

TITLE 22

EMERGENCY REGULATIONS

Disposition Options for Universal Waste Cathode Ray Tubes (CRTs) and CRT Glass

Department Reference Number: R-2011-03
Office of Administrative Law Emergency Number: 2012-1003-01E

FINDING OF EMERGENCY

Pursuant to section 25214.10.2 of the Health and Safety Code, a regulation adopted pursuant to article 10.3 of chapter 6.5 of division 20 of the Health and Safety Code may be adopted as an emergency regulation in accordance with chapter 3.5 (commencing with section 11340) of part 1 of division 3 of title 2 of the Government Code, and for the purposes of that chapter, including section 11349.6 of the Government Code, the adoption of these regulations is an emergency and shall be considered by the Office of Administrative Law as necessary for the immediate preservation of the public peace, health, and safety, and general welfare.

Notwithstanding chapter 3.5 (commencing with section 11340) of part 1 of division 3 of title 2 of the Government Code, an emergency regulation adopted by the Department of Toxic Substances Control (DTSC) pursuant to section 25214.10.2 of the Health and Safety Code shall be filed with, but not be repealed by, the Office of Administrative Law and shall remain in effect for a period of two years or until revised by DTSC, whichever occurs sooner.

In this re-adoption of the emergency regulations there are no changes in the emergency circumstances from the preceding emergency actions.

STATEMENT OF FACTS SUPPORTING FINDING OF EMERGENCY

DTSC finds this emergency to be an emergency as a matter of law. Specifically, section 25214.10.2 of the Health and Safety Code states that a regulation adopted pursuant to article 10.3 of chapter 6.5 of division 20 of the Health and Safety Code (commencing with sec. 25214.9) "is an emergency and shall be considered by the Office of Administrative Law as necessary for the immediate preservation of the public peace, health, and safety, and general welfare...and shall remain in effect for a period of two years or until revised by DTSC, whichever occurs sooner."

AUTHORITY AND REFERENCE

These regulations are being proposed under the following authorities:

Health and Safety Code section 25141.5. This section grants DTSC authority to adopt, by regulation alternative management standards for disposal of a hazardous waste that would be classified as hazardous solely because it exceeds Total Threshold Limit Concentrations.

Health and Safety Code section 25143.2. This section grants DTSC authority to exclude some recyclable materials from classification as a waste.

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

Health and Safety Code section 25173. This section grants DTSC the authority to ensure that trade secrets used by a person regarding the methods of hazardous waste handling and disposal are used only in connection with the responsibilities of DTSC pursuant to chapter 6.5 of division 20 of the Health and Safety Code and that such trade secrets are not disseminated without the consent of the person.

Health and Safety Code section 25201. This section grants DTSC the authority to require hazardous waste facilities that store, treat, transfer, recover resources from, or dispose of hazardous waste to obtain a hazardous waste facilities permit or other grant of authorization.

Health and Safety Code section 25205.7. This section grants DTSC the authority to enter into a written agreement with a person who applies for a waste classification determination from DTSC pursuant to which that person shall reimburse DTSC, pursuant to Article 9.2 (commencing with Section 25206.1), for the costs incurred by DTSC in processing the application.

Health and Safety Code section 25214.9. This section grants DTSC authority to adopt regulations allowing DTSC to establish management standards as an alternative to one or more of the standards in chapter 6.5 of division 20 of the Health and Safety Code for any specified activity that involves the management of an electronic waste.

Health and Safety Code section 25214.10.2. This section grants DTSC the authority to adopt a regulation pursuant to article 10.3 of chapter 6.5 of division 20 of the Health and Safety Code as an emergency which shall be considered by the Office of Administrative Law as necessary for the immediate preservation of the public peace, health and safety, and general welfare and which shall remain in effect for a period of two years or until revised by DTSC, whichever occurs sooner.

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 25141.5. This section grants DTSC authority to adopt, by regulation alternative management standards for disposal of a hazardous waste that would be classified as hazardous solely because it exceeds Total Threshold Limit Concentrations.

