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Title 22@ Social Security

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Division 4.5@ Environmental Health Standards for the Management of Hazardous Waste

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Chapter 16@ Recyclable Materials (Recyclable Hazardous Wastes)

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Article 2@ Generator, Transporter and Facility Operator Requirements

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Section 66266.21@ Requirements

66266.21 Requirements

(a)

Recyclable materials that are placed on the land are regulated as hazardous wastes according to this division and Chapter 6.5, Division 20 of the Health and Safety Code, unless the requirements of subdivision (b) of this section are met.

(b)

Recyclable materials that are placed on the land and which meet all applicable requirements for exclusion from classification as a waste or for an exemption set forth in section 25143.2 of the Health and Safety Code (HSC), except for the requirement set forth in HSC section 25143.2(e)(2), shall not be regulated pursuant to HSC section 25143.2(e)(2) if the following requirements are met. (1) The recyclable material shall be a non-RCRA hazardous waste. (2) The recyclable material shall not be used as an ingredient in an industrial furnace, as defined in section 66260.10, to produce a product that is placed on the land, unless either of the following criteria are met: (A) the industrial furnace is operating pursuant to the requirements of Article 8 of Chapter 16, "Hazardous Wastes Burned in Boilers or Industrial Furnaces," with regard to the hazardous constituents in the recyclable material (the owner or operator of the industrial furnace must also comply with all requirements of the local air quality management district or air pollution control district); or (B) the owner or operator of the industrial furnace has a permit from the local air quality management district or air pollution control

district addressing the hazardous constituents in the recyclable material (in this case, the local air quality management district or air pollution control district would have sole jurisdiction over air emissions from hazardous constituents in the recyclable material). (3) The recyclable material, either in its existing state or in processed products, shall not be used in agriculture as a fertilizer, soil amendment, agricultural mineral, auxiliary soil and plant substance, or animal feed. (4) The recyclable material shall not meet the criteria for a hazardous waste set forth in this division because of: (A) the characteristics of acute toxicity set forth in paragraphs (a)(3) through (a)(5) of section 66261.24; or (B) constituents listed in paragraph (a)(7) of section 66261.24; or (C) any criterion of an extremely hazardous waste as set forth in sections 66261.110 and 66261.113; or (D) asbestos content exceeding one (1) percent by weight, as specified in section 66261.24(a)(2)(A) of this chapter. (5) Where the recyclable material is used as an ingredient in the manufacture of a product that is placed on the land, hazardous constituents in the recyclable material whose concentrations are greater than or equal to the Soluble Threshold Limit Concentrations (STLCs) set forth in section 66261.24(a)(2)(A) shall have chemically reacted or become physically bound so as not to leach from the product containing the recyclable material. Specifically, the hazardous constituents shall not leach out of the product in concentrations that would exceed the applicable STLC, once the effect of dilution by other ingredients (as explained below) has been taken into account.

In order to demonstrate that the hazardous constituents in the recyclable material are bound in the product so that they would not exceed the applicable STLC, even when eliminating the effect of dilution by other ingredients, the following procedures must be used. (A) Sampling of the recyclable material and the product shall be conducted according to the sampling methods described in

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd edition, U.S. Environmental Protection Agency, 1986, or one of the sampling methods listed in Appendix I, Chapter 11 of this division. (B) Analysis of the recyclable material and the product shall be conducted according to the Waste Extraction Test (WET), Appendix II, Chapter 11 of this division or an alternative test method approved pursuant to 22 CCR section 66260.21. (C) The concentration of the hazardous constituents in the final product must be multiplied by the dilution factor inherent in combining the recyclable material with other materials. The dilution factor is calculated by dividing the weight of the final product made with the recyclable material by the weight of the recyclable material used in the product, or

$$\frac{\text{weight of final product}}{\text{weight of recyclable material}} = \text{dilution factor}$$

The final calculation of the hazardous constituents present in the product, as determined by taking into account the effects of dilution, must be less than the applicable STLC. [The following is an example of how these calculations can be done. A ton of spent sandblast grit, which is hazardous due to a mean soluble lead concentration of 12 mg/L, is combined with nineteen tons of other aggregate and asphalt to produce twenty tons of asphaltic concrete. The dilution factor is calculated by dividing the twenty tons of final product, including the recyclable material, by the original one ton of recyclable material. This gives us a dilution factor of 20. The asphaltic concrete is then subjected to the WET and yields mean results for lead of 0.23 mg/L. This number is then multiplied by the dilution factor, 20, for a result of 4.60 mg/L. This final result, 4.60 mg/L, does not exceed the STLC for lead of 5 mg/L and therefore meets the criterion. Note: This is only an example of how to implement this requirement and does not provide guidelines for hazardous waste sampling and analysis. Furthermore this example is not binding on the regulated

