COUNTY OF SAN MATEO

Environmental Health Services
San Mateo County Health
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# GROUNDWATER PROTECTION PROGRAM
# MONITORING WELL DESTRUCTION POLICY

**Sealing Material:** Type I/II neat cement grout with 6 to 7 gallons of water per 94 pounds of cement. This measurement (for both water and cement) must be able to be demonstrated in the field upon request from the inspector (such as using a 5-gallon bucket for measuring the water and using entire bags of cement).

**Work Plan Requirement:** All well destructions regardless of oversight agency must have a work plan approved in writing by San Mateo County Environmental Health Services. The well construction log and grout calculations must be submitted for all wells.

**Pressure Grout Requirements**: The sand pack may not be more than 3 feet above the top of the screened interval, the screened interval may not be longer than 25 feet, and the bottom of the original boring may not be more than 2 feet deeper than the bottom of the constructed well. The total depth of the well and the fact that there are no obstructions in the well must be verified in the field. Type I/II cement grout must be tremied into the well, followed by application of 25 psi pressure maintained for 5 minutes. If the well does not meet pressure grouting criteria or if pressure grouting fails due to inadequate grout volume or failure to hold pressure, it must be destroyed by drilling out to the total depth of the original boring. Free falling grout through tremie pipe is only allowed if the boring is dry, or if water is present in less than 10% of the boring, and the boring is less than 30 feet deep. If the boring or well does not meet these criteria, then grout must be pumped through a tremie pipe using an appropriate grout pump to displace any encountered groundwater from the bottom up which must then be containerized and handled per all applicable laws.

**Over-drilling Requirements:** The well casing and all annular material must be removed. A guide rod extending to the bottom of the casing must be inserted prior to drilling, and the boring tremie grouted to the surface using Type I/II cement grout or sand/cement grout, consistent with State Water Well Standards. Augers may not be completely removed from the boring prior to grouting. No more than five feet of unsupported boring may be exposed at any time to avoid loss of borehole integrity. A general observation is that grouting borings using the ¾ inch PVC pipe typically used to collect grab groundwater samples in borings is not adequate. Free falling grout is only allowed through augers if the boring is dry, or if water is present in less than 10% of the boring, and the boring is less than 30 feet deep, otherwise grout must be pumped through the tremie pipe and the boring grouted from the bottom up to displace groundwater.

Failure to emplace the necessary amount of grout either due to pressure grout failure or improper field techniques, will result in the requirement to over-drill and properly destroy the well or boring in question. Any variance from work plan approved well destruction procedures or conditions **must be approved in writing**. Failure of the driller to provide adequate equipment to properly destroy wells at the time of scheduled well destruction may result in voiding of the current permit and require re-permitting as a new mobilization. A complete description of field activities including copies of drillers dallies and consultant field notes documenting the number of bags of cement and volume of mixed grout used to destroy each well must be provided in a well destruction report.