Health and Safety Code section 25143.2. This section grants DTSC authority to exclude some recyclable materials from classification as a waste.

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

Health and Safety Code section 25159.5. This section specifies that DTSC shall, insofar as practicable, make the standards and regulations conform to corresponding federal regulations. This section does not prohibit DTSC from adopting standards or regulations that are more stringent than federal regulations.

Health and Safety Code section 25173. This section grants DTSC the authority to ensure that trade secrets used by a person regarding the methods of hazardous waste handling and disposal are used only in connection with the responsibilities of DTSC pursuant to chapter 6.5 of division 20 of the Health and Safety Code and that such trade secrets are not disseminated without the consent of the person.

Health and Safety Code section 25201. This section grants DTSC the authority to require hazardous waste facilities that store, treat, transfer, recover resources from, or dispose of hazardous waste to obtain a hazardous waste facilities permit or other grant of authorization.

Health and Safety Code section 25205.7. This section grants DTSC the authority to enter into a written agreement with a person who applies for a waste classification determination from DTSC pursuant to which that person shall reimburse DTSC, pursuant to Article 9.2 (commencing with Section 25206.1), for the costs incurred by DTSC in processing the application.

Health and Safety Code section 25214.9. This section grants DTSC authority to adopt regulations allowing DTSC to establish management standards as an alternative to one or more of the standards in chapter 6.5 of division 20 of the Health and Safety Code for any specified activity that involves the management of an electronic waste.

INFORMATIVE DIGEST/ POLICY STATEMENT OVERVIEW

Current State Law

DTSC's regulations (Cal. Code Regs., tit. 22, sec. 66261.9, subsec. (a)) identify cathode ray tubes (CRTs) and CRT glass destined for recycling at a CRT glass manufacturer or primary or secondary lead smelter to be "universal wastes." Universal wastes are subject to regulation pursuant to California Code of Regulations, title 22, chapter 23 (sec. 66273.1 et seq.). Universal waste CRTs and CRT glass regulated pursuant to chapter 23 are exempt from regulation pursuant to chapter 6.5 of division 20 of the Health and Safety Code (commencing with sec. 25100) and its implementing regulations (See Cal. Code Regs., tit. 22, sec. 66261.9, subsec. (a)), except as specified otherwise in chapter 23, and, therefore, are not fully regulated as hazardous wastes pursuant to chapter 6.5.

Health and Safety Code section 25214.9 authorizes DTSC to adopt management standards, including treatment or disposal standards, as an alternative to one or more of the standards in chapter 6.5 of division 20 of the Health and Safety Code for any specified activity that involves the management of hazardous electronic waste, which includes CRT devices and CRTs. The treatment standards for CRTs, adopted pursuant to section 25214.9, are found in California Code of Regulations, title 22, chapter 23, article 7 (Cal. Code Regs., tit. 22, sec., 66273.70 et seq.).

California Code of Regulations, title 22, section 66273.73 authorizes treatment of CRT devices and CRTs pursuant to standards specified in California Code of Regulations, title 22, section 66273.75. Subsection (a)(8) of section 66273.75 requires that a universal waste handler who treats CRTs pursuant to section 66273.73 authority shall "treat CRTs only for the purpose of recycling one or more types of CRT glass and ensure that all the CRT glass is reclaimed at a CRT glass manufacturer or at a primary or secondary lead smelter." Consequently, a person may not treat CRTs to generate CRT glass using the treatment methodologies authorized by section 66273.73 if the purpose of the treatment is for recycling the CRT glass by means other than at a CRT glass manufacturer or at a primary or secondary lead smelter or for disposal.

California Code of Regulations, title 22, section 66273.72, subsections (b) and (c) authorize treatment of CRT devices and CRTs without generating CRT glass, but do not expressly require that the ultimate disposition of the CRTs generated be recycled at a CRT glass manufacturer or at a primary or secondary lead smelter.

