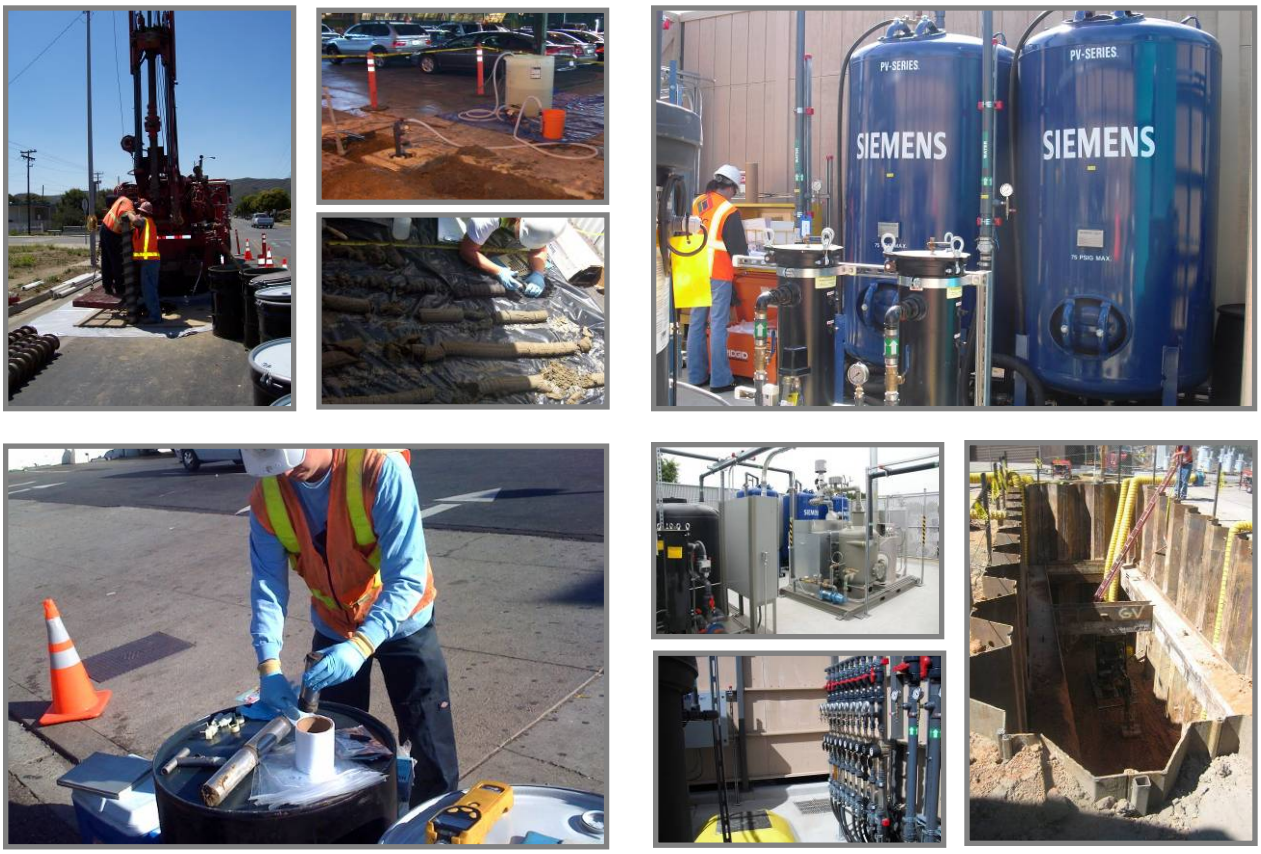
Statement of Qualifications

ETIC Engineering, Inc.



ETIC Engineering, Inc.
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1.0 Introduction

Overview

ETIC Engineering, Inc. (ETIC) is a full-service remediation company, providing construction and environmental consulting services. Our services include engineering, geosciences, biology, water quality, and storm water compliance. We have been serving California since 1991 with offices in Pleasant Hill (Headquarters), Pasadena, San Diego, Costa Mesa, Martinez, Fresno, and Roseville.

Our company is staffed with 150 scientists, engineers, and field personnel who have backgrounds in environmental, civil, and chemical engineering; geology and hydrogeology; biology; and environmental compliance.

Certifications

ETIC is a licensed California General Engineering Contractor certified to remove hazardous substances.

We are also certified by the California Public Utilities Commission Supplier Clearinghouse as a Women and Minority Business Enterprise (WMBE), verification order number: 7JN00038, with an environmental focus.

Approach

ETIC is committed to providing quality services using innovative approaches to environmental problem-solving. We assist our clients by defining and understanding their environmental needs and develop cost-effective solutions that have proven acceptable to the public and regulatory community.

Safety

ETIC has an outstanding safety record and has been recognized nationally by our clients due to our flawless execution of field services. ETIC places a huge emphasis on a constant focus on behavior-based safety during each task on a project. All of our field personnel are 40-hour OSHA HAZWOPER, First Aid/CPR, and Smith Driver certified. ETIC also mandates Drug and Alcohol testing and operates under an Injury and Illness Prevention Plan. In addition, ETIC places extreme emphasis on all aspects of permit compliance and we have developed a compliance vulnerability matrix to track all permit requirements. Since its inception, ETIC has never received a Notice of Violation or fine related to environmental work.

