



# California Regional Water Quality Control Board Central Valley Region

Karl E. Longley, ScD, P.E., Chair

Linda S. Adams  
Secretary for  
Environmental  
Protection

1685 E Street, Fresno, California 93706  
(559) 445-5116 • Fax (559) 445-5910  
<http://www.waterboards.ca.gov/centralvalley>



Arnold  
Schwarzenegger  
Governor

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CROWS LANDING  
SSIC NO. 5090.3.A

18 November 2008

Mr. John Escobar  
PO Box 126  
Crows Landing, CA 95313

## **DESTRUCTION OF OLD AGRICULTURAL IRRIGATION WELL, ESCOBAR PROPERTY, NASA CROWS LANDING FLIGHT FACILITY, CROWS LANDING, STANISLAUS COUNTY**

You have two agricultural irrigation wells on your property, which is east across Bell Road from the former NASA Crows Landing Flight Facility. Your old well was installed in 1994 and is no longer in use. The old well has been replaced by a new well that was installed in October 2007. The old and new wells are within close proximity to each other. As the State of California regulatory agency charged with protecting water quality, and in accordance with State of California Department of Water Resources regulations, we are asking that you properly destroy your old well. Details regarding our request are presented below.

The old well was drilled in 1994 to a total depth of 476 feet below ground surface (bgs). Two screen intervals were installed from 348 to 476 feet bgs and from 200 to 228 bgs. The deeper screen interval was placed in strata described as gravel streaks, clay, and gravel that are below the Corcoran Clay, which is a regional clay layer that is laterally extensive and approximately 25 to 30 feet thick in the project site vicinity. The upper screen interval was placed in a sand layer that lies directly on top of the Corcoran Clay. The sand layer directly above the Corcoran Clay has been assigned an informal name (as related to the NASA Crows Landing Flight Facility cleanup project) and is referred as the Deep Aquifer. Gravel pack placed in the annular space extended from total well depth (467 feet bgs) to 20 feet bgs. The gravel pack, therefore, extends through the Corcoran Clay interval. With the gravel pack placed through the Corcoran Clay interval, this provides an opportunity for contaminants in the aquifers above the Corcoran Clay to migrate to those aquifers below the Corcoran Clay. The breach in the Corcoran Clay is not protective of water quality in the deeper aquifers below the Corcoran Clay.

Because this well is no longer in use, the well should be properly destroyed in accordance with State and local guidelines and regulations. Additionally, the Corcoran Clay interval, which extends from approximately 229 feet to 255 feet bgs, should be sealed with bentonite or bentonite grout because contaminants from the NASA Crows Landing facility are present above the Corcoran Clay and would likely migrate to the aquifer below the clay if not sealed off. The destruction of the old well must include sealing the Corcoran Clay interval. The well pipe at the interval of the Corcoran Clay must be perforated and pressured grouted during the destruction process of the well.

*California Environmental Protection Agency*

We ask that by **6 February 2009** the old well be properly destroyed with the Corcoran Clay interval properly sealed.

If you have any questions regarding the above, please call Greg Issinghoff at 559-488-4390.



RUSSELL W. WALLS  
Senior Engineer  
RCE No. 43140

GJl:gji

cc: Mr. James B. Sullivan, Department of the Navy, BRAC Program Management Office  
West, San Diego  
Ms. Francesca D'Orofrío, Department of Toxic Substances Control, Sacramento  
Mr. Alan Berry, California Integrated Waste Management Board, Sacramento  
Mr. Don Chuck, NASA Ames Research Center, Moffett Field  
Mr. Gary Munekawa, Moffett Federal Airfield, Moffett Field  
Mr. Keith Boggs, Stanislaus County Chief Executive Office, Modesto  
Ms. Nicole Damin, Stanislaus County Department of Environmental Resources, Modesto  
Mr. Kirk Ford, Stanislaus County Planning and Community Development, Modesto  
Mr. Hamlet Hamparsumian, Tetra Tech EC, Inc., Santa Ana