



Department of Toxic Substances Control



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TITLE 22
60-DAY PUBLIC NOTICE AND COMMENT PERIOD
PROPOSED REGULATIONS
UNIVERSAL WASTE RULE
Department Reference Number: R-97-08
December 19, 2000

NOTICE IS HEREBY GIVEN that the Department of Toxic Substances Control (DTSC) proposes to add Chapter 23, Division 4.5, to Title 22, California Code of Regulations (22 CCR). These proposed regulations would also amend sections 66260.10 Chapter 10, section 66262.11 of Chapter 12, section 66264.1 of Chapter 14, section 66265.1 of Chapter 15, section 66268.1 of Chapter 18, and section 66270.1 of Chapter 20, Division 4.5, 22 CCR. A new section 66261.9 would be added to Chapter 11. Note that section 66261.9 of Chapter 11 and Chapter 23 are found in existing law on a temporary basis, having been adopted by emergency regulation in March of 2000 and readopted in July of 2000 (a second readoption is also expected in November of 2000, after the completion of this document). The changes to section 66260.10 and 66260.12 of Chapter 10, section 66262.11 of Chapter 12, section 66264.1 of Chapter 14, section 66265.1 of Chapter 15, section 66268.1 of Chapter 18, and section 66270.1 of Chapter 20 are also largely found in existing law on a temporary basis because they were also adopted in the aforementioned emergency regulations.

These proposed regulations, called the Universal Waste Rule, would streamline the requirements for collection and management of common hazardous wastes designated as universal wastes without posing an additional risk to public health and the environment. In fact, one of the intended outcomes is increased proper disposal of universal waste, which will enhance protection of human health and the environment. The waste streams included under this proposed rule are hazardous waste batteries, hazardous waste thermostats (those thermostats containing mercury), and hazardous waste lamps (most fluorescent tubes, high intensity discharge, mercury vapor and similar lamps). Generators and transporters of universal wastes would be exempt from many hazardous waste management requirements, including, for instance, the hazardous waste manifesting requirement. However, most treatment, disposal, or recycling would still be subject to applicable State and federal Resource Conservation and Recovery Act of 1976 (RCRA) permit requirements. Households and conditionally exempt small quantity generators would be allowed to manage their universal wastes as non-hazardous wastes for a four year period, after which, they would become subject to the Universal Waste Rule. The proposed regulations are necessary for the protection of human health and safety, protection of the environment, to increase consistency with

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federal requirements and to implement the provisions of Assembly Bill (AB) 1530 (Chapter 575, statutes of 1996, Health and Safety Code (HSC), section 25219 et seq.).

PUBLIC HEARING AND WRITTEN COMMENT PERIOD

DTSC will hold a public hearing at 10:00 a.m. on February 28, 2001, in the auditorium at 714 P Street (Room 102), Sacramento, California at which time any person may present statements or arguments orally or in writing, relevant to the proposed regulations. Written comments submitted prior to 5:00 p.m. on February 28, 2001 will be considered.

Representatives of DTSC will preside at the hearing. Persons who wish to speak are requested to register prior to the hearing. Pre-hearing registration will be conducted at the location of the hearing from 9:30 a.m. to 10:00 a.m. Registered persons will be heard in the order of their registration. Any other person wishing to speak at the hearing will be afforded the opportunity after the registered persons have been heard. The hearing will close at 10:30 unless testimony is continuing.

AUTHORITY AND REFERENCE

These regulations are being proposed under the following authorities:

Health and Safety Code section 25141. This section grants DTSC authority to adopt, by regulation, criteria for the identification of hazardous wastes.

Health and Safety Code section 25150. This section grants DTSC authority to adopt standards dealing with the management of hazardous waste.

Health and Safety Code section 25150.6. This section grants DTSC authority to exempt a hazardous waste from certain management activities.

Health and Safety Code section 25219.1. This section adopts the "Mercury Containing and Rechargeable Battery Management Act" (Federal Battery Management Act (FBMA), P.L. 104-142, 42 U.S.C. 14301 et seq.) by reference. This section also directs DTSC to make the necessary changes to obtain authority to implement the FBMA.

Health and Safety Code section 58012. This section grants DTSC authority to adopt regulations.

These regulations implement, interpret, or make specific the following:

Health and Safety Code section 25141. This section allows DTSC to determine which wastes are hazardous using the criteria provided.

Health and Safety Code section 25150. This section allows DTSC to adopt standards for the management of hazardous waste.

Health and Safety Code section 25150.6. This section allows DTSC to exempt a hazardous waste from certain hazardous waste management activities.

Health and Safety Code section 25219, 25219.1, and 25219.2. These sections require batteries covered by the FBMA to be regulated under provisions identical to those in the Federal universal waste rule.

These regulations are based on, but are not identical to, the following federal regulations:

Title 40, CFR, sections 260.10, 262.11, 264.1, 265.1, 268.1: These are regulations which were in existence before the federal Universal Waste Rule but were modified to take account of the existence of the Universal Waste Rule.

Title 40, CFR, section 261.9: This section was added to the pre-existing Part 261 regulations to establish universal waste as a subset of hazardous waste.

