

**FINAL ANALYSIS AND FINDINGS REQUIRED BY
HEALTH AND SAFETY CODE SECTION 25150.6
DTSC RULEMAKING R-01-06
ELECTRONIC HAZARDOUS WASTE REGULATIONS
OCTOBER 31, 2002**

INTRODUCTION

Rulemaking R-01-06, referred to as the proposed Electronic Hazardous Waste Regulations, would permit handlers of waste cathode ray tube (CRT) materials and consumer electronic devices (collectively referenced in the proposed rulemaking and in this document as “electronic hazardous waste”) to manage that waste in a manner that differs from statutory requirements for hazardous waste. This rulemaking would add CRT materials and consumer electronic devices (CEDs) to the wastes that can be managed under the existing State universal waste regulations contained in California Code of Regulations, title 22, division 4.5, chapter 23. The universal waste regulations provide alternate management standards for certain hazardous wastes or categories of wastes that are generated by a large portion of the general public. This document sets forth the final analysis and findings required by Health and Safety Code section 25150.6 for regulations that vary from statutory requirements for hazardous wastes.

The Department of Toxic Substances Control (DTSC) made the preliminary documents available for review and comment during the 45-day public comment period for the draft Electronic Hazardous Waste Regulations. This document (in preliminary form) continued to be available during the comment period for post-hearing changes to the regulations. This document was updated to address any necessary changes and to conform with any changes made to the regulations after the public comment periods. This final document is available upon request and has been posted on DTSC's Internet site at least 10 working days prior to formal adoption of the regulations and transmittal to the Office of Administrative Law for final review, as required by Health and Safety Code section 25150.6.

THE PROPOSED ELECTRONIC HAZARDOUS WASTE REGULATIONS

The proposed Electronic Hazardous Waste Regulations would establish permanent standards for CRT materials and CEDs. These materials are identified in the proposed regulations as “universal wastes.” The proposed regulations are established under the State's existing universal waste regulations that are based on the U.S. Environmental Protection Agency (U.S. EPA) Universal Waste Rule. For further information about the contents, scope, and standards of the proposed electronic hazardous waste regulations, please see the 45-Day Public Notice and the Initial Statement of Reasons for Rulemaking R-01-06.

The Electronic Hazardous Waste Regulations address wastes produced in relatively small quantities by large segments of society, whereas most other hazardous wastes are produced by industrial generators. The full hazardous waste requirements developed for large, industrial hazardous waste generators are ideal for generators of these wastes. However, given the widespread generation of relatively small volumes of universal wastes, and that management of discarded CRT materials and CEDs pose lower risks than most other hazardous wastes, DTSC has determined that the management of waste CRT materials and CEDs under the universal waste regulations is appropriate.

Conditional Exemptions

The Electronic Hazardous Waste Regulations proposed in this rulemaking would allow households to continue to manage their universal waste, in some aspects, as non-hazardous waste after the effective date of the regulations. The exemption is conditional provided that the person who generates the universal waste: (1) does not disassemble or treat the universal wastes, (2) does not dispose of the wastes, and (3) takes the waste only to a universal waste handler or destination facility (i.e., a permitted hazardous waste facility).

Management Standards¹

The Electronic Hazardous Waste Regulations establish special standards that allow simple and cost-effective management at every step of the process until the electronic hazardous waste reaches its ultimate disposition, either hazardous waste treatment and disposal or recycling. The proposed regulations establish specific standards for CRT materials and CEDs that deviate from the following hazardous waste requirements in statutes:

Storage time limits at transfer facilities (Health and Safety Code section 25123.3). This section defines a “storage facility.” A transfer facility where hazardous waste is held in the course of transportation for less than 10 days in areas zoned industrial and less than six days in all other areas is not a storage facility.

Use of the manifest for transportation (Health and Safety Code section 25160). This section requires the use of a Uniform Hazardous Waste Manifest (manifest) for transporting hazardous wastes and establishes procedures for the use of the manifest.

Use of a registered hazardous waste transporter (Health and Safety Code section 25163). This section requires all hazardous waste to be transported by a registered hazardous waste transporter and establishes requirements for registered transporters.

¹ Management means the transportation, transfer, recycling, recovery, disposal, handling, processing, storage, and treatment of hazardous waste (Health and Safety Code section 25117.2).