Current Federal Law

The U. S. EPA does not regulate CRTs or CRT glass as universal wastes. Instead, under U. S. EPA's "CRT Rule" (71 Fed. Reg. 42928 (Jul.28, 2006)), CRTs and CRT

glass destined for recycling and CRTs exported for reuse are excluded from U.S. EPA hazardous waste regulation if certain conditions are met. (See 40 CFR subpart E (commencing with § 261.39)). If the CRTs are not managed as specified by these conditions, they are not excluded. The CRTs would then be considered hazardous waste (if they exhibit a hazardous waste characteristic) for purposes of U. S. EPA regulation from the time they were "generated", i.e., from the time the decision was made to dispose of them or to release the vacuum for recycling. Under the CRT Rule, processed CRT glass (glass removed from CRTs) that is sent to a CRT glass manufacturer or a lead smelter is not a solid waste, unless it is speculatively accumulated. If it is sent for other types of recycling (other than being used in a manner constituting disposal), it may also be excluded from the definition of a solid waste, and, therefore, would not be regulated by U. S. EPA as a hazardous waste if it meets the criteria of 40 Code of Federal Regulations part 261.2(e)(ii). (See 71 Fed. Reg. 42928, 42929 (7/28/2006)).

The CRT Rule does not prohibit a State authorized to implement its hazardous waste program in lieu of the U.S. EPA program from regulating CRTs and CRT glass as fully regulated hazardous waste or as universal waste, or imposing more stringent requirements on persons generating universal waste CRTs or CRT glass than those imposed by the CRT Rule or other U. S. EPA regulations. (See 71 Fed. Reg. 42928, 42944 (Jul.28, 2006)).

Policy Statement Overview

The State Legislature enacted the Electronic Waste Recycling Act of 2003 (EWRA) (Stats. 2003, ch. 526 (SB 20)) to eliminate electronic waste stockpiles and legacy devices, including waste CRT devices and CRTs, by providing a comprehensive and innovative system for their reuse, recycling, and proper and legal disposal. (See Pub. Resources Code sec. 42461, subd. (a).) To facilitate the operation of such a system, the EWRA included Health and Safety Code section 25214.9 which authorizes DTSC to adopt management standards for electronic devices, including treatment or disposal standards, as an alternative to one or more of the management standards in chapter 6.5 of division 20 of the Health and Safety Code (commencing with sec. 25100) for any specified activity that involves the management of hazardous electronic waste, including CRT devices and CRTs. The EWRA also included Public Resources Code section 42475.2, which authorizes DTSC and the California Integrated Waste Management Board ("CIWMB"), now known as the Department of Resources Recycling and Recovery, or CalRecycle) to adopt emergency regulations to implement and make more specific the EWRA. In early 2004, CIWMB and DTSC each adopted emergency regulations pursuant to section 42475.2 to do so.

CIWMB's emergency regulations (filed May 10, 2004, Register 2004, Number: 20) established a program that provides cost-reimbursement to recyclers of discarded CRT

devices and CRTs who render CRTs unusable as CRTs by “cancelling” the waste CRT (i.e., releasing the vacuum inside the tube or crushing or shredding the CRT devices or CRTs pursuant to the treatment standards and other management requirements specified by DTSC in its emergency regulations).

In its emergency regulations (OAL Reference Number: 04-0526-01E), DTSC authorized treatment of CRT devices and CRTs, and CRT glass derived from such treatment, as universal wastes under less stringent standards than those that would apply if the CRTs and CRT glass were managed as fully regulated hazardous wastes pursuant to chapter 6.5 of division 20 of the Health and Safety Code (commencing with sec. 25100), provided CRT glass generated by the recycler is ultimately sent to a CRT glass manufacturer or a primary or secondary lead smelter for further recycling.¹

The purpose of these relaxed standards is to promote participation by recyclers of CRTs in CalRecycle’s EWRA recycling program while maintaining an appropriate level of regulation over their recycling activities in order to protect human health and safety and the environment. Maximizing participation in the EWRA reimbursement program is necessary to realize its full potential benefit to human health and the environment.

