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Memo

To Board of Education

From Kyla Johnson-Trammell, Superintendent
Jenine Lindsay, Interim General Counsel
Rebecca Littlejohn, Risk Management Officer

Board Meeting Date February 14, 2024

Subject Service Agreement for Consulting Services – Inc. – **VAPOR INTRUSION INITIATIVE**
Subsurface Contamination
(Phase One: Vapor Encroachment Condition Screening Evaluation)
Project #: 23125

Acton Requested Approval by the Board of Education of Services Agreement for Vapor Consulting Services by and between the **District** and **Catalyst Environmental Solutions,** for the latter to provide environmental services associated with phase one of the Districts *Vapor Intrusion Initiative*. The Vapor Intrusion Initiative is being implemented to identify potential human health risks at District facilities due to vapor intrusion. The scope of work will be to complete Vapor Encroachment Screenings of OUSD facilities in the West, Central and East regions. Although there is a well-defined scope of work for the Vapor Encroachment Screening, it is anticipated that the results of the vapor encroachment screening may result in a need for public outreach, verification sampling and monitoring, and/or implementation of interim corrective actions. As such, this budget includes a base cost, which represents a lump sum cost to complete the well-defined scope of work, and three not-to-exceed time and materials budgets: One to support public outreach and communication, one to provide services associated with verification monitoring and sampling, and one to provide services associated with implementation of interim mitigation measures. Services associated with these contingency budgets will be implemented on an as-requested and as-needed basis and will require submittal of a written not-to-exceed cost estimate from **Catalyst Environmental Solutions** to OUSD and written approval and authorization from OUSD prior to authorization to proceed. Budgets for each of these services are summarized below:

Budget Item	**Type**		**Cost**
Base Cost	Lump Sum	$	$158,162
Contingency: Public Participation	T&M NTE	$	$20,000
Contingency: Verification Monitoring & Sampling	T&M NTE	$	$15,000
Contingency: Interim Mitigation Measures	T&M NTE	$	$150,000

This agreement is scheduled to be effective from January 1, 2024 through December 31, 2024.

Discussion

Catalyst Environmental Solutions was chosen through an RFP (a) on the basis of demonstrated competence and professional qualifications (Government Code §4526), and (b) using a fair, competitive RFP selection process (Government Code §§4529.10 et seq.)

Recommendation

Approval by the Board of Education of Agreement for Architectural Services by and between Approval by the Board of Education of Agreement for Architectural Services by and between the **District** and Catalyst Environmental Solutions, for the latter to provide environmental services associated with phase one of the Districts *Vapor Intrusion Initiative*. The Vapor Intrusion Initiative is being implemented to identify potential human health risks at District facilities due to vapor intrusion. The scope of work will be to complete Vapor Encroachment Screenings of OUSD facilities in the West, Central and East regions for Vapor Consulting Services. The total not-to-exceed amount is **$343,162.00,** which includes a not-to-exceed amount of **$158,162**, for Basic Services, and a not-to-exceed amount of **$185,000** for Additional Contingency Services, with work scheduled to commence on **January 1, 2024**, and scheduled to last until **December 31, 2024**, pursuant to the Agreement.

Fiscal Impact

Attachments

- Contract Justification Form
- Agreement, including Exhibits
- Certificate of Insurance
- Routing Form

OAKLAND UNIFIED SCHOOL DISTRICT
Community Schools, Thriving Students

SERVICES AGREEMENT

This Services Agreement ("AGREEMENT") is a legally binding contract entered into between the Oakland Unified School District ("OUSD") and the entity or individual ("VENDOR," together with OUSD, "PARTIES") named in **Exhibit A**, attached hereto and incorporated herein by reference. Unless otherwise stated herein, "VENDER INDIVIDUAL" includes (to the extent they exist): VENDOR Board members, officers, trustees, and directors; VENDOR employees, agents, consultants, contractors and subcontractors, representatives, and other similar individuals; and volunteers and others unpaid persons under VENDOR's direction, invitation, or control.

The PARTIES hereby agree as follows:

1. **Services**. VENDOR shall provide the services ("SERVICES") as described in **Exhibit A**.

2. **Term**. The term ("TERM") of this AGREEMENT is established in **Exhibit A.**

3. **Compensation**.
   a. Over the TERM, OUSD agrees to pay VENDOR the amount of money stated in **Exhibit A** for satisfactorily performing the SERVICES. OUSD shall not pay and shall not be liable to VENDOR for any costs or expenses paid or incurred by VENDOR not described in **Exhibit A**.
   b. Compensation for SERVICES performed outside of the TERM (e.g., prior to execution of this AGREEMENT or after its termination) shall be at OUSD's sole discretion and in an amount solely determined by OUSD. VENDOR agrees that it shall not expect or demand compensation for the performance of such SERVICES.
   c. VENDOR acknowledges and agrees not to expect or demand compensation for any SERVICES performed prior to the PARTIES, particularly OUSD, validly and properly executing this AGREEMENT and VENDOR shall not rely on verbal or written communication from any individual, other than the OUSD Superintendent or the OUSD Legal Counsel, stating that OUSD has validly and properly executed this AGREEMENT.
   d. Payment for SERVICES shall be made for all undisputed amounts no more frequently than in monthly installment payments within sixty (60) days after VENDOR submits an invoice to OUSD, in accordance with Paragraph 4 (Invoicing), for the SERVICES actually performed and after OUSD's written approval that the SERVICES were actually performed. The granting of any payment by OUSD, or the receipt thereof by VENDOR, shall in no way lessen the liability of VENDOR to correct unsatisfactory performance of SERVICES, even if the unsatisfactory character of the performance was not apparent or detected at the time a payment was made. If OUSD determines that VENDOR's performance does not conform to the requirements of this AGREEMENT, VENDOR agrees to correct its performance without delay.

4. Invoicing. Invoices furnished by VENDOR under this AGREEMENT must be in a form acceptable to OUSD.
   a. All amounts paid by OUSD shall be subject to audit by OUSD. Invoices shall include, without limitation: VENDOR name, VENDOR address, invoice date, invoice number, purchase order number, name of school or department to which the SERVICES were provided, name(s) of the person(s) performing the SERVICES, date(s) the SERVICES were performed, brief description of the SERVICES provided on each date, total invoice amount, and the basis for the total invoice amount (e.g., if hourly rate, the number of hours on each date and the rate for those hours).
   b. If OUSD, at its sole discretion, determines an invoice fails to include the required elements, OUSD will not pay the invoice and will inform VENDOR of the missing items; VENDOR shall resubmit an invoice that includes the required elements before OUSD will pay the invoice.
   c. Invoices must be submitted no more frequently than monthly, and within 30 days of the conclusion of the applicable billing period. OUSD reserves the right to refuse to pay untimely invoices.
   d. OUSD reserves the right to add or change invoicing requirements. If OUSD does add or change invoicing requirements, it shall notify VENDOR in writing and the new or modified requirements shall be mandatory upon receipt by VENDOR of such notice.
   e. To the extent that VENDOR has described how the SERVICES may be provided both in-person and not in-person, VENDOR's invoices shall—in addition to any invoice requirement added or changed under subparagraph (d)—indicate whether the SERVICES were provided in-person or not.
   f. All invoices furnished by VENDOR under this AGREEMENT shall be delivered to OUSD via email unless OUSD requests, in writing, a different method of delivery.

5. Suspension. If OUSD, at its sole discretion, develops health and safety concerns related to VENDOR's provision of SERVICES, then the OUSD Superintendent or an OUSD Chief may, upon approval by OUSD legal counsel, issue a notice to VENDOR to suspend this AGREEMENT, in which case VENDOR shall stop providing SERVICES under this AGREEMENT until further notice from OUSD. OUSD shall compensate VENDOR for the SERVICES satisfactorily provided through the date of suspension.

