

❖ Environmental Data Collection in Support of Permit Acquisition and Compliance

Project Name	Services Provided
A Mountain	<ul style="list-style-type: none"> Groundwater Sampling: Monitoring well sampling
AFP44	<ul style="list-style-type: none"> Groundwater Treatment Plant (GWTP) carbon scrubber vapor sample collection: weekly, monthly and quarterly GWTP influent and effluent sampling Regional groundwater sampling, project supervision, and field coordination. Monthly shallow groundwater zone (SGZ) water sampling Monthly soil vapor monitor well sampling (Tedlar bags and SUMA canisters) Monthly Dual Phase Extraction Well sampling Discrete interval sampling Transducer installation and data downloads Grab sampling during well installation Low-flow sampling NOI preparation and coordination, measured GPS coordinates and well locations, and develop well cartoons and well data spreadsheets Soil Vapor Extraction Treatment System sampling (Tedlar bags and SUMA canister) Potassium Permanganate (KMno4) injection and monitoring tests Regional water level measurements GAC vapor sampling
AZ Air National Guard	<ul style="list-style-type: none"> Treatment system parameter monitoring and sampling Quarterly groundwater monitoring
Broadway Landfill	<ul style="list-style-type: none"> Groundwater Sampling
Broadway-Pantano	<ul style="list-style-type: none"> Discrete interval sampling Groundwater sampling
Carlota Copper Mine	<ul style="list-style-type: none"> Stream flow data downloads from flume monitoring stations Dedicated pump removal, sample pump installation, well purge, and removal
CLFI	<ul style="list-style-type: none"> Groundwater sampling
Congress Landfill	<ul style="list-style-type: none"> GPR measurements Condensate sampling Shallow zone monitor well sampling Daily water level measurements Hand bail de-watering leachate collection wells
Conn-Selmer Nogales	<ul style="list-style-type: none"> Quarterly groundwater sampling utilizing passive diffusion and ridged porous polyethylene bags Provide data reduction and syntheses services for report preparation. Monthly groundwater level measurements Monthly GWTP influent and effluent sampling Provide project management, coordinate between regulatory agencies, conduct study area surveys, site inspections, participate in ADEQ audits, develop sampling plan, and health and safety documents Sample and regulate effluent storage impoundment.
Cyprus Tohono Mine	<ul style="list-style-type: none"> Install temporary submersible pump, purge well, and sample
Evergreen Air Center	<ul style="list-style-type: none"> Quarterly installation of temporary submersible pumps, purge wells, and samples
FMI Ajo	<ul style="list-style-type: none"> Install temporary submersible pump, purge well, and sample Measure water levels across study area
FMI Bisbee	<ul style="list-style-type: none"> Install temporary submersible pump, purge well, and sample Discrete interval sampling Soil sampling
FMI Sierrita	<ul style="list-style-type: none"> Monthly/Quarterly groundwater sampling, low flow sampling Install temporary submersible pump, purge well, and sample
Ft. Lowell	<ul style="list-style-type: none"> Install temporary submersible pump, purge well, and sample
Harrison Landfill	<ul style="list-style-type: none"> Soil Vapor Extraction (SVE) Treatment System monitoring and sampling SVE well field data collection; vacuum, velocity and temperature measurements from extraction wells Groundwater monitor well sampling
Ina Road Landfill	<ul style="list-style-type: none"> Install temporary submersible pump, purge well, and sample
Los Reales Landfill	<ul style="list-style-type: none"> Groundwater Treatment Plant (GWTP) carbon scrubber vapor sample collection GWTP influent/effluent water sampling Landfill leachate sampling Monthly groundwater level measurements Quarterly installation of temporary submersible pumps in non-dedicated monitor wells, purge well, and sample SVE well field data collection; vacuum, velocity and temperature measurements from extraction wells Sample soil vapor extraction and soil vapor monitor wells utilizing Tedlar bags and vacuum box Discrete interval sampling
Mission Linen WQARF sites	<ul style="list-style-type: none"> Dual phase treatment system performance monitoring; vacuum, velocity and temperature measurements.
