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Amend California Code of Regulations, title 22, division 4.5, chapter 11, article 1, section 66261.9 to read:

§66261.9. Requirements for Universal Waste.

(a) The hazardous wastes listed in this section are exempt from the management requirements of chapter 6.5 of division 20 of the Health and Safety Code and its implementing regulations except as specified in chapter 23 and, therefore, are not fully regulated as hazardous wastes. The wastes listed in this section are subject to regulation pursuant to chapter 23 and shall be known as “universal wastes.”

- (1) Batteries, as described in section 66273.2, subsection (a);
- (2) Electronic devices, as described in section 66273.3, subsection (a);
- (3) Mercury-containing equipment, as described in section 66273.4, Subsection (a);
- (4) Lamps, as described in section 66273.5, subsection (a) (including, but not limited to, M003 wastes);
- (5) Cathode ray tubes, as described in section 66273.6, subsection (a);
- (6) Cathode ray tube glass, as described in section 66273.7, subsection (a); ~~and~~
- (7) Aerosol cans, as specified in Health and Safety Code section 25201.16; and
- (8) PV modules, as described in section 66273.7.1, subsection (a).

(b) Unless specified otherwise in section 66273.60, universal wastes shall be managed as hazardous wastes pursuant to chapters 10 through 16, 18, and 20 through 22 of this division upon arrival at a destination facility.

Note: Authority cited: Sections 25141, 25150, 25150.6, 25201, 25214.9, 25214.10.1, ~~25219.4~~, 25259 and 58012, Health and Safety Code; and Section 42475, Public Resources Code. Reference: Sections 25117.2, 25141, 25150, 25159.5, 25180 – 25196, 25214.5, 25214.9, 25219, 25219.1, and 25219.2, Health and Safety Code; 40 CFR Section 261.9.

1 **Amend** California Code of Regulations, title 22, division 4.5, Table of Contents, chapter
2 23 to read as follows:

3
4 **Table of Contents**

5
6 ***

7
8 Chapter 23. Standards for Universal Waste Management

9
10 Article 1. General

11
12 ***

13
14 §66273.7.1. Applicability — Photovoltaic Modules (PV Modules)

15
16 ***

17
18 Article 3. Standards for Universal Waste Handlers

19
20 ***

21
22 § 66273.33.5 Universal Waste Management Requirements for Electronic Devices,
23 CRTs, ~~and CRT Glass,~~ and PV Modules.

24
25 ***

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Preliminary Draft For Discussion Purposes Only

1 **Amend** California Code of Regulations, title 22, division 4.5, chapter 23, article 1,
2 section 66273.1 to read:

3
4 **§66273.1. Scope.**

5
6 (a) This chapter establishes requirements for managing universal wastes, as defined in
7 section 66273.9. The following universal wastes are subject to regulation pursuant to
8 this chapter:

- 9 (1) Batteries, as described in section 66273.2, subsection (a);
10 (2) Electronic devices, as described in section 66273.3, subsection (a);
11 (3) Mercury-containing equipment, as described in section 66273.4,
12 subsection (a);
13 (4) Lamps, as described in section 66273.5, subsection (a) (including, but not
14 limited to, M003 wastes);
15 (5) Cathode ray tubes, as described in section 66273.6, subsection (a);
16 (6) Cathode ray tube glass, as described in section 66273.7, subsection (a); ~~and~~
17 (7) Aerosol cans, as specified in Health and Safety Code section 25201.16.; and
18 (8) PV modules, as described in section 66273.7.1, subsection (a).

19 (b) This chapter provides an alternative set of management standards in lieu of
20 regulation as hazardous wastes pursuant to chapters 10 through 16, 18, and 20 through
21 22 of this division. The alternative management standards of articles 1 through 3 of this
22 chapter do not apply to destination facilities, as defined in section 66273.9, except as
23 otherwise specified in section 66273.60, subsections (b) or (c).
24

25
26 NOTE: Authority cited: Sections 25141, 25150, 25150.6, 25201, 25214.9, 25219.1 and
27 25259,58012, Health and Safety Code; and Section 42475, Public Resources Code.

28 Reference: Sections 25141, 25150, 25159.5, 25201, 25212, 25214.6, 25214.9, 25219,
29 25219.1, and 25219.2, Health and Safety Code; 40 CFR Section 273.1.
30

1 **Add** California Code of Regulations, title 22, division 4.5, chapter 23, article 1,
2 section 66 to read:

3
4 **§66273.7.1. Applicability — PV Modules.**

5
6 (a) PV modules covered pursuant to chapter 23.

7 (1) The requirements of this article apply to persons managing PV modules, as
8 defined in section 66273.9, except those listed in subsection (b) of this section.

9 (2) Discarded PV modules that are hazardous waste because the device exhibits the
10 characteristic of toxicity specified in section 66261.24.

11 (b) PV modules not covered pursuant to this chapter. The requirements of this chapter
12 do not apply to the following PV modules:

13 (1) PV modules that are not yet wastes pursuant to chapter 11 as provided in
14 subsection (c) of this section;

15 (2) PV modules that do not exhibit a characteristic of a hazardous waste as set forth
16 in article 3 of chapter 11 and that are not otherwise identified as hazardous waste
17 pursuant to chapter 11 of this division;

18 (3) PV modules that are destined for recycling (or are recycled) by being “used in a
19 manner constituting disposal,” as described in section 66266.20, or that are destined
20 for disposal (or are disposed) to a permitted hazardous waste disposal facility. Such
21 PV modules shall be managed as hazardous wastes pursuant to chapters 10
22 through 16, 18, and 20 through 22 of this division;

23 (4) PV modules that are managed as hazardous wastes pursuant to chapters 10
24 through 16, 18, and 20 through 22 of this division; and

25 (5) PV modules that were previously identified as waste pursuant to chapter 11, but
26 are no longer identified as a waste (e.g., discarded PV modules that is refurbished
27 and is returned to service).

