

**CHAPTER 14: OPERATIONAL STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES.**

**CHAPTER OVERVIEW:**

This chapter is primarily based on 40 Code of Federal Regulations (CFR), Part 264. Some portions of Chapter 14 are based on Articles 17 through 32 (Division 4, Chapter 30) of existing Title 22 of the California Code of Regulations (CCR), Chapter 6.5 of Division 20 of the Health and Safety Code (H&SC), or Subchapter 15 of Title 23 of the CCR. As discussed in the introduction to this Statement of Reasons (SOR), the proposed Chapter 14 regulations are based on one or more of these state laws wherever the state law is more stringent or broader than the corresponding federal law. Chapter 14 sets forth minimum standards for the management of hazardous wastes in California. These standards apply to all owners and operators of permitted hazardous waste management facilities, except as specifically provided otherwise in this chapter. Some articles in Chapter 14 establish standards that apply generally to all or most types of hazardous waste management facilities, other articles establish standards which are specific to a particular type of facility. The subjects covered by the general standards include: identification number, waste analysis, security, inspections, personnel training, requirements for ignitable/reactive/incompatible hazardous wastes, location and design standards, preparedness and prevention, contingency plan and emergency procedures, manifesting, reporting, recordkeeping, water quality and environmental monitoring, closure and post-closure, and financial responsibility. Chapter 14 establishes specific standards for facilities using the following types of hazardous waste management units: containers, tank systems, surface impoundments, waste piles, land treatment, landfills, incinerators, and miscellaneous units. The chapter title is being slightly modified from the title of 40 CFR, Part 264 by substituting the word "management" for "treatment, storage, and disposal". This is a nonsubstantive change made to conform to changes in the state statute (H&SC, Sections 25117.1 and 25117.2).

This chapter specifies operational standards applicable to owners and operators of hazardous waste facilities.

**ARTICLE 1: GENERAL**

This article is based on Subpart A of 40 CFR, Part 264. It sets forth general information pertaining to standards for owners and operators of permitted hazardous waste management facilities including: the purpose, scope, and applicability of Chapter 14, and the relationship between the Chapter 14 standards and the Chapter 15 interim status standards and the Department of Health Services' (Department's) ability to take enforcement actions.

Section 66264.1: This section, which is based on 40 CFR, Section 264.1, specifies the purpose, scope, and applicability of the Chapter 14 regulations. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR and as follows:

Section 66264.1(a): The word "national" is being deleted because this language is not applicable in the context of state regulations.

Section 66264.1(d): This subsection, which pertains to hazardous waste permits-by-rule for injection wells with Underground Injection Control (UIC) Program permits, is being deleted in order to comply with existing, more stringent state law. H&SC, Section 25159.15 prohibits the operation of a hazardous waste injection well in California without a hazardous waste facility permit meeting requirements set forth in the H&SC. Permits-by-rule are not allowed for hazardous waste injection wells under California law.

Section 66264.1(f): This subsection pertains to the applicability of certain federal regulations in states that have received federal authorization to conduct a Resource Conservation and Recovery Act (RCRA) hazardous waste program. It is being deleted because this language is not applicable in the context of state regulations.

40 CFR, Sections 264.1(g)(1), (2), (5), and (6): These sections of the federal regulation provide for exemptions from these requirements which are not allowed under existing, more stringent state regulations (Title 22, CCR, Section 66300) and are, therefore, not being included in the proposed state regulations. Specifically, certain municipal or industrial solid waste facilities which manage non-regulated hazardous waste, certain recyclers, totally enclosed treatment facilities, and elementary neutralization units and wastewater treatment units are exempt from regulation under 40 CFR, Section 264.1(g).

Section 66264.1(g)(9): This section conforms with 40 CFR, Section 264.1(g)(9) except for the following changes:

The phrase "or a transfer facility storing manifested shipments of hazardous waste in containers" is being added to clarify that both the transporter and the transfer facility are exempt from the requirement to obtain a permit, if certain conditions are met. This regulation conforms with existing H&SC, Section 25123.3.

The maximum time allowed for storing manifested shipments of hazardous waste in containers at a transfer facility without a

permit or Interim Status Document (ISD) is being revised from "ten (10) days" to "144 hours". This change is necessary to comply with existing, more stringent state law (H&SC, Section 25123.3).

Compliance with proposed Title 22, CCR, Section 66263.18 is being added as a condition for this exemption from the permitting requirements. This addition is necessary to conform to existing Title 22, CCR, Section 66532 which is more stringent than the corresponding federal regulation. The sentence structure of this section is being modified to accommodate this and the other changes discussed above.

Section 66264.2: This is a new section. This section establishes that the permit modifications which are required to comply with the provisions of this chapter shall be in accordance with a schedule of compliance established by the Department. This section is necessary to clarify to the permitted facilities that they have to comply with the provisions of this chapter within a certain period of time specified in the compliance schedule of the approved permit modifications.

Section 66264.3: This section, which is based on 40 CFR, Section 264.3, specifies the relationship of the Chapter 14 standards to the Chapter 15 interim status standards. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR.

Section 66264.4: This section, which is based on 40 CFR, Section 264.4, clarifies the Department's ability to take enforcement actions pursuant to the H&SC. This section conforms to the corresponding federal regulation except that the reference to RCRA, Section 7003 is being changed to the corresponding H&SC section because the state does not have authority to take enforcement actions under RCRA, Section 7003. Additionally, this change clarifies that the Department may pursue enforcement actions using the full range of its state statutory authority. This change is being made for completeness and clarity and does not in any way alter the Department's enforcement authority. The section title is being modified to reflect this change.

## ARTICLE 2: GENERAL FACILITY STANDARDS

This article is based on Subpart B of 40 CFR, Part 264. It sets forth general standards applicable to all permitted hazardous waste facilities, including: identification numbers; required notices; general waste analysis; security; inspections; personnel training; requirements for ignitable, reactive or incompatible hazardous wastes; and location and design standards.

Section 66264.10: This section, which is based on 40 CFR, Section 264.10, specifies the applicability of this article. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR and as follows:

40 CFR, Section 264.10(b): This subsection which provides for a limitation on the applicability of floodplain requirements is being deleted in order to conform with existing, more stringent Title 22, CCR, Section 67120, which does not provide for such a limitation. Additionally, a related phrase at the end of the first sentence (originally 40 CFR, Section 264.10(a)), "and in paragraph (b) of this section", is being deleted.

Section 66264.11: This section, which is based on 40 CFR, Section 264.11, specifies the requirement concerning identification numbers. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR.

Section 66264.12: This section, which is based on 40 CFR, Section 264.12, specifies facility notification requirements. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR.

Section 66264.13: This section, which is based on 40 CFR, Section 264.13, specifies requirements concerning general waste analysis. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR and as follows:

Section 66264.13(b)(3): This section, which pertains to the sampling portion of the facility waste analysis plan, is being modified to conform with existing Title 22, CCR, Section 67102(b)(3), which is broader in scope than the corresponding federal regulation.

40 CFR, Section 264.13(b)(7): This subsection pertains to surface impoundments which are exempted under 40 CFR, Section 268.4 from the land disposal restrictions. This subsection is not being included in the proposed regulations because the state statute (H&SC, Section 25179.5, et seq.) does not allow this exemption. (See the SOR for Chapter 18 for more information pertaining to this change.)

Section 66264.14: This section, which is based on 40 CFR, Section 264.14, specifies requirements concerning security. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR and as follows:

Section 66264.14(a): The new language "as required in Section 66270.14(b)(4) of Chapter 20" is being added following the word 'Department'. This cross reference is necessary to clarify that the demonstration referred to in this regulation occurs when Part B of the permit application is submitted.

Section 66264.14(c): This section conforms with 40 CFR, Section 264.14(c) except for the following changes:

The phrase "Hazardous Waste Area" is being added following the word "Danger", which appears twice in this subsection. The first change is necessary to comply with existing, more stringent state regulations (Title 22, CCR, Section 67103(c)). The second change is being made for consistency.

The word "Spanish" is being added following the word "English". This change is necessary to comply with existing, more stringent state regulations (Title 22, CCR, Section 67103(c)).

The parenthetical expression "e.g., facilities in counties bordering the Canadian province of Quebec must post signs in French, facilities in counties bordering Mexico must post signs in Spanish" is being deleted. The reference to the Quebec border is not applicable in California and, as previously stated, state regulations pertaining to Spanish-language signs are more stringent than the federal requirement.

Section 66264.15: This section, which is based on 40 CFR, Section 264.15, specifies general inspection requirements. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR and as follows:

Section 66264.15(b)(4): The reference in the corresponding 40 CFR regulation to Section (66)264.194 is being changed to 66264.195. This change is necessary to correct an erroneous reference in the federal regulation.

Section 66264.16: This section, which is based on 40 CFR, Section 264.16, specifies the training requirements for facility personnel. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR and as follows:

Section 66264.16(b): The phrases "six (6) months after the effective date of these regulations or" and "whichever is later" are being deleted. This change is necessary to conform with existing, more stringent state regulation (Title 22, CCR, Section 67105(b)).

Section 66264.17: This section, which is based on 40 CFR, Section 264.17, specifies the general requirements for managing ignitable, reactive, or incompatible hazardous wastes. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR.

Section 66264.18: This section, which is based on 40 CFR, Section 264.18, sets forth permitted facility location standards relating to seismic faults, floodplains, salt formations, and underground mines and caves. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR and as follows:

Section 66264.18(a)(1): This section conforms with 40 CFR, Section 264.18(a)(1) except for the following changes:

The phrase "or facilities undergoing substantial modification" is being added following the phrase "Portions of new facilities". This change is necessary to conform with existing Title 22, CCR, Section 66391(a)(11)(A). The corresponding federal regulation is less stringent in that it applies the seismic standard to new facilities only.

The last sentence (which is in the comment section of the federal regulation) is being deleted. The sentence states that certain states are assumed to be in compliance with the seismic standards. California is not one of those states and, thus, this sentence is not applicable in California.

Section 66264.18(b)(1): The phrase "or within the maximum high tide" is being added following the word "floodplain". This change is necessary to conform with existing, more stringent state regulation (Title 22, CCR, Section 67120(b)).

Additionally, the phrase "or maximum high tide" is being added following "100 year flood" and the words "or tide" are being added after the word "flood" for consistency with the first change.

Section 66264.18(b)(1): The last sentence in this subsection is based on the Comment following 40 CFR, Section 264.18(b)(1)(ii), but is being modified to delete language pertaining to the transfer of wastes to hazardous waste facilities in other states. This change is necessary because the Department has no authority over facilities outside California.

40 CFR, Section 264.18(b)(1)(ii): This section of the federal regulation provides for exemptions to the floodplain standards which are not allowed under existing, more stringent state regulations (Title 22, CCR, Section 67120). Therefore, this section is not being included in the proposed state regulations.

Section 66264.18(c): The phrase "except for the Department of Energy Waste Isolation Pilot Project in New Mexico" is being deleted because this language is not applicable in California.

Section 66264.25: This section, which is based on and is necessary to conform with Title 22, CCR, Section 67108, sets forth seismic and precipitation design standards.

Section 66264.25(a): The words "and all" are being inserted before the phrase "cover systems and drainage control systems" for clarification. This wording of the existing Title 22 regulation is awkward and confusing.

### ARTICLE 3: PREPAREDNESS AND PREVENTION

This article is based on Subpart C of 40 CFR, Part 264. It sets forth the requirements for owners and operators of permitted facilities pertaining to procedures and equipment intended to prevent and prepare the facilities for emergencies.

Section 66264.30: This section is based on 40 CFR, Section 264.30, which specifies the applicability of this article. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR.

Section 66264.31: This section, which is based on 40 CFR, Section 264.31, sets forth requirements for the facility design and operation to minimize the possibility of the occurrence of an emergency situation. This section conforms to the corresponding federal regulation except for generic changes specified in the introduction to this SOR and as follows:

The word "located" is being added to conform with the standards set forth in existing Title 22, CCR, Section 66300(f). These standards are more stringent than the corresponding federal standards.

Section 66264.32: This section, which is based on 40 CFR, Section 264.32, sets forth the requirements for a facility to have specified equipment in order to be prepared for an emergency situation. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR.

Section 66264.33: This section, which is based on 40 CFR, Section 264.33, specifies the requirements for the testing and maintenance of emergency equipment to assure its proper operation in the time of emergency. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR.

Section 66264.34: This section, which is based on 40 CFR, Section 264.34, specifies requirements pertaining to communication and alarm system access by the facility personnel. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR.

Section 66264.35: This section, which is based on 40 CFR, Section 264.35, sets forth requirements for reserved aisle space for the unobstructed movement of personnel and equipment in time of

emergency. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR and as follows:

The phrase ". . . unless it can be demonstrated to the Department. . ." has been modified to state ". . . unless it is demonstrated pursuant to Section 66270.14(b)(6) to the Department. . .". This cross reference is necessary to clarify that the waiver request justification must be in the Part B application.

Section 66264.37: This section, which is based on 40 CFR, Section 264.37, sets forth requirements for facility personnel to make arrangements with local authorities for coordination in the event of an emergency. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR and as follows:

Section 66264.37(a)(1): Language is being added to this section to incorporate the Title 22, CCR, Section 67126(a)(1) requirement for familiarizing the local Office of Emergency Services (OES) with the layout of the facility. This more stringent requirement is not contained in the corresponding federal regulation.

#### ARTICLE 4: CONTINGENCY PLAN AND EMERGENCY PROCEDURES

This article is based on Subpart D of 40 CFR, Part 264. It sets forth the requirements for owners and operators of permitted facilities to establish contingency plans and emergency procedures for the facility operation.

Section 66264.50: This section is based on 40 CFR, Section 264.50, which specifies the applicability of this article. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR.

Section 66264.51: This section, which is based on 40 CFR, Section 264.51, addresses the purpose and implementation of the contingency plan. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR.

Section 66264.52: This section, which is based on 40 CFR, Section 264.52, specifies the content of the contingency plan for the facility. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR and as follows:

Section 66264.52(d): The phrase "(see Section 66270.14)" is being added for clarification.

Section 66264.52(g): This new subsection which states, "The plan shall include the current telephone number of the state OES." has been added to accommodate a concern expressed by EPA. Federal regulations have a specific telephone number for the National Response Center, while current state regulations simply require a call to the state OES. Requiring the facility contingency plan to contain the current telephone number for the state OES, will address EPA's concern.

Section 66264.53: This section, which is based on 40 CFR, Section 264.53, sets forth requirements pertaining to the distribution of copies of the contingency plan. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR.

Section 66264.54: This section, which is based on 40 CFR, Section 264.54, sets forth conditions under which the contingency plan must be amended. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR.

Section 66264.55: This section, which is based on 40 CFR, Section 264.55, sets forth requirements for the facility to have an emergency coordinator available at all times. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR.

Section 66264.56: This section, which is based on 40 CFR, Section 264.56, sets forth the procedures to be followed in the event of an emergency. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR and as follows:

Section 66264.56(d)(2): In this subsection the words "in every situation" are being incorporated to conform to the requirement of existing Title 22, CCR Section 67145(d)(2), which is more specific and, therefore, more stringent than the corresponding federal regulation.

Section 66264.56(d)(2): Federal regulation requires that the on-scene coordinator for a geographic area, or the National Response Center, be notified in case of an emergency. The State law is more specific, and requires that the state OES be notified in every situation. Therefore, this section of the proposed regulation is being revised to reflect this specific state requirement which is set forth in existing Title 22, CCR, Section 67145(d)(2).

ARTICLE 5: MANIFEST SYSTEM, RECORDKEEPING, AND REPORTING:

This article is based on 40 CFR, Part 264, Subpart E and Title 22, CCR, Sections 67160, 67161, 67162, 67163, 67164, 67165, 67166, and 67167. It sets forth general requirements and recordkeeping procedures for use of the manifest and additional reporting requirements.

Section 66264.70: This is based on 40 CFR, Section 264.70 which specifies the applicability of this article to owners and operators of both on-site and off-site facilities. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR and as follows:

Section 66264.70: The sentence referencing 40 CFR, Section 264.73(b) is being deleted. It states that Section 264.73(b) applies only to permittees who treat, store, or dispose of hazardous waste on-site where such wastes were generated. Section 67160 does not have this exemption from operating record requirements and is therefore more stringent than federal law.

Section 66264.71: This is based on 40 CFR, Section 264.71. It establishes the procedure for using the manifest. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR and as follows:

Section 66264.71(a)(2) and (b)(2) and (b)(4) and (c): The "Comments" are being deleted. They are explanatory in nature and do not satisfy the definition of regulations as provided in Government Code, Section 11342.

Section 66264.71(a)(5) and (b)(5): These subsections are being added to the corresponding federal regulation. Section 67168(a) requires a facility receiving hazardous waste other than by pipeline to submit to the Department, within thirty (30) days of receipt of hazardous waste, a legible copy of the manifest used. This is more stringent than federal regulations.

Section 66264.72: This is based on 40 CFR, Section 264.72 which specifies the method for reporting manifest discrepancies. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR.

Section 66264.73: This is based on 40 CFR, Section 264.73 which specifies requirements and the process for keeping a written operating record at a facility. This section conforms to the

corresponding federal regulation except for the generic changes specified in the introduction to this SOR and as follows:

Section 66264.73(b)(2): The "Comment" is being deleted. It is explanatory in nature and does not satisfy the definition of regulations as provided in Government Code, Section 11342.

Section 66264.73(b)(3): Reference to 40 CFR, Section 268.4(a) which refers to regulations for treatment of restricted hazardous waste surface impoundments is being deleted. Existing State law, H&SC, Section 25208.4(c), prohibits discharge of restricted hazardous wastes into a surface impoundment; thus 40 CFR, Section 268.4(a) cannot be incorporated.

Section 66264.74: This is based on 40 CFR, Section 264.74 which establishes the process for availability, retention and disposition of records. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR and as follows:

Section 66264.74(a): This subsection specifies that all records will be furnished upon request for inspection to the Department. Section 67164 specifies that the State Water Resources Control Board (SWRCB), and the appropriate regional water quality control board may also request the records for inspection. This is more stringent than federal law and these agencies are being added to the subsection.

Section 66264.74(c): This subsection specifies a copy of records of waste disposal locations and quantities must be submitted to the Department and local land authority upon closure. Section 67164(c) requires that a copy also must be submitted to the appropriate regional water quality control board. This is more stringent than federal law and this requirement is being added to the subsection.

Section 66264.75: This is based on 40 CFR, Section 264.75 which specifies the owner or operator of a hazardous waste facility must prepare and submit to the Department a Biennial report. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR and as follows:

Section 66264.75: The term "Biennial" is being deleted and replaced with "Annual." The phrase "even numbered" is also being deleted. Section 67165 requires that permitted facilities submit reports annually to the Department. This is more stringent than the federal requirement for a Biennial report.

For the December 1990 to January 1991 comment period, the form number and revision date for the report form was added.

Section 66264.75: This section requires an annual report be submitted to the Department. Section 67165 requires that a copy also be submitted to the appropriate regional water quality control board. This is being added to the subsection.

Section 66264.75: The phrase "forms provided by the Department" is replacing the EPA form reference. Section 67165 requires the report to be submitted on forms provided by the Department. These forms include all requirements of the EPA form.

Section 66264.75(d): New language is being added that requires the "EPA and California hazardous waste numbers, and U.S. DOT hazard class." This subsection specifies that a description and the quantity of hazardous waste be reported. These requirements currently exist in Section 66470(d) and is more stringent than federal regulations.

Section 66264.75(d): This subsection is being added to establish a process for the proper DOT hazard class description of non-RCRA hazardous wastes is being added. All RCRA hazardous wastes have a proper description, but not all non-RCRA hazardous wastes do. This will provide a means of describing non-RCRA hazardous wastes when there is no corresponding DOT hazard class description available.

Section 66264.75(k): This subsection is being added to the corresponding federal regulation because this requirement currently exists in section 67165(h). This is more stringent than federal regulations.

Section 66264.76: This is based on 40 CFR, Section 264.76 which specifies that if a facility accepts any hazardous waste from an off-site source without an accompanying manifest it is required to submit a report of this activity to the Department. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR and as follows:

Section 66264.76: The reference to EPA's form 8700-13B which is used by a facility when hazardous waste is received without a manifest is being deleted. Section 67166 specifies the format and information to be included when a facility submits an unmanifested waste report to the Department. This includes all requirements of the EPA form. Language is being added that specifies this requirement. For the December 1990 to January 1991 comment period, the words "...on forms provided by..." were replaced with the words "...in the form of a letter to...". This change allows the facility to use any

format desired as long as the information required is included pursuant to subsections (a) through (e) of this section. Use of a form provided by the Department was not only unnecessary, it would have led to delays in reporting while forms were obtained. It is important that manifest discrepancies be reported as soon as possible to ensure that wastes are being properly managed.

Section 66264.76(g): The heading "Comment" and the federal correspondence is being deleted. The correspondence references the federal exemption for generators of hazardous waste producing less than 100 KG per a calendar month. Title 22 does not allow for this exemption. The change is consistent with the change proposed in Section 66262.20.

In addition the "Comment" does not satisfy the definition of a regulation as provided in Government Code, Section 11342.

Section 66264.77: This is based on 40 CFR, Section 264.76 which specifies additional reports to be submitted. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR and as follows:

Section 66264.77: The term "Biennial" is being deleted and replaced with "Annual." Section 67165 requires that permitted facilities submit reports annually. This requirement is more stringent than federal regulations. This change is consistent with the change proposed in Section 66264.75.

**ARTICLE 6: WATER QUALITY MONITORING AND RESPONSE PROGRAMS FOR PERMITTED FACILITIES**

This article is based on 40 CFR Part 264 Subpart F, Title 22 CCR Article 22, and Title 23 CCR Subchapter 15 Article 5. It sets forth the water quality monitoring and corrective action requirements for permitted facilities.

The corrective action and financial responsibility requirements for solid waste management units (SWMUs) at permitted facilities, found in existing 40 CFR sections 264.90 and 264.101, have been moved to a separate article of this Chapter, Article 19. The requirements for SWMUs were added to existing 40 CFR Subpart F on July 15, 1985 to incorporate the statutory provisions of the Hazardous and Solid Waste Amendments of 1984 (HSWA). EPA intends to promulgate regulations addressing this issue in greater detail. These regulations are expected to comprise a new subpart of Part 264, Subpart S. In anticipation of those future changes, and for the sake of clarity in these proposed regulations, the corrective action and financial responsibility requirements for SWMUs have been moved into a separate article.

Subpart F of Part 264 of 40 CFR establishes the ground water monitoring and response programs required for permitted hazardous waste facilities. In addition to those requirements, existing California regulations (in both Subchapter 15 and Title 22) require the owner or operator of a hazardous waste facility to monitor, and respond to releases to surface water, and liquid in the unsaturated zone. The unsaturated zone, as defined in section 66260.10 of Chapter 10, is the zone between the land surface and the water table. These requirements have been added to Article 6. References to ground water have been altered to include surface water and soil-pore liquid where appropriate throughout the regulations. (Soil-pore liquid includes any liquid found in the pore spaces of soil in the unsaturated zone.) A considerable amount of new language has been added to section 66264.97 in order to describe the surface water and unsaturated zone monitoring systems. Where appropriate, references to releases "to the uppermost aquifer" or "to ground water" have been changed to include any release "from a regulated unit". (A regulated unit, as defined under section 66264.90 of this article, is any landfill, surface impoundment, waste pile, or land treatment unit that received hazardous waste after July 26, 1982 or that is required pursuant to Section 66264.90(a) to comply with the provisions of Article 6.) Where appropriate, references to "wells" or "upgradient wells" have been changed to include all monitoring and/or background monitoring points.

In order to retain the stringency of RCRA, the definition of the point of compliance has not been altered (except to extend the "vertical surface" through the uppermost aquifer) and the owner or operator is still required to install ground water monitoring wells at the point of compliance. The proposed surface water and

soilpore liquid monitoring requirements (adapted from existing California regulations) state that monitoring points must be established that will enable the earliest possible detection of a release from a regulated unit, that will provide the data needed to evaluate changes in water quality due to a release, and/or that will provide the data necessary to evaluate the effectiveness of corrective action. These additional monitoring points may not always be located at the point of compliance. Where appropriate, references to the point of compliance have been altered to assure that the regulations apply at all monitoring points (including those at the point of compliance).

The phrase "for each regulated unit" has been inserted liberally throughout proposed Article 6 in order to clarify the requirement that each regulated unit at the facility must have an individually designed monitoring program. While certain elements of the monitoring programs may be shared by two or more units, each monitoring program must be evaluated individually.

For example, a landfill and an adjacent surface impoundment may share background monitoring points, monitoring points for surface water, and may even have a common point of compliance. The list of constituents of concern and the list of monitoring parameters for these units may, however, be significantly different. Each unit would have separate ground water monitoring points and unsaturated zone monitoring points. If a release were detected from the surface impoundment, the owner or operator would initiate an evaluation monitoring program for that unit. Unless the Department or the owner or operator had reason to suspect that the source of contamination was actually the landfill, the owner or operator would not be required to initiate an evaluation monitoring program for the landfill, but would continue a detection monitoring program for that unit.

In these proposed regulations the process for selecting monitoring parameters for a regulated unit has been redefined. The term "monitoring parameter" is used as a consolidated term for the physical parameters, waste constituents, reaction products and hazardous constituents that will provide a reliable indication of a release from the regulated unit. The goal is to allow the Department and the regulated community the freedom to select a relatively small number of parameters that will provide a high degree of certainty that the data needs of the monitoring program will be met.

Under the proposed regulations, the first step is to identify a list of constituents of concern for each regulated unit. The list will include the hazardous constituents, waste constituents and reaction products that are reasonably expected to be in or derived from wastes placed in the regulated unit. This list is specified in the facility permit as part of the water quality protection standard. Background values must be established for each constituent of concern. At a minimum, the determination of

background values must be based on data collected during quarterly sampling at background monitoring points for a period of one year. This is an existing requirement under existing Title 23 Subchapter 15 Article 5.

Next, the owner or operator will propose an appropriate list of monitoring parameters. These parameters will be selected based upon an expected or demonstrated correlation with the constituents of concern and upon the data needs of the monitoring program. The owner or operator must conduct sampling and analysis for all monitoring parameters at a frequency specified in the facility permit. This is an existing requirement under 40 CFR Subpart F.

Finally, the owner or operator must periodically monitor for the entire list of constituents of concern and determine if the chosen list of monitoring parameters continues to be appropriate for site conditions. The frequency of testing for constituents of concern will vary for each regulated unit but will never be less frequent than once every five years. The frequency will be based upon conditions at the site, including unit age, the variety of wastes in the unit, the rate of ground water movement, and the data needs of the monitoring program.

Original Subpart F required the owner or operator to monitor for and respond to releases of "hazardous constituents" from regulated units and SWMUs. In these proposed regulations this requirement has been expanded because existing Subchapter 15 requires corrective action for any detected release from a regulated unit, whether or not the constituents are the hazardous constituents listed in Appendix VIII. Although existing Subpart F uses the terms "parameter" and "constituent" almost interchangeably, in the proposed regulations their use has been standardized so that a parameter always refers to a monitoring parameter, and a "constituent" is used to refer to a constituent of concern. Requirements which were based on the detection of "hazardous constituents" or on evidence of "contamination" have been modified so that they are based on "statistically significant evidence of a release".

Under current Subpart F the structure of the monitoring programs (detection, compliance and corrective action) is closely tied to the use of alternate concentration limits (ACLs) for hazardous constituents. After an owner or operator discovers statistically significant evidence of a release from a regulated unit, the owner or operator must institute a compliance monitoring program. The first step in compliance monitoring is the establishment of the ground water protection standard which can include ACLs that are above background values for hazardous constituents. Corrective action is not required until the ground water protection standard has been exceeded.

Under existing Subchapter 15 the concentration limit for each constituent is always set equal to the background value for that

constituent. This is more stringent than the federal regulation but can be unnecessarily burdensome when background values are universally applied as concentration limits for corrective action. The Department believes that the goal of hazardous waste management is the total, permanent containment or treatment of all hazardous waste constituents. Therefore, for the purposes of detecting and evaluating a release from a regulated unit, concentration limits must be established equal to background values. For a corrective action program, concentration limits must be established equal to background values wherever technologically and economically feasible. Whenever it is not feasible to achieve a background concentration for a constituent in a corrective action program, cleanup concentrations must be established based upon risk assessment, risk management, and best available technology.

In the proposed regulations the Department has established a procedure for establishing concentration limits that are greater than background values for a corrective action program. The procedure includes the original requirements for establishing an ACL under existing Subpart F and provides further limitations which the Department feels are necessary to protect human health and the environment. The details of the procedure are described in the statement of reasons for section 66264.94. In order to emphasize the difference between the application of these concentration limits and original Subpart F's ACLs they have been renamed "concentration limits greater than background".