Murietta Park	<ul style="list-style-type: none"> Install temporary submersible pump, purge well, and sample
Oracle Ridge Mine	<ul style="list-style-type: none"> Install temporary submersible pump, purge well, and sample Monthly groundwater sampling from monitor wells with dedicated pumps. Storm water sampling (on call) Wetland sampling Monthly spring flow survey and sampling
Phoenix Goodyear Airport South	<ul style="list-style-type: none"> Semiannual and annual groundwater sampling utilizing Hydrasleeve sample bags and from dedicated pump equipment. Monthly regional water level measurements Weekly influent and effluent sampling from multiple GWTS Monthly sampling of public water systems
Pioneer Paints	<ul style="list-style-type: none"> Install temporary submersible pump, purge well, and sample
Price Service Center / TFS#10	<ul style="list-style-type: none"> Weekly depth to groundwater hydrocarbon free product thickness measurements with interface probe SVE well field data collection; vacuum, velocity and temperature measurements from extraction wells Sample soil vapor extraction and soil vapor monitor wells utilizing Tedlar bags and vacuum box Quarterly groundwater sampling from monitor wells utilizing portable 2" RediFlo submersible pumps Monthly influent and effluent sampling of groundwater and SVE treatment systems
Prudence Landfill	<ul style="list-style-type: none"> Install temporary submersible pump, purge well, and sample
Rio Nuevo	<ul style="list-style-type: none"> Install temporary submersible pump, purge well, and sample



Rosemont Copper Mine	<ul style="list-style-type: none"> • Monthly spring flow observations • Monthly depth to groundwater level measurements • Quarterly spring water sampling • Monthly transducer data downloads from monitor wells • Quarterly groundwater sampling from monitor wells utilizing Well Sample Rig • Transducer data, depth to water measurement data, groundwater / spring water sample data and stream flow data reduction and synthesis for report preparation • Depth to groundwater measurements and groundwater parameter measurements in support of aquifer testing • Staffing aquifer testing
Santa Cruz River	<ul style="list-style-type: none"> • Transducer data downloading
Silverbell Landfill	<ul style="list-style-type: none"> • Install temporary submersible pump, purge well, and sample • SVE well field data collection; vacuum, velocity and temperature measurements from extraction wells • Sample soil vapor extraction and soil vapor monitor wells utilizing Tedlar bags and vacuum box • Monthly influent and effluent sampling of soil vapor from the SVE treatment system • Quarterly groundwater sampling from monitor wells utilizing portable 2" RediFlo submersible pumps
TARP Remediation Facility/Tucson Water	<ul style="list-style-type: none"> • Install temporary submersible pump, purge well, and sample • SUMA canister sampling of vapor emissions
TCC/HQUST	<ul style="list-style-type: none"> • Install temporary submersible pump, purge well, and sample
TEP Nogales	<ul style="list-style-type: none"> • Install temporary submersible pump, purge well, and sample
TIA	<ul style="list-style-type: none"> • Provide sampling support with existing dedicated pump equipment; connect and purge well and transport purge water.
Toole Ave	<ul style="list-style-type: none"> • SVE well field data collection; vacuum, velocity and temperature measurements from extraction wells • Sample soil vapor extraction and soil vapor monitor wells utilizing tedlar bags and vacuum box • Monthly influent and effluent sampling of soil vapor from the SVE treatment system
Tucson Water, various sites	<ul style="list-style-type: none"> • Purge well and collect samples
Tumamoc	<ul style="list-style-type: none"> • Install temporary submersible pump, purge well, and sample
UofA Farms well	<ul style="list-style-type: none"> • Install temporary submersible pump, purge well, and sample
Vincent Mullins Landfill	<ul style="list-style-type: none"> • Install temporary submersible pump, purge well, and sample
WQARF Sites	<ul style="list-style-type: none"> • Install temporary submersible pump, purge well, and sample



❖ Environmental Treatment System Operation, Maintenance, Repair and Installation

Project Name	Services Provided
AFP44	<ul style="list-style-type: none"> • KMnO4 injections – potassium permanganate • Bio-trap installation • pH probe calibration in groundwater treatment plant • Maintenance of all electrical equipment including variable frequency drives • Calibration and repair of all instrumentation • Operation of treatment system • Programming and installation of Allen-Bradley PLC5 and SLC-500 controllers • Design and programming of Wonderware HMI operator interface • Condensate water removal from lines • Fiber optic cable splicing and repair, polishing connector faces for proper attenuation.