As noted above, DTSC’s existing universal waste regulations continue to require that CRT glass be sent only to a CRT glass manufacturer or a primary or secondary lead smelter for recycling. When DTSC implemented its relaxed standards in 2004, CRT manufacturing possessed a larger capacity to use the amount of CRT glass generated from treatment of CRT devices and CRTs pursuant to DTSC’s regulations than did primary or secondary lead smelters. However, with the advancement of other types of technologies (e.g., flat screen televisions), the demand for the manufacturing of new CRTs has greatly decreased to the extent that the global CRT glass manufacturing market can no longer provide sufficient opportunities for CRT glass recycling. In addition, although smelters still accept CRT glass, they do not have the capacity to significantly promote the recycling of the remaining CRT glass.

Therefore, sending CRT glass for recycling under the existing options no longer remains sustainable for CRT recyclers, including those who would otherwise take advantage of DTSC’s relaxed treatment standards to obtain reimbursement of their recycling costs pursuant to CalRecycle’s current EWRA regulations. In this regard, the effectiveness of DTSC’s existing regulations in furthering the implementation of the recycling program

¹ DTSC adopted these original management standards pursuant to the emergency regulations authority provided by SB 20 in Public Resources Code section 42475.2. When the State Legislature amended the EWRA later in 2004 (Stats. 2004, ch. 863 (SB 50)), it provided DTSC with additional authority to adopt alternate management standards as emergency regulations. See Health and Safety Code section 25214.10.2. Previously, DTSC has relied on its section 25214.10.2 authority to add new electronic devices to the list of covered electronic devices eligible for CIWMB’s reimbursement program (OAL Reference Number 04-1216-03E) and to revise notification requirements (OAL Reference Number 04-1216-03E). The management standards originally adopted through these emergency regulations were finalized in 2009 (Register 2009, No. 6).

intended by the State Legislature in enacting the EWRA has been significantly diminished.

As a result, CRT glass generated pursuant to DTSC's current regulations has also led to CRT and CRT glass mismanagement issues in California, other states and overseas. For example, recyclers of CRTs and CRT glass, including many who benefit from CalRecycle's EWRA reimbursement program, have been either exceeding one year accumulation time limits specified in DTSC's universal waste regulations by postponing or diverting the treatment of CRTs or shipping their CRT glass with no intention of recycling it, effectively bypassing the protections offered by DTSC's universal waste regulations. Consequently, millions of pounds of hazardous waste CRTs and CRT glass either remain at locations across California or have been shipped out of state, potentially for unauthorized use or disposal. Additionally, due to the loss of a viable CRT manufacturing market, which currently only exists overseas (only one CRT manufacturer is currently operating worldwide), over the last two years, CRT glass exported out of California is likely being stockpiled and not being recycled as prescribed by DTSC's current universal waste regulations.

Therefore, in order to continue to encourage proper management of CRTs and CRT glass and promote participation by recyclers of CRTs in CalRecycle's EWRA recycling program, thereby improving the overall effectiveness of the EWRA, the existing options for the ultimate disposition of CRTs and CRT glass need to be expanded and the management standards modified under DTSC's universal waste regulations. This will ensure the appropriate safety measures are created to remain protective of human health and the environment, thus avoiding widespread abandonment or improper disposal of large quantities of this material—in California, in other states, or overseas.

The proposed regulations are compatible with CalRecycle's EWRA reimbursement regulations in that the new disposition options have the potential to promote participation by recyclers in CalRecycle's EWRA recycling program.

Objectives

The overall objective of this emergency rulemaking is to further the purpose of the EWRA by decreasing the potential for release of hazardous wastes to the environment due to mismanagement, stockpiling, abandonment, and unsafe recycling of large quantities of hazardous waste CRTs and CRT glass in California, other states, or overseas.

This rulemaking will meet this objective by expanding the existing options for the disposition of CRT glass currently regulated under DTSC's universal waste regulations by removing the standard that a universal waste handler may treat CRTs to generate CRT glass only if the glass is ultimately sent for recycling to either a CRT glass

manufacturer or a primary or secondary lead smelter. The proposed regulations will continue to authorize this recycling disposition as one option. However, as an alternative, the proposed regulations will also authorize a universal waste handler who treats CRTs to recycle or dispose the generated CRT glass as fully regulated hazardous waste or to take advantage of exclusions from regulation as a hazardous waste provided by chapter 6.5 of division 20 of the Health and Safety Code (commencing with sec. 25100), as specified in the proposed regulations.