The elimination of ACLs, as established under existing Subpart F, has had a significant impact on the structure of the monitoring programs in these proposed regulations:

- 1) The compliance monitoring program is used under 40 CFR section 264.99 to establish and evaluate compliance with the ground water protection standard. Under 40 CFR section, the standard is not established until after the owner or operator discovers statistically significant evidence of a release from the regulated unit. Under these proposed regulations, the standard is established during the detection monitoring program. Once the standard has been exceeded the owner or operator must institute an evaluation monitoring program which replaces the compliance monitoring program and is used to characterize the nature and extent of the release from the regulated unit and to prepare for a corrective action program. During evaluation monitoring, sampling and analysis is used to evaluate changes in water quality that have occurred as a result of the release from the unit and to gather data needed to plan appropriate remedial actions.
- 2) The water quality protection standard is now established for the detection monitoring as well as for evaluation and corrective action programs. During a detection monitoring program the standard is used to determine if a release from a

regulated unit has occurred. During evaluation monitoring the standard is used to help evaluate the nature and extent of the release. During a corrective action program the standard is used to determine the success of the corrective action.

- 3) Under current Subpart F, a regulated unit was expected to switch back and forth between compliance monitoring and corrective action as the concentrations of constituents in ground water fluctuated near the concentration limits established in the ground water protection standard. The Department does not believe there is a benefit in switching between programs. Under the proposed regulations, an owner or operator of a regulated unit is required to remain in a corrective action program until the water quality protection standard has not been exceeded for one year and the Department approves a permit modification to establish a detection monitoring program for that regulated unit (See the additional explanation below).
- 4) Existing Subpart F requires an owner or operator to perform either compliance monitoring or corrective action throughout the compliance period for a regulated unit. This requirement meant that, after a corrective action program, an owner or operator was required to perform yearly sampling and analyses for constituents listed in Appendix IX of Chapter 14 throughout the compliance period.

Under the proposed regulations, after a corrective action program has been successfully completed, an owner or operator must institute a detection monitoring program for the purpose of detecting subsequent releases from the regulated unit. In this way the requirements in sections 66264.98 and 66264.99 for responding to statistically significant evidence of a release from a regulated unit are applied to each new release from the regulated unit. The Department has retained the requirement to perform yearly Appendix IX sampling and analyses during the compliance period. This requirement provides an important safeguard for the detection of any less mobile constituents which may not be detected during a corrective action program.

Language has been added as necessary throughout the proposed regulations to emphasize the purpose of each monitoring program. Detection monitoring is required for the purpose of detecting a release from a regulated unit. Evaluation monitoring is required for the purpose of characterizing the nature and extent of contamination due to a release from a regulated unit and to gather additional data as necessary to design an effective corrective action program. The corrective action program must remove or treat in place any constituents released to the environment from a regulated unit and must include monitoring to determine the success of the corrective action.

Wherever a requirement in existing 40 CFR specified a period of time for completing the requirement language has been added to explain when the time period begins. For example : "within seven days" might be modified to read "within seven days of determining statistically significant evidence of a release".

Language has also been added to require that when the owner or operator must submit written notification to the Department, it must be sent by certified mail.

Section 66264.90 : This section is based on 40 CFR section 264.90. It establishes the applicability of the regulations contained in this article. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this statement of reasons and in the article overview and as follows :

The requirements for responding to releases from solid waste management units, originally located in 40 CFR 264.90(a) have been moved into Article 19 of this chapter. This change is discussed in greater detail in the article overview.

The exemptions to ground water monitoring provided under 40 CFR 264.90(b) have been deleted. This is consistent with the more stringent requirements of existing Subchapter 15.

66264.90(a) : The phrase "facilities that treat store or dispose of hazardous waste" has been modified to read "permitted facilities". This change was necessary because the use of active verbs implied that the requirements would not apply to facilities that were not actively involved in the management of hazardous waste. Since these requirements continue to apply during post-closure care, the language was modified as shown.

Language has been added to allow the Department to require the owner or operator of a unit that stopped receiving hazardous waste by July 26, 1982 to comply with the requirements of Article 6 if the Department determines that waste or waste constituents may pose a threat to human health or the environment. This language is modeled after similar language in existing Title 23, Subchapter 15, is more stringent than the federal regulations, and has therefore been incorporated into these proposed regulations.

The term "releases to the uppermost aquifer" has been changed to "releases to ground water, surface water, or the unsaturated zone". This change was necessary because of the additional surface water and unsaturated zone monitoring and response requirements which are discussed in the article overview.

Section 66264.90(b) : The reference to the fiscal responsibility requirements in section 264.101 has been replaced with the requirement itself.

Section 66264.90(c) : This subsection is based on 40 CFR sections 264.90(c) and has been modified to more clearly reflect California's restructured program requirements (See the article overview for this article). The owner or operator of a regulated unit must always comply with the provisions of Article 6 throughout the active life of the unit. After closure of the unit, the requirements continue to apply during the post-closure care period and during any compliance period for the unit unless all waste, waste residues, contaminated system components, contaminated subsoils, and all other contaminated geologic materials are removed or decontaminated at closure.

Section 66264.90(e) : This subsection has been added to provide the owner or operator a specific schedule (180 days) for submitting an application for a permit modification to make program modifications necessary to comply with the provisions of this article. Since most of the provisions of these proposed regulations are simply reflections of existing state and federal requirements, it is hoped that the majority of permitted facilities will require only minor modifications to their existing monitoring programs. Such facilities should reexamine the statistical procedures in use for active monitoring programs and propose appropriate changes. All facilities need to clearly specify a list of constituents of concern for each regulated unit and establish background concentrations for all constituents in the water quality sampling and analysis plan. The list of monitoring parameters and the sampling methods and frequency for each regulated unit should be re-evaluated. These program modifications should result in more efficient use of monitoring resources and should provide a higher degree of protection to human health and the environment.

If compliance with the provisions of this article will require the installation of additional wells or other monitoring devices, the owner or operator shall begin any necessary construction within 30 days of receiving approval from the Department and shall implement the approved plans according to a schedule of compliance established by the Department.

Section 66264.91 : This section is based on 40 CFR section 264.91. It establishes the conditions under which the detection, evaluation, and corrective action programs will be required for a regulated unit. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this statement of reasons and in the article overview and as follows :

Section 66264.91(a) : This subsection, although based loosely on the language in 40 CFR section 264.91(a), has been completely rewritten to reflect California's approach to water quality monitoring (See the article overview for a more detailed discussion of this issue). Specifically, for each regulated unit, the owner or operator is required to:

(1) institute a detection monitoring program unless the owner or operator is conducting either evaluation monitoring or corrective action under this article;

(2) institute an evaluation monitoring program whenever the results of the detection monitoring program indicate that there is statistically significant evidence of a release from the regulated unit;

(3) institute an evaluation monitoring program whenever there is significant physical evidence of a release from the regulated unit; and

(4) institute a corrective action program upon approval by the Department of the application for a permit modification that is required in response to any release from the regulated unit.

Subsection 66264.91(a)(3) has been added to clarify what the Department believes to be a reasonable application of the existing requirement that the owner or operator modify the monitoring program at the facility as necessary to protect human health and the environment (40 CFR section 264.98(h)). Because of the uncertainties inherent in the design and operation of a water quality monitoring program, the owner or operator must be able to recognize, and respond to, physical changes at or near the facility that would indicate probable contaminant migration.

Section 66264.91(c) : This subsection requires an owner or operator, who is conducting an evaluation monitoring or corrective action program for a regulated unit, to continue to monitor for, and respond to additional releases from that unit. It has been added in order to provide the owner or operator and the permit writer the flexibility to design an integrated monitoring and response program, best suited to the data needs of the regulated unit. This requirement will be most important when the size of a release from a regulated unit is small relative to the size of the unit.

Section 66264.92 : This section is based on 40 CFR section 264.92. It specifies the elements of the water quality protection standard which is used in the determination of statistically significant evidence of a release and in the determination of successful completion of a corrective action program. This section conforms to

the corresponding federal regulation except for the generic changes specified in the introduction to this statement of reasons and in the article overview and as follows:

This section has been completely rewritten for the sake of clarity. The references to "ground water", "the uppermost aquifer", and "the point of compliance" have been modified because, under existing California regulations the standard applies at any monitoring point in ground water, surface water or the unsaturated zone.

The phrase "the compliance period" has been modified to read "the active life of the regulated unit, the post-closure care period under section 66264.117 of Article 7 of this chapter, and during any compliance period." This change was necessary to reflect the structural changes made to the water quality monitoring programs (See the article overview for a more detailed discussion of this subject) and to retain the stringency of existing California regulations. Under existing Subpart F, the standard applies only during the compliance period which begins after hazardous constituents have been detected in ground water. Neither existing Subchapter 15 nor existing Title 22 regulations limits the application of the standard to the compliance period.

Section 66264.90(b) : This subsection has been added to allow the Department to establish separate water quality protection standards for each program that is active at a regulated unit. For example, if an owner or operator is conducting a detection monitoring program in conjunction with a corrective action program and the Department has established concentration limits greater than background for those monitoring points that are used to evaluate the effectiveness of corrective action, a different water quality protection standard with concentration limits equal to background values must also be established for those monitoring points that are used to detect additional releases from the unit.

Section 66264.93 : This section is based on 40 CFR section 264.93. It establishes the criteria for specifying the constituents of concern for each regulated unit. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this statement of reasons in the article overview and as follows :

This section has been modified to incorporate the requirement, in existing California regulations, that an owner or operator monitor for and respond to all releases from a regulated unit - not just releases of hazardous constituents (See the article overview for this article for a more detailed discussion of this topic).

The definition of hazardous constituents has been modified and moved to the definitions section (section 66260.10). The phrase "that have been detected in ground water in the uppermost aquifer underlying a regulated unit and" has been deleted from the definition of a hazardous constituent. This change was made for the sake of clarity because a hazardous constituent is a hazardous constituent, regardless of where it is located or whether it has been detected.

Under the proposed regulations the Department will not exempt a waste constituent or reaction product from the list of constituents of concern specified in the facility permit. The Department believes that periodic monitoring for all constituents of concern is necessary in order to verify the assumptions made when selecting appropriate monitoring parameters (See the article overview for this article for a more detailed discussion of this topic). Provisions are made in proposed section 66264.94 for establishing concentration limits above background for those constituents of concern that do not pose a threat to human health or the environment.

Section 66264.94 : This section is based on 40 CFR section 264.94. It establishes the criteria for establishing concentration limits for monitoring parameters. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this statement of reasons in the article overview and as follows :

The use of "alternate concentration limits" (ACLs) has been significantly modified. Under RCRA a release from a regulated unit which did not cause an ACL to be exceeded would not require corrective action. An owner or operator could remain in compliance monitoring, while a release from a regulated unit continued, uncorrected. It is the intention of the Department to maintain the stringency of California regulations by requiring the concentration limits for all monitoring parameters to be equal to the background value for that parameter (in the medium of interest) during detection and evaluation monitoring. Under these proposed regulations, concentration limits which are above background may only be established for a corrective action program and only if all of the requirements of this subsection are satisfied. The owner or operator must demonstrate (through an engineering feasibility study) that such a limit is justified. The owner or operator must propose a limit which is protective of human health and the environment, and must submit all necessary information to support the higher limit as required by original Subpart F.

In order to emphasize the difference between the application of these "alternate limits" and RCRA's ACLs they have been renamed "concentration limits greater than background".

Further restrictions have also been added which place upper limits on these values. These upper limits are to be determined using health based standards.

Section 66264.94(a) : Based loosely on existing section 264.94(a), this subsection has been completely rewritten to reflect California's approach to water quality monitoring as described in the article overview for this article.

Under existing Subpart F the owner or operator of a hazardous waste management facility is allowed to use statistical procedures for updating background values during a detection monitoring program. During an evaluation monitoring or a corrective action program a single value is established as the concentration limit in the ground water protection standard. This means that, when a facility is located in an area where there is significant variation in the quality of background water, the concentration limit will have to be large enough to encompass the entire range of values, and may not be an accurate reflection of the actual quality of background water.

Concentration limits are intended to reflect water quality conditions unaffected by discharges of wastes (background concentrations) at each regulated unit in order to ensure that the quality of the environment is not degraded by discharges of waste to land. The Department recognizes that regulated units may be regulated over long periods of time and that background conditions may change for reasons unrelated to waste management. To ensure that more accurate data comparisons are made, concentration limits must be established to reflect seasonal fluctuations or other factors of natural variation (factors unrelated to waste discharges at the unit) in water quality. This is accomplished by continually updating the background water quality data for a constituent and establishing a limit based on the updated data.

Under the proposed regulations, for each constituent of concern, the owner or operator must propose either a concentration limit, a procedure for updating the concentration limit based on current background water quality data, or a concentration limit above background for a corrective action program.

Note : The requirement in existing section 264.94(a)(2) that a concentration limit may not exceed a value listed in Table 1 has been rewritten and incorporated into the requirements for establishing concentration limits greater than background. See subsection 66264.94(e)(1).

Section 66264.94(b) : This subsection has been added to establish the provisions for Departmental review of the proposed concentration limits for inclusion in the permit.

Section 66264.94(c) : This section has been added to specify that concentration limits greater than background may only be established for a corrective action program and that they may not be established at all unless it is technologically or economically infeasible to achieve background. The owner or operator must demonstrate to the Department that the constituent will not pose a substantial hazard as long as the concentration limit greater than background is not exceeded. Data requirements for making such a finding are established.

Sections 66264.94(d)(1)(A) through (I) and (d)(2)(A) through (J): These criteria are based on the criteria set forth under 40 CFR Subpart F section 264.94(b) regarding the establishment of alternate concentration limits for a compliance monitoring program. Under these proposed regulations, these criteria are used to establish concentration limits greater than background for a corrective action program rather than for a compliance monitoring program.

Section 66264.94(d)(1)(A) : The phrase "including its potential for migration" has been deleted because in the experience of the Department, the predictions of the migration potential for waste constituents has not proven reliable. Errors in the assumptions made when modeling contaminant transport often overwhelm the physical processes described. The Department believes that "the physical and chemical characteristics" of waste include the factors governing the potential for migration, but the Department does not wish to imply that concentration limits greater than background will be established based upon predictions of low mobility.

Section 66264.94(d)(1)(E) : The word "potential" was added because actual future uses of water can not be known. This change is consistent with EPA's use of the term when consideration of future events or conditions is required.

Section 66264.94(d)(2) : The phrase "hydraulically connected" has been deleted because existing California regulation is protective of all surface water, whether or not it is "hydraulically connected" to the uppermost aquifer.

Section 66264.94(d)(2)(D) : The word precipitation has been substituted for the word "rainfall" because all forms of precipitation (including rain, hail and snow) must be considered when contaminant transport is evaluated. This is consistent with existing Subchapter 15.

Section 66264.94(d)(2)(F) : The word "potential" was added because actual future uses of water can not be known. This change is consistent with EPA's use of the term when consideration of future events or conditions is required.

Section 66264.94(e) : This subsection has been added to introduce three limitations on the upper value that can be established as a concentration limit greater than background for a constituent of concern.

Section 66264.94(e)(1) : The requirement from existing section 264.94(a)(2) has been added to the requirements for establishing concentration limits greater than background. Table 1 has been deleted and replaced with a reference to the maximum contaminant levels established pursuant to the Safe Drinking Water Act. This was necessary so that additions and updates to the list of MCLs would be incorporated automatically into these regulations. This subsection also establishes the requirement that concentration limits may not exceed other health or environmentally based standards promulgated by the USEPA or the Department.

Section 66264.94(e)(2) : This section has been added because, when it is not technically or economically feasible to achieve the background concentration for a constituent, it is necessary to establish a concentration limit which provides the highest degree of protection to water quality that can be reasonably supported. This requirement is consistent with regulating the quality of the waters of the State to attain the highest water quality which is reasonable (WC Section 13000 of the Porter-Cologne Water Quality Control Act).

Section 66264.94(e)(3) : This subsection has been added to require that concentration limits greater than background values not exceed water quality objectives established by the Regional Water Quality Control Boards, and that they be protective of the beneficial uses established for the medium of concern by the Regional Boards.

Section 66264.94(f) : This subsection has been added to require that risk be evaluated as if exposure would occur at the point of compliance. The Department does not intend to use the criteria specified under proposed section 66264.94(c) for purposes of justifying greater concentration limits based on attenuation or dilution factors. In the experience of the Department, the predictions of the migration potential for waste constituents has not proven reliable. Errors in the assumptions made when modeling contaminant transport often overwhelm the physical processes described. The practice of evaluating risk as if exposure would occur at the point of compliance is consistent with procedures presented in EPA's guidance document for establishing ACLs.

Section 66264.94(g) : This subsection has been added to describe the standard procedure used to evaluate risk when multiple compounds with similar toxicologic effects are involved. The procedure is described in greater detail in the California Site Mitigation Decision Tree, published by the

California State Department of Health Services, Toxic Substances Control Division, May 1986.

Section 66264.94(h) : This subsection has been added to emphasize the requirement that concentration limits which are above a background value may only be established for those monitoring points at which a statistically significant increase has occurred. This assures that an owner or operator will be required to characterize any "new" release from a regulated unit which is currently or has previously been involved in corrective action as soon as the release is detected.

Section 66264.94(i) : This subsection has been added to define procedures for re-establishing background values after a corrective action program has been successfully completed.

Section 66264.94(j) : This section is based on 40 CFR Section 264.94(c). The phrase "and exempted aquifers" has been deleted because there are no exempted aquifers in the state of California.

Section 66264.95 : This section is based on 40 CFR section 264.95. It establishes the criteria for specifying the point of compliance and the monitoring points for each regulated unit. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this statement of reasons and in the article overview and as follows:

The phrase "Monitoring Points and the" has been added to the title of this section to reflect the expanded water quality monitoring requirements for surface water and the unsaturated zone (See the article overview for this article for a more detailed discussion of this topic).

Section 66264.95(a) : The phrase "down into" has been changed to "through" in the definition of the point of compliance. This change has been made for the sake of clarity and is consistent with the intention of EPA as expressed in the preamble to the regulations. The owner or operator must monitor any or all saturated zones within the uppermost aquifer as necessary to provide a reliable indication of a release from a regulated unit.

The last sentence of this subsection has been added to reflect the expanded water quality monitoring requirements for surface water and the unsaturated zone (See the article overview for this article for a more detailed discussion of this topic).

Section 66264.95(b)(2) : The phrases "more than one" and "several" have been changed to "contiguous" to conform with the more stringent requirement in existing Subchapter 15,

section 2553(c). Under existing Subpart F, a facility having more than one regulated unit may designate a point of compliance that is common to all the units. It is the experience of the Department that this approach can lead to poor monitoring performance. In the proposed regulations a shared point of compliance is only allowed where existing regulated units are contiguous and where monitoring along the shared boundary would impair the integrity of a containment or structural feature of any of the units. This requirement helps to assure that each regulated unit at the facility is equipped with monitoring systems that are capable of providing the earliest possible detection and measurement of a release from that unit.

The word "circumscribing" has been changed to "along the outer boundary of" in order to clarify the requirement that the point of compliance must be located as close as possible to the regulated unit.

Section 66264.96 : This section is based on 40 CFR section 264.96. It establishes the compliance period as the minimum period of time during which the owner or operator must conduct water quality monitoring subsequent to a release from a regulated unit. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this statement of reasons and in the article overview and as follows :

Section 66264.96(a) : The phrase "during which the ground-water protection standard applies" has been deleted from the first sentence because, under the proposed regulations, the water quality protection standard applies during the active life, the post-closure care period and during any compliance period for the regulated unit (See the article overview for this article for a more detailed discussion of this topic).

The phrase "waste management area" has been replaced with the phrase "regulated unit". This change was necessary because the Department believes that the water quality monitoring program for each regulated unit must be individually designed for that unit. Although multiple units may be located within the same waste management area, the units will usually have different active lives, may contain different types of waste or have other distinguishing characteristics.

The second sentence has been modified to clarify the existing requirement that, subsequent to a release from a regulated unit, the owner or operator must continue to perform water quality monitoring during a period of time at least as long as the sum of the lengths of the active life and the closure period. This requirement, from original Subpart F, is based upon a model for contaminant transport that is conservative with respect to the most mobile, non-adsorptive constituent in

the regulated unit. Beyond this minimum period, the Department believes that the total length of time during which monitoring is to be required for a regulated unit must be determined based upon site specific conditions and the fate and transport characteristics of the wastes migrating through the environment. If necessary to protect human health or the environment, the Department has the authority to require continued monitoring by extending the post-closure care period for a regulated unit.

Section 66264.96(b) : The word "when" has been replaced with the phrase "each time". This change was necessary to emphasize the existing requirement that the compliance period begins over for each new release from a regulated unit.

Section 66264.96(c) : The word "scheduled" has been added to correct a logical error. The compliance period cannot be ended and extended at the same time.

Section 66264.97 : This section is based on 40 CFR section 264.97. It establishes the general components of the water quality monitoring systems which must be established, operated and maintained by the owner or operator.

Structural changes to section 264.97 were made for the sake of clarity. These changes were necessary because of the added surface water and unsaturated zone monitoring requirements in this section. Each type of monitoring system is now described in a separate subsection (b, c, and d), and the general requirements that apply to all systems are specified in subsection (e) in the approximate order in which the requirements will be satisfied.

Throughout this section references to "constituents" and "hazardous constituents" have been modified to include all constituents of concern and all monitoring parameters (See the article overview for this article for a more detailed discussion of this topic).

References to "levels" of constituents have been changes to "values" for the sake of clarity and consistency.

This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this statement of reasons and in the article overview and as follows :

Section 66264.97(a) : Based on the introductory paragraph to 40 CFR section 264.97, this subsection has been modified to conform to the structural changes made to this section. This is a non-substantive change to these regulations.

Section 66264.97(b)(1) : Based loosely on 40 CFR section 264.97(a), this subsection has been almost totally rewritten

to reflect California's three phased approach to water quality monitoring (See the article overview for this article for a more detailed discussion of this topic). Specifically this section now requires that an owner or operator establish a ground water monitoring system that includes:

- 1) background monitoring points in the uppermost aquifer (this is a minimum requirement in existing federal regulations);
- 2) monitoring points in the uppermost aquifer at the point of compliance (this is a minimum requirement in existing federal regulations); and
- 3) additional monitoring points and background monitoring points as necessary to assure that the objectives of the water quality monitoring program are satisfied.

For a detection monitoring program, the water quality monitoring system must be designed to assure the earliest possible detection of a release from a regulated unit. For an evaluation monitoring program, the the water quality monitoring system must be designed to provide the data necessary to evaluate changes in water quality due to the release from the regulated unit. For a corrective action program, the the water quality monitoring system must be designed to provide the data necessary to evaluate the effectiveness of the corrective action program.

The phrases "monitoring points" and background monitoring points" are used in place of the word "wells". This change is necessary because new devices are being developed for ground water sampling that do not exactly qualify as wells. In these regulations, the terms monitoring point and background monitoring point are being used as comprehensive terms which include wells, devices and locations. The requirement that the samples produced from these monitoring points and background monitoring points must be "representative" is retained. This modification does not create new regulatory provisions.

Section 66264.97(b)(2) : This subsection is based on 40 CFR section 264.97(a)(1)(i). The phrase "A determination of background quality may include sampling of wells" has been replaced with the phrase "The ground water monitoring system may include background monitoring points". This change was necessary because of the structural changes made to this section for the sake of clarity. In the proposed regulations, the monitoring "systems" are described separately from the requirements for establishing background.

This subsection has also been rewritten to emphasize the requirement that, regardless of hydrologic conditions at the

site, the owner or operator must use background monitoring points that provide samples that are representative of background water quality.

Section 66264.97(b)(3) : This subsection has been added because existing Subchapter 15 requires that all well logs be filed with the Department of Water Resources (DWR) or with agencies authorized by DWR to collect copies of well logs. This section requires that a copy of these drillers' logs be filed with the Department.

Sections 66264.97(b)(4), (b)(5), and (b)(6) : These sections are based on 40 CFR section 264.97(c).

Section 66264.97(b)(4) : This subsection was rewritten in order to clarify the requirements for monitoring well construction. Well casing must be used to maintain the integrity of the bore hole, and must be properly constructed so that the well bore will not provide a pathway for contaminant migration.

Section 66264.97(b)(5) : This subsection has been modified because original RCRA requires that the casing be packed with gravel or sand. The filter pack actually belongs in the annulus, not in the casing, and must be appropriate for the collection of representative samples.

The provision for using perforated casing for the collection of groundwater samples has been eliminated because "appropriately screened" wells would include any well (if there is one) with perforated casing that provides representative samples. Our intention is to discourage (but not preclude) the use of perforated casing because: (1) it is unlikely that representative samples can be collected in such wells; and (2) the practice of perforating the casing in the field or downhole, while common in the water well and petroleum industries, would not be acceptable for the construction of a monitoring well.

The word "representative" has been inserted in order to clarify the requirement in 40 CFR section 264.97(a) that ground water samples be representative of water in the aquifer. The ability to collect representative samples from a well is dependent upon (among other things) the well materials, design and construction. This change is for clarification purposes only, and does not create new regulatory provisions.

Section 66264.97(b)(6) : The phrases "for each monitoring well" and "and below" have been inserted. These changes are necessary because the entire borehole outside of the sampling interval of each well must be sealed (not just the upper portion) to prevent cross contamination of saturated zones.

This is a standard construction requirement for monitoring wells. Since existing Subchapter 15 requires the prevention of cross contamination of saturated zones, this change does not create new regulatory provisions.

The phrase "interval shall be appropriately" has been inserted and the phrase "depth must be" has been deleted. This change is necessary because a well is screened, and samples are collected, from an interval of the borehole, not at a single depth. The insertion of the word "appropriately" is intended to convey the message that the seal should be designed for the site conditions and must meet the specified performance criteria. Since the performance criteria are derived from current regulations, this change does not create new regulatory provisions.

The phrase "contamination of samples and the ground water" has been deleted and the phrase "entry of surface contaminants, cross contamination of saturated zones, and contamination of samples" has been inserted. This change is necessary to clarify the performance criteria for the seal in the annulus of a monitoring well. The entry of surface contaminants and cross contamination of aquifers are common problems with improperly constructed monitoring wells. This does not create a new regulatory requirement.

Section 66264.97(b)(7) : This subsection has been added because existing Subchapter 15 requires that monitoring wells be properly developed. That requirement has been retained.

Section 66264.97(c) : This subsection has been written to incorporate the existing California requirements for surface water monitoring. In order to fit these requirements into the existing RCRA structure a considerable amount of new language was necessary. Language from the RCRA ground water monitoring system description, existing Title 22, and existing Subchapter 15 was used wherever possible. The intention of the authors was to require the owner or operator to establish monitoring points at those locations most likely to satisfy the data needs of the monitoring program, and to establish appropriate background monitoring points for each surface water body for comparison purposes.

The water quality in surface water bodies should show considerably more natural variation than the quality of ground water. For that reason, the establishment of appropriate background monitoring points is a critical requirement of this section.

Section 66264.97(d) : This subsection has been inserted in order to incorporate the existing California requirements for unsaturated zone monitoring. In order to fit these requirements into the existing RCRA structure a considerable

amount of new language was necessary. Language from the RCRA ground water monitoring system description, existing Title 22, and existing Subchapter 15 was used wherever possible. The owner or operator shall monitor the unsaturated zone using the method or combination of methods which best satisfy the data needs of the monitoring program. Existing Title 22 and existing Subchapter 15 both require that the unsaturated zone monitoring system include soil pore liquid sampling or (soil-pore liquid measurements) wherever samples (or measurements) could provide an indication of a release from a regulated unit. Unsaturated zone monitoring shall always be required unless the owner or operator makes a successful demonstration that no method of unsaturated zone monitoring could provide useful information or that, for an existing regulated unit, installation of unsaturated zone monitoring devices is not technically feasible.

Section 66264.97(e)(1) : This section has been added to incorporate the requirement in existing Subchapter 15 that the monitoring systems be designed and certified by a registered geologist or a registered civil engineer.

Section 66264.97(e)(2) : This subsection has been added because existing Subchapter 15 requires that all wells be logged under the supervision of a registered geologist, that soils be described using the Unified Soil Classification System, and that rock be described in an appropriate manner. These requirements are more stringent than existing RCRA and have therefore been maintained. The facility must submit these logs to the Department upon completion of drilling.

Section 66264.97(e)(2)(C) : This subsection has been added to require the depth and thickness of saturated zones to be marked on the geologic log. This is standard practice for logging borings as part of a hydrogeologic investigation, requires minimum effort on the part of the logger, and provides valuable information which is not available through other means.