AZ Air National Guard	<ul style="list-style-type: none"> • Chemical feed pump installation • Routine maintenance and repair of GWERTS treatment system instrumentation, controls, communication equipment, and parts • Weekly/monthly routine GWETRS treatment system repair • Electrical, controls, and computer repair • Installation, repair, programming of PLC control equipment and instrumentation • Programming of Wonderware HMI computer interface • motor saver and flow meter repair/installation • Monthly system parameter monitoring
Broadway-Pantano	<ul style="list-style-type: none"> • GWTS operational maintenance and repair and scheduled PMs • VFD operations meetings • Housekeeping and landscaping • System programming and performance monitoring, operational code revisions • SVE weekly maintenance • Blower rotation; blower repair/replacement • NO2 replacement and restarts • Backflushing • Injection testing • Air-vac repair, HMI program troubleshooting, TCSS module repair • Carbon sampling and carbon change; carbon vessel painting • Injection well backwash system switch over: component design and installation of conduit, trenching, well vault coring • Injection well transfer switch installation • AC repair • SVE/AI system maintenance: motor/blower rotation and repair • Transport drums into DROS compound
Congress Landfill	<ul style="list-style-type: none"> • GPR testing and recording • Stack removal and installation • Water line and irrigation system installation, repair, and replacement • Blower repair and replacement • Instrumentation calibration/repair • Installation of process controls, electrical wiring and conduits, air conditioner, GPR, condensation sump for bioreactor • Construction and installation of humidification drums • Mobile office installation • Pump and conduit installation/repair/replacement • Replace transformer for pump • Computer troubleshooting • Data logger repair • New bioreactor construction and installation
Conn-Selmer: Nogales, AZ	<ul style="list-style-type: none"> • Provide routine and unscheduled operational maintenance and repair of groundwater treatment system components in stripping towers, influent tanks, and effluent tanks • Purchase and install (variable frequency drive)VFD extraction well for groundwater treatment system; including electrical components, remote keypads, and fabrication of panels and enclosures • Treatment system containment floor epoxy • Disinfect stripping towers • Provide routine maintenance and repair of lined impoundment pond, including weed abatement and general landscaping.
Evergreen Air Center	<ul style="list-style-type: none"> • Install electrical system and SVE unit • Build CMU unistrut supports, buried at grade • Operational maintenance and repair of controls for SVE system
FMI Bisbee	<ul style="list-style-type: none"> • Sulfate characterization surface completion (above ground)
Harrison Landfill	<ul style="list-style-type: none"> • Operational maintenance and repair of soil vapor remediation system and controls • O&M Manual and report preparation • Treatment building lock repair and replacement • Blower repair and replacement • Sparge motor replacement • Plumbing repair • Trenching and installation of junction box and conduit • VFD fabrication and installation
Ina Road Landfill	<ul style="list-style-type: none"> • Operational maintenance, repair
Indian Oasis HS	<ul style="list-style-type: none"> • Install wiring for existing fire alarm system
Kinder Morgan Benson	<ul style="list-style-type: none"> • O&M for soil vapor extraction treatment system and service coordination • Generator and blower motor repair/system troubleshooting • System parameter recording and instrumentation calibration
Los Reales Landfill	<ul style="list-style-type: none"> • Treatment system daily operational maintenance, including transfer pump descaling, chlorine tank filling and cleaning, DAT tank and discharge tank cleaning, flowmeter cleaning, and pressure filter replacement • Operational maintenance and repair of instrumentation and control components: routine and emergency • System upgrades • Pond level reprogramming and system restarts • VFD repair and replacement • Flow meter and fittings repair and replacement • Breaker installation • (diffusion aeration tank) DAT tank cleaning and storage tank transducer repair
Marana School District	<ul style="list-style-type: none"> • Remove and replace wire for intercom and install switches in all classrooms



