

San Diego Chapter: Lake Hodges pump station tour

By Bill Zondorak

On February 27, the SAVE San Diego Chapter toured the San Diego County Water Authority's Lake Hodges pump station which is part of the San Diego County Water Authority's new emergency storage facility. A group of 20 members and guests started the tour at 4:00 p.m. and finished with a social at the Hernandez Hideaway, which is just across the street from the pump station entrance and learned a lot along the way. The Lake Hodges pump station and tunnel project will connect the City of San Diego's Lake Hodges Reservoir with the Water Authority's Olivenhain Reservoir in order to store 20,000 acre feet of water in Lake Hodges in an emergency. This connection will allow water from Lake Hodges to serve a broad area of users in the region in an emergency. During the transfer of water from the Olivenhain reservoir at a higher elevation to the Lake Hodges Reservoir, the Water Authority will be able to generate 40

megawatts of peak hydroelectric energy or enough to power to annually sustain over 26,000 homes. The project began in 2005 and will be complete in 2008, with a tunnel that is 1.25 miles long containing a 10-foot diameter steel pipeline connecting the two reservoirs that have a difference in elevation of 770 feet. The pump station reaches ten stories underground and houses two 28,000 horse power generators that produce 40MW of power as water flows down the tunnel from Olivenhain to Lake Hodges. The energy created will produce \$5.4 million in revenue each year defraying the costs of the Hodges Reservoir. The energy generated will be routed to a switchyard that connects to a 69kv transmission line on the local transmission grid. Our host, Jacobs Engineering Project Manager Gregg Degen, told about the challenges



Impellar housing. Photograph courtesy of Gregory Farrand.



Randy Huber, SDWCA, assisting. Photograph courtesy of Gregory Farrand.

with coordinating pipe steel from Austria, pump turbines from China, motors from Brazil, transformers from Canada, as well as other fascinating facts.

← Academic Track continued from page 5

and Chairman, Department of Industrial Engineering, University of Florida: "Capital Investment Options with Time"

- *Dr. Farrokh Mistree*, Professor, School of Mechanical Engineering, Georgia Institute of Technology: "Strategic Engineering—Value Creation for the Global Market"
- *Dr. F. Fred Choobineh*, Milton E. Mohr Distinguished Professor of Engineering and Director of Nebraska EPSCoR, University of Nebraska-Lincoln: "Decision Analysis Tools for Value Engineering"

The Academic Track is hosted by the Miles Value Foundation.