Prohibition on disposal of hazardous waste at an unpermitted facility (Health and Safety Code section 25189.5). This section prohibits the disposal of any hazardous waste at an unauthorized facility and establishes penalties for this crime.

Hazardous waste facilities permit requirement for intermediate accumulation points (Health and Safety Code section 25201). This section requires a hazardous waste facility permit or other grant of authorization for storage of hazardous waste. Health and Safety Code section 25201 establishes the permit requirement for a storage facility; Health and Safety Code section 25123.3 defines a storage facility as a facility which accepts hazardous waste from sources.

ORGANIZATION OF THIS DOCUMENT

This document follows the organization of Health and Safety Code section 25150.6. To assist the reader's understanding of the analysis and findings, each subdivision of Health and Safety Code section 25150.6 is shown in *italics* prior to the "DTSC Evaluation" headings. The "DTSC Evaluation" for each subdivision includes the analysis, explanation, and/or other information necessary to support the conclusion that this proposed rulemaking accomplished the statutory goals of section 25150.6. Each subdivision of the statute is addressed in this document and, where applicable, the "DTSC Evaluation" identifies those subdivisions that are not applicable to this proposed rulemaking.

INCORPORATION BY REFERENCE

This proposed State rulemaking for the inclusion of CRT materials and CEDs into the existing State universal waste regulations is based largely on the corresponding federal Universal Waste Rule. The rationale, facts, and figures behind the federal rule are primarily the information that DTSC relied upon in developing the proposed regulations. The four Federal Register notices that established the federal Universal Waste Rule are incorporated by reference into this document:

58 Fed. Reg. 8102 (February 11, 1993): Proposed Universal Waste Rule

59 Fed. Reg. 38288 (July 27, 1994): Proposed Lamps Rule

60 Fed. Reg. 25492 (May 11, 1995): Final Universal Waste Rule

64 Fed. Reg. 36466 (July 6, 1999): Final Rule - Hazardous Waste Lamps

FORMAL SECTION 25150.6 ANALYSIS

As discussed above, DTSC proposes to exempt management of CRT materials and CEDs from requirements in five separate statutory sections: Health and Safety Code sections 25123.3, 25160, 25163, 25189.5, and 25201. The required analysis follows.

Section 25150.6. (a) Except as provided in subdivision (e) and (f), the department, by regulation, may exempt a hazardous waste management activity from one or more of the requirements of this chapter, if the department does all of the following:

(1) Prepares an analysis of the hazardous waste management activity to which the exemption will apply pursuant to subdivision (b). The department shall first prepare the analysis as a preliminary analysis and make it available to the public at the same time that the department gives notice, pursuant to Section 11346.4 of the Government Code, that it proposes to adopt a regulation exempting the hazardous waste management activity from one or more of the requirements of this chapter. The department shall include, in the notice, a reference that the department has prepared a preliminary analysis and a statement concerning where a copy of the preliminary analysis can be obtained. The information in the preliminary analysis shall be updated and the department shall make the analysis available to the public as a final analysis not less than ten working days prior to the date that the regulation is adopted.

DTSC Evaluation: The preliminary analysis was made available on the DTSC Internet site. The analysis was referenced, as required, in the 45-day Public Notice and Comment Period. The preliminary analysis was made available for public review and comment simultaneously with the proposed regulations, and the Initial Statement of Reasons. This document provides the final analysis and findings pursuant to Health and Safety Code section 25150.6. It is being placed on the DTSC Internet site at least 10 working days prior to formal adoption of this rule by DTSC.

(2) Demonstrates that one of the conclusions required by subdivision (c) is valid.

DTSC Evaluation: This document demonstrates that the applicable conclusions found in paragraphs (3) and (4) of subdivision (c) are valid. See the discussions following text of those paragraphs for the preliminary analysis.

(3) Imposes, as may be necessary, conditions and limitations on the exemption that ensure that the exempted activity will not pose a significant potential hazard to human health or safety or to the environment.

DTSC Evaluation: The conditions imposed, along with the requirements established by federal, state, and local jurisdictions (including requirements for management of hazardous materials, business operations, and worker safety), to ensure the exemptions will not pose a significant potential hazard to human health, safety or the environment are the universal waste management standards being adopted, in part, under the authority of Health and Safety Code section 25150.6. That is, the project itself incorporates the conditions necessary to protect human health, safety, and the environment. The particular provisions are discussed in detail later in this document.