Mission Linen WQARF sites	<ul style="list-style-type: none"> • Troubleshoot and repair liquid ring pump • Repair/replace pump equipment units and motors • Remediation system repair: pumps, controls, heat exchanger; review drawings, decontamination • Replace cooler/heat exchange core • routine O&M • Install acoustic enclosure • Change dynalube sealing quarterly
Nearmont Landfill	<ul style="list-style-type: none"> • Pipe line and vapor probe repair
NOAO	<ul style="list-style-type: none"> • Upgrade system controls, fittings, and wiring
PGA South	<ul style="list-style-type: none"> • Replace existing discharge pipe and manifold at treatment compound • Routine and non-scheduled operation and maintenance of remediation treatment systems
Price Service Center / TFS#10	<ul style="list-style-type: none"> • Hydrocarbon vapor extraction • Operational maintenance and repair of controls and electronics, system optimization • Omega phone & phone line installation • Repair / replace 325 gallon poly tank • Paragon blower troubleshooting, repair, and replacement • Paragon system electrical repairs • Compressor repair • (total free product recovery) TFR pump installation • Skimmer pump depth calibration • Install new process controller and control board • TCAT system repair
Raytheon/Tohono O'odham Nation	<ul style="list-style-type: none"> • Operational maintenance / pH probe calibration of GWTP
Raytheon	<ul style="list-style-type: none"> • Install programmable logic controllers for well field
Rio Nuevo	<ul style="list-style-type: none"> • Bioreactor blower skid removal
Silverbell Landfill	<ul style="list-style-type: none"> • SVE/AI system operational maintenance, repair, and well field data collection • LF fire management • Blower rotation • LF gas measurements and monitoring • 300 gallon poly tank replacement • Lactate injection construction/installation/unload • Nutrient injection vault modifications • Condensate pipeline repair
Texas Instruments	<ul style="list-style-type: none"> • Pilot test of in-situ oxidation: SVMW and GW injection of KMno4 and tank modification • Move tank from SVMW to SVE • Provide 1200-gallon poly tank rental
TIA	<ul style="list-style-type: none"> • Troubleshoot VFDs and submersible motors for wells; replace motor and pump cable
Toole Ave	<ul style="list-style-type: none"> • Repair coordination, oversight, troubleshooting and maintenance • Stack installation and installation of hour meter • SVE/AI system construction and startup • Troubleshooting and sampling of SVE system; routine maintenance and scheduled PMs • Parameter recording and system restarts • Condensate line installation and parameter recording, tank plumbing • Routine system checks and sampling • Decommission SVE/AI system: remove piping, disconnect all electrical and gas lines, remove stack
Vincent Mullins Landfill	<ul style="list-style-type: none"> • SVE Operational maintenance & repair
Why Water Company	<ul style="list-style-type: none"> • Troubleshoot / repair/replace touch screen panel



❖ Monitoring Station Operation, Maintenance, Repair, and Installation

Project Name	Services Provided
Asarco Mine, Hayden	<ul style="list-style-type: none"> • Construct and provide power to 9 air monitoring stations: install conduit, install power poles and service entrance, pour concrete slabs, install chain link fence, install equipment, calibrate monitoring equipment, trench, level building pads, and install 40 foot meteorological tower.
Haunted Canyon	<ul style="list-style-type: none"> • Install and program well field measurement and control equipment • Perform routine maintenance, repair, and replacement of control system equipment • Calibrate and install Parshall flume open channel water flow meters/transmitters and creek water flow mitigation temperature controls • Install conduits, solar panel, radio, antenna, data loggers and electrical wiring & components
Oracle Ridge Mine	<ul style="list-style-type: none"> • Troubleshoot and replace iridium satellite modem (for stormwater monitoring station)
Rosemont Copper Mine	<ul style="list-style-type: none"> • Weir construction and installation
Tucson Water, various sites	<ul style="list-style-type: none"> • Install water well submersible pumps, variable frequency drives, level monitoring equipment, blowers, fans, pumps, and power distribution equipment.