6. Termination. Upon termination consistent with this Paragraph (Termination), VENDOR shall provide OUSD with all materials produced, maintained, or collected by VENDOR pursuant to this AGREEMENT, whether or not such materials are complete or incomplete or are in final or draft form.
   a. For Convenience by OUSD. OUSD may at any time terminate this AGREEMENT upon thirty (30) days prior written notice to VENDOR. OUSD shall compensate VENDOR for SERVICES satisfactorily provided through the date of termination. Upon approval by OUSD legal counsel, the OUSD Superintendent or an OUSD Chief may issue the termination notice without prior approval by the OUSD Governing Board, in which case this AGREEMENT would terminate upon ratification of the termination by the OUSD Governing Board or thirty (30) days after the notice was

provided, whichever is later. VENDOR shall immediately stop providing SERVICES upon receipt of the termination notice from the OUSD Superintendent or OUSD Chief.

b. For Cause. Either PARTY may terminate this AGREEMENT by giving written notice of its intention to terminate for cause to the other PARTY. Written notice shall contain the reasons for such intention to terminate, which shall include (i) material violation of this AGREEMENT or (ii) if either PARTY is adjudged bankrupt, makes a general assignment for the benefit of creditors, or a receiver is appointed on account of its insolvency. Upon approval by OUSD legal counsel, the OUSD Superintendent or an OUSD Chief may issue the termination notice without prior approval by the OUSD Governing Board, in which case this AGREEMENT would terminate upon ratification of the termination by the OUSD Governing Board or three (3) days after the notice was provided, whichever is later, unless the condition or violation ceases or satisfactory arrangements for its correction are made. VENDOR shall immediately stop providing SERVICES upon receipt of the termination notice from the OUSD Superintendent or OUSD Chief.

c. Due to Unforeseen Emergency or Acts of God. Notwithstanding any other language of this AGREEMENT, if there is an unforeseen emergency or an Act of God during the TERM that would prohibit or limit, at the sole discretion of OUSD, the ability of VENDOR to perform the SERVICES, OUSD may terminate this AGREEMENT upon seven (7) days prior written notice to VENDOR. The OUSD Governing Board may issue this type of termination notice or the OUSD Superintendent, upon approval by OUSD legal counsel, may issue this type of the termination notice without the need for approval or ratification by the OUSD Governing Board. VENDOR shall immediately stop providing SERVICES upon receipt of the termination notice from the OUSD Superintendent.

d. Due to Failure to Ratify by OUSD Board. If, consistent with Paragraph 41 (Signature Authority), this AGREEMENT is executed on behalf of OUSD by the signature of the Superintendent, a Chief, a Deputy Chief, or an Executive Director, and the Board thereafter declines to ratify this AGREEMENT, this AGREEMENT shall automatically terminate on the date that the Board declines to ratify it. OUSD shall compensate VENDOR for the SERVICES satisfactorily provided through the date of termination.

7. Data and Information Requests.

a. VENDOR shall timely provide OUSD with any data and information OUSD reasonably requests related to the provision of the SERVICES.

b. VENDOR shall register with and maintain current information within OUSD's Community Partner database unless OUSD communicates to VENDOR in writing otherwise, based on OUSD’s determination that the SERVICES are not related to community school outcomes. If and when VENDOR’s programs and school site(s) change (either midyear or in subsequent years), VENDOR shall promptly update the information in the database.

8. Confidentiality and Data Privacy.
   a. OUSD may share information with VENDOR pursuant to this AGREEMENT in order to further the purposes thereof. VENDOR and VENDOR INDIVIDUALS shall maintain the confidentiality of all information received in the course of performing the SERVICES, provided such information is (i) marked or identified as "confidential" or "privileged," or (ii) reasonably understood to be confidential or privileged.
   b. VENDOR understands that student data is confidential. VENDOR or VENDOR INDIVIDUALS may only access or receive identifiable student data, other than directory information, in connection with this AGREEMENT only after VENDOR and OUSD execute (i) a California Student Data Privacy Agreement ("CSDPA") or CSDPA Exhibit E, if VENDOR is a software vendor, or (ii) the OUSD Data Sharing Agreement, if VENDOR is not a software vendor. Notwithstanding Paragraph 24 (Indemnification), should VENDOR or VENDOR INDIVIDUALS access or receive identifiable student data, other than directory information, without first executing such an agreement, VENDOR shall be solely liable for any and all claims or losses resulting from its access or receipt of such data.
   c. All confidentiality requirements, including those set forth in the separate data sharing agreement, extend beyond the termination of this AGREEMENT.

9. Copyright/Trademark/Patent/Ownership. VENDOR understands and agrees that all matters produced under this AGREEMENT, excluding any intellectual property that existed prior to execution of this AGREEMENT, shall be works for hire as defined under Title 17 of the United States Code, and all copyrights in those works are the property of OUSD. These matters include, without limitation, drawings, plans, specifications, studies, reports, memoranda, computation sheets, the contents of computer diskettes, artwork, copy, posters, billboards, photographs, videotapes, audiotapes, systems designs, software, reports, diagrams, surveys, source codes or any other original works of authorship, or other documents prepared by VENDOR in connection with the SERVICES performed under this AGREEMENT. VENDOR cannot use, reproduce, distribute, publicly display, perform, alter, remix, or build upon matters produced under this AGREEMENT without OUSD's express written permission. OUSD shall have all right, title and interest in said matters, including the right to register the copyright, trademark, and/or patent of said matter in the name of OUSD. OUSD may, with VENDOR's prior written consent, use VENDOR's name in conjunction with the sale, use, performance and distribution of the matters, for any purpose and in any medium.

10. Alignment and Evaluation.
   a. VENDOR agrees to work and communicate with OUSD staff, both formally and informally, to ensure that the SERVICES are aligned with OUSD's mission and are meeting the needs of students as determined by OUSD.
   b. OUSD may evaluate VENDOR or VENDOR INDIVIDUALS in any reasonable manner which is permissible under the law. OUSD's evaluation may include, without limitation: (i) requesting that OUSD employee(s) evaluate the performance of

VENDOR or VENDOR INDIVIDUALS, and (ii) announced and unannounced observance of VENDOR or VENDOR INDIVIDUALS.

11. Inspection and Approval. VENDOR agrees that OUSD has the right and agrees to provide OUSD with the opportunity to inspect any and all aspects of the SERVICES performed including, but not limited to, any materials (physical or electronic) produced, created, edited, modified, reviewed, or otherwise used in the preparation, performance, or evaluation of the SERVICES. In accordance with Paragraph 3 (Compensation), the SERVICES performed by VENDOR must meet the approval of OUSD, and OUSD reserves the right to direct VENDOR to redo the SERVICES, in whole or in part, if OUSD, in its sole discretion, determines that the SERVICES were not performed in accordance with this AGREEMENT.

12. Equipment and Materials. VENDOR shall provide all equipment, materials, and supplies necessary for the performance of this AGREEMENT.

13. Legal Notices. Based on contact information set forth in Exhibit A, all legal notices provided for under this AGREEMENT shall be sent: (i) via email, (ii) personally delivered during normal business hours, or (iii) sent by U.S. Mail (certified, return receipt requested) with postage prepaid to the other PARTY. Notice shall be effective when received if personally served or emailed or, if mailed, three days after mailing. Either PARTY must give written notice of a change of mailing address or email.

14. Status.
    a. This is not an employment contract. VENDOR, in the performance of this AGREEMENT, shall be and act as an independent contractor.
    b. If VENDOR is a natural person, VENDOR verifies all of the following:
        (i) VENDOR is free from the control and direction of OUSD in connection with VENDOR's work;
        (ii) VENDOR's work is outside the usual course of OUSD's business; and
        (iii) VENDOR is customarily engaged in an independently established trade, occupation, or business of the same nature as that involved in the work performed for OUSD.
    c. If VENDOR is a business entity, VENDOR understands and agrees that it and any and all VENDOR INDIVIDUALS shall not be considered employees of OUSD, and are not entitled to benefits of any kind or nature normally provided employees of OUSD and/or to which OUSD's employees are normally entitled, including, but not limited to, State Unemployment Compensation or Worker's Compensation. VENDOR shall assume full responsibility for payment of all Federal, State, and local taxes or contributions, including unemployment insurance, social security and income taxes with respect to VENDOR INDIVIDUALS. VENDOR verifies all of the following:
        (i) VENDOR is free from the control and direction of OUSD in connection with the performance of the work;
        (ii) VENDOR is providing the SERVICES directly to OUSD rather than to customers of OUSD;

(iii) the contract between OUSD and VENDOR is in writing;
(iv) VENDOR has the required business license or business tax registration, if the work is performed in a jurisdiction that requires VENDOR to have a business license or business tax registration;
(v) VENDOR maintains a business location that is separate from the business or work location of OUSD;
(vi) VENDOR is customarily engaged in an independently established business of the same nature as that involved in the work performed;
(vii) VENDOR actually contracts with other businesses to provide the same or similar services and maintains a clientele without restrictions from OUSD;
(viii) VENDOR advertises and holds itself out to the public as available to provide the same or similar services;
(ix) VENDOR provides its own tools, vehicles, and equipment to perform the SERVICES;
(x) VENDOR can negotiate its own rates;
(xi) VENDOR can set its own hours and location of work; and
(xii) VENDOR is not performing the type of work for which a license from the Contractor's State License Board is required, pursuant to Chapter 9 (commencing with section 7000) of Division 3 of the Business and Professions Code.