Section 25150.6 (b) Before the department gives notice of a proposal to adopt a regulation exempting a hazardous waste activity from one or more of the requirements of this chapter pursuant to subdivision (a), and before the department adopts the regulation, the department shall evaluate the hazardous waste management activity and prepare, as required by paragraph (1) of subdivision (a), an analysis that addresses all of the following aspects of the activity, to the extent that the requirement or requirements from which the activity will be exempted can affect these aspects of the activity:

DTSC Evaluation: This document provides the evaluation and analysis. Specific portions follow after the text of each of the statutory subdivisions quoted below.

(1) The types of hazardous waste streams and the estimated amounts of hazardous waste that are managed as part of the activity and the hazards to human health or safety or to the environment posed by reasonably foreseeable mismanagement of those hazardous wastes and their hazardous constituents. The estimate of the amounts of hazardous waste that are managed as part of the activity shall be based upon information reasonably available to the department.

DTSC Evaluation: The specific waste streams, estimated amounts, and the hazards of their mismanagement are discussed below. Following the discussion of each of the waste streams is an additional detailed description of the hazards of lead, which is found in hazardous waste CRT materials.

A. CRT materials (CRTs, CRT devices, and CRT glass)

All CRT materials would be eligible for universal waste designation, if those CRT materials are hazardous wastes. CRTs are found in virtually every household and business in the state. They are used in television sets, computers and scientific equipment. With the rapid evolution of computer technology, computers become obsolete in a short period of time and their CRT monitors then become waste. Each year, an estimated 6 million CRTs are disposed in California.

A CRT is used to visually display electronic information by focusing electrons from an electron gun on light-emitting phosphors on the front portion of the CRT's screen. The decelerating electrons create X-ray radiation that must be shielded to minimize the radiation exposure to the user. Lead in the form of lead oxide is added to the CRT glass to diminish the X-ray flux. The lead is incorporated into the glass tube in varying concentrations, with the rear portion of the CRT containing the highest levels of lead. A typical 17-inch computer monitor contains over two pounds of lead. Larger CRTs may contain up to 10 pounds of lead each.

Situations when CRT materials may be mismanaged include accumulating waste CRT materials in unauthorized locations (e.g., garages), placing them with the trash because persons are unaware that the wastes cannot be disposed to a municipal landfill, participating in manufacturer/retailer take-back programs (that are operating without authorization), or transporting the wastes to a CRT material recycler (who is operating without authorization).

To encourage the recycling of CRT materials, the proposed regulations will streamline the requirements for managing the removal of CRTs from CRT devices. The proposed streamlined standards for persons who handle and transport CRT materials will provide these persons with an administrative incentive and the means to manage these wastes without compromising public health and environmental safety.

B. Consumer Electronic Devices

CEDs are even more pervasive than CRTs in our society. These items are any electronic devices that are used in the home, business or elsewhere, including, but not limited to, computers, telephones, answering machines, radios, stereo equipment, tape players/recorders, phonographs, video cassette players/recorders, compact disc players/recorders, calculators, and some appliances. Although there are not accurate estimates for consumer electronic device generation in California, the United States Environmental Protection Agency (U.S. EPA) estimated in 1999 that 1.8 million tons of the "subcategory of consumer electronics" were generated nationally, which was about 1% to 2% of the municipal solid waste stream.

While most CRTs are hazardous wastes, only some CEDs are hazardous wastes and, thus, will pose a threat to the environment. CEDs often contain lead and other regulated inorganic persistent and bioaccumulative toxic substances and can pose a potential harm to the environment when these devices are placed in municipal landfills. The primary constituents of concern include heavy metals, lead solder, brominated flame retardants and chlorinated plastics. Once the proposed regulations are effective, only those CEDs that are found to be hazardous waste will be regulated.

The potential for mismanagement also exists for CEDs. However, these devices tend to be smaller in size and more easily “hidden” in the solid waste stream. For this reason, the potential for inappropriate disposal is even greater for CEDs. DTSC believes that by streamlining the management requirements, recycling and proper management of CEDs will be accomplished rather than improper disposal. Thus the regulations will not compromise public health and environmental safety.