❖ **Well Field Maintenance**

Project Name	Services Provided
A Mountain	<ul style="list-style-type: none"> • Replace well vault
ADEQ Elfrida	<ul style="list-style-type: none"> • Develop monitor wells: Surge and bail well to increase yield
AFP44	<ul style="list-style-type: none"> • Remove/repair/install/decontaminate pumps, electrical plug, pump end and motor, column pipe, sounder pipe, and motor wire for monitor wells and extraction wells • Repair well vaults • Cut, transport, prepare, and install new inductor pipes, sounder pipes, well seals, and customize well seal to fit specifications • Multiple well abandonments, to include notice of intent (NOI) preparation and waste disposal assistance, roll off, IDW consolidation • Pipe line repairs • Fabricate, install and paint bollards • Excavate around the high and low side of the pad and reinforce washout under and around pad and riprap an area extending outside the diameter of well pad with decorative stone to correct erosion damage • Fabricate and install locking well enclosures and install locks on existing vaults and straighten lock bars • Demo existing pads, form and pour new reinforced concrete pads to repair cracked/broken/unsecured well pads • Verify well abandonments, cut casings down, and demo well pads • Excavate fill from concrete vaults and determine integrity of well heads and wells due to issues locating wells in below grade cement vaults filled with dirt. • Repair spring-assisted closing mechanisms and fabricate new lock mechanisms. • Tremie bentonite into the annulus between well casing and borehole to repair washouts. • Determine if angled surface casing affects well casing; jackhammer out pad and mechanically straighten surface casing • Fabricate/repair/replace well caps and install expanding well plugs. • Install new submersible pumps, pump heads, motor, and splice kit • Install/maintain/repair irrigation and sprinklers • Repair Redi-Flow 2 pump and equipment • Repair and replace submersible pump equipment 500-gpm extraction wells • Repair and modify wells in Shallow Groundwater Zone • Monitor well development and repair • Well pad replacement and plug installation • Site demolition of soil vapor extraction pipelines • Video log wells • Repair concrete pads surrounding below grade well vaults. • Remove pump equipment from monitor well, replace worn components.
Asarco Mine Hayden	<ul style="list-style-type: none"> • Monitor well aquifer testing. Provided submersible pump, motor wire, electrical disconnect, flow meter, column pipe, sounder pipe, generator and staffing.
Asarco Mine Sahuarita	<ul style="list-style-type: none"> • Remove column pipe and troubleshoot pump, motor, and clean pump intake. • Measure total depth of well, surge and bail well to total depth, reinstall pump and motor. • Develop extraction and monitor wells; brush, swab, bail and purge. • Pull, repair, and reinstall submersible pump and motor • Extraction well flow optimization • Chemical and mechanical rehabilitation of injection wells • Remove and inspect equipment from wells
B-79 well	<ul style="list-style-type: none"> • Above grade well vault and reinforced concrete pad installation
BHP Mine	<ul style="list-style-type: none"> • Submersible pump removal and repair
Broadway-Pantano	<ul style="list-style-type: none"> • Landscaping • Graffiti and vandalism abatement, repair, and police reporting • Install and remove submersible pumps, column pipes, sounder pipes, and assemble flow meters and discharge manifolds • Provide maintenance on pump and generator • Conduct 12-hour aquifer tests • Fence/gate repair • Pipeline excavation and pipe repair
Carlota Copper Mine	<ul style="list-style-type: none"> • Well development • Conduct 24-hr production well aquifer testing. Provided submersible pump, motor wire, electrical disconnect, flow meter, column pipe, sounder pipe, generator and staffing. • Install purge pump, purge well, and remove pump. Swab, brush and bail • Assemble wellhead plumbing and install permanent pump and associated pipe and well seal. • New installation of dedicated submersible pumps, motors, power disconnects, pipe, custom well seals, concrete pads and well enclosures.
Caterpillar/Tucson Proving Ground	<ul style="list-style-type: none"> • Remove dedicated and reinstall pump equipment, inspect submersible motor and pump end • Well development: brush, swab, and bail well • Video logging of well • Disinfect well: pour calcium hypochlorite, energize pump, and recirculate groundwater; purge from well to in-house standards • Conduct 24-hr production well aquifer testing. Provided submersible pump, motor wire, electrical disconnect, flow meter, column pipe, sounder pipe, generator and staffing.