28 (c) Generation of waste PV modules.

29 (1) A used PV module becomes a waste on the date it is discarded (e.g., when
30 removed from service and the owner does not intend to reinstall it because the PV
31 module no longer functions as designed).

32 (2) Unused PV modules.

33 (A) An unused PV module that is not a retrograde material becomes a waste on
34 the date it is discarded (e.g., when stored prior to being sent for reclamation);

35 (B) An unused PV module that is a retrograde material becomes a waste on the
36 date that it becomes a recyclable material pursuant to subsection (e) of the
37 definition of “recyclable materials” in section 66260.10.

38 (d) A respondent in an action to enforce regulations implementing this division who
39 claims that a PV module is not a waste bears the burden of demonstrating that there is
40 a known market or disposition for its use as a PV module.

41
42
43 NOTE: Authority cited: Sections 25141, 25150, 25214.6, 25259, and 58012, Health and
44 Safety Code. Reference: Sections 25141, 25150, and 25159.5, Health and Safety
45 Code.

1 **Amend** California Code of Regulations, title 22, division 4.5, chapter 23, article 1,
2 section 66273.9 to read:

3
4 **§ 66273.9. Definitions.**

5
6 When used in this chapter, the terms listed in this section have the meaning given
7 below. Unless otherwise specified, listed terms that cross-reference the definitions of
8 other terms refer to the definitions set forth in this section for those other terms. Terms
9 that are also defined in chapter 10 of this division are duplicated here solely for
10 convenience of the regulated community. Terms used in this chapter that are not
11 defined in this section but are defined in chapter 10 of this division and/or chapter 6.5 of
12 division 20 of the Health and Safety Code have the meanings given in those sources.

13
14 ***

15 "Photovoltaic Modules (PV modules)"

16 (a) Means any photovoltaic modules (PV module or PV modules) device that converts
17 photons from the sun into electricity for general use and is identified as a hazardous
18 waste because the module exhibits the characteristic of toxicity as specified in article 3
19 of chapter 11 of this division. (Examples of PV modules include but are not limited to
20 rooftop PV modules, PV modules systems operated by utility companies, PV modules
21 powered lighting systems, and heating and cooling systems.)

22 (b) Does not mean:

23 (1) Physically-damaged, fractured or fragmented PV modules that are no longer
24 recognizable as a PV module.

25 (2) Solar-powered electronic devices that have one or more photovoltaic cells
26 incorporated into their structures (e.g., calculators).

27
28 ***

29
30 Note: Authority cited: Sections 25141, 25141.5, 25150, 25214.6, 25150.6, 25201,
31 25214.9, 25259, and 58012, Health and Safety Code; and Section 42475, Public
32 Resources Code. Reference: Sections 25141, 25141.5, 25150, 25159.5, 25201, 25212,
33 25214.6, 25214.9, 25219, 25219.1 and 25219.2, Health and Safety Code; 40 CFR
34 Sections 261.4, 261.5 and 273.9.

35

1 **Amend** California Code of Regulations, title 22, division 4.5, chapter 23, article 3,
2 section 66273.32 to read:

3

4 **§ 66273.32. USEPA Notification, Department Notification, and Reporting**
5 **Requirements for Universal Waste Handlers.**

6

7 (a) USEPA notification requirements.

8

9 ***

10

11 (e) Electronic submissions. If submitted electronically through the Department's
12 universal waste web-based reporting system, Department notifications and annual
13 reports required pursuant to subsections (c) and (d) of this section shall be addressed to
14 the Department at <http://www.dtsc.ca.gov>.

15

16 (f) Written submissions. If submitted in writing, Department notifications and annual
17 reports required pursuant to subsections (c), ~~and (d)~~, and (g) of this section shall be
18 sent to the Department by certified mail, return receipt requested, at the following
19 address: Department of Toxic Substances Control, Universal Waste Notification and
20 Reporting Staff, P.O. Box 806, Sacramento, CA 95812-0806, with the words "Attention:
21 Universal Waste Handling Activities" prominently displayed on the front of the envelope.

22

23 (g) Department notification requirement for universal waste handlers of PV modules.

24

25 (1) Any universal waste handler of PV modules who intends to accept and
26 accumulate but not treat, PV modules from an offsite source shall submit to the
27 Department at the address given in subsection (f) of this section, a written
28 notification containing the information specified in subsection (g)(2) of this section
29 prior to accepting PV modules.

30 (2) This notification shall include:

31 (A) Name of universal waste handler (if the facility owner is different than the
32 facility operator, also include the owner's name);

33 (B) ID Number of the universal waste handler, if applicable;

34 (C) Telephone number of universal waste handler;

35 (D) Mailing address of universal waste handler and physical address, if different
36 from the mailing address, including county;

37 (E) Name, telephone number and e-mail address of the contact person at the
38 universal waste handler's site who should be contacted regarding universal
39 waste management activities;

40 (F) Model number of PV modules accepted

41 (3) Universal waste handlers shall provide to the Department any changes to the
42 information provided pursuant to subsections (g)(1) and (g)(2) of this section within
43 30 days of such changes.