Section 66264.97(e)(3) : The phrase "more than one" has been replaced with the term "contiguous". This change is necessary because original 40 CFR Part 264 Subpart F allows the owner or operator of a facility to monitor multiple units as if they were one "large unit" with a point of compliance that was described by the "large unit". The original language only restricts the application of this option by requiring that a release be detected at the point of compliance. Existing Subchapter 15 further restricts the exercise of this option by requiring that the units be contiguous and that monitoring provide the earliest detection of a release.

The phrase "provided that provisions for sampling the ground water in the uppermost aquifer" has been replaced with the

phrase "if the owner or operator demonstrates to the satisfaction of the department that the water quality monitoring program". This change was necessary because existing California regulations require that surface water and the unsaturated zone be monitored in addition to ground water. This change allows the Department to evaluate the entire monitoring program as an integrated unit.

This section has also been modified to retain the requirement in existing Subchapter 15 that the monitoring system enable earliest detection and measurement of waste constituents that have leaked from the units, not just detection in the uppermost aquifer at the point of compliance.

Section 66264.97(e)(4) : The word "analysis" has been changed to "analytical" because the word is used as an adjective to modify the word "procedures". The word "that" has been moved to correct a logical error in the sentence structure (the procedures are not designed to "ensure results" they are designed to "ensure that results...").

The phrase "at all monitoring points and background monitoring points" has been added and the phrase "below the waste management area" has been deleted. This change is necessary because sampling and analytical procedures alone will not ensure that the quality of water below the waste management area is determined. Proper procedures will help to ensure that the quality of water at the monitoring points is determined. The location and construction requirements for monitoring points ensure that the samples collected at the monitoring point will represent the conditions under the waste management area.

The phrase "a detailed description of the" has been added to emphasize the requirement that the owner or operator must supply all the information needed by the Department to review the proposed procedures.

Section 66264.97(e)(4)(A) : Language was added to this subsection to clarify the meaning of the phrase "sample collection".

Section 66264.97(e)(5) : The language in this subsection has been modified so that the word "appropriate" applies to all sampling and analytical methods, not just those for ground water. The phrase "hazardous constituents in ground water samples" has been replaced with the phrase "the concentration of each constituent of concern and the concentration or value of each monitoring parameter". This change is necessary because, under these proposed regulations, the owner or operator will perform routine sampling for monitoring parameters and periodic sampling for all constituents of

concern (See the article overview for this article for a more detailed discussion of this topic).

Section 66264.97(e)(6) : This subsection has been added to emphasize the requirement that the selection of statistical methods must be based on a reasonable understanding of the natural data distribution at the site. This information is also required to establish background values for monitoring parameters and constituents of concern. Language from existing Subchapter 15 has also been added that establishes the minimum data requirements for establishing background values and language requiring that background be established for new regulated units before wastes are discharged.

Section 66264.97(e)(7) : Based on the first paragraph of 40 CFR section 264.97(h), this section has been modified to emphasize the role of the Department to review, approve, modify, or disapprove all elements of the water quality monitoring program proposed (with supporting documentation) by the owner or operator.

The phrase "based on data collected pursuant to subsection (e)(6) of this section," has been added to emphasize the requirement that the selection of statistical methods must be based on a reasonable understanding of the natural data distribution at the site. The list of statistical methods has been moved into a separate section for the sake of clarity.

The phrase "to be used in evaluating ground water monitoring data" has been replaced with the phrase "and shall be used in evaluating water quality monitoring data". This change was necessary because of the surface water and unsaturated zone monitoring requirements.

This subsection has also been modified so that it no longer applies only to hazardous constituents. The owner or operator must propose statistical methods for all monitoring parameters and for all constituents of concern (See the article overview for this article for a more detailed discussion of this topic).

A sentence has been added to this subsection which specifically requires that the criteria for determining statistically significant evidence of a release and for determining compliance with the water quality protection standard be specified in permit. This was added only for the sake of clarity and does not impose new regulatory provisions.

The requirement that "the" statistical test must be performed separately for each constituent or parameter has been modified to read "each statistical test" because the owner or operator does not have to use the same statistical test for every constituent being monitored. EPA technical staff has

confirmed that this is consistent with the intention of the EPA.

The word "procedures" has been changed to "methods" for the sake of consistency. When referring to statistical methods, EPA uses both words, apparently interchangeably.

The word "must" has been changed to "will" twice in the final sentence of this subsection because the requirement has been modified to require a demonstration by the owner or operator that the performance standards will be met.

Section 66264.97(e)(8) : This section is based on the 40 CFR sections 264.97(h)(1) through (h)(5). The introductory sentence was necessary in order to separate this subsection from subsection (e)(7).

Section 66264.97(e)(8)(A) : This section is based on 40 CFR section 264.97(h)(1). The phrase "in all instances" has been inserted to emphasize the requirement that, following the use of the parametric analysis of variance (ANOVA) to compare the data from all downgradient monitoring points against the data from all upgradient monitoring points, individual comparisons are to be made between each downgradient monitoring point and the background monitoring points. A statistically significant increase over the background data during any one of these comparisons constitutes statistically significant evidence of a release from the unit.

Section 66264.97(e)(8)(B): This section is based on 40 CFR section 264.97(h)(2). The phrase "in all instances" has been inserted to emphasize the requirement that, following the use of the analysis of variance (ANOVA) based on ranks to compare the data from all downgradient monitoring points against the data from all upgradient monitoring points, individual comparisons are to be made between each downgradient monitoring point and the background monitoring points. A statistically significant increase over the background data during any one of these comparisons constitutes statistically significant evidence of a release from the unit.

Section 66264.97(e)(8)(E) : The phrase "and approved" has been modified to read "for approval" because the Department reserves the right to disapprove the use of statistical test methods proposed by the owner or operator. A considerable amount of new language has also been added to require that, if the alternate statistical method includes a procedure to verify statistically significant evidence of a release, the procedure must consist of either a single composite retest or at least two discrete retests. Any verification procedure must comply with the additional performance standards specified in Sections 66264.97(e)(8)(E)1. through 6.

The requirements for a verification procedure are designed to reduce the negative effect a Type I error (false positive) has on the regulated community without increasing the Type II error (false negative) rate. These requirements have been developed with the assistance of EPA technical staff. They are expected to provide an accurate test of the statistically significant indication of a release within a relatively short period of time.

Section 66264.97(e)(8)(E)1. through 6. : These subsections contain specific requirements designed to permit an expedited but accurate check of the initial indication of a release :

Section 66264.97(e)(8)(E)1. : For a verification procedure consisting of discrete retests, the significant evidence of a release will be confirmed by any single rejection of the null hypothesis.

Section 66264.97(e)(8)(E)2. : The number of samples collected must be appropriate for the statistical method used.

Section 66264.97(e)(8)(E)3. : These samples must be collected over a period of no more than 30 days. This 30 day limit for the resampling effort may result in a sampling interval that is shorter than the interval specified in the facility permit. The Department believes that, when addressing a potential release from a regulated unit, it is important to respond as quickly as possible in order to minimize the risk to human health and the environment.

Section 66264.97(e)(8)(E)(4): This section establishes the data requirements for discrete and composite retests.

Section 66264.97(e)(8)(E)5. : For a verification procedure consisting of a composite retest, all statistical analyses done under this subsection will be individual monitoring point comparisons because only those individual monitoring points that indicate a release will be resampled and analyzed. The Type I error level during this verification monitoring must be no less than 0.05. For a one-sided statistical comparison, control charts must use an upper limit of no more than 1.645 standard deviations of the statistic plotted when doing a re-analysis to achieve this same Type I error level (1.96 standard deviations for a two-sided statistical comparison). The use of this higher minimum Type I error level is necessary to control Type II errors under conditions where a release has already been indicated.

Section 66264.97(e)(8)(E)6. : This section has been added to establish the Type I error rate for discrete retests.

Section 66264.97(e)(8)(E)7. : The owner or operator must report the results of the statistical retest as well as the

concentrations of each parameter involved in retesting within seven days of the last analysis.

Section 66264.97(e)(8)(E)8. : This section has been added to clarify that the verification procedure is only to be used as confirmation of significant evidence of a release.

Section 66264.97(e)(9) : This section is based on 40 CFR Section 264.97(i). The phrase "for each six-month period" has been added as necessary throughout this section to clarify that the EPA intended that these performance standards be satisfied for each six-month period. The phrase "for each testing period" has also been deleted or replaced throughout this section as necessary to clarify this requirement.

Section 66264.97(e)(9)(A) : This section is based on 40 CFR Section 264.97(i)(1). This section has been modified in order to clarify the requirement that an appropriate statistical method must be selected for each constituent or parameter. If more than one statistical method is appropriate, the owner or operator should use the method that is least likely to fail to identify a release from the regulated unit. The phrase "so that the distribution of the transformed data is appropriate for a normal theory test" has been inserted to clarify the implied performance standard for transforming data.

Section 66264.97(e)(9)(B) : This section is based on 40 CFR section 264.97(i)(2). The phrase "or with a background parameter value" has been added because these performance standards apply to the statistical analysis of both constituents of concern and monitoring parameters.

Section 66264.97(e)(9)(C) : This section is based on 40 CFR section 264.97(i)(3). The performance standard in section 66264.97(e)(9)(B) does not apply to control charts because this type of statistical method requires a different approach to Type I error level. The Department is including a similar performance standard that has been adapted for use with control charts. Under these proposed regulations, an owner or operator wishing to use control charting is required to use a the false-positive rate of no less than 1% per period. This means that for a one-sided statistical comparison the upper control limit for X-Bar and R-Charts can be set at no more than 2.576 standard deviations from the mean for the statistic plotted (2.327 standard deviations for a two-sided statistical comparison). These limits will provide the same sort of control over the Type I error rate for control charts as is provided under Subsection (e)(9)(B) for the ANOVA methods.

Section 66264.97(e)(9)(D) : This section is based on 40 CFR section 264.97(i)(4). The performance standard in section 66264.97(e)(9)(B) does not apply to tolerance intervals or prediction intervals because these types of statistical

methods require a different approach to Type I error level. The Department is including a similar performance standard that has been adapted for use with these methods. Under these proposed regulations, an owner or operator wishing to use a tolerance interval or prediction interval must limit the coverage of any tolerance interval used to no more than 95 percent and the confidence coefficient must be no more than 95 percent. Prediction intervals must be constructed with an experimentwise error rate of no less than five percent and an individual monitoring point error rate of no less than one percent. These limits will provide the same sort of control over the Type I error rate for control charts as is provided under Subsection (e)(9)(B) for the ANOVA methods.

Section 66264.97(e)(9)(E) : This section is based on 40 CFR section 264.97(i)(5). The phrase "limit of detection" has been modified to read "practical quantitation limit" because data with values between the limit of detection and the practical quantitation limit must also be accounted for. EPA technical staff has confirmed that this is consistent with the intention of EPA. Language has been added to this subsection to clarify the EPA's use of the phrase "specified limits of precision and accuracy". The practical quantitation limits listed in Appendix IX to Chapter 14 are to be used for guidance purposes by the Department when specifying limits of precision and accuracy in the facility permit.

Section 66264.97(e)(9)(G) : This section has been added to require that the same quality control procedures that are used to filter erroneous data from the data set for downgradient monitoring points must be used to filter data from the background data set. The inclusion of bad data in the background data set could lead to an overestimation of the natural variation in background water quality. This could seriously impede the early detection of a release from a regulated unit.

Section 66264.97(e)(10) : This subsection has been added to clarify the requirement that an owner or operator propose a method for determining background values for the constituents of concern and monitoring parameters listed in the facility permit. The establishment of a reliable background value is essential because the performance of the statistical test in discerning or delineating a release is dependent upon the use of representative data. The background value for a constituent consists of the mean or median of the data at the background monitoring points and a measure of its dispersion about that mean or median. As discussed in the statement of reasons for section 66264.94, two approaches to establishing a background value are permitted in these proposed regulations, because both produce reliable information under appropriate circumstances :

- 1) An owner or operator may propose to use existing background data to establish a background value which is then written into the permit and used in all statistical comparisons for that constituent or parameter. This approach is only viable where the background data does not exhibit appreciable seasonal or temporal variation and where the power of the statistical procedure for that constituent or parameter is not adversely affected by the use of historical background data; or
- 2) An owner or operator may propose a procedure to be used to establish and update the background value for a constituent or parameter to reflect seasonal or temporal variation in background water quality.

Section 66264.97(e)(11) : This subsection has been added to clarify the requirement that the Department review the statistical procedures proposed by the owner or operator. Upon approval of those procedures, the Department must specify, in the facility permit, either a background value or the procedure for updating the background value for each constituent or parameter.

Section 66264.97(e)(12) : Based loosely on 40 CFR section 264.97(g), this subsection has been rewritten as part of the structural changes made to this subsection. The first sentence has been deleted because the requirement to establish background values has been clarified and moved to sections 66264.97(e)(10) and (e)(11). A considerable amount of new language has been added to more clearly require an owner or operator to propose, for approval by the Department, the sampling methods to be used to establish background and for monitoring pursuant to Article 6. These methods must include a sufficient number of samples to assure that the data needs of the program are met. The owner or operator must also determine an appropriate sampling interval for each medium (ground water, surface water and the unsaturated zone). Language has also been added to require that any "alternate sampling method" proposed under this section must include not less than one sample collected quarterly from each monitoring point and from each background monitoring point. This is consistent with existing state requirements in Subchapter 15.

Section 66264.97(e)(13) : This section is based on 40 CFR section 264.97(f). The phrase "portion of the" has been inserted. This change is necessary because original RCRA only required ground water monitoring. Under existing Subchapter 15 and Title 22 the owner or operator is required to monitor surface water and the unsaturated zone as well as ground water. Each monitoring program (detection monitoring, compliance monitoring, and corrective action) will have a ground water portion, a surface water portion and an unsaturated zone portion.

The phrase "an accurate" has been inserted. This change is necessary to emphasize the importance of accuracy when determining ground water surface elevations. This information is needed by the field personnel in order to determine an appropriate purge volume and to identify any significant deviation from the expected water level. (Note: Additional water level measurements are required pursuant to subsection 66264.97(e)(15) for the purpose of determining ground water flow rate and direction.)

The phrase "and field parameters (temperature, electrical conductivity, turbidity and pH) at each well" has been inserted. This change is necessary because existing Subchapter 15 requires the owner or operator to measure field parameters each time a groundwater sample is collected. A requirement to include turbidity as a field parameter has been added to this section to require that turbidity be measured each time ground water is sampled. Turbidity is easily measure with a portable meter and is an important indicator of the representativeness of the ground water sample.

Section 66264.97(e)(14) : This section has been added to require the owner or operator graph all analytical data from each monitoring point and each background monitoring point. Graphing or charting water quality data over time is standard practice for any water quality investigation. It requires a minimum amount of time to perform and yields valuable information of benefit to both the owner or operator and the regulatory agency.

Section 66264.97(e)(15) : This section has been added to incorporate a requirement in existing Subchapter 15 that the owner or operator determine ground water flow rate and direction at least quarterly, including times of expected highest and lowest elevations of the ground water surface. Because contemporaneous water level measurements that are unaffected by sampling activity are required for the determination of ground water flow rate and direction this will require separate water level measurements from those collected at the time of sampling.

Section 66264.97(e)(16) : Based on 40 CFR section 264.97(j), this section has been modified slightly to clarify the requirement that all water quality data collected in accordance with Article 6 be maintained in the operating record and submitted to the Department as required in the facility permit.

Section 66264.98 : This section is based on 40 CFR section 264.98. It contains the detailed requirements for an owner or operator who is required to implement a detection monitoring program.

Several structural changes have been made to this section in order to present to regulations in the approximate order in which the requirements will be satisfied. Although many changes have been made to the language in this section, most reflect the major changes described in the article overview. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this statement of reasons and in the article overview and as follows :

Section 66264.98(a) : Based on the introductory paragraph to 40 CFR section 264.98, this subsection has been modified to conform to the structural changes made to this section. This is a non-substantive change to these regulations.

Section 66264.98(b) : Based on 40 CFR Section 264.98(b), this paragraph originally required the owner or operator to install a ground water monitoring system at the point of compliance. It has been rewritten to reflect the addition of the surface water and vadose zone monitoring systems as described in section 66264.97. The reference to the point of compliance has been dropped because section 66264.97 more clearly specifies the types and locations of monitoring points which are required for each system.

Section 66264.98(c) : This subsection has been added as part of the structural change to this section described in the section overview for this section. It has been added to clarify the requirement that background values be established for all constituents of concern and for all monitoring parameters. The procedures for establishing background values are described under the general monitoring requirements in section 66264.97(e)(11).

Section 66264.98(d) : This subsection has been added as part of the major structural changes to the monitoring programs due to the elimination of ACLs (See the article overview for this article for a more detailed discussion of this topic). This subsection requires that the water quality protection standard be specified in the facility permit for a detection monitoring program.

The water quality protection standard will apply to all constituents of concern. Monitoring parameters are used for determining statistically significant evidence of a release but are not included in the water quality protection standard because, for a corrective action program, the owner or operator is not required to "remove or treat in place" a monitoring parameter unless it is also listed as a constituent of concern.

Section 66264.98(e) : Based loosely on 40 CFR section 264.98(a), this section has been modified to introduce the term "monitoring parameter" as a consolidated reference to the "physical parameters, hazardous constituents, waste constituents, and reaction products that provide a reliable indication of a release from the regulated unit". The reference to "specific conductance, total organic carbon, and total organic halogen" has been deleted because, in the experience of the Department, these have not proven to be universally reliable indicators of contamination. Their use as indicator parameters was not required under 40 CFR, and is not precluded under these proposed regulations. The phrase "indicator parameter" is no longer used because the definition of monitoring parameter includes those parameters that are referred to in 40 CFR as indicator parameters.

The phrase "for each medium (ground water, surface water, and for unsaturated zone)" has been added to emphasize the requirement that each media be considered separately when choosing appropriate monitoring parameters.

Section 66264.98(e)(2) : This subsection has been added as part of the major change in California's approach to water quality monitoring. (See the article overview for this article for a more detailed discussion of the use of monitoring parameters and constituents of concern). The selection of monitoring parameters is to be based upon a projected correlation between the values for the monitoring parameters and the concentrations of constituents of concern.

Section 66264.98(e)(3) : This section is based on 40 CFR section 264.98(a)(2). The phrase "in the unsaturated zone beneath the waste management area" has been deleted because of the surface water and unsaturated zone monitoring requirements which have been added to this article. The mobility, stability and persistence of waste constituents must be considered for each media through which the contaminant is expected to migrate.

Section 66264.98(e)(5) : This section is based on 40 CFR section 264.98(a)(4). The phrase "concentrations or" has been deleted because, in these proposed regulations the term "values" has been used to include the concentrations for monitoring parameters and constituents of concern. The phrase "or constituents" has been deleted because the definition of monitoring parameters includes "constituents" as used here.

Section 66264.98(f) : This section is based on 40 CFR section 264.98(d). This section has been rewritten to require that the sampling frequency be specified according to Section 66264.97(e)(12). The first sentence has been added to clarify the requirement to conduct sampling and analysis. The requirement from existing Subchapter 15 that sampling be

scheduled to include "the times of the expected highest and lowest annual elevations of the ground water surface" has been added.

Section 66264.98(g) : This subsection has been added as part of the major change in California's approach to water quality monitoring. (See the article overview for this article for a more detailed discussion of the use of monitoring parameters and constituents of concern). The owner or operator is required to periodically monitor for all constituents of concern at those locations specified in the facility permit and determine if there is statistically significant evidence of a release. This monitoring must be done at a frequency specified in the permit based upon the confidence that the monitoring parameters have been chosen correctly. The Department will specify in the permit the locations at which sampling must be conducted. At a minimum, this monitoring shall be performed once every five years.

Section 66264.98(h) : This section is based on 40 CFR section 264.98(c). The first sentence has been deleted because the requirement to conduct sampling and analysis has been rewritten and moved to Section 66264.98(f).

Section 66264.98(i) : This section is based on 40 CFR section 264.98(f). The phrase "for each monitoring point" has been added in order to emphasize the requirement in section 66264.97(e)(7) that the statistical test shall be conducted separately for each constituent at each monitoring point.

Section 66264.98(i)(3) : This section has been added in order to incorporate the provision from existing Subchapter 15 that the Department may make an independent finding that there is statistically significant evidence of a release from a regulated unit.

Section 66264.98(j) : This subsection is based on 40 CFR Section 264.98(g). It has been extensively rewritten and split into two subsections in order to provide guidelines for the use of a statistical verification procedure.

The requirements for a verification procedure are designed to reduce the negative effect a Type I error (false positive) has on the regulated community without increasing the Type II error (false negative) rate. These requirements have been developed with the assistance of EPA technical staff. They are expected to provide an accurate test of the statistically significant indication of a release within a relatively short period of time.

Section 66264.98(j)(1) : Language has been added to require that notification of a significant evidence of a release must be sent by certified mail, and to require that the

notification include an identification of the constituents or parameters that have indicated significant evidence of a release and the locations where that evidence was indicated.

Section 66264.98(j)(2) : This subsection has been added to require that if the owner or operator intends to use a verification procedure that has been specified in the facility permit, that procedure must be initiated immediately after determining statistically significant evidence of a release.

Section 66264.98(k) : An introductory paragraph has been inserted to establish the applicability of the requirements in this subsection. This was necessary because of the provisions for verifying a release added to subsection (j) of this section.

Section 66264.98(k)(1) : New language has been added that requires the discharger to determine the concentration of each constituent of concern at each monitoring point in the affected medium. This requirement was added as the first step the owner or operator must take to prepare for the evaluation monitoring program. For that program the owner or operator must propose a list of monitoring parameters based upon a demonstrated correlation between the constituents of concern and the proposed parameters.

Section 66264.98(k)(2) : This section is based on 40 CFR Section 264.98(g)(2). This section originally required the owner or operator who has found a statistically significant increase in a monitoring parameter to immediately sample all ground water monitoring wells for Appendix IX constituents. This requirement has been modified to include only those monitoring points in the affected media. This approach was used because : (1) existing California regulations do not clearly require that all monitoring points be sampled for Appendix IX constituents; (2) obtaining a sufficient volume of liquid from the unsaturated zone would often be extremely difficult; and (3) intensified sampling in all media for Appendix IX constituents may not always be justified; and (4) because other provisions (in section 66264.99) require the owner or operator to fully characterize any release release from the regulated unit, the Department does not believe that a blanket requirement is needed here.

Section 66264.98(k)(3) : This section is based on 40 CFR Section 264.98(g)(3). Language has been added to clarify that the requirements of this subsection only apply to constituents that are not already identified as constituents of concern. This was necessary because of the major changes explained in the article overview. The phrase "will form the basis for compliance monitoring" has been modified to read "will be added to the list of constituents of concern specified in the water quality protection standard for evaluation monitoring".

This change was necessary to clarify the meaning of the requirement. Under these proposed regulations, the owner or operator must determine the spatial distribution and concentration of each constituent of concern throughout the zone of contamination, must select monitoring parameters based upon a demonstrated correlation between the constituents of concern and the parameters, must remove or treat in place any constituents of concern released from the regulated unit, and must determine the success of corrective action based upon the concentrations of constituents of concern.

Language has also been added to allow the Department to exclude from the list of constituents of concern any constituent that is not reasonably expected to be in or derived from the regulated unit. This is consistent with the federal definition of "hazardous constituent".

Section 66264.98(k)(4) : This subsection has been added to describe the requirements for establishing background values and for selecting statistical procedures for any new constituents of concern identified pursuant to subsection (k)(3). Each requirement contains a reference to the appropriate general monitoring requirement established in Section 66264.97.

Section 66264.98(k)(5)(A) : This section has been modified to require the owner or operator to include the results of the most recent sampling events in the application for a permit modification required under subsection (k)(4) of this section.

Section 66264.98(k)(5)(C) : The word analysis has been changed to "analytical" because it is being used as an adjective to modify the word "procedures".

Section 66264.98(k)(5)(D) : This subsection has been added to require the owner or operator to submit a detailed description of the measures to be taken in order to assess the nature and extent of the release. This submittal gives the Department an opportunity to review, modify, approve, and/or disapprove the proposal as part of the application for a permit modification. Timely submittals of high quality work plans will provide for more efficient site characterization and a high level of protection to human health and the environment.

Section 66264.98(k)(6) : This section is based loosely on 40 CFR Section 264.98(g)(5) but has been extensively modified to reflect the major structural differences described in the article overview. Original 40 CFR sections 264.98(g)(5)(i) and (g)(5)(ii)(A) and (B) have been deleted because, under current California regulations, alternate concentration limits (ACLs) are not allowed (See the article overview for this article for a more detailed discussion of this topic).

The word "study" has been substituted for the word "plan" for the sake of consistency. The report which is required is referred to by both names under RCRA (See section 264.99(h)(2)).

Language has also been added in response to a concern expressed by the EPA that initiation of corrective action could be delayed by repeated unsuccessful attempts to obtain concentration limits greater than background. In response to that concern, the proposed regulations have been modified to include a requirement that the engineering feasibility study must contain, at a minimum, detailed description of the corrective action measures that could be taken to achieve background concentrations for all constituents of concern. Since this same information will be needed as part of the justification for a concentration limit greater than background, this new requirement satisfies EPA's concern about undue delays without adding an unreasonable burden to the owner or operator.

Section 66264.98(k)(7) : Language has been added to clarify that if the owner or operator makes a successful demonstration under this subsection, the owner or operator does not have to submit an engineering feasibility study to the Department. This is consistent with the intention of the federal regulations.

Section 66264.98(k)(7)(C) : The phrase "at the facility" has been deleted because, under these proposed regulation, separate monitoring programs are established for each regulated unit. A facility may have several detection monitoring programs in effect at any given time.

Section 66264.98(l) : The phrase "no longer satisfies" has been changed to "does not satisfy" in order to remove the implication that the existing program at the facility at one time satisfied the requirements of this section. Language has also been added to clarify the requirement that the owner or operator must respond to significant physical evidence of a release.

Section 66264.98(l)(1) : This subsection has been added to require that the Department be notified by certified mail within seven days of making the determination under subsection (1).

Section 66264.98(m) : This section has been added to retain and clarify the corresponding requirement under existing Subchapter 15, Article 5, section 2556(c).

Section 66264.98(n) : This section has been added as part of the major structural changes to the water quality monitoring programs required at permitted facilities. Existing Subpart F

requires an owner or operator to perform either compliance monitoring or corrective action throughout the compliance period for a regulated unit. This requirement means that, after a corrective action program, an owner or operator is required to perform yearly sampling and analyses for constituents listed in Appendix IX of Chapter 14 throughout the compliance period and to include in the list of monitoring parameters all hazardous constituents that have been detected in ground water.

Under these proposed regulations, after a corrective action program has been successfully completed, an owner or operator must institute a detection monitoring program for the purpose of detecting subsequent releases from the regulated unit. In this way the requirements in sections 66264.98 and 66264.99 for responding to statistically significant evidence of a release from a regulated unit are applied to each new release from the regulated unit. The Department has retained the requirement to perform yearly Appendix IX sampling and analyses during the compliance period. This requirement provides an important safeguard for the detection of any less mobile constituents which may not be detected during a corrective action program. Language has also been added to mimic the appropriate requirements for responding to elevated levels of hazardous constituents or to the appearance of new constituents.

Section 66264.99 : This section is based on 40 CFR section 264.99. It contains the detailed requirements for an owner or operator who is required to implement an evaluation monitoring program. Although many changes have been made to the language in this section, most reflect the major changes described in the article overview. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this statement of reasons and in the article overview and as follows:

A considerable amount of language from original 40 CFR section 264.99 has been replaced as part of the major structural changes in the water quality monitoring and response programs in these proposed regulations. Under original 40 CFR the compliance monitoring program requires an owner or operator to provide enhanced monitoring for a regulated unit that has demonstrated significant evidence of a release, but that is not in violation of the ground water protection standard. Under these proposed regulations, any statistically significant evidence of contamination constitutes a violation of the water quality protection standard because alternate concentration limits (ACLs) are not available under these regulations.

In these proposed regulations, the owner or operator of a regulated unit that has violated the water quality protection standard during a detection monitoring program must institute an evaluation monitoring program for the purpose of characterizing the release and preparing for a corrective action program.

The title of this section has been changed from "Compliance Monitoring Program" to "Evaluation Monitoring Program". This change was necessary in order to emphasize the the major structural differences in the water quality monitoring and response programs in these proposed regulations and because the new title more clearly describes the purpose of the program.

Section 66264.99(a) : Language has been added to this subsection in order to clearly state that the purpose of the evaluation monitoring program is to characterize the release and to prepare for a corrective action program.