Clients

ETIC has enjoyed successful relationships with clients in both the public and private sectors, and has numerous clients who have engaged the firm since its founding. Our clients have included oil companies, manufacturers, developers, water agencies, municipalities, other consulting firms, and utility companies all who have been satisfied with our services.

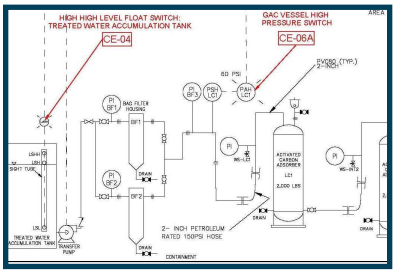
2.0 Areas of Expertise

The professionals at ETIC are committed to the application of technological and scientific solutions that effectively meet the needs of our clients, while contributing to the protection and preservation of the environment. Combining technical ability with a personal approach to service, ETIC has proven itself as a leader in the areas of environmental consulting, engineering, and construction services.

With over 20 years of environmental remediation experience, ETIC offers the following services to our clients:

2.01	Environmental Engineering and Remediation
2.02	Site Assessment
2.03	Underground Storage Tank Management
2.04	Facility Decontamination and Demolition
2.05	Excavation and Disposal
2.06	Electrical Control Systems
2.07	Field Pilot Studies and System Design
2.08	Remediation System Installation
2.09	Groundwater Monitoring and Sampling
2.10	Remediation System Operation and Maintenance

2.01 Environmental Engineering and Remediation



Feasibility Studies

Pilot and Treatability Studies

Remediation System Design and Permitting

Treatment System Upgrades and Retrofits

Permit Compliance

ETIC provides additional value to our clients by using our expert knowledge to provide efficient and cost-effective technology to our clients in a complex regulatory setting. We consider our clients' goals and analyze the available information, then propose customized solutions from proven technologies.

Approach

ETIC evaluates site data and then proposes site-specific solutions to achieve regulatory approval. From feasibility studies to system operation and maintenance to closure evaluation, ETIC's engineers and technicians provide cost-effective answers to engineering and remediation projects at every stage.

Experience

We are experienced with a wide range of contaminants, including petroleum hydrocarbons, fuel oxygenates (including MTBE), volatile organic compounds, and metals.

Project experience includes the design, testing, installation, and operation of treatment systems employing a variety of proven and emerging remediation technologies, including:

- Soil vapor extraction and treatment
- Groundwater extraction and treatment
- Dual-phase (simultaneous soil and groundwater) extraction
- Air sparging
- Bioventing, bioslurping, and ex-situ bioremediation

ETIC is well-versed in meeting the requirements of regulatory agencies. We currently operate remediation systems and meet the requirements of the following regulatory agencies: Bay Area Air Quality Management District, National Pollutant Discharge Elimination System permit, and Regional Water Quality Control Boards.

2.02 Site Assessment

Geologic Investigation and Interpretation

Hydrogeological Investigation & Testing

Monitoring and Sampling

Aquifer Testing

RCRA and CERCLA (Superfund) Support Services

Underground Storage Tank (UST) Services

Assessments and Superfund Assistance

Portfolio Management

ETIC's site assessment services are designed to provide clients with a clear understanding of environmental conditions. Each site investigation is designed to meet client objectives in the most efficient and economical manner possible.

Site Investigation Objectives

- Determining whether contaminants are present;
- Evaluating the source of contaminants;
- Defining the horizontal and vertical extent and concentrations of contaminants in soil, groundwater, or other environmental media;
- Characterizing site hydrogeologic conditions; and
- Gathering necessary data to either support risk-based closure or develop a remedial design for site cleanup.

Site Assessment Methods

We use a phased approach to minimize costs and meet specifically defined objectives. Site assessments can be complex requiring many studies or straightforward and only requiring one or two of the following studies: soils investigation, groundwater investigation, hazardous building materials inventory, air monitoring, and sediment sampling. Prior to commencing a field investigation, a comprehensive plan is developed.

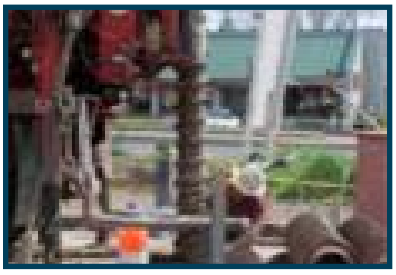
Methods for expedited site assessments such as direct-push drilling technology, HydroPunch, and soil gas surveys are initially used for rapid data gathering. If needed, more permanent monitoring points are subsequently installed in strategic locations.

Based on site assessment findings, ETIC staff assists clients in obtaining site closure from regulatory agencies, or in developing a plan for remediation.