44

45 (h) Electronic submissions. If submitted electronically through the Department's e-mail
46 system, Department notifications required pursuant to subsections (g) of this section
shall be addressed to the Department at PVmodules@dtsc.ca.gov.

1
2
3 Note: Authority cited: Sections 25141, 25150, 25201, 25214.9, 25219.1, 25259, and
4 58012, Health and Safety Code; and Section 42475, Public Resources Code.
5 Reference: Sections 25141, 25150, 25159.5, 25201, 25214.9, 25219, 25219.1, and
6 25219.2, Health and Safety Code; and 40 CFR Section 273.32.
7

Preliminary Draft For Discussion Purposes Only

1 **Amend** California Code of Regulations, title 22, division 4.5, chapter 23, article 3,
2 section 66273.33.5 to read:

3
4 **§ 66273.33.5. Universal Waste Management Requirements for Electronic Devices,
5 CRTs, ~~and CRT Glass,~~ and PV Modules.**

6
7 The requirements of this section apply only to universal waste handlers of electronic
8 devices, CRTs, ~~and/or CRT glass,~~ and PV modules.

9
10 ***

11
12 (d) PV modules.

13 (1) A universal waste handler of PV modules shall

14 (A) Comply with the applicable requirements of sections 66273.30 through
15 66273.32, and of sections 66273.34 through 66273.39, of this article with
16 respect to the management of PV modules; and

17 (B) Manage PV modules in a way that prevents releases of any universal waste
18 or component of a universal waste to the environment under reasonably
19 foreseeable conditions, as follows:

20 1.a. A universal waste handler shall contain any PV module in a manner that
21 prevents breakage and release of components to the environment. If a
22 container is used, such a container shall prevent leakage, spillage, or damage
23 that could cause leakage under reasonably foreseeable conditions.

24 b. Intact PV modules that are managed in a manner that prevents breakage
25 of the PV modules and release of components of the PV modules to the
26 environment under reasonably foreseeable conditions (e.g., stretch-film on a
27 pallet) shall be deemed to comply with subsection (d)(1)(B)1.a. of this
28 section

29 2. A universal waste handler shall immediately clean up and place in a
30 container any PV module that is accidentally or unintentionally broken and
31 may be expected to cause a release of hazardous constituents to the
32 environment under reasonably foreseeable conditions. The container shall be
33 structurally sound, compatible with the contents of the PV modules and shall
34 prevent releases of components to the environment under reasonably
35 foreseeable conditions.

36 (2) Except as otherwise provided in subsection (d)(3) of this section, a universal
37 waste handler of PV modules shall comply with the applicable requirements of article
38 7 of this chapter in addition to the requirements of subsection (d)(1) of this section
39 with respect to PV modules.

40 (3) A universal waste handler of PV modules shall be exempt from the requirements
41 of article 7 of this chapter with respect to the PV modules, if the universal waste
42 handler:

43 (A) Manages only PV modules that are intact (except for the occasional PV
44 module that is accidentally or unintentionally broken and that is managed
45 according to the applicable provisions of this chapter);

- 1 (B) Ensures that the intact PV modules remain intact (except for the occasional
- 2 PV modules that is accidentally or unintentionally broken and that is managed
- 3 according to the applicable provisions of this chapter) throughout the entire time
- 4 they are in the universal waste handler's custody; and
- 5 (C) Complies with the requirements of section (d)(1) of this section.

6
7
8 Note: Authority cited: Sections 25141, 25150, 25201, 25214.6, 25214.9, 25219.1,
9 25259, and 58012, Health and Safety Code; and Section 42475, Public Resources
10 Code. Reference: Sections 25141, 25150, 25159.5, 25201, 25212, 25214.6, 25214.9,
11 25219, 25219.1, and 25219.2, Health and Safety Code; 40 CFR Section 273.33.
12

Preliminary Draft For Discussion Purposes Only

1 **Amend** California Code of Regulations, title 22, division 4.5, chapter 23, article 3,
2 section 66273.34 to read:

3

4 **§ 66273.34. Labeling/Marking.**

5 Except as otherwise provided in subsection (g), (h), and (i) of this section, a universal
6 waste handler shall label or mark universal waste to identify the type of universal waste
7 as specified in subsections (a) through ~~(f)~~(i) of this section.

8 ***

9

10 (h) PV modules (i.e., each PV module), or a container or pallet in or on which the PV
11 modules are contained, shall be labeled or marked clearly with the following phrase:
12 "Universal Waste PV Module(s)."

13

14 (i) In lieu of labeling individual PV modules and/or containers or pallets of PV modules
15 pursuant to subsection (h) of this section, a universal waste handler may accumulate
16 PV modules within a designated area demarcated by boundaries that are clearly labeled
17 with the following phrase: "Universal Waste PV Module(s)."

18

19

20 Note: Authority cited: Sections 25141, 25150, 25201, 25214.6, 25214.9, 25219, 25259,
21 and 58012, Health and Safety Code; and Section 42475, Public Resources Code.

22 Reference: Sections 25141, 25150, 25159.5, 25201, 25212, 25214.6, 25214.9, 25219.1
23 and 25219.2, Health and Safety Code; 40 CFR Section 273.34.

24

1 **Amend** California Code of Regulations, title 22, division 4.5, chapter 23, article 3,
2 section 66273.36 to read:

3
4 **§ 66273.36. Personnel Training.**

5
6 (a) A universal waste handler shall ensure that all personnel who manage universal
7 wastes at the universal waste handler's facility are thoroughly familiar with proper
8 universal waste management and emergency response procedures relative to those
9 persons' responsibilities, as specified in subsections (b) and (c) of this section.