15. Qualifications, Training, and Removal.
a. VENDOR represents and warrants that VENDOR and all VENDOR INDIVIDUALS have the necessary and sufficient experience, qualifications, and ability to perform the SERVICES in a professional manner, without the advice, control or supervision of OUSD. VENDOR will perform the SERVICES in accordance with generally and currently accepted principles and practices of its profession for services to California school districts and in accordance with applicable laws, codes, rules, regulations, and/or ordinances.
b. VENDOR represents and warrants that all VENDOR INDIVIDUALS are specially trained, experienced, competent and fully licensed to provide the SERVICES identified in this AGREEMENT in conformity with the laws and regulations of the State of California, the United States of America, and all local laws, ordinances and/or regulations, as they may apply.
c. VENDOR agrees to immediately remove or cause the removal of any VENDOR INDIVIDUAL from OUSD property upon receiving notice from OUSD of such desire. OUSD is not required to provide VENDOR with a basis or explanation for the removal request.

16. Certificates/Permits/Licenses/Registration. VENDOR shall ensure that all VENDOR INDIVIDUALS secure and maintain in force such certificates, permits, licenses, and registration as are required by law in connection with the furnishing of the SERVICES pursuant to this AGREEMENT.

17. Insurance.
    a. Commercial General Liability Insurance. VENDOR shall maintain Commercial General Liability Insurance, including automobile coverage, with limits of at least one million dollars ($1,000,000) per occurrence, and two million dollars ($2,000,000) aggregate, sexual misconduct, harassment, bodily injury and property damage. Coverage for corporal punishment, sexual misconduct, and harassment may either be provided through General Liability Insurance or Professional Liability Insurance. The coverage shall be primary as to OUSD and shall name OUSD as an additional insured with the additional insured endorsement provided to OUSD within 15 days of effective date of this AGREEMENT (and within 15 days of each new policy year thereafter during the TERM). Evidence of insurance shall be attached to this AGREEMENT or otherwise provided to OUSD upon request. Endorsement of OUSD as an additional insured shall not affect OUSD's rights to any claim, demand, suit or judgment made, brought or recovered against VENDOR. The policy shall protect VENDOR and OUSD in the same manner as though each were separately issued. Nothing in said policy shall operate to increase the Insurer's liability as set forth in the policy beyond the amount or amounts shown or to which the Insurer would have been liable if only one interest were named as an insured. The requirements of this subparagraph may be specifically waived as noted in Exhibit A.
    b. Workers' Compensation Insurance. VENDOR shall procure and maintain, at all times during the TERM of this AGREEMENT, Workers' Compensation Insurance in conformance with the laws of the State of California (including, but not limited to, Labor Code section 3700) and Federal laws when applicable. Employers' Liability Insurance shall not be less than one million dollars ($1,000,000) per accident or disease. The requirements of this subparagraph may be specifically waived as noted in Exhibit A.

18. Testing and Screening.
    a. Tuberculosis Screening. VENDOR shall ensure that all VENDOR INDIVIDUALS who will be working at OUSD sites for more than six hours in total during the TERM or who work with students (regardless of the length of time) have submitted to a tuberculosis risk assessment as required by Education Code section 49406 within the prior 60 days. If tuberculosis risk factors were identified for a VENDOR INDIVIDUAL, that VENDOR INDIVIDUAL must submit to an intradermal or other approved tuberculosis examination to determine if that VENDOR INDIVIDUAL is free of infectious tuberculosis. If the results of the examination are positive, VENDOR shall obtain an x-ray of the lungs. VENDOR, at its discretion, may choose to submit a VENDOR INDIVIDUAL to the examination instead of the risk assessment. The requirements of this subparagraph may be specifically waived as noted in Exhibit A.
    b. Fingerprinting/Criminal Background Investigation. For all VENDOR INDIVIDUALS providing the SERVICES, VENDOR shall ensure completion of fingerprinting and criminal background investigation and shall request and regularly review

subsequent arrest records. VENDOR confirms that no VENDOR INDIVIDUAL providing the SERVICES has been convicted of a felony, as that term is defined in Education Code section 45122.1. VENDOR shall provide the results of the investigations and subsequent arrest notifications to OUSD. For purposes of this subparagraph, VENDOR shall use either California Department of Justice or Be A Mentor, Inc. (http://beamentor.org/OUSDPartner) finger-printing and subsequent arrest notification services. The requirements of this subparagraph may be specifically waived as noted in **Exhibit A**.

19. Incident/Accident/Mandated Reporting.
    a. VENDOR shall notify OUSD, via email pursuant to Paragraph 13 (Legal Notices), within twelve (12) hours of learning of any significant accident or incident in connection with the provision of the SERVICES. Examples of a significant accident or incident include, without limitation, an accident or incident that involves law enforcement, or possible or alleged criminal activity, or possible or actual exposure to a communicable disease such as COVID-19. VENDOR shall properly submit required accident or incident reports within one business day pursuant to the procedures specified by OUSD. VENDOR shall bear all costs of compliance with this Paragraph.
    b. To the extent that a VENDOR INDIVIDUAL is included on the list of mandated reporters found in Penal Code section 11165.7, VENDOR agrees to inform that VENDOR INDIVIDUAL, in writing, that they are a mandated reporter, and describing the associated obligations to report suspected cases of abuse and neglect pursuant to Penal Code section 11166.5.

20. Health and Safety Orders and Requirements; Site Closures.
    a. VENDOR shall adhere to any health or safety orders or requirements issued at the time of the execution of this AGREEMENT or in the future by OUSD or other public entities ("Orders").
    b. Except as possibly stated otherwise in **Exhibit A**, VENDOR is able to meet its obligations and perform the SERVICES required pursuant to this AGREEMENT in accordance with any Order; to the extent that VENDOR becomes unable to do so, VENDOR shall immediately inform OUSD in writing.
    c. Except as possibly stated otherwise in **Exhibit A**, to the extent that there may be a site closure (e.g., due to poor air quality, planned loss of power, strike) or similar event in which school sites and/or District offices may be closed or otherwise inaccessible, VENDOR is able to meet its obligations and perform the SERVICES required pursuant to this AGREEMENT; to the extent that VENDOR becomes unable to do so, VENDOR shall immediately inform OUSD in writing.
    d. VENDOR shall bear all costs of compliance with this Paragraph, including but not limited lost compensation for failure to provide SERVICES.

21. Conflict of Interest.
    a. VENDOR and all VENDOR INDIVIDUALS shall abide by and be subject to all applicable, regulations, statutes, or other laws regarding conflict of interest. VENDOR shall not hire, contract with, or employ any officer or employee of OUSD during the TERM without the prior approval of OUSD Legal Counsel.
    b. VENDOR affirms, to the best of his/her/its knowledge, that there exists no actual or potential conflict of interest between VENDOR's family, business, or financial interest and the SERVICES provided under this AGREEMENT, and in the event of any change in either private interest or the SERVICES under this AGREEMENT, any question regarding a possible conflict of interest which may arise as a result of such change will be immediately brought to OUSD's attention in writing.
    c. Through its execution of this AGREEMENT, VENDOR acknowledges that it is familiar with the provisions of section 1090 *et seq.* and section 87100 *et seq.* of the Government Code, and certifies that it does not know of any facts which constitute a violation of said provisions. In the event VENDOR receives any information subsequent to execution of this AGREEMENT which might constitute a violation of said provisions, VENDOR agrees it shall immediately notify OUSD in writing.

22. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion. VENDOR certifies, to the best of its knowledge and belief, that it and its principals are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency according to Federal Acquisition Regulation Subpart 9.4, and by signing this AGREEMENT, certifies that neither it nor its principals appear on the Excluded Parties List (https://www.sam.gov/).

23. Limitation of OUSD Liability. Other than as provided in this AGREEMENT, OUSD's financial obligations under this AGREEMENT shall be limited to the compensation described in Paragraph 3 (Compensation). Notwithstanding any other provision of this AGREEMENT, in no event shall OUSD be liable, regardless of whether any claim is based on contract or tort, for any special, consequential, indirect or incidental damages, including, but not limited to, lost profits or revenue, arising out of, or in connection with, this AGREEMENT for the SERVICES performed in connection with this AGREEMENT.