Title 40, CFR, Part 273: This Part provides the basic regulatory standards of the federal Universal Waste Rule.

SPECIFIC OBJECTIVES

The major objective of this rulemaking is to remove hazardous waste batteries, lamps, and thermostats from the non-hazardous municipal solid waste stream by diverting them to hazardous waste recycling, treatment, and disposal facilities. These facilities are designed, constructed, and sited for safe management of hazardous wastes. This objective is achieved by allowing management of universal wastes under simpler streamlined management standards. A second objective is to conform State regulations as closely as is possible to the federal Universal Waste Rule given California's more stringent definition of hazardous waste and DTSC's mission to protect the State's people and environment from risks associated with hazardous wastes.

INFORMATIVE DIGEST/PLAIN ENGLISH OVERVIEW

These State regulations would increase consistency with the Federal universal waste requirements of Title 40, Code of Federal Regulations (40 CFR) part 273, relax the

collection and management standards for certain common hazardous wastes that pose a lesser risk than many other wastes primarily produced by industry, and implement the provisions of AB 1530 (Chapter 575, statutes of 1996, Health and Safety Code (HSC) section 25219 et seq.).

Universal wastes share the following characteristics:

- 1) they are generated by a large community whose size makes implementation of an effective hazardous waste program difficult for regulatory agencies;
- 2) they are generated in relatively small quantities in a wide variety of settings other than industrial settings;
- 3) they are present in significant volumes in non-hazardous waste management systems; and
- 4) management under the Universal Waste Rule is more likely to divert these wastes from the municipal solid waste stream than management under the full hazardous waste management requirements.

The “Mercury Containing and Rechargeable Battery Management Act” (Federal Battery Management Act (FBMA)), P.L. 104-142, 42 U.S.C. 14301 et seq.) requires managing certain Battery types (sealed lead-acid batteries, rechargeable batteries (other than automotive type spent lead acid storage batteries), alkaline-manganese and zinc-carbon containing mercury batteries, button cell mercuric oxide batteries, and other mercuric oxide batteries) under provisions identical to those under the Federal Universal Waste Rule. In California, AB 1530 (Chapter 575, statutes of 1996) revised State statutes to reflect this federal law. The proposed State Universal Waste Rule would apply the federal universal waste management requirements to non-RCRA hazardous waste batteries, as well as the batteries already regulated by the FBMA and the federal Universal Waste Rule.

The proposed State Universal Waste Rule would adopt management standards similar to those included in the federal Universal Waste Rule. Two additional standards have been included in the proposed State regulations to address specific California concerns. These additional standards are permissible under federal requirements. They include the following:

- 1) The regulations would mandate that hazardous waste lamps be sent to an authorized recycling facility in order to be eligible for universal waste designation. The federal rule does not require recycling of any universal waste.

2) The storage period at transfer facilities would be limited to 6 days, or 10 days in areas that are zoned industrial (10 days in either area for hazardous waste batteries), in order to be consistent with current State requirements. The federal rule allows a ten day storage period anywhere.

DTSC is still considering the addition of two additional requirements. The first is application of the large quantity handler of universal waste requirements to small quantity handlers of universal waste. The second is requiring that intermediate accumulation points file a simple notification with DTSC to allow identification and inspection of this class of handlers.

Adoption of these Universal Waste Rule regulations would supersede any existing emergency Universal Waste Rule regulation. Note that DTSC's previous policies regarding mercury-containing lamps were rescinded during the adoption of the existing emergency Universal Waste Rule.

The proposed State Universal Waste Rule also differs in scope compared to the federal Universal Waste Rule in the following manners:

1) Scope of wastes regulated: The proposed Universal Waste Rule applies to all batteries, thermostats, and lamps identified as hazardous waste under the California hazardous waste control law. State waste classification rules identify more batteries, lamps, and, potentially, thermostats as hazardous waste than do the corresponding federal rules.

2) Exemptions: The proposed Universal Waste Rule will contain two exemptions allowing continued non-hazardous disposal of universal wastes for four years, after which the exemptions will sunset for all universal wastes.

- Households: True private households will be allowed to dispose of their universal wastes as non-hazardous waste for four years. During this period, the Department and the California Integrated Waste Management Board will work to improve household hazardous waste collection systems for universal wastes.

- Conditionally exempt small quantity generators: Persons generating 100 kilograms (220 pounds) or less of total universal wastes plus hazardous wastes per month will be allowed to dispose of their universal wastes as non-hazardous waste for four years. During this period, DTSC expects the infrastructure for collection, recycling and disposal of universal wastes (recyclers, intermediate accumulation/transshipment points) to develop fully.

The last major difference between the federal Universal Waste Rule and the State's Universal Waste Rule is that the State is not proposing to designate hazardous waste pesticides as universal wastes. Pesticides are not proposed as universal wastes because DTSC believes that pesticides do not meet the criteria for the relaxed management standards associated with universal wastes for the following reasons:

- 1) Pesticides are usually liquid materials packaged in larger containers up to and including railcars. Large quantities of liquid materials pose very serious hazards and are not suitable for the Universal Waste Rule. For example, the 1991 rail car derailment in Dunsmuir, which killed all life in much of the upper Sacramento River, involved metam sodium, a pesticide which was not even designated as a hazardous material under federal transportation law.
- 2) The pesticides most likely to have uses suspended or canceled are the ones with unacceptable human or ecological toxicity such as chlorpyrifos and ethyl parathion, two chemicals with recently suspended or canceled uses due to their extreme toxicity.

