

# Kurt A. Goebel, CEM

## Senior Vice President/Environmental Division Manager

Mr. Goebel is a Senior Vice President, Principal Geologist, and Environmental Division Manager. Mr. Goebel has been with Converse since 1991. He understands the business community and has worked with numerous community leaders and clients, providing solutions for a wide range of environmental issues. Mr. Goebel understands the need to satisfy regulatory requirements for compliance, yet he works in the clients' interest, to minimize risk and provide quality technical service. His clients include casino/hotel facilities, small and large industry, local government (city, county, state), private developers, and property managers. He is a Nevada Certified Environmental Manager and is well versed at interfacing with State regulators on the client's behalf.

### Areas of Experience

- Asbestos Management
- Brownfields Grants and Assessment
- Dust Monitoring & Air Quality
- Groundwater Assessment & Monitoring
- Hazardous Materials Management
- Health and Safety Compliance
- Indoor Air Quality and Industrial Hygiene
- Landfill Management
- Phase I & II Environmental Assessments
- Soil Gas Surveys
- Regulatory Compliance
- Risk Assessments
- Remedial Actions
- Vapor Encroachment

### General Experience

#### **Phase I Environmental Site Assessments (Phase I ESAs)**

Mr. Goebel has completed and managed Phase I ESAs for banks, cities, developers, municipalities, private owners, state agencies, the BLM, and school districts. The ESAs were typically completed as part of pre-acquisition due diligence. Sites assessed have included heavy industrial, light industrial, landfills, shopping malls, schools/universities, hospitals, office buildings, parks, agricultural operations, residential, and undeveloped land. Mr. Goebel works with a peer that is on the ASTM committee for developing the Phase I due diligence standard.

#### **Phase II Environmental Site Assessments (Phase II ESAs) and General Subsurface Investigations**

Mr. Goebel has completed Phase II ESA scope of services that include sites for school districts, UST sites, AST sites, dry cleaners pipeline sites, bulk storage terminals, industrial sites, landfills, and commercial sites in Nevada and Arizona that have included:

- Surface soil sampling and soil sampling by hand auger, direct-push rigs, hollow stem auger rigs, or grab samples.

### EDUCATION

- M.S. Geology, University of Nevada, Las Vegas, 1989
- B.S. Geology, Western Illinois University, 1985

### REGISTRATIONS/CERTIFICATIONS

- State of Nevada, Certified Environmental Manager, EM-1231
- 40-Hour Health and Safety Training and 8-Hour Refresher
- 8-Hour Health and Safety Supervisors Training
- Professional Geologist – Nevada
- Registered Hazardous Substances Professional, RHSP-294

### PROFESSIONAL MEMBERSHIPS

- American Council of Engineering Companies (ACEC), SGAC Environmental Subcommittee Chairman
- National Association Industrial and Office Properties (NAIOP), Government Affairs Committee
- International Right of Way Association (IRWA)- Vice Chair
- Risk Management Association (RMA)
- American Institute of Architects (AIA), past member
- Air & Waste Management Association (AWMA), past president
- Geological Society of Nevada, past president

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- Use of directing field reading equipment for volatile organic compounds, hydrogen sulfide, and methane
- Groundwater well installation and sampling, including hydro-punch methodology
- Geophysical Surveys to delineate underground features (septic tanks, pipe lines, and tanks)
- Soil Gas Surveys using tedlar bags, summa canisters, and mobile laboratories
- Chemical analyses of samples that will typically include total petroleum hydrocarbons, volatile organic compounds, semi-volatile organic compounds, pesticides, herbicides, PCBs and metals. In addition, he has worked on assessments for arsenic, perchlorate, and dioxin.

## **Remediation**

Mr. Goebel has initiated and completed remediation for various petroleum hydrocarbons such as gasoline, diesel fuel, and oil, as well as a host of solvents such as tetrachlorethylene (aka perchlorethylene or PCE) and trichlorethylene (TCE). Specific to PCE, Mr. Goebel has been involved in the assessment or remediation at over 30 PCE projects in southern Nevada. He is familiar with methods of assessment unique to Las Vegas and is familiar with appropriate remedial techniques, risk assessment, and how to get sites closed. He has also completed remediation at lead shooting ranges. He managed one of the largest hydrocarbon remediation projects in Nevada, which was a mass excavation of soil, loading, transportation and treatment. Some of the technologies he has overseen include:

- Natural attenuation
- Enhanced natural attenuation
- In-situ and ex-situ bioremediation
- Air sparging, C-Sparging
- Over purging
- Soil vapor (vacuum) extraction
- Dual phase extraction
- Hydrocarbon product recovery
- Excavation and removal
- Oxygen Enhancement
- Oxygen Reduction
- Thermal desorption

## **RCRA Hazardous Waste Mitigation and Response Mitigation**

Mr. Goebel manages hazardous waste assessment activities for clients to reduce waste volume, reuse or recycle as much material as possible, and reduce their generator classification, if possible. Waste audits are completed to help clients assess regulatory compliance prior to a regulatory compliance inspection. He also helps clients monitor that drums of waste are appropriately labeled, transported, and shipped to an appropriately licensed treatment facility. He has also managed several mitigation responses for contractors working on releases, such as UPPR train derailments.

## **Asbestos, Lead-Based Paint, Mold Surveys, Abatement Monitoring, and Clearance Sampling**

Mr. Goebel managed asbestos and lead-based paint projects to complete surveys, abatement specifications, and abatement monitoring projects. Clients include hospitals, hotels, schools/universities, retail shopping malls, and commercial offices. Asbestos, lead, and mold surveys include: visual surveys of facility, sampling, laboratory analysis from accredited laboratories, and reports prepared by certified consultants. The abatement specifications typically include: list of impacted materials, regulatory requirements, submittals, work execution, air-monitoring, abatement procedures, clearance sampling, and closeout documentation. Abatement monitoring personnel also observe and monitor abatement activities such as: review contractor's submittal package, collection of air samples, daily evaluation of containment and contractor, conduct clearance sampling, and preparation of project closeout documentation.

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## **Air Quality**

Mr. Goebel has overseen and provided assistance to numerous major and minor sources and has worked to facilitate compliance with the local regulatory agencies. He helped provide clients with assistance in obtaining permits, preparing protocol documents for performance testing, and conducting performance testing (Method 9 opacity testing). He also assists in developing emission inventories and calculating potential emissions (including actual emission calculations). He also has experience in helping residential and commercial developers comply with federal PM10 requirements for dust control; this includes a dust permit, dust monitoring plan, employing BACT, and actual dust monitoring. Mr. Goebel also helps clients work through compliance issues with the local regulatory agency.

## **Indoor Air Quality**

Mr. Goebel has overseen numerous IAQ assessments and helped clients find solutions to the issue. The preliminary IAQ assessment process typically involves 1) maintenance personnel interviews, 2) building walkthrough, 3) ventilation system evaluation, and 4) basic sampling for carbon dioxide, carbon monoxide, temperature, and relative humidity over multiple days. Recommendations are made after the preliminary assessment, which typically result in improved IAQ. If specific issues are identified, requiring further evaluation, then further sampling can be provided related to the following common issues: water intrusion, odors, dusts, irritating materials, ergonomics, lighting, and LEED certification.

## **Regulatory Compliance**

Mr. Goebel is experienced in providing regulatory compliance guidance for a myriad of issues. Most issues stem from new permit requirements when starting a new business, permits required during construction, or when regulations change for an existing permit. Some common issues and permits are related to: waste management and chemical management, various pollution prevention plans, construction dewatering and NPDES Discharge, chemical use reporting, aquifer use or injection, local waste management for transfer and recycling facilities, and chemical release response.