10 (1) For purposes of this section, "personnel who manage universal waste" means
11 any persons who consolidate, sort, treat, recycle, package for transport, offer for
12 transport, or physically relocate containers of universal waste.

13 (2) Persons who, in the course of their normal duties, only generate universal wastes
14 from onsite sources and place them into accumulation containers, areas or locations
15 are not "personnel who manage universal waste" (e.g., an office worker who
16 removes spent batteries from an electronic device).

17 (b) A universal waste handler shall initially train and provide annually, thereafter, training
18 to all personnel who manage or who supervise those who manage universal wastes.
19 Training materials shall be in the form of any written media (e.g., brochures, electronic
20 mail, company letters, pamphlets, posters, etc.) and shall include the date of that
21 material. This training shall include, at a minimum:

22 (1) The types and hazards associated with the universal waste that personnel may
23 manage at the facility (e.g., hazards due to leaded glass in CRT devices or CRTs,
24 and hazards such as cadmium, lead, or selenium in PV modules);

25
26 ***

27
28 Note: Authority cited: Sections 25141, 25150, 25219, 25259, and 58012, Health and
29 Safety Code; and Section 42475, Public Resources Code. Reference: Sections 25141,
30 25150, 25159.5, 25219, 25219.1, and 25219.2, Health and Safety Code; 40 CFR
31 Section 273.36.

32

1 **Amend** California Code of Regulations, title 22, division 4.5, chapter 23, article 3,
2 section 66273.39 to read:

3
4 **§ 66273.39. Tracking Universal Waste Shipments.**

5
6 (a) Receipt of shipments. A universal waste handler shall keep a record of each
7 shipment of universal waste received at the universal waste handler's facility. The
8 record may take the form of a log, invoice, manifest, bill of lading, or other shipping
9 document. The record for each shipment of universal waste received shall include the
10 following information:

- 11 (1) The name and address of the originating universal waste handler from which the
12 universal waste was sent;
13 (2) The quantity [count or weight, consistent with, for example, section 66273.32,
14 subsection (d)] of each type of universal waste received (e.g., batteries, thermostats,
15 lamps, electronic devices, CRTs, CRT glass, PV modules); and
16 (3) The date of receipt of the shipment of universal waste.

17 ***

18 (c) Shipments offsite. A universal waste handler shall keep a record of each
19 shipment of universal waste sent from the universal waste handler's facility to
20 another facility. The record may take the form of a log, invoice, manifest, bill of
21 lading or other shipping document. The record for each shipment of universal waste
22 sent shall include the following information:

- 23 (1) The name and address of the universal waste handler or destination facility to
24 which the universal waste was sent;
25 (2) The quantity [count or weight, consistent with, for example, section 66273.32,
26 subsection (d)] of each type of universal waste sent (e.g., batteries, thermostats,
27 lamps, electronic devices, CRTs, CRT glass, PV modules); and
28 (3) The date of departure of the shipment of universal waste.

29
30 ***

31
32 Note: Authority cited: Sections 25141, 25150, 25150.6, 25219.1, 25219.2, 25259, and
33 58012, Health and Safety Code. Reference: Sections 25141, 25150, 25159.5, 25219,
34 25219.1, and 25219.2, Health and Safety Code; 40 CFR Section 273.39.

35

1 **Amend** California Code of Regulations, title 22, division 4.5, chapter 23, article 5,
2 section 66273.51 to read:

3
4 **Article 5. Standards for Universal Waste Transporters**

5
6 **§ 66273.51. Prohibitions.**

7
8 A universal waste transporter is:

- 9 (a) Prohibited from disposing of universal waste;
10 (b) Prohibited from diluting or treating universal waste, except as a consequence of
11 responding to a release as provided in section 66273.54;
12 (c) Prohibited from transporting more than five CRTs at any one time unless the CRTs
13 are contained as described in section 66273.33.5, subsection (b)(1)(B); ~~and~~
14 (d) Prohibited from transporting more than 100 kilograms or 220 pounds of electronic
15 devices at any one time unless the electronic devices are contained as described in
16 section 66273.33.5, subsection (a)(1)(B); and
17 (e) Prohibited from transporting PV modules more than 100 kilograms or 220 pounds of
18 PV modulesm at any one time unles the PV modules are contained as described in
19 section 66273.33.5, subsection (d)(1)(B).
20
21

22 Note: Authority cited: Sections 25141, 25150, 25150.6, 25201, 25214.9, 25219.1, 25259
23 and 58012, Health and Safety Code; and Section 42475, Public Resources Code.
24 Reference: Sections 25141, 25150, 25159.5, 25201, 25214.9, 25219, 25219.1 and,
25 Health and Safety Code; and 40 CFR Section 273.51.
26

1 **Amend** California Code of Regulations, title 22, division 4.5, chapter 23, article 7,
2 section 66273.70 to read:

3
4

5 **Article 7. Authorization Requirements for Universal Waste Handlers Who Treat**
6 **Universal Wastes**

7
8 **§ 66273.70. Applicability.**
9

10 (a) Except as otherwise provided in subsections (b), (c), and (d) of this section, a
11 universal waste handler, who treats universal waste, is subject to all applicable
12 requirements of chapters 14, 15, 16, 18, 20, and 22 of this division with respect to the
13 treatment of that universal waste.