Note : Original 40 CFR section 264.99(a) has been deleted because, when evaluation monitoring is required the regulated unit is already known to be out of compliance with the standard. The water quality protection standard is used during detection monitoring for the purpose of detecting a release from the regulated unit and during corrective action to evaluate the success of the corrective action program.

Section 66264.99(b) : This section has been added to clearly specify that the owner or operator must determine the spatial distribution and concentration of each constituent of concern throughout the zone affected by the release, and to require that the assessment be completed and submitted to the Department within 90 days of establishing an evaluation monitoring program. The 90 day limit was included because, under existing federal regulations, if a facility does not request ACLs or if requested ACLs are not granted, the owner or operator is required to submit an application for a permit modification within 90 days of exceeding the ground water protection standard. Since the proposed regulation do not include provisions for ACLs, and since the information required by this subsection is needed as part of the application for a permit modification, the 90 day limit was included in order to maintain the existing stringency of the federal requirement.

Section 66264.99(c) : This section has been added to require the owner or operator to use the data collected pursuant to (b) to update the engineering feasibility study prepared for the corrective action program. This is a logical interpretation of existing requirements under both Title 22 and Subchapter 15. In order to retain the stringency of

existing regulations, the owner or operator is required to submit an engineering feasibility study within 180 days of determining that there is statistically significant evidence of contamination (section 66264.98(k)(5)(A)). If an update to this feasibility study is necessary based on data collected pursuant to this section, the update shall be submitted within 90 days of establishing an evaluation monitoring program.

Section 66264.99(d) : This section is based on 40 CFR section 264.99(h)(2). It has been modified to require the application for a permit modification to establish a corrective action program to be based on the results of the investigation of the release and on the engineering feasibility study. Language has also been added that requires the owner or operator to submit the application to the Department within 90 days of establishing an evaluation monitoring program. The 90 day limit was included because, under existing federal regulations, if a facility does not request ACLs or if requested ACLs are not granted, the owner or operator is required to submit an application for a permit modification within 90 days of exceeding the ground water protection standard. Since the proposed regulation do not include provisions for ACLs the 90 day limit was included in order to maintain the existing stringency of the federal requirement.

Section 66264.99(d)(1) : This subsection contains new language which has been adapted from a similar provision in Subchapter 15. The evaluation monitoring program is intended to be used as an interim program while the owner or operator prepares to establish an appropriate corrective action program. The information obtained regarding the nature and extent of contamination must be included with the description of proposed corrective action measures included in the application for permit modification.

Section 66264.99(d)(2) : This section has been added as part of the major revisions to the proposed regulations discussed in the article overview. If the owner or operator can demonstrate that it will be technically or economically infeasible to obtain the background level of a constituent during a corrective action program, the owner or operator may propose that a concentration limit greater than background be established in the water quality protection standard for a corrective action program. The owner or operator is required to submit all data necessary to justify the proposed limit to the Department as part of the application for a permit modification to establish a corrective action program.

Section 66264.99(d)(3) : This section is based on 40 CFR section 264.99(h)(2)(i). The phrase "proposed corrective action measures" has been added because in these proposed regulations a distinction is made between corrective action measures and the corrective action program. The corrective

action measures are those steps taken to remove or treat in place the constituents of concern that have been released to the environment or to prevent continued or subsequent releases. The corrective action program consists of all corrective action measures and the water quality monitoring performed to evaluate the effect of the corrective action measures. The phrase "specified in the facility permit under paragraph (a) of this section" has been modified to read "proposed for a corrective action program". This is necessary because, under the proposed regulations, the owner or operator may propose a concentration limit greater than background for a corrective action program. The proposed corrective action measures must be designed to achieve the concentration limits established for corrective action.

Section 66264.99(d)(4) : This section is based on 40 CFR section 264.99(h)(2)(ii). The last sentence of this section has been deleted because the Department believes that each monitoring program must be designed to suit the particular data needs of the program. While all or part of an existing monitoring system may be incorporated into another program (see subsection (e)(1) of this section) the primary goal in system design must be to fulfill the objectives of the monitoring program.

Section 66264.99(e) : This section has been added to describe the minimum monitoring requirements for an evaluation monitoring program. Based loosely on the requirements for detection and compliance monitoring in original 40 CFR, this section has been rewritten to reflect the goals of the evaluation monitoring program under these proposed regulations. The introductory paragraph states that the monitoring requirements of this section are "in addition to" the requirements for assessing the nature and extent of contamination.

The purpose of restructuring the monitoring programs is to provide a high level of protection to human health and the environment by requiring rapid response to any release from a regulated unit. The evaluation program has been designed to provide a smooth transition from detection monitoring to corrective action. The Department expects that the time spent in evaluation monitoring will be relatively short because of the preliminary work done characterizing the site geology and hydrology for Part B of the permit application. In order to maintain the existing stringency of RCRA, and to provide for those case where the evaluation program lasts for an extended period of time, minimum monitoring requirements have been included in these proposed regulations.

Section 66264.99(e)(1) : This section is based on 40 CFR section 264.99(b). This paragraph originally required the owner or operator to install a ground water monitoring system

at the point of compliance. It has been rewritten to reflect the addition of the surface water and vadose zone monitoring systems as described in section 66264.97. The reference to the point of compliance has been dropped because section 66264.97 more clearly specifies the types and locations of monitoring points which are required for each system. The references to subsections 264.97(a)(2), (b) and (c) have been changed to reflect the structural changes which were made to section 66264.97. The last sentence has been added to replace the provision in original 40 CFR section 264.99(h)(2)(ii) (See the discussion for section 66264.99(d)(3) for a more detailed discussion of this topic).

Section 66264.99(e)(2) : This section has been added as part of the change made in the selection of monitoring parameters as described in the article overview. Under these proposed regulations, monitoring parameters are selected based upon the original criteria specified in 40 CFR Section 264.98(a) and upon a demonstrated correlation with the constituents of concern (See the article overview for this article for a more detailed discussion of this topic). In order to retain the stringency of existing federal regulations, the list of monitoring parameters for each medium must include the hazardous constituents that have been detected in that medium.

Section 66264.99(e)(3) : This section is based on 40 CFR section 264.99(f). This section has been rewritten to require that the sampling frequency be specified according to Section 66264.97(e)(12). The first sentence has been added to clarify that this section refers to monitoring for monitoring parameters listed in the facility permit. Sampling pursuant to this section is required to evaluate changes in water quality due to the release. This information must then be evaluated with respect to the design criteria for corrective action (See the discussion for section 66264.99(e)(7) for a more detailed discussion of this topic).

New language has also been added in order to incorporate provisions from Subchapter 15 which require that ground water monitoring be scheduled to include the times of expected highest and lowest annual elevations of the ground water surface.

Section 66264.99(e)(4) : This subsection has been added as part of the major change in California's approach to water quality monitoring. (See the article overview for this article for a more detailed discussion of the use of monitoring parameters and constituents of concern). The owner or operator is required to periodically monitor for all constituents of concern and evaluate changes in water quality due to the release from the regulated unit. This monitoring must be done at a frequency specified in the permit based upon

the confidence that the monitoring parameters have been chosen correctly.

Section 66264.99(e)(5) : This section is based on 40 CFR section 264.99(c). This section has been modified because, under these proposed regulations the primary purpose of evaluation monitoring is not to determine statistically significant increases of contamination for the purpose of requiring corrective action. Sampling pursuant to this section is required to evaluate changes in water quality due to the release.

The phrase "must record..." has been modified to read "shall maintain a record..". This is consistent with the requirement under section 66264.97 that the owner or operator maintain all water quality monitoring data in the facility operating record.

Note : Original 40 CFR section 264.99(d) has been deleted because, under these proposed regulations the primary purpose of evaluation monitoring is not to determine statistically significant increases of contamination for the purpose of requiring corrective action. Sampling pursuant to this section is required to evaluate changes in water quality due to the release.

Note : Original 40 CFR section 264.99(e) has been deleted because it has been replaced by a more stringent requirement in section 66264.97(e)(15).

Section 66264.99(e)(6) : This section is based on 40 CFR section 264.99(g). This section originally required the owner or operator who has found a statistically significant increase in a monitoring parameter to sample all ground water monitoring wells for Appendix IX constituents at least annually. This requirement has been modified to include only those monitoring points in the affected media. This approach was used because: (1) existing California regulations do not clearly require that all monitoring points be sampled for Appendix IX constituents; (2) obtaining a sufficient volume of liquid from the unsaturated zone would often be extremely difficult; and (3) intensified sampling in all media for Appendix IX constituents may not always be justified; and (4) because other provisions (in section 66264.99) require the owner or operator to fully characterize any release from the regulated unit, the Department does not believe that a blanket requirement is needed here.

The phrase "monitoring list" has been modified to read "list of constituents of concern specified in the facility permit". This change was necessary to to clarify the meaning of the requirement. Under these proposed regulations, the owner or operator must determine the spatial distribution and

concentration of each constituent of concern throughout the zone of contamination, must select monitoring parameters based upon a demonstrated correlation between the constituents of concern and the parameters, must remove or treat in place any constituents of concern released from the regulated unit, and must determine the success of corrective action based upon the concentrations of constituents of concern.

Language has also been added to allow the Department to exclude from the list of constituents of concern any constituent that is not reasonably expected to be in or derived from the regulated unit. This is consistent with the federal definition of "hazardous constituent".

Note : Original sections 264.99(h) and (h)(1) have been deleted because, under these proposed regulations the primary purpose of evaluation monitoring is not to determine statistically significant increases of contamination for the purpose of requiring corrective action. Sampling pursuant to this section is required to evaluate changes in water quality due to the release. Original 40 CFR section 264.99(h)(2) has been modified, moved, and renumbered as 66264.99(d).

Section 66264.99(e)(7) : This section has been added to clearly establish the requirement that the owner or operator use the information collected pursuant to subsection (e) to evaluate the adequacy of the design criteria for corrective action. If the owner or operator determines that the plan for corrective action is insufficient, the owner or operator must notify the Department by certified mail with 7 days, and submit any appropriate changes to the plan within 90 days. This is a logical interpretation of existing requirements to evaluate the nature and extent of contamination and to develop an appropriate corrective action plan.

Section 66264.99(f) : This section is based on 40 CFR section 264.99(i). It has been modified to reflect the modified structure of the evaluation monitoring program and to specify the requirements for reinstating a detection monitoring program after the successful completion of a corrective action program.

Section 66264.99(g) : This section has been added to emphasize the Department's authority to require interim corrective action measures where necessary to protect human health or the environment.

Section 66264.99(h) : This section is based on 40 CFR section 264.99(j). The phrase "no longer satisfies" has been changed to "does not satisfy" in order to remove the implication that the existing program at the facility at one time satisfied the requirements of this section.

Section 66264.99(i) : This section has been added to retain and clarify the corresponding requirement under existing Subchapter 15.

Section 66264.100 : This section is based on 40 CFR section 264.100. It contains the detailed requirements for an owner or operator who is required to implement a corrective action program. Although many changes have been made to the language in this section, most are reflections of the major changes described in the article overview. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this statement of reasons and in the article overview and as follows :

Throughout this section the use of the words "measures" and "program" have been standardized. In the proposed regulations, corrective action measures are those steps that are taken to remediate the release from the facility. The corrective action program refers to all corrective action measures and all monitoring activities required to evaluate the effectiveness of the corrective action measures.

Section 66264.100(a) : The phrase "pursuant to section 66264.91 of this article" has been added, and the phrase "discharge the following responsibilities" has been modified to read "comply with the requirements of this section for that unit" to clarify the applicability of this section.

Section 66264.100(b) : The phrase "to ensure that the regulated units are in" has been changed to read "remediate releases from the regulated unit and to ensure that the regulated unit achieves...". This change was necessary to emphasize the requirement to remediate releases from the regulated unit. Language that describes the elements of the water quality protection standard has been deleted and replaced with the appropriate reference to Section 66264.92, where the water quality protection standard is now clearly defined.

Section 66264.100(c) : The phrase "prevents hazardous constituents from exceeding" has been modified to read "ensures that constituents of concern achieve" this was necessary to correct a logical error because it is impossible to "prevent" something which has already occurred.

The phrase "and throughout the zone affected by the release, including any portions of the affected zone that extend beyond the facility boundary," has been added to clarify the requirement that the owner or operator remediate the entire release.

Language has been added to this subsection to retain a provision from existing Title 22 that the owner or operator

must take actions to prevent future noncompliance with the water quality protection standard due to a continued or subsequent release.

Note : Original 40 CFR section 264.100(c) has been deleted. Under current Subpart F, a regulated unit is expected to switch back and forth between compliance monitoring and corrective action as the concentrations of constituents in ground water fluctuate near the concentration limits established in the ground water protection standard. The Department does not believe there is a benefit in switching between programs. Under the proposed regulations, an owner or operator is required to remain in a corrective action program until the water quality protection standard has not been exceeded for one year and the owner or operator demonstrates to the Department that it is not likely that wastes remaining in the regulated unit will cause the standard to be exceeded.

Section 66264.100(d) : The phrase "as effective as that program" has been changed to "effective". This change was necessary because the purposes of the evaluation and corrective action programs are different. The corrective action program may be based on elements of the evaluation monitoring program but must stand alone as an effective program with respect to the goals of corrective action.

Note: Original 40 CFR Section 66264.100(e)(1) and (2) have been deleted because proposed subsection 66264.100(c) requires that the owner or operator perform corrective action throughout the zone affected by the release. The Department does not wish to adopt a standard which could give rise to arguments by an owner or operator that they are relieved of corrective action responsibilities because the release has migrated offsite. Instead of establishing a standard which would relieve an owner or operator of corrective action responsibilities, the Department will work with individuals on a case-by-case basis to obtain permission to undertake remedial actions or to join uncooperative land owners in the cleanup utilizing additional authorities.

Section 66264.100(e) : This section is based on 40 CFR Section 264.100(e)(3). This section has been modified to emphasize the authority of the Department to establish a schedule of compliance for corrective action in the facility permit.

Section 66264.100(f) : This section is based on 40 CFR Section 264.100(e)(4). This section has been modified to emphasize the requirement that before terminating corrective action measures the owner or operator must demonstrate the success of the corrective action program to the Department.

Note : Original 40 CFR section 264.100(f) has been deleted. The requirements of this section have been replaced with equivalent or more stringent requirements as follows:

- 1) Corrective action measures may only be terminated pursuant to section 264.100(f); and
- 2) If the owner or operator is conducting corrective action at the scheduled end of the compliance period, the compliance period is extended until the water quality protection standard has not been exceeded for three years pursuant to section 66264.96(c).

Section 66264.100(g) : This section has been added as part of the major structural changes described in the article overview for this article. The owner or operator is required to remain in a corrective action program until the water quality protection standard has not been exceeded for a period of one year after terminating the corrective action measures.

Section 66264.100(g)(2) : This section has been added because a mechanism for returning to a Detection monitoring program was missing from the existing regulations. This requirement is consistent with the intent of existing regulations. Note : During the compliance period, there are additional monitoring requirements for a regulated unit that returns to Detection monitoring after a corrective action program (See section 66264.98(n)).

Section 66264.100(h) : This subsection has been modified slightly to emphasize the authority of the Department to require more frequent reporting when necessary to protect human health or the environment.

Section 66264.100(i) : The phrase "no longer satisfies" has been changed to "does not satisfy" in order to remove the implication that the existing program at the facility at one time satisfied the requirements of this section.

Section 66264.100(j) This section emphasizes the Department's authority to review the adequacy of and direct changes to the owner or operator's monitoring program.

## ARTICLE 7: CLOSURE AND POSTCLOSURE

This article is based on Subpart G of 40 CFR Part 264. It sets forth the general closure requirements applicable to all permitted hazardous waste facilities, and the general postclosure care requirements applicable to all permitted disposal facilities and to certain permitted waste pile, surface impoundment, and tank system facilities. Closure and postclosure care requirements unique to each facility type are set forth in the facility specific articles of Chapter 14.

Section 66264.110: This section, which is based on 40 CFR section 264.110, specifies the facility universe to which the requirements of this article are applicable. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons.

Section 66264.111: This section, which is based of 40 CFR section 264.111, sets forth the closure performance standard applicable to all permitted hazardous waste management facilities. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

Section 66264.111 (b): The phrase "contaminated runoff" is being changed to "contaminated rainfall or runoff", and the word "hazardous" is being deleted from the phrase "hazardous waste decomposition products". These changes are necessary to conform with existing, more stringent Health and Safety Code section 25245 (a)(2).

Section 66264.112: This section, which is based on 40 CFR section 264.112, sets forth various requirements pertaining to the closure plan which must be submitted by all permitted facilities, including: submission procedures, plan contents, amendment requirements and procedures, and closure notification requirements and procedures. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

Section 66264.112 (a)(1): The phrase "or when otherwise requested by the Department" is being inserted in the third sentence. This change, which pertains to when the facility is required to submit its closure plan, is necessary to conform to Health and Safety Code section 25246 (b). The corresponding federal regulation is less stringent as it does not include this requirement.

Section 66264.112 (a)(2): Language is being added to this section to require that a copy of the approved closure plan be

"kept at the facility". This change is required to conform to existing Title 22 CCR section 67212. The corresponding federal regulation does not include this requirement, and is, therefore, less stringent.

Section 66264.112 (b): The words "and/or" are being changed to "or", and the phrase "and to perform final closure of the facility at the end of its active life" is being inserted at the end of the first sentence. These changes are being made for clarification only and do not alter the intended meaning of the regulation.

Sections 66264.112 (b)(1) and (2): Language is being added to these sections to require the closure plan to specify when the facility will be partially and finally closed. This change is required to conform to existing Title 22 CCR section 67212. The corresponding federal regulation does not include this requirement and, therefore, is less stringent.

Sections 66264.112 (b)(7) and (c)(2)(B): Language in the 40 CFR version of these two sections, which restricts the requirement to provide an estimate of the expected year of closure to certain facilities, is not being included in the proposed regulations. This change is necessary to conform to existing Title 22 CCR section 67212 (b)(4), which requires all facilities to include an estimate of the expected year of closure in their closure plans.

Section 66264.112 (c): The words "operating plans, facility design, or" are being deleted. This portion of the regulations addresses closure requirements. Therefore, it is confusing and inappropriate to include the requirement for submitting a permit modification to authorize a change in operating plans or facility design in this section of the regulations. (This requirement is addressed in Chapter 20 of the proposed regulations.) This change is being made solely to improve the clarity of the regulations, and does not alter regulatory requirements in any way.

Section 66264.112 (c)(3): The third sentence in the 40 CFR version of this section applies only to those permitted surface impoundment and waste pile facilities that initially (at the time of permit application/issuance) intend to clean close, and are, therefore, not required under 40 CFR to prepare a contingent closure plan to cover the possibility of not being able to clean close. This sentence is not being included in the proposed state regulation to conform to the existing and more stringent Title 22 CCR sections 67288(d) and 67351(c), which require all permitted surface impoundments and waste piles that initially plan to clean close to have a contingent closure plan to cover the possibility of being unable to clean close.

Section 66264.112 (d)(1): 40 CFR section 264.112 (d)(1) requires owners/operators of permitted surface impoundments, waste piles, land treatment units and landfill units to notify the Department at least 60 days prior to beginning closure. Owners/operators of other types of permitted units are only required to give a 45 day closure notice. However, existing Title 22 CCR section 67212 (d) is more stringent as it requires a 180 day closure notice for all permitted facilities. The proposed state regulations incorporate the shorter notice periods allowed under 40 CFR, since in many instances the 180 day notice period is unnecessary and may result in delaying closure. However, the Department is retaining the option to require a longer notice period, up to 180 days, on a case-by-case basis, to ensure adequate time to review and make necessary amendments to the closure plan prior to the initiation of closure.

Section 66264.112 (d)(1): Language is being added to this section to allow the Department 90 days after receipt of the closure notice to review the closure plan and require any necessary modifications. This provision, which is not found in the less stringent corresponding federal regulation, is being added to conform to existing Title 22 CCR section 67212 (d).

Section 66264.112 (d)(2): This section defines the term "date when the owner or operator expects to begin closure". Existing Title 22 CCR section 67218 defines this to be "no later than immediately after the date on which the owner or operator expects to receive the final volume of wastes". 40 CFR defines this date, in most cases, to be "no later than 30 days after the date on which any hazardous waste management unit receives the known final volume of hazardous waste". In the context of this regulation "30 days after" is less stringent than "immediately". Therefore, to conform to the more stringent Title 22 requirement, the 40 CFR language is being incorporated into the proposed regulation with the words "30 days after" deleted. The word "immediately" from the existing Title 22 regulation is not being included in the proposed regulation because of its ambiguity, which could lead to inconsistent interpretation of the regulation. The language of the proposed regulation, however, is consistent with the intent of the existing Title 22 regulation.

40 CFR Section 66264.112 (e): This section of the federal regulations allows facilities to initiate closure activities without first notifying the Department of their intent to begin closure. This federal regulation is not being incorporated into the proposed state regulations because it is less stringent than existing Title 22 CCR section 67212, which requires facilities to notify the Department, in all cases, prior to initiating closure activities to give the Department

time to review and update the plan, as necessary, prior to its implementation.

Section 66264.113: This section, which is based on 40 CFR section 264.113, sets forth the maximum time periods allowed for completing certain portions of the planned closure activities, and the procedures and requirements for extending these time limits. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

Sections 66264.113 (a)(1)(B)(2). and (b)(1)(B)(2).: These sections specify one of the conditions which must be met before the Department may extend the closure time limits. The 40 CFR version of this condition is that there is a reasonable likelihood that the owner or operator or another person will recommence operation of the facility within one year. The corresponding condition in existing Title 22 CCR section 67213, however, is more stringent and specifies that recommencement of operations is limited to a person other than the owner or operator. Therefore, the language in the corresponding 40 CFR regulation is being modified to conform to the more stringent existing Title 22 regulation.

Section 66264.114: This section, which is based on 40 CFR section 264.114, specifies the requirements for disposing of or decontaminating all contaminated equipment, structures and soils during the closure period. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

Existing Title 22 CCR section 67214 is more specific and thus more stringent than the corresponding federal regulation in that it defines "decontaminated" to mean "removing all hazardous waste and residues". 40 CFR does not define the term "decontaminated". Therefore, language is being added to this section to conform to the more stringent existing Title 22 requirement. Additionally, in the following sentence, the word "any" is being changed to "all" and the words "and residues" are being inserted after "hazardous wastes" for consistency with the above change.

"66264.197" is being added after the word "Section". This addition is necessary to conform with the revision made to the corresponding federal regulation per Federal Register, September 2, 1988.

Section 66264.115: This section, which is based on 40 CFR section 264.115, sets forth the requirements pertaining to closure

certification. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

The word "partial" is being added before the word "closure" in the first line of this section, and the language "of each hazardous waste...landfill unit" is being taken out of the regulation. These changes are being made because Section 66260.10 defines the term "partial closure" which includes closure of surface impoundments, waste piles, etc. These changes, however, do not change the intent of corresponding federal regulation.

This section requires the closure certification to be signed by a registered professional engineer. The word "qualified" is being added to this requirement to conform with existing Title 22 CCR section 67215, and for consistency with the engineering certification requirements found elsewhere throughout these proposed regulations and the 40 CFR regulations. Additionally, the word "registered" in this section is being changed to "registered in California" to conform with the requirements of the Business and Professions Code, sections 6704 and 6732, which are more stringent than the requirements found in the federal regulations.

Section 66264.116: This section, which is based on 40 CFR section 264.116, sets forth requirements pertaining to the survey plat which must be prepared and submitted in conjunction with facility closure. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

The term "surveyed benchmarks" is being modified to read "surveyed vertical and horizontal benchmarks". This change is necessary to conform with the requirements of existing Title 22 CCR section 67219. The requirement found in the corresponding federal regulation is less specific and, therefore, less stringent.

This section requires the survey plat to be prepared and certified by a professional land surveyor. Language is being added to require that the surveyor be licensed in California to conform to the requirements of existing Title 22 CCR section 67219. The corresponding federal requirement is less stringent since it does not require any type of license.

Section 66264.117: This section, which is based on 40 CFR section 264.117, sets forth requirements pertaining to postclosure care and use of the facility property. This section conforms to the corresponding federal regulation except for the generic changes

specified in the introduction to this Statement of Reasons and as follows:

Section 66264.117 (a): This section is based on, and is necessary to conform to, existing Title 22 CCR section 67217 (a). This section provides clarifying language not contained in the corresponding federal regulation. However, the requirements of this section are not limited solely to where hazardous wastes will remain after closure, but apply where waste residues, contaminated materials or contaminated soils are left in place as well. Therefore, this subsection has been modified to reflect this broader requirement.

Section 66264.117(b)(1): The new language "...except as provided in subsections (b)(2)(A) and (b)(2)(B)..." is being added to this section. This addition is necessary to clarify that per subsection (b)(2)(A) and (b)(2)(B), post-closure care period may be shortened or extended respectively, if the owner/operator demonstrates to the satisfaction of the Department that such changes in the post-closure care period are necessary to protect human health and the environment.

Section 66264.117(b)(2)(A): The new language "...owner/operator demonstrates to the satisfaction of the Department and..." is being added to this subsection to specify the Department's criteria for shortening the post-closure care period to less than thirty years as stated in subsection (b)(1) of this section.

Section 66264.117 (f): This section is based on, and is necessary to conform to, existing Title 22 CCR section 67217 (f). This section sets forth requirements pertaining to postclosure use of facility property, which are more stringent than the corresponding federal requirements. The word "Director" in the existing Title 22 regulation is being replaced by the word "Department" for consistency with the terminology used throughout these regulations. The following additional language is added at the end of the subsection: "No variance may be granted except as provided in subsection (d) of this section." This language is needed to clarify that the subsection (d) requirement applies to any variance granted pursuant to subsection (f). This clarification is necessary to conform with the provisions of 40 CFR Section 264.117 (c).

Section 66264.118: This section, which is based on 40 CFR section 264.118, deals with the postclosure plan and specifies the required content of the plan and requirements and procedures pertaining to initial submission and amendment of the plan. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

Sections 66264.118 (a), (d)(3) and (d)(4): The 40 CFR version of these sections contains language which applies only to those permitted surface impoundment and waste pile facilities that initially (at the time of permit application/issuance) intend to clean close, and are, therefore, not required under 40 CFR to prepare a contingent postclosure plan to cover the possibility of not being able to clean close. This language is not being included in the proposed state regulation to conform to the existing and more stringent Title 22 CCR sections 67288(d) and 67351(c), which require all permitted surface impoundments and waste piles that initially plan to clean close to have a contingent postclosure plan to cover the possibility of being unable to clean close.

Section 66264.118 (a): The phrase "or when otherwise requested by the Department" is being inserted in the third sentence. This change, which pertains to when the facility is required to submit its postclosure plan, is necessary to conform to Health and Safety Code section 25246 (b). The corresponding federal regulation is less stringent as it does not include this requirement.

Section 66264.118 (b)(2)(A): The phrase "cap and final cover or other containment systems" is being changed to "cap and final cover and other containment systems". This change is necessary to conform to the requirements of existing Title 22 CCR section 67218 (a)(3)(B)(1). The corresponding federal regulation is less stringent.

Section 66264.118 (c): In the proposed state regulations, the phrases "and all revisions", "kept at the facility and", and "an updated and" are being added to and the phrase "has been certified" is being deleted from the corresponding 40 CFR language. These changes are necessary to conform to the requirements of existing Title 22 CCR section 67218. The corresponding federal regulation is less stringent since it does not require that the plan and all revisions be kept at the facility until final closure of the facility. Additionally, the federal regulation only requires the facility contact person to keep a copy of the approved (and not necessarily updated) plan after final closure has been certified, which is typically later than final closure itself.

Section 66264.118 (d)(2)(C): The words "or the postclosure care period" are being added to conform to the requirements of existing Title 22 CCR section 67218 (b). The corresponding federal regulation does not contain this requirement and, therefore, is less stringent.

Section 66264.118 (d)(3): The word "amended" is being added for clarity only and does not alter the meaning of the regulation.

Section 66264.118 (d)(4): The phrases "modify or" and "or for other causes if deemed necessary to prevent threats to human health and the environment" are being added to conform to the requirements of existing Title 22 CCR section 67218 (d)(2). These requirements are not included in the corresponding federal regulation (40 CFR section 264.118 (d)(4)), however, they are consistent with the provisions of 40 CFR Part 124 which are being incorporated in Chapter 21 of the proposed state regulations.