City of Tucson: Tucson Water, multiple sites	<ul style="list-style-type: none"> • Chemical and mechanical well rehabilitation for monitor wells: remove mineralization and bacteriological deposits, rehabilitation of Baroid AE sulfuric acid and MGA glycolic biocide chemicals; brush, bail, swab, purge • Pump installation/repair/replacement • Well repairs: pull pump and sounding pipe, replace bell reducer and nipple, reinstall pump and sounding pipe • Submersible pump equipment installation and well head repairs • Demo concrete pad and form/pour new pad; install new well vault • Remove and clean pump equipment and pipe • Remove obstruction from wells



Congress Landfill	<ul style="list-style-type: none"> • Landfill cap excavation and fissure repair • Well vault and casing repair and painting • Pipeline repairs and modifications • Remove obstructions from wells • Submersible pump installation/repair/replacement • Installation of concrete stands • Extraction/injection well plumbing • Monitoring point and new SVE/AI well installations with push/auger rig • Install plumbing for new air injection wells • De-watering well development • Monitor well head repair/replacement • Concrete pad repair/replacement • Bollard repair/replacement • Transfer pump motor repair and replacement • Decommission/abandon large utility vault and well; remove electrical equipment • Weed abatement and landscaping
Conn-Selmer: Nogales, AZ	<ul style="list-style-type: none"> • Video log well and remove well casing • Well field maintenance: fabricate and install vault locks, vault installation/modification/repair • Conduct short term step production well aquifer testing. Provided submersible pump, motor wire, electrical disconnect, flow meter, column pipe, sounder pipe, generator and staffing.
COT Parks & Rec: multiple parks	<ul style="list-style-type: none"> • Remove sump pump motor and inspect bowls and electrical components • Provide generator and pump maintenance • Rehabilitate wells and repair/install line shaft turbine pumps and bowls, including plumbing and electrical connections; provide regularly scheduled preventative maintenance • Inspect and remove submersible sump pumps, check and test motors; replace motor and pump ends, galvanized drop pipes, submersible cables and fittings; reinstall pump with shroud, cla-valve, and adjust flow direction of pump and speed for cla-valve • Install pump skid, plumbing, and electrical components • Repair irrigation booster station system and provide regularly scheduled preventative maintenance. • Install and repair pump stations and lake aerators; provide regularly scheduled preventative maintenance • Fabricate and install hydro-pneumatic tank • Video survey coordination and equipment specifications • Replace pump mechanical seals
Evergreen Air Center	<ul style="list-style-type: none"> • Excavate and remove trees
FMI Ajo	<ul style="list-style-type: none"> • Remove and install/repair/replace pumps and pump equipment from monitor wells • Purchase and assemble motor starter box for monitor well field.
Desert Diamond Casino	<ul style="list-style-type: none"> • Decommission extraction well: disconnect and remove all electrical components, plumbing and pumping equipment; excavate extraction well pipeline, terminate pipeline, and backfill excavation • Demo existing pad and excavate for new vault; pour new concrete pad • Modify wellhead of monitor wells; remove and replace submersible pump • Install submersible pump equipment in extraction well
FMI Bisbee	<ul style="list-style-type: none"> • Conduct pump testing of wells; monitor generator and pump and measure water levels during start up and shut down • Conduct 24-hr step production well aquifer testing. Provided submersible pump, motor wire, electrical disconnect, flow meter, column pipe, sounder pipe, generator and staffing. • Develop new monitor wells • Equip new monitor wells with pump equipment, concrete pads, well enclosures and electrical start boxes. Pump equipment included column pipe, sounder pipe, submersible pump ends and motors and custom well seals
FMI Sierrita	<ul style="list-style-type: none"> • Remove, inspect, and repair existing submersible pumps, motors, sounder pipes, and column pipes in monitor wells • Equip new monitor wells with pump equipment, concrete pads, well enclosures and electrical start boxes. Pump equipment included column pipe, sounder pipe, submersible pump ends and motors and custom well seals • Fabricate, weld, and repair monitor well security boxes • Install mitigation well pumps • Fabricate and install custom well cover for monitor wells • Brush, swab and bail monitor wells to remove sediment, residual rust, and scale from well casing • Repair and replace high and low flow submersible pumps from silo tanks • Pressure test pump and motor in monitor well • Video log (point of compliance) POC monitor wells
Ft. Bowie Nat'l Historic Site	<ul style="list-style-type: none"> • Chemical and mechanical well rehabilitation for water supply well • Excavated trench and installed new water distribution pipeline
Harrison Landfill	<ul style="list-style-type: none"> • Submersible pump and motor repair and replacement • Drill cutting removal • Cable gate, fencing, and bollard installation • Vault repair • Concrete pad repair • Obstruction removal • Well head repair / replacement • Chemical and mechanical extraction well rehabilitation • Monitor well sounding pipe repair and replacement • Remove and replace inductor pipe from injection well; bail sediments from bottom of well • Well head plumbing and electrical extension
Honeywell Facility Deer Valley	<ul style="list-style-type: none"> • Remove submersible pumps, piping and wire and other associated equipment from large decommissioned monitor well field.