14 (b) Except as otherwise provided in subsection (d) or (e) of this section, a universal
15 waste handler who manages a universal waste and its integral components, or the
16 components specified below that the handler has removed from the universal waste, for
17 purposes of recycling it or its component(s) or for the purpose of disposing CRTs, ~~or~~
18 CRT glass or PV modules by performing one or more activities listed in one or more of
19 the three categories given in subsection (c) of this section, shall be deemed authorized
20 by the Department to conduct those activities, provided the universal waste handler
21 complies with the applicable requirements of this article in addition to the applicable
22 requirements of subsection (c) of section 66273.33, and to the applicable requirements
23 of subsections (a)(1), (b)(1), ~~and~~ (c)(1) and (d)(1) of section 66273.33.5, and to the
24 applicable requirements of article 8 of this chapter. The authorization created by this
25 subsection shall not be deemed to be any of the following:

- 26 (1) A permit-by-rule;
27 (2) A conditional authorization; or
28 (3) A conditional exemption.

29 (c) Activities eligible for authorization pursuant to subsection (b) of this section are any
30 of the following:

- 31 (1) Removal activities. Removing user-replaceable components from electronic
32 devices, as specified in section 66273.71.
33 (2) Disassembling/draining activities.
34 (A) Removing CRTs from electronic devices, as specified in section 66273.72,
35 subsection (b);
36 (B) Dismantling electronic devices that are not CRT devices and/or removing
37 yokes from CRTs, as specified in section 66273.72, subsection (c);
38 (C) Removing mercury ampules and/or mercury switches from mercury-
39 containing equipment, as specified in section 66273.72, subsection (d); ~~and/or~~
40 (D) Draining liquid mercury from pressure or vacuum gauges, as specified in
41 section 66273.72, subsection (e); and
42 (E) Dismantling PV modules as specified in 66273.72.
43 (3) Treatment activities.
44 (A) Treating electronic devices and/or residual printed circuit boards, as specified
45 in section 66273.73, subsection (a); ~~and/or~~

- 1 (B) Treating CRTs and/or CRT glass, as specified in section 66273.73,
- 2 subsection (b); and
- 3 (C) Treating PV modules as specified in 66273.73.
- 4

5 Note: Authority cited: Sections 25141, 25141.5, 25150, 25201, 25214.6, 25214.9,
6 25214.10.2, ~~25259~~, 26219.1 and 58012, Health and Safety Code; and Section 42475,
7 Public Resources Code. Reference: Sections 25141, 25141.5, 25150, 25159.5, 25201,
8 25212, 25214.6, 25214.9, 25219, 25219.1 and 25219.2, Health and Safety Code
9

Preliminary Draft For Discussion Purposes Only

1
2 **Amend** California Code of Regulations, title 22, division 4.5, chapter 23, article 7,
3 section 66273.72 to read:

4
5 **§ 66273.72. Authorization for Disassembling/Draining Activities.**
6

7 (a)(1) Universal waste handlers shall not conduct any activity pursuant to this section if
8 the activity involves the use or application of:

- 9 (A) Chemicals, including water; and/or
10 (B) External heat.

11 (2) A universal waste handler shall perform a hazardous waste determination
12 pursuant to section 66262.11 for all residuals resulting from the activities authorized
13 by subsection (c) or (f) of this section, and shall:

- 14 (A) Be deemed the generator of all residuals that are hazardous waste.
15 (B) For all residuals that are hazardous wastes, comply with all the applicable
16 requirements of chapters 12, 14, 15, 16, 18, 20, 22 and 23 of this division and the
17 applicable notification requirements in Health and Safety Code section 25153.6,
18 except as otherwise provided in subsections (a)(3), (a)(4), (a)(6) or (a)(7) of this
19 section.
20

21 ***

22 (f) Dismantling PV modules. A universal waste handler who conducts any of the
23 activities identified in subsection (f)(1) of this section shall be deemed authorized by the
24 Department to do so, provided the universal waste handler complies with the
25 requirements in this subsection.

26 (1) The universal waste handler dismantles, or otherwise manually segregates,
27 components from PV modules (e.g., frames, junction boxes, wires, inverter and
28 cables, metals, plastic, batteries, etc.).

29 (2) The universal waste handler shall:

30 (A) Comply with the notification and recordkeeping requirements specified in
31 section 66273.74, subsections (a)(5) and (c)(3);

32 (B) Ensure that all residuals resulting from the activities authorized by subsection
33 (f)(1) of this section that meet the definition of scrap metal in section 66260.10
34 are recycled; and

35 (C) Conduct the activities in a manner that protects persons managing the PV
36 modules, and that prevents releases of any universal wastes and/or any
37 components of universal wastes, to the environment under reasonably
38 foreseeable conditions, as follows:

39 1. Dismantle PV modules over, on, or in, a containment device (e.g., a tray, a
40 box, a workbench, a table,) sufficient in size and construction to contain any
41 universal waste and/or component of such waste that may be released to the
42 environment under reasonably foreseeable conditions.

43 2. Contain any hazardous residuals produced from dismantling PV modules in
44 a manner that prevents releases of the residuals to the environment under
45 reasonably foreseeable conditions.