Selected Site Assessment Projects

- ExxonMobil Oil Corporation (>200)
- Nestle USA – Oakland Facility
- Yellow Cab
- Cord-Cook
- Kaiser Aerospace Facilities
- Manufacturing Facilities
- Delta Star (Electric Transfer Manufacturer)

2.03 Underground Storage Tank Management



UST Fund SB2004 Reimbursement Program Assistance

Full Staff of In-house Professionals

Project Portfolio Management Services: Complete Fiscal and Technical Management of Multiple Sites

Investigation, Remediation, and Reporting

Negotiations & Closure

ETIC consultants, geologists, engineers, and environmental contracting specialists provide a full array of underground storage tank (UST) services, including:

- Locating and removal of USTs;
- Performance of site investigations and evaluation of potential preparation and submission of Phase I and Phase II reports and corrective action plans;
- Risk assessment and groundwater modeling;
- The creation of remedial designs and acquisition of all necessary regulatory permits (NPDES, AQMD, POTW, various building permits);
- Construction and maintenance of soil and groundwater remediation systems;
- Regulatory negotiations for site closure;
- Source removal by excavation; and
- Implementation of ETIC's Portfolio Management approach to assist clients in the management of both fiscal and technical aspects of a large portfolio of sites.

UST Reimbursement Fund

With the growing concern over MTBE and other fuel oxygenates, UST owners or Responsible Parties have grown more aware of the UST Reimbursement Fund as a valuable resource. Since its inception, ETIC has assisted numerous property and UST owners in the process of obtaining reimbursement for these assessment and remediation efforts.

The Fund, maintained by the California State Water Resources Control Board, offers property and tank owners up to $1.5 million for the cleanup of leaking USTs. ETIC staff assists UST Fund claimants in obtaining pre-approvals, 3-bid waivers, and preparation of Fund-compliant invoices.

2.04 Facility Decontamination and Demolition

Facility Decontamination and Demolition

Aboveground Tank Closure and Demolition

Underground Storage Tank Closure and Removal

Asbestos and Lead Abatement

Meth (Drug) Lab Decontamination and Demolition

Waste Area, Clarifier, and Sump Closure

Excavation, Transport, and Disposal of Impacted Soil

Efficient and effective decontamination and demolition of public and private facilities is crucial for meeting business goals. These projects often face challenges of complex compliance issues, necessary application of remedial technologies, health and safety requirements, and tight project schedules. ETIC staff are able to incorporate fast-track approaches while upholding applicable state and federal regulations and guidance to achieve ultimate return on investments for facility owners.

ETIC's full suite of turnkey decontamination and demolition services include site assessments and investigations, alternatives analysis, asset disposition, remedial design and construction, and program management. ETIC has successfully decontaminated structures such as production facilities, warehouses, and plating facilities using a variety of decontamination technologies and strategies.

Services

- Confined space entry;
- Removal of underground storage tanks (USTs);
- Dismantling of tanks, piping, and associated equipment;
- Decontamination and demolition of containment structures;
- Disposal arrangement for contaminated liquids and sludges recovered from containment structures and wastewater generated during cleanup activities;
- Excavation, treatment or transport, and disposal of contaminated soil;
- Negotiations with regulatory agencies on the scope of required cleanup, background contaminant levels, and acceptable cleanup levels; and
- Complete documentation and regulatory approval for clean closure.

Selected Project Experience

Decontamination and Demolition

ETIC was retained to decontaminate and demolish a former plating facility in San Leandro, CA. The facility was part of the federal government's Superfund program to address abandoned hazardous waste sites. ETIC demolished the contaminated concrete slab, excavated soil inside the building (cyanide, metals contamination), and installed an impermeable cap over the site giving the site a "No Further Action Required" status.

Assessment, Abatement and Demolition

ETIC completed assessment and abatement services for multiple structures containing asbestos materials and lead-based paint. Following abatement activities a total of 12 structures were removed from a 4-acre commercial and industrial site in San Jose, CA. In addition, our team excavated approximately 400 cubic yards of impacted soil and managed the offsite disposal of the soil.

2.05 Excavation and Disposal

Excavation and Grading

Shoring

Dewatering and Treatment Services

Soil Loading

Profile Preparation and Disposal

Drum Disposal

Confined Space Entry

Five common ways of managing or treating hazardous waste onsite are: air stripping, capping, pump and treat, excavation, and incineration. When hazardous waste cannot be treated onsite to reduce the hazardous waste volume or toxicity, excavation services are employed. Our excavation operations include excavation and removal of impacted soil and water, underground pipes, underground storage tanks, or drums to enhance environmental protection and prevent further contamination.

After excavation, ETIC will arrange for waste transportation and disposal. We operate a variety of equipment including: excavators, dump trucks, backhoes, bulldozers, graders, and compactors. Over the past 20 years ETIC has worked with the following contaminants:

- Organic phosphates
- Methyl bromide and other pesticides
- Manufacturing sludges and residues
- Asbestos
- Lead and other metals
- Chlorinated and non-chlorinated solvents
- Petroleum hydrocarbons

Selected Project Experience

Lead-Impacted Soil Excavation
One of ETIC's largest excavation projects consisted of the excavation, transport, and disposal of over 16,000 tons of hazardous soil in Contra Costa County, CA. The project was completed ahead of schedule and allowed property owners to proceed with site development plans.