Federal Law: The United States Environmental Protection Agency (U.S. EPA) promulgated the federal Universal Waste Rule on May 11, 1995 to streamline the collection and management of common hazardous wastes designated as universal wastes such as batteries, pesticides, fluorescent tubes and thermostats. The federal Universal Waste Rule established alternative management standards for generators and transporters of these universal wastes. In 1996, the United States Congress enacted the "Mercury Containing and Rechargeable Battery Management Act" (Federal Battery Management Act (FBMA) Public Law 104-142, 42 U.S.C. 14301 et seq.). The FBMA requires collecting and managing certain battery types such as used rechargeable alkaline batteries, rechargeable nickel-cadmium and sealed lead-acid batteries, alkaline-manganese and zinc-carbon containing mercury batteries, button cell mercuric oxide batteries, and other mercuric oxide batteries under provisions identical to the federal Universal Waste Rule standards adopted on May 11, 1995. In California, Assembly Bill (AB) 1530 (Chapter 575, statutes of 1996, Health and Safety Code) made the revisions to State statutes to reflect the federal law concerning batteries.

State Law: Under current State law (absent the Emergency Universal Waste Rule regulations discussed below), all universal wastes, except batteries covered by the FBMA (see above) are fully regulated under the general hazardous waste management standards. These general hazardous waste management regulations will become effective if DTSC fails to adopt these proposed regulations. With regard to fluorescent tubes, two interim DTSC policies were previously in effect. One policy stated that fluorescent tubes could be transported on a bill of lading using a common carrier. The second policy stated that a generator was allowed to dispose of up to 25 tubes per day

per location as non-hazardous waste. Most generators were following these policies instead of the full hazardous waste requirements. The documentation included with the emergency Universal Waste Rule adopted by DTSC on March 6, 2000 officially rescinded these two policies. If the emergency regulations fail to be readopted, the 25 tubes per day policy will not become effective again because it was never adopted into statute or regulation and thus never had the force of law. Absent the current emergency rules, all wastes proposed as universal wastes in this rule, except batteries covered under the FBMA, are fully regulated hazardous wastes.

Emergency regulations: The emergency regulations adopted by DTSC on March 6, 2000, address hazardous waste batteries, thermostats, and lamps. The emergency rules closely mirror the federal Universal Waste Rule with minor differences in the scope of the wastes included and the scope of the household and conditionally exempt small quantity generator exemptions. The emergency regulations were readopted on July 7 and remain in effect for 120 additional days. The Department will seek to readopt the emergency regulations as necessary to keep the rules effective until these proposed regulations become effective. With the adoption of the emergency regulations, DTSC's interim policies on the transportation and disposal of fluorescent lamps were rescinded. Note that failure to adopt these proposed regulations will result in the emergency regulations becoming ineffective leaving all universal wastes subject to the general hazardous waste management standards.

CEQA COMPLIANCE

DTSC has prepared an Initial Study and a draft Negative Declaration for this rulemaking which indicates no significant effect from the project on the environment. The public comment period on the CEQA documentation is from January 29, 2001 to February 28, 2001. A copy of these documents is available at the address shown below: Comments should be sent to:

Ms. Joan Ferber, Regulations Coordinator
Environmental Analysis and Regulations Section
Department of Toxic Substances Control
400 P Street, 4th Floor
P.O. Box 806
Sacramento, CA 95812-0806

PEER REVIEW

This rulemaking does not require peer review because scientific based standards are not being established. DTSC's 1985 waste classification rulemaking established the toxicity criteria, including the Soluble Threshold Limiting Concentration (TTLC) and the

Total Threshold Limiting Concentration (TTLC), which identify universal wastes as hazardous wastes. In 1991, DTSC's RCRA authorization rulemaking in 1991 adopted the Toxicity Characteristics (TC) for mercury (and other constituents) that were established in 40 CFR section 261.24 by the U.S. EPA. The DTSC and U.S. EPA toxicity characteristics were based on scientific risk assessment. The science from the TC rulemaking identified the universal waste streams as being in need of regulation. This rulemaking establishes management standards based on the fact that the wastes were previously identified as hazardous waste. Therefore, the level of regulation applied to universal waste handlers and transporters does not require peer review.

BUSINESS REPORT

This rulemaking does not require businesses to write a new report. In fact, small quantity handlers, required prior to the emergency regulations to obtain a hazardous waste Identification Number and use a manifest, will no longer be required to obtain ID numbers or use manifests for universal wastes for universal wastes.

FISCAL IMPACT ESTIMATES

The fiscal and economic impacts are calculated for fluorescent tubes and alkaline batteries, the major wastestreams impacted by these proposed regulations. The actual fiscal and economic impacts are significant cost savings because management under the Universal Waste Rule is much less expensive than management under the general hazardous waste control law. However, recognizing that few entities have managed their universal waste as hazardous waste, DTSC has also developed rough cost estimates for managing the subject wastes as universal wastes.