24. Indemnification.
    a. To the furthest extent permitted by California law, VENDOR shall indemnify, defend and hold harmless OUSD, its Governing Board, agents, representatives, officers, consultants, employees, trustees, and volunteers ("OUSD Indemnified Parties") from any and all claims or losses accruing or resulting from injury, damage, or death of any person or entity arising out of VENDOR's performance of this AGREEMENT. VENDOR also agrees to hold harmless, indemnify, and defend OUSD Indemnified Parties from any and all claims or losses incurred by any supplier or subcontractor furnishing work, services, or materials to VENDOR arising out of the performance of this AGREEMENT. VENDOR shall, to the fullest extent permitted by California law, defend OUSD Indemnified Parties at VENDOR's own expense, including attorneys'

fees and costs, and OUSD shall have the right to accept or reject any legal representation that VENDOR proposes to defend OUSD Indemnified Parties.

b. To the furthest extent permitted by California law, OUSD shall indemnify, defend, and hold harmless VENDOR and VENDOR INDIVIDUALS from any and all claims or losses accruing or resulting from injury, damage, or death of any person or entity arising out of OUSD's performance of this AGREEMENT. OUSD shall, to the fullest extent permitted by California law, defend VENDOR and VENDOR INDIVIDUALS at OUSD's own expense, including attorneys' fees and costs.

25. Audit. VENDOR shall establish and maintain books, records, and systems of account, in accordance with generally accepted accounting principles, reflecting all business operations of VENDOR transacted under this AGREEMENT. VENDOR shall retain these books, records, and systems of account during the TERM and for three (3) years after the earlier of (i) the TERM or (ii) the date of termination. VENDOR shall permit OUSD, its agent, other representatives, or an independent auditor to audit, examine, and make excerpts, copies, and transcripts from all books and records, and to make audit(s) of all billing statements, invoices, records, and other data related to the SERVICES covered by this AGREEMENT. Audit(s) may be performed at any time, provided that OUSD shall give reasonable prior notice to VENDOR and shall conduct audit(s) during VENDOR'S normal business hours, unless VENDOR otherwise consents.

26. Non-Discrimination. It is the policy of OUSD that, in connection with all work performed under legally binding agreements, there be no discrimination because of race, color, ancestry, national origin, religious creed, physical disability, medical condition, marital status, sexual orientation, gender, or age; therefore, VENDOR agrees to comply with applicable Federal and California laws including, but not limited to, the California Fair Employment and Housing Act beginning with Government Code section 12900 and Labor Code section 1735 and OUSD policy. In addition, VENDOR agrees to require like compliance by all its subcontractor (s). VENDOR shall not engage in unlawful discrimination in employment on the basis of actual or perceived: race, color, national origin, ancestry, religion, age, marital status, pregnancy, physical or mental disability, medical condition, veteran status, gender, sex, sexual orientation, or other legally protected class.

27. Drug-Free/Smoke Free Policy. No drugs, alcohol, and/or smoking are allowed at any time in any buildings and/or grounds on OUSD property. No students, staff, visitors, VENDORS, or subcontractors are to use controlled substances, alcohol or tobacco on these sites.

28. Waiver. No delay or omission by either PARTY in exercising any right under this AGREEMENT shall operate as a waiver of that or any other right or prevent a subsequent act from constituting a violation of this AGREEMENT.

29. Assignment. The obligations of VENDOR under this AGREEMENT shall not be assigned by VENDOR without the express prior written consent of OUSD and any assignment without the express prior written consent of OUSD shall be null and void.

30. No Rights in Third Parties. This AGREEMENT does not create any rights in, or inure to the benefit of, any third party except as expressly provided herein.

31. Litigation. This AGREEMENT shall be deemed to be performed in Oakland, California and is governed by the laws of the State of California, but without resort to California's principles and laws regarding conflict of laws. The Alameda County Superior Court shall have jurisdiction over any litigation initiated to enforce or interpret this AGREEMENT.

32. Incorporation of Recitals and Exhibits. Any recitals and exhibits attached to this AGREEMENT are incorporated herein by reference. VENDOR agrees that to the extent any recital or document incorporated herein conflicts with any term or provision of this AGREEMENT, the terms and provisions of this AGREEMENT shall govern.

33. Integration/Entire Agreement of Parties. This AGREEMENT constitutes the entire agreement between the PARTIES and supersedes all prior discussions, negotiations, and agreements, whether oral or written. This AGREEMENT may be amended or modified only by a written instrument executed by both PARTIES.

34. Severability. If any term, condition, or provision of this AGREEMENT is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remaining provisions will nevertheless continue in full force and effect, and shall not be affected, impaired or invalidated in any way.

35. Provisions Required By Law Deemed Inserted. Each and every provision of law and clause required by law to be inserted in this AGREEMENT shall be deemed to be inserted herein and this AGREEMENT shall be read and enforced as though it were included therein.

36. Captions and Interpretations. Paragraph headings in this AGREEMENT are used solely for convenience, and shall be wholly disregarded in the construction of this AGREEMENT. No provision of this AGREEMENT shall be interpreted for or against a PARTY because that PARTY or its legal representative drafted such provision, and this AGREEMENT shall be construed as if jointly prepared by the PARTIES.

37. Calculation of Time. For the purposes of this AGREEMENT, "days" refers to calendar days unless otherwise specified and "hours" refers to hours regardless of whether it is a work day, weekend, or holiday.

38. Counterparts and Electronic Signature. This AGREEMENT, and all amendments, addenda, and supplements to this AGREEMENT, may be executed in one or more counterparts, all of which shall constitute one and the same amendment. Any counterpart may be executed and delivered by facsimile or other electronic signature (including portable document format) by either PARTY and, notwithstanding any statute or regulations to the contrary (including, but not limited to, Government Code section 16.5 and the regulations

promulgated therefrom), the counterpart shall legally bind the signing PARTY and the receiving PARTY may rely on the receipt of such document so executed and delivered electronically or by facsimile as if the original had been received. Through its execution of this AGREEMENT, each PARTY waives the requirements and constraints on electronic signatures found in statute and regulations including, but not limited to, Government Code section 16.5 and the regulations promulgated therefrom.

39. W-9 Form. If VENDOR is doing business with OUSD for the first time, VENDOR acknowledges that it must complete and return a signed W-9 form to OUSD.

40. Agreement Publicly Posted. This AGREEMENT, its contents, and all incorporated documents are public documents and will be made available by OUSD to the public online via the Internet.

41. Signature Authority.
    a. Each PARTY has the full power and authority to enter into and perform this AGREEMENT, and the person(s) signing this AGREEMENT on behalf of each PARTY has been given the proper authority and empowered to enter into this AGREEMENT.
    b. Notwithstanding subparagraph (a), VENDOR acknowledges, agrees, and understands (i) that only the Superintendent, and the Chiefs, Deputy Chiefs, and Executive Directors who have been delegated such authority, may validly sign contracts for OUSD and only under limited circumstances, and (ii) that all such contract still require ratification by the OUSD Governing Board. VENDOR agrees not to accept the signature of another other individual as having the proper authority to enter into this AGREEMENT on behalf of OUSD.

42. Contract Contingent on Governing Board Approval. The PARTIES acknowledge, agree, and understand that OUSD shall not be bound by the terms of this AGREEMENT unless and until it has been (i) formally approved by OUSD's Governing Board or (ii) validly and properly executed by the OUSD Superintendent, a Chief, or a Deputy Chief authorized by the Education Code or Board Policy, and no compensation shall be owed or made to VENDOR absent such formal approval or valid and proper execution.

REST OF PAGE INTENTIONALLY LEFT BLANK

IN WITNESS WHEREOF, the PARTIES hereto agree and execute this AGREEMENT and to be bound by its terms and conditions:

VENDOR

Name: David Blankenhorn Signature: David Blankenhorn Digitally signed by David Blankenhorn Date: 2024.02.05 08:45:38 -08'00'

Position: COO/Director of Client Services Date: 02/05/24

One of the terms and conditions to which VENDOR specifically agrees by its signature is subparagraph (c) of Paragraph 3 (Compensation), which states that VENDOR acknowledges and agrees not to expect or demand compensation for any SERVICES performed prior to the PARTIES, particularly OUSD, validly and properly executing this AGREEMENT and shall not rely on verbal or written communication from any individual, other than the OUSD Superintendent or OUSD Legal Counsel, stating that OUSD has validly and properly executed this AGREEMENT.

OUSD

Name: Benjamin Davis Signature:

Position: President, Board of Education Date: 2/15/2024

☐ Board President (for approvals)
☐ Chief/Deputy Chief/Executive Director (for ratifications)

Name: Kyla Johnson-Trammell Signature:

Position: Superintendent & Secretary, Board of Education Date: 2/15/2024

Template approved as to form by OUSD Legal Department.

SERVICES AGREEMENT
EXHIBIT A
(Paragraph numbers in Exhibit A corresponds to the applicable Paragraph number in this Agreement.)