The proposed regulations will also provide the same final disposition options and management requirements for a handler that treats CRT devices and CRTs (but does not treat CRTs to generate CRT glass) as are imposed on those that generate CRT glass, except that disposal of hazardous waste CRTs in a class II or class III disposal unit is not authorized.

The proposed regulations will promote recycling over disposal in that the recycling options provided by chapter 6.5 are likely to be pursued by recyclers who seek to reduce their costs and management requirements. In any event, whether the final disposition of CRTs and CRT glass is recycled or disposed, the availability of these additional options made possible by the proposed regulations should operate to decrease the current potential for release of hazardous waste to the environment as a result of mismanagement, stockpiling, abandonment, or unsafe recycling and, in so doing, further the purpose of the EWRA.

Finally, the proposed regulations include new notification requirements, and reporting and recordkeeping obligations intended to promote the enforcement, when necessary, of the new management standards associated with the expanded disposition options. Requirements for protecting trade secrets contained in submittals to DTSC are also provided.

Proposed Regulations:

Introduction

The proposed regulations expand the existing options for the disposition of CRT glass currently regulated under universal waste regulations by removing the standard that a universal waste handler authorized by California Code of Regulations, title 22, section 66273.73 to treat CRTs to generate CRT glass may treat CRTs only if the glass is sent for recycling to either a CRT glass manufacturer or a primary or secondary lead smelter. Under the proposed regulations (Cal. Code Regs., tit. 22, sec. 66273.75), such a handler has one year from the date that the handler begins to accumulate CRTs to treat them and generate universal waste CRT glass, and an additional year to ship the universal waste CRT glass for recycling at a CRT glass manufacturer or at a primary or secondary lead smelter, or to determine whether the universal waste CRT glass will be

recycled by other means or disposed. A universal waste handler who has accumulated CRT glass prior to the effective date of the proposed regulations will be allowed a minimum of six months from the effective date to take advantage of these options. When a handler makes the determination to recycle by other means or dispose the handler is deemed the generator of hazardous waste CRT glass.

Current regulations (Cal. Code Regs., tit. 22, sec. 66273.75) require universal waste handlers who treat CRTs to generate CRT glass to ensure that the CRT glass is ultimately recycled at a CRT glass manufacturer or a primary or secondary lead smelter. The proposed regulations follow a similar approach in that they require universal waste handlers who treat CRTs to generate CRT glass that is not sent for recycling at a CRT glass manufacturer or a primary or secondary lead smelter to ensure that the CRT glass is recycled by other means or disposed, as required by the proposed regulations.

Recycling CRT glass by other means

If the universal waste handler determines to recycle the CRT glass by other means, the handler is deemed the generator of hazardous waste CRT glass and is required to determine whether the CRT glass is excluded from full regulation as hazardous waste and thereby can be managed instead as an excluded recyclable material (ERM) pursuant to Health and Safety Code section 25143.2, subdivision (b) or (d). Upon determining the CRT glass to be an ERM, the handler may manage it as such or apply to DTSC for concurrence with its determination pursuant to California Code of Regulations, title 22, chapter 23, article 9 (commencing with sec. 66273.90), added by the proposed regulations. During the application process, the handler is required to manage the CRT glass as fully regulated hazardous waste. A handler who proceeds to manage the CRT glass as an ERM without DTSC concurrence may be subject to an enforcement action if DTSC subsequently determines the CRT glass is not an ERM.

If the universal waste handler determines that the CRT glass is not an ERM, but would still like to recycle the CRT glass, then the CRT glass must be managed as fully regulated hazardous waste (e.g., CRT glass sent for reclamation (other than by CRT glass manufacturing or smelting) would be subject to generator standards in Chapter 12, including the use of a manifest upon shipment).