Mandates on Local Agencies and School Districts: DTSC has determined that adoption of these regulations creates no new local mandates.

Estimate of potential costs or savings subject to reimbursement pursuant to Part 7 (commencing with Section 17500) of Division 4 of the Government Code and other nondiscretionary costs or savings to local agencies: DTSC has determined that the proposed regulations will require no costs subject to reimbursement pursuant to Part 7 (commencing with Section 17500) of Division 4 of the Government Code or other nondiscretionary costs or savings to local agencies.

There will be two different types of costs incurred by local agencies. There are costs to local agencies in their roles as regulated entities and in their roles as regulators. If these regulations are not approved, the existing emergency regulations will lapse and all universal wastes will need to be managed under the general hazardous waste management standards at very large costs. Thus, the real legal effect of these

regulations is to save considerable money for local agencies when compared to the costs of managing their wastes if the regulations are not adopted.

The fiscal impact of these regulations on local agencies, as regulated entities, is the savings between hazardous waste management and universal waste management, at total cost savings of \$31M. The costs of managing alkaline batteries as universal waste has been estimated per employee for both the State and local governments. The cost of managing fluorescent tubes as universal waste has been carefully estimated for the State. Costs for management of fluorescent tubes by local agencies is then estimated by factoring the relative ratio of total employment (State/local agencies). However, some local (and State) agencies have never managed universal wastes as hazardous wastes. For these agencies, management under the Universal Waste Rule will seem to create new costs. The total cost of managing fluorescent tubes and alkaline batteries as universal waste for all local government is \$6.7M. An unknown realworld savings will also occur because the current practice of managing all street, parking lot, and security lighting waste as hazardous waste will be replaced by universal waste management which DTSC estimates to be 20% or less (for smaller entities) of hazardous waste management costs.

Costs that local agencies may incur for inspecting generators of universal waste under the Unified Program would be recoverable in fees authorized under the Health and Safety Code section 25404.3. Some generators of universal waste already manage some type of hazardous waste and will not pose a new burden to the local Unified Program Agencies. However, most businesses that do not generate other hazardous wastes will generate universal wastes and will enter the inspection universe. All generators of universal wastes would require dedication of some level of Certified Unified Program Agency (CUPA) resources. The impact on CUPAs would be minimized by development of an inspection strategy in keeping with the lower risk nature of these wastes. Inspection of universal waste generators should only take up a small amount of inspection time, thus each individually adding little to the workload. Note that Unified Program Agencies are authorized by Health and Safety Code section 25404.3 to recover the costs of implementing the Unified Program, including the generator inspection program, by statute.

Potential Impact on State Agencies: DTSC may incur an increased workload associated with: (1) oversight of the CUPAs; (2) conveying program information and guidance; and (3) inspecting intermediate accumulation points for universal wastes. Accommodating the increased workload would be accomplished by restructuring unit workloads as needed in order to provide training or compliance assistance to State or local agencies and industry, and inspecting the intermediate accumulation points. At this point, DTSC would be charged with inspection and enforcement at offsite accumulation points. It is unknown how many offsite accumulation points will

commence operation.

Although universal wastes would not be fully regulated as hazardous wastes and DTSC would not collect fees from universal waste handlers or universal waste transporters, the quantities of these wastes are a small portion of the manifested hazardous waste stream and should not result in a significant revenue loss for DTSC. Many of these generators are exempt from generator fees because they do not produce the threshold amount of hazardous waste that triggers the fee (> 5 tons/year). Before adoption of the emergency regulations, most of these wastes were being managed under the interim policies DTSC had in place and were being disposed of in municipal waste streams. Quantifying these wastes is difficult since there are no specific waste codes that apply to these waste streams.

Costs to State agencies as regulated entities:

Fluorescent Tubes: For the first four years, only the largest locations would be regulated; all others would be exempt as conditionally exempt small quantity universal waste generators. DTSC estimates total costs of only about \$50,000 for the first four years. Actual costs will be higher by an unknown amount for agency locations using large amounts of alkaline batteries where batteries will contribute significantly to exceeding the 220 lbs of universal waste per month level for exemption.

There are also State agencies that generate other hazardous wastes in addition to universal wastes, such as used oil, paints, or solvents. Because the quantities of these wastes add to their universal waste generation, these generators are not likely to qualify for the small quantity generator exemption. Their universal wastes would require proper hazardous waste disposal or recycling. However, even these agencies may have multiple locations, some of which only generate fluorescent tubes. Note that all State agencies would be subject to these costs after the sunset of the small quantity exemption four years after these regulations become effective.

The total cost to the State government for the four years in which the small quantity exemption is effective would be at least \$50,000 per year depending on how many physical locations surpass generation of 220 pounds per month of total hazardous and universal waste (and are thus no longer exempt).

To calculate the costs to the State after the sunset of the small quantity exemption, square footage obtained from the Department of General Services (DGS) was used for the space leased by state agencies which DGS tracks, and the space owned by state agencies. The numbers are 15,592,542 ft² and 185,352,357 ft² giving a total of 200,944,899 ft². This number was then multiplied by the rate of 0.0125 tubes/ft²/year, which is used by the Green Lights program, and then multiplied by the cost of

\$0.35/tube, yielding a cost of \$879,133/year to the State. All agencies would be required to recycle their lamps once the exemptions were phased out. Although these costs are higher than if the small quantity exemption existed, the costs are less than if the lamps were handled as hazardous wastes.

