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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 15@ Interim Status Standards for Owners and Operators of Hazardous Waste Transfer, Treatment, Storage, and Disposal Facilities

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Article 6@ Water Quality Monitoring and Response Programs for Interim Status Facilities

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Section 66265.99@ Evaluation Monitoring Program

66265.99 Evaluation Monitoring Program

(a)

An owner or operator required pursuant to section 66265.91 to establish an evaluation monitoring program for a regulated unit shall, at a minimum, comply with the requirements of this section for that unit. The evaluation monitoring program shall be used to assess the nature and extent of the release from the regulated unit and to design a corrective action program meeting the requirements of section 66264.100 of article 6 of chapter 14.

(b)

The owner or operator shall collect and analyze all data necessary to assess the nature and extent of the release from the regulated unit. This assessment shall include a determination of the rate of migration of hazardous constituents and the spatial distribution and concentration of each constituent of concern throughout the zone affected by the release. The owner or operator shall complete this assessment as soon as technically feasible and, with 15 days of completion, shall submit to the Department a written report containing an assessment of environmental quality.

(c)

Based on the data collected pursuant to subsections (b) and (e) of this section, the owner or operator shall update the engineering feasibility study required under section 66265.98 (l)(6). The owner or operator shall submit this engineering

feasibility study to the Department as soon as technically feasible.

(d)

The owner or operator of any facility required to obtain a permit shall use the data collected pursuant to subsection (b) of this section and the engineering feasibility study submitted pursuant to subsection (c) of this section, to prepare Part B of the permit application under section 66270.14 of chapter 20 or to update Part B of the permit application if Part B has been previously submitted. At a minimum, the application shall include the following information: (1) a detailed assessment of the nature and extent of the release from the regulated unit; (2) a proposed water quality protection standard including any proposed concentration limits greater than background under section 66264.94(c), and all data necessary to justify each such limit; (3) a detailed description of proposed corrective action measures that will be taken to achieve compliance with the water quality protection standard proposed for a corrective action program; and (4) a plan for a water quality monitoring program that will demonstrate the effectiveness of the proposed corrective action.

(1)

a detailed assessment of the nature and extent of the release from the regulated unit;

(2)

a proposed water quality protection standard including any proposed concentration limits greater than background under section 66264.94(c), and all data necessary to justify each such limit;

(3)

a detailed description of proposed corrective action measures that will be taken to achieve compliance with the water quality protection standard proposed for a corrective action program; and

(4)

a plan for a water quality monitoring program that will demonstrate the effectiveness of the proposed corrective action.

(e)

In addition to the requirements set forth in subsections (b), (c), and (d) of this section, the owner or operator shall continue to monitor groundwater, surface water and the unsaturated zone to evaluate changes in water quality resulting from the release from the regulated unit. In conducting this monitoring, the owner or operator shall comply with the following requirements: (1) The owner or operator shall install water quality monitoring systems that are appropriate for evaluation monitoring and that comply with the provisions of section 66265.97. These water quality monitoring systems may include all or part of existing monitoring systems. (2) The owner or operator shall select a list of monitoring parameters for each medium (groundwater, surface water, and the unsaturated zone) to be monitored pursuant to section 66265.97. The list for each medium shall include all hazardous constituents that have been detected in that medium and shall include those physical parameters, waste constituents and reaction products that provide a reliable indication of changes in water quality resulting from the release from the regulated unit to that medium. The owner or operator shall specify each list of monitoring parameters in the water quality sampling and analysis plan after considering the following factors: (A) the types, quantities and concentrations of constituents in wastes managed at the regulated unit; (B) information that demonstrates a sufficient correlation between the proposed monitoring parameters and the constituents of concern specified for the unit; (C) the mobility, stability and persistence of waste constituents or their reaction products; (D) the detectability of physical parameters, waste constituents and