A universal waste handler who ships CRT glass directly to a primary or secondary lead smelter or a CRT glass manufacturer will be subject to additional documentation requirements, added by the proposed regulations. However, a universal waste handler who ships CRT glass to a primary or secondary lead smelter or a CRT glass manufacturer through an intermediate facility, as defined in the proposed regulations, would also be required to make contractual arrangements with that intermediate facility that further ensures the CRT glass gets to the intended end-destination facility.

Disposal of CRT glass

If the universal waste handler determines to dispose CRT glass, the handler is also deemed the generator of hazardous waste CRT glass.

The proposed regulations (Cal. Code of Regs., tit. 22, sec. 66273.9)) define various terms related to the disposal of CRT glass, such as “CRT funnel glass” (leaded glass) and “CRT panel glass.” (non-leaded glass). The proposed regulations (Cal. Code Regs., tit. 22, sec. 66273.73)) authorize the separation of CRT panel glass from CRT funnel glass as an allowable treatment method for CRTs. The separated panel glass may be disposed (Cal. Code Regs., tit. 22, sec. 66273.75)) in certain class II or III landfills that meet specified Water Code standards. The proposed regulations (Cal. Code Regs., tit. 22, sec. 66261.4, subsec. (h)) provide for this exclusion from disposal as fully regulated hazardous waste in a class I landfill under the authority of Health and Safety Code section 25141.5.

Health and Safety Code section 25141.5 also allows DTSC to adopt additional management standards for the CRT panel glass prior to disposal. Therefore, to qualify hazardous waste CRT panel glass for disposal in a class II or class III landfill, the proposed regulations (Cal. Code Regs., tit. 22, sec. 66273.75) specify standards for the treatment of CRTs and standards for the management of any CRT panel glass generated by such treatment until the CRT panel glass is determined to meet specific waste criteria also added by the proposed regulations. (Cal. Code Regs., tit. 22, sec. 66273.81)). CRT panel glass must meet the waste criteria for all hazardous constituents, and if met, must be managed prior to disposal in accordance with the additional requirements specified in California Code of Regulations, title 22, chapter 23, article 8 (commencing with sec. 66273.80), thereby further ensuring leaded glass is not disposed in a class II or III landfill. Only then can CRT panel glass be disposed in a class II or III landfill.

Other hazardous waste CRT glass, including CRT funnel glass and commingled CRT panel glass, may only be disposed as fully regulated hazardous waste in a class I landfill (Cal. Code Regs., tit. 22, sec. 66273.75)). Therefore, any legacy glass (generated prior to the adoption of the proposed regulation) cannot qualify for disposal in a class II or III landfill.

Recycling and Disposal of CRTs

Under the proposed regulations (Cal. Code Regs., tit. 22, sec. 66273.72)), universal waste handlers who remove CRTs from CRT devices and/or remove yokes from CRTs are given the same disposition options and are subject to the same regulatory scheme, including those standards identified for the recycling and disposal CRT glass (described above), upon the treatment of CRTs (and CRT devices), except that disposal of hazardous waste CRTs in a class II or class III landfill is not authorized. A universal

waste handler who has accumulated CRTs after removing the CRTs from CRT devices or after removing yokes from CRTs prior to the effective date of the proposed regulations, will be allowed a minimum of six months from the effective date to take advantage of these options.

Current regulations do not require universal waste handlers who remove CRTs from CRT devices and/or remove yokes from CRTs to ensure that the CRTs are legitimately recycled. Under the proposed regulations (Cal. Code Regs., tit. 22, sec. 66273.72)), universal waste handlers who perform one or both of these activities but do not ship the CRTs to another authorized universal waste handler for further treatment (e.g., handlers that ship CRTs out-of-state prior to being sent to a CRT glass manufacturer) are required to ensure (through documentation) that the CRTs are legitimately recycled or disposed.

Notifications, Reports and Recordkeeping

Under the proposed regulations (Cal. Code Regs., tit. 22, sec. 66273.72, 6627.74 and 66273.75)), a universal waste handler who ships CRTs or CRT glass for recycling at a CRT glass manufacturer or at a primary or secondary lead smelter is required to keep and provide to DTSC upon request specified records relative to such shipments.