## **Brownfields**

Mr. Goebel developed a formal Brownfields program for Converse in 2006. As such, he understands the grant writing process and the various grants that are available, including site specific grants, community wide grants, coalition grants and clean up grants, as well as the revolving loan fund. He also oversees management of implementation of the grants when they are awarded to a community. He has overseen both petroleum and hazardous materials assessment grants and coalition grants for city and county municipalities in Nevada and California. Specific items completed as part of these assessments include field sampling plans, quality assurance plans, phase I site assessments, and phase II site assessments. He also works with community outreach and understands one of the most important elements is community outreach and involvement.

## **NEPA**

Mr. Goebel manages staff for clients that are required to complete environmental assessment (EA) activities on federal land. Depending upon the federal agency and the concern for that area or land being evaluated, different biological items may be evaluated. He manages various biological services that include: biological assessments, environmental assessments for federal land, wetlands determinations, threatened and endangered species assessments, and tortoise surveys. In addition, he can help address mining leases, geological issues, hazardous waste and air quality.

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## Risk Assessment

Mr. Goebel has managed risk assessment work to assess and define the level of impacts to human health. This work has been done as part of acquisition studies for land and also for requesting closure of a remediation site. We provide health-based risk assessments to enable us to provide a more realistic solution for achieving site closure. We use risk assessors that are familiar with developing site specific target levels for your site and are able to apply those standards so the regulatory agency can utilize them.

## Experience

### Phase I Environmental Site Assessments

**Phase I ESA and Drum Disposal, The Landwell Company** - The project consisted of conducting a Phase I Environmental Site Assessment on multiple parcels throughout the BMI Complex. The Landwell Company plans to develop the parcels with commercial properties. Converse conducted site visits to each parcel, performed review of government agency records, reviewed historical records, conducted numerous interviews, and prepared a report of our findings. Our work has assisted our client with property transactions that will allow for future development of these previously, primarily undeveloped properties. As a separate scope of work, we also categorized approximately 200 drums for disposal or treatment. Some drums contained PCB and Dioxin wastes and were transported to specific facilities capable of treatment for that type of material.

**US Bank, Various Commercial sites, Nevada and Arizona** - This project consists of an on call MSA to perform Phase I Environmental Site Assessments (ESAs) on commercial properties with various past business uses. The properties are located throughout Nevada and Arizona. When Converse is awarded the work, we perform the work as required in the ASTM standard, which includes site reconnaissance, regulatory database review, and aerial photo review on each of the properties. Historical research into prior use was conducted in conjunction with the ESAs. Reports documenting the findings were prepared for each of the facilities.

**Union Bank of California, Various Commercial Sites, California, Nevada and Arizona** - This project consisted of an on call MSA to perform Phase I Environmental Site Assessments (ESAs) on commercial properties with various past business uses. The properties were located throughout California, Nevada and Arizona. When Converse is awarded the work, we perform the work as required in the ASTM standard, which includes site reconnaissance, regulatory database review, and aerial photo review on each of the properties. Historical research into prior use was conducted in conjunction with the ESAs. Reports documenting the findings were prepared for each of the facilities.

**Southern Nevada Paving Numerous Phase I Sites, Aggregate Industries, Clark County, NV** - This project consisted of Phase I Environmental Site Assessments (ESAs) on one active sand and gravel quarry and five fixed properties, and also Transaction Screen Processes (TSPs) on nine portable facilities that were being considered for purchase. The properties are located throughout the Las Vegas Valley and near Sloan, Nevada. Converse performed a site reconnaissance and regulatory database review on each of the 15 properties. Historical research into prior use was conducted in conjunction with the ESAs. Reports documenting the findings were prepared for each of the facilities. Converse recommended Phase II work at the majority of the facilities and performed the work during the fall of 2003.

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**Moapa Indian Reservation, Ash Grove Cement Company, Clark County, NV** - This project consisted of a Phase I Environmental Site Assessment (ESA) on 2,363 acres of undeveloped land on the Moapa Indian Reservation. Ash Grove was going to develop the property with a cement manufacturing facility. Converse coordinated with Ash Grove and representatives of the Moapa Indian Reservation to perform the site reconnaissance on the property, performed a database review, reviewed historical records, and prepared a report documenting the findings.

## Phase II Environmental Site Assessments

**PCB and TPH Assessment, WAPA** – Mr. Goebel was the principal for work conducted at the site, which consisted of an electrical switchyard that had previously contained circuit breakers, transformers, aboveground storage tanks (ASTs), an underground oil handling system, and an oil handling room in a control building. Converse conducted soil sampling at the site. The soil samples were collected during demolition/excavation of the facility to aid in determining if total PCB and petroleum contamination existed in the soil. A Subsurface Assessment Report and A-K Evaluation Report were prepared and submitted to the Nevada Division of Environmental Protection (NDEP). A “no further action” determination was issued by the NDEP in November 2004.

**Lead Soil Assessment and Remediation, SunCor Development** - Converse provided environmental consulting services for the characterization and remediation of a former trap and skeet shooting facility. Surface soils of the site were impacted with low concentrations of arsenic, lead, and polynuclear aromatic hydrocarbons. The site was remediated to state of Arizona residential soil levels and was commercially developed. The site was enrolled in the Voluntary Remediation Program and was granted a letter of “No Further Action” by the Arizona Department of Environmental Quality. We developed an approach to site characterization that allowed for the most effective and efficient remediation of the site while realizing substantial savings for our client.

**Dioxin Assessment, NDOT** – Representing NDOT, Converse oversaw the removal of ash material containing dioxin that was buried in the construction area for the I-215/I-515 interchange. As part of this work, Converse reviewed waste manifests to assess compliance with transportation requirements of this waste.

**PCB Assessment, Southern California Edison** – Mr. Goebel performed soil sampling for numerous oil stained areas from transformer oil to assess if any of the oil contained PCBs. This work was performed at the facility located in the Eldorado Valley.

**Groundwater Monitoring and Sampling Programs, de maximis** - Converse provides groundwater monitoring and sampling services for monitoring wells located on the former Montrose Chemical Company and Stauffer Management Company sites. This work includes the monitoring of approximately 117 wells on a quarterly basis and the sampling of approximately 65 additional wells for organics, inorganics, and radionuclides on a semi-annual basis.

**Rainbow Gardens Assessment, UNLV** - Converse conducted an assessment of multiple areas of concern throughout the property. Areas of concern included mine tailings, stained soil, wire burn “pits”, and target shooting areas. The assessment was conducted to identify potential contaminants in surface soil and hazardous waste determinations were made.

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**Evaluation of Arsenic In Soil Data, City of Las Vegas** - High arsenic concentrations were found in soil. Converse conducted a review of arsenic concentrations in soil samples recovered at the site in an effort to evaluate the data in comparison to historical background concentrations of arsenic in soil. Historical data from samples recovered at the site were compared to data obtained from other studies conducted in the Las Vegas Valley. We concluded that concentrations of arsenic in soil samples collected from this site are consistent with background concentrations of arsenic reported in other studies in the Las Vegas area. Our efforts have allowed the City of Las Vegas to continue with the development and the various contractors working at this project site to make appropriate and cost effective determinations of how to handle soil with specific concentrations of arsenic.

**RCRA Compliance Monitoring, Montrose Chemical Company, Henderson, Nevada** - Mr. Goebel coordinated the sampling of RCRA monitoring wells at this former pesticide chemical manufacturing plant. In addition, Mr. Goebel coordinated the transportation and treatment of the fluids recovered from the leachate recovery trench to a RCRA-licensed treatment facility, supervised technicians, compiled data, and prepared reports to client and state.

**Phase II Assessment and Risk Assessment, Private Developer, Henderson, Nevada** – Converse worked with a small local developer to address upgradient groundwater impacts from a perchlorate release. This process required bringing fill material and building a subdrain to create separation of final grade and impacted groundwater. This also includes a detailed risk evaluation to address potential future concerns from users of the property. The risk assessment evaluated potential exposure pathways for perchlorate, VOCs, hydrocarbons, metals, and pesticides.