Section 66264.119: This section, which is based on 40 CFR section 264.119, sets forth postclosure notification requirements. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

Sections 66264.119 (a) and (b)(1)(C): The term "other (hazardous waste) disposal unit" is being replaced by the word "area" in these two sections. This change is necessary to conform to the terminology used in existing Title 22 CCR sections 67219 and 67220, which in some instances could be more stringent than the terminology used in the corresponding federal regulations. The phrase "not limited to hazardous waste disposal units" has been added following the word "area". This new language clarifies that the word "area" is at least as stringent as federal law.

Section 66264.119 (a): The last sentence in this section is based on, and is necessary to conform to, existing Title 22 CCR section 67219. This requirement, which pertains to reporting changes occurring after the survey plat is filed, is not contained in the corresponding federal regulation, which is, therefore, less stringent.

Sections 66264.119 (b) and (b)(2): The words "or operator" are being deleted from these two sections. This change is necessary to conform to existing Title 22 CCR section 67220 (a), which requires the owner (not the owner or operator) to record deed notations. The corresponding federal requirement is less stringent since it allows this to be done by either the owner or the operator.

Section 66264.119 (c): The words "at any time" are being added in the first sentence of this section to conform to the language of the corresponding existing Title 22 regulation (CCR section 67220 (b)). This change does not alter the meaning of the corresponding federal regulation. Additionally, the phrase "contaminated soils" is being changed to "and all contaminated underlying and surrounding soils". This change is necessary to conform to existing Title 22 CCR section 67220 (b), which is more specific and, therefore, more stringent than the corresponding federal regulation. The

phrase "removal activities are completed to the satisfaction of the Department" is also being added in this section to conform to existing Title 22 CCR section 67220 (b). The corresponding federal regulation is less stringent as it only requires upfront Department approval of planned removal activities as a condition for requesting modification of the deed notation.

Section 66264.120: This section, which is based on 40 CFR Section 264.120, sets forth the requirements pertaining to postclosure care certification. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

This section requires the postclosure care certification to be signed by a registered professional engineer. The word "qualified" is being added to this requirement for consistency with the engineering certification requirements found elsewhere throughout these proposed regulations and the 40 CFR regulations. Additionally, the word "registered" in this section is being changed to "registered in California" to conform with the requirements of the Business and Professions Code, sections 6704 and 6732, which are more stringent than the requirements found in the federal regulations.

## ARTICLE 8: FINANCIAL REQUIREMENTS:

This article is based on 40 CFR, Part 264, Subpart H. The article is also based on Title 22, California Code of Regulations (CCR), sections 67001 through 67033. It sets forth the financial responsibility requirements of hazardous waste facilities that are permitted.

Section 66264.140: This section is based on 40 CFR, section 264.140 which specifies the applicability of regulation sections 264.142, 264.143, 264.147, and 264.151. This section conforms to the corresponding changes specified in the introduction to this Statement of Reasons and as follows:

Section 66264.140(a): This subsection establishes the applicability of regulations to owners and operators of all hazardous waste facilities. The phrase "as defined in section 66260.10" is being added to clarify that the applicability of the regulations cited above is limited to only those facilities defined in that subsection.

Section 66264.140(b)(1): This subsection lists a specific type of hazardous waste facility to which these regulations apply. The word "disposal" is deleted and replaced with the term "hazardous waste" in order to be consistent in the terminology used throughout the section. The phrase "which are disposal sites" is added to clarify the type of hazardous waste facility referred to in this subsection.

Section 66264.140(b)(2): This subsection lists two specific types of disposal methods and includes them, for purposes of financial responsibility, in the definition of disposal site. The reference to piles is expanded to mean a "temporary waste" pile. The reference to "surface impoundments from which the owner or operator intends to remove the wastes at closure" is expanded and made more stringent to "surface impoundments shall be considered as a disposal site until the owner/operator has demonstrated to the satisfaction of the Department that all wastes have been removed from the site". The reason for defining surface impoundments is because intent to clean up a surface impoundment is not a measurable basis for determining whether or not financial responsibility regulations will apply. The new language makes it clear that surface impoundments are accountable under these regulations and remain so until it has been demonstrated that the impoundment is clean. Only when surface impoundments are demonstrated to be clean will the owner or operator be released from the requirements of the article.

Section 66264.140(b)(3): This subsection lists a specific tank system to which these regulations apply.

Section 66264.140(c): This subsection establishes that states and the federal government are exempt from this article. This subsection adds the provisions of existing Title 22, CCR subsection 67001(c)(1).

Section 66264.140(c)(1): This subsection is added to the corresponding federal regulations because no equivalent provisions exist in federal regulations. This subsection adds the provisions of existing Title 22, CCR subsection 67001(c)(1) which states that state government does not include local, city, county government or any subdivisions thereof.

Section 66264.141: This section is based on 40 CFR, section 264.141 which lists terms that are used specifically in regards to the financial regulations in Article 8. The terms are listed here and defined in section 66260.10 which is referenced in the first paragraph. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction of this Statement of Reasons and as follows:

Section 66264.142: This section is based on 40 CFR, section 264.142 which describes the procedure for submitting a cost estimate for closure. This section conforms to the corresponding federal regulations except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

Section 66264.142(a): This subsection establishes the authority for requiring that a cost estimate for closure be prepared and gives the citations of regulations that describe how the facility must be closed. The requirement that the estimate must be prepared and submitted to the Department currently exists in Title 22 CCR, section 67002(a) but has no counterpart in current federal regulations. It is necessary that the Department have documentation of the closure cost estimate so that when a financial mechanism is submitted a determination can be made that the mechanism is sufficient to cover the estimated cost of closing.

Section 66264.142(a)(1): This subsection establishes the authority for how the closure cost estimate shall be prepared. The requirement that the estimate be submitted in accordance with permit application and part B permit application regulations currently exists in Title 22, CCR section 67002(a) but has no counterpart in current federal regulations.

Section 66264.142(b): This subsection establishes the authority for requiring that owners or operators adjust the closure cost estimate for inflation. The requirement that the updated closure cost estimate be submitted to the Department currently exists in Title 22, CCR section 67002(a) but has no counterpart in current federal regulations. This regulation conforms to the federal regulations in that it does not

specify that the inflated cost estimate be submitted within 60 days prior to the anniversary date of the establishment of the financial instrument, but rather when the annual update of the financial mechanism is due to be submitted to the Department.

Section 66264.142(c): This subsection establishes the requirement and timeline for revising a closure cost estimate.

Section 66264.142(d): This subsection establishes the requirement that an owner or operator of a hazardous waste facility shall keep the latest closure cost estimate on file at the facility.

Section 66264.143: This section is based on 40 CFR, section 264.143 which establishes the various financial assurance mechanisms for closure to be used to meet the requirements under this Article. This section also establishes that the mechanisms must be demonstrated to the Department. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

Section 66264.143(a): This subsection establishes the closure trust fund as an acceptable mechanism to meet the financial assurance requirements for closure.

Section 66264.143(a)(1): This subsection establishes the period of time that the trust agreement shall be established prior to receipt of hazardous waste for a new facility.

Section 66264.143(a)(2): This subsection establishes that the closure trust agreement shall be submitted with original signatures, on a form provided by the Department. This requirement currently exists in Title 22, CCR section 67004(b) but has no counterpart in current federal regulations. A standardized form is provided to owners or operators so that there is no deviation from the required language. An original signature is required to ensure that the owner or operator has reviewed the document and by virtue of the signature bind the company to the provisions therein.

Section 66264.143(a)(3): This subsection establishes the period of time that payments must be deposited into the trust fund. The requirement that the trust fund be funded over a term of ten (10) years beginning with the establishment of the trust fund currently exists in Title 22, CCR section 67004(c) as opposed to the federal counterpart that the trust fund be funded over the term of the initial RCRA permit. The State requires a shorter pay-in period because of several instances when a facility has begun closure before the trust fund has been fully funded thereby creating a situation of having insufficient closure funds. The shorter pay-in period is intended to alleviate such problems.

Section 66264.143(a)(3)(A): This subsection establishes when the first payment shall be made into the trust fund for existing facilities. This requirement currently exists in Title 22, CCR section 67004(c)(1) but has no counterpart in current federal regulations. This language is added to provide a contrast with the language found in the following paragraph section 66264.143(a)(3)(B) and to clarify that the payment schedule is different for an existing facility.

Section 66264.143(a)(3)(b): This subsection establishes when the first payment shall be made into the trust fund for new facilities.

Section 66264.143(a)(10): This subsection establishes what the value of the trust fund must be before the beginning of final closure. This new language currently exists in Title 22, CCR but has no counterpart in the current federal regulations. This language is added to clarify that if a facility closes before the end of the pay-in period the facility is still liable to fully fund the trust fund before closure begins.

Section 66264.143(a)(11): This subsection establishes the procedure for requests for reimbursement of closure expenditures. In the body of the subsection generic reference changes required sentence restructuring to maintain a grammatically correct sentence.

Section 66264.143(a)(12): This subsection establishes the terms under which the Department shall agree to terminate a trust agreement.

Section 66264.143(b)(1): This subsection establishes the surety bond guaranteeing payment into the closure trust fund as an acceptable mechanism to meet the financial assurance requirements for closure.

Section 66264.143(b)(2): This subsection establishes that the surety bond shall be submitted with original signatures, on a form provided by the Department. This requirement currently exists in Title 22, section 67005(b) but has no counterpart in current federal regulations. A standardized form is provided to owner/operators so that there is no deviation from the required language. An original signature is required to ensure that the owner/operator has reviewed the document and by virtue of the signature binds the company to the provisions therein.

Section 66264.143(b)(3)(B): This section establishes that an updated Schedule A of the trust agreement is not required until the trust fund is funded. A parenthetical reference is

deleted because that reference number has changed and no longer exists. A new reference is added.

Section 66264.143(c)(1): This subsection establishes the surety bond guaranteeing performance of closure as an acceptable mechanism for financial assurance for closure. This mechanism can only be used by a permitted facility as defined in section 66260.10.

Section 66264.143(c)(2): This subsection establishes that the surety bond shall be submitted with original signatures, on a form provided by the Department. This requirement currently exists in Title 22, section (b) but has no counterpart in current federal regulations. A standardized form is provided to owners or operators so that there is no deviation from the required language. An original signature is required to ensure that the owner or operator has reviewed the document and by virtue of the signature binds the company to the provisions therein.

Section 66264.143(c)(5): This subsection establishes that the surety becomes liable in the event that the owner or operator fails to perform as guaranteed by the bond. The requirement that determinations as to when an owner or operator has failed to perform is made by the Department currently exists in Title 22, section 67006(e). The federal counterpart to this section states that the final determination as to when an owner or operator has failed to perform is based pursuant to section 3008 of RCRA. This reference no longer exists and is therefore deleted.

Section 66264.143(d)(1): This subsection establishes the closure letter of credit as an acceptable financial mechanism for financial assurance for closure.

Section 66264.143(d)(2): This subsection establishes that the closure letter of credit shall be submitted with original signatures, as specified in the form provided by the Department. This requirement currently exists in Title 22, section 67007(b) but has no counterpart in current federal regulations. A standardized form is provided to owners or operators so that there is no deviation from the required language. An original signature is required to ensure that the owner or operator has reviewed the document and by virtue of the signature binds the company to the provisions therein.

Section 66264.143(d)(3): This subsection establishes that the standby trust fund shall be established with the irrevocable standby letter of credit. The standby trust fund is necessary to act as a vehicle for the disbursement of funds should the Department find it necessary to draw on the letter of credit.

Section 66264.143(d)(3)(B): This section establishes that an updated Schedule A of the trust agreement is not required until the trust fund is funded. A parenthetical reference is deleted because that reference number has changed and no longer exists. A new reference is added.

Section 66264.143(d)(4): This subsection establishes that the letter of credit be accompanied by a letter that lists pertinent information about the facility for purposes of identification. The term Hazardous Waste Facility Identification Number exists in Title 22, section 67007(d). The identification numbers are the same as those given by EPA.

Section 66264.143(d)(7): This subsection establishes that when the closure cost estimate increases that the amount of credit is increased to cover the difference. The term credit is used to clarify state regulations to mean specifically the "letter of" credit.

Section 66264.143(d)(8): This subsection establishes that the Department may draw upon the letter of credit when a determination that the owner or operator has failed to perform final closure has been made. Under federal regulation a determination of when the owner or operator has failed to perform final closure is made pursuant to section 3008 of RCRA. The reference is no longer appropriate and determinations as to when an owner or operator has failed to perform is now made by the Department.

Section 66264.143(e)(1): This subsection establishes closure insurance as an acceptable mechanism for financial assurance for closure.

Section 66264.143(e)(2): This subsection establishes that verification of closure insurance shall be submitted with original signatures, on a form provided by the Department. This requirement currently exists in Title 22, CCR section 67008(b) but has no counterpart in current federal regulations. A standardized form is provided to owner or operators so that there is no deviation from the required language. An original signature is required to ensure that the owner/operator has reviewed the document and by virtue of the signature binds the company to the provisions therein.

Section 66264.143(e)(8)(B): This subsection establishes that cancellation, termination, or failure to renew closure insurance shall not occur and that the policy shall remain in full force in the event that a permit is terminated or revoked. State regulations have an additional condition that the policy remain in full force in the event the permit is denied.

Section 66264.143(e)(8)(C): This subsection establishes that closure insurance shall remain in effect in the event that closure is ordered by the Department or a U.S. district court. State regulations have an additional condition that closure insurance remain in effect in the event closure is ordered by any other governmental agency. In California, hazardous waste facilities are regulated by more than one governmental agency. Therefore, if a facility violates provisions of another regulatory body and closure is ordered the facility is still liable to maintain closure insurance under these regulations.

Section 66264.143(f): This subsection establishes the financial test and corporate guarantee as an acceptable mechanism for financial assurance for closure.

Section 66264.143(f)(3)(A): This subsection establishes that the financial test and corporate guarantee shall be submitted on the owner or operator's official letterhead stationary, shall contain language as specified by the Department, and shall have original signatures. This requirement currently exists in Title 22, CCR section 67009(c)(1) but has no counterpart in the current federal regulations. An original signature is required to ensure that the owner or operator has reviewed the document and by virtue of the signature binds the company to the provisions therein.

Section 66264.143(f)(6): This subsection establishes the notice requirements when the owner or operator no longer meet the requirements of this subsection. Federal regulations state that notice must be sent within 90 days after the end of the facility's fiscal year for which the year-end data show that the owner or operator no longer meets the requirements. State regulations differ in that notice must be sent within 90 days of any occurrence that prevents the owner or operator from meeting the requirements. This is required because the state does not want facilities operating for any extended period of time without a mechanism to meet their financial assurance obligations.

Section 66264.143(f)(10): This subsection establishes the requirements for complying with the regulations by obtaining a "corporate guarantee". The State has an additional requirement not found in federal regulation that the document shall be submitted on official letterhead stationary of the parent corporation with original signatures, as specified in a form provided by the Department. An original notarized signature is required to ensure that the parent corporation has reviewed the document and by virtue of the signature binds the company to the provisions therein.

Section 66264.143(g): This subsection establishes the requirements for an alternative mechanism that may be used to meet the requirements for financial assurance. This subsection

applies to non-RCRA facilities only. Facilities which manage solely non-RCRA hazardous waste are not regulated by EPA and, therefore, EPA cannot require the Department to regulate such facilities in any particular manner.

Section 66264.143(h): This subsection establishes the use of multiple financial mechanisms to satisfy the requirements of this section. This subsection has been expanded to include the financial test as one of the mechanisms used to satisfy the requirements of this section. This change is consistent with section 66264.147(a)(7) which allows the financial test to be used to satisfy the requirements of that section. This subsection was formerly identified as subsection (g). With the addition of the alternative financial mechanism as an option this subsection becomes identified as subsection (h). The regulations discuss the situation in which a mechanism is used to cover facilities in more than one region. The term regions as used here refers to the federal differentiation of areas within the continental U.S.. Although the state is concerned about the use of a mechanism that is used to cover facilities in more than one region, the state cannot require a facility to demonstrate coverage to another jurisdiction outside its jurisdiction. The state can only deny the use of a mechanism for a California facility when the mechanism pledges the same assets for facilities outside of California.

Section 66264.143(i): This subsection establishes the use of one or more financial mechanisms for multiple facilities to satisfy the requirements of this section. The federal regulations state that an owner or operator "may" use a "single" mechanism to cover multiple facilities. Since a combination of mechanisms may be used to cover one facility, it is logical that a combination of mechanisms may be used to cover multiple facilities. This subsection was formerly identified as subsection (h). With the addition of the alternative financial mechanism as an option this subsection becomes identified as subsection (i).

Section 66264.143(j): This subsection establishes the requirements for release from financial assurance for closure. This subsection was formerly identified as subsection (i). With the addition of the alternative mechanism as an option this subsection becomes identified as subsection (j).

Section 66264.143(j)(2): This subsection establishes the requirements for release from financial assurance for closure when there is a transfer of ownership or operational control of the facility. This is new language not found in 40 CFR and is brought over from Title 22 CCR section 67013(b).

Section 66264.144: This section is based on 40 CFR section 264.144 which establishes the requirement to prepare a cost estimate for postclosure care. This section conforms to corresponding federal

regulation except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

Section 66264.144(a): This subsection establishes the authority for requiring that a cost estimate for postclosure care be prepared. It lists the regulatory citations for preparing the cost estimate. The requirement that the cost estimate be prepared and submitted to the Department exists in current Title 22 CCR section 67014 but has no counterpart in current federal regulations. It is necessary that the Department have documentation of the postclosure cost estimate so that when a financial mechanism is submitted a determination can be made that the mechanism is sufficient to cover the estimated cost of postclosure.

Section 66264.144 (a) (2): This subsection establishes the number of years postclosure cost estimates must be multiplied by to determine the amount of postclosure funds to be established and refers to section 66264.117.

Section 66264.145: This section is based on 40 CFR, section 264.145 which establishes the various financial assurance mechanisms for postclosure to be used to meet the requirements under this Article. This section also establishes that the mechanisms must be demonstrated to the Department. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

Section 66264.145(a)(1): This subsection establishes the postclosure trust fund as an acceptable mechanism to meet the financial assurance requirements for postclosure.

Section 66264.145(a)(2): This subsection establishes that the postclosure trust agreement shall be submitted with original signatures, on a form provided by the Department. This requirement currently exists in Title 22, section 67016(b) but has no counterpart in current federal regulations. A standardized form is provided to owner or operators so that there is no deviation from the required language. An original signature is required to ensure that the owner or operator has reviewed the document and by virtue of the signature binds the company to the provisions therein.

Section 66264.145(a)(3): This subsection establishes the period of time that payments must be deposited into the trust fund. The requirement that the trust fund be funded over a term of ten (10) years beginning with the establishment of the trust fund exists in Title 22, section 67016(c) as opposed to the federal counterpart that the trust fund be funded over the term of the initial RCRA permit. The State requires a shorter pay-in period because of several instances when a facility has begun closure before the trust fund has been fully funded

thereby creating a situation of having insufficient postclosure funds. The shorter pay-in period is intended to alleviate such problems.

Section 66264.145(a)(3)(A): This subsection establishes when the first payment shall be made into the trust fund for existing facilities. This requirement exists in Title 22, section 67016(c)(1) but no counterpart exists in current federal regulations. This language is added to provide a contrast with the language found in the following paragraph section 66264.145(a)(3)(B) and to clarify that the payment schedule is different for an existing facility.

Section 66264.145(a)(10): This subsection establishes what the value of the trust fund must be before the beginning of final postclosure. This is new language not found in 40 CFR and is brought over from Title 22 CCR section 67014(j). This language is added to clarify that if a facility closes before the end of the pay-in period the facility is still liable to fully fund the trust fund before postclosure begins.

Section 66264.145(b): This subsection establishes the surety bond guaranteeing payment into the postclosure trust fund as an acceptable mechanism to meet the financial assurance requirements for postclosure.

Section 66264.145(b)(2): This subsection establishes that the surety bond shall be submitted with original signatures, on a form provided by the Department. This requirement currently exists in Title 22, section 67017(b) but has no counterpart in the current federal regulations. A standardized form is provided to owners or operators so that there is no deviation from the required language. An original signature is required to ensure that the owner or operator has reviewed the document and by virtue of the signature binds the company to the provisions therein.

Sections 66264.145 (b)(4)(C) and (c)(4)(B): This subsection has been amended to clarify that when a bond is used as the mechanism for establishing financial assurance for postclosure, the bond shall guarantee that, if the bond is cancelled, the owner or operator will provide an alternative financial assurance to the Department within 90 days of receipt of notification of cancellation from the surety. This subsection differs from the corresponding federal regulation in that it does not require the bond to ensure that the owner or operator will obtain the approval of the Department within 90 days of receipt of notification. This change is consistent with EPA's interpretation of the federal regulation and is necessary to comply with the clarity standard specified in Government Code section 11349.

Section 66264.145(b)(3)(B)(2): This subsection establishes that an updated Schedule A of the trust agreement is not required until the trust fund is funded. A parenthetical reference is deleted because that reference number has changed and no longer exists. A new reference is added.

Sections 66264.145 (b)(7), (c)(7), and (c)(8): These subsections have been amended to specify that the Department shall approve a reduction in the penal sum of the surety bond whenever the current postclosure cost estimate decreases and the owner or operator demonstrates to the satisfaction of the Department that the new cost estimate is less than the penal sum. This subsection differs from the corresponding federal regulation by making the Department's approval of the penal sum mandatory upon a showing by the owner or operator that the new cost estimate is less than the penal sum. This change was necessary because adopting the standard in the corresponding federal regulation would have made the Department's decision discretionary without specifying a standard for the decision. A state regulation containing the standard in the federal regulation would not meet the clarity standard specified in Government Code Section 11349.

Section 66264.145(c)(1): This subsection establishes the surety bond guaranteeing performance of closure as an acceptable mechanism for financial assurance for postclosure. This mechanism can only be used by a permitted facility as defined in section 66260.10.

Section 66264.145(c)(2): This subsection establishes that the surety bond shall be submitted with original signatures, on a form provided by the Department. This requirement currently exists in Title 22, section 67018(b) but has no counterpart in the current federal regulations. A standardized form is provided to owner or operators so that there is no deviation from the required language. An original signature is required to ensure that the owner or operator has reviewed the document and by virtue of the signature binds the company to the provisions therein.

Section 66264.145(c)(3)(B)(2): This subsection establishes that an updated Schedule A of the trust agreement is not required until the trust fund is funded. A parenthetical reference is deleted because that reference number has changed and no longer exists. A new reference is added.

Section 66264.145(c)(5): This subsection establishes that the surety becomes liable in the event that the owner or operator fails to perform as guaranteed by the bond. The requirement that determinations as to when an owner or operator has failed to perform is made by the Department exists in Title 22, section 67018(e). The federal counterpart to this section states that the final determination as to when an owner or

operator has failed to perform is based pursuant to section 3008 of RCRA. This reference no longer exists and is therefore deleted.

Section 66264.145(d)(1): This subsection establishes the postclosure letter of credit as an acceptable financial mechanism for financial assurance for postclosure.

Section 66264.145(d)(2): This subsection establishes that the postclosure letter of credit shall be completed as specified in the form provided by the Department and shall have original signatures. This requirement currently exists in Title 22, section 67019(b) but has no counterpart in current federal regulations. A standardized form is provided to the owner or operator so that there is no deviation from the required language. An original signature is required to ensure that the owner or operator has reviewed the document and by virtue of the signature binds the company to the provisions therein.

Section 66264.145(d)(3)(B)(2): This subsection establishes that an updated Schedule A of the trust agreement is not required until the trust fund is funded. A parenthetical reference is deleted because that reference number has changed and no longer exists. A new reference is added.

Section 66264.145(d)(4): This subsection establishes that the letter of credit be accompanied by a letter that lists pertinent information about the facility for purposes of identification. The term Hazardous Waste Facility Identification Number exists in Title 22, section 67019(d). The identification numbers are the same as those given by EPA.

Section 66264.145(d)(5): This subsection establishes the expiration date and terms for renewal of the letter of credit.

Section 66264.145(d)(6): This subsection establishes that the letter of credit shall be issued in an amount at least equal to the current postclosure cost estimate.

Section 66264.145(d)(7): This subsection establishes that when the postclosure cost estimate increases that the amount of credit is increased to cover the difference. The term credit is used to clarify state regulations to mean specifically the "letter of credit".

Section 66264.145(d)(9): This subsection establishes that the Department may draw upon the letter of credit when a determination has been made that the owner or operator has failed to perform final postclosure. Under federal regulation a determination of when the owner or operator has failed to perform final closure is made pursuant to section 3008 of RCRA. The reference is no longer appropriate and

determinations as to when an owner or operator has failed to perform are now made by the Department.

Section 66264.145(e)(1): This subsection establishes postclosure insurance as an acceptable mechanism for financial assurance for postclosure.

Section 66264.145(e)(2): This subsection establishes that verification of postclosure insurance shall be submitted with original signatures, on a form provided by the Department. This requirement currently exists in Title 22, section 67020(b) but has no counterpart in current federal regulations. A standardized form is provided to owners or operators so that there is no deviation from the required language. An original signature is required to ensure that the owner or operator has reviewed the document and by virtue of the signature binds the company to the provisions therein.

Section 66264.145(e)(8)(B): This subsection establishes that cancellation, termination, or failure to renew postclosure insurance shall not occur and that the policy shall remain in full force in the event that a permit is terminated or revoked. State regulations have an additional condition that the policy remain in full force in the event the permit is denied.

Section 66264.145(e)(8)(C): This subsection establishes that postclosure insurance remain in effect in the event that closure is ordered by the Department or a U.S. district court. State regulations have an additional condition that postclosure insurance remain in effect in the event closure is ordered by any other governmental agency. In California, hazardous waste facilities are regulated by more than one governmental agency. Therefore, if a facility violates provisions of another regulatory body and postclosure is ordered the facility is still liable to maintain postclosure insurance under these regulations.

Section 66264.145(f): This subsection establishes the financial test and corporate guarantee as an acceptable mechanism for financial assurance for postclosure.

Section 66264.145(f)(3)(A): This subsection establishes that the financial test and corporate guarantee for postclosure shall be submitted on the owner or operator's official letterhead stationary, shall contain language as specified by the Department, and shall have original signatures. This requirement currently exists in Title 22, section 67021(c)(1) but has no counterpart in current federal regulations. An original signature is required to ensure that the owner or operator has reviewed the document and by virtue of the signature binds the company to the provisions therein.

Section 66264.145(f)(6): This subsection establishes the notice requirements when the owner or operator no longer meets the requirements of this subsection. Federal regulations state that notice must be sent within 90 days after the end of the facility's fiscal year for which the year-end data show that the owner or operator no longer meets the requirements. State regulations differ in that notice must be sent within 90 days of any occurrence that prevents the owner or operator from meeting the requirements. This is required because the state does not want facilities operating for any extended period of time without a mechanism to meet their financial assurance obligations.

Section 66264.145(f)(11): This subsection establishes the requirements for complying with the regulations by obtaining a "corporate guarantee". The requirement that the document must be submitted as specified by the form provided by the Department, and that the signatures be original is found in Title 22, CCR, section 67021(k). The corporate guarantee shall be on official letterhead stationery of the parent corporation.

Section 66264.145(g): This subsection establishes the requirements for an alternative mechanism that may be used to meet the requirements for financial assurance for postclosure. This subsection applies to non-RCRA facilities only. Facilities which manage solely non-RCRA hazardous waste are not regulated by EPA therefore cannot require the Department to regulate such facilities in any particular manner.

Section 66264.145(h): This subsection establishes the use of multiple financial mechanisms to satisfy the requirements of this section. This subsection has been expanded to include the financial test as one of the mechanisms used to satisfy the requirements of this section. This change is consistent with section 66264.147(a)(7) which allows the financial test to be used to satisfy the requirements of that section. This subsection was formerly identified as subsection (g). With the addition of the alternative financial mechanism as an option this subsection becomes identified as subsection (h).

Section 66264.145(i): This subsection establishes the use of one or more financial mechanisms for multiple facilities to satisfy the requirements of this section. The federal regulations state that an owner or operator "may" use a "single" mechanism to cover multiple facilities. Since a combination of mechanisms may be used to cover one facility, it is logical that a combination of mechanisms may be used to cover multiple facilities. This subsection was formerly identified as subsection (h). With the addition of the alternative financial mechanism as an option this subsection becomes identified as subsection (i). The regulation discusses the situation in which a mechanism is used to cover

facilities in more than one region. The term regions as used here refers to the federal differentiation of areas within the continental U.S.

Although the state is concerned about the use of a mechanism that is used to cover facilities in more than one federal region, the state cannot require a facility to demonstrate coverage to another jurisdiction outside its jurisdiction. Therefore this sentence is deleted.

Section 66264.145(j): This subsection establishes the requirements for release from the financial assurance for postclosure care. This subsection was formerly identified as subsection (i). With the addition of the alternative mechanism as an option this subsection becomes identified as subsection (j).