Other hazardous waste lamps which have never been the subject of enforcement moratoria are also within the scope of the Universal Waste Rule. These lamps include street and intersection lamps, parking lot lighting, and security lights. These lamps are much larger and heavier than fluorescent tubes and few agencies generating any significant quantity will be exempt (allowed to use non-hazardous disposal) during the four year exemption period simply because of the heavy weight per unit for these lamps. DTSC does not have figures on the total number of these lamps generated by the State. However, the major generator of such lamps, the California Department of Transportation (CalTrans), uses about 34,000 lamps per year. At a savings of 80% over hazardous waste management, CalTrans will save about \$147,000 per year over the general hazardous waste management rules.

Batteries: Again, only batteries not covered by the FBMA are included in this analysis. It addresses only the number of alkaline batteries generated because there are only small numbers of batteries outside of the FBMA (and automobile batteries - not included in the Universal Waste Rule) other than alkaline batteries.

The costs of managing batteries as universal waste are calculated by estimating the weight of waste batteries generated and multiplying this cost by the unit cost of recycling or disposal plus transportation.

Cost Impact of Batteries Covered by the FBMA: The cost impact of batteries covered by the FBMA is not addressed in this analysis. This subset of batteries became subject to the Universal Waste Rule first by action of federal statute, then by action of State statute. This rulemaking does not affect the regulatory status of such batteries.

Costs of Managing Alkaline Batteries as universal waste after the sunset of the exemptions:

Costs of managing alkaline batteries for the State were based on the weight of spent batteries produced per year per employee. Costs per pound of batteries were developed using stated recycling and disposal rates and estimated average transportation costs. A total cost of \$750K/year (disposal) to \$3M/year (recycling) is estimated. Costs to the State during the four year exemption period have not been calculated due to the lack of information regarding generation of other hazardous wastes, use of batteries, and the size of each distinct location, and thus, the applicability of the exemption. However, the cost can be estimated proportionally by using the ratio

for fluorescent tubes before and after the sunset of the exemptions. This estimate is about \$14,000.

Costs to the State if these rules are not adopted: By comparison, if these wastes were handled as hazardous waste, the 3,472 multiple state agency locations would have costs for complying with generator standards of \$1108 each, assessing a total of \$3,850,000 per year. The facilities at the 3,472 locations total 185,160,035 ft². Using a disposal cost of \$0.35/tube, assesses an additional \$810,000 per year. Therefore, if all waste fluorescent tubes generated by the State were handled as hazardous waste, including both the costs associated with operating as a generator and the costs associated with fluorescent tube disposal, there would be a cost to the State of \$4,660,000.

The \$4.6 million cost estimate could be slightly less if tubes are recycled rather than disposed, since the cost for recycling is \$.20/tube and no generator fees would apply unless the handler is a large quantity handler of universal waste.

The costs for management of batteries would also significantly increase if the proposed regulations are not adopted. To estimate the increased costs, the 80:20 cost differential between hazardous waste management and universal waste management is used. Because the analysis for fluorescent tubes above already incorporates the fixed costs for complying with the hazardous waste generator standards, only the battery management costs are estimated. With a total cost for disposal by State agencies estimated at \$305K and applying the 80:20 differential estimated for actual management costs, a cost of \$1,080k for management of alkaline batteries as hazardous wastes. Thus, a total cost to the State if these regulations fail to become effective is estimated at:

TOTAL COST: **\$5,740K for hazardous waste management.**

Versus

TOTAL COST: **\$1,040K for universal waste management**

Savings to the State:

TOTAL SAVINGS: **\$4,700K. This number is the actual fiscal impact on the State.**

DTSC will also incur costs for implementing the inspection program at offsite accumulation points. The cost will depend on the number of accumulation points which will have to be inspected. It is estimated that the workload will be about 24 hours per

inspection using the workload standard for transporter inspections, which is closely related in nature to offsite accumulation point inspections. At this point, any estimation of the number of these points is purely speculative and a cost estimate cannot be developed.

Potential Impact on Federal Funding to State Agencies: The proposed regulations will not have an impact on federal funding of State programs. There should not be a loss of federal funds if the State is in compliance with or more stringent than the federal standards. These regulations are equivalent to the federal standards in some aspects and more stringent than the federal requirements with regard to lamps, the more limited definition of households, and the phase-out of the exemptions for Conditionally Exempt Small Quantity Generators and Households. Documentation issued with the emergency regulations rescinded the 25 tubes per day disposal policy, making the State as stringent as the federal requirement with regard to lamps.

Potential Effect on Housing Costs: DTSC has determined that there will be no impact on housing costs.