**Perchlorate Risk Assessment, Beazer Homes** - Principal in charge for overseeing the completion of quantitative risk analyses to evaluate potential impact to human health for new development near Las Vegas Wash. Completed an ASTM Tier 1 and Tier II analysis to identify risk and establish site Specific Target Levels (SSTLs) for a site to be developed along the Las Vegas Wash situated above the perchlorate plume.

**PCE Assessment/Remediation** - Mr. Goebel has been involved in the assessment or remediation at over 30 PCE projects in southern Nevada. He is familiar with methods of assessment unique to Las Vegas and is familiar with appropriate remedial techniques, risk assessment, and how to get sites closed.

**PCE Assessment and Remediation, Maryland Square, former Al Phillips, Clark County, Nevada** – Mr. Goebel managed the initial assessment work and prepared the initial remediation reviews at this site. Subsequent to this work, the operator and their consultant took over the project. However, Converse remained in a review capacity for the owner to monitor the quality of and appropriateness of the work to protect the owners' interests. Upon a class action law suit from offsite residents, Converse initiated a work plan to remediate the site former source area, create a cut-off wall to prevent further offsite migration, and address residential area impacts. Prior to implementation, the addition of new legal counsel resulted in a different direction for the project.

**PCE Remediation, former Vogue Dry Cleaner, Clark County, Nevada** – The ongoing work consists of mitigating perchloroethylene (PCE) in the groundwater at a dry cleaning site. Converse delineated the lateral and vertical extent of the plume and initiated remediation through hydrogen reduction compound (HRC) injection to mitigate the groundwater plume. HRC was injected in

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several locations to reduce groundwater concentrations. Source reduction of source area soils is now commencing.

**PCE Assessment and Remediation, Meadows Cleaners, Clark County, Nevada** – The project consisted of mitigating perchloroethylene (PCE) in the groundwater at a dry cleaning site that is located up gradient of the original Las Vegas groundwater well field. Converse delineated the extent of the plume (500+ feet) and initiated an ozone air sparging system to mitigate the plume. Mr. Goebel oversaw the remediation phase of this C-sparging groundwater remediation site.

**PCE Dry Cleaning Mitigation, former Dr Clean Las Vegas, Nevada** - Mr. Goebel coordinated fieldwork for delineation and mitigation of dry cleaning chemicals at a dry cleaning site located up gradient of a shopping center. This work included soil borings to assess soil plume delineation and Geoprobe, and conventional wells to assess groundwater impacts. Remediation consisted of over purge and vapor extraction. Mr. Goebel also managed the contract, compiled data, supervised technicians, and prepared reports to the client and state.

**PCE Dry Cleaning Mitigation, Paradise Gardens, LLC, Las Vegas, Nevada** - Converse conducted site characterization activities related to a release of PCE from a dry cleaning facility. Work included installation and sampling of monitoring wells, aquifer testing, design of a remedial alternative and preparation of a corrective action plan, which was approved by NDEP State of Nevada. Remedial efforts consisted of the injection of Hydrogen Release Compound (HRC). HRC is a product that enhances the in-situ biodegradation of chlorinated compounds. Naturally occurring microorganisms use hydrogen to progressively remove chlorine atoms from chlorinated compounds such as PCE. HRC provides a slow release of lactic acid to support anaerobic microbial activity and produce hydrogen. Converse is working on a risk assessment in an effort to establish acceptable site specific target levels for contaminants of concern.

**PCE Remediation, Rite Aid, formerly Thrifty Payless** - Mr. Goebel managed the air sparging remediation of perchloroethylene (PCE) resulting from a former dry cleaning operation at this site. The system consisted of in-situ air sparging and vapor extraction. The site achieved a 90% reduction of PCE concentrations before the client sold the property.

**PCE Remediation, Former Maple Cleaners, Clark County, Nevada** – This project consisted of completing the initial assessment work. Subsequently, soil vapor extraction was implemented to mitigate the soil impacts and groundwater plume. Converse was successfully able to close the site.

**PCE Assessment, former Swiss Cleaners, Clark County, Nevada** – The site work consisted of assessing the extent of offsite impacts in groundwater. This property is being reviewed by the City for possible redevelopment. Converse was successfully able to close the site.

**PCE Assessment, Caprock Michigan Paseo Plaza LLC, Clark County, Nevada** – This project consisted of completing Phase II assessment work to delineate the extent of the groundwater plume. Ultimately, Converse was able to complete a risk assessment and demonstrate the site concentrations were below a site specific target level approved by NDEP. The site was subsequently closed.

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**Solvent Remediation, Clark County School District, Clark County, Nevada** - Mr. Goebel supervised a subsurface geophysical survey for roadway improvements along Rochelle Avenue. In addition, Mr. Goebel supervised the installation of monitoring wells, the PCE/TCE groundwater remediation system, designed the groundwater remediation system, supervised the preparation of architectural specifications for the installation of the groundwater remediation system, and reviewed reports.

**PCE and Hydrocarbon Remediation, Harrah's Las Vegas Casino** - Mr. Goebel was the supervisor for work conducted to investigate the source of hydrocarbons and solvents, including PCE in the groundwater. Hydrocarbons and solvents were encountered during dewatering activities for the sub-road entrance into Harrah's. Mr. Goebel oversaw the design of the treatment system for the site. This included sizing the carbon vessels and assessing the aquifer properties.

**TCE Assessment, Las Vegas Convention Center South Hall Expansion** - During construction of a major south expansion of the existing facility, Mr. Goebel assisted in dewatering treatment, which was required in an area documented to contain Trichloroethylene (TCE) and high nitrate values. He provided permitting assistance, regulatory interfacing, and construction dewatering treatment of TCE for this expansion project. The treatment system consisted of reusing the water for beneficial use (dust control).

**PCE and Hydrocarbon Remediation, Bridger & 4th Street Project** - Mr. Goebel was the supervisor for work to conduct construction dewatering and implement subsequent carbon treatment for PCE and hydrocarbons in shallow groundwater. Mr. Goebel oversaw the design of the treatment system for the site. This included sizing the carbon vessels and assessing the aquifer properties.

**TCE Assessment and Mitigation, Desert Inn Arterial** - Mr. Goebel was the supervisor for work conducted to mitigate TCE in the groundwater. TCE was encountered during dewatering activities. Mr. Goebel oversaw the design of the treatment system for the site. This included sizing the carbon vessels and assessing the aquifer properties. He also provided regulatory interfacing to acquire the NPDES permit. Due to the expense of treating Nitrate concentrations, he assisted in acquiring a temporary permit from the Clark County Sanitation District to discharge TCE treated water to their sewer system.

**Various PCE Assessments, NDEP** - Managed State environmental mitigation, assessment, and remediation contract for the state of Nevada. Contract was for one million over a two-year period. The contract included investigating numerous DNAPL sites (mostly dry cleaners) where an owner was not responsive.

## **RCRA Hazardous Waste Mitigation and Response Mitigation**

**Waste Management, Clark County School District** - Managed hazardous waste assessment for County school district. When several drums of waste were inappropriately deemed hazardous, the State issued a Warning Letter and a Finding of Alleged Violation was likely to be issued. We more accurately characterized the waste and the issue was resolved.

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**Leachate Assessment, Montrose Chemical** - After closure of two RCRA ponds, Mr. Goebel managed the sampling of four groundwater monitoring compliance wells for the RCRA facility. Work also included pumping leachate solution from a recovery trench installed downgradient of the former ponds.

**Waste Assessment, Clark County Real Property** - Before widening of a county road, a waste leach pit was reported and investigated. After hand auguring to sample and characterize the waste, work consisted of coordinating the excavation, transportation, and disposal of hazardous waste soil. Subsequent work consisted of designing and implementing a groundwater remediation system to remediate the impacted groundwater.

**Hazardous Waste Compliance, Former Debbie Reynolds Casino** - After painted furniture was washed and stripped using methylene chloride (solvent) and discharged into a grease trap (sanitary sewer), Mr. Goebel coordinated a hazardous waste contractor to enter the tank and remove the grease sludge in full level B protection. The waste was pumped out for disposal and the tank was re-sampled.

