items that are not universal waste, must be labeled or marked clearly with ~~any one of~~ the following phrase~~s~~: "Universal Waste – ~~Consumer Electronic Items", or "Electronic Wastes," or "Used Electronic Items . . . ."~~Cathode Ray Tubes (CRTs)/Electronic Lamps/Used Consumer Electronic Items/Devices/Components." In lieu of labeling individual universal waste items or containers or pallets, a large quantity handler may accumulate universal waste electronic items within a designated area demarcated by boundaries that are clearly labeled using the label described above.