C. Hazards of Lead

Lead is a potent developmental neurotoxicant. Recent research has shown that any measurable level of lead found in children’s blood is accompanied by statistically significant deficits in intellectual performance. Additionally, lead exposure can result in toxic effects upon the kidneys, and the circulatory and skeletal systems.

The primary hazard found in CRTs is the leaded glass. The glass contains enough lead to fail: (1) the federal toxicity characteristic 40 C.F.R. section 261.24; (2) the State’s Total Threshold Limit Concentration (TTLC); and (3) the Soluble Threshold Limit Concentration (STLC) criteria (Cal. Code Regs., tit. 22, §66261.24, subd. (a)(2)). The leaded glass lacks acute hazards, posing instead long-term toxicity hazards through landfill leaching and groundwater contamination if the CRTs are improperly disposed.

(2) The complexity of the activity, and the amount and complexity of operator training, equipment installation and maintenance, and monitoring that are required to ensure that the activity is conducted in a manner that safely and effectively manages the particular hazardous waste stream.

DTSC Evaluation: Following is an evaluation and analysis of the management of universal waste in general, followed by detailed analyses for CRT materials and CEDs addressed in the proposed regulations.

A. Management of Universal Waste in General

Effective management of universal wastes, including CRT materials and CEDs, is neither difficult nor complex. Additionally, it requires minimal training and the training is straightforward and inexpensive. The proposed rules require that employees be made aware that these wastes can be regulated as universal wastes and may not be indiscriminately disposed. Training must address location-specific storage area requirements (marking the area) and choosing containers that will shelter the wastes from damage, especially the more fragile CRTs. Beyond training on physical handling, packaging, and storage requirements, training must address administrative concerns such as proper labeling and accumulation time limits. Further, persons who remove CRTs from CRT devices must be trained in the safe removal procedures and in the procedures for responding to releases of CRT glass.

B. Management of Universal Waste CRT Materials

Waste CRTs materials must be managed in a manner that prevents their release to the environment. CRTs that are broken must be repackaged in containers and can be managed as universal wastes.

C. Management of Universal Waste Consumer Electronic Devices

Management of waste CEDs is similar to that of CRT materials. Typically the hazardous constituents are contained within the physical casing of these devices. When broken, the CEDs must be placed in structurally-sound containers that can be subsequently managed as universal wastes.

(3) The chemical or physical hazards that are associated with the activity and the degree to which those hazards are similar to, or differ from, the chemical or physical hazards that are associated with the production processes that are carried out in the facilities that produce the hazardous waste that is managed as part of the activity.

DTSC Evaluation: The chemical and physical hazards of universal wastes are generally unrelated to the hazards of the activities taking place in the facilities producing universal wastes. Most hazardous wastes (that are not universal wastes) pose greater immediate threats than universal wastes due to the higher quantities and the larger amounts found in any one container or tank. Unlike the industrial generators of other hazardous waste, many generators of universal wastes produce no other hazardous wastes and use few other hazardous materials. For instance, an office building that generates CEDs and occasional CRT materials may very well not produce other types of hazardous waste.

(4) The types of accidents that might reasonably be foreseen to occur during the management of particular types of hazardous waste streams as part of the activity, the likely consequences of those accidents, and the actual reasonably available accident history associated with the activity.

DTSC Evaluation: The types of accidents expected from universal wastes are easily understood. The most serious type of accident is the breakage of the waste (e.g., the plastic case or glass), thus releasing the contents of the device into the environment. Due to the small amounts of hazardous material found in any one unit of universal waste, serious consequences can be expected only when larger quantities are broken. If larger quantities are broken, the hazardous contents pose all of the expected immediate acute hazards (broken glass) and chronic toxicity hazards (lead exposure).

However, accidents such as transportation accidents that break, for instance, large volumes of CRTs, are generally responded to by emergency response personnel who promptly contain and clean up the released material (e.g., broken CRT glass).

In general, the most common accidents with universal wastes will be simple breakage of single items or small aggregated quantities. In these cases, the release will be small and, even when consequential, easily contained and managed as hazardous waste as required by the proposed regulatory standards. The limited size of expected releases will not pose a serious hazard unless poor management practices make such releases common. Even small accidents will require repackaging and more time and expense for the handler; therefore, a powerful incentive for careful management is provided by these proposed standards.