Petroleum Hydrocarbon-Impacted Soil Excavation
ETIC was retained to excavate and dispose (offsite) of over 3,000 cubic yards of impacted soil, followed by backfilling with controlled density fill, at a commercial site in Pleasant Hill, CA. Impacted groundwater was also extracted, treated, and discharged under permit.

Petroleum Hydrocarbon-Impacted Soil Excavation
The project involved the excavation and offsite disposal of impacted soil from a shored excavation at a major public utility company site in Grass Valley, CA. Soil was excavated to a total depth of 27 feet below grade, followed by backfilling and compacting imported fill materials.

2.06 Electrical Control Systems

Control System Design

Electrical Panel Fabrication

Conduits and Meter Mains

Control System Testing and Troubleshooting

Controls Programming Services

Single off-the-shelf electrical control systems no longer meet the needs of most industries. ETIC holds a competitive advantage in that we customize our electrical systems to provide longevity and ease of maintenance. ETIC will tailor solutions and are able to oversee all aspects of design, fabrication, and installation.

Services

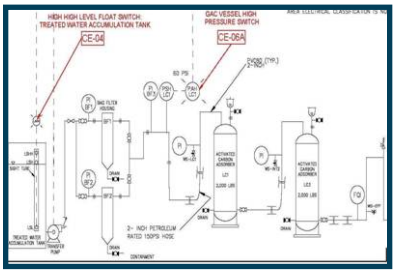
Control System Installation and Troubleshooting Services

ETIC provides design and installation of electrical components for remediation systems. Each system is designed and fabricated to meet or exceed our client's specifications and expectations. One of our specialties is the installation of industrial control systems. We also test and troubleshoot new and existing systems.

ETIC works directly with local utilities to install main electrical services for permanent and temporary system installations. To guarantee our standard of high quality, our staff will obtain permits when needed for installations when required, saving time and money for our clients. Our field personnel work with local inspectors to provide timely completion of the projects.

We have earned a superior reputation for our timely completion of projects within budget. Our technicians are well trained on National Electrical Code requirements as well as OSHA and other safety requirements. Jobsite organization and cleanliness is one of our trademarks. All field changes are documented on as built drawings and all change orders are approved in writing.

2.07 Field Pilot Studies and System Design



Vapor Extraction

Dual-Phase Extraction

Bioventing

Air Sparging

Pump and Treat

In-Situ Chemical Injection

Treatment Technology and Equipment Selection

Design of Remediation Systems

ETIC is experienced in reducing the volume or toxicity level of contaminants and hazardous materials by using tested in-situ remedial technologies to avoid high excavation costs. We take cost effective measures by employing current technologies to reduce project expenditures. This process is implemented through field pilot studies and the design phase.

Approach

Initial site assessments are conducted to address areas of concern and develop a field pilot study approach. Field pilot studies are used as preliminary studies to determine the most applicable solution for remediation of contaminants. ETIC is committed to meeting mandated regulations while focusing on our client's goals.

After determining the cause and effect of the contaminant(s), ETIC provides remedial options such as vapor extraction, bioventing, air sparging, and pump and treat methods. Additionally, ETIC can implement in-situ chemical injection methods based on the specific contaminant(s) requiring treatment. Our experienced staff analyze current technologies, equipment, and trends before selecting a final remedial technique.

Upon selection of the final remedial solution, ETIC will tailor the solution to be cost effective and meet the client's goal during the design process. ETIC staff are well qualified and are able to conduct pilot tests and design systems, giving ETIC an advantage of providing turnkey services and maintaining a high standard of quality by working under one management team.

Selected Project Experience

Petroleum Hydrocarbon-Impacted Site, West Sacramento, CA
A high vacuum multi-phase extraction pilot test was conducted to evaluate feasibility of this technology for remediation. The onsite groundwater extraction system was subsequently upgraded to include a high-vacuum extraction system to extract soil vapor and groundwater. A catalytic oxidizer was used for vapor treatment and carbon was used for groundwater treatment. The site groundwater concentrations decreased significantly in two years of system operation and the site is being considered for closure.

Petroleum Hydrocarbon-Impacted Site, LaHabra, CA
Three in-situ chemical oxidation (ISCO) events were performed using sodium persulfate activated with either chelated iron or hydrogen peroxide. ISCO was chosen based on site concentrations, site access constraints, and time constraints due to site development activities. Groundwater monitoring results 1 week after the third injection event indicated reduction of up to 97 percent average concentration of hydrocarbons in the wells.

2.08 Remediation System Installation

City Building, Planning, Electrical Department and Air and Water Discharge Permitting

Installation of Underground and Aboveground Pipelines

Design and Construction of Custom Remediation Compound Enclosures

Design and Fabrication of Custom Piping Manifolds and Electrical Control Panels

Electrical Controls Inspection and Programming Services

ETIC has provided remediation design, constructability reviews, and installation of turnkey remediation systems including all underground piping, civil, mechanical, and electrical aspects of these projects. We have installed systems for private clients at former service stations, RCRA sites, and federal military bases. Our varied expertise allows us to recognize client needs at different cost and technical levels.

