



# California Regional Water Quality Control Board

## San Francisco Bay Region



Terry Tamminen  
Secretary for  
Environmental  
Protection

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Arnold Schwarzenegger  
Governor

N00221\_001193  
MARE ISLAND  
SSIC NO. 5090.3.A

March 17, 2004  
File No.: 2129.2011(AWN)

Commander  
Attn: Jerry Dunaway, Code 06CM.JD  
Southwest Division, Naval Facilities Engineering Command  
1220 Pacific Highway  
San Diego, CA 92132-5190

**Subject: Approval of Request for Water Board Concurrence with the Groundwater Beneficial Use Exception for Municipal and Domestic Supply (MUN) Investigation Area H1, Former Mare Island Naval Shipyard, Vallejo, Solano County**

Dear Mr. Dunaway:

San Francisco Bay Regional Water Quality Control Board (Water Board) staff has reviewed the beneficial use exception request dated July 29, 2003, prepared by Weston Solutions, Inc. (Weston) on behalf of the U.S. Department of the Navy (Navy). This letter conveys Water Board concurrence with that request.

### Background

The July 29, 2003 submittal requests Water Board concurrence with an exception for groundwater from the municipal and domestic supply (MUN) beneficial use within Investigation Area H1 (IA H1) at the former Mare Island Naval Shipyard. Beneficial uses for groundwater and surface water are defined in the Water Board's Water Quality Control Plan, (Basin Plan), dated June 21, 1995. The Basin Plan provides that all groundwaters are considered suitable, or potentially suitable, for municipal or domestic water supply and that, in making any exceptions, the Water Board will consider the criteria referenced in Water Board Resolution No. 89-39, "Sources of Drinking Water", where:

- (a) The total dissolved solids (TDS) exceed 3,000 mg/l (5,000  $\mu$ S/cm, electrical conductivity), and it is not reasonably expected by the Water Board that the groundwater could supply a public water system, or
- (b) There is contamination, either by natural processes or human activity (unrelated to the specific pollution incident), that cannot reasonably be treated for domestic use using best management practices or best economically achievable treatment practices, or

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- (c) The water source does not provide sufficient water to supply a single well capable of producing an average, sustained yield of 200 gallons per day.

### Site-Specific Data

In support of its request on behalf of the Navy, Weston has provided data primarily focused on TDS concentration in groundwater. Specifically, Weston has provided maximum, minimum, and average TDS concentrations for groundwater samples retrieved from monitoring wells, based on no fewer than four samples per monitoring well, as follows:

- 53 monitoring wells screened in the shallow water bearing zone
- 18 monitoring wells screened in the intermediate water bearing zone
- 21 monitoring wells screened in the deep water bearing zone

In addition, more recent data was submitted which includes results from the advancement of 12 cone penetrometer (CPT) borings to depths beyond the deep water-bearing zone, including in some cases to bedrock. Groundwater samples collected via the CPT borings were also reviewed to assess the quality of groundwater at depth.

Results of the compiled data are as follows:

Water Bearing Zone	# MWs/CPTs sampled	# MWs/CPTs with Average <sup>1</sup> [TDS] Exceeding:	
		3,000 mg/l	10,000 mg/l
Shallow (~5-20 ft bgs)	53	46	19
Intermediate (~20-40 ft bgs)	18	18	17
Deep (~40-60 ft bgs)	21	21	20
CPT Investigation (~60-140 ft bgs)	12	12	11

<sup>1</sup> Average[TDS] is based on no fewer than 4 groundwater samples (and up to 17) collected from MWs from 1987 to 2000, and a single grab groundwater sample from each CPT boring collected in November 2003.

Based on these data, the Water Board believes the groundwater within IA H1 in the shallow, intermediate, and deep water bearing zones, exceeds 3,000 mg/l on average, and meets exception (a) outlined above. Therefore, the Water Board concurs with Weston's request, on behalf of the Navy.

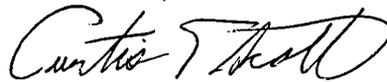
### Non-Degradation

Please be aware that State Water Resources Control Board (SWRCB) Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California," requires attainment of background levels of water quality, or the highest level of water quality that is reasonably achievable if background levels cannot be restored. Furthermore, SWRCB

Resolution 92-49, "Policies and Procedures for Investigation and Cleanup and Abatement of Dischargers Under Water Code Section 13304," states that cleanup levels other than background must be consistent with the maximum benefit to the people of the State, not unreasonably affect present and anticipated beneficial uses of such water, and not result in water quality less than that prescribed in the Water Quality Control Plans and Policies adopted by the State and Regional Water Boards. Where it is not possible to achieve background water quality, Resolution No. 92-49 requires cleanup to the best level of water quality, which is technologically and economically achievable.

Should you have any questions, please contact Alec Naugle of my staff by phone at (510) 622-2510 or by email at [awn@rb2.swrcb.ca.gov](mailto:awn@rb2.swrcb.ca.gov).

Sincerely,



Curtis T. Scott  
Chief, Groundwater Protection and  
Waste Containment Division

cc: William Karlovitz, Weston Solutions, Inc.  
Dwight Gemar, Weston Solutions, Inc.  
David Godsey, U.S. Department of Navy, Southwest Division  
Chip Gribble, California DTSC  
Emily Roth, U.S. EPA  
Gary Riley, S.F. Bay Water Board  
Alec Naugle, S.F. Bay Water Board  
Norman Shopay, California DTSC  
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