VENDOR: Catalyst Environmental Solutions Corporation

1. Services. Describe the SERVICES VENDOR will provide: _____

2. Term.
   a. This AGREEMENT shall start on the below Start Date. If no date is entered, then this AGREEMENT shall start on the latest of the dates on which each of the PARTIES signed this AGREEMENT.
      Start Date: January 1, 2024
   b. Unless terminated earlier, this AGREEMENT shall end on the below End Date. If no date is entered, then this AGREEMENT shall end on the first June 30 after start date listed in subparagraph (a). If the dates set forth in this subparagraph and subparagraph (a) would cause this AGREEMENT to exceed the limits set forth in state law (e.g., Education Code section 17596), this AGREEMENT shall instead automatically end upon reaching said limit.
      End date: December 31, 2024

3. Compensation.
   a. The basis for payment to VENDOR shall be:
      - ☑ Hourly Rate: See Rate Sheet per hour
      - ☐ Daily Rate: _____ per day
      - ☐ Weekly Rate: _____ per week
      - ☐ Monthly Rate: _____ per month
      - ☐ Per Student Served Rate: _____ per student served
      - ☐ Performance/Deliverable Payments: Describe below the performance and/or deliverable(s) as well as the associated rate(s): _____
   b. Over the TERM, the total compensation under this AGREEMENT shall not exceed the below amount. This sum includes (but is not limited to) compensation for the full performance of this AGREEMENT and all fees, costs, and expenses incurred by VENDOR including (but not limited to) labor, materials, taxes, profit, overhead, travel, insurance, permitted subcontractor costs, and other costs.
      Not-To-Exceed Amount: $343,162

13. **Legal Notices**.

OUSD
Site/Dept: Legal Department
Address: 1011 Union Street, Site 946
City, ST Zip: Oakland, CA 94607
Phone: 510-879-5060
Email: ousdlegal@ousd.org

VENDOR
Name/Dept: Megan Schwartz
Address: 315 Montana Avenue, Suite 311
City, ST Zip: Santa Monica, CA 90403
Phone: 818-387-5875
Email: mschwartz@ce.solutions

17. **Insurance**. OUSD has waived the following insurance requirements. Written confirmation of a waiver (e.g., email from OUSD Risk Management Officer) is attached hereto. Failure to attach such written confirmation voids any such waiver even if otherwise properly given.

☐ *Commercial General Liability Insurance*. Waiver typically available by OUSD if no VENDOR INDIVIDUAL interacts or has contact with OUSD students (in-person or virtual) and the not-to-exceed amount is $25,000 or less.

☐ *Workers' Compensation Insurance*. Waiver typically available by OUSD if VENDOR has no employees.

18. **Testing and Screening**. OUSD has waived the following testing and screening requirements. Written confirmation of a waiver (e.g., email from OUSD Risk Management Officer) is attached hereto. Failure to include such written confirmation voids any such waiver even if otherwise properly given.

☑ *Tuberculosis Screening*. Waiver typically available by OUSD if VENDOR INDIVIDUALS will have no in-person contact with OUSD students.

☑ *Fingerprinting/Criminal Background Investigation*. Waiver typically available by OUSD if no VENDOR INDIVIDUAL interacts or has contact with OUSD students (in-person or virtual).

20. **Health and Safety Orders and Requirements; Site Closures.** If there is an Order or event in which school sites and/or District offices may be closed or otherwise inaccessible, would the SERVICES be able to continue?

☑ Yes, the SERVICES would be able to continue as described herein.

☐ No, the SERVICES would not be able to continue.

2744 E. 11th Street, Suite A9, Oakland, CA 94601 | (510) 407-2864 | smichelson@ce.solutions

October 12, 2023

Rebecca Littlejohn
Risk Management Officer
Oakland Unified School District
1011 Union Street
Oakland, CA 94607

Via email: rebecca.littlejohn@ousd.org

RE: Letter of Interest – Subsurface Contamination Consulting Services
Phase One: Vapor Encroachment Condition Screening Evaluation
OUSD Region - Central
Project #23125

Rebecca,

Catalyst Environmental Solutions Corporation (Catalyst) is pleased to provide this Letter of Interest (LOI) to support the Oakland Unified School District (OUSD) with Phase One of its Vapor Intrusion Initiative which consists of a vapor encroachment condition screening evaluation. As specified in the Request for Qualifications and Proposal (RFQ/P) dated August 14, 2023, the objective of Phase One is to identify potential Vapor Encroachment Conditions (VECs) at OUSD Facilities and to categorize each OUSD Facility based on its relative potential vapor intrusion risk.

Catalyst is exceptionally suited to support OUSD with this scope of work given our extensive experience, including school-specific and public interfacing experience, in assessing and mitigating vapor intrusion risk. Because our team is Oakland-based, we have a deep knowledge of the physical factors within the OUSD boundaries that affect vapor migration and intrusion risk (e.g., geology, hydrogeology, subsurface infrastructure, and land use) as well as a keen understanding of the community concerns. Lastly, we have strong working relationships with the various regulatory agencies associated with assessing, managing, and mitigating vapor intrusion risk and a demonstrated track record of effectively working with these agencies to achieve our client's goals.

Our team will be led by Steve Michelson, a State of California Professional Geologist (PG) who is based in our Oakland office. Steve has over 25 years of relevant experience and is an effective communicator with extensive experience in translating complex issues into easily understandable concepts across a range of stakeholders. At the senior level, he will be supported by Tyson Fulmer, PG and Andy Campbell, PE who both have significant experience in assessing and addressing vapor intrusion risk. Copies of the resumes for these staff as well as associated professional certifications are provided in Attachment A.

The following provides the corporate information requested in the RFQ/P:

Legal Name: Catalyst Environmental Solutions Corporation
Organization Type: State of California S-Corporation (C3818303)
Address: 2744 E. 11th Street, Suite A9, Oakland, CA 94601
Telephone: 510-407-2864
Website: https://www.ce.solutions/

Registrations

State of California Registered Small Business (Certification #2000479)
Alameda County-Certified Small, Local, and Emerging Business (SLEB Certification No. 23-00059)
Alameda County Transportation Commission Local Small Business Certification (CAT20230403-03)

Tax ID Information

Federal Tax ID: 47-5064211
State Tax ID: 3818303

The following provides the company attestations requested in the RFQ/P:

- *I/we have received and reviewed the Template Services Agreement (available as Attachment A to the RFQ/P). I/we understand that this is the legal agreement that Catalyst will need to sign, and Catalyst agrees to sign it, without objection or reservation, if selected by the District. I/we understand that only the District, at its sole discretion, may change the terms of the Agreement.*
- *I/we certify that no official or employee of the District, nor any business entity in which an official of the District has an interest, has been employed or retained to solicit or assist in responding to the RFP and that Catalyst has no current intent (nor has promised) to employ or retain any official or employee of the District, nor any business entity in which an official of the District has an interest, to perform any of the services for which Catalyst might be selected by this RFP process.*
- *No official or employee of Catalyst has ever been convicted of an ethics violation.*
- *By virtue of submission of this Proposal, I/we declare that all information provided is true and correct.*

We appreciate the opportunity to provide you with this proposal. Please let me know if you have any questions or comments.

Sincerely,

Steven Michelson, PG[1]
Technical Director
CELL: (510) 407-2864
EMAIL: smichelson@ce.solutions

[1] Authorized to submit the RFQ/P on behalf of Catalyst Environmental Solutions Corporation.

ATTACHMENT A

RESUMES AND PROFESSIONAL CERTIFICATIONS FOR KEY STAFF

Steven Michelson, PG

Technical Director

Summary of Qualifications – Vapor Intrusion Mitigation Focus

Mr. Michelson applies technical, economic, and regulatory analysis to assist both the public and private sectors in the cost-effective management and closure of environmental liabilities. He has particular expertise regarding the assessment vapor intrusion risks followed by the mitigation risks to protect human health – ranging from children in schools, to families in low-income housing, to commercial facilities. His experience includes the investigation, mitigation, and remediation of contamination liabilities at a variety of public, school, commercial and industrial facilities, military installations, mines, and ports. His experience predominantly in the San Francisco Bay area, but ranges from dry cleaners in Alaska to uranium mill tailings in New Mexico to extensive petroleum releases in a dune system along California's central coast to legacy mercury contamination affecting wetlands, creeks, and the San Francisco Bay to dredged sediment in the California Delta to transfer of military bases to the public sector. He also brings extensive experience to resolving Natural Resource Damage claims and CERCLA liabilities.