Under the proposed regulations (Cal. Code Regs., tit. 22, sec. 66273.74)), when a universal waste handler determines to recycle CRTs or CRT glass by means other than for recycling at a CRT glass manufacturer or at a primary or secondary lead smelter, or to dispose CRTs or CRT glass at a class I landfill, the handler must notify DTSC within 15 days of the determination. For disposal of CRTs or CRT glass at a class I landfill, a handler must also maintain records on file, including such information as the technological or economical factors or other reasons for not recycling the CRTs or CRT glass. (Cal. Code Regs., tit. 22, sec. 66273.74)).

The proposed regulations (Cal. Code Regs., tit. 22, sec. 66273.83)) require that a universal waste handler who disposes CRT panel glass at a class II or class III landfill keep records for each shipment. These records shall include documents that demonstrate that the CRT panel glass meets the required waste criteria and that the landfill at which the CRT panel glass has been disposed has been provided with the notifications and the certifications required by the proposed regulations. Additionally, the proposed regulations (Cal. Code Regs., tit. 22, sec. 66273.82)) require the handler to submit a copy of the notification and certification to DTSC at least 60 days prior to the initial shipment of CRT panel glass to each landfill and at other times specified in the proposed regulations.

Trade Secrets Protection

The information required to be submitted to DTSC pursuant to the proposed regulations may contain information entitled to protection as trade secrets. The proposed regulations add article 10 (commencing with sec. 66273.100) to chapter 23 to describe the requirements for making a claim that information submitted to DTSC pursuant to the proposed regulations is entitled to trade secret protection and the administrative process that DTSC will follow to evaluate the claim.

STUDIES RELIED ON

On January 1, 2000, the Florida Center for Solid and Hazardous Waste Management (a University of Florida adjunct) published "Characterization of Lead Leachability from Cathode Ray Tubes using the Toxicity Characteristic Leaching Procedure", in the journal Environmental Science and Technology. The article presented the results of TCLP analysis for monochrome and color CRTs. This study concluded that color CRTs contain lead exceeding the U.S. EPA hazardous waste characteristic threshold level of 5.0 milligrams per liter (the average concentration was 18.5 milligrams per liter). However, the study also concluded the CRT panel glass (separated from the CRT funnel glass, including the frit) either contained no lead or contained lead below the U.S. EPA hazardous waste characteristic threshold level (<1.0 milligram per liter).

In February 2002, the Basel Action Network and the Silicon Valley Toxics Coalition published a report, "Exporting Harm--The High-Tech Trashing of Asia," that highlighted the critical situation caused by the exportation of electronic wastes to China and other developing countries. This report revealed that in the western United States 50 to 80 percent of the electronic wastes collected for recycling are not recycled domestically, but rather are shipped to China and other foreign destinations. Much of this waste is "recycled" under extremely hazardous conditions, where worker health and safety is ignored, and contamination of air, water and soil results from the burning and dumping of electronic waste components. The results of this investigation demonstrated that consumer electronic waste must be regulated in this State in a way designed to prevent its future mismanagement.

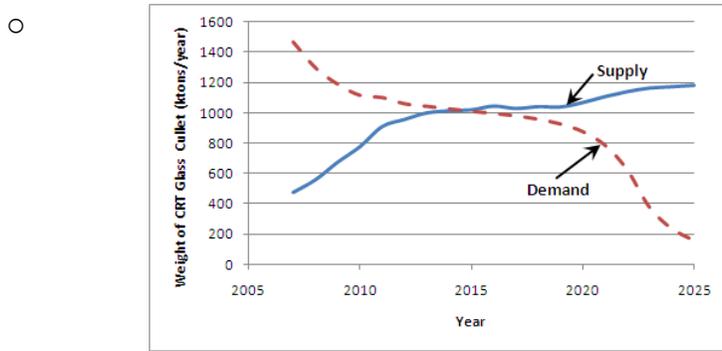
In 2009, of the 78 million pounds of CRTs and CRT glass that were shipped out of California, 20 million pounds were shipped to sources with unknown final dispositions² (not to a lead smelter, CRT glass manufacturer, or other universal waste handler who then sends it to a CRT glass manufacturer).