Handlers of these wastes are required by the proposed regulations to train employees in appropriate emergency response procedures. The regulations also require universal waste handlers and CRT materials handlers to promptly respond to releases. These and other safeguards should prevent uncontrolled releases of hazardous constituents to the environment.

(5) The types of locations at which the activity may be carried out, an estimate of the number of these locations, and the types of hazards that may be posed by proximity to the land uses described in subdivision (b) of Section 25232. The estimate of the number of locations at which the activity may be carried out shall be based upon information reasonably available to the department.

DTSC Evaluation: The hazards of CRT materials and CEDs, as discussed previously, are found virtually everywhere including schools, day care centers, and hospitals. DTSC estimates that at least one million businesses in California generate universal wastes. Universal waste, including CRT materials and CEDs, are found in most of these businesses and in the 12 million households in the State.

FINDINGS

Section 25150.6 (c): The department shall not give notice proposing the adoption of, and the department may not adopt, a regulation pursuant to subdivision (a) unless it first demonstrates, using the information developed in the analysis prepared pursuant to subdivision (b), that one of the following is valid:

(1) The requirement from which the activity is exempted is not significant or important in either of the following:

(A) Preventing or mitigating potential hazards to human health or safety or to the environment posed by the activity.

DTSC Evaluation: The finding above is not applicable to the exemption from certain hazardous waste management requirements provided in the proposed Electronic Hazardous Waste Regulations.

(B) Ensuring that the activity is conducted in compliance with other applicable requirements of this chapter and the regulations adopted pursuant to this chapter.

DTSC Evaluation: The finding above is not applicable to the exemption from certain hazardous waste management requirements provided in the proposed Electronic Hazardous Waste Regulations

(2) A requirement is imposed and enforced by another public agency that provides protection of human health and safety and the environment that is as effective as, and equivalent to, the protection provided by the requirement, or requirements, from which the activity is being exempted.

DTSC Evaluation: The finding above is not applicable to the exemption from certain hazardous waste management requirements provided in the proposed Electronic Hazardous Waste Regulations.

(3) Conditions or limitations imposed on the exemption will provide protection of human health and safety and the environment equivalent to the requirement, or requirements, from which the activity is exempted.

DTSC Evaluation: The finding above is applicable to the proposed Electronic Hazardous Waste Regulations. By streamlining generation, accumulation, and transportation requirements for CRT materials and CEDs, but continuing to impose requirements for their proper disposal or recycling, the proposed regulations will provide protection of human health and the environment that is equivalent to the protection provided by current requirements. The proposed regulations are based primarily on an expansion of the State's existing universal waste regulations, which are based largely on the federal Universal Waste Rule. A detailed discussion of U.S. EPA's rationale for adopting the federal universal waste standards, which are different from the general hazardous waste control regulations, is found in the four Federal Register notices incorporated by reference into this document. Following is a summary of U.S. EPA's universal waste rationale that is directly applicable to the proposed addition of CRT materials and CEDs to the State's existing universal waste regulations.

A. General Philosophy of Universal Waste Management Standards

Universal wastes are different from other hazardous wastes, both in quantities generated and number of generators. The proposed regulations, which follow the universal waste approach, are equally protective and are more cost effective than the traditional hazardous waste approach. Universal wastes are generated by a larger segment of society than are other hazardous wastes, which are typically generated by industrial facilities. Universal wastes are generated by most small businesses, households, schools, universities, hospitals and governmental agencies. Universal wastes are also generated by each generator in smaller quantities than are hazardous wastes generated by industrial facilities. U.S. EPA weighed the benefits of the standard hazardous waste control regulations against their application to management of universal wastes. From this point of view, the application of hazardous waste regulations to universal wastes would likely increase the improper management of these wastes. For this reason, U.S. EPA determined that an alternative waste management approach would result in proper waste management and less environmental damage.

B. Rationale for the Exemption from the Manifest Requirement, Health and Safety Code Section 25160

U.S. EPA determined that the use of a hazardous waste manifest acted as a disincentive for the proper management of universal wastes. The disincentive comes from the regulatory requirements that accompany the use of a manifest, such as the requirements to obtain an identification number, comply with the waste code standards, and comply with detailed record keeping and retention requirements. In California, the following additional requirements accompany use of the manifest.

