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REQUIREMENTS FOR DESTRUCTION OF MONITORING WELLS AND ABANDONMENT OF BOREHOLES

This policy is established to ensure compliance with the Water Well Standards (Bulletin 74-81) and California Well Standards (Bulletin 74-90) of the California Department of Water Resources.

1. Purpose

A monitoring well or exploratory borehole that is no longer useful, permanently inactive, or otherwise “abandoned” must be properly destroyed in order to:

- A. Ensure the protection of groundwater quality, and,
- B. Eliminate a possible physical hazard to humans and animals.

All permanently inactive or otherwise “abandoned” monitoring wells and exploratory holes subject to these requirements must be properly destroyed. The purpose of destruction is to eliminate the well structure and borehole as possible means for preferential migration for surface water, poor quality water, pollutants, and contaminants, in addition to preventing a possible to humans and animals.

2. Requirements for Destruction of Monitoring Wells

All monitoring wells shall be destroyed in accordance with the following requirements, Section 23 of the Water Well Standards (bulletin 74-81), and Part III of the California Well Standards (Bulletin 74-90).

- A. All monitoring wells shall be destroyed by removal of casing and annular materials. Overboring with a similar diameter drill is the recommended method.
- B. The wellbore shall then be filled with neat cement containing not more than five percent (5 %) bentonite. The sealing material shall be placed in a continuous pour under pressure (tremie pipe or equivalent). Proceeding from the bottom of the wellbore upwards, as the augers are withdrawn. Care shall be taken to prevent bridging, freefall and dilution of sealing materials. Alternatively, the wellbore may be filled with bentonite chips or pellets with a two (2) foot grout seal to the surface. Volume of sealing material placed during filling and sealing shall be verified to be equal to or greater than the volume to be sealed. This is to help determine whether the boring has been properly filled and that bridging has not occurred.

3. Requirements for Abandonment of Exploratory Boreholes

- A. Exploratory borings located in areas of known or suspected contamination shall be completely filled with neat cement containing not more than five percent (5%) bentonite. The sealing material shall be placed in a continuous pour under pressure (tremie pipe or equivalent), proceeding from the bottom of the bore upwards, as the augers are withdrawn. Care shall be taken to prevent bridging, freefall, and dilution of materials. Alternatively, the boring may be filled with bentonite chips or pellets with a two (2) foot grout seal to the surface. Volume of sealing material placed during filling and sealing shall be verified to be equal to or greater than the volume to be sealed. This is to help determine whether the boring has been properly filled and that bridging has not occurred.
- B. Borings located outside such areas as outlined in 3.A shall be filled with sealing materials from the ground surface (existing grade) to the minimum depths as described in Section 23 (Bulletin 74-81) of the Water Well Standards and Part II of the California Well Standards (Bulletin 74-90). Additional sealing material shall be placed below the minimum surface seal where needed to prevent interchange of poor quality water, pollutants, or contaminants between strata penetrated by the boring.
- C. All borings shall be inspected prior to filling and sealing procedures. Borings shall be cleared of obstructions, pollutants and contaminants which may interfere with filling and sealing as stated in Part III of the California Well Standards (Bulletin 74-90).

4. Sealing and Fill Materials

Materials used for sealing monitoring wells and exploratory borings shall have low permeability, be compatible with the chemical environment, and have mechanical properties consistent with present and future site uses (see Part II, Bulletin 74-90, California Well Standards and Section 23, Bulletin 74-81, Water Well Standards).

Drilling muds or drill cuttings are not acceptable as any part of sealing or fill materials.

No policy can address all possible situations. Complex or special situations will be considered on a case by case basis, with major consideration given to the intent of Bulletin 74-90.

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