Potential Impact on Businesses and Private Persons: DTSC has determined that almost all businesses in California will be impacted by the proposed regulations. The Universal Waste Rule affects any businesses generating or transporting universal wastes including batteries, thermostats, and lamps. To the extent that businesses were managing their waste as hazardous waste prior to enactment of the emergency Universal Waste Rule regulations, DTSC estimates that they will benefit from savings. Generators will not be required to hire hazardous waste transporters to transport their universal wastes; they will be able to self-transport their universal wastes. Transporters will also be able to transport Universal wastes without possessing a hazardous waste transporter registration. Small businesses will benefit especially from the one-year accumulation time, since they would most likely generate tubes at a lower rate than large businesses. Per-tube costs would be much higher for a small generator than a large one if a registered transporter were used four times a year. The sporadic rate at which a small business generates tubes may also make them more likely to take advantage of the self-transport option.

Under the emergency Universal Waste Rule regulations adopted by DTSC on March 6, 2000 and readopted on July 7, 2000, many businesses would qualify for the CESQG exemption. However, the proposed Universal Waste Rule would only allow a CESQG exemption for four years. All lamps would have to be sent for recycling in order to benefit from the Universal Waste Rule. Any recycling and handling costs incurred would still be much less than the costs associated with handling the universal wastes as fully regulated hazardous wastes.

Tables 1 and 2 present costs for small businesses and households to manage alkaline batteries and fluorescent tubes as non-hazardous waste, universal waste, and hazardous waste. If the wastes proposed as universal wastes could be disposed as non-hazardous wastes, generators would incur virtually no additional costs. These wastes are a small part of the solid waste stream from businesses and households. Most businesses and households will generate both batteries and fluorescent tubes.

If they generate both and are able to combine shipments, costs would be lower than for separate shipment. For example, households or eligible small quantity generators with batteries and tubes need only make one trip to a drop-off event to dispose of both wastes.

The cost to manage batteries considers both in-State disposal and out-of-State recycling costs.

**Table 1
Initial Costs to Manage Alkaline Batteries Under Non-hazardous,
Universal Waste, and Hazardous Waste Management Rules**

Activity	Non-Hazardous Disposal¹	Universal Waste Disposal²	Universal Waste Recycling	Self Transport	HW Management³
Pounds of shipments per year	10	10	10	10	10
Notify	NA	NA	NA	NA	\$40
Train employees	NA	Minor	Minor	NA	\$160
Contingency plan	NA	NA	NA	NA	\$420
Packaging and transport	NA	\$28	\$29	\$7 - \$14	\$292
Use manifest	NA	NA	NA	NA	\$128

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Fee charged by disposal or recycling facility	\$0	\$17	\$9	NA	\$105
Total	\$0	\$45	\$38	\$7 - \$14	\$1,145

- 1 Carrier and disposal facility are local solid waste disposal services.
- 2 Assumes shipment to local consolidator.
- 3 Current hazardous waste generators would only incur additional transport and disposal costs, and minor costs to revise training and contingency plans.

Note that since hazardous waste lamps that are disposed instead of being recycling cannot be managed as universal wastes under the proposed regulations, only tube recycling costs are considered for universal waste management of lamps.

Table 2
Initial Costs to Manage Waste Fluorescent Tubes
Under Nonhazardous, Universal Waste, and Hazardous Waste Management

Activity	Non-Hazardous Disposal	Universal Waste Recycling	Household Self-Transport	Hazardous Waste Management
Notify	NA	NA	NA	\$40 ³
Train employees	NA	Minor	NA	\$160 ³
Contingency plan	NA	NA	NA	\$420 ³
Packing and Local Transport Cost	NA	\$22 to \$50 ²	\$7 to \$14	\$300
Use manifest	NA	NA	NA	\$120
Fees charged by authorized facility	\$0 ¹	\$24 ⁴ Recycling	\$0	\$24 Recycling or \$60 Disposal ⁴
Total	\$0	\$46 to \$74	\$7 to \$14	\$1064 Recycling or \$1100 Disposal

- 1 Carrier and disposal facility are local solid waste disposal services.
- 2 Based on one local service area shipment per year of one package of up to 117 tubes, including packaging, handling, and shipping paper costs.
- 3 Current hazardous waste generators may not incur additional transport and disposal costs, and only minor costs to revise training and contingency plans
- 4 Based on a shipment of one package containing 117 tubes.

Table 3
Cost of hazardous waste management
and universal waste management for larger generators

Activity	Universal Waste: Cost/pound	Universal Waste: Cost for 300 pounds	Hazardous Waste: Cost/pound	Hazardous Waste: Cost for 300 pounds
Notify	NA	NA	NA	\$40
Train employees	Minor	Minor	NA	\$160
Contingency Plan	NA	NA	NA	\$420
Packaging and Transport	\$2.80	\$840	\$15.00 ¹	\$4,500
Use Manifest	NA	NA	NA	\$128 ²
Recycle or disposal fee	\$1.70	\$510	\$5.00 ³	\$1,500
Totals	\$4.50	\$1,350	\$39.70	\$6,748

- 1 Cost for using an registered hazardous waste hauler. A lower unit shipping cost is used because the quantities are assumed to be higher (one shipment of 3,600 pounds per year)
- 2 One shipment using one manifest is assumed per year
- 3 A lower unit recycling/disposal cost is used because the quantities are assumed to be higher (one shipment of 3,600 pounds per year). Note that universal waste costs are lower for the same recycling and disposal facilities because hazardous waste recycling or disposal adds costs such as use of the manifest and chemical analysis work.