- 1 3. Immediately clean up and place in a container PV module that is
2 accidentally or unintentionally broken and that may reasonably be expected to
3 cause a release to the environment under reasonably foreseeable conditions.
4 Such a container shall be structurally sound, be compatible with the contents
5 of the PV module and prevent releases to the environment under reasonably
6 foreseeable conditions.
- 7 4. Place PV modules in containers/pallets with packing materials (placed in
8 shipping boxes and/or secured by stretch-film on a pallet) if such materials are
9 necessary to prevent breakage during handling, storage and transportation.
- 10 5. Ensure that persons performing the activities are thoroughly familiar with
11 the hazards associated with such treatment, have access to the proper
12 procedures and protective equipment necessary to conduct the treatment
13 safely, use such protective equipment if required by any applicable health and
14 safety requirements, and comply with the requirements of this section.
- 15 6. Ensure that the facility is operated in compliance with all applicable health
16 and safety laws and regulations [e.g., Cal. Code Regs., tit. 8, ch. 4 (Division
17 of Industrial Safety) subch. 7 (General Industry Safety Orders), group 16
18 (Control of Hazardous Substances), art. 107 (Dusts, Fumes Vapors and
19 Mists), and art. 109 (Hazardous Substances and Processes), and sec. 5198
20 (Lead)].
- 21 7. Ensure that the facility maintains aisle spacing in compliance with
22 applicable fire safety code standards in California.

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25 Note: Authority cited: Sections 25141, 25141.5, 25143.2, 25150, 25173, 25201,
26 25214.6, 25214.9, 25214.10.2, 25219.1, 25259 and 58012, Health and Safety Code;
27 and Section 42475, Public Resources Code. Reference: Sections 25141, 25141.5,
28 25150, 25159.5, 25173, 25201, 25212, 25214.6, 25214.9, 25219, 25219.1 and 25219.2,
29 Health and Safety Code
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Preliminary Draft

1
2 **Amend** California Code of Regulations, title 22, division 4.5, chapter 23, article 7,
3 section 66273.73 to read:

4
5 **§ 66273.73. Authorization for Treatment (Processing) Activities**
6

7 (a) Treatment of electronic devices and PV modules.

8 (1) A universal waste handler described in subsection (a)(1)(A) of this section shall
9 be deemed authorized by the Department to conduct the activities identified in
10 subsection (a)(1)(B) of this section, provided the universal waste handler complies
11 with the requirements specified in subsections (a)(1)(B) and (a)(1)(C) of this section.

12 (A) The universal waste handler treats electronic devices and/or residual printed
13 circuit boards for which the handler is deemed to be the generator pursuant to
14 sections 66273.71 and/or 66273.72 and produces only residuals that, if they
15 exhibit any hazardous waste characteristic described in article 3 of chapter 11 of
16 this division, will meet either of the following criteria when managed pursuant to
17 section 66273.75, subsection (c):

- 18 1. They meet the definition of scrap metal in section 66273.9; or
19 2. They qualify for management as universal wastes pursuant to this chapter.

20 (B) The universal waste handler treats electronic devices and/or residual printed
21 circuit boards for which the handler is deemed to be the generator pursuant to
22 sections 66273.71 and/or 66273.72 by conducting activities other than, or in
23 addition to, the removal activities authorized in section 66273.71 or the
24 disassembling/draining activities authorized by section 66273.72, and using only
25 one or more of the methods allowed pursuant to subsection (c) of this section.

26 (C) The universal waste handler complies with all of the following requirements in
27 addition to the requirements of section 66273.33.5, subsection(a)(1) and (d)(1):

- 28 1. The notification, annual reporting, and recordkeeping requirements
29 specified in section 66273.74; and
30 2. The standards specified in section 66273.75.

31 (2) A universal waste handler described in subsection (a)(2)(A) of this section shall
32 be deemed authorized by the Department to conduct the activities identified in
33 subsection (a)(2)(B) of this section, provided the universal waste handler complies
34 with the requirements specified in subsections (a)(2)(B) and (a)(2)(C) of this section.

35 (A) The universal waste handler treats electronic devices, PV modules and/or
36 residual printed circuit boards for which the handler is deemed to be the
37 generator pursuant to sections 66273.71 and/or 66273.72 and produces any
38 residual that exhibits a hazardous waste characteristic described in article 3 of
39 chapter 11 of this division when managed pursuant to section 66273.75,
40 subsection (c) and meets both of the following criteria:

- 41 1. It does not meet the definition of scrap metal in section 66273.9; and
42 2. It does not qualify for management as universal wastes pursuant to this
43 chapter

44 (B) The universal waste handler treats electronic devices, PV modules and/or
45 residual printed circuit boards for which the handler is deemed to be the

1 generator pursuant to sections 66273.71 and/or 66273.72 by conducting
2 activities other than, or in addition to, the removal activities authorized in section
3 66273.71 and the disassembling/ draining activities authorized in section
4 66273.72, and using only one or more of the methods allowed pursuant to
5 subsection (c) of this section.

6 (C) The universal waste handler complies with all of the following requirements in
7 addition to the requirements of section 66273.33.5, subsection (a)(1) and (d)(1):

- 8 1. The notification, annual reporting, and recordkeeping requirements
9 specified in section 66273.74;
- 10 2. The standards specified in section 66273.75;
- 11 3. The closure plan and financial requirements specified in section 66273.76;
12 and
- 13 4. When applicable, the closure requirements specified in section 66273.77.

14 ***

15 (c) Electronic device, CRT, PV modules and residual printed circuit board treatment
16 methods allowed.

