

A Cooperative Effort Between

AEROJET

**CARMICHAEL
WATER DISTRICT**



Department of Toxic
Substances Control

GET L-A OPEN HOUSE

ANCIL HOFFMAN COUNTY PARK • CARMICHAEL, CALIFORNIA • AUGUST 25, 2010

A cooperative effort between Aerojet, the Carmichael Water District, Sacramento County Parks and state and federal regulators led to the recent construction of a groundwater extraction and treatment (GET) facility at Ancil Hoffman Park. The facility designation is GET L-A.

N-Nitrosodimethylamine (NDMA), a byproduct associated with liquid rocket engine testing, was detected in 2003 in a monitor well in the Rossmoor Bar area in Rancho Cordova. Additional sampling indicated that NDMA was also present in a monitor well just north of the American River in Carmichael.

Aerojet and the Carmichael Water District (CWD) began working together to implement a remedy to stop migration of NDMA to any of CWD's water supply wells and remediate the groundwater. Under the regulatory guidance of the US EPA, the California Regional Water Quality Control Board and California Department of Toxic Substances Control, Aerojet and CWD developed a solution that accomplished these mutual objectives.

The GET facility is designed to remove NDMA from groundwater conveyed to the facility via a network of extraction wells. Extracted groundwater is exposed to an ultra violet (UV) light treatment technology approved by the US EPA and the California Department of Public Health for the removal of NDMA. The facility has extra space should the treatment system require expansion.

Once treated, the cleaned groundwater provides irrigation for the Ancil Hoffman golf course. The volume of groundwater is sufficient to meet approximately half of the course's water needs from May through September, and all of the water needs from October through April. Any excess is discharged to the American River.

Aerojet designed GET L-A to blend into the local surroundings, using building materials and colors that complement the existing golf course buildings and the Effie Yeaw Nature Center. The building houses the treatment system and a new irrigation pump station, replacing the previous outdoor station. The south lawn loading dock area utilizes grass pavers, providing a permeable yet reinforced vehicular surface, in keeping with park surroundings.

By permitting Aerojet to construct the GET L-A facility at Ancil Hoffman Park, Sacramento County was able to greatly reduce the volume of potable water used to irrigate the

course. The County now saves \$100,000 annually in water costs, while allowing for the annual conservation of 125 million gallons of potable water.

This project shows how a collaborative effort protects drinking water resources for CWD ratepayers, provides a beneficial reuse of treated water, reduces dependency on potable water and saves County taxpayers money in park irrigation costs.

GET L-A Facility

FAST FACTS

- The GET system treats NDMA with ultra violet (UV) light
- The GET system protects drinking water wells to the west, ensuring CWD ratepayers continue to have access to safe, clean drinking water
- The treated water will be used to irrigate the Ancil Hoffman golf course
- The GET facility saves the County water costs and fosters the conservation of potable water
- Construction of the GET system is not funded by CWD ratepayers



GET L-A: QUESTIONS AND ANSWERS

- Q. Why was this treatment facility built?
A. The GET L-A facility treats N-Nitrosodimethylamine, also known as NDMA. The chemical was found in a monitor well north of the American River at depths approximately 400 feet below the surface.
- Q. Is drinking water served in this area safe for my family to drink?
A. Water being served to CWD's customers is routinely tested and meets rigorous state regulations set by the California Department of Health Services for drinking water quality.
- Q. What is NDMA?
A. NDMA is a byproduct associated with liquid rocket engine testing. NDMA is also found widely in food (milk, processed meats, bacon and beer) and pesticides. NDMA is also a byproduct of the water chlorination process.
- Q. How does the facility treat NDMA?
A. NDMA can be removed from the groundwater by exposing it to ultra violet light, a treatment method approved by the US EPA and the California Department of Health Services.
- Q. What happens to the treated water?
A. The cleaned water is used to irrigate the golf course at Ancil Hoffman Park, and will provide 50% of the water needs of the course from May through August, and 100% of the water needs from September through April, reducing dependency on potable water for irrigation. Cleaned water in excess of what the park uses will be discharged to the American River.
- Q. Can I drink the treated water?
A. While the treated water no longer contains NDMA, it does not undergo the treatment process used for drinking water and is not served to the public. The potable water at Ancil Hoffman Park is directly provided by the Carmichael Water District.
- Q. Will Carmichael Water District water rates go up to pay for this treatment system?
A. The treatment system construction and operation costs are paid by Aerojet.