**Hazardous/Regulated Materials/Waste Release Response, Pardee Homes** - Converse manages regulated materials at Pardee sites throughout Clark County. When an incident occurs, Pardee personnel contact Converse to respond. Converse staff mobilizes to the incident location, secures the scene, designs a clean-up method, addresses any items that require immediate attention and ultimately implements the clean-up. Converse also tracks the various aspects of the project from manifesting (as necessary), entering information into an internal database, reporting of the incident to applicable agencies, etc. Our efforts help Pardee to provide their future/existing residents with property that is not environmentally impacted.

**Union Pacific Railroad Train Derailment, PSC Environmental Services** - The project consisted of emergency response services to a Union Pacific Railroad (UPRR) train derailment adjacent to the Meadow Valley Wash to the north of Caliente, Nevada. Several of the derailed train cars contained lime. Converse collected daily surface water samples at three separate locations upstream and downstream of the derailed train. Samples were collected for nine consecutive days and samples were analyzed by the laboratory on a rush basis. Converse submitted a report documenting the findings to PSC, who subsequently submitted the report to UPRR and the Nevada Division of Environmental Protection. Our rapid response aided in accident clean-up efforts such that the tracks could be re-opened.

## Asbestos

**Pre-Demolition Hazardous Building Material Surveys, City of North Las Vegas, NV** - The Buena Vista Springs I apartment complex consisted of 54 two-story apartment buildings encompassing approximately 249,203 square feet. The Buena Vista Springs II apartment complex consisted of 18 two-story buildings, encompassing approximately 65,988 square feet. Mr. Goebel was the contract manager for this project which included a pre demolition survey, preparation of abatement specs, and 3rd party oversight during demolition for asbestos, lead, PCB, mercury, and CFC refrigerant materials.

**Pre-Demolition Hazardous Building Material Surveys, Clark County, NV** - The University Medical Center Apartment complex was built in 1972 and consisted of five separate buildings. The total combined square footage of the apartment complex units is approximately 15,000

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square feet. Our services included a visual inspection, bulk sample collection and laboratory analysis of homogenous areas of building materials, conducted to identify the presence or absence of asbestos and lead. It also included a visual inspection for other hazardous materials including mercury containing fluorescent lighting, polychlorinated biphenyl (PCB) containing light ballasts, mercury containing thermostats and switches, radioactive material containing smoke detectors, and chlorofluorocarbon (CFC) refrigerants in air conditioner units.

**HBMS Survey, City of Las Vegas, NV** - Converse completed a Rehabilitation Hazardous Building Materials Survey for the Westside School in Las Vegas, Nevada. This HBMS covered asbestos, lead containing materials, and other hazardous building materials. The purpose of the HBMS is to help the City of Las Vegas to comply with EPA and OSHA regulations for renovation of the structures at the site.

**Pre-Demolition Asbestos & Lead Surveys and 3rd Party Oversight, Project NEON, NDOT** – Project NEON is a freeway widening project near a major freeway intersection in Las Vegas. The widening project required the acquisition of numerous commercial businesses. Our services included a visual inspection, bulk sample collection and laboratory analysis of homogenous areas of building materials, conducted to identify the presence or absence of asbestos and lead. We also completed preparation of abatement specs and 3rd party oversight during demolition for asbestos and lead.

**Asbestos Surveys, Boyd School of Law UNLV, Las Vegas, Nevada** - Mr. Goebel was Principal-in-Charge for several renovation phases of work conducting asbestos surveys and asbestos abatement specifications. Converse performed a complete asbestos survey of the former UNLV library. The two buildings involved were renovated for the Proposed Boyd School of Law. As part of our services to the State Board of Public Works, Converse provided asbestos abatement specifications for the abatement project. Converse also provided project monitoring during abatement activities and for emergency response actions at the site.

**Asbestos Surveys, Caesars Palace Hotel & Casino, Las Vegas, Nevada** - Mr. Goebel was Principal-in-Charge for several phases of work conducting asbestos surveys and asbestos abatement specifications. Converse performed a complete asbestos survey of the Caesar's Palace complex. As part of our services to Caesar's Palace, Converse has provided asbestos abatement specifications for numerous asbestos abatement projects. Converse also provided project monitoring during abatement activities and for emergency response actions at the site.

**Asbestos Surveys, Clark County Real Property Management, Clark County, Nevada** - Mr. Goebel was Principal-in-Charge for several phases of work conducting asbestos surveys and asbestos abatement specifications. His work included consultation for exposure liability and air monitoring issues. Converse is in the process of providing a general Operation and Maintenance Program (O&M) for all Clark County buildings containing asbestos materials. The purpose of an O&M plan is to provide a safe work place and control the release of asbestos fibers until the asbestos-containing material in the buildings are abated through renovation or demolition activities. In addition, as part of our contract with Clark County General Services, Converse provides consultation, building surveys, and air monitoring during periods of renovation and demolition of Clark County buildings.

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**Specification Review, Clark County Regional Justice Center, Clark County, Nevada** - Mr. Goebel was Principal-in-Charge for several phases of work that included conducting asbestos surveys and asbestos abatement specifications for several buildings related to the Regional Justice Center. Converse performed a complete asbestos survey of the approximately 19 buildings on three blocks in downtown Las Vegas to be replaced as part of the construction of the new Regional Justice Center. Converse also provided asbestos abatement specifications and project monitoring.

**Caesars Palace Hotel & Casino (Desert Palace), 3570 Las Vegas Boulevard South, Las Vegas, Nevada** - Mr. Goebel was Principal-in-Charge for several phases of work conducting asbestos surveys and asbestos abatement specifications. Converse performed a complete asbestos survey of the Caesar's Palace complex. As part of our services to Caesar's Palace, Converse has provided asbestos abatement specifications for numerous asbestos abatement projects. Converse also provided project monitoring during abatement activities and for emergency response actions at the site.

**El Mirador Motel, Asbestos Perimeter Air Monitoring, Las Vegas, NV** – Converse conducted perimeter air monitoring during the demolition of the El Mirador Motel, located at 2310 S. Las Vegas Boulevard, Las Vegas, Nevada. Converse performed the following tasks for this project: performed visual clearance and collected air samples during demolition activities, submitted area air samples to a certified laboratory for phase contrast microscopy (PCM) analysis, and prepared a letter report at the conclusion of the project compiling the laboratory data documenting work activities at the project site. An asbestos survey and a final visual inspection were also performed by Converse for this project.

**East Sahara DMV, Final Visual Inspections and Air Testing, Las Vegas, NV** – Converse conducted asbestos visual inspections and final clearance air testing in multiple areas at the East Sahara DMV location, located at 2621 E. Sahara Avenue, Las Vegas, Nevada. Converse performed a visual inspection of each area after the abatement contractor performed the abatement activities, collected air samples in the containment areas for submission to the laboratory for analysis, and provided clearance letters containing the results for each area tested.

**Donovan DMV, Final Visual Inspections and Air Testing, Las Vegas, NV** – Converse conducted asbestos visual inspections and final clearance air testing in multiple areas at the Donovan DMV location, located at 4110 Donovan Way, Las Vegas, Nevada. Converse performed a visual inspection of each area after the abatement contractor performed the abatement activities, collected air samples in the containment areas for submission to the laboratory for analysis, and provided clearance letters containing the results for each area tested.

**939 East Flamingo Road, Final Visual Inspections and Air Testing, Las Vegas, NV** - Converse conducted asbestos visual inspections and final clearance air testing in multiple units of this apartment complex located at 939 E. Flamingo Road, Las Vegas, NV. Converse performed a visual inspection of each unit after the abatement contractor performed the abatement activities, collected air samples in the containment areas for submission to the laboratory for analysis, and provided clearance letters containing the results for each unit tested.