Transport costs in Tables 1, 2, and 3 are on a per-container basis and assume shipment to a local waste consolidator for eventual transshipment to an authorized facility. Thus, businesses generating larger quantities will see increased recycling or disposal fees, but significant increases in transport costs will occur stepwise and the

number of containers recycled or disposed increases (i.e., as more than one container fills up). For ease of analysis, the stepwise increase as containers are filled is modeled as a linear increase with weight to allow the size, shape, and density of various batteries in the mix to be disregarded.

Households: DTSC has also determined that a permanent household exemption will not be included under the proposed universal waste requirements. Although households would not be required to obtain an EPA identification number or notify of their universal waste activities, they would still be required to take their lamps to a household hazardous waste collection facility after the sunset of the household exemption in four years. Households may need to store universal wastes until they are able to take them to a collection facility. However, there should be minimal hazard risk if the spent lamps are stored in the packaging in which the new lamps came.

The cost for transportation to a collection facility would range from \$5.90 to \$7.14 based on a round-trip distance of 4 to 8 miles. This was based on the cost of operating a car according to the Internal Revenue Code of \$0.31 per mile and the time spent on the trip of approximately 20 minutes at \$14 per hour. Since many households already use collection programs, the inclusion of tubes as universal wastes may not generate additional trips for these households. Due to the long life of fluorescent tubes, households are expected to transport tubes only once every four years. However, they are expected to generate batteries every year, and therefore are expected to make one trip per year.

**Significant Adverse Economic Impact/Potential Impact on Jobs/Businesses
Expansion/Contraction:**

A. Creation or elimination of jobs within California- DTSC has determined that there will be no significant impact on the creation or elimination of jobs in California. To the extent that businesses are currently using registered hazardous waste transporters, such as for some hazardous waste lamps, some registered haulers may see a loss in revenue. The quantities of these waste streams designated as universal wastes account for a small percentage of the total hazardous waste stream, so the impact on hazardous waste transporters is not expected to be significant. Note, however, that a small but important new industry is expected to arise, to an unknown extent, geared toward collecting universal wastes and trans-shipping them in bulk to destination facilities. No reasonable estimate of the number of new businesses or jobs can be made at this point.

The creation of new jobs may also occur if commercial transporters expand their businesses to transport Universal wastes that are currently being disposed in

non-hazardous landfills and for other universal wastes which may be added in the future. The number of wastes that may be added is expected to be minimal and there would not be a net increase in jobs since the quantity of wastes being transported either by hazardous waste transporters or common carriers would remain the same. Analysis of the impacts of adding further wastestreams will be analyzed when those wastestreams are proposed for addition.

B. Creation of new businesses or the elimination of existing businesses within California: DTSC has determined that there will be no significant impact on the creation or elimination of businesses in California. The demand for transporting and recycling services is expected to be met via an expansion of existing businesses, so the proposed regulation is not expected to lead to the creation of many new businesses within California. Also, creation of new businesses in the future is not expected to be significant because the number of wastes added to the Universal Waste Rule in the future is expected to be minimal. A few new businesses may start up to meet the demand for universal waste accumulation and transshipment and lamp recycling, although it is more likely that existing businesses will expand to accommodate new demand.

C. Expansion of businesses currently doing business in California: Adoption of the proposed Universal Waste Rule is not expected to promote any significant expansion of businesses in California. The quantities of waste designated as universal wastes account for a small portion of the total hazardous waste stream, and should not promote any significant expansions for businesses transporting these designated Universal wastes. With the adoption of a Universal Waste Rule in California, lamps designated as universal wastes would be required to be sent for recycling. The current recycling capacity in California is approximately 39 million lamps per year. This is about 70% of the supply of tubes expected to result from the Universal Waste Rule. The maximum recycling capacity is still undetermined, but with the recyclers located in neighboring states, sufficient capacity should exist. Note that further recycling businesses may be proposed for the State. Similarly, an unknown number of businesses may begin to collect and trans-ship universal wastes from universal waste generators. Any future business expansions will depend on the types and number of wastes streams added to the Universal Waste Rule.

No battery recyclers currently operate in California. Most batteries will be sent out-of-state for recycling. These shipments may be direct or through consolidators. It is not known whether recyclers will open facilities in California once the proposed rule becomes effective. These would have to compete with the disposal option for batteries.

D. Ability of California businesses to compete with those in other states: DTSC has determined that California businesses will be able to compete better with businesses in other states, since more than 40 states have adopted some type of Universal Waste Rule. If California fails to adopt a universal waste rule, all proposed universal wastes would require full hazardous waste management which would put California business at a competitive disadvantage to businesses in other States. While the proposed regulation does improve the competitive position of California businesses, it does not grant the same exemptions as under the federal Universal Waste Rule. However, the difference in costs between the federal and proposed State regulation do not appear sufficient to place California businesses at a competitive disadvantage. Although California's proposed Universal Waste Rule is more stringent than the federal Universal Waste Rule, it is less stringent than California's current hazardous waste requirements, and should encourage proper environmental management and recycling of universal wastes.