Remediation Technologies

- Air strippers
- Air sparging
- Bioventing, bioslurping, and ex-situ bioremediation
- Dual-phase (simultaneous soil and groundwater) extraction
- Groundwater extraction and treatment
- Permeable reactive barriers
- Soil vapor extraction and treatment

ETIC has over 20 years of experience in the design, installation, and operation and maintenance of remediation systems and has extensive experience managing large portfolios of systems for our clients. ETIC has designed, installed, and operated over 150 remediation systems throughout California for a major petroleum refining and retail company.

Selected Project Experience

Chlorinated Solvent Remediation

ETIC excavated over 4,000 linear feet of trenches and installed over 12,000 linear feet of remediation piping for soil vapor extraction, air sparging, and groundwater pump and treat systems at a government defense contracting facility in Mountain View, CA. Installation of the systems also included two bore and jacks beneath a railroad right of way. Lastly, ETIC installed the treatment system pad and equipment and provided system startup services.

Chlorinated Solvent and Petroleum Hydrocarbon Remediation

ETIC installed aboveground piping and an oxidizer (including primary power pole and electrical service), provided equipment integration, and installed three bioventing systems and electrical service at Mather Air Force Base near Sacramento, CA. The installation of the system also included installation of multiple 480V electrical meter mains.

Petroleum Hydrocarbon Remediation

ETIC designed, fabricated, and installed an automated biosparge piping manifold assembly for 24 injection wells at the Camp Pendleton Marine Corps Base near San Diego, CA. The manifold assembly included flow meters, pressure regulators, valves, and automated controls.

2.09 Groundwater Monitoring and Sampling Services

Specialized Groundwater Sampling Techniques

Data Collection and Management

Quality Assurance and Quality Control Procedures

Standardized Groundwater Monitoring and Sampling Protocols

ETIC's experienced staff of field technicians provide timely and accurate groundwater monitoring and sampling services. ETIC has developed a standard protocol for groundwater monitoring services and tailors it for project-specific needs. Our protocol showcases our attention to detail and commitment to quality services.

Groundwater Monitoring and Sampling Services

Our groundwater monitoring and sampling activities are conducted in strict compliance with all regulatory guidelines. ETIC's field staff are proficient in field parameter testing, precise documentation of field reports, groundwater monitoring and sampling, and wellhead maintenance and repair. When executing our services, our field technicians use a three step protocol including gauging, purging, and sampling for groundwater monitoring.

Wells are opened prior to gauging to allow the groundwater level in the well to equilibrate with atmospheric pressure. The well is then gauged and purged to provide a representative groundwater sample for analysis. Field parameters of pH, temperature, and electrical conductance are measured during purging to ensure that these parameters have stabilized before groundwater in a well is sampled. After the sample has been collected, it is properly packaged for shipment to state-certified laboratory.

Our technicians are trained and experienced with multiple types of specialized groundwater sampling procedures, including:

- Manual pumps and bailers
- Electric and pneumatic submersible pumps
- WaTerra pumping technique
- Micro purging (flowcell purging)

Selected Project Experience

ETIC has been retained by a major petroleum refining and retail company to manage a portfolio of over 200 sites for groundwater monitoring and sampling services. ETIC is focused on achieving "No Further Action" status at our client's sites and has closed over 85 of these sites over the past ten years. ETIC's groundwater monitoring and sampling services and precise documentation of field reports aided in the closure process.

2.10 Remediation System Operation and Maintenance

Data Collection and Management

System Operational Analysis and Optimization

Quality Assurance and Quality Control Assurance

System Troubleshooting

Permit Compliance

Operation and Maintenance

Proper operation and maintenance (O&M) of remediation systems is critical to the successful elimination of contaminants in soil and groundwater. ETIC's specialized staff of O&M professionals are well-versed in the design and function of numerous types of remediation systems, and the regulatory requirements of their performance and upkeep.

Our unique O&M unit is comprised of an in-house staff of engineers, field technicians, and licensed construction/electrical professionals. This gives us the ability to perform diagnostic analyses on system equipment and to complete any necessary repairs, saving considerable time and cost to our clients.

ETIC is well-versed in meeting the requirements of regulatory agencies. We currently operate remediation systems under the jurisdictions of numerous system oversight agencies, including the Bay Area Air Quality Management District, South Coast Air Quality Management District, and Regional Water Quality Control Boards.

ETIC has managed the operation of systems for sites impacted by various contaminants, including petroleum hydrocarbons, fuel oxygenates (including MTBE), volatile organic compounds, and metals. We have significant experience with multiple types of remediation systems, including:

- Bioreactor
- Oxidizers (thermal and catalytic)
- Air stripper
- Soil vapor extraction
- Groundwater extraction
- Dual-phase extraction
- Air sparging
- Bioventing

ETIC is a one-stop shop for remediation systems; from design and installation to O&M. Our breadth of staff and services has allowed ETIC to simultaneously operate and maintain up to 40 remediation systems during a calendar year.