reaction products; and (E) the background values and the coefficients of variation of proposed monitoring parameters in groundwater, surface water and the unsaturated zone. (3) The owner or operator shall conduct sampling and analyses for the monitoring parameters listed in the water quality sampling and analysis plan. The owner or operator shall specify in the water quality sampling and analysis plan the frequencies for collecting samples and for conducting statistical analyses to evaluate changes in water quality due to the release from the regulated unit. For groundwater, samples from each monitoring point and each background monitoring point shall be collected at least quarterly during the compliance period of the regulated unit, including the times of expected highest and lowest annual elevations of the groundwater surface. The Department may approve sampling at times other than the expected highest and lowest annual elevations, if appropriate, however quarterly sampling is still required. The owner or operator shall conduct more frequent sampling where necessary to protect human health or the environment. When specifying the frequencies for collecting samples and conducting statistical analyses for groundwater, the owner or operator shall consider the groundwater flow rate and any variation in groundwater flow rate and direction. (4) In addition to monitoring for the monitoring parameters specified pursuant to subsection (e)(2) of this section, the owner or operator shall periodically monitor for all constituents of concern specified in the water quality sampling and analysis plan and evaluate changes in water quality due to the release from the regulated unit. The owner or operator shall specify the frequencies for monitoring pursuant to this subsection after considering the degree of certainty associated with the demonstrated correlation between values for monitoring parameters and values for the constituents of concern. Monitoring pursuant to this subsection shall be conducted at least every five years; (5) The

owner or operator shall conduct water quality monitoring for each monitoring parameter and each constituent of concern in accordance with section 66265.97(e)(12). The owner or operator shall maintain a record of water quality analytical data as measured and in a form necessary for the evaluation of changes in water quality due to the release from the regulated unit. (6) The owner or operator shall analyze samples from all monitoring points affected by a release from the regulated unit for all constituents contained in Appendix IX to chapter 14 at least annually to determine whether additional hazardous constituents are present and, if so, at what concentration(s). The owner or operator may propose to modify the number of monitoring points and specific Appendix IX analytes based on site-specific conditions and previous Appendix IX sampling results. If the Department approves the proposal, it shall be incorporated into the water quality sampling and analysis plan. If the owner or operator finds Appendix IX constituents in the groundwater, surface water or the unsaturated zone that are not already identified in the water quality sampling and analysis plan as constituents of concern, the owner or operator may resample within one month and repeat the analysis for those constituents. Resampling may occur within a different time frame provided the owner or operator receives written approval from the Department. If the second analysis confirms the presence of new constituents, the owner or operator shall report the concentration of these additional constituents to the Department by certified mail within seven days after the completion of the second analysis and the owner or operator shall add them to the list of constituents of concern specified in the water quality sampling and analysis plan unless documentation is maintained in the facility operating record that demonstrates that the constituent is not reasonably expected to be in or derived from waste in the regulated unit. If the owner or operator does not

resample, then the owner or operator shall report the concentrations of these additional constituents to the Department by certified mail within seven days after completion of the initial analysis and the owner or operator shall add them to the list of constituents of concern specified in the water quality sampling and analysis plan unless documentation is maintained in the facility operating record that demonstrates that the constituent is not reasonably expected to be in or derived from waste in the regulated unit. (7) The owner or operator shall evaluate all water quality data obtained pursuant to subsection (e) of this section and all water level data obtained pursuant to section 66264.97(e)(15) on a quarterly basis to determine the rate and extent of migration of hazardous constituents and to describe the nature of changes in the geometry and geochemistry of the volume affected by the release. This information shall be reviewed with respect to the design criteria for the corrective action program. If the evaluation indicates that the plan for corrective action is insufficient, the owner or operator shall: (A) notify the Department by certified mail within seven days of such determination; and (B) within 90 days of such determination, submit, for approval by the Department any appropriate changes to the application for a permit; and (8) the owner or operator shall submit to the Department by March 1, following each calendar year, a report on the results of the evaluation monitoring program including, but not limited to, the calculated rate of migration of hazardous constituents in groundwater.