1. There is a fee attached to the use of a manifest.
2. The following requirements that accompany use of the manifest contradict the universal waste management requirements proposed in the Electronic Hazardous Waste Regulations.
 - a. Use of the manifest requires obtaining an ID number. The proposed rules deliberately do not apply this requirement to handlers of CEDs or CRT material handlers.
 - b. Use of the manifest requires that a waste be transported by a registered hazardous waste transporter. The proposed rules do not require universal waste CEDs or CRT material handlers to use registered transporters and increase the choices that universal waste handlers have when offering their universal wastes for transport.

c. Use of the manifest requires that a waste be sent to a permitted facility. This would preclude handlers from sending universal wastes to an unpermitted intermediate accumulation point. The proposed rules do not require intermediate accumulation points to obtain permits. These accumulation points are one of the greatest incentives for proper accumulation and disposition of universal wastes.

In conclusion, DTSC has determined that exempting use of the manifest for these wastes is offset by the incentives for proper management provided in the requirements of the universal waste regulations. The tracking requirements of the universal waste regulations still include waste shipment tracking (i.e., bills of lading) and record keeping requirements. Under the proposed regulations, large and small universal waste handlers and CRT material handlers must keep records of each shipment sent or received. Adequate tracking of universal waste shipments can be accomplished through review of records although no manifest is required.

C. Rationale for Exemption from the Registered Hazardous Waste Transporter Requirement, Health and Safety Code Section 25163

State law requires use of a registered hazardous waste transporter for shipments of hazardous waste. The major benefit of registration is a slightly higher level of liability insurance because obtaining a hazardous materials endorsement on a driver's license requires a higher level of training and the use of special equipment, both of which are not required for common carriers. Use of a registered hazardous waste transporter adds significant expense to transportation of universal wastes given the much smaller number of registered transporters compared with the number of common carriers licensed to transport hazardous materials under U.S. Department of Transportation (DOT) requirements. Most shipments of universal waste will be subject to DOT requirements; consequently allowing transportation without the use of registered hazardous waste transporters will not have a significant effect.

D. Rationale for Exemption from the Permit Requirement for Accumulation Points and CRT Material Recyclers, Health and Safety Code Sections 25123.3 and 25201

The proposed rules allow accumulation by small and large quantity handlers of CEDs and by CRT material handlers without a hazardous waste facilities permit. Thus, the public review and comment process (California Environmental Quality Act process) and the regulations associated with hazardous waste permits do not apply to offsite accumulation and storage of these waste categories. (The full permit program continues to apply to universal waste destination facilities in California.) This exemption allows universal waste handlers to establish collection and management programs for universal wastes without the need to obtain hazardous waste facility permits. In

addition to the requirements of the proposed regulations, project review, public notice and CEQA determination would be addressed for new facilities as a function of site-specific, local agency requirements.

DTSC concurs with the judgment of U.S. EPA in this matter. The ability to accumulate and store universal waste without a permit will encourage: (1) firms to take back spent universal wastes when they sell new products which will, when spent, become universal wastes; (2) household collection facilities to accept universal wastes for proper disposition; and (3) third party firms to cheaply and conveniently collect universal wastes for shipment and ultimate disposition. These accumulation activities are an essential component in the system to move universal wastes from generator locations to the permitted disposal and recycling sites.

E. Rationale for Temporary Exemption from the Requirement that Hazardous Waste be Disposed in Authorized Facilities, Health and Safety Code Section 25189.5

DTSC is proposing four-year exemptions from hazardous waste disposal requirements for CEDs (not CRT materials) produced by both households and conditionally exempt small quantity universal waste generators. These exemptions are proposed to allow sufficient time for household hazardous waste collection facilities to obtain funding and develop management plans for accepting CEDs from both households and “small quantity commercial sources,” and to develop other management alternatives such as take-back programs, and to allow third party universal waste collection and shipment firms to develop.