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## Air Quality

**USGBC LEED Certification Environmental Quality Services, Tiberti Whiting-Turner Joint Venture** - Converse has been providing consulting services regarding the environmental quality requirements of the US Green Building Council's Leadership in Energy and Environmental Design rating system. The Springs Preserve is pursuing the Platinum rating. Converse has performed indoor air testing and assisted with bulk sampling for VOCs to help identify and correct problems encountered.

**Various Indoor Air Quality Surveys, Clark County Risk Management** - Converse has provided numerous mold, asbestos, lead paint, and indoor air quality surveys for Clark County, including fungal assessments at a variety of locations consistently for the past ten years.

**Industrial Hygiene Services, Tronox, formerly Kerr McGee Chemical** - Converse has been providing industrial hygiene assessment services for a manganese (and other chemicals) manufacturer for more than ten years. Assessments include metal, acid gas, noise, and various other hazardous material exposures.

**Dust Control Management, Pardee Homes** - Converse provided environmental management services for the construction industry. Services included designing and operating a management system to comply with Clark County Air Quality Regulations. Tasks included compliance status review, dust monitoring, regulatory coordination, negotiation, reporting, permitting, corporate reporting, corrective action, and process improvement. Through our constant efforts, we were able to help avoid Corrective Action Orders (CAO) being issued, but also kept CAOs from elevating to Notice of Violation (NOV) status.

**Air Quality Permitting, Clark County Department of Aviation** - McCarran International Airport is the primary airport serving visitors to the greater Las Vegas metropolitan area. Sources of regulated air pollutants located at the facility include boilers, cooling towers, diesel powered emergency generators, a "paint booth", and an aboveground storage tank. New emission units include three boilers and four new cooling towers. Converse prepared the application package, which included an emissions inventory (developed by Converse), an analysis of Best Available Control Technology for the new equipment, calculations of potential to emit regulated air pollutants, applicable forms and manufacturer's information. Over 80 pieces of equipment that are considered categorically exempt were included in the emissions inventory as required by the Department of Air Quality and Environmental Management. By our prompt response to this work, Converse was able to help the Department of Aviation avoid any penalties.

**Dust Compliance and Monitoring, Private Developer, Clark County, Nevada** - Converse worked with a national developer to change their dust compliance issues into a model program for the County. Our client has received a letter of recognition and an award. Our work included establishing a strict compliance program and providing dust monitors to work with our client's field staff and contractors.

**Fire Department Hazardous Materials Permit and Safety Audit, Venetian** - Converse performed a hazardous materials and safety audit of the Venetian Flight Hangar facility located at McCarran Airport. Converse prepared the Hazardous Materials permit application, as well as applications for Hangar Operations and the use of oxygen. In addition, a safety audit was conducted to assure compliance with OSHA and EPA regulations.

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## Regulatory Compliance

**Evaluation of Fire Protection Re-Use Water System, Reliant Energy, Primm, Nevada** – As Environmental Division Manager, Mr. Goebel supervised work conducted at this site, which included researching analytical methods, assessing human health risks, reviewing treatment standards for potable versus wastewater, sampling treated water, reviewing the process, and preparing the report, which will be used to establish future protocols. Converse conducted evaluation of water quality standards and history of re-use water systems as it relates to risks to fire fighters. This includes water quality testing, engineering design review, risk assessment reviews, reporting, and public presentations.

**Risk Assessment Review, Clark County Detention Center, Clark County Real Property Management** – Mr. Goebel oversaw the completion of soil sampling in accordance with an Environmental Stewardship Plan at the Clark County Shooting Complex. Work included collecting surface soil samples throughout the Complex for pH analysis. Converse staff conducted soil sampling activities for a total of 36 surface soil samples at the Shotgun Center, Public Rifle/Pistol Center, and Education Center. In each defined area, soil was collected from the top 1-2 inches at 10 discrete locations.

**Risk Assessment Review, Clark County Detention Center, Clark County Real Property Management** - The project involved conducting an in depth review of historical analytical data and a risk assessment conducted by others. Additional responses and collection of data was recommended pertaining to groundwater impacts along with vapor intrusion recommendations for the subject property. Through our efforts, we assisted the County in creating a better understanding of the possible health risks to the inmates along with Clark County Employees.

**Compliance Audits, Howard Hughes Corporation** - Provided tenant reviews for several property owners who had concerns regarding new tenant liability. The audits included researching tenant regulatory history, proposed operational issues, and permit requirements.

**Risk Assessment, Indian Health Services** - Prepared risk analysis for a remote Indian Health Services hospital site that was impacted by hydrocarbons. The risk analysis work included analyzing soil gas results, ambient air results, and groundwater results. The risk analysis report was prepared for EPA Region IX and discussed potential air exposure, soil exposure, and groundwater exposure using OSHA standards and the ASTM Risk based Corrective Action Standard.

**Drug Lab Remediation, Mohave County** - Supervised a crew during removal and sampling of the interior of a cabin. The cabins were owned by a county agency. The interior was being removed because the cabin had been used as a drug lab.

**Compliance Audit, Friendly Ford** - Conducted a compliance audit for an automobile dealership. Work included identifying potential waste issues and management practices that would be considered a liability.

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**AST Installation Specification, Clark County Department of Aviation** - Prepared technical specifications for several aspects of work, including tank installation, tank removal, and remediation systems installation. The specifications were performed in accordance with the AIA standard for a county agency.

**RCRA Compliance Audits, Dermody Properties** - Mr. Goebel completed several RCRA audits for this commercial developer to assess their tenant's activities. These audits included assessing various aspects of RCRA compliance, including labeling, manifesting, storage, handling and disposal. It also included assessing a wide array of hazardous waste streams.

**Industrial Plant** - Mr. Goebel performed a RCRA audit of this confidential client to assess RCRA compliance. The audits included assessing various aspects of RCRA compliance, including labeling, manifesting, storage, handling, and disposal.

**Waste Management, Clark County School District** - Mr. Goebel managed hazardous waste assessment for the County school district when several drums of waste were inappropriately deemed hazardous. The State issued a Warning Letter and a Finding of Alleged Violation (FOAV) was pending to be issued. We requested enough time to more accurately characterize the waste and were able to demonstrate that the waste was not hazardous.

**Monitoring Well Sampling Compliance, Montrose Chemical** - After closure of two RCRA ponds, Mr. Goebel managed the sampling of four groundwater monitoring compliance wells for the RCRA facility. Work also included pumping leachate solution from a recovery trench installed downgradient of the former ponds and coordinating the proper transportation and disposal of the hazardous waste stream.

**Unpermitted Discharge, Clark County School District, Clark County, Nevada** - A subsurface geophysical survey was completed for roadway improvements along Rochelle Avenue. After hand auguring to sample and characterize the waste, work consisted of coordinating the excavation, transportation, and disposal of hazardous waste soil. Mr. Goebel supervised the installation of monitoring wells, the groundwater remediation system, designed the groundwater remediation system, supervised the preparation of architectural specifications for the installation of the groundwater remediation system, and reviewed reports.

**Nevada Division of Environmental Protection, Bureau of Corrective Action** - Mr. Goebel managed the environmental mitigation, assessment, and remediation (EMAR) contract with the State. The contract was for sites with non-responsive responsible parties who are involved in legal action.

**CAPP Audit, NV Energy** - Mr. Goebel coordinated qualified staff to complete a Chemical Accident Protection Plan (CAPP) audit for the Silverhawk energy plant near Apex, Nevada. The review was performed to provide an internal review of the program to assess compliance. Our review was based on field observations at the site. To facilitate the review, the Converse team used the form Verification of Compliance Audits Program, Nevada Division of Environmental Protection, Chemical Accident Prevention Program Element Audit Checklist.