Potential Impact on Small Businesses: DTSC has determined that small businesses would avoid a large increase in compliance costs as a result of the proposed Universal Waste Rule. DTSC estimates that a representative small business would save at least \$1,000 per year over managing these wastes as hazardous waste which will be required if these regulations are not adopted.

Transporters of universal waste would not see a significant loss in business since the quantities of wastes designated as universal wastes are a small part of the hazardous waste stream.

Most small businesses generate few or no other hazardous wastes and qualify for the conditionally exempt small quantity universal waste generator (CESQUWG) exemption under the existing Universal Waste Rule emergency regulations. Under the proposed regulations, the CESQUWG exemption sunsets after four years so small businesses would no longer be able to dispose of these lamps to the municipal non-hazardous waste stream. The costs associated with required recycling, however, would be less than if universal wastes were handled under full hazardous waste disposal requirements. For example, a small facility of 2000 ft² that replaces 0.0125 tubes/year/ft², replaces 25 tubes per year and yields a cost of \$27/year for recycling.

A medium facility of 10,000 ft² with the same replacement rate, would replace 125 tubes each year yielding a cost of \$47/year for recycling

PLAIN ENGLISH STATEMENT: A non-controlling plain English summary of the regulations has been incorporated into the Initial Statement of Reasons under the heading "Detailed Statement of Reasons/Non-Controlling Plain English Summary."

Therefore, if you have this notice, you already have a copy of the non-controlling plain English summary. However, CCR, Title 1, Section 4(b)(1)(B) requires the following statement to be included in the notice:

DTSC has determined that it is not feasible to draft the regulations in plain English due to the technical nature of the regulations; however, a non-controlling plain English summary of the regulations is available from the agency contact person named in this notice.

CONSIDERATION OF ALTERNATIVES

DTSC has determined that no alternative would be more effective in diverting universal wastes from the solid waste stream and in streamlining the management practices of handlers and transporters managing universal wastes such as batteries, thermostats, and lamps without posing a risk to public health or the environment or would be as effective and less burdensome to affected private persons than the proposed action. DTSC invites interested persons to present arguments, with respect to the various options, at the scheduled hearing, or during the written comment period.

AVAILABILITY OF TEXT OF REGULATIONS AND STATEMENT OF REASONS

Copies of the Initial Statement of Reasons and text of the proposed regulations are posted to DTSC's Internet site at <http://www.dtsc.ca.gov> or may be obtained from Ms. Joan Ferber of DTSC's Environmental Analysis and Regulations Section as specified below. The information upon which DTSC relied is available at the address shown below.

**AVAILABILITY OF THE ANALYSIS REQUIRED UNDER HEALTH AND SAFETY
CODE SECTION 25150.6**

As required by statute, the analysis required under Health and Safety Code section 25150.6 is available for concurrent public review and comment. It can be obtained from DTSC's Internet site at <http://www.dtsc.ca.gov> or may be obtained from Ms. Joan Ferber of DTSC's Environmental Analysis and Regulations Section as specified below. The final Health and Safety Code section 25150.6 analysis will be made available to all persons commenting on the regulations and on DTSC's Internet site at least 10 days before the final regulations are adopted.

POST-HEARING CHANGES

After the close of the comment period, DTSC may adopt the proposed regulations. If substantial changes are made, the modified text will be made available for comment for at least 15 days prior to adoption. Only persons who request the specific proposed regulations and those who provide written or oral comments on these specific regulations will be sent a copy of the modified text, if substantive changes are made. Once a regulation has been adopted, DTSC prepares a Final Statement of Reasons which updates the Initial Statement of Reasons, summarizes how DTSC addressed comments, and includes other material, as required by Government Code, section 11346.9. Copies of the Final Statement of Reasons may be obtained from Ms. Joan Ferber at the address shown below. A copy of the Final Statement of Reasons will also be posted on DTSC's Internet site at <http://www.DTSC.ca.gov>.

CONTACT PERSONS

Statements, arguments or contentions must be submitted in writing or may be presented verbally during the public hearing in order for them to be considered before these regulations are adopted, amended or repealed. For more information regarding this regulation package, contact DTSC as follows:

Inquiries regarding the technical aspects of proposed regulations may be directed to Mr. Mike Horner of DTSC at mhorner@dtsc.ca.gov or (916) 322-7889. However, such oral inquires are not part of the rulemaking record.

To be included in this regulation package's mailing list, and to receive updates of this rulemaking, please leave a message on the DTSC mailing list phone line at (916) 324-9933 or e-mail jferber@dtsc.ca.gov.

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Please direct all procedural inquiries and requests for documents to Ms. Joan Ferber at (916) 322-6409 or Ms. Bonnie Amoruso at (916) 322-2833. All written comments should be sent to Ms. Feber by either e-mail: *jferber@dtsc.ca.gov*, fax (916) 327-0978 or mail:

Ms. Joan Ferber, Regulations Coordinator
Environmental Analysis and Regulations Section
Department of Toxic Substances Control
400 P Street, 4th Floor
P.O. Box 806
Sacramento, CA 95812-0806

Dated: _____

[Original Signed By]
James McRitchie, Chief
Environmental Analysis and Regulations Section