Converse Shows Great Diversity on The Venetian Project

Converse has been providing a wide range of consulting services for the $1.2 billion Venetian Resort - Hotel Casino, Las Vegas' newest mega-resort, taking the place of the historic Sands Casino.

For years, Converse has assisted in the development of newer and bigger structures with traditional geotechnical engineering, materials testing and construction observation, along with quality assurance services. However, because of the Venetian's unique site conditions, the services provided have run the multidisciplinary gamut from geotechnical services to asbestos, underground tank services, Phase I & II Assessments, groundwater contamination assessment and treatment, and construction and permanent dewatering design services.

In order to meet this challenge, a multidisciplinary project team was developed and overseen by Jeffrey S. Palmer, C.E.M., Principal Consultant at the Las Vegas office.

Jim Werfe, Principal Geologist, set about his team to the task of their hydrogeologic assessment to design a construction dewatering system for proposed site development. Angie Belingheri, P.E., Project Engineer, spearheaded the underground tank removals and compliance sampling. John Worlund, P.E., Principal Engineer, assisted Belingheri in development of a plume characterization and water remediation plans. Mike Klein, Geotechnical Engineer, assisted in the development of the permanent dewatering system efforts. Laura Gillespie, Project Chemist, coordinated the removal of hazardous materials discovered at the site, as well as environmental permitting.

Thousands of tons of soil and millions of gallons of water contaminated with hydrocarbons were effectively managed by the team, allowing the project to proceed on schedule. Many innovative solutions were employed to solve the myriad of problems.

Converse's multidisciplinary approach to solving the unique problems resulted in significant cost savings to the project.

Reservoir Leak Deemed Too Expensive to Repair

Converse Consultants, Las Vegas, recently completed an in-depth study for the Nevada State Park System to investigate excessive leakage at the Echo Canyon Reservoir located in Eastern Nevada. The study concluded that mitigation measures for the repair of the reservoir would be at least $4 million to $5 million.

Echo Canyon Reservoir, now part of the Nevada State Park System, was sited in the late 1960's along Meadow Valley Wash where it entered Dry Valley. Prior to construction of the dam, surface water flow in Meadow Valley Wash reportedly "disappeared" into the ground after leaving the mouth of Echo Canyon in the area of the current reservoir site. The coarse-grained alluvial deposits were unfavorable for maintaining naturally occurring stream flow across the valley, hence the name "Dry" Valley.

(Continued on page 2)
Newport Beach Groundwater Project Completed

Completion of the four-year, $18 million Newport Beach Utilities Department groundwater development project was celebrated recently at the Costa Mesa, California office with the unveiling of a bronze plaque.

The project, which included two underground well stations, a 3 million gallon underground concrete reservoir 40 feet below grade, a 50-foot deep pump station adjacent to the reservoir, new building construction over the buried reservoir and pump station, and seven miles of transmission line from the two well sites to the reservoir, began with a preliminary exploration by Converse in 1993. A previously-unknown splay of the Newport-Inglewood Fault was discovered during the unearthing conducted by Converse, which resulted in the relocation of the reservoir and pump station as well as significant redesign of the facility.

Since the below grade reservoir was located partially over a deep ravine and partially in an area that had to be excavated about 40 feet to reach grade, the area was surcharged with 15 feet of fill to reduce the potential for differential settlement when the reservoir was filled.

Thomas J. Scheil, Principal in Charge of the project, and D. Scott Magorien, Principal Geologist, in charge of the geologic and fault study, were faced with additional challenges posed at the reservoir site. These included differential settlement potential between the improvements over the buried reservoir and over its 40+ feet of backfill, and ground acceleration of 0.60 g due to the proximity of the Newport-Inglewood Fault.

Design and construction at the well sites in Fountain Valley included wellpoint dewatering to install the transmission piping, and soldier piles and sheeting to retain the excavation adjacent to the Slater Avenue embankment for the bridge over the 405 freeway.

Echo Canyon (Continued from pg. 1)

Initial project studies in the 1960’s indicated that adverse geological conditions existed at the site for the construction of a reservoir. In short, the geologic conditions at Echo Canyon Reservoir presented a difficult engineering and construction challenge which appeared to be greater than the available resources at the time.

The recent study, led by Converse’s Principal Geologist, Jim Werle, involved geotechnical and geological investigations to determine the probable cause(s) of the leakage and provide recommendations for mitigation methods. Mike Klein, Senior Engineer and Lorrie Linnert-Dunford, Senior Staff Geologist, assisted in the investigation.

Field and laboratory investigations revealed that the 65-acre reservoir is losing significant volumes of water through the liner due to the quality of the liner material, the lack of compaction and moisture, and the liner thickness. In order to mitigate the excessive leakage, an engineered liner would need to be properly installed over the entire reservoir. However, in order to obtain construction permits to re-line the reservoir, the existing outlet works and emergency spillway would need to be upgraded to current engineering requirements. The cost for these upgrades could well exceed the cost of a liner.

Plant Engineering Show Features Converse Staff

The Second Annual Las Vegas Plant Engineering & Maintenance Show was held August 5 and 6, 1998, at the Las Vegas Convention Center.