DTSC has determined that very small quantity generators of universal waste would find the disposal options practiced by larger generators such as direct shipment to recyclers and hazardous waste disposal sites to be less cost effective. The expense of hazardous waste disposal could result in the smaller quantity generators practicing inappropriate disposal, such as solid waste (trash) disposal of the easily hidden CEDs and more environmentally harmful disposal to the general environment in ditches, fields, and other inappropriate locations. Disposal of electronic hazardous wastes in inappropriate locations could lead to the release of their hazardous constituents into surface and ground waters and exposure to children and wildlife.

DTSC is committed to working with the California Integrated Waste Management Board, the State Water Resources Control Board, the Household Hazardous Waste Information Exchange, and any other interested stakeholders to ensure that multiple, straightforward and inexpensive options exist for householders and small generators after the sunset of the exemption. The existence of such options will greatly increase overall compliance with the requirement for hazardous waste disposal or recycling of all universal waste. It is the intent of DTSC to ensure that households and small quantity

generators have sufficient convenient and inexpensive options for disposal when they become subject to the universal waste management standards in the future. This will prevent habitual inappropriate disposal from becoming the accepted, long-term practice.

(4) Conditions or limitations imposed on the exemption accomplish the same regulatory purpose as the requirement, or requirements, from which the activity is being exempted but at less cost or greater administrative convenience and without increasing potential risks to human health or safety or to the environment.

DTSC Evaluation: The finding above is applicable to the proposed Electronic Hazardous Waste Regulations. The proposed regulations are based on an expansion of the State's existing universal waste regulations, which are largely based on the federal Universal Waste Rule. A detailed discussion of U.S. EPA's rationale for adopting the federal universal waste standards, which are much different from the general hazardous waste control regulations, is found in the four federal register notices incorporated by reference in this document. Following is a summary of the rationale.

A. General Philosophy of Universal Waste Standards

The standards of the proposed Electronic Hazardous Waste Regulations clearly impose a much smaller financial requirement on generators and other handlers of CRT materials and CEDs than the requirements that are otherwise imposed by compliance with California's hazardous waste control law. The proposed standards not only allow less expensive management, they also propose alternatives to record keeping, permitting, and other administrative requirements of the general hazardous waste control law, including the three statutory requirements that are waived in the proposed regulations. U.S. EPA determined, and DTSC concurs, that the cost effectiveness and administrative conveniences of meeting these alternative management standards for universal waste would drive proper management of these universal wastes. DTSC is also waiving the non-RCRA requirement for use of a registered transporter. In other words, DTSC believes that the standards of the universal waste regulations will not only be equally protective during the generation, accumulation, and shipment of CRT materials and CEDs, but will also move a much larger fraction of these universal waste categories to proper ultimate disposition.

B. Rationale for Exemption from the Manifest Requirement, Health and Safety Code Section 25160

By exempting universal waste and CRT material handlers from the requirement to use a manifest during transportation, the Electronic Hazardous Waste Regulations also (as discussed above) remove the requirements for handlers to obtain identification numbers, use registered transporters, and transport the waste only to permitted facilities (as opposed to unpermitted intermediate accumulation points). By removing these

financial requirements (which are requirements that accompany the use of a manifest) and reducing the administrative costs of manifest record retention, generators will be much more likely to send discarded CRT materials and CEDs to proper disposition.

C. Exemption from the Registered Hazardous Waste Transporter Requirement, Health and Safety Code Section 25163

As discussed above, there is little significant direct environmental protection provided by the registered hazardous waste transporter requirement for handlers of CRT materials and CEDs. Use of a registered hazardous waste transporter also limits the transportation options that are available through the use of common carries, which is allowed under the proposed regulations.

D. Exemption from the Permit Requirement for Offsite Accumulation Points and CRT Material Recyclers, Health and Safety Code Sections 25123.3 and 25201

This exemption does more than any single provision of the Electronic Hazardous Waste Regulations to facilitate and promote simple and cost efficient alternatives for proper disposition of CRT materials and CEDs. As discussed above, providing cost efficient collection options provides incentives to collect and recycle these wastes rather than improperly manage these wastes. The costs of obtaining and maintaining hazardous waste facility permits would increase the associated costs of operating intermediate accumulation points and the costs of using their services. These factors would increase the probability for inappropriate disposal to non-hazardous landfills and other uncontrolled locations. These factors also would increase risks to public health and the environment through continued disposal to landfills and to the general environment.