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## **Brownfields**

**Victorian Square Brownfields Reuse, Sparks, Nevada** - Mr. Goebel was the contract manager during a Brownfields cleanup and reuse for downtown redevelopment. This is a major redevelopment area for the city of Sparks and includes the historical business district. The City was incorporated in 1905 and was developed to meet the needs of the railroad. Many of the historical businesses have contributed to the environmental concerns that have been identified in the area. Mr. Goebel assisted the city in evaluating properties to purchase by way of reviewing 25 Phase Is. Properties included historic casinos, dry cleaners, and other retail shops that used UST for heating oil.

**Mineral County Brownfields Assessments, Hawthorne, Nevada** - Mr. Goebel was the contract manager during an EPA Brownfields grant for hazardous material and petroleum. Under this program, Mr. Goebel oversaw 35 Phase I and 15 Phase IIs for prioritized properties within Mineral County. To assist with the potential land reuse development of these properties, Converse provided GIS support to land designated for sale and reuse. GIS includes creating a Geodatabase that has the ability to be linked to a GIS map for the properties within the study area. The purpose of the database is to maintain a user friendly electronic system for managing Brownfield sites.

**City of Grass Valley Brownfields Assessment Grant, Grass Valley, CA** - Mr. Goebel was the contract manager during an EPA Brownfields grant for the City of Grass Valley Community-wide EPA Brownfields Grand program. Under the grant the community is required to perform Phase I and Phase II investigations. This included developing a Quality Assurance Project Plan (QAPP) and Field Sampling Plans (FSP) for EPA's approval. These investigations were performed under the oversight of Mr. Goebel. Numerous parcels have completed Phase I and Phase II investigations.

**Lyon County Brownfield Collation Assessment Grant, Lyon County, NV** - Mr. Goebel was the contract manager during an EPA Brownfields coalition grant for the communities of Yerington, Fernley, and Lyon County. Under the grant, the community is required to conduct public outreach, develop a site inventory, prepare a Quality Assurance Project Plan (QAPP), perform Phase I and Phase II investigations, and develop clean up and reuse strategies. Mr. Goebel coordinated resources to facilitate community interest to make this grant viable.

**Northern Nevada Development Authority Brownfields Coalition Community Wide Assessment Grant, Carson City and Douglas County, NV** - In early 2018, Converse was retained by the NNDA to conduct work under its Brownfields Community-Wide Site Assessment grant for properties in Douglas County and Carson City. Work underway includes completing 20 ESAs, 10 Phase II ESAs, 5 Analysis of Brownfields Cleanup Alternatives (ABCAs), and 5 Reuse Plans. One unique element that we are working on is that we are leveraging our contacts to promote redevelopment in challenging areas within Douglas County. We have already completed a certified site package for Bentley properties to help facilitate and open possible new developments. In addition to completing this high priority certified site package, we have already completed 11 EPA-approved Phase I ESAs and are currently working on 2 more Phase Is and a Phase II ESA. Also, we have completed an EPA approved Quality Assurance Plan, 4 Brownfields Fact Sheets, weighted Site Ranking Criteria, a Community Outreach and Involvement Plan, and completed Area Wide Plans for both Carson City and Douglas County.

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## Environmental Assessments

**Environmental Assessment, NV Energy** – Mr. Goebel scoped and coordinated work required for an Environmental Assessment (EA). The EA was required by the BLM for water rights land acquisition. The EA required addressing numerous facets, including biology, archaeology, mining, environmental justice, visual, water resources, geotechnical, air quality, and socio-economic factors. The EA included several separate sites within one valley. The EA was submitted to meet the requirements of the BLM.

**Hidden Valley Environmental Assessment, Hidden Valley, Nevada** - Mr. Goebel coordinated work for an Environmental Assessment (EA) in accordance with BLM requirements. The EA was required for siting water resource wells for the Harry Allen Power Station. The EA included evaluating cultural resources, endangered plants and animals, mining, geology, water resources, air quality, environmental justice, socio-economic resources and visual resources.

**Environmental Assessment (Nevada Power Company)** - The work consisted of completing an Environmental Assessment (EA) in accordance with BLM requirements. The EA is required for siting water resource wells for the Ely Energy Center. The EA included evaluating cultural resources, endangered plants and animals, mining, geology, water resources, air quality, environmental justice, socio-economic resources, and visual resources. Our work helped ensure NPC is able to serve Clark County's energy needs.

## Risk Assessment

**Risk Analysis for Development of Former UPRR Site, Las Vegas, Nevada** - Converse completed a qualitative and quantitative risk analysis for the 61-acre parcel formerly operated by Union Pacific, which is now owned by the City of Las Vegas. We completed a comprehensive risk analysis that identified areas of concern, potential of encountering contamination, free product, dissolved product, and reviewed the agreement between the former owners and Union Pacific to identify potential issues. Mr. Goebel was the client contact and oversaw completion of the risk analysis for the City. His work included reviewing former contracts and agreements and initiating risk analysis for future workers and occupants of the site.

**Sunrise Acres Elementary School Risk Analysis for Development (Clark County School District), Hadland Park, Las Vegas, Nevada** - Converse completed a quantitative risk assessment for two parcels of land that were owned by the Clark County School District and the City of Las Vegas. The work was performed for the school district to identify potential health risk issues for building a school in an area where there was a closed groundwater remediation site. The work included compiling existing data, collecting additional data, and working with a risk assessor to derive Site Specific Target Levels (SSTLs) for the site. Based on our work, the site was developed for use as a school and City Park.

## Discharge Permitting Compliance and Dewatering

**Higgins Generating Station Water Sampling Laboratory Services, Jean, NV** – Mr. Goebel is the Principal in charge for this project, in which he supervises the collection of water samples, as required by agreement with CCFD and NDEP Discharge Permit, and collection of verification samples of water supply, as needed.

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**Water Quality Sampling, Southern Nevada Water Authority** - Our work involved water quality sampling to help the SNWA comply with requirements of National Pollutant Discharge Elimination System (NPDES) permits that were issued for the installation of Intake No. 3 at Lake Mead. Our portion of the project included preparation of a Sampling and Monitoring Plan, a Health and Safety Plan, weekly sampling of various locations within Lake Mead, data review and evaluation, and preparation of monthly Discharge Monitoring Reports (DMRs), as required by the NPDES permits.

**Stormwater Management and Sampling, Republic Services, Former Sunrise Landfill** - Design and management of stormwater monitoring and reporting program for Republic Services.

**SPCC Plan Preparation, Lasco Bathware** - Converse prepared a Spill Prevention Control and Countermeasure (SPCC) Plan for a plant that has two 6,000-gallon diesel aboveground storage tanks on-site. Converse conducted a site visit, conducted interviews with Lasco personnel, and prepared the final SPCC Plan.

**Silver Bowl Park, Clark County Risk Management** - Converse was initially contracted to prepare a monitoring well design document and install two groundwater monitoring wells at the Silver Bowl Park. The purpose of the monitoring wells was to evaluate the effect of using tertiary treated, filtered, and disinfected effluent supplied by the Clark County Water Reclamation Facility via an irrigation system at the Silver Bowl. Converse was subsequently contracted to sample the wells on a quarterly basis and submit the results, along with the results of discharge effluent sampling conducted by others, on Discharge Monitoring Reports to the NDEP. Annually, Converse prepares a report to the NDEP discussing the past year's worth of monitoring and evaluates the nitrate usage at the park.

**Evaluation of Public Water System, Clark County Risk Management** - Converse was contracted to collect a groundwater sample from a well supplying the Sandy Valley Library, Fire Dept. and Senior Center to be analyzed for coliform. This was a result of the CC Parks and Recreation receiving a letter from the SNHD informing them that Public Water System ID #NV0000317 was in violation of the maximum contaminant level for total coliform. Coliform was absent and Converse was then contracted to evaluate the distribution system. A total of 21 service connections were identified. These service connections were each sampled for coliform over a 4 week period and found to be absent. Converse followed strict sampling guidelines that included cleaning the service connections with a bleach solution, running both hot and cold water for a specified period of time. Once coliform was determined to be absent from each service connection, the boil water restriction imposed by the SNHD on the system was lifted. Converse will be conducting a year's worth of follow up sampling.