Speaking at the conference were Dale Walsh, C.I.H., C.S.P., C.E.M., Senior Industrial Hygienist, and Kurt Goebel, Senior Geologist/Environmental Manager both from Converse’s Las Vegas office. Mr. Walsh’s “Workplace Safety Evaluation” covered such topics as an overview of OSHA regulations, including noise exposure, respiratory protection, hazard communication, asbestos and chemical spill response awareness, and proper storage of chemicals.

Mr. Goebel’s presentation, entitled “Environmental Issues and Regulations”, presented an overview of the Environmental Protection Agency and local regulations. His presentation emphasized the importance of site audits for facility managers and the advantages of being proactive.

The two-day event featured over 135 exhibitors displaying the latest in new products and services as well as cutting edge technology and innovative techniques for professional facility managers.
Converse Provides Geotech & Geology Engineering for Ocean Trails

Ocean Trails is one of several large land development projects that are underway in southern California. This project includes 75 single-family residential lots, with lot sizes varying from 12,000 to 24,000 square feet. There will be an 18-hole golf course and clubhouse with associated maintenance facilities and parking.

Converse Consultants is providing geotechnical engineering and engineering geology design services for Tracts 50666, 50667 and Ocean Trails Golf Course designed by Pete Dye, to be constructed on a Pacific Ocean bluff in Rancho Palos Verdes. Winter grading is required due to Gnatcatcher habitat and other environmental concerns. The project has worked through a difficult permitting process with significant environmental and geotechnical issues.

Converse is providing full-time observation and soil compaction testing using the Sand Cone and Nuclear Gage Test methods during site grading. About 2 million yards of soils will be moved as part of the grading operation. As part of the post-grading work Converse will observe and test trench backfill compaction for utilities, and fill and subgrade for internal streets, sidewalks, curbs and gutters. Slope stability is the technical challenge, considering the nearby Portuguese Bend landslide. Complex geologic conditions require installation of dewatering wells, horizontal drains, soil stabilization buttresses, a low permeability clay cap over 80 acres of irrigated golf course and various other measures.

Converse was instrumental in gaining technical and political approval of this controversial project. Converse technical project personnel include Doug Santo, L.T. Evans and Lorraine Muto.

A Job Well Done by Converse

Converse Consultants, Las Vegas, is proud to share a recent "thank you" letter received from one of our clients for a job well done. The letter (pictured at left) was written by Richard Varley, owner of RV Construction Co. on behalf of Wet 'n Wild Theme Park, for materials testing and special inspection services provided on the "Royal Flush" project (pictured below).

W. Rickey Kurtz, Converse Project Manager on the job, was instrumental in expediting the approval process to meet the unusually short construction schedule of the project. The extra effort put forth by Mr. Kurtz and his team, as well as the other subconsultants on the project, resulted in a successful end result which was completed on time. In turn, we wish to express our thanks to Mr. Varley for taking the time out of his busy schedule to acknowledge everyone's hard work and a job well done.

Converse Awarded NPDES Sampling Project

In February, 1998, Converse Consultants, Las Vegas, was awarded the National Pollution Discharge Elimination System (NPDES) sampling project to monitor water quality for Lake Mead during construction of the second intake pipeline.

The new pipeline will increase the capacity of the current distribution system to enable the Southern Nevada Water Authority (SNWA) to provide more water and meet the peak demand requirements for Las Vegas, North Las Vegas, Henderson and Boulder City.

The pipeline extends from the intake on Saddle Island, traverses beneath Boulder Harbor, then continues underground to a tunnel bored through the River Mountains.

The 1.5-year contract with Parsons Infrastructure and Technology Group and SNWA consists of sampling at 50-foot horizontal and 20-foot vertical intervals. Another component is concurrent monthly sampling 500 feet from the silt curtain which is on 250-foot horizontal and 20-foot vertical intervals. There is also discharge sampling that occurs during emplacement of the pipeline beneath Boulder Harbor.

As project manager, Kurt Goebel, Senior Geologist, was instrumental in getting the project. Steve Havens leads the sampling effort on the project, assisted by Kevin Bottum, Angel Ramos, Doug Bell, Mike Leskys and Mark Stacey. The unique sampling requirements of this project have provided the Converse team with the opportunity to demonstrate their diversity.
**Converse Services**

- Air Quality Services
- Analytical Testing Services
- Asbestos Management Services
- Biological Services
- Earthquake Engineering
- Engineering Geology
- Environmental Engineering
- Environmental Planning
- Geotechnical Engineering
- Geotechnical Services
- Hazardous Materials Management
- Laboratory Testing (soils, rock)
- Material Inspection and Testing Services for the Minerals Industry
- Site Assessments
- Site Remediation
- Underground Tank Services
- Water Resource Engineering

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**Did You Know?**

- In the Continental U.S., about 86.5% of our fresh water is beneath the ground, 13.4% is in lakes, 0.13% is in the atmosphere, 0.05% is in glacier ice, and only 0.03% is in rivers.
- The water used by 53% of America’s homes is from groundwater.
- Forty-seven states have licensing or registration requirements for well installers.
- Every working day, more than 1,000 new water wells are installed in America.

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*Conversations* is a publication of The Converse Professional Group of geotechnical and environmental consulting companies.  
*Conversations* is published bi-annually and is distributed to Converse employees, clients and friends.  
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