Section 66264.145(j)(2): This subsection establishes the requirements for release from the requirements of financial assurance for postclosure in the event of transfer of ownership or operational control. This requirement exists in Title 22, CCR, section 67025(b) but no counterpart exists in federal regulations.

Section 66264.146: This section is based on 40 CFR, section 264.146. It establishes the requirements for financial assurance for both closure and postclosure for one or more facilities by the use of a single mechanism. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons and the addition of the alternative mechanism option referenced in 66264.143(g) and 66265.145(g).

Section 66264.147: This section is based on 40 CFR, section 264.147. It establishes the financial responsibility requirements for bodily injury and property damage to third parties caused by sudden and non-sudden accidental occurrences arising from the operation of the facility. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

Section 66264.147(a): This subsection establishes the liability requirements for sudden accidental occurrences for hazardous waste treatment facilities. The requirement that liability coverage must be on a per facility basis exists in Title 22 CCR, section 67027(b) but has no counterpart in current federal regulations.

Section 66264.147(a)(1)(i): This subsection establishes the requirements for the wording of the Hazardous Waste Facility Liability Endorsement and the Certificate of Insurance. This section is duplicated in subsection 66264.147(b). This

subsection is being deleted here and will be reinserted in a new subsection number within the body of this section.

Section 66264.147(a)(1)(ii): This subsection establishes the requirement that insurers must as a minimum be licensed to provide insurance in one or more states. This section is duplicated in subsection 66247.147(b). This subsection is being deleted here and will be reinserted in a new subsection number within the body of this section.

Section 66264.147(a)(6): This subsection establishes the option of using an alternative mechanism as described in section 66264.147(i) to meet the requirement of this section. This requirement exists in Title 22, CCR, section 67027(c)(3) and has no counterpart in current federal regulations.

Section 66264.147(b): This subsection establishes the liability requirements for non-sudden accidental occurrences for hazardous waste treatment facilities. The requirement that liability coverage must be on a per facility basis exists in Title 22 CCR section 67028(b) but has no counterpart in current federal regulations.

Section 66264.147(b)(1)(i): This subsection establishes the requirements for the wording of the Hazardous Waste Facility Liability Endorsement and the Certificate of Insurance. This section is duplicated in subsection 66264.147(a). This subsection is being deleted here and will be reinserted in a new subsection number within the body of this section.

Section 66264.147(b)(1)(ii): This subsection establishes the requirement that insurers must as a minimum be licensed to provide insurance in one or more states. This section is duplicated in subsection 66247.147(a). This subsection is being deleted here and will be reinserted in a new subsection number within the body of this section.

Section 66264.147(b)(6): This subsection establishes the option of using an alternative mechanism as described in section 66264.147(i) to meet the requirement of this section. This requirement currently exists in Title 22 CCR section 67028(c)(3) and has no counterpart in current federal regulations.

Section 66264.147(b)(4): This subsection establishes the dates when liability insurance must be submitted. This subsection is no longer appropriate as the dates for full compliance with the liability requirements has passed. This subsection is therefore obsolete and is deleted.

Section 66264.147(c): This subsection establishes that a request for a variance from the requirements of this section

may be submitted to the Department. This subsection was formally identified as subsection (d).

Section 66264.147(d): This subsection establishes that the Department may adjust the level of financial responsibility for a facility or group of facilities based on the degree and duration of risk associated with a facility or group of facilities. This subsection was formally identified as subsection (e).

Section 66264.147(e): This subsection establishes the timeframe for maintaining liability coverage. This subsection was formally identified as subsection (f).

Section 66264.147(f): This subsection establishes the requirements for liability insurance for sudden and non-sudden accidental occurrences. The requirement for liability insurance exists in Title 22 CCR section 67029 but has no counterpart in current federal regulations. This subsection was formally identified as subsection (c) however, it was out of sequence as subsection (c) and has been relettered to subsection (f).

Section 66264.147(g): This subsection establishes the use of the financial test for liability coverage as an accepted mechanism for financial assurance.

Section 66264.147(g)(3)(A): This subsection establishes that the letter from the chief financial officer must be submitted on the official letterhead stationary of the owner or operator and shall contain original signatures. This requirement currently exists in Title 22 CCR section 67030(c)(1) but has no counterpart in current federal regulations. The last sentence in this subsection is rewritten into two sentences because the federal counterpart is lengthy and somewhat confusing.

Section 66264.147(g)(6): This subsection establishes the notification procedures when the owner or operator no longer meets the requirement of this subsection. The requirement that notice be sent to the Department of the owner's or operator's intent to obtain the required liability coverage within 90 days after any occurrence that prevents the owner or operator from meeting the test requirements appears in Title 22 CCR section 67030(f) but has no counterpart in current federal regulations. The requirement that evidence of liability coverage must also be submitted to the Department within 90 days after any occurrence that prevents the owner or operator from meeting the requirements also appears in Title 22 CCR section 67030(f) and also has no counterpart in federal regulations.

Section 66264.147(g)(7): This subsection establishes the requirement that the owner or operator may have to submit reports of the financial condition of the facility to verify that the owner or operator still meets the requirements of this section. This requirement currently exists in Title 22, CCR section 67030(g) but has no counterpart in current federal regulations.

Section 66264.147(g)(8): This subsection establishes that the Department may disallow the use of the financial test on the basis of qualifications in the opinion expressed by the independent certified public accountant.

Section 66264.147(g)(9): This subsection establishes that the Department has the authority to approve a decrease in the current postclosure estimate for which this test demonstrates financial assurance if the amount of the cost estimate exceeds the remaining cost of postclosure care. This requirement currently exists in Title 22, CCR section 67030(i) but has no counterpart in current federal regulations.

Section 66264.147(g)(10): This subsection establishes when owners and operators no longer have to submit the items required by the financial test. This requirement currently exists in Title 22, CCR section 67030 but has no counterpart in current federal regulations.

Section 66264.147(h): This subsection establishes the corporate guarantee for liability coverage as an acceptable mechanism to meet the requirements of this section. This subsection was formerly identified as subsection (g).

Section 66264.147(h)(1): This subsection establishes that the corporate guarantee shall contain language as specified by the Department and shall have original signatures. There is no counterpart to this requirement in the current federal regulations.

Section 66264.147(i): This subsection establishes the letter of credit for liability coverage as an acceptable mechanism to meet the requirements of this section. This subsection was formerly identified as subsection (h).

Section 66264.147(i)(3): This subsection establishes that the letter of credit shall be submitted with original signatures and as specified in the form provided by the Department. There is no counterpart to this requirement in the current federal regulations.

Section 66264.147(j): This subsection establishes the payment bond for liability coverage as an acceptable mechanism to meet the requirements of this section. This subsection was formerly identified as subsection (i).

Section 66264.147(j)(3): This subsection establishes that the payment bond shall be submitted with original signatures, on a form provided by the Department. There is no counterpart to this requirement in the current federal regulations.

Section 66264.147(k): This subsection establishes the trust fund for liability coverage as an acceptable mechanism to meet the requirements of this section. This subsection was formerly identified as subsection (j).

Section 66264.147(k)(1) and (4): These subsections establish that the trust agreement shall be submitted with original signatures on a form provided by the Department. There is no counterpart to this requirement in the current federal regulations.

Section 66264.147(l): This subsection establishes an alternative mechanism for liability coverage as an approved mechanism to meet the requirements of this section. This requirement currently exists in Title 22, CCR section 67031 but has no counterpart in current federal regulations.

Section 66264.148: This section is based on 40 CFR, section 264.148. It establishes the requirements of the owner or operator or financial institutions when they are no longer capable of meeting the financial assurance requirements of this article. This section conforms to existing federal regulations except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

Section 66264.148(b): This subsection establishes the circumstances under which an owner or operator is deemed to be without the required financial assurance or liability coverage.

Federal language cites the regulation references for meeting the financial assurance requirements. This is deleted and replaced with the state language which clearly states what requirements must be met.

Section 66264.149: This section is based on 40 CFR, section 264.149. It establishes the option to use a state-required mechanism in states where EPA is administering the requirements of this article. This section will no longer be appropriate when the state is authorized to conduct their own program. Therefore, this section is deleted.

Section 66264.150: This section is based on 40 CFR, section 264.150. It establishes to any state the option to assume the financial assurance responsibility for those facilities operating in the state. It has been determined that this state cannot assume such responsibility without statutory authorization. Therefore, this section is deleted.

Section 66264.151: This section is based on 40 CFR, section 264.151. It establishes the language to be used for each mechanism specified in this article. The forms used to demonstrate financial responsibility are referenced in the regulations and are an integral part of the rulemaking file. Therefore, this section is deleted in its entirety.

## ARTICLE 9: USE AND MANAGEMENT OF CONTAINERS

This article is based on Subpart I of 40 Code of Federal Regulations (CFR), Part 264. It sets forth the requirements for owners and operators of permitted facilities that use containers for managing hazardous wastes.

Section 66264.170: This section, which is based on 40 CFR, Section 264.170, specifies the applicability of this article. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons (SOR) and as follows:

Section 66264.170: Existing Title 22, California Code of Regulations (CCR), Section 67240 is more stringent than the corresponding federal regulation because the state regulation does not exempt containers from which hazardous waste has been emptied from the requirements of this division. Therefore, the reference found in 40 CFR, Section 264.170 to this exemption is not being included in the proposed State regulations.

Section 66264.171: This section, which is based on 40 CFR, Section 264.171, sets forth the requirement to transfer hazardous waste to a container of good condition if the container holding the hazardous waste is not in good condition. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR.

Section 66264.172: This section, which is based on 40 CFR, Section 264.172, sets forth requirements for compatibility of a hazardous waste with the material of the container or its lining. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR.

Section 66264.173: This section, which is based on 40 CFR, Section 264.173, specifies requirements for handling containers holding hazardous wastes. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR.

Section 66264.174: This section, which is based on 40 CFR, Section 264.174, sets forth requirements for weekly inspection of container storage areas. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR and as follows:

Section 66264.174: The word "where" is being changed to "used for". This is a sentence structure change necessitated by the generic change of "stored" to "storage or transfer".

Section 66264.175: This section, which is based on 40 CFR, Section 264.175, specifies requirements for container storage area containment systems. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR and as follows:

Section 66264.175(a): The statement "except as otherwise provided by paragraph (c) of this section", which is contained in the federal regulation, is not being included in the proposed regulation as it references an exemption which is not allowed by existing, more stringent Title 22, CCR, Section 67245.

Section 66264.175(b)(3): This subsection is being revised to conform to existing Title 22, CCR, Section 67245(b)(3) which provides additional containment requirements pertaining to "precipitation from at least a 24 hour, 25 year storm plus 10% of the aggregate volume of all containers". This requirement is more stringent than the corresponding federal regulation.

Section 66264.175(b)(5): A new language "(33 U.S.C. Section 1342)" is being added to provide a United States Code citation parallel to the referenced Section 402 of the Federal Clean Water Act, as amended. This change has been made per Office of Administrative Law (OAL) comment.

Section 66264.175(c): This subsection, is being added to require a written statement signed by a professional civil engineer registered in California that indicates that the containment system is suitably designed to achieve the requirements of this section. The addition of this language is necessary to conform with the requirements of existing Title 22, CCR, Section 67245(c). These more stringent requirements are not contained in the corresponding federal regulation.

40 CFR, Sections 264.175(c) and (d): These sections of the corresponding federal regulation provide an exemption from the requirements of this section for containers holding certain wastes if they do not contain free liquids. Existing Title 22, CCR, Section 67245 is more stringent because it does not allow this exemption. Therefore, these federal regulation sections are not being included in the proposed regulations.

Section 66264.176: This section, which is based on 40 CFR, Section 264.176, sets forth special requirements for placement of containers holding ignitable or reactive waste. This section

conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR.

Section 66264.177: This section, which is based on 40 CFR, Section 264.177, sets forth special requirements for management of incompatible wastes. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR.

Section 66264.178: This section, which is based on 40 CFR, Section 264.178, sets forth closure requirements specific to containers and container storage areas. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR.

## ARTICLE 10: TANK SYSTEMS

This article is based on Subpart J of 40 CFR, Part 264. It sets forth the requirements for owners and operators of permitted facilities that use tank systems for managing hazardous wastes.

Section 66264.190: This section is based on 40 CFR, Section 264.190, which specifies the types of tanks to which the requirements of this article apply. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR and as follows:

Section 66264.190(a): A new language "Third Edition, November 1986" is being added following the language "U.S. Environmental Protection Agency (EPA) publication No. SW-846" to specify which version of the specified publication contains the test required. This addition is being made per OAL comment.

Section 66264.190(a) and (b): The words "tanks" in these subsections have been changed to "tank systems" pursuant to changes made in the corresponding federal regulations (Federal Register at 53 FR 171, 9/2/88.).

Section 66264.190(b): Reference to section 66264.193 is being changed to 66264.193(a) which was a typographic error.

Section 66264.191: This section, which is based on 40 CFR, Section 264.191, sets forth requirements for the design and the structural integrity assessment for tank systems that are already in existence at the time of permit issuance. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR and as follows:

Sections 66264.191(a) and (c)(6): Section 66264.191(a) is based on existing Title 22, CCR, Section 67251(a) and stipulates certain design standards for tank systems. Section 66264.191(c)(6) requires that these standards be included in the assessment required under section 66264.191(b). Inclusion of subsection (a) in the proposed regulations is necessary to retain the existing state regulatory requirements of section 67251(a). The corresponding federal regulations do not contain these requirements and, therefore, are less stringent. New paragraph (c)(6) is necessary because the corresponding federal regulation (40 CFR, Section 264.191(b)), which specifies the required contents of the assessment, does not include these standards which are required to be included under existing Title 22, CCR, Section 67251(c).

Section 66264.191(b): The language of the first sentence of this subsection has been revised to clarify the term "existing" as it appears in 40 CFR, Section 264.191(b). This

change has been made to address EPA's concern to define the term "existing" in the proposed regulations.

Section 66264.191(b): The phrase "and in addition to the requirements of subsection (f) of this section" is being added to make it clear that the assessment requirements of subsection (b) are separate from, and in addition to, the requirements of subsection (f) which is being inserted into the regulations from existing Title 22, CCR.

Sections 66264.191(b) and (c)(5)(B): These sections, which are based on 40 CFR, sections 264.191(a) and (b)(5)(ii), require certifications by "an independent, qualified, registered professional engineer". Both sections are being revised to stipulate that the engineer must be "registered in California", to conform with the requirements of the Business and Professions Code, Sections 6704 and 6732, which are more stringent than the requirements found in the federal regulations.

Sections 66264.191(b) and (d): Existing Title 22, CCR, Section 67251(c) requires a written statement to be submitted with the permit application attesting that the tank and containment systems are designed to meet the regulatory requirements specific to tank systems. This existing Title 22 requirement is applicable to both Resource Conservation and Recovery Act (RCRA) and non-RCRA facilities. In addition, RCRA facilities were required under 40 CFR, Section 264.191 to obtain an assessment meeting the requirements of 40 CFR, Section 264.191(b) by January 12, 1988, if they did not have secondary containment meeting the requirements of 40 CFR, Section 264.193 as of that date. (January 12, 1988, was one year after the effective date of the federal regulations requiring secondary containment and this assessment.) For tank systems used to manage materials that become/became hazardous wastes subsequent to July 14, 1986 (the date these federal regulations were issued), the assessment is/was required to be conducted, under 40 CFR, Section 264.191(c), within twelve (12) months after the date the materials become/became hazardous wastes. The proposed state regulations contained in Section 66264.191 extend this assessment requirement to non-RCRA tank systems. Non-RCRA tanks are those tanks containing non-RCRA hazardous wastes, and tanks containing RCRA hazardous waste if the owner or operator is a conditionally exempt small quantity generator (as defined in 40 CFR, Section 261.5) or a 100 to 1000 kg per month generator (as defined in 40 CFR, Section 265.201). The deadlines for obtaining this assessment for non-RCRA tank systems are consistent with the RCRA deadlines specified in 40 CFR (and 66264.191(b) and (d)), but the non-RCRA deadlines are measured from the effective date of these proposed state regulations (rather than the federal regulations). This should allow facilities with non-RCRA tank systems adequate

time (i.e., one (1) year) to obtain the required assessment. The Department is proposing to apply these RCRA requirements to non-RCRA tank systems in order to maintain consistency between the state regulatory requirements for RCRA and non-RCRA facilities. Additionally, this assessment requirement is further warranted by the high risk of spills and leaks from tank systems resulting in environmental contamination, public health risks, and costly cleanups. The assessment required by proposed Section 66264.191, for tank systems not meeting secondary containment requirements, should result in the early identification of tank system problems requiring repair in order to prevent spills and leaks.

Section 66264.191(d): In addition to the changes discussed above, the wording of this section is being slightly modified for clarification only; no change is being made to the intended meaning of the corresponding federal regulation.

Section 66264.191(b)(2) & (d)(2): These subsections are being reformed for purposes of clarity and to direct OAL to insert the actual effective date of these regulations. These changes are being made per OAL comment.

Section 66264.191(f): This section is based on, and is necessary to conform with, existing Title 22, CCR, Section 67251(c). This section requires a written statement to be submitted with the Part B permit application attesting that the existing tank and containment systems are designed to meet the regulatory requirements specific to tank systems. This assessment must be certified by an engineer. The corresponding federal regulation does not include this requirement and, therefore, is less stringent. This section conforms to existing Title 22, CCR, Section 67251(c) except as follows:

The phrase "of all existing tank systems" is being inserted for clarification.

The phrase "the application" is being changed to "Part B of the application" to make it clear that this requirement pertains to Part B, rather than Part A, of the permit application.

The phrase "that indicates" is being changed to "attesting". This is a non-substantive wording change made to conform with the terminology used in the federal regulations and in Section 66264.191(b).

The reference to "a professional civil engineer registered in California" is being changed to "an independent, qualified professional engineer registered in California, in accordance with Section 66270.11(d)". This change is made for consistency with Section

66264.191(b), since both Sections 66264.191(b) and (f) specify the engineering certification requirements for the same assessment.

Section 66264.192: This section, which is based on 40 CFR, Section 264.192, sets forth requirements for the design and the structural integrity assessment for tank systems that are new at the time of permit issuance. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR and as follows:

Sections 66264.192(a) and (b)(6): Section 66264.192(a) is based on existing Title 22, CCR, Section 67251(a) and stipulates certain design standards for tank systems. Section 66264.192(c)(6) requires that these standards be included in the assessment required under section 66264.192(b). Inclusion of subsection (a) in the proposed regulations is necessary to retain the existing state regulatory requirements of section 67251(a). The corresponding federal regulations do not include these requirements and, therefore, are less stringent. New paragraph (b)(6) is necessary because the corresponding federal regulation (40 CFR, Section 264.192(a)), which specifies the required contents of the assessment, does not include these standards which are required to be included under existing Title 22, CCR, Section 67251(c).

Sections 66264.192(b) and (c): These sections, which are based on 40 CFR, Sections 264.192(a) and (b), require certifications by "an independent, qualified, registered professional engineer". Both subsections are being revised to stipulate that the engineer must be "registered in California", to conform with the requirements of the Business and Professions Code, Sections 6704 and 6732, which are more stringent than the requirements found in the federal regulations.

Section 66264.192(b): Language is being added to this subsection to require that the assessment (mandated by this subsection) attest "that the tanks and containment system are suitably designed to achieve the requirements in this article". This requirement is contained in existing Title 22, CCR, Section 67251(c), but is not included in the corresponding federal regulation. The addition of this language is, therefore, necessary to conform to existing Title 22, CCR, Section 67251(c), which is more stringent than the federal regulation. The word "also" is being added in the last sentence of this section for clarification.

Section 66264.193: This section, which is based on 40 CFR, Section 264.193, specifies the requirements pertaining to containment and detection of hazardous waste releases for permitted tank systems.

This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR and as follows:

Section 66264.193(a): Paragraphs (1)-(6) of this section provide a phased-in schedule for different types of tank systems for complying with the secondary containment requirements of Section 66264.193. Existing Title 22, CCR, Section 67251(b) requires all permitted tank systems to meet certain secondary containment requirements. These current state requirements are contained in proposed sections 66264.193(c)(2), (c)(4), (e)(1)(A) and (e)(2)(A) (except these two sections do not apply to tanks not containing free liquids), and (e)(1)(B) and (e)(2)(B). These existing Title 22 requirements are applicable to both RCRA and non-RCRA facilities. (See the SOR for Sections 66264.191(b) and (d) for the definition of non-RCRA tank.) In addition, RCRA permitted facilities are required to comply with the much more extensive secondary containment requirements set forth in 40 CFR, Section 264.193. 40 CFR, Section 264.193(a) provides a phased-in schedule for facility compliance with the federal secondary containment requirements. The deadline by which a given RCRA tank system must meet the federal secondary containment requirements is based on the type of waste handled, the age of the tank system or the facility's age, and when the material managed in the tank becomes a hazardous waste. The federal compliance deadlines are measured from the effective date of the federal regulations implementing these secondary containment requirements (January 12, 1987). The proposed state regulations contained in Section 66264.193 extend the more extensive federal secondary containment requirements to non-RCRA tank systems. The proposed deadlines for complying with the secondary containment requirements set forth in Section 66264.193 for non-RCRA tank systems are consistent with the RCRA deadlines specified in 40 CFR (and Section 66264.193(a)), but the non-RCRA deadlines are measured from the effective date of these proposed state regulations (rather than the federal regulations). This phased-in compliance schedule, which was developed by the EPA and is being adopted by the Department in these proposed regulations, is based upon: (1) two years as the estimated time for most facilities to obtain approvals for and install a secondary containment system; and (2) fifteen years as the median age to failure for underground tank systems (no reliable time-to-failure data is available for other types of tanks). In addition, the phased-in schedule is intended to enable both facilities and the Department to give first priority to those tank systems in greatest need of adequate secondary containment. The Department is proposing to apply these RCRA requirements to non-RCRA tank systems in order to maintain consistency between the state regulatory requirements for RCRA and non-RCRA facilities. Additionally, these enhanced secondary containment requirements are further warranted by

the high risk of spills and leaks from tank systems resulting in environmental contamination, public health risks, and costly cleanups. Secondary containment meeting the requirements of the federal regulations and these proposed state regulations will protect the environment and the public from the dangers associated with tank system leaks and spills, as well as preventing/ minimizing costly cleanups.

Section 66264.193(a)(2): The word "that" is being changed to "which" for clarification.

Sections 66264.193(a)(2), (a)(3) & (a)(4): The first sentence of these subsections has been rephrased to include Federal Register date which establishes when the regulations were promulgated thus establishing the definition of the term "existing" as it appears in corresponding federal regulations. These changes have been made to address EPA's concern to clarify the term "existing" in the proposed regulations.

Section 66264.193(a)(4): In addition to the changes discussed above, the phrase "as of January 12, 1987" is being inserted for clarification.

Section 66264.193(a)(2)(B), (a)(3)(B), (a)(5) & (a)(6): The language of these subsections have been modified for purposes of clarity and to direct the OAL to incorporate the actual effective date of these regulations when these regulations become effective. These changes are being made per OAL comment.

Section 66264.193(a)(5): A new language "from the effective date of these regulations" is being added after the word "existing" which establishes the definition of "existing".

Section 66264.193(a)(2)(B)(1): This subsection has been eliminated per EPA's comment as this subsection establishes effective dates for tanks containing non-RCRA waste only whereas Section 66264.193(a)(2) exclusively addresses tanks containing RCRA wastes F020, F021, F023, F026 and F027.

Section 66264.193(a)(2)(B)(2): Requirements of this subsection have been merged into Section 66264.193(a)(2)(B). This change has been made to rearrange Section 66264.193(a)(2).

Section 66264.193(c)(2): Language is being added to this section to incorporate the existing Title 22, CCR, Section 67251(b)(1) requirement for a base underlying the tanks which meets certain design standards. This standard is more stringent than the corresponding federal requirement.

Section 66264.193(c)(4): Language is being added to this section to incorporate the existing Title 22, CCR, Section

67251(b)(5) requirement that spilled or leaked waste and precipitation must be removed "in as timely a manner as is necessary to prevent overflow of the containment system". This includes requiring facilities, proposing an exception to the requirement of this section to remove released wastes within twenty-four (24) hours, to demonstrate to the Department "that overflow of the containment system will not occur". This standard is more stringent than the corresponding federal requirement. Section 66264.193(c)(4)(B) & (C): For ease of use the United States Code citations are being added as citations parallel to the referenced sections of the Federal Clean Water Act, as amended. These additions are being made per the OAL comment.

Sections 66264.193(e)(1)(A) and (e)(2)(A): These paragraphs are being revised to incorporate the requirement from existing Title 22, CCR, Section 67251(b)(3) which specifies that containment systems must be capable of containing "precipitation from a 24 hour, 25 year storm event plus the greater of 10% of the aggregate volume of all tanks or 100% of the volume of the largest tank, whichever is greater". This standard is more stringent than the corresponding federal requirement.

Sections 66264.193(e)(1)(B) and (e)(2)(B): These paragraphs are being revised to conform with existing Title 22, CCR, Section 67251(b)(4) which requires that containment systems either prevent run-on or be capable of containing run-on from a 24 hour, 25 year storm in addition to the capacity requirements of Sections 66264.193(e)(1)(A) and (e)(2)(A). This standard is more stringent than the corresponding federal requirement. The wording in these paragraphs is also being modified to clarify that the system must either prevent or be capable of containing both run-on and infiltration. The wording in the corresponding federal regulations could be erroneously interpreted to only require prevention/containment of run-on or infiltration. This interpretation, however, is not logical in the framework of environmental protection and could in some cases result in a standard less stringent than the existing state regulation. Many tank systems could be subject to both run-on and infiltration from a storm, and protection against one and not the other would negate the intended effect of this regulation. These paragraphs are also being modified to make it clear that the required excess capacity pertains to the run-on and infiltration (rather than the precipitation itself) from a 25 year, 24 hour storm. This change is necessary for internal consistency within these paragraphs.

Section 66264.193(f)(3): Addition of the words "and sealless valves" following the word "pumps" is to conform with the changes made in the corresponding federal regulations pursuant to Federal Register Volume 53, #171, 9/2/1988.

Section 66264.193(g): This section is based on 40 CFR, Section 264.193(g) and provides for a variance from the secondary containment requirements of Section 66264.193 if alternate design and operating practices are employed which meet certain standards. The variance provision contained in section 66264.193(g) is more limited than the federally-allowed variance. 40 CFR allows a variance for all tanks, except new underground tanks. However, existing Title 22, CCR, Section 67251(b)(1) allows an exemption from these requirements only for "existing above-ground tanks in place". Since the Title 22 exemption provision makes the regulations more stringent than does the 40 CFR variance, Section 66264.193(g) is being revised to conform with Title 22, CCR, Section 67251(b)(1).

Section 66264.193(h)(1): The sentence pertaining to variances for new tank systems is being deleted to conform with existing Title 22, CCR, Section 67251(b)(1), which only allows variances for "existing above-ground tanks in place". The words "according to the following schedule: (i) For existing tank systems," are being deleted since they are no longer necessary and are confusing given the above deletion. The last sentence of this section is being added to require facilities, seeking a variance from those secondary containment requirements contained in existing Title 22, to submit the variance demonstration required by this section to the Department with their Part B permit application. Although facilities may delay implementation of most of the secondary containment requirements of Section 66264.193 until the deadlines set forth in Section 66264.193(a), those requirements specified in existing Title 22 for permitted facilities (and listed in Section 66264.193(i)(1)) must be complied with at the time of permitting unless a variance is requested and approved by the Department. The addition of this language to Section 66264.193(h)(1) is necessary to conform to existing Title 22, CCR, Section 67251(b). The corresponding federal regulation is less stringent in that it allows some facilities to be permitted without meeting any secondary containment requirements for existing tank systems until the deadlines specified in Section 66264.193(a), which may occur after the facility is permitted.

Section 66264.193(h)(1): The word "must" is being replaced by the words "is required to". As is discussed in the generic change portion of the introduction to this SOR, the word "must" is being changed to "shall" throughout the proposed regulations to conform with the standard terminology used in Title 22, CCR. In this particular section changing "must" to "shall" would not be appropriate grammatically. For this section, the use of the term "is required to" accomplishes the same intent as the generic change and is grammatically correct.

Section 66264.193(j): This subsection, along with all references to this subsection have been changed to subsection (i) as originally proposed subsection (i) has been completely deleted.

Section 66264.193(i)(1): This section is being added to require facilities to comply with those portions of the secondary containment requirements which are currently required under Title 22 pending full compliance with Section 66264.193. This section is necessary to conform to existing Title 22, CCR, Section 67251(b). The corresponding federal regulation is less stringent in that it does not require facilities to meet any secondary containment requirements for existing tank systems until the deadlines specified in Section 66264.193(a).