**Dewatering Treatment, Sampling and Reporting, Caesars Palace** - Converse prepared and submitted a National Pollutant Discharge Elimination System (NPDES) permit application for construction activities at the site. Two separate groundwater treatment systems were designed and installed at different locations on the property to treat groundwater impacted with perchloroethylene (PCE). Converse continues to conduct quarterly sampling and operations and maintenance activities at the site and prepare quarterly Discharge Monitoring Reports (DMRs), as required by the NPDES permit. Our rapid response to the discovery of PCE in the discharge water allowed the contractor to continue work with no delays. We were able to arrange to have a treatment system delivered to the site and assembled within one day of the discovery.

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**The Venetian** - Mr. Goebel was the supervisor for work conducted to investigate the source of hydrocarbons and solvents in the groundwater. Hydrocarbons were encountered during dewatering activities. Mr. Goebel oversaw the design of the treatment system for the site. This included sizing the air strippers, carbon vessels, and assessing the aquifer properties. He also provided regulatory interfacing to acquire the NPDES permit. Continuous dewatering of the structure requires continuous operation of the treatment system, which collects impacted groundwater from the french drain surrounding the structure.

**Harrah's Las Vegas Casino** - Mr. Goebel was the supervisor for work conducted to investigate the source of hydrocarbons and solvents in the groundwater. Hydrocarbons and solvents were encountered during dewatering activities for the sub-road entrance into Harrah's. Mr. Goebel oversaw the design of the treatment system for the site. This included sizing the carbon vessels and assessing the aquifer properties.

**Bridger & 4th Street Project** - Mr. Goebel was the supervisor for work to conduct construction dewatering and implement subsequent carbon treatment for shallow groundwater. Mr. Goebel oversaw the design of the treatment system for the site. This included sizing the carbon vessels and assessing the aquifer properties.

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**Desert Inn Arterial** - Mr. Goebel was the supervisor for work conducted to mitigate TCE in the groundwater. TCE was encountered during dewatering activities. Mr. Goebel oversaw the design of the treatment system for the site. This included sizing the carbon vessels and assessing the aquifer properties. He also provided regulatory interfacing to acquire the NPDES permit. Due to the expense of treating Nitrate concentrations, he assisted in acquiring a temporary permit from the Clark County Sanitation District to discharge TCE-treated water to their sewer system.

**Las Vegas Convention Center South Expansion** - During construction of a major south expansion of the existing facility, Mr. Goebel assisted in dewatering treatment, which was required in an area documented to contain Trichloroethylene (TCE) and high nitrate values. He provided permitting assistance, regulatory interfacing, and construction dewatering treatment of TCE for this expansion project. The treatment system consisted of reusing the water for beneficial use (dust control).

## Landfills

**Compliance Well Sampling, Republic Services** - Manage ongoing quarterly sampling work at the Apex Regional Landfill for four compliance wells. This work is required by federal regulations and is under the jurisdiction of EPA Region IX and Clark County. The sampling protocol meets required quality control requirements.

**Investigation Well Sampling, Republic Services** - Managed initial groundwater sampling of two wells and a spring located downgradient of the Sunrise Landfill. This work was part of an investigation related to requirements by EPA Region IX. The sampling included purging wells that varied in depth from 100 to 300 feet. The scope was also modified to include sampling of a seep that began to discharge after a significant rain event. This additional sampling was completed on short notice and was feasible due to our local presence. The short notice was necessary to ensure a sample was obtained before the seep disappeared. The sampling protocol met required quality control requirements.

**Landfill Assessment, City of Henderson** - The former landfill in Henderson is undergoing assessment and mitigation prior to reuse. Working with CH2M Hill, Converse completed the fieldwork for assessing the extent of the waste. Our work included trenching through various areas of waste to determine its depth and lateral extent. After completing the trenching, we also collected samples in native soil to assess the potential impact to soil. This work was completed per an approved work plan, sample plan, and health & safety plan.

**Landfill Consulting Services, Republic Services of Southern Nevada** - Converse performs quarterly surface emissions monitoring, perimeter monitoring, gas flare sampling, groundwater monitoring, and gas well balancing in accordance with EPA requirements. In addition to these, Converse has also provided Construction Quality Assurance during waste cell construction, landfill gas piping expansion work, subsurface investigations, industrial hygiene assessments, and related GIS work.

**Lysimeter Installation, Republic Services of Southern Nevada** - Converse oversaw the installation of two high pressure vacuum lysimeters beneath module 5 of the Laughlin Landfill. The lysimeters were installed using sonic drilling techniques at inclinations of approximately 30 degrees from horizontal. Converse presently performs quarterly sampling of the lysimeters for compliance with Clark County requirements.

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## **Landfill Assessment, Republic Services of Southern Nevada, Clark County, Nevada -**

Converse supported ongoing work at the Republic Services of Southern Nevada former Sunrise Mountain Landfill. Converse has been providing 1-2 staff on a daily basis. Our work includes supporting the hydrogeologic investigation, helping to define the waste limits, determining the suitability of the existing cap material, and conducting surface emission monitoring. In addition, we are providing the stormwater monitoring for the landfill, which consists of sampling discharges from various locations where stormwater exits the site during precipitation events.

## **Oil Recovery and Mitigation**

**Oil Remediation, Quaker State Minit Lube –** For numerous sites, oversaw the removal of new oil and used oil USTs from express oil change facilities. Several sites included additional soil excavation. One site resulted in identifying gasoline constituents from a previous gasoline facility at this site.

**Oil Remediation, Clark County School District -** Initiated hydraulic oil release investigations that included excavating source material, monitoring, and recovering floating hydraulic oil.

**Oil Use Assessment, Friendly Ford -** Several oil/water separators at an auto facility were sampled to help the client manage the waste. Some of the tanks contained solvents that resulted in hazardous waste.

**Former Asphalt Batch Plant, Lewis Homes -** Performed sampling of a sludge material that was discovered during utility trenching at a new subdivision. The sludge material resulted from a former asphalt batch plant.

## **Hydrocarbon Assessment and Remediation**

**Risk Assessment, Sunrise Acres Elementary School, Clark County School District, Las Vegas, Nevada -** Converse completed a quantitative risk assessment for two parcels of land that were owned by the Clark County School District and the City of Las Vegas. The work was performed for the school district to identify potential health risk issues for building a school in an area where there was a closed groundwater remediation site. The work included compiling existing data, collecting additional data, and working with a risk assessor to derive Site Specific Target Levels (SSTLs) for the site. Based on our work, the site was developed for use as a school and City Park.

## **R.C. White Transportation Facility Groundwater Remediation, Clark County School District**

- Hydrocarbon contamination was discovered during the removal of six USTs in 1992. Converse oversaw the excavation of these USTs and approximately 2,800 tons of impacted soils. Converse subsequently designed and oversaw the installations of pump and treat and soil vapor extraction systems related to this release. In August 2001, Converse began hydrogen peroxide injections at the site. Overall, remediation has reduced BTEX concentrations in the groundwater beneath the site by approximately 80%. Presently, Converse is preparing a conceptual site model for the NDEP.

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**Groundwater Remediation, Longley Construction** – Mr. Goebel managed UST removal and over-excavation of soil to remove source hydrocarbons. Subsequently, he initiated assessment and remediation of hydrocarbon contaminated groundwater beneath the site. Monthly hydrogen peroxide injections were employed. The site underwent closure monitoring at the direction of the Nevada Division of Environmental Protection. Because of fluctuating concentrations, Mr. Goebel oversaw the implementation of a risk assessment and the associated activities required by NDEP to achieve site closure.

**UST System Removal Oversight, Clark County Department of Aviation** - During the demolition of the former car rental facilities, multiple underground storage tank (UST) systems were removed. Converse was contracted by the Department of Aviation to represent the County's interests and oversee removal of all of the UST systems to ensure that the work was done according to applicable regulations. Converse's efforts assisted the Department of Aviation with having their property returned to them with impacts removed to the extent possible.