Education

- B.S. Geology and B.S. Civil Engineering, Lehigh University

Disciplines

- Project Management
- Geology/Hydrogeology
- Site Assessment and Remediation
- Dredge Programs and Beneficial Reuse of Sediment
- Environmental Compliance & Permitting
- Water Resources

Professional Affiliations

- California Professional Geologist (No. 5165)
- State of California Contractor – General A, B, C57, C21, and HazMat

Representative Project Experience

VAPOR INTRUSION MITIGATION

California Crosspoint Academy, Hayward, CA

Program manager, technical lead and main client contact for the investigation of risks to indoor air, and subsequent design, installation, and commissioning of vapor intrusion mitigation systems at two new school buildings. One building provides classroom and dormitory services and the other is a multi-purse gymnasium and theatre. Steve provided significant strategic planning to assist the client with the management of the regulatory oversight agency and coordination with the general construction contractor and subcontractors installing the vapor intrusion mitigation system. The facility was constructed and occupied on schedule without delays caused by the mitigation of environmental risks.

Lincoln Landing, Hayward, CA

Program manager, technical lead and main client contact for the investigation of legacy environmental impacts due to lead, petroleum, PCBs, chlorinated solvents, and risks to indoor air – all in preparation for the construction of a new $400M mixed use residential and commercial development in central Hayward. He subsequently led the design and implementation of an extensive remediation effort, including excavation and installation of nearly ½-mile of horizontal soil vapor extraction pipe. Steve also directed the design, installation, and commissioning of vapor intrusion mitigation systems of 10 vapor intrusion mitigation systems. Steve provided significant strategic planning to assist the client with the management of the regulatory oversight agency and coordination with the general construction contractor and subcontractors installing the vapor intrusion mitigation system. The facility was constructed and occupied on schedule without delays caused by the mitigation of environmental risks.

EAH Housing, Hayward, CA

Program manager, technical lead and main client contact for the investigation of legacy environmental impacts due to lead based paint and risks to indoor air from neighboring sites – all in preparation for the construction of a new $50M low-income residential housing development. He led the design and implementation of an extensive site-wide soil remediation effort, which included excavation and soil stabilization. Steve directed the design, installation, and pending commissioning of the building's vapor intrusion mitigation system. Steve is currently providing significant strategic planning to assist the client with the management of the regulatory oversight agency and coordination with the general construction contractor and subcontractors installing the vapor intrusion mitigation system.

McClymonds High School, Oakland, CA

Steve was engaged to critically review and comment on technical reports prepared by another consultant working at the direction of DTSC. DTSC's responses to Steve's comments resulted in important modifications to DTSC's approach to interpreting the environmental conditions. While the risks to indoor air at the school were, nonetheless, considered nominal, DTSC did modify their approach to be consistent with their own guidance, making their findings more defensible.

Dermody Properties, Hayward, CA

Program manager, technical lead and main client contact leading the design, installation, and pending commissioning of vapor intrusion mitigation systems of a 220,000 square-foot building alone the shore of San Francisco Bay. Steve provided significant strategic planning to assist the client with the management of the regulatory oversight agency and coordination with the general construction contractor and subcontractors installing the vapor intrusion mitigation system. The facility was constructed and occupied on schedule without delays caused by the mitigation of environmental risks.

ARC, Oakland, CA

Program manager, technical lead and main client contact for the investigation of legacy environmental impacts due to petroleum released over decades from a former underground storage tank. At one point, the gasoline measured 3 feet thick floating atop ground water. The plume of extensive petroleum contamination underlies more than a city block, including a historic century old apartment building. Steve leads the investigation, monitoring, design of a soil vapor extraction and air sparge system, followed by the eventual installation and operation of that system. Steve continues to provide significant strategic planning to assist the client with the management of the regulatory oversight agency

480 Ellis, MEW Superfund Site, Mountain View, CA

Program manager, technical lead and main client contact for the investigation of vapor intrusion risks to a commercial building located above the Middlefield-Ellis-Whisman Superfund Site. Steve led the design and implementation of the assessment of vapor intrusion risks, and assisted in the negotiations of strategies with lenders to facility the purchase and sale of the property. Steve is now assisting the owner in negotiations with the USEPA and Geosyntec regarding further assessment to inform the classification of the proper risk Tier.

Other Sites

Throughout his career Steve led, designed, and implemented numerous investigations of environmental contamination, including assessing and mitigating risks to indoor air. His work in these matters ranges from the ASTM E1527 and ASTM E2600 standards to compliance with investigation requirements and guidance issued by various local, state, and federal regulatory agencies.

BOARD FOR PROFESSIONAL ENGINEERS, LAND SURVEYORS, AND GEOLOGISTS

ISSUANCE DATE
MAY 1, 1991

EXPIRATION DATE
JANUARY 31, 2025

CURRENT DATE / TIME
OCTOBER 12, 2023
11:7:51 AM

LICENSING DETAILS FOR: 5165

NAME: MICHELSON, STEVEN

LICENSE TYPE: GEOLOGIST

LICENSE STATUS: CLEAR

ADDRESS

42 CALIFORNIA AVENUE
ORINDA CA 94563
CONTRA COSTA COUNTY

MAP

TYSON FULMER, PG

Project Manager/Senior Geologist

Summary of Qualifications

Mr. Fulmer is an accomplished geologist with over 15 years of experience in environmental consulting. Multidisciplinary education and work background with the ability to perform multiple tasks in the environmental sector. Excellent verbal and written communication skills, effective manager and team leader. Skilled in marketing, networking and business development networking services. All relevant vapor intrusion and risk assessment project experience discussed below is currently being conducted or was completed within the last 5 years.

Representative Vapor Intrusion Mitigation Project Experience

Lincoln Landing Hayward CA | Hayward CA

Analyzed and interpreted CVOC and radon vapor data including to develop site specific attenuation factors. Evaluated data to determine risk for building occupants for a site development. Evaluated soil vapor and indoor air data to determine cumulative risk and hazard indices based on screening criteria. Analyzed differential pressure data and radon concentration data to evaluate vapor intrusion mitigation system (VIMS) performance.

Moxy Hotel Development | 3723 Haven Ave, Menlo Park CA

Evaluated existing contamination at a proposed hotel development and calculated vapor intrusion risks based on residential and commercial land use. Proposed mitigation measures based on land use and building design. Worked with engineering team to design a vapor intrusion mitigation system to attenuate human health risks. Site work also included an evaluation of discharge to terrestrial and aquatic environmental receptors in a sensitive habitat and supervising remedial activities.

CVOC and Petroleum Contaminated Site | 930 Linden Ave | South San Francisco

Evaluated risk to indoor air posed by predominantly aliphatic based petroleum compounds within the context of the low threat closure policy and existing local screening criteria. Also supervised project that included site characterization design and implementation of a direct injection remedial action for CVOCs. Used isotope analyses and functional gene assays to monitor effectiveness of remedial action.

CVOC contaminated site | 1108 Park Ave | San Jose CA:

After applying for and receiving SCAP grant funding for a CVOC project with significant vapor intrusion issues. Identified pathways for vapor migration to indoor air using passive diffusion and soil vapor well data to model where soil vapor plume was present. Collected soil vapor, crawl space and indoor air samples to evaluate vapor to indoor air migration. Implemented vapor intrusion mitigation measures such as

Education

- Bachelor of Science, Earth Studies and Bachelor of Arts, Environmental Studies (Honors), University of California, Santa Cruz 1999-2004
- Abroad Studies, University of Costa Rica 2003

Disciplines

- Project Management
- Remedial Design and Alternative Analyses
- Vapor Intrusion Risk Assessment
- Vapor Intrusion Mitigation Design
- Geologic Interpretation
- Cost estimating project budgeting
- Permitting
- ASTM compliant Phase I and II ESAs
- Subcontractor Coordination
- Environmental Site Characterization
- Grant Application and Execution
- Public Speaking and Teaching
- Soil Management and Waste Characterization
- Dredge permitting and reporting
- Natural attenuation monitoring
- Database management

Certifications

- California Professional Geologist, PG 9062
- 40-hour HAZWOPER

sealing slab, air filtration and design of a blower system to mitigate indoor air. Currently permitting SVE system to mitigate impacts to indoor air at adjacent occupied residences.

Commercial/Residential Development | Alice St | Oakland CA

Used radon detectors to generate a site-specific attenuation factor for a development in Oakland CA. Re-evaluated risk to indoor air based on soil vapor concentrations with site-specific attenuation factor.

Former Dry Cleaner with CVOC Contamination| 1534 Park St | Alameda CA

Prepared and implemented a pilot test work plan to mitigate soil vapor intrusion issues at a former dry cleaner in a dense urban setting. Evaluated risk to indoor air at property and adjacent residences. Currently preparing a long-term soil vapor extraction system to mitigate soil vapor impacts and threat to indoor air.