17 (1) Except as otherwise provided in subsection (c)(2) of this section, one or more of
18 the following treatment methods is eligible for authorization pursuant to this section,
19 if performed by a universal waste handler described in subsections (a) and/or (b) of
20 this section:

21 (A) Physical treatment that changes only the physical properties of electronic
22 devices, residual printed circuit boards, and/or CRTs, or PV modules such as
23 cutting, sawing, breaking, shredding, crushing, grinding, screening, sieving,
24 acceleration, or compacting (e.g., screening to separate different particle sizes of
25 the same component);

26 (B) Physical separation based on differences in physical properties such as size,
27 color, density, or ferromagnetism (e.g., screening to separate different
28 components based on differences in their sizes);

29 ***

30 (2) Any treatment activity identified in subsection (c)(1) of this section is not eligible
31 for authorization pursuant to this article, but is instead subject to all applicable
32 requirements of chapters 14, 15, 16, 18, 20, and 22 of this division, if the treatment
33 activity involves:

34 (A) The use or application of;

- 35 1. Chemicals, including water, other than coolant recirculated in CRT cutting
36 machines; and/or
- 37 2. External heat.

38

39 Note: Authority cited: Sections 25141, 25141.5, 25143.2, 25150, 25201, 25214.9,
40 25214.10.2, 25219, 25259 and 58012, Health and Safety Code; and Section 42475,
41 Public Resources Code. Reference: Sections 25141, 25141.5, 25143.2, 25150,
42 25159.5, 25201, 25212, 25214.9, 25219, 25219.1 and 25219.2, Health and Safety
43 Code.
44

1
2 **Amend** California Code of Regulations, title 22, division 4.5, chapter 23, article 7,
3 section 66273.74 to read:

4
5 **§ 66273.74. Notification, Annual Reporting, and Recordkeeping.**

6
7 (a) Notification.

8
9 ***

10 (5) Universal waste handlers of PV modules.

11 Except as otherwise provided in section 66273.72, a universal waste handler who
12 intends to treat any of PV module pursuant to this article shall submit to the
13 Department at the address given in subsection (f) of this section, a written
14 notification containing the following information prior to treating any PV module:

15 (A) Name of universal waste handler;

16 (B) Telephone number of universal waste handler;

17 (C) Mailing address of universal waste handler, and physical address, including
18 county, if different from the mailing address;

19 (D) If different from the notifier pursuant to subsection (a) of this section, the
20 name and mailing address of the organization (as authorized to transact
21 business in California) that owns and/or operates the facility;

22 (E) Name, business telephone number, and e-mail address (if available) of the
23 person at the universal waste handler's site who should be contacted regarding
24 universal waste management activities;

25 (F) Facility ID Number, if issued;

26 (G) A general description of model numbers of PV modules treated;

27 (H) A description of the treatment process(es) to be used; and

28 (I) Documentation that the facility operator has notified the facility property owner
29 (if different from the operator of the facility) that the facility operator is treating PV
30 modules at the facility.

31 ***

32 (c) Recordkeeping.

33 (1)(A) Universal waste handlers of electronic devices and/or CRTs.

34 Except as otherwise provided in sections 66273.71 and 66273.72, a universal waste
35 handler who treats any electronic device and/or CRT pursuant to this article shall
36 maintain on file at the universal waste handler's facility, the following documents as
37 specified:

38 ***

39 (3) Universal waste handlers of PV modules.

40 Except as otherwise provided in sections 66273.71 and 66273.72, a universal waste
41 handler who treats any PV modules pursuant to this article shall maintain on file at
42 the universal waste handler's facility, the following documents as specified:

43 (A) A copy of the notification submitted to the Department as required by
44 subsection (a)(5) of this section.

1 (B) A current copy of any local air district permit and/or other relevant permit
2 required for the facility, beginning no later than the date on which the local air
3 district and/or other relevant permitting authority required the universal waste
4 handler to possess such a permit.

5
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7 Note: Authority cited: Sections 25141, 25141.5, 25143.2, 25150, 25201, 25214.6,
8 25214.9, 25214.10.2, 26219.1, 25259 and 58012, Health and Safety Code; and Section
9 42475, Public Resources Code. Reference: Sections 25141, 25141.5, 25143.2, 25150,
10 25159.5, 25179.6, 25201, 25212, 25214.6, 25214.9, 25219, 25219.1 and 25219.2,
11 Health and Safety Code.
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Preliminary Draft For Discussion Purpose

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Amend California Code of Regulations, title 22, division 4.5, chapter 23, article 7, section 66273.74 to read:

§ 66273.75. Treatment (Processing) Standards.

A universal waste handler who treats electronic devices, residual printed circuit boards, and/or CRTs or PV modules pursuant to section 66273.73 shall comply with the following standards:

(a) Treatment

The universal waste handler shall:

- (1) Utilize only treatment methods identified in section 66273.73, subsection (c);
- (2) Ensure that all mercury-containing lamps, PCB capacitors, and other components containing fluids (i.e., liquids or gases) that would be identified as hazardous wastes, are removed prior to treatment methods that may release the fluids such as cutting, sawing, breaking, shredding, crushing, grinding, screening, sieving, acceleration, or compacting;
- (3) Conduct treatment activities over, or in, a containment device (e.g., a tray, a box, a workbench, a table, or an enclosed machine) sufficient in size and construction to contain any materials that might be released to the environment under reasonably foreseeable conditions.
- (4) Ensure that all hazardous wastes generated from treatment activities and sent offsite for disposal are managed (i.e., manifested) in accordance with the applicable requirements of article 2 of chapter 12 of this division.
- (5) Comply with the requirements of sections 66265.18 and 66265.25 of chapter 15 of this division to the extent that those requirements apply to facility location and design standards.
- (6) Ensure that all treatment is conducted in compliance with all applicable state and local air pollution control laws and regulations.
- (7) Treat electronic devices that are not CRT devices, PV modules and/or residual printed circuit boards only for the purpose of recycling one or more of their components.
- (8) For disposal of CRT panel glass at a class II or class III landfill pursuant to this section and article 8 of this chapter:
 - (A) Separate CRT panel glass from CRT funnel glass; and
 - (B) Remove all phosphor powders from the CRT panel glass.
- (9) Not accept for treatment, any electronic devices or PV modules or CRTs that are managed, or that are required to be managed, as hazardous wastes pursuant to chapters 10 through 16, 18, 20 and 22 of this division, unless authorized to do so pursuant to a hazardous waste facility permit or other authorization granted by the Department pursuant to those chapters.