In 2009 an analysis of global mass flows of primary and secondary CRT glass conducted by researchers at the Massachusetts Institute of Technology (MIT) showed a projection of the supply and demand of CRT glass cullet. The study roughly estimated

² DTSC data compiled from 2009 and 2010 Annual Reports for e-waste Handling and Recycling Activity

the time until supply of CRT cullet exceeds demand to be 2015. The MIT researchers acknowledge that the timing could be sooner depending upon factors such as low TV sales, high collection rates of CRT cullet in Asia, and the low usage of CRT cullet by CRT manufacturers³.

Figure 1: Supply and Demand Curves for CRT Glass Cullet



Source: Gregory, J.; Nadeau, M.; Kirchain, R. Evaluating the Economic Viability of a Material Recovery System: The Case of Cathode Ray Tube Glass. *Environ. Sci. Technol.* 2009 43, 9245–9251.

In 2010, universal waste handlers who treated CRTs to produce CRT glass (e.g., crush) are presumed to have had approximately 30 million pounds of CRTs and CRT glass remaining onsite⁴. Of the 72 million pounds of CRTs and CRT glass shipped out of state, in 2010, 58 million pounds were shipped to sources not involved with lead smelting or CRT glass manufacturing⁵.

These sources include:

- A destination that is known to be linked with a company that uses CRT glass to manufacture building materials (approximately 35 million pounds).
- A destination that is accumulating (and not processing or shipping) CRT glass in a warehouse (approximately 17 million pounds), with no documentation that the glass is destined for further recycling.

³ Gregory et al.,2009. Environmental Science and Technology Issue 43, pages 9245-9251

⁴ DTSC data compiled from 2009 and 2010 Annual Reports for e-waste Handling and Recycling Activity

⁵ Ibid.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) COMPLIANCE

DTSC has found this rulemaking project to be exempt under CEQA. A draft of the Notice of Exemption (NOE) is available for review with the rulemaking file and the NOE will be filed with the State Clearinghouse when the regulations are adopted.

FISCAL IMPACT ESTIMATES

Mandates on Local Agencies and School Districts: DTSC has made a preliminary determination that adoption of these regulations will create no new local mandates.

Estimate of Potential Cost or Savings to Local Agencies Subject to Reimbursement: DTSC has made a preliminary determination that adoption of these regulations will not impose a local mandate or result in costs subject to reimbursement pursuant to part 7 of division 4, commencing with section 17500, of the Government Code or other nondiscretionary costs or savings to local agencies.

Cost or Savings to Any State Agency: DTSC has made a preliminary determination that the proposed regulations will have minimal impact on State costs and will be absorbable with current staffing. DTSC may incur an increased workload associated with: (1) reviewing additional notifications and demonstration documentation; (2) conveying program information and guidance; (3) performing site inspections; and (4) identifying hazardous waste recycling exclusions. DTSC will restructure unit workloads as needed in order to provide training or compliance assistance to enforcement and industry, answer hazardous waste recycling questions, and inspect facilities subject to additional regulatory requirements.

The proposed regulations also subject handlers to additional hazardous waste control laws, which may generate additional revenue for DTSC through generator fees, disposal fees and manifest fees. In addition, the proposed regulations allow DTSC to charge a fee for service to handlers that request concurrence (from the department) that their material meets statutory conditions to be excluded from classification as a hazardous waste.

The proposed regulations may have an impact on State savings, as well, by effectively reducing the amount of time (and resources) needed by DTSC to respond to Public Records Act Requests. New trade secret provisions in the proposed regulations clarify that a handler can only assert a claim of trade secret following specific requirements when submitting demonstration documents requested by DTSC.

Cost or Savings in Federal Funding to the State: DTSC has made a preliminary determination that the proposed regulations will have no impact on Federal revenue or costs.