**Venetian North Tower Soil and Groundwater Remediation, Venetian Casino and Resort** - Converse oversaw the segregation and removal of approximately 1,050,000 cubic yards of soil, with approximately 170,558 cubic yards exhibiting hydrocarbon impacts. Converse provided on-site analytical capabilities during this process, which expedited the removal of soils to appropriate off-site locations. During this work, Converse also designed, permitted, and implemented a groundwater remediation system capable of treating 1,200 gpm of hydrocarbon impacted groundwater. This work was part of the largest excavation ever attempted on the Las Vegas Strip.

**Venetian South Tower Soil and Groundwater Remediation, Venetian Casino and Resort** - Converse installed 10 groundwater monitoring and remediation wells to investigate the extent of groundwater contamination on the property and to initiate interim remediation of groundwater before commencement of construction activities on the south tower. Converse also supervised trenching of approximately 600 linear feet of soil in an attempt to ascertain the source of hydrocarbon contamination in the area. Converse also assisted in the segregation of impacted soils during excavation activities. A treatment system incorporating air strippers was then designed and constructed. Converse is presently performing monthly discharge sampling for this facility.

**Underground Storage Tank Removal Oversight, Nevada Department of Transportation (NDOT)** - Converse oversaw the removal of 5 underground storage tanks (USTs) and associated dispensers/piping from a former gas station as a part of the US 95 Expansion Project for the Nevada Department of Transportation. The USTs were installed in 1992 and were constructed of double walled fiberglass. The associated piping was also double walled fiberglass. In addition, three hydraulic lifts and associated reservoirs were removed from inside the service building located at the site. Converse documented the conditions of the UST system during removal; conducted appropriate sampling of native soil beneath the tanks, product dispensers and hydraulic lifts; and prepared documentation for submittal to the Southern Nevada Health District to facilitate closure of the facility.

**Hydrocarbon Soil Remediation, Pardee Homes** - The site consists of approximately 160 acres of land under development as a single family residential development. Formerly, the site was used as a gravel pit and cement/asphalt plant. Facility operations, office buildings, a garage/lube building, truck scales, and a concrete batch process plant were located on the southwest portion

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of the site. Vehicle fueling and maintenance operations were conducted in this area and there were multiple underground storage tanks. Aboveground storage tanks, an asphalt plant, and an undocumented landfill were formerly located on the southeast portion of the site. Phase I and Phase II site assessments conducted by Converse identified several areas of concern associated with the former uses of the site. An aggressive remedial approach was undertaken consisting of the excavation and removal of impacted soil combined with completion of a Risk Evaluation for impacted soil that was not removed. A “no further action” determination was issued in March 2007. This project likely represents the largest hydrocarbon soil remediation project in Nevada.

**Site Characterization and Remediation, Esslinger Family Trust** - The project site was formerly used as a gasoline service station. During UST removal activities, petroleum hydrocarbon impacts were noted. Site characterization activities were conducted, followed by remediation. Remediation consists of groundwater extraction (via over purge events) and hydrogen peroxide injections. Converse is conducting a risk assessment for this site to establish acceptable site specific target levels for contaminants of concern in an effort to gain a “no further action” determination from the NDEP. This site is eligible for reimbursement under the State of Nevada Petroleum Fund and Converse works closely with the owner to ensure maximum reimbursement of costs. We were able to enroll our client in the Petroleum Fund, allowing a significant amount of the work to be reimbursed through the state program. Our remedial efforts have proven to be effective and, combined with our ongoing risk assessment, have been designed to assist in closing this project for our client.

**Groundwater Assessment and Remediation, Clark County Department of Aviation** - Converse conducted a site characterization to evaluate the extent of petroleum hydrocarbon impacts and MTBE impacts to groundwater at the site. An interim corrective action plan was submitted to the State of Nevada, Division of Environmental Protection for conducting interim remedial efforts. Remedial efforts consist of conducting dual phase extraction twice monthly. The UST system has been removed and additional remedial measures consisting of excavation and removal of impacted soil was conducted. Converse was able to negotiate an interim remedial effort with the NDEP due to the ultimate facility demolition. Our approach has shown effective results without having to install a remediation system that would have been destroyed during facility demolition activities, thus resulting in significant expense to our client. Converse worked closely with staff of the NDEP to obtain full coverage for this project from the State of Nevada Petroleum Fund.

**Free Product AST Assessment and Remediation, NV Energy, Moapa, Nevada** - Converse assisted NPC to address source reduction and remediation of free-phase hydrocarbons, evaluation of potential impacts to an operating dewatering system, and determination of potential impacts to an adjacent river. Currently, a pump and treat product remediation system is reducing product levels at the site.

**AST Terminal; Mitigation, Assessment, and Remediation, CALNEV Pipeline Company, Las Vegas, Nevada** - Converse worked at several CALNEV sites. After completing the assessment work and completing design specifications at their AST bulk storage terminal, we initiated an ambitious remediation program, which incorporated air sparging for the dissolved-phase plume, pump and treat for the free product, and soil vapor extraction for the vadose zone. We also provided assessment and interim remediation services for free product along a fuel pipeline where it crosses below a county intersection. This includes product recovery (90 feet below ground surface) occurring concurrently with assessment.

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**Risk Analysis for Development of Former UPRR Site, City of Las Vegas, Nevada** - Converse completed a qualitative and quantitative risk analysis for the 61-acre parcel formerly operated by Union Pacific, which is now owned by the City of Las Vegas. We completed a comprehensive risk analysis that identified areas of concern, potential of encountering contamination, free product, dissolved product, and reviewed the agreement between the former owners and Union Pacific to identify potential issues. Mr. Goebel was the client contact and oversaw completion of the risk analysis for the City. His work included reviewing former contracts and agreements and initiating risk analysis for future workers and occupants of the site.

**Hydrocarbon Monitoring AST Release, Lake Mead Marina** - Conducted investigation and remediation of a fuel release at a marina along the shore of Lake Mead. Work consisted of free product skimming from an open excavation and subsequent groundwater monitoring.

**Hydrocarbon Delineation Along Runway, Tonopah Test Site** - Completed drilling for soil sampling and soil vapor extraction testing on the Tonopah Test Range. Drilling activities included drilling with a rotary rig supplemented with a compressor and drilling foam adjacent to an active runway that was being utilized by the F-117 Stealth Fighter jets.

**Hydrocarbon Monitoring, Nellis AFB** - Monitored excavation of soil at an AST site during conversion from underground pipe manifold to above ground manifold. Also prepared the Stormwater Plan and the Health and Safety Plan for the site.

**Risk Assessment and Hydrocarbon Remediation, Private Developer, Clark County, Nevada** – Converse worked with a national developer to take an impacted property that was formerly used for industrial processes and make it a marketable product. This process required major investment in the property, including treatment of over 400,000 tons of hydrocarbon-impacted soils. This also includes a detailed risk evaluation to address potential future concerns from users of the property. The risk assessment evaluated potential exposure pathways for VOCs, hydrocarbons, metals, and pesticides.

**The Venetian** - Mr. Goebel was the supervisor for work conducted to investigate the source of hydrocarbons in the groundwater. Hydrocarbons were encountered during dewatering activities. Mr. Goebel oversaw the design of the treatment system for the site. This included sizing the air strippers, carbon vessels, and assessing the aquifer properties. He also provided regulatory interfacing to acquire the NPDES permit. Continuous dewatering of the structure requires continuous operation of the treatment system, which collects impacted groundwater from the french drain surrounding the hotel.

**Harrah's Las Vegas Casino** - Mr. Goebel was the supervisor for work conducted to investigate the source of hydrocarbons and solvents in the groundwater. Hydrocarbons and solvents were encountered during dewatering activities for the sub-road entrance into Harrah's. Mr. Goebel oversaw the design of the treatment system for the site. This included sizing the carbon vessels and assessing the aquifer properties.