Former Dry Cleaner with CVOC Contamination | 3135 Stevens Creek Blvd | San Jose CA

Characterized CVOC impacts to soil vapor and ground water and implemented a soil vapor pilot test to evaluate design parameters for full scale soil vapor extraction. Summarized data in a pilot test report for recommendations in a remedial design for long term soil vapor extraction to mitigate impacts to soil vapor at the overlying commercial properties and the downgradient impacted properties.

TCE Contaminated Site | 561 Division St | Campbell CA

After characterizing soil vapor impacts to indoor air, designed and implemented a soil vapor extraction system for a former industrial property with CVOC impacts to soil vapor. Operated soil vapor extraction at the site for approximately 1-year resulting in significant contaminant mass removal and reduction of soil vapor concentrations

Former Gas Station Site| 599 N 4th St | San Jose CA

Evaluated risks to indoor air at downgradient properties impacted by a a former leaking underground storage tank in San Jose. Characterized vapor intrusion risks to residences and commercial properties at grade and with subgrade basements. Calculated site specific attenuation factors for properties based on subslab and indoor air sampling. Working with County LOP and State Water Board to remediate and achieve risk based closure.

Other Skills, Affiliated Organizations and Interests:

Languages: Fluent in oral and written Spanish communication, conversational Cantonese

Affiliated Professional Organizations:

Environmental and Engineering: Ground Water Resources Association (GRAC), Professional Environmental Marketing Association (PEMA), American Civil Engineers California (ACEC), Bay Planning Coalition, Environmental Section of the San Francisco Bar Association.

Commercial Real Estate, Development Organizations: Norcal CCIM, Commercial Brokers Association (CBA), NAIOP, Bay East Real Estate, Alameda Chamber of Commerce, Urban Land Institute (ULI).

Publications, Classes and Presentations:

- Managing real estate risk with environmental due diligence : Transaction strategies for environmentally impacted properties, Corporate Real Estate Journal Volume 12 No. 4, March 4th, 2023
- In Situ Treatment of Chlorinated Solvent Source Zone - Treatment Performance and Injection Design Assessed With Compound-Specific Isotope Analysis (CSIA), presented at Ground Water Resources Association of CA
- Environmental Due Diligence: Transacting Properties and Managing Risk (Course curriculum and class with Commercial Brokers Association)
- An Environmental History of the San Francisco Bay Area/Alameda (Presented with Norcal CCIM)

STATE OF CALIFORNIA
dca
DEPARTMENT OF CONSUMER AFFAIRS

BOARD FOR PROFESSIONAL ENGINEERS, LAND SURVEYORS, AND GEOLOGISTS

This Is To Certify That Pursuant
To The Provisions of Chapter 12.5 Division 3 of The Business and Professions Code

Tyson Robert Fulmer

IS DULY LICENSED AS A

PROFESSIONAL GEOLOGIST

In The State of California and Is Entitled To All The Rights and
Privileges Conferred In Said Code

DEPARTMENT OF CONSUMER AFFAIRS · BOARD FOR PROFESSIONAL ENGINEERS, LAND SURVEYORS, AND GEOLOGISTS · STATE OF CALIFORNIA

WITNESS OUR HAND AND SEAL

Certificate No GEO 9062

This 4th day of June, 2013, at Sacramento, California.

BOARD FOR PROFESSIONAL ENGINEERS,
LAND SURVEYORS, AND GEOLOGISTS

Executive Officer

President

EPRPGO 07/20/11

BOARD FOR PROFESSIONAL ENGINEERS, LAND SURVEYORS, AND GEOLOGISTS

LICENSING DETAILS FOR: 9062

NAME: FULMER, TYSON

LICENSE TYPE: GEOLOGIST

LICENSE STATUS: CLEAR

ADDRESS

2129 BYRON STREET
BERKELEY CA 94702
ALAMEDA COUNTY

ISSUANCE DATE

JUNE 4, 2013

EXPIRATION DATE

NOVEMBER 30, 2024

CURRENT DATE / TIME

OCTOBER 12, 2023
10:22:40 AM

ANDREW H. CAMPBELL, PE

SENIOR ENGINEER

Summary of Qualifications

Mr. Campbell has held responsible charge of environmental remediation projects since 2000. He specializes in developing optimized remediation and mitigation strategies for properties contaminated by releases of volatile organic compounds (VOCs) while building consensus between clientele, regulatory agencies, and other stakeholders. This includes the design of low-cost remediation, mitigation, and closure plans drawing upon a variety of techniques to reduce the risks associated with complete exposure pathways, most importantly vapor intrusion to indoor air. Andrew also provides construction quality assurance (CQA) oversight and system testing, commissioning, and monitoring. His clientele has included land developers, schools, major airlines, utilities, and state and federal government agencies.

Education

- B.S., Biochemistry University of California at Davis, 1992
- M.S., Civil Engineering, University of Colorado at Boulder, 1996

Disciplines

- Project Management
- Vapor Intrusion Management System (VIMS) Design
- Remedial Design
- Stormwater Management

Certifications

- California Professional Engineer, License No. C60412
- Qualified Stormwater Pollution Prevention Plan Developer (QSD)
- Professional Engineer (Civil) - AZ, WA, NV, FL, TX, MD, NJ, OH, VA, WV, and NCEES Council Record

Representative Project Experience

Principal Engineer, California Crosspoint Academy, Hayward, CA.

Oversaw preparation of two VIMS designs for two new buildings on the campus of a growing private school. Contaminants included PCE, benzene, fuel hydrocarbons, and other chlorinated hydrocarbons. ACDEH provided lead regulatory oversight. Deliverable documents included a Basis of Design report, VIMS construction plans, CQA Plans, and an OMMR Plan. VIMS components included vapor barriers, passive SSVS, and active sub-slab depressurization (SSDS). A student dormitory also included an elevator pit and a battery pit, both of which required VIMS. Mr. Campbell provided CQA oversight per ACDEH requirements and oversaw the commissioning of both buildings' systems, including preparation of record reports of construction and commissioning.

Principal Engineer, Lincoln Landing, Hayward, CA

Designed ten distinct vapor intrusion mitigation systems (VIMS) for various new buildings on a redeveloped parcel impacted by perchloroethylene (PCE), benzene, fuel hydrocarbons, and other chlorinated hydrocarbons. Construction had already begun when Mr. Campbell was asked to begin the design process, with the Alameda County Department of Environmental Health (ACDEH) providing lead regulatory oversight. Mr. Campbell prepared a Basis of Design report, VIMS construction plans, CQA Plan, Risk Management Plan, and Operations, Maintenance, Monitoring, and Reporting (OMMR) Plan. VIMS components included vapor barriers, passive and active sub-slab ventilation systems (SSVS), conduit seals, trench dams, and above-ground ventilation. The development included four elevator pits and an indoor pool, spa, and surge tank, all of which required VIMS. He oversaw CQA oversight while facilitating overall construction progress, still ensuring the installed VIMS met stringent ACDEH requirements. Mr. Campbell prepared multiple record reports of construction and commissioning, and ACDEH issued rapid approval of occupancy for the protected buildings.

Principal Engineer, Dermody Properties, Hayward, CA

Designed a VIMS for a 220,000 SF warehouse with TCE impacts to subgrade soil. The San Francisco Bay Regional Water Quality Board served as the lead regulator. The VIMS design included a vapor barrier and a passive SSDS. Mr. Campbell is currently overseeing CQA.

Principal Engineer, Anvil Builders, Emeryville, CA

Designed a VIMS for a tenant improvement project on an existing warehouse building to be repurposed as offices. A neighboring facility had released PCE, carbon tetrachloride, chloroform, and other solvents which migrated beneath the project site. ACDEH provided lead regulatory oversight, and construction had already begun when Mr. Campbell was asked to prepare ACDEH-required deliverables. Those included a Basis of Design report, VIMS construction plans, CQA Plan, and OMMR Plan. VIMS components included an anti-vapor coating atop the concrete floor and active, indoor ventilation.

Principal Engineer, Satellite Affordable Housing Associates, Oakland, CA

Designed a VIMS for a proposed mixed-used development including affordable housing overlying a ground-floor medical clinic and community center. VOC impacts to subgrade soil included benzene, PCE, and gasoline. ACDEH served as the lead regulator. The VIMS design included a vapor barrier, a passive SSDS, and above-grade ventilation. The design also provides VIMS for an elevator pit.

Principal Engineer, EAH, Hayward, CA.