Los Reales Landfill	<ul style="list-style-type: none"> • Remove existing fence and posts and install chain link fencing with razor wire with a lockable gate for site access • Coordinate efforts with others to modify original electrical drawings and account for any changes in electrical service requirements resulting from equipment relocation; ensure that all revisions meet permit and service application requirements to obtain new permits and service. • Install motion sensitive lighting and outlets for metering pump, tank mixing motor operation, and additional requirements. • Coordinate and execute the move of all SVE equipment within the existing compound to the new location. • Provide a stable, level surface for system equipment relocation after monitoring well has been abandoned. • Install discharge piping from the treatment system discharge to the drainage outfall • Bollard installation • Concrete well pad repair • Storage tank repair • Landscaping maintenance • Irrigation system repair/replacement/maintenance • Pump head repair and replacement • Repair monitor well • Repair vault and well head for extraction well • Chemical and mechanical well rehabilitation • Pump and motor cleaning/repair/replacement • Well head modifications • Aquifer testing • New extraction well development • Sounding pipe repair/replacement • Inductor pipe repair/replacement • Tremie neat cement into annulus between casing and borehole in well • Bail accumulated sediment and debris from extraction and monitor wells
Irvington Landfill	<ul style="list-style-type: none"> • Repair well pad • Well repairs: sounding pipe and electrical repairs • Chemical and mechanical well rehabilitation • Troubleshoot and repair electrical well components • Pull and replace submersible pump equipment
Mission Linen	<ul style="list-style-type: none"> • Remove pump equipment from 14 monitor wells • Well development / bail accumulated sediments, purge well and dispose purged water
Mt. Lemmon Scout Camp	<ul style="list-style-type: none"> • Provide centrifugal pump equipment to Troop for spring water transfer
Nearmont Landfill	<ul style="list-style-type: none"> • Site restoration • Site landscaping
Oracle Ridge Mine	<ul style="list-style-type: none"> • Remove and replace submersible pump and pump equipment, sounder pipe, PVC piping • Remove well head cover, windmill structure and sucker pipe from ranch well for video logging • Install and remove test pump and determine discharge rate • Conduct pump test; monitor generator and pump performance
PGA South	<ul style="list-style-type: none"> • Remove and replace submersible pump and motor
Pima County Wastewater Management:	<ul style="list-style-type: none"> • Remove and replace submersible motor
Pioneer Paints	<ul style="list-style-type: none"> • Repair and replace new monitor well vault and concrete pad • Well development
Price Service Center / TFS#10	<ul style="list-style-type: none"> • Construct containment wall around oil/water tanks • Vault /enclosure repair and replacement • Repair / replace sounder pipe • Remove root obstruction from monitor well • Pneumatic free product pump repair/replacement • Excavate and extend casing for monitor well damaged by construction • New flush grade well vault installation
Prudence Landfill	<ul style="list-style-type: none"> • Remove water level sounder stuck in well and extend sounding pipe to top of submersible pump. • Well enclosure repair: welding, reassembling, painting, and installation; level and re-concrete cage legs and install new locks • Fabricate and install enclosure lid; secure to vault and frame
Tohono O'odham Nation	<ul style="list-style-type: none"> • Submersible pump repair / UofA research project
Rio Nuevo	<ul style="list-style-type: none"> • Well vault repair • Dewatering pump installation • Well troubleshooting and repair • Pump removal • Extraction well head location, repair, and stenciling • Pump repair • Replace stolen wires and cables for motor
Rosemont Copper Mine	<ul style="list-style-type: none"> • Well head modification and sounder pipe, transducer connector housings, and pump installation • Fabricate and install well cover, transducers, and sample ports • 24-hour aquifer testing. Provided pump equipment, installation, flow meter, generator, parameter meters, water level sounders, control panel and well head plumbing. • 8-hour aquifer testing. Provided pump equipment, installation, flow meter, generator, parameter meters, water level sounders, control panel and well head plumbing. • New well submersible pump installations: pumps, motors, wire, control boxes, pipe, well enclosures and well head fittings. • Repair high and low float switches on holding tank; inspect pumping system • Repair well vault and well heads; replace electrical junction fittings and transducer enclosures • Reprogram WinSitu transducers • Well development