community.] (6) Where the recyclable material is used as a substitute for a commercial product or as an ingredient in the manufacture of a product, the final product shall not contain constituents at concentrations that cause the product to exhibit hazardous characteristics pursuant to Chapter 11 of this division, other than those constituents that are also found in the same or greater concentrations in a comparable commercial product. The only exception to this requirement is if, prior to using the recyclable material, the person claiming an exclusion obtains the department's written concurrence that: (A) the concentrations of hazardous constituents greater than those present in a comparable commercial product improve the quality of the product made from the recyclable material and do not increase the hazards to public health or the environment of that product; or (B) if no comparable commercial product exists, the hazardous constituents in the recyclable material that cause the product to exhibit a characteristic of a hazardous waste are beneficial to the product and do not cause the product to pose a threat to public health or the environment. (7) Prior to use of the recyclable material, any person wishing to manage the recyclable material under the claim to an exclusion or exemption pursuant to this article must obtain a written certification from a qualified independent engineer or engineering geologist, registered in the state of California, that the recyclable material and the product containing that material meet the applicable standards or specifications for the intended use of the recyclable material and product of the American Society for Testing and Materials (ASTM), the American Association of State Highway and Transportation Officials (AASHTO), the American National Standards Institute (ANSI), the Uniform Building Code (UBC), or the standards of a government agency having jurisdiction over the applications of that recyclable material or product. Where the certification is not appropriate for an engineer or engineering

geologist, but can be provided by another qualified professional, or where standards other than those listed are appropriate, or where there are no applicable standards for a particular use of a recyclable material, the person wishing to claim an exclusion or exemption may meet this requirement by obtaining prior written approval from the department. The person requesting the department's determination shall submit documentation to the department supporting the alternative certification or standards, or absence of standards.

(1)

The recyclable material shall be a non-RCRA hazardous waste.

(2)

The recyclable material shall not be used as an ingredient in an industrial furnace, as defined in section 66260.10, to produce a product that is placed on the land, unless either of the following criteria are met: (A) the industrial furnace is operating pursuant to the requirements of Article 8 of Chapter 16, "Hazardous Wastes Burned in Boilers or Industrial Furnaces," with regard to the hazardous constituents in the recyclable material (the owner or operator of the industrial furnace must also comply with all requirements of the local air quality management district or air pollution control district); or (B) the owner or operator of the industrial furnace has a permit from the local air quality management district or air pollution control district addressing the hazardous constituents in the recyclable material (in this case, the local air quality management district or air pollution control district would have sole jurisdiction over air emissions from hazardous constituents in the recyclable material).

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also comply with all requirements of the local air quality management district or air pollution control district); or

(B)

the owner or operator of the industrial furnace has a permit from the local air quality management district or air pollution control district addressing the hazardous constituents in the recyclable material (in this case, the local air quality management district or air pollution control district would have sole jurisdiction over air emissions from hazardous constituents in the recyclable material).

(3)

The recyclable material, either in its existing state or in processed products, shall not be used in agriculture as a fertilizer, soil amendment, agricultural mineral, auxiliary soil and plant substance, or animal feed.

(4)

The recyclable material shall not meet the criteria for a hazardous waste set forth in this division because of: (A) the characteristics of acute toxicity set forth in paragraphs (a)(3) through (a)(5) of section 66261.24; or (B) constituents listed in paragraph (a)(7) of section 66261.24; or (C) any criterion of an extremely hazardous waste as set forth in sections 66261.110 and 66261.113; or (D) asbestos content exceeding one (1) percent by weight, as specified in section 66261.24(a)(2)(A) of this chapter.

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66261.113; or

(D)

asbestos content exceeding one (1) percent by weight, as specified in section

66261.24(a)(2)(A) of this chapter.

(5)

Where the recyclable material is used as an ingredient in the manufacture of a product that is placed on the land, hazardous constituents in the recyclable material whose concentrations are greater than or equal to the Soluble Threshold Limit Concentrations (STLCs) set forth in section 66261.24(a)(2)(A) shall have chemically reacted or become physically bound so as not to leach from the product containing the recyclable material. Specifically, the hazardous constituents shall not leach out of the product in concentrations that would exceed the applicable STLC, once the effect of dilution by other ingredients (as explained below) has been taken into account. In order to demonstrate that the hazardous constituents in the recyclable material are bound in the product so that they would not exceed the applicable STLC, even when eliminating the effect of dilution by other ingredients, the following procedures must be used. (A) Sampling of the recyclable material and the product shall be conducted according to the sampling methods described in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd edition, U.S. Environmental Protection Agency, 1986, or one of the sampling methods listed in Appendix I, Chapter 11 of this division. (B) Analysis of the recyclable material and the product shall be conducted according to the Waste Extraction Test (WET), Appendix II, Chapter 11 of this division or an alternative test method approved pursuant to 22 CCR section 66260.21. (C) The concentration of the hazardous constituents in the final product must be multiplied by the dilution factor inherent in combining the recyclable material with other materials. The dilution factor is calculated by dividing the weight of the final product made with

the recyclable material by the weight of the recyclable material used in the product, or

$$\text{weight of final product} \div \text{weight of recyclable material} = \text{dilution factor}$$