E. Rationale for Temporary Exemption from the Requirement that Hazardous Waste be Disposed in Authorized Facilities, Health and Safety Code Section 25189.5

These exemptions allow a phased implementation of the disposal exemption for CEDs for the smallest and most numerous universal waste generators, households and very small generators. A phased approach will prove more effective because the increase in the number of generators regulated will be more closely matched to the increase in capacity and options for cost efficient collection and shipment of CEDs. While the allowance to continue to place large quantities of CEDs in non-hazardous landfills may seem to be environmentally inappropriate, environmental protection will be increased over the long term once an infrastructure is established that provides cost effective recycling or disposal options.

NECESSITY REQUIREMENT

Section 25150.6 (d) A regulation adopted pursuant to this section shall not be deemed to meet the standard of necessity, pursuant to Section 11349.1 of the Government Code, unless the department has complied with subdivisions (b) and (c).

DTSC Evaluation: As indicated above, this document represents compliance with the necessary provisions.

COMPLIANCE WITH THE FEDERAL ACT

Section 25150.6 (e) The department shall not exempt a hazardous waste management activity from a requirement of this chapter or the regulations adopted by the department if the requirement is also a requirement for that activity under the federal act.

DTSC Evaluation: The proposed State regulatory standards are virtually identical to the federal universal waste standards in almost all provisions. When the actual regulatory standards vary, for instance in the recycling requirement for CRT materials, these standards are more stringent and protective than the federal standards. Although U.S. EPA has not added CRT materials or CEDs to the federal Universal Waste Rule, it allows states to add other hazardous wastes, or more stringent requirements, to the states' universal waste rules.

The major deviation from the federal standards is the scope of the regulated community. The household and small quantity exemptions proposed in the base State Universal Waste Rule are both similar to, but much narrower in scope, than the corresponding federal exemptions. These proposed State standards will both initially and ultimately regulate a much larger universe of entities than the corresponding federal rules thereby giving the State a much higher degree of environmental protection than provided by the federal Universal Waste Rule. Thus, the proposed regulations meet the standards of Health and Safety Code sections 25159 and 25159.5 for regulations to obtain and maintain RCRA authorization.

AUTHORITY TO ADOPT REGULATIONS FOR CERTAIN HAZARDOUS WASTES

Section 25150.6 (f)(1) On and after January 1, 2002, the department may, by regulation, exempt a hazardous waste management activity from one or more of the requirements of this chapter pursuant to this section only if the regulations govern the management of one or the hazardous wastes listed in subparagraphs (A) to (E), inclusive, of paragraph (2), the regulations identify the hazardous waste as a universal waste, and the regulations amend the standards for

universal waste management set forth in Chapter 23 (commencing with Section 66273.1) of Division 4.5 of Title 22 of the California Code of Regulations.

(2) The regulations that the department may adopt pursuant to paragraph (1) shall govern only the following types of hazardous waste:

(A) Electronic hazardous waste, as the department may describe in the regulations adopted pursuant to this subdivision.

(B) Hazardous waste batteries.

(C) Hazardous wastes containing mercury.

(D) Hazardous waste lamps.

(E) Lead-painted wood debris that is a hazardous waste.

DTSC Evaluation: These proposed regulations are being adopted for the waste category described in Health and Safety Code, section 25150.6, subdivision (f)(2)(A), electronic hazardous waste. Electronic hazardous waste includes, but is not limited to, CRT materials and CEDs. DTSC began the development of the Electronic Hazardous Waste Regulations after January 1, 2002, which is in accordance with the provisions of this subdivision.

SUNSET OF AUTHORITY

Section 25150.6(g) The authority of the department to adopt regulations pursuant to this section shall remain in effect only until January 1, 2003, unless a later enacted statute, which is enacted before January 1, 2003, deletes or extends that date. This subdivision does not invalidate any regulation adopted pursuant to this section prior to the expiration of the department's authority.

DTSC Evaluation: These regulations are proposed for adoption before January 1, 2003, which is the statutory deadline for inclusion of these waste categories in the State's existing universal waste regulations.

CONCLUSION

Based on the above analysis, DTSC concludes that the proposed regulations meet the criteria of Health and Safety Code section 25150.6 for variance from existing statutory requirements and they will provide protection of human health and the environment.