3.0 Selected Project Experiences

ETIC has extensive experience performing technically sound environmental consulting services related to site investigations and remediation. ETIC's range of experience and staff resources allows ETIC to be able to provide turnkey services to cover all objectives of an investigation, including the following typical objectives:

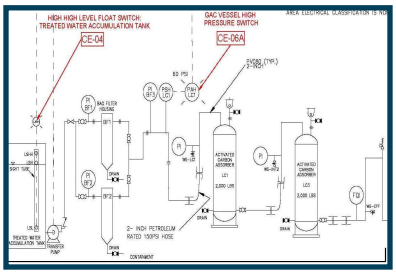
- Determining whether contaminants are present;
- Evaluating the source of contaminants;
- Delineating the horizontal and vertical extent and concentrations of contaminants in soil, groundwater, or other media;
- Characterizing site hydrogeologic conditions;
- Determining the most appropriate feasibility study based on site specific conditions;
- Planning and executing various types of feasibility studies and/or pilot testing;
- Data reduction and analysis of all field and chemical data;
- Compilation of necessary data to either support risk-based closure or develop a remedial design for site cleanup;
- Designing, permitting, installing, and maintaining remediation systems (if required);
- Removing underground storage tanks, pipelines, or other structures as needed, depending on the type of investigation.

ETIC can offer our clients a broad range of experience with both traditional and innovative remediation technologies. Because we have a construction division in addition to our staff of engineers and scientists, we can provide both design and installation services for remediation systems.

Selected project experiences of ETIC's site investigation and remediation services are presented in the following examples:

1. ExxonMobil Portfolio
2. Sara Lee Facilities
3. Nestle USA, Inc.
4. Grass Valley Service Center
5. Marsh Landing

3.1 ExxonMobil Portfolio



Client:
ExxonMobil Oil Corporation

Location:
Various locations throughout California

Duration of Project:
1999 - present

Services:
- Contaminated Site Management
- Site Investigation and Remediation
- Compliance Assurance
- Site Closure

Project Details
ETIC Engineering, Inc. (ETIC) has been working as a consultant to ExxonMobil under a Master Services Contract for more than 10 years. ETIC staff have provided comprehensive environmental services to ExxonMobil at sites throughout California, including sites located in the counties of Los Angeles, Orange, Alameda, Contra Costa, El Dorado, Humboldt, Sacramento, Santa Clara, San Joaquin, San Mateo, Siskiyou, Yolo, and San Diego. The sources of the contamination at the sites are underground storage tanks (USTs), product dispensers, and product piping used for fuel/waste oil storage and fuel dispensing. ETIC provides all necessary services to investigate and remediate contaminants and to bring sites to closure.

Our Approach
ETIC's services to ExxonMobil have included preliminary site investigations; soil and groundwater investigations; remedial investigations; well installations; groundwater monitoring; engineering design, construction, installation, and operation/management of remediation systems; ecological and human health risk assessment; chemical fate and transport modeling; and negotiations with regulatory agencies. Specific environmental service details include:

- **Remedial Investigations** – ETIC staff have conducted numerous remedial investigations across California. Investigations have focused on assessing both the horizontal and vertical extent of soil and groundwater contamination. A combination of direct-push and conventional drilling methods has been used to collect the necessary data. The information obtained from site investigations and groundwater monitoring activities aid the development of remediation plans.
- **Groundwater Monitoring** – ETIC's Field Technical Support Group monitors groundwater quality on a quarterly, semi-annually, and/or annual basis at over 80 ExxonMobil sites across California**.**
- **Feasibility Studies/Corrective Action Plans** – ETIC staff conduct feasibility studies to determine the most effective technology to remediate soil and groundwater contamination found at sites. Field testing is conducted using multi-phase, dual-phase, and single-phase extraction to test recovery rates. Feasibility studies have shown various types of extraction systems to be effective remedial technologies at different sites. This also allows for design of a full-scale remediation system with the necessary water and/or vapor abatement systems.
- **Engineering Design, Permitting, and Construction** – ETIC staff have developed engineering plans for fabrication of extraction systems, including groundwater extraction, dual-phase extraction, and soil vapor extraction systems. In

addition, ETIC's construction department has installed multiple remediation and treatment systems and electrical and natural gas utilities at ExxonMobil sites.