(1)

The owner or operator shall install water quality monitoring systems that are appropriate for evaluation monitoring and that comply with the provisions of section 66265.97. These water quality monitoring systems may include all or part of existing monitoring systems.

(2)

The owner or operator shall select a list of monitoring parameters for each medium (groundwater, surface water, and the unsaturated zone) to be monitored pursuant to section 66265.97. The list for each medium shall include all hazardous constituents that have been detected in that medium and shall include those physical parameters, waste constituents and reaction products that provide a reliable indication of changes in water quality resulting from the release from the regulated unit to that medium. The owner or operator shall specify each list of monitoring parameters in the water quality sampling and analysis plan after considering the following factors: (A) the types, quantities and concentrations of constituents in wastes managed at the regulated unit; (B) information that demonstrates a sufficient correlation between the proposed monitoring parameters and the constituents of concern specified for the unit; (C) the mobility, stability and persistence of waste constituents or their reaction products; (D) the detectability of physical parameters, waste constituents and reaction products; and (E) the background values and the coefficients of variation of proposed monitoring parameters in groundwater, surface water and the unsaturated zone.

(A)

the types, quantities and concentrations of constituents in wastes managed at the regulated unit;

(B)

information that demonstrates a sufficient correlation between the proposed monitoring parameters and the constituents of concern specified for the unit;

(C)

the mobility, stability and persistence of waste constituents or their reaction products;

(D)

the detectability of physical parameters, waste constituents and reaction products; and

(E)

the background values and the coefficients of variation of proposed monitoring parameters in groundwater, surface water and the unsaturated zone.

(3)

The owner or operator shall conduct sampling and analyses for the monitoring parameters listed in the water quality sampling and analysis plan. The owner or operator shall specify in the water quality sampling and analysis plan the frequencies for collecting samples and for conducting statistical analyses to evaluate changes in water quality due to the release from the regulated unit. For groundwater, samples from each monitoring point and each background monitoring point shall be collected at least quarterly during the compliance period of the regulated unit, including the times of expected highest and lowest annual elevations of the groundwater surface. The Department may approve sampling at times other than the expected highest and lowest annual elevations, if appropriate, however quarterly sampling is still required. The owner or operator shall conduct more frequent sampling where necessary to protect human health or the environment. When specifying the frequencies for collecting samples and conducting statistical analyses for groundwater, the owner or operator shall consider the groundwater flow rate and any variation in ground water flow rate and direction.

(4)

In addition to monitoring for the monitoring parameters specified pursuant to subsection (e)(2) of this section, the owner or operator shall periodically monitor for all constituents of concern specified in the water quality sampling and analysis plan and evaluate changes in water quality due to the release from the regulated unit. The owner or operator shall specify the frequencies for monitoring pursuant to this subsection after considering the degree of certainty associated with the demonstrated

correlation between values for monitoring parameters and values for the constituents of concern. Monitoring pursuant to this subsection shall be conducted at least every five years;

(5)

The owner or operator shall conduct water quality monitoring for each monitoring parameter and each constituent of concern in accordance with section 66265.97(e)(12). The owner or operator shall maintain a record of water quality analytical data as measured and in a form necessary for the evaluation of changes in water quality due to the release from the regulated unit.

(6)

The owner or operator shall analyze samples from all monitoring points affected by a release from the regulated unit for all constituents contained in Appendix IX to chapter 14 at least annually to determine whether additional hazardous constituents are present and, if so, at what concentration(s). The owner or operator may propose to modify the number of monitoring points and specific Appendix IX analytes based on site-specific conditions and previous Appendix IX sampling results. If the Department approves the proposal, it shall be incorporated into the water quality sampling and analysis plan. If the owner or operator finds Appendix IX constituents in the groundwater, surface water or the unsaturated zone that are not already identified in the water quality sampling and analysis plan as constituents of concern, the owner or operator may resample within one month and repeat the analysis for those constituents. Resampling may occur within a different time frame provided the owner or operator receives written approval from the Department. If the second analysis confirms the presence of new constituents, the owner or operator shall report the concentration of these additional constituents to the Department by certified mail within seven days after the completion of the second analysis and the owner or