Ryland Landfill	<ul style="list-style-type: none"> • Well inspection and repair • Sounding pipe repair and replacement
Saguaro National West	<ul style="list-style-type: none"> • Mechanical well rehabilitation: remove 30-ft of accumulate sediments; brush and swab • Replace production well submersible pump equipment
San Manuel	<ul style="list-style-type: none"> • Pump removal and well head modification • Custom flange fabrication and installation for closing in artesian water flow
Santa Cruz River	<ul style="list-style-type: none"> • Well enclosure painting and stenciling
Shell Service Station	<ul style="list-style-type: none"> • Air knife trenching and pipeline installation
TCC/HQUST	<ul style="list-style-type: none"> • Remove roots from well
TEP: Nogales, AZ	<ul style="list-style-type: none"> • Demo existing well pad and pour new concrete pad • Install new well vault and remove obstruction in well. • Fabricate custom well head assembly



Texas Instruments	<ul style="list-style-type: none"> • Submersible pump repair/replace/installation and well seal modifications for extraction and monitor wells • Bail sediment accumulation from extraction well • Bail obstruction from well casing
Silverbell Landfill	<ul style="list-style-type: none"> • Golf cart path paving • Bollard installation • Drainage grading • New well submersible pump installations: pumps, motors, wire, control boxes, pipe, well enclosures and well head fittings. • New well development • Vault repair and replacement, including excavation and installation of new vaults • Well inspections • Vault lid repair/replacement • Gate and fencing installation/transport/repair/replacement • Obstruction removal from well casing • Landscaping • Submersible pump repair and replacement • Well rehabilitation • Repair drop pipe – well repair • Concrete pad repair • Extend submersible pump depth • Sounding pipe repair and replacement • Site preparation for new well: clearing site, revegetation, and landscaping • New vault installation • Fabricate prototype vault lid • Repair and replace well casing; pull injection lines • Repair and replace motor
TIA	<ul style="list-style-type: none"> • Sounder pipe installation • Chemical rehabilitation of extraction and recharge wells • Install packer with air hose and retrieval rope in soil vapor extraction well • Install well plug to replace end cap in casing string • Video log SVE wells • Remove and replace new submersible pump • Well development: swab, brush and bail monitor well, install purge pump and transport purge water • Repair leaky pitless adapter in extraction well • Install submersible pump, motor, and piping • Remove all down hole pump equipment and troubleshoot problems with low pressure, repair and reinstall equipment • Disassemble well head assemblies and trip out pumps, brush down casings, swab and bail wells, decontaminate pump heads and column pipes.
Toole Ave	<ul style="list-style-type: none"> • Landscaping • Well abandonment • Buried well excavation • SVE well head modifications /additions
Town of Sahuarita	<ul style="list-style-type: none"> • Remove pump equipment from POC monitor wells; brush, bail and purge and reinstall pump equipment
Tumacacori Nat'l Park	<ul style="list-style-type: none"> • Remove existing pump equipment
Tumamoc	<ul style="list-style-type: none"> • Remove submersible pump equipment and transport • Remove roots from monitor wells • Well development • Chemical well rehabilitation • Repair perimeter fence
Twin Buttes Properties: Sahuarita, AZ	<ul style="list-style-type: none"> • Repair submersible motor cable and install new well seal • Replace monitor well sounding pipe
UPRR (multiple locations)	<ul style="list-style-type: none"> • Chemical rehabilitation of injection wells • Develop monitor wells • Remove pump equipment and transport pipe for disposal • Decontaminate equipment of free product diesel exposure • Install temporary pump and purge wells; replace pumps
Vincent Mullins Landfill	<ul style="list-style-type: none"> • Well rehabilitation • Pump and motor troubleshooting, repair, replacement, and decontamination • Pipeline replacement and product bailing • Sounding pipe repair and replacement
Cyprus Tohono Mine	<ul style="list-style-type: none"> • remove, replace, and reset submersible pump equipment in well
Ryland Landfill	<ul style="list-style-type: none"> • Transducer repair and replacement
Santa Cruz River	<ul style="list-style-type: none"> • Transducer installation