- **Operation, Maintenance, and Monitoring Field Services –** ETIC staff are highly experienced in conducting all operation and maintenance activities for a variety of remediation systems. This includes all activities necessary to maintain desired system efficiencies, sampling and analysis to maintain compliance with the discharge permits, and tracking and disposal of all waste generated due to operation of the remediation system and assessment activities.
- **Human Health Risk Assessments –** ETIC staff have performed numerous human health and ecological risk assessments for ExxonMobil. The risk assessments have focused on quantifying potential risks associated with exposure to observed levels of chemicals of potential concern, including petroleum hydrocarbons, heavy metals, and volatile organic compounds (VOCs). Risk assessment results have been used to negotiate stoppage or reduction of remedial activities and monitoring, development of cleanup goals and objectives, development of risk management and health and safety plans, and to support site closure.
- **Regulatory Support** – ETIC staff have provided support to ExxonMobil toward negotiations with various regulatory agencies relating to a wide range of environmental issues. These have included site characterization, risk assessment, remediation, site closure, risk management, and monitoring.
- **Site Closures –** ETIC staff have successfully documented and negotiated site closure at over 100 ExxonMobil sites throughout California.

Benefits and Values

ETIC embraces safety above all else and has been the recipient of the following awards from ExxonMobil:

- 2004 –National Safety Recognition Award
- 2005 –Loss Prevention System Recognition Award – Western Area
- 2005 –National Loss Prevention System Ideas Best Practices Award
- 2006 –National Loss Prevention System Ideas Best Practices Award
- 2007 – National Contractor Safety Performance Award
- 2009 –Annual Contractor Safety Award
- 2010 –Environmental Services Safety Award Flawless Execution
- 2011 – ExxonMobil Global Safety Award

3.2 Sara Lee Facilities

Site Assessment and Environmental Consulting

Client:
Sara Lee as a subconsultant to PSC Environmental Services

Location:
Northern California

Project Budget:
$820,000

Duration of Project:
2005-2011

Services:
- Site Assessment
- Remedial Investigation, Design, and Implementation
- Sensitive Receptor Survey
- Groundwater Monitoring

Sara Lee and its subsidiaries have operated several bakeries and distribution facilities in California and fueled its fleet of vehicles, using gasoline and diesel stored in underground storage tanks (USTs) at the bakeries and distribution facilities. Soil and groundwater contamination were discovered at some sites during removal of the USTs. The sources of contamination were the USTs, product dispensers, and product pipelines used for fuel storage or dispensing.

ETIC provided preliminary site assessments; soil and groundwater investigations; well installations; remedial investigations; groundwater monitoring; engineering design; remediation implementation; operation and maintenance of remediation systems; sensitive receptor surveys; chemical fate and transport modeling; and negotiations with regulatory agencies. Descriptions of the individual Sara Lee work scopes are provided below:

- ***Sara Lee, Antioch, California***
  Perform quarterly groundwater monitoring and sampling. Installed groundwater monitoring well to further evaluate the extent of the contaminant plume. Performed pilot testing of dual-phase extraction (DPE) and treatment to evaluate its feasibility for remediation. Performed soil, soil vapor, and groundwater investigation to assess the effectiveness of remediation. Implemented in situ chemical oxidants as a remedial measure. Performed sensitive receptor survey in preparation for closure of the environmental case.
- ***Sara Lee, Concord, California***
  Perform quarterly groundwater monitoring and sampling. Conducted soil, soil vapor, and groundwater investigation to assess the effectiveness of remediation. Installed groundwater monitoring wells to evaluate the extent of the contaminant plume. Performed sensitive receptor survey in preparation for closure of the environmental case.
- ***Sara Lee, Oakland, California***
  Performed comprehensive soil and groundwater investigation at a site impacted by a release of diesel in the vicinity of a former UST and dispenser. Performed direct-push soil and groundwater sampling and laboratory analysis to evaluate the extent of contamination.
- ***Sara Lee, Stockton, California (3 Sites)***
  Perform quarterly groundwater monitoring and sampling. Performed operation and maintenance of the air sparging and soil vapor extraction system. Conducted post-remediation groundwater monitoring. Conducted soil, soil vapor, and groundwater investigations. Performed sensitive receptor surveys.
- ***Sara Lee, San Francisco, California***
  Performed assessment and removal of one hydraulic lift system and obtained site closure.

3.3 Nestle USA, Inc.

Client:
Nestle USA, Inc.

Location:
West Oakland, California

Project Budget:
$2 million

Services:
- Remedial Investigation
- Feasibility Studies
- Remedial Design and Implementation
- Environmental Modeling and Human Health Risk Assessment
- Case Closure

Business Challenge
The Alameda County Health Care Agency (ACHCA) and the Regional Water Quality Control Board (RWQCB) requested remediation of this ~3 acre site, which had multiple feet of free product in 7-10 wells and lesser amounts of free product in more than 30 wells, to MCL levels in the groundwater. The sources of the environmental impacts at the site were underground storage tanks (USTs) used for fuel storage and dispensing, one UST for storage of waste oil and solvents, use of waste oil containing chlorinated solvents for dust control, vehicle painting operations, and historical use of PCBs and Freon refrigerants.