Section 66264.193(i)(3): This section requires an assessment (in certain cases) by an "independent, qualified registered professional engineer". This is being revised to require that the engineer be an "independent, qualified professional engineer, registered in California, in accordance with Section 66270.11(d)". The state Business and Professions Code, Sections 6704 and 6732 require that such assessments be made by engineers registered in California, and 40 CFR requires that the assessment be in accordance with section 66270.11(d).

Section 66264.194: This section is based on 40 CFR, Section 264.194 and specifies general operating requirements for permitted tank systems. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR and as follows:

Section 66264.194(a): The phrase "hazardous wastes or treatment reagents" is being changed to "hazardous wastes or other materials (e.g. treatment reagents)". This change is necessary to conform with existing Title 22, CCR, Section 67252(a), which specifies that neither hazardous waste nor other materials (including treatment reagents) may be placed in a tank if they could cause the tank to fail. The corresponding federal regulation is less stringent because it only applies this restriction to hazardous waste and treatment reagents.

Section 66264.194(b)(3): This section is being revised, in conformance with existing Title 22, CCR, Section 67525(b)(2), to specify that the freeboard must be sufficient to prevent overtopping by precipitation "from at least a 24 hour, 25 year storm". This is more specific and thus more stringent than the design standard in the corresponding federal regulation.

Section 66264.195: This section is based on 40 CFR, Section 264.195 and specifies inspection requirements for permitted tank systems. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR and as follows:

Section 66264.195(a): Language is being added to require that overfill controls be inspected "at least once each operating day to ensure that they are in good working order". This change is necessary to conform to existing Title 22, CCR, Section 67254(a)(1). The corresponding federal regulation is less stringent as it does not include this requirement.

Section 66264.195(b)(3): This section is being revised to require that the inspection of construction materials must include the detection of any corrosion. This change is necessary to conform to existing Title 22, CCR, Section 67254(b). The corresponding federal regulation does not contain this inspection standard and, therefore, is less stringent.

Section 66264.195(b)(4): This section is being added, in conformance with existing Title 22, CCR, Section 67254(a)(3), to require that uncovered tanks be inspected for the level of waste in the tank at least once each operating day. This requirement is not contained in the corresponding federal regulation.

Section 66264.195(e): This is a new section which is based on, and is necessary to conform with, existing Title 22, CCR, Section 67254(b). This addition makes the inspection schedule and procedure requirements more specific and more stringent than the requirements found in the corresponding federal regulation.

Section 66264.196: This section is based on 40 CFR, Section 264.196 and specifies the requirements for responding to hazardous waste leaks and spills and for handling leaking or unfit permitted tank systems. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR and as follows:

Section 66264.196(a): This is a new section which is based on, and is necessary to conform with, Title 22, CCR, Section 67254(c). This added section stipulates that the facility's contingency plan must include certain procedures pertaining to tank spills or leakage. The corresponding federal regulation does not contain this requirement and, therefore, is less stringent.

Section 66264.196(b)(1): This section is being added to make it clear that the facility must comply with the general

emergency response procedures set forth in Section 66264.56, in addition to the requirements of Section 66264.196. The corresponding federal regulation does not reference the general emergency response procedures, and could thus lead to the misinterpretation that the procedures set forth in Section 66264.196 are a substitute for (rather than an addition to) the requirements of Section 66264.56.

Section 66264.196(b)(3)(B): This section is being revised to require that releases to the secondary containment system must be removed "within as timely a manner as is necessary to prevent overflow of the containment system". This change is necessary to conform with existing Title 22, CCR, Section 67251(b)(5). The corresponding federal regulation does not include this standard and, therefore, is less stringent. Additionally, language is being added to this section requiring the facility to provide the demonstration required under Section 66264.193(c)(4) if the facility is proposing an exception to the requirement to remove such releases within 24 hours. This change is being made for clarity and consistency with the requirements specified in section 66264.193(c)(4).

Section 66264.196(b)(5)(A): This section requires the facility to notify the Department in the event of a release to the environment. The last sentence in the corresponding federal regulation, which states that this requirement can be satisfied by complying with 40 CFR, Part 302, is not being included in the proposed regulation since this would not satisfy the more stringent notification requirements contained in existing Title 22, CCR, Section 67145.

Section 66264.196(b)(5)(B): The phrase "but is not exempt from the requirements of section 66264.56" is being inserted for clarification. This change does not alter the requirements of the regulations.

Section 66264.196(b)(7): This section requires a certification of major tank repairs by an "independent, qualified, registered, professional engineer". This is being revised to require that the engineer be an "independent, qualified, professional engineer, registered in California", to conform with the requirements of the Business and Professions Code, Sections 6704 and 6732, which are more stringent than the requirements found in the federal regulations.

Section 66264.197: This section is based on 40 CFR, Section 264.197 and specifies closure and post-closure requirements for permitted tank systems. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR.

Section 66264.198: This section is based on 40 CFR, Section 264.198 and specifies special requirements for managing ignitable or reactive wastes in permitted tank systems. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR.

Section 66264.199: This section is based on 40 CFR, Section 264.199 and specifies special requirements for managing incompatible wastes in permitted tank systems. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this SOR.

## ARTICLE 11: SURFACE IMPOUNDMENTS

This article is based on 40 CFR Part 264 Subpart K and Title 22, CCR sections 67280 to 67318. It sets forth the requirements for the design, operation, monitoring, inspection, closure and post-closure care of surface impoundments at permitted facilities.

Section 66264.220: This section is based upon 40 CFR section 264.220 which sets forth the applicability of these regulations. This section conforms with the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons.

Section 66264.221: This section is based upon 40 CFR section 264.221 which sets forth design and operating requirements for surface impoundments. This section conforms with the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

In the version of the regulations proposed 6/1/89, the phrase "maximum probable" was added to modify the reference to "pressure gradients" in subsection (a)(1). After review by staff, this change was deemed to be outside of the scope of this rulemaking, and is being withdrawn. The current proposed subsection is now identical to the existing federal language.

Section 66264.221 (b): Title 22 language from existing section 67281 (e) has been added. The added language is, "into the soil outside the impoundment or ...". This additional language is broader in scope and is not contained in the corresponding federal regulations.

Section 66264.221 (b)(5): The existing Title 22 requirement (section 67281 (e)(5)) that refers to "The potential for lateral migration of hazardous constituents...", has been added. This added language is broader in scope and is not contained in the corresponding federal regulations.

Section 66264.221 (b)(6): Existing Title 22, CCR section 67281 (e)(6) has been added to make up this new subsection. The added language is broader in scope and is not contained in the corresponding federal regulations. The added language includes in the design requirements the recommendations of the State or Regional Water Quality Control Boards.

Section 66264.221 (c): The February 2, 1985 effective date of the Title 22 regulations (which preceded the effective date of the corresponding federal regulations), has been added. More stringent language from Title 22, CCR section 67281 (a), which is not contained in the corresponding federal language, has been added. The additional text states that, "When an existing surface impoundment is expanded after February 2, 1985, the entire surface impoundment will be

treated as a surface impoundment constructed after February 2, 1985."

The phrase, "relative to the waste or leachate to be contained", has been added to the permeability requirement for the lower liner of the liner system. This addition comes from existing California regulations found in Title 22, CCR section 67281 (a), is broader in scope and is not contained in the corresponding federal regulations.

Section 66264.221 (d) and (e): Existing Title 22, CCR sections 67281 (b) and (d), which contain the minimum technology requirements for liners and leachate collection systems have been inserted in these locations. These requirements are broader in scope and are not contained in the corresponding federal regulations.

Section 66264.221 (g) (1): The Title 22 soluble threshold limit concentration, as detailed in sections 66260.10 and 66261.24, has been substituted for the federal EP toxicity criteria. These requirements are broader in scope and are not contained in the corresponding federal regulations, as noted in the Statement of Reasons for section 66261.24.

Section 66264.226: This section is based on 40 CFR section 264.226 which relates to monitoring and inspection requirements for surface impoundments at permitted facilities. This section conforms with the corresponding federal regulation, except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

Section 66264.226 (b)(3): The Title 22 requirement (section 67286 (b)(3)), that the weekly inspection look for "the presence of liquids in the leak detection system", has been added. This requirement is more stringent, and is not contained in, the corresponding federal regulations.

Section 66264.226 (c): The qualifier, "registered in California", has been added to the requirement for certification from a qualified engineer. This qualifier exists in the current Title 22, CCR section 67286 (c), and is more stringent than the corresponding federal regulation.

Section 66264.226 (c) (3): The existing Title 22 requirement in section 67286 (c)(3), that an impoundment "Will not fail due to the external or internal forces from an earthquake or landslide." has been added to make this subsection. "Maximum credible" has been added to clarify the requirements of this subsection and to be consistent with the language used throughout Title 22, CCR and this package of regulations. (See 66264.228 (a)(2)(C)(6) for an example.) This language is broader in scope, and is not contained in the corresponding federal regulation.

Section 66264.227: This section is based upon 40 CFR section 264.227 which covers emergency repairs and contingency plans. This section conforms with the corresponding federal regulation, except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

Section 66264.227 (d) (2) (B): The more stringent Title 22 requirement that a qualified engineer be "registered in California" has been added.

Section 66264.228: This section is based on 40 CFR section 264.228 which pertains to closure and post-closure care of surface impoundments at permitted facilities. This section conforms with the corresponding federal regulation, except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

Section 66264.228 (a) (2) (C) (1): 40 CFR language pertaining to the long-term minimization of liquid migration through closed units has been deleted and replaced by more stringent Title 22 text, contained in section 67288 (b) (3) (A), requiring the prevention of downward entry of water into a closed unit for at least 100 years.

Sections 66264.228 (a) (2) (C) (6 and 7): Title 22 language requiring that the cover of a closed surface impoundment be designed to "accommodate lateral and vertical shear forces generated by the maximum credible earthquake", and "preclude ponding of rainfall and surface run-on over the closed area" has been added to this subsection. These additions from existing Title 22, CCR section 67288 (b) (3) (F and G) are more stringent than the corresponding federal regulation.

As originally proposed, the regulation would have required the cover of a closed surface impoundment to accommodate lateral and vertical shear forces generated by the maximum probable earthquake. After staff review and public comments, the term "maximum probable earthquake" is being withdrawn and has been replaced by "maximum credible earthquake" as used in Title 22, CCR section 67288 (b) (3) (F).

Section 66264.228 (b): Language from Title 22, CCR section 67288 (c), which is broader in scope and is not contained in the corresponding federal regulations, has been added. The added phrase is "or contaminated soils".

Section 66264.228 (b) (1) and (b) (3): The more stringent Title 22 language found in section 67288 (c) (1), requiring that facilities be closed in a manner that will "minimize any chance of post-closure release", and "facilitate post-closure maintenance, monitoring, and emergency response; and require minimum maintenance of containment structures, leachate collection systems and surface drainage or diversion systems",

which are not contained in the corresponding federal language, has been inserted.

Section 66264.228 (d): Title 22, CCR section 67288 (e), requiring owners/operators to notify the Department, in writing, if liquids are detected in the leak detection system has been added to this subsection.

Section 66264.228 (e) through (r): Title 22, CCR sections 67288 (f) through (s), relating to requirements for owners or operators of surface impoundments in which wastes will remain on site after closure, has been inserted in full into these subsections, except that the Title 22 language has been modified as noted below.

Section 66264.228 (e), (e)(1) and (e)(5): In response to a comment received during the first public comment period, references to wastes remaining "at the site" have been changed to "in a unit". As originally proposed, this regulation would require extensive work to be done at the entire facility if wastes were to remain after closure of the facility. The intent of the requirements contained in subsection (e) is to require additional work only in those areas where wastes are left behind, not over the entire site. By making the change in language to "in a unit", the requirements of this subsection have been clarified.

These subsections are broader in scope, are more stringent, and are not contained in the corresponding federal regulations.

Section 66264.228 (e)(9): Additional language which clarifies the requirements contained in this subsection has been added in response to a comment received during the first public comment period. The clarifying language is, "If a synthetic membrane is used in the final cover system,...".

Section 66264.228 (m): The word "significant" has been added to clarify the language of this subsection. It is the Department's intention to require that facilities be designed and constructed to maintain their integrity if an earthquake takes place. The Department realizes that minor cracks or sloughing of material can occur during an earthquake, but the integrity of the unit as a whole must be maintained.

Section 66264.229: This section is based on 40 CFR section 264.229, which sets forth special requirements for ignitable or reactive wastes. This section conforms with the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons.

Section 66264.230: This section is based on 40 CFR section 264.230, which relates to special requirements for incompatible

wastes. This section conforms with the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons.

Section 66264.231: This section, which is based upon 40 CFR section 264.231, covers the special requirements for hazardous waste types F020, F021, F022, F023, F026, and F027. This section conforms with the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons.

## ARTICLE 12: WASTE PILES

This article is based on 40 CFR Part 264 Subpart L and Title 22, CCR sections 67340 through 67351. It sets forth the requirements for the design, operation, monitoring, inspection, closure and post-closure care of waste piles at permitted facilities.

Section 66264.250: This section is based upon 40 CFR section 264.250, which sets forth the applicability of these regulations. This section conforms with the corresponding federal regulation, except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

Section 66264.250 (b): The phrase, "that are part of a permitted facility and...", has been inserted. This phrase is part of the current Title 22 language contained in section 67340 (b), which is broader in scope and is not contained in the corresponding federal regulation.

Section 66264.251: This section is based on 40 CFR section 264.251, which sets forth design and operating requirements for waste piles. This section conforms with the corresponding federal regulation, except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

Section 66264.251 (b), (c), and (d): Insertion of Title 22 text (sections 67341 (b), (c), and (d)) regarding construction of liners and leachate collection and removal systems in accordance with subsections (b) and (c) of section 66264.221. These requirements are broader in scope and are not contained in the corresponding federal regulations.

Section 66264.251 (e)(5): Insertion of more stringent Title 22 language from section 67341 (e)(5), concerning the potential for lateral migration of hazardous constituents, which is not contained in the corresponding federal regulations.

Section 66264.251 (k) and (l): Title 22, CCR section 67342 has been added, in whole (with generic changes), to make up these two new subsections. These added subsections, relating to groundwater monitoring, leachate collection and removal, and liner requirements, are broader in scope, are more stringent, and are not contained in the corresponding federal regulations.

Section 66264.254: This section is based on 40 CFR section 264.254, which covers monitoring and inspection requirements for waste piles at permitted facilities. This section conforms with the corresponding federal regulation, except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

Section 66264.254 (b)(3): Existing Title 22, CCR section 67344 (b)(2) has been inserted at this location. The inserted language reads, "The presence of liquids in leak detection systems, where installed to comply with section 66264.251 (k)." This language is more stringent, and is not contained in the corresponding federal regulation.

Section 66264.256: This section is based on 40 CFR section 264.256, which sets forth the special requirements for ignitable or reactive wastes. This section conforms with the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons.

Section 66264.257: This section is based on 40 CFR section 264.257. It defines the special requirements for incompatible wastes in waste piles at permitted facilities. This section conforms with the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons.

Section 66264.258: This section is based on 40 CFR section 264.258, which covers the requirements for closure and post-closure care of waste piles at permitted facilities. This section conforms with the corresponding federal regulation, except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

Section 66264.258 (b): The term "owner or operator" has been used to replace the word "he", as used in the federal regulations, in order to be non-gender specific.

Section 66264.258 (c)(1): Language from 40 CFR which states, "...that does not comply with the liner requirements of..." has been deleted in order to be consistent with the more stringent Title 22 requirements contained in existing section 67351 (c)(1)(A), which require that all facilities comply with the requirements of this subsection.

Section 66264.259: This section is based on 40 CFR section 264.259, which sets forth the special requirements for hazardous waste types FO20, FO21, FO22, FO23, FO26, and FO27. This section conforms with the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons.

## ARTICLE 13: LAND TREATMENT UNITS

This article is based on 40 CFR Part 264 Subpart M and Title 22, CCR sections 67360 through 67382. It sets forth the requirements for the design, operation, treatment demonstration and program, closure and post-closure care of land treatment units at permitted facilities.

**NOTE:** The phrase "hazardous constituents" has been changed throughout this article to "constituents of concern". This is so that these regulations can be consistent with those of the Water Quality Control Board, whose regulations cover non-hazardous as well as hazardous constituents of concern.

The term "unsaturated zone" has been replaced throughout this article with the term "vadose zone". This change has been made in order to be consistent with the statutory language from the Health and Safety Code which has been added in many sections. The two terms have been defined in Section 66260.10 as being synonymous.

Section 66264.270: This section is based on 40 CFR section 264.270, which sets forth the applicability of these regulations. This section conforms with the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons.

Section 66264.271: This section is based on 40 CFR section 264.271, which sets forth the requirements for the treatment program for land treatment units at permitted facilities. This section conforms with the corresponding federal regulation, except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

Section 66264.271 (a): The phrase, "of a facility", from existing Title 22 section 67361 (a), has been added to this subsection. This addition is for the purpose of clarity.

Section 66264.271 (b): Federal language, which cross-references regulations where hazardous constituents are identified, has been deleted because the new phrase, "constituents of concern", which has replaced hazardous constituents, includes non-hazardous compounds which would not be found in the referenced appendix.

Section 66264.271 (c) (2): The maximum depth of the treatment zone above the highest anticipated elevation of the water table has been changed from 1 meter ( 3 feet), to 1.5 meters (5 feet). This change is necessary in order to be consistent with current Title 23, CCR, Subchapter 15 requirements (section 2530 (c)).

Section 66264.272: This section is based on 40 CFR section 264.272, which sets forth the requirements for the treatment demonstration for land treatment units at permitted facilities.

This section conforms with the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons.

Section 66264.273: This section is based on 40 CFR section 264.273, which sets forth the design and operating requirements for land treatment units at permitted facilities. This section conforms with the corresponding federal regulation, except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

This section incorporates statutory requirements contained in AB 3383, Chapter 1632, Statutes of 1988, codified in various Health and Safety Code sections from 25110 through 25503.7. These requirements are being included in order to eliminate some of the regulated community's confusion which currently arises because requirements central to the hazardous waste control laws are divided between statute and regulation. The Department believes that by consolidating the requirements in the regulations, it will eliminate some of the confusion expressed by members of the regulated community who are unaware of the existence of the statutory requirements and thus, make it easier to comply with the hazardous waste control laws.

Section 66264.273 (b): The word "prevent" has replaced the word "minimize". The more stringent language comes from existing Title 22, CCR section 67363 (b), and is not contained in the corresponding federal regulation.

Section 66264.273 (d): The phrase, "and properly dispose of" has been added to reinforce the requirements of these regulations pertaining to the classification and disposal of wastes.

In response to a public comment and subsequent analysis by staff, the word "test" has been eliminated from the additional language originally proposed in the 6/1/89 version of the draft regulations. While it is implicit that in order to properly dispose of any contained run-off, testing must be conducted, to specify so in these regulations is beyond the scope of this rulemaking.

Sections 66264.273 (h) and (i): Existing Title 22, CCR sections 67363 (f) and (g) have been added to make up these new subsections. The added subsections prohibit the growth of food-chain crops in or on the treatment zone, and direct that the release of airborne contaminants be "below nuisance levels or other levels necessary to protect human health or the environment".

In the version of the regulations proposed on 6/1/89, subsection (i) included Title 22 language which contained the

requirement that releases of airborne contaminants be below "hazardous or nuisance levels". In response to a public comment, the word "hazardous" has been eliminated and replaced with "or other levels necessary to protect human health or the environment". This change is necessary because there are no designated levels to determine "hazardous levels" of airborne contaminants, while there are levels that are recognized as necessary to protect human health or the environment.

These requirements are broader in scope, are more stringent, and are not contained in the corresponding federal regulations.

Section 66264.273 (j): This new subsection is comprised of language from AB 3383, Chapter 1632, Statutes of 1988, which amended various Health and Safety Code sections between sections 25110 and 25503.7. The new subsection specifies that unless a variance is granted, two or more liners and a leachate collection system are required to be installed at every new land treatment unit, every replacement unit, and every lateral expansion of and existing land treatment unit.

The Department may grant a variance if the owner/operator can demonstrate that "no hazardous constituents identified in Appendix VIII to Chapter 11 have migrated into the vadose zone or into the waters of the state, and no other hazardous constituents have migrated from the land treatment unit into the vadose zone or into the waters of the State in concentrations which pollute or threaten to pollute the vadose zone or the waters of the State."

In response to a comment submitted by the EPA regarding the effects on potential corrective actions by allowing "migration of hazardous constituents that pollute or threaten to pollute...", several changes have been made to the language originally proposed in the 6/1/89 version of these regulations. The authority to require corrective actions under RCRA extend only to those chemicals identified in Appendix VIII of Chapter 11. The EPA's comment was accommodated by specifying that for hazardous constituents identified in Appendix VIII, no releases would be allowed. The original language contained in the Health and Safety Code, which contains the wording "pollute or threaten to pollute...", as it relates to those chemicals which California regulates in addition to the federal Appendix VIII chemicals, has been retained.

The new subsection also requires that the design and operating practices prevent the migration of hazardous constituents into the vadose zone and provide for the rapid detection and removal or remediation of any hazardous constituents that migrate from the treatment zone of a land treatment unit. The

subsection also specifies that a variance or a renewal of a variance may not exceed three years.

Section 66264.273 (k): This new subsection states that, unless granted a variance, "after January 1, 1990, no person shall discharge hazardous waste into a land treatment unit which has not been equipped with liners and a leachate collection and removal system...". These requirements are broader in scope, and are more stringent, than the current federal language.

Section 66264.273 (l): This subsection is comprised of statutory language from AB 3383. It provides that under certain circumstances, non-RCRA hazardous waste which has been excavated as part of a removal or remedial action at a release site is exempt from the requirements of subsection (j).

Section 66264.273 (m): This subsection has been added to clarify where the phrases "removal", "remedial action", "hazardous substance", and "release" are defined.

Section 66264.276: This entire section has been reserved. 40 CFR section 264.276 has been deleted because existing Title 22, CCR section 67363 (f) specifically prohibits the growth of food-chain crops in or on the treatment zone of a land treatment unit at a permitted facility.

Section 66264.278: This section is based on 40 CFR section 264.278, which sets forth the requirements and response actions for monitoring the unsaturated (vadose) zone beneath a land treatment unit at a permitted facility. This section conforms with the corresponding federal regulation, except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

NOTE: In response to a comment received during the first comment period, the terms "value" or "values" which are used throughout this section, have been replaced by the word "concentration" or "concentrations" for purposes of clarity.

Section 66264.278 (introductory paragraph): Added language directs that in addition to these regulations, the requirements of Article 6 and Article 17 also apply to owners/operators of land treatment units at permitted facilities. This additional language is for the purpose of clarity.

Section 66264.278 (d): New language states that the water quality monitoring requirements of Article 6 will also be considered in determining the soil monitoring requirements for owners and operators of land treatment units at permitted facilities. This additional language will facilitate the owner/operator in designing a comprehensive environmental

monitoring plan for both the saturated and vadose zones at a land treatment facility.

Section 66264.278 (g): New language from AB 3383 has been added to make up this subsection. This subsection directs that no person shall place or dispose of hazardous waste in a land treatment unit if: hazardous constituents have migrated into the vadose zone, there is evidence that a hazardous constituent in the land treatment unit has not been or will not be completely degraded, transformed or immobilized, or there is a significant potential for hazardous constituents to migrate from the land treatment unit into a potential source of drinking water.

Section 66264.278 (h): This subsection requires that the owner/operator of a land treatment unit shall at least annually submit information to the Department to assure that the conditions set forth in subsection (g) are not present. This language is contained in Health and Safety Code section 25209.4 (a), which is broader in scope and is not contained in the federal regulations.

Section 66264.278 (i): This subsection requires that the owner/operator of a land treatment unit that is unable to meet the requirements of subsection (g), shall describe to the Department the results of their findings within 72 hours. This language comes from Health and Safety Code section 25209.4 subdivisions (b) and (c), is broader in scope, and is not found in the federal regulations.

The requirement that written notification be submitted within 7 days, as proposed in the 6/1/89 version of these regulations, has been deleted after analysis of a comment received during the public comment period.

Section 66264.278 (j): This subsection directs that upon receiving notice pursuant to subsection (i), the owner/operator shall cease operating, and shall close the land treatment unit unless appropriate removal or remedial actions are completed and an application for a permit or variance modification is approved by the Department. The owner/operator may also equip the land treatment unit with liners, and a leachate collection and removal system that satisfy the requirements of this article. This language comes from Health and Safety Code section 25209.4, and is not found in the federal regulations.

Section 66264.278 (k): This subsection requires that, unless granted an extension by the Department, all actions taken pursuant to subsection (j) of this section shall be completed within 18 months, or the land treatment unit shall be closed. This requirement comes from Health and Safety Code section 25209.4 also.

Section 66264.278 (1): The explanatory phrases, "the owner or operator" and "at the facility", have been inserted in several places in order to clarify the regulations. A reference to the requirements of subsections of sections 67264.278 (j)(1 and 2) has also been placed in this subsection. This subsection is composed primarily from 40 CFR section 264.278 (h). Subsection (g) of 40 CFR section 264.278 has been deleted and its language carried over into the new subsections which have been added.

Section 66264.279: This section is based on 40 CFR section 264.279, which covers the recordkeeping requirements for land treatment units at permitted facilities. This section conforms with the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons.

Section 66264.280: This section is based on 40 CFR section 264.280, which sets forth the requirements for closure and post-closure care of land treatment units at permitted facilities. This section conforms with the corresponding federal regulation, except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

Section 66264.280 (a)(2): The word "prevent" has replaced the word "minimize" as the more stringent language in existing Title 22, CCR section 67369 (a)(2) states.

40 CFR section 264.280 (a)(6): This subsection of the federal regulations has been deleted because it refers to conditions for growing food-chain crops, which is not allowed under existing Title 22, CCR section 67363 (f).

Section 66264.280 (a)(6): This subsection was numbered (a)(7) before the previous subsection's deletion. The federal requirements in this subsection have been merged with Title 22, CCR section 67369 (a)(5) language requiring that the waste be completely degraded, immobilized, or transformed. This language is more stringent, and is not found in the corresponding federal text.

In response to a public comment, "...but in no event can monitoring be discontinued in less than 90 days after the last application of waste to the treatment zone" has been added to clarify and consolidate the requirements of the state and federal regulations.

Section 66264.280 (b): Added language from Title 22, CCR section 67369 (b) directs that independent Engineering Geologists and Professional Engineers be certified or registered in the state of California. This more stringent language is not found in the corresponding federal text.

40 CFR section 264.280 (c)(6): This subsection deals with food-chain crops and has been deleted in accordance with section 66264.280 (a)(6).

Section 66264.280 (c)(7): The Title 22 section 67369 (c)(6) requirement that the release of airborne contaminants be controlled to "below nuisance levels or other levels necessary to protect human health or the environment" has been added.

In the version of the regulations proposed on 6/1/89, subsection (i) included Title 22 language which contained the requirement that releases of airborne contaminants be below "hazardous or nuisance levels". In response to a public comment, the word "hazardous" has been eliminated and replaced with "or other levels necessary to protect human health or the environment". This change is necessary because there are no designated levels to determine "hazardous levels" of airborne contaminants, while there are levels that are recognized as necessary to protect human health or the environment.

These requirements are broader in scope, and are not found in the corresponding federal text.

Section 66264.280 (d): Title 22 language from section 67369 (d) has been added. The added text is, "and that the waste in the treatment zone has been shown to the satisfaction of the Department to have been completely degraded, transformed or immobilized." This language is more stringent, and is not found in the corresponding federal text.

Section 66264.280 (d)(1)(A): Title 22 language from section 67369 (d)(1)(A) has been added. The added language is, "where soil has not been contacted by constituents of waste." This more stringent language is not found in the corresponding federal regulation.

Section 66264.280 (e): This subsection of the federal regulations has been deleted because it contains a blanket exemption from the requirements of Article 6 of this chapter. Exemptions to the requirements of Article 6 are found in Section 66264.90(c).

Section 66264.281: This section is based on 40 CFR section 264.381, which sets forth the special requirements for ignitable or reactive wastes in land treatment units at permitted facilities. This section conforms with the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons.

Section 66264.282: This section is based on 40 CFR section 264.282, which sets forth the requirements for incompatible wastes in land treatment units at permitted facilities. This section conforms with the corresponding federal regulation except for the

generic changes specified in the introduction to this Statement of Reasons.