(b) Containment of residuals.

- (1) The universal waste handler shall manage all residuals produced from treating electronic devices, residual printed circuit boards, and/or CRTs, or PV modules in a

1 manner that prevents a release to the environment of any universal waste or any
2 component thereof, as follows:

3 (2) Contain any residuals that are produced from treating electronic devices, residual
4 printed circuit boards, and/or CRTs, or PV modules in a manner that prevents
5 releases of hazardous residuals to the environment under reasonably foreseeable
6 conditions.

7 (3) Clean up and immediately place in a container any electronic device, residual
8 printed circuit board, and/or CRT or PV modules that is accidentally or
9 unintentionally broken and that might reasonably be expected to cause a release to
10 the environment under reasonably foreseeable conditions. Such containers shall be
11 structurally sound, be compatible with the contents of the electronic devices, residual
12 printed circuit boards, and/or CRTs or PV modules and prevent releases under
13 reasonably foreseeable conditions.

14 ***

15
16 (d) Worker safety.

17 (1) A universal waste handler, who treats electronic devices, residual printed circuit
18 boards, and/or CRTs or PV modules shall be thoroughly familiar with the hazards
19 associated with such treatment, have access to the proper procedures and
20 protective equipment necessary to conduct the treatment safely, use such protective
21 equipment if required by any applicable health and safety requirements, and comply
22 with the requirements of this section;

23 (2) A universal waste handler, who treats electronic devices, residual printed circuit
24 boards, and/or CRTs or PV modules shall ensure that the universal waste handler's
25 facility is operated in compliance with all applicable health and safety laws and
26 regulations [e.g., Cal. Code Regs., tit. 8, ch. 4 (Division of Industrial Safety), subch.
27 7 (General Industry Safety Orders), group 16 (Control of Hazardous Substances),
28 art. 107 (Dusts, Fumes Vapors and Mists), and art. 109 (Hazardous Substances and
29 Processes), and sec. 5198 (Lead)].

30
31 (e) Zoning.

32 (1) A universal waste handler, who treats electronic devices, residual printed circuit
33 boards, and/or CRTs or PV modules using any of the methods allowed pursuant to
34 this section, shall ensure that such treatment is consistent with local zoning
35 requirements and land use patterns applicable to the universal waste handler's
36 facility.

37 ***

38
39 Note: Authority cited: Sections 25141, 25141.5, 25143.2, 25150, 25201, 25214.9,
40 25214.10.2, 25219.1, 25259 and 58012, Health and Safety Code; and Section 42475,
41 Public Resources Code. Reference: Sections 25141, 25141.5, 25143.2, 25150,
42 25159.5, 25173, 25201, 25212, 25214.9, 25219, 25219.1 and 25219.2, Health and
43 Safety Code; Sections 42479, Public Resources Code.

44

1 **Amend** California Code of Regulations, title 22, division 4.5, chapter 23, article 7,
2 section 66273.76 to read:

3
4 **§ 66273.76. Closure Plan and Financial Requirements.**

5
6 (a) Except as otherwise provided in subsections (a)(4) and (b)(5) of this section, and in
7 addition to the universal waste handler notification required pursuant to section
8 66273.74, subsection (a), a universal waste handler who intends to conduct one or
9 more of the treatment activities described in section 66273.73, subsections (a)(2) and
10 (b) shall submit the information specified in subsections (a)(1) through (d) of this section
11 to the Department in the manner and at the address given in subsections (e) and (f) of
12 this section, no later than 30 calendar days prior to initially conducting those treatment
13 activities:

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18 Note: Authority cited: Sections 25141, 25150, 25201, 25214.9, 25219.1, 25259 and
19 58012, Health and Safety Code; and Section 42475, Public Resources Code.

20 Reference: Sections 25141, 25150, 25159.5, 25201, 25212, 25214.9, 25219, 25219.1
21 and 25219.2, Health and Safety Code.
22

1 **Amend** California Code of Regulations, title 22, division 4.5, chapter 23, article 7,
2 section 66273.77 to read:

3
4 **§ 66273.77. Closure of Universal Waste Treatment Facilities.**

5
6 (a) Closure notification.

7 A universal waste handler who intends to close a universal waste treatment facility or
8 any universal waste treatment unit, including universal waste units that also treat
9 residual printed circuit boards that have been determined to be exempt scrap metal
10 pursuant to section 66273.71, subsection (e), section 66273.72, subsection (a)(3), or
11 section 66273.75, subsection (c)(1)(C), and who conducts any of the treatment activities
12 described in section 66273.73, subsection (a)(2) or (b) shall:

13
14 ***

15
16 Note: Authority cited: Sections 25141, 25150, 25201, 25214.9, 25219.1, 25259 and
17 58012, Health and Safety Code; and Section 42475, Public Resources Code.

18 Reference: Sections 25141, 25150, 25159.5, 25201, 25212, 25214.9, 25219, 25219.1
19 and 25219.2, Health and Safety Code.