Our Approach
ETIC provided turn-key environmental services to Nestlé USA at a former distribution and maintenance facility located in West Oakland. Remediation was conducted by ETIC over a 2.5 year period to reduce free product levels to trace measurements. ETIC conducted environmental modeling to estimate the transport of chemicals of potential concern (COPCs) in the saturated and vadose zones. The results of the modeling were used for the human health risk assessment developed for the site. The human health risk assessment focused on development of risk-based soil and groundwater screening levels for over 50 COPCs, including petroleum hydrocarbons, polycyclic aromatic hydrocarbons, chlorinated solvents, PCBs, pesticides, and heavy metals. Risk-based screening levels protective of future construction workers and daily site occupants were used for development of construction worker health and safety plans and risk management strategies to ensure protection of site occupants during proposed construction and redevelopment activities.

ETIC successfully made a case to the RWQCB and the ACHCA that the site hydrogeology and natural attenuation processes would restrict plume migration even though some free product remained in wells and soil in the source area. The site was subsequently closed based on these arguments and our client was able to divest the property.

Additional services provided to Nestlé included: legal support during sale of the property; development of a Corrective Action Plan which included public meetings and informational literature, development of a Risk Management Plan for use by future property owners, developers, and site occupants; and an Assessment of Historic Buildings found on the site.

3.4 Grass Valley Service Center

Petroleum Hydrocarbon-Impacted Soil Excavation

Client:
Major Utility Client

Location:
Grass Valley, California

Project Budget:
$475,000

Duration of Project:
August 2009 –
November 2009

Services:
- Excavation
- Dewatering
- Transportation & Disposal
- Backfill
- Compaction
- Site Restoration

Business Challenge
ETIC implemented the corrective action plan for a major utility company that included excavation of petroleum hydrocarbon-impacted soil, dewatering activities, transportation and disposal of impacted soil and groundwater, backfill and compaction of the excavation using clean imported material, and site restoration activities.

Our Approach
Prior to initiation of field activities, ETIC prepared a site-specific health and safety plan and an Environmental Controls Plan that included spill prevention, controls, and counter measures to be implemented as wells as storm water pollution prevention and dust controls measures. The excavation area was then cleared and the existing asphalt was saw-cut and removed.

The sheet-pile shoring system was installed per the project-specific Excavation Support and Protection Plan. The soil within the interior of the shoring was excavated to a total depth of 27 feet below ground surface (bgs) using a combination of excavators to excavate between 10 and 15 feet bgs, followed by use of a mini-excavator, which was lowered within the excavation using a crane, to reach the total depth. The excavated areas were then backfilled and compacted. All excavated soil was transported offsite by a preapproved transporter at a preapproved facility. Dust suppression measures were accomplished by using a trailer-mounted water tank and pump during soil excavation, stockpiling, and truck loading activities.

Following completion of the excavation backfilling activities, the sheet-pile shoring was removed, and the asphalt pavement was replaced to match the existing surface using hot-mix. Lastly, final site clean-up was performed, and all equipment was removed from the site. A final survey of the adjacent structures was conducted by a licensed surveyor to check for settlement.

3.5 Marsh Landing

Petroleum Hydrocarbon-Impacted Soil Excavation

Client:
Major Utility Client

Location:
Antioch, California

Project Budget:
$400,000

Duration of Project:
December 2010 – April 2011

Services:
- Shoring
- Excavation
- Dewatering
- Waste Disposal
- Backfill
- Compaction
- Site Restoration

Business Challenge
ETIC was retained to conduct soil removal activities at the Marsh Landing-GenOn Power Generating Station in Contra Costa County, California. The project included contaminated soil excavation at three locations (Excavation A, B, and C), shoring, dewatering, waste disposal, backfill, compaction, and site restoration. ETIC implemented surgical excavation operations as the excavation areas were near energized fiber optic conduits and transected Excavation C.

Our Approach
ETIC obtained grading and electrical permits from the Contra Costs County Department of Conservation and Development-Building Inspection Division for the project and all fieldwork was conducted in accordance with Contra Costa County permit requirements, including implementation of best management practices (BMPs) for storm water pollution prevention at the site prior to initiation of fieldwork. In addition, Underground Service Alert (USA) was contacted prior to the initiation of fieldwork and was updated monthly.

ETIC's shoring subcontractor, installed sheet pile shoring around all three excavation areas and a combination of vacuum soil excavation and hand digging methods were used near the energized fiber optic conduits. Prior to using the vacuum soil excavation and hand digging methods, overburden soil was removed using a small excavator. Once the shoring was completely installed, ETIC commenced excavation activities and off-hauled all excavated soil in accordance with the Excavation Plan. All excavated soil was transported for disposal by ETIC's preapproved waste transport subcontractor. The total volume of excavated and off-hauled soil amounted to 562 tons or approximately 350 cubic yards. ETIC then backfilled the excavation areas and restored the site.

Benefits & Value
A third party conducted subsurface utility clearance during a previously soil investigation and cleared the site for excavation. ETIC project personnel followed the company's behavior-based safety program job safety analysis for excavation activities and conducted a second subsurface utility clearance in which the energized fiber optic conduits were located within the excavation areas. ETIC worked with the project engineer to revise the shoring design and excavation plan to prevent damaging the fiber optic conduits. By conducting the second subsurface utility clearance, ETIC prevented disturbance to the fiber optic conduits responsible for communication to and from the generating station.