Section 6264.283: This section is based on 40 CFR section 264.283, which sets forth the special requirements for hazardous waste types F020, F021, F022, F023, F026, and F027 in land treatment units at permitted facilities. This section conforms with the corresponding federal regulation, except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

Section 6264.283 (b): To be consistent with the requirements of section 67264.273 (j)(2)(B), the phrase, "soils outside of the treatment zone" has been added to this subsection.

## ARTICLE 14: LANDFILLS

This article is based upon 40 CFR Part 264 Subpart N and Title 22, CCR sections 67400 through 67423. It sets forth the requirements for the design, operation, monitoring, inspection, closure and post-closure care of landfills at permitted facilities.

Section 66264.300: This section is based on 40 CFR section 264.300, which sets forth the applicability of these regulations. This section conforms with the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons.

Section 66264.301: This section is based on 40 CFR section 264.301, which sets forth design and operation requirements for landfills. This section conforms with the corresponding federal regulation, except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

Section 66264.301 (a)(1): The phrase, "and during the post-closure care period", from Title 22, CCR section 67401 (a)(1), which is broader in scope and is not contained in the corresponding federal text, has been added.

Section 66264.301 (a)(2)(B): The phrase, "and post closure care period", which is broader in scope and is not contained in the corresponding federal text, has been added at this location also.

Section 66264.301 (b): In accordance with language set forth in section 66264.93, "hazardous constituents" has been changed to "constituents of concern". In reply to a comment received during the first comment period, the factors to be considered by the Department in deciding whether to grant an exemption to subsection (a) have been added. Since the factors to be considered in subsection (b) are the same as for subsection (d), a specific reference has been made to the factors listed in Section 66264.301 (d)(1 through 5), rather than relisting them.

Section 66264.301 (c): The phrase, "relative to the leachate to be contained" (Title 22, CCR section 67401 (a)(1)(D)), has been added in reference to the permeability requirement for the lower liner in a landfill. This more stringent requirement is not contained in the corresponding federal regulations.

Section 66264.301 (d): The Federal language that begins this subsection, "Subsection (c) of this section will not apply...", has been deleted and changed to: "The Department may grant an owner or operator an exemption from the requirements of subsection (c)...". The requirements of this subsection have not been altered by the change in language,

only clarified to emphasize that an exemption must be granted by the Department.

The more restrictive language from Title 22, CCR section 67401 (b) has been inserted into the corresponding federal text. The inserted phrases are, "...any significant threat to public health or the environment,...", and, "...or surrounding soils...". These phrases are broader in scope, are more stringent, and are not part of the federal text.

Section 66264.301 (d)(5): The added requirement for exemption from Title 22, CCR section 67401 (b)(5), regarding consideration of "the potential for lateral migration of hazardous constituents which could present a threat to public health or the environment", has been added. This requirement is broader in scope and is not found in the corresponding federal regulations.

Section 66264.301 (d)(6) (old): In response to a comment received during the public comment period, requirement number (6), as proposed in the 6/1/89 version of these regulations, has been deleted. The SWRCB regulations relating to landfills must be complied with by the landfill owner or operator in addition to these regulations, so this requirement is redundant and unnecessary.

Section 66264.301 (e)(1): The Title 22 soluble threshold limit concentration, as defined in sections 66260.10 and 66261.24, has been substituted for the federal EP toxicity criteria. This language is not contained in the corresponding federal text, and is being included here to be consistent with section 66261.24.

Section 66264.301 (e)(2)(A)(3): The phrase "hazardous waste facility" has been inserted before the word "permits", to clarify the language of this subsection.

Section 66264.301 (e)(3)(B): The more restrictive Title 22 phrase, "or surrounding soils", has been added in reference to the migration of hazardous constituents from a landfill. This language is not contained in the corresponding federal text.

Section 66264.301 (old k): This 40 CFR requirement has been deleted because it applies only to landfills in the state of Alabama.

Section 66264.301 (new k): Title 22 language from section 67401 (f), requiring design and operation of a facility so as to ensure closure and post-closure care requirements are met, has been added at this location. These requirements are broader in scope and are not contained in the corresponding federal language.

Section 66264.303: This section is based upon 40 CFR Part 264.303, which sets forth the monitoring and inspection requirements for landfills at permitted facilities. This section conforms with the corresponding federal regulation, except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

Section 66264.303 (b)(3): The more restrictive statement, "The presence of liquids in leak detection systems", from Title 22, CCR section 67403 (b)(2), has been added at this location.

Section 66264.309: This section is based on 40 CFR Part 264.309, which pertains to surveying and recordkeeping requirements for landfills at permitted facilities. This section conforms with the corresponding federal regulation, except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

6624.309 (a): Title 22 language from existing section 67419 (a), has been added to this subsection. The added language is, "with horizontal and vertical controls". Horizontal controls are coordinates of latitude and longitude (or other standard coordinate system), while vertical controls refer to the elevation of the well head above mean sea level.

Section 66264.310: This section is based on 40 CFR Part 264.310, which covers closure and post-closure care requirements for landfills at permitted facilities. This section conforms with the corresponding federal regulation, except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

Section 66264.310 (a)(1): The 40 CFR text for this subsection has been deleted and replaced with the more stringent Title 22 language (section 67409 (a)(1)) which states, "Prevent the downward entry of water into the closed landfill throughout a period of at least 100 years."

Section 66364.310 (a)(5): Language from Title 22, CCR section 67409 (a)(5), which deals with accommodating lateral and vertical shear forces generated by the maximum credible earthquake, has been added.

After staff review and public comments, the term "maximum probable earthquake", as proposed in the 6/1/89 version of these regulations, is being withdrawn and will be replaced by "maximum credible earthquake" as used in current Title 22, CCR section 67409 (a)(5).

This language is more stringent than the corresponding federal regulation.

Section 66264.310 (a)(7): Title 22, CCR section 67409 (a)(7) has been added at this location. This section requires that the provisions of sections 66264.228 (e) through (r) be conformed to, except that the Department may grant variances or require that alternative measures be undertaken. This language is broader in scope, more stringent, and is not contained in the corresponding federal text.

Section 66264.310 (c): This subsection is comprised entirely of more restrictive language from Title 22, CCR section 67409 (b). The requirements to provide controls that will prevent the migration of gas from a landfill are found in this subsection and do not exist in current 40 CFR text.

Section 66264.312: This section is based upon 40 CFR section 264.312, which sets forth the special requirements for ignitable or reactive wastes. This section conforms with the corresponding federal regulation, except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

Section 66264.312 (b): This subsection has been deleted from the federal text because existing Title 22, CCR section 67420 (b), allows this exemption "at interim status facilities only".

Section 66264.313: This section is based on 40 CFR section 264.313, which covers the special requirements for the disposal of incompatible wastes. This section conforms with the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons.

Section 66264.314: This section is based upon 40 CFR section 264.314, which sets forth the requirements for disposal of bulk and containerized liquids. This section conforms with the corresponding federal regulation, except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

40 CFR section 264.314 (a): This subsection of 40 CFR has been deleted because the effective date of November 8, 1985 has already past. 40 CFR section 264.314 (b) has been retained and modified with the effective date of the California disposal requirement, which was February 2, 1985 (Register 85, No. 2).

In response to public comments and clarification from EPA, the prefix "non", which was deleted from the term "non-containerized liquid hazardous waste" in the 6/1/89 version of these regulations, has been added back.

Section 66264.314 (b): Language has been added which directs that Method 9095 (SW-846) be used, "except that the representative sample size shall be 100 milliliters and a 400

micron standard conical filter shall be used in lieu of the 60 mesh filter described in Method 9095." These changes are necessary to make these proposed regulations consistent with the free liquids test currently described in Title 22 CCR section 66076, which is more stringent than the corresponding federal test.

Section 66264.314 (c)(1): The text from 40 CFR which was deleted in the 6/1/89 version of these regulations has been reinserted.

Section 66264.315: This section is based upon 40 CFR section 264.315, which spells out the special requirements for containers. This section conforms with the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons.

Section 66264.316: This section is based on 40 CFR section 264.316, which sets forth the requirements for the disposal of small containers of hazardous waste in overpack drums (lab packs). This section conforms with the corresponding federal regulation, except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

Section 66264.316 (e): Title 22 CCR language from existing section 67424 (e) has been added. The added language is, "provided that the cyanide concentration is less than 1,000 mg/l." This added language is more stringent and is not found in the corresponding federal regulations.

Section 66264.317: This section is based on 40 CFR section 264.317, which covers the special requirements for hazardous waste types F020, F021, F022, F023, F026, and F027. This section conforms with the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons.

Section 66264.318: This section has been added in response to a new regulation added to Title 22 in October, 1989, as section 67425. This new section sets forth a requirement that effective October 12, 1991, all nonliquid hazardous waste, bulk or containerized, must contain less than 50 percent moisture by weight prior to disposal in a hazardous waste landfill. This new section also sets forth the method for determining the moisture content of a waste sample. This requirement has no corresponding requirement in 40 CFR, and is therefore more stringent.

## ARTICLE 15: INCINERATORS

This article sets forth requirements for permitting of incinerators. It includes waste analysis and monitoring requirements, performance standards, and requirements for trial burns. It also addresses operating and recordkeeping requirements, notification requirements for burning certain specific hazardous wastes and sets forth closure requirements for incinerators.

Section 66264.340: This section is based on 40 CFR section 264.340; it establishes the applicability of this article. This section conforms to the corresponding federal regulation except for the generic changes explained in the introduction to this Statement of Reasons and as follows:

In subsection (a)(2), the phrase "...for any recycling purpose and elect to be regulated under this subpart." is being deleted. Current State law regulates any burning of hazardous waste whether in incinerators or industrial furnaces or boilers under the incinerator regulations of existing Title 22 Article 30. Thus, persons burning hazardous waste for recycling purposes are regulated as incinerators and do not have the option of choosing to be regulated. Additional changes were made to this section for the second comment period. The words "...in order to destroy them..." were removed because existing State statute Health and Safety Code section 25143.2) does not allow exemption from classification as waste or hazardous waste for hazardous wastes being burned for energy recovery. Thus, units burning these materials are regulated as incinerators.

Section 66264.341: This section is based on 40 CFR section 264.341; it establishes requirements for analysis of waste being burned in permitted incinerators. This section conforms to the corresponding federal regulation except for the generic changes explained in the introduction to this Statement of Reasons.

Section 66264.342: This section is based on 40 CFR section 264.342; it establishes principal organic hazardous constituents (POHC's) to be used for testing the performance of the incinerator. This section conforms to the corresponding federal regulation except for the generic changes explained in the introduction to this statement of reasons and as follows:

In subsection (b)(1), Appendix X to proposed Chapter 11 (derived from Title 22, Div. 4, Article 9) is being added to the list of principal organic hazardous constituents which may be specified in a hazardous waste facility permit as a chemical compound which may be burned. The requirement that Appendix X constituents be included in the permit if they are to be burned appears in existing Title 22 CCR section 67453 (b)(1). The lists from both Appendix VIII (derived from 40 CFR Appendix VIII to Part 261) and Appendix X must be included

because, although these lists overlap, they are far from identical. All currently listed compounds, if they are to be burned by that incinerator, must be included in an incinerator permit in order to preserve the current aggregate stringency of existing State and federal law.

Section 66264.343: This section is based on 40 CFR section 264.343; it establishes a methodology for using the POHC's determined in the preceding section to calculate the performance of the incinerator and it establishes special performance requirements for certain specific hazardous wastes being destroyed. This section conforms to the corresponding federal regulation except for the generic changes explained in the introduction to this Statement of Reasons.

Section 66264.344: This section is based on 40 CFR section 264.344; it establishes specific provisions to be included in hazardous waste incinerator permits. This section conforms to the corresponding federal regulation except for the generic changes explained in the introduction to this Statement of Reasons.

Section 66264.345: This section is based on 40 CFR section 264.345; it establishes operating requirements and parameters to be included in the stated operating requirements along with some required operational safety equipment. This section conforms to the corresponding federal regulation except for the generic changes explained in the introduction to this Statement of Reasons.

Section 66264.347: This section is based on 40 CFR section 264.347; it establishes which parameters must be monitored, sets a schedule for monitoring and inspection of the incinerator, and establishes recordkeeping requirements. This section conforms to the corresponding federal regulation except for the generic changes explained in the introduction to this Statement of Reasons.

Section 66264.351: This section is based on 40 CFR section 264.351; it establishes additional requirements for closure of permitted hazardous waste incinerators. This section conforms to the corresponding federal regulation except for the generic changes explained in the introduction to this Statement of Reasons and as follows:

The comment at the end of this section is being included in this regulation. This comment states that at closure, and throughout the operating period, unless the owner or operator can demonstrate that the residue removed from the incinerator is not hazardous, he becomes a generator of hazardous waste and must manage the waste accordingly. This language is regulatory in nature and must be included in the body of the regulation.

## ARTICLE 16: MISCELLANEOUS UNITS

This article is based on Subpart X of 40 CFR Part 264. It sets forth the requirements for owners and operators of permitted miscellaneous hazardous waste units.

Section 66264.600: This section, which is based on 40 CFR section 264.600, specifies the applicability of this article. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons.

Section 66264.601: This section, which is based on 40 CFR section 264.601, sets forth environmental performance standards for miscellaneous units. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons and as follows:

Section 66264.601: The words "are to" are being replaced with the word "shall" to conform with standard Title 22, CCR terminology. (Refer to the discussion in the introduction to this Statement of Reasons pertaining to the generic change, "must" to "shall".)

Sections 66264.601 (a), (b) and (c): The phrase "waste constituents", wherever it appears in these sections, is being changed either to "constituents of concern" or to "waste constituents, hazardous constituents, or reaction products", depending on the context. This change is necessary to conform with the changes which are being made in Chapter 14, Articles 6 and 17 of these proposed regulations. (Refer to the introductory Statements of Reasons for Articles 6 and 17 for further discussion pertaining to this change.)

Sections 66264.601 (a)(3), (b)(8), and (c)(5): The phrase "sources of contamination" in these sections is being changed to "sources of pollution and contamination". This change is necessary to conform with the changes which are being made in Chapter 14, Article 6 of these proposed regulations. (Refer to the introductory Statement of Reasons for Article 6 for further discussion pertaining to this change.)

Section 66264.601 (a)(3): The corresponding federal regulation requires consideration of the existing quality of, and the cumulative impact of other sources of pollution and contamination on, the groundwater. Section 66264.601 (a)(3) is being revised to require that the same considerations be made relative to the soilpore liquid and gas in the normally unsaturated zone. This change is necessary to provide consistency with the introductory paragraph of section 66264.601 (a), which pertains to both groundwater and the

subsurface environment. Additionally, this change conforms with the existing Title 22, CCR regulatory requirements for hazardous waste facilities in general. (See existing Title 22, CCR sections 66391 (c) and 67182, and proposed sections 66264.92 and 66270.14 (c).)

Section 66264.602: This section, which is based on 40 CFR section 264.602, sets forth requirements for miscellaneous units pertaining to monitoring, analysis, inspection, response, reporting, and corrective action. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons.

Section 66264.603: This section, which is based on 40 CFR section 264.603, sets forth postclosure care requirements for miscellaneous units. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this Statement of Reasons.

**ARTICLE 17: ENVIRONMENTAL MONITORING AND RESPONSE PROGRAMS FOR AIR, SOIL, AND SOIL-PORE GAS FOR PERMITTED FACILITIES**

This article is based on Title 22 CCR Article 22. It sets forth the environmental monitoring and corrective action requirements for permitted facilities.

As part of the effort to obtain RCRA authorization for the State of California, the Department of Health Services and the State Water Resources Control Board entered into an agreement to rewrite the monitoring requirements for hazardous waste facilities. The primary objective of the work group was to design parallel sets of monitoring regulations which can be adopted by both agencies in order to provide consistent requirements for the regulated community. All water quality monitoring requirements for permitted facilities from existing regulations (RCRA, Title 22, and Title 23) have been incorporated into Article 6 of Chapter 14. In addition to the water quality monitoring requirements, original Title 22 requires the owner or operator to monitor soil, air, and soil-pore gas. Since the Water Resources Control Board does not have comparable requirements, these provisions have been included in this article, separate from the water quality monitoring requirements in Article 6.

Since Title 22 CCR Article 22 was used as the base document for this environmental monitoring article, all requirements for monitoring ground water, surface water, and the unsaturated zone are shown as struck out text. The Title 22 checklist should be used to find the comparable requirements in Article 6.

All references to the compliance period have been deleted from this article because the compliance period is based on a model for contaminant transport in ground water. It was not considered to be appropriate for use in air monitoring, soil monitoring, or soil-pore gas monitoring.

Several changes have been made in order to standardize the terminology used here and in Article 6:

References to "units" and "facilities" have been standardized. "Unit" or "regulated unit" is used when a provision applies to an individual, regulated unit. "Facility" is used as defined in section 66260.10 of Chapter 10 of this division.

The "point of compliance" has been replaced with "monitoring points". This change is discussed in greater detail in the description of section 66264.705.

References to "Departmental findings" have been standardized to emphasize the responsibility of the owner or operator to make appropriate demonstrations to the Department. The Department may then accept or reject the proposals, based upon the evidence presented.

References to "public health and the environment" and "human health and the environment" have been modified to read "human health or the environment" for the sake of consistency. (Existing regulations use all three, apparently interchangeably.)

Where appropriate, references to "air in vapor and gas monitoring wells" have been changed to "soil-pore gas". This was necessary to allow the use of modern soil-pore gas monitoring technologies which do not require monitoring wells.

Where the owner or operator is required to fulfill a requirement within a given time period (e.g., "within 7 days") language has been added to clarify when the time period begins. (e.g. "within 7 days of the date such determination is made")

Many terms used in this article are also used in Article 6 for the water quality monitoring programs (e.g., monitoring points, detection monitoring program, corrective action program, etc.). For the sake of clarity, when such terms are used in this article references to the appropriate subsections have been added (e.g. monitoring points established under section 66264.705).

Section 66264.700 : This section is based on Title 22 CCR Article 22 section 67180. It establishes the applicability of the regulations contained in this article. This section conforms to the corresponding regulation except for the generic changes specified in the introduction to this Statement of Reasons and in the article overview and as follows :

Section 66264.700 (a) : The phrase "except as provided in subsection (b) of this section" has been deleted because it is not needed and is unnecessarily confusing. Both subsections (b) and (c) provide exemptions to the monitoring requirements of this article. Either both subsections should be referenced here, or none should be. We chose none.

The phrase "sections 67180 through 67190 of this article" has been changed because the entire article now applies to permitted facilities. The requirements for interim status facilities are now found in Article 18 of Chapter 15.

The term "regulated unit" has been introduced for the sake of consistency with Article 6. Unlike the requirements of Article 6, the requirements of this article only apply to regulated units which have received hazardous waste after February 2, 1985, the original effective date of the Title 22 regulations.

Section 66264.700 (b) : The term "operating life" has been changed to "active life". This change is necessary because under existing RCRA the exemption from monitoring is only available during the post-closure care period. The term "active life" includes both the operating life and the closure period of the regulated unit and is therefore more descriptive of the entire time period before post-closure.

Section 66264.700 (d) : This section has been rewritten to clarify the requirements to monitor after closure of the regulated unit. The phrase "shall continue to apply for 30 years..." has been replaced with a requirement to monitor during any post closure care period under section 66264.117 (which will ordinarily be equal to 30 years) and during any compliance period established for a water quality monitoring program. This is consistent with the requirements in Article 6.

Section 66264.701 : This section is based on Title 22 CCR Article 22 section 67181. It establishes the conditions under which the detection monitoring, compliance monitoring and corrective action programs will be required for a regulated unit. This section conforms to the corresponding regulation except for the generic changes specified in the introduction to this Statement of Reasons and in the article overview and as follows :

Section 66264.701 (a) (1) : This language has been slightly modified to clarify the requirement that the owner or operator institute a compliance monitoring program whenever a "statistically significant increase" for a hazardous constituent is detected at any monitoring point. (The existing language is "whenever hazardous constituents under section 66264.703 from a regulated unit are detected") This is important for hazardous constituents which are found at detectable levels in the background samples. It is the intention of these regulation to require responses to releases from regulated units. Releases are detected by evaluating statistically significant increases in the concentration of hazardous constituents.

Section 66264.702 : This section is based on Title 22 CCR Article 22 section 67182. It specifies the elements of the environmental protection standard. This section conforms to the corresponding regulation except for the generic changes specified in the introduction to this Statement of Reasons and in the article overview.

Section 66264.703 : This section is based on Title 22 CCR Article 22 section 67183. It establishes the criteria for the selection of the list of hazardous constituents to which the environmental protection standard applies. This section conforms to the

corresponding regulation except for the generic changes specified in the introduction to this Statement of Reasons and in the article overview and as follows :

Section 66264.703 (a) : The phrase "which of the constituents of substances identified in Article 9 or 11 of this chapter or Part 261, Appendix VIII of 40 CFR are" has been deleted because, in this proposed regulation package the term "hazardous constituent", as defined in section 66260.10 of Chapter 10, is equivalent.

Section 66264.703 (b)(1) : The phrase "that may enter soil ground water, surface water or air outside the facility" has been replaced with the phrase "from a regulated unit" in order to emphasize the goal of preventing any migration of hazardous constituents to the environment due to a release from the regulated unit.

Section 66264.703 (b)(2) : The phrase "after considering recommendations of the State Water Resources Control Board or the appropriate Regional Water Resources Control Board" has been deleted because, for the purposes of authorization, the Department must have independent authority to take actions necessary for the protection of ground and surface water quality.

Section 66264.703 (c) : This section has been deleted because, for the purposes of authorization, the Department must have independent authority to take actions necessary for the protection of ground water and surface water quality.

Section 66264.704 : This section is based on Title 22 CCR Article 22 section 67184. It establishes the criteria for establishing concentration limits for hazardous constituents. This section conforms to the corresponding regulation except for the generic changes specified in the introduction to this Statement of Reasons and in the article overview and as follows :

For the sake of clarity and consistency several references to "the concentration of a hazardous constituent" have been slightly modified to read "the concentration limit of a hazardous constituent". It is believed that the word "limit" had been omitted in error.

Section 66264.704 (a) : The last sentence of this section has been deleted because, for the purposes of authorization, the Department must have independent authority to take actions necessary for the protection of ground water and surface water quality.

Section 66264.704 (b) : This subsection has been slightly modified to clarify the requirement that a concentration limit

for soil shall not exceed the background concentration unless the Department approves an alternate concentration limit.

Section 66264.704 (d) : This section has been slightly modified to clarify the requirement that a concentration limit for soil-pore gas shall not exceed the background concentration unless the Department approves an alternate concentration limit.

Section 66264.705 : This section is based on Title 22 CCR Article 22 section 67185. It establishes the criteria for establishing monitoring points at which the environmental protection standard applies. This section conforms to the corresponding regulation except for the generic changes specified in the introduction to this Statement of Reasons and in the article overview and as follows :

The term "point of compliance" has been replaced with the term "monitoring points". The point of compliance is defined in Article 6 of Chapter 14 and is used for establishing ground water monitoring points at the downgradient boundary of each regulated unit. Contaminant migration in air, soil, and soil-pore gas is not always directly influenced by the direction of groundwater flow in the uppermost aquifer. Instead, language from original Title 22 CCR section 67188 that requires monitoring points to be suitable for sampling any substance which may migrate from a regulated unit and to be located close enough to the regulated unit to provide an early indication of such migration has been moved into this section.

Section 66264.706 : This section is based on Title 22 CCR Article 22 section 66188. It contains the detailed requirements for an owner or operator who is required to implement a detection monitoring program. This section conforms to the corresponding regulation except for the generic changes specified in the introduction to this Statement of Reasons and in the article overview and as follows :

The second sentence of the introductory paragraph has been deleted because the phrase "away from the hazardous waste facility", as defined in this section, was considered to be unnecessarily confusing. The requirements for locating monitoring points at appropriate locations for the purposes of monitoring have been moved to section 66264.705. The phrase "away from the hazardous waste facility" has been changed to "at any monitoring point" where necessary throughout this section.

Section 66264.706 (b) : The sentence "Such monitoring shall be conducted throughout the active life and post-closure care period of the facility" has been deleted because that requirement has already been established in section 66264.700. The phrase "and soil-pore gas" has been added to the fourth sentence of this subsection because it had apparently been omitted in error.

Section 66264.707 : This section is based on Title 22 CCR Article 22 section 67189. It contains the detailed requirements for an owner or operator who is required to implement a compliance monitoring program. This section conforms to the corresponding regulation except for the generic changes specified in the introduction to this Statement of Reasons and in the article overview.

Section 66264.708 : This section is based on Title 22 CCR Article 22 section 67190. It contains the detailed requirements for an owner or operator who is required to implement a corrective action program. This section conforms to the corresponding regulation except for the generic changes specified in the introduction to this Statement of Reasons and in the article overview and as follows:

Section 66264.708 (f) : The language in this subsection was modified to clarify the requirement to continue corrective action as necessary to achieve compliance with the environmental protection standard. If, at the time the monitoring requirements of this article would normally be completed for a regulated unit, the owner or operator is conducting corrective action under this article, the owner or operator shall continue corrective action measures until the environmental protection standard has not been exceeded for three years. This is consistent with existing regulations.

Article 19 : CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS

This article is based on Sections 264.90 and 264.101 of 40 CFR Part 264 Subpart F. It sets forth the corrective action requirements for solid waste management units (SWMUs) at permitted facilities.

The requirements in this article were added to 40 CFR Subpart F on July 15, 1985 to incorporate the statutory provisions of the Hazardous and Solid Waste Amendments of 1984 (HSWA). EPA intends to promulgate regulations addressing this issue in greater detail. These regulations are expected to comprise a new subpart of Part 264, Subpart S. In the proposed regulations, the Department has, for the sake of clarity, moved the corrective action requirements for SWMUs into a separate article. This article conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this statement of reasons and in the article overview and as follows :

Section 66264.800 : This section is based on 40 CFR Part 264 Subpart F Section 264.90. It establishes the applicability of the requirements in this article. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to this statement of reasons and in the article overview and as follows :

The language for this section was modeled after the existing requirements in 40 CFR Section 264.90 that applied to SWMUs. Under these proposed regulations the corrective action and financial responsibility requirements apply during the active life of the facility and the closure period. After closure, the regulations apply during the post-closure care period and any compliance period under Article 6 of this Chapter unless the owner or operator removes or decontaminates all contaminated material at the facility.

The phrase "facilities that treat, store or dispose of hazardous waste" has been modified to read "permitted hazardous waste facilities". This change was necessary because the use of active verbs implied that the requirements would not apply to facilities that were not actively involved in the management of hazardous waste. Since these requirements apply to any permitted facility, the language was modified as shown.

Section 66264.801 : This section is based on 40 CFR Part 264 Subpart F Section 264.101. It establishes the corrective action requirements in this article. The original federal language has been replaced with a requirement to address corrective action in the facility permit as required by Section 25200.10, Health and Safety Code. These requirements are equivalent to the federal regulations.

Appendix I: This is based on 40 CFR Part 264, Appendix I, which establishes additional recordkeeping instructions for portions of the operating record. This section conforms to the corresponding federal regulation except for the generic changes specified in the introduction to the Statement of Reasons and as follows:

Section (1): New language is being added that requires the California Hazardous Waste Code Number be used for recordkeeping and reporting requirements. This requirement is not in federal regulation. Although these code numbers are not currently in Title 22, they are on the back of the manifest and they are being incorporated in these regulations in Chapter 11, Appendix XII.

Appendices II, III and IV: Reserved.

Appendix IV: This appendix in the federal regulations, which provides calculations for Cochran's Approximation to the Behrens-Fisher Student's t-test, used to be the statistical procedure required by 40 CFR Part 264, Subpart F for the analysis of ground water monitoring data. However, the October 11, 1988 Federal Register modified the Subpart F regulations to require other more appropriate statistical procedures for analyzing ground water data. The Federal Register erroneously, however, failed to delete this Appendix, which is no longer necessary to the regulations. For this reason, this appendix is not being included in the proposed state regulations even though it is still found in the federal regulations.

Appendix V: This appendix is based on Appendix V of 40 CFR Part 264 and sets forth examples of potentially incompatible wastes. This appendix conforms to the corresponding federal appendix except for the generic changes specified in the introduction to this Statement of Reasons.

Appendix VI: This appendix in the federal regulations lists those political jurisdictions in the United States that are required to comply with the 40 CFR seismic standards. Since existing and proposed Title 22, CCR regulations require that these standards be complied with throughout the State of California, such a listing is unnecessary in the state regulations.

Appendices VII and VIII: Reserved.

Appendix IX: This appendix is based on Appendix IX of 40 CFR Part 264 and lists ground water monitoring constituents. This appendix conforms to the corresponding federal appendix.