The final calculation of the hazardous constituents present in the product, as determined by taking into account the effects of dilution, must be less than the applicable STLC. [The following is an example of how these calculations can be done. A ton of spent sandblast grit, which is hazardous due to a mean soluble lead concentration of 12 mg/L, is combined with nineteen tons of other aggregate and asphalt to produce twenty tons of asphaltic concrete. The dilution factor is calculated by dividing the twenty tons of final product, including the recyclable material, by the original one ton of recyclable material. This gives us a dilution factor of 20. The asphaltic concrete is then subjected to the WET and yields mean results for lead of 0.23 mg/L. This number is then multiplied by the dilution factor, 20, for a result of 4.60 mg/L. This final result, 4.60 mg/L, does not exceed the STLC for lead of 5 mg/L and therefore meets the criterion. Note: This is only an example of how to implement this requirement and does not provide guidelines for hazardous waste sampling and analysis. Furthermore this example is not binding on the regulated community.]

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(B)

Analysis of the recyclable material and the product shall be conducted according to the Waste Extraction Test (WET), Appendix II, Chapter 11 of this division or an alternative test method approved pursuant to 22 CCR section 66260.21.

(C)

The concentration of the hazardous constituents in the final product must be multiplied by the dilution factor inherent in combining the recyclable material with other materials. The dilution factor is calculated by dividing the weight of the final product made with the recyclable material by the weight of the recyclable material used in the product, or $\frac{\text{weight of final product}}{\text{weight of recyclable material}} = \text{dilution factor}$. The final calculation of the hazardous constituents present in the product, as determined by taking into account the effects of dilution, must be less than the applicable STLC. [The following is an example of how these calculations can be done. A ton of spent sandblast grit, which is hazardous due to a mean soluble lead concentration of 12 mg/L, is combined with nineteen tons of other aggregate and asphalt to produce twenty tons of asphaltic concrete. The dilution factor is calculated by dividing the twenty tons of final product, including the recyclable material, by the original one ton of recyclable material. This gives us a dilution factor of 20. The asphaltic concrete is then subjected to the WET and yields mean results for lead of 0.23 mg/L. This number is then multiplied by the dilution factor, 20, for a result of 4.60 mg/L. This final result, 4.60 mg/L, does not exceed the STLC for lead of 5 mg/L and therefore meets the criterion. Note: This is only an example of how to implement this requirement and does not provide guidelines for hazardous waste sampling and analysis. Furthermore this example is not binding on the regulated community.]

(6)

Where the recyclable material is used as a substitute for a commercial product or as an ingredient in the manufacture of a product, the final product shall not contain constituents at concentrations that cause the product to exhibit hazardous characteristics pursuant to Chapter 11 of this division, other than those constituents that are also found in the same or greater concentrations in a comparable commercial product. The only exception to this requirement is if, prior to using the recyclable material, the person claiming an exclusion obtains the department's written

concurrence that: (A) the concentrations of hazardous constituents greater than those present in a comparable commercial product improve the quality of the product made from the recyclable material and do not increase the hazards to public health or the environment of that product; or (B) if no comparable commercial product exists, the hazardous constituents in the recyclable material that cause the product to exhibit a characteristic of a hazardous waste are beneficial to the product and do not cause the product to pose a threat to public health or the environment.

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(B)

if no comparable commercial product exists, the hazardous constituents in the recyclable material that cause the product to exhibit a characteristic of a hazardous waste are beneficial to the product and do not cause the product to pose a threat to public health or the environment.

(7)

Prior to use of the recyclable material, any person wishing to manage the recyclable material under the claim to an exclusion or exemption pursuant to this article must obtain a written certification from a qualified independent engineer or engineering geologist, registered in the state of California, that the recyclable material and the product containing that material meet the applicable standards or specifications for the intended use of the recyclable material and product of the American Society for Testing and Materials (ASTM), the American Association of State Highway and Transportation Officials (AASHTO), the American National Standards Institute (ANSI), the Uniform Building Code (UBC), or the standards of a government agency having jurisdiction over

the applications of that recyclable material or product. Where the certification is not appropriate for an engineer or engineering geologist, but can be provided by another qualified professional, or where standards other than those listed are appropriate, or where there are no applicable standards for a particular use of a recyclable material, the person wishing to claim an exclusion or exemption may meet this requirement by obtaining prior written approval from the department. The person requesting the department's determination shall submit documentation to the department supporting the alternative certification or standards, or absence of standards.