operator shall add them to the list of constituents of concern specified in the water quality sampling and analysis plan unless documentation is maintained in the facility operating record that demonstrates that the constituent is not reasonably expected to be in or derived from waste in the regulated unit. If the owner or operator does not resample, then the owner or operator shall report the concentrations of these additional constituents to the Department by certified mail within seven days after completion of the initial analysis and the owner or operator shall add them to the list of constituents of concern specified in the water quality sampling and analysis plan unless documentation is maintained in the facility operating record that demonstrates that the constituent is not reasonably expected to be in or derived from waste in the regulated unit.

(7)

The owner or operator shall evaluate all water quality data obtained pursuant to subsection (e) of this section and all water level data obtained pursuant to section 66264.97(e)(15) on a quarterly basis to determine the rate and extent of migration of hazardous constituents and to describe the nature of changes in the geometry and geochemistry of the volume affected by the release. This information shall be reviewed with respect to the design criteria for the corrective action program. If the evaluation indicates that the plan for corrective action is insufficient, the owner or operator shall:

(A) notify the Department by certified mail within seven days of such determination; and (B) within 90 days of such determination, submit, for approval by the Department any appropriate changes to the application for a permit; and

(A)

notify the Department by certified mail within seven days of such determination; and

(B)

within 90 days of such determination, submit, for approval by the Department any

appropriate changes to the application for a permit; and

(8)

the owner or operator shall submit to the Department by March 1, following each calendar year, a report on the results of the evaluation monitoring program including, but not limited to, the calculated rate of migration of hazardous constituents in groundwater.

(f)

The owner or operator may demonstrate that a source other than the regulated unit caused the evidence of a release or that the evidence is an artifact caused by an error in sampling, analysis or statistical evaluation or by natural variation in groundwater, surface water or the unsaturated zone. Upon a successful demonstration, the Department shall specify that the owner or operator shall reinstitute a detection monitoring program meeting the requirements of section 66265.98. In making a demonstration under this subsection, the owner or operator shall: (1) notify the Department by certified mail in writing that the owner or operator intends to make a demonstration pursuant to this subsection; (2) submit a report to the Department that demonstrates that a source other than the regulated unit caused the evidence of a release or that the apparent noncompliance with the standard evidence resulted from error in sampling, analysis, or evaluation or from natural variation in groundwater, surface water or the unsaturated zone; (3) submit to the Department an amended water quality sampling and analysis plan to reinstitute a detection monitoring program for the unit. This amended plan shall include all appropriate changes to the monitoring program; and (4) continue to monitor in accordance with the evaluation monitoring program established pursuant to this section.

(1)

notify the Department by certified mail in writing that the owner or operator intends to make a demonstration pursuant to this subsection;

(2)

submit a report to the Department that demonstrates that a source other than the regulated unit caused the evidence of a release or that the apparent noncompliance with the standard evidence resulted from error in sampling, analysis, or evaluation or from natural variation in groundwater, surface water or the unsaturated zone;

(3)

submit to the Department an amended water quality sampling and analysis plan to reinstitute a detection monitoring program for the unit. This amended plan shall include all appropriate changes to the monitoring program; and

(4)

continue to monitor in accordance with the evaluation monitoring program established pursuant to this section.

(g)

The Department shall require interim corrective action measures where necessary to protect human health or the environment.

(h)

If the owner or operator determines that the evaluation monitoring program does not satisfy the requirements of this section, the owner or operator shall, within 90 days, submit an amended water quality sampling and analysis plan to make any appropriate changes to the program.

(i)

Any time the Department determines that the evaluation monitoring program does not satisfy the requirements of this section, the Department shall send written notification of such determination to the owner or operator by certified

mail, return receipt requested. The owner or operator shall, within 90 days of such notification by the Department, submit an amended water quality sampling and analysis plan to make appropriate changes to the program.