Designed a VIMS for a proposed affordable housing development with VOC impacts to subgrade soil. ACDEH served as the lead regulator. The VIMS design included a vapor barrier and a passive SSDS. The design also provides VIMS for an elevator pit. Mr. Campbell is currently overseeing CQA.

Principal Engineer, 988 Harrison St, San Francisco, CA

Designed a VIMS for a proposed mixed-use development with VOC impacts to subgrade soil. The City and County of San Francisco acted as the lead regulator. The VIMS design included a vapor barrier and sub-barrier monitoring system. The design also provides VIMS for an elevator pit. Mr. Campbell is currently overseeing CQA.

Principal Engineer, AMG & Associates, El Camino Real, San Bruno, CA

Designed a VIMS for a proposed, mixed-use development near a former dry cleaner. PCE in soil ranged up to 108,000 micrograms per cubic meter (µg/m3). The San Mateo County Department of Environmental Health served as the lead regulator. The VIMS design included a vapor barrier and an active SSDS. The design also provides VIMS for two elevator pits. San Mateo County approved the design with minimal comments, allowing the development to proceed with financing and construction permitting.

Principal Engineer, Prologis, Inc., San Leandro, CA

Designed a VIMS for the construction of a new, 100,000 SF logistics warehouse, with an elevator, to be operated by a major online retailer. Property impacts included trichloroethylene (TCE) and its biological breakdown products, including high levels of vinyl chloride. The California Department of Toxic Substances Control (DTSC) served as the lead regulator. The VIMS design included a vapor barrier and a passive sub-slab ventilation system. DTSC approved the design with minimal comment.

Principal Engineer, El Dorado County Library, South Lake Tahoe, CA

Performed pressure field extension (PFE) tests on a public library with confirmed radon impacts to indoor air. Designed a full-scale SSDS as an engineered mitigation control.

Principal Engineer, Washington Square, Petaluma, CA

Designed a VIMS for an operating strip mall that included a dry cleaner. PCE in indoor air ranged up to 301 µg/m3). DTSC provided lead regulatory oversight. VIMS components included an anti-vapor coating atop the concrete floor and active, indoor ventilation using an enhanced heating, ventilating, and air conditioning (HVAC) system. Post-implementation monitoring demonstrated successful mitigation below regulatory limits. DTSC agreed that no additional vapor intrusion mitigation activities were necessary.

State of California Department of Consumer Affairs

BOARD FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS

This Is To Certify That Pursuant
To The Provisions of Chapter 7, Division 3 of The Business and Professions Code

Andrew Hogan Campbell

IS DULY LICENSED AS A

PROFESSIONAL ENGINEER

IN

CIVIL ENGINEERING

In The State of California, and Is Entitled To All The Rights and
Privileges Conferred In Said Code

WITNESS OUR HAND AND SEAL

Certificate No C 60412

This 4th day of February, 2000, at Sacramento, California.

BOARD FOR PROFESSIONAL
ENGINEERS AND LAND SURVEYORS

Cinde Christenson
Executive Officer

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OUSD Region - CENTRAL Statement of Qualifications and Proposal for Subsurface Contamination Consulting Services - Vapor Encroachment Condition Screening Evaluation

OUSD Project No. 23125

Prepared for:
Oakland Unified School District
1011 Union Street
Oakland, CA 94607

Prepared By:
Catalyst Environmental Solutions
2744 E. 11th Street, Suite A9
Oakland, CA 94601

October 12, 2023

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Table of Contents

SECTION 1 Introduction

Catalyst Environmental Solutions Corporation (Catalyst) is pleased to submit this Statement of Qualifications (SOQ) to support the Central Region of the Oakland Unified School District (OUSD) with Phase One of its Vapor Intrusion Initiative (VII) that primarily consists of a vapor encroachment survey (VES) performed in general conformance with ASTM E2600-22 to identify vapor encroachment conditions (VEC). Our SOQ responds to the Request for Qualifications and Proposal (RFQ/P) dated August 14, 2023 (OUSD Project #23125). This SOQ is organized to provide the following: an overview of our Project Understanding and a description of Catalyst; our proposed Project Team; an overview of our Qualifications and Experience; and, the Scope of Work including our approach to project management and execution.

Project Understanding

In recent years, OUSD has encountered vapor intrusion issues at facilities owned, operated, or maintained by OUSD (OUSD Facilities) and has developed the VII to proactively identify, evaluate, and (where appropriate) mitigate VECs at its facilities. For the purposes of RFQ/P, OUSD grouped its Facilities into five regions: Central; East; Northeast; Northwest; and, West. This proposal has been prepared for the Central Region which, based on the GIS link provided in the RFQ/P, consists of 21 bid sites and 40 bid parcels.

The objective of Phase One of the VII, the scope of this proposal, is to identify potential VECs at OUSD Facilities and to categorize each OUSD Facility based on its relative potential vapor intrusion risk and need for additional data (Class 1 through Class 4 as defined by OUSD in the RFQ/P). The scope of work involves conducting a Tier 1 Vapor Encroachment Screen (VES) in general conformance with ASTM E2600-22 *Standard Guide for Vapor Encroachment Screening* (ASTM E2600-22) with consideration of the caveats specified in the RFQ/P.

For Phase One, the area around each OUSD Facility will be reviewed to identify known and potential sources of vapor intrusion risk and existing data will be evaluated using San Francisco Bay Regional Water Quality Control Board's Tier 1 Environmental Screening Levels (Tier 1 Residential ESLs) to inform each the classification of each OUSD Facility. We understand that the scope of work may also include preparation of a scope for a Tier 2 VES and public meetings.

Following completion of Phase One, subsequent phases of the VII will focus on further assessing specific risk at identified facilities and, where appropriate, designing and implementing mitigation measures at facilities where vapor intrusion is occurring and represents an unacceptable risk.

Overview of Catalyst

Catalyst was founded in 2015 and fills the growing gap in the market for attentive, high-quality, and full-service solutions provided by innovative, creative, and successful experts. We are California Registered Small Business with offices in Oakland, California as well as three offices across southern California and an office in Portland, Oregon. This project would be led out of our Oakland office which includes 6 staff and, as needed, will draw upon the expertise of additional staff from our other offices.

Catalyst is exceptionally suited to support OUSD with this scope of work given our extensive experience, including school-specific experience, in assessing and addressing vapor intrusion risk. Our key qualifications are summarized on the following page.

Overview of Catalyst's Qualifications

We are Experts in Assessing Vapor Intrusion Risk as well as Developing and Implementing Cost-Effective Solutions to Address Identified Issues	Our team has over 30 years of experience investigating and resolving environmental risks, including vapor intrusion assessment, human health risk assessment, and vapor intrusion mitigation. Within Alameda County alone, since 2019, our team has led over 17 projects involving the investigation and subsequent design, installation, and commissioning of vapor intrusion mitigation systems. Our experience also includes many more projects throughout the Bay Area involving the investigation of vapor intrusion risks.
We have Demonstrated Experience Supporting Schools in Assessing and Mitigating Vapor Intrusion	Our experience includes working with California Crosspoint Academy in Hayward, California in assessing vapor intrusion risk as well as designing and overseeing the construction of vapor intrusion mitigation systems for two new school buildings covering over 20,000 square feet. In addition, Catalyst staff was engaged to review and comment on technical reports characterizing vapor intrusion risks at McClymond's High School. …
We are a Local, Small-Business Enterprise that Understands the Environmental Setting and Community Concerns	Our project team is based in Oakland and has a deep knowledge of the environmental factors within the OUSD boundaries that affect vapor migration and intrusion risk (e.g., geology, hydrogeology, subsurface infrastructure, and land use) as well as a keen understanding of the political landscape and community concerns.
We have Demonstrated Success in Effectively Working with Various Regulatory Oversight Agencies to Achieve our Client's Goals	Our team has strong working relationships with the various regulatory agencies associated with assessing, managing, and mitigating vapor intrusion risk and a demonstrated track record of effectively working with these agencies to achieve our client's goals. We have extensive experience working with the Alameda County Department of Environmental Health, San Francisco Bay Regional Water Quality Control Board, and the Department of Toxic Substances Control in investigating, designing, and/or implementing vapor intrusion mitigation systems in compliance with their respective stringent requirements.
Our Project Manager is an Effective Leader and Communicator with over 30 Years of Experience in Assessing and Addressing Risks Associated with Soil Vapor Intrusion	Our team will be led by Steve Michelson, a State of California Professional Geologist who is based in our Oakland office. Steve has over 30 years of relevant experience who has personally led over 50 projects related to vapor intrusion including our work with the California Crosspoint Academy and McClymonds High School. He has been on the forefront of our work in Alameda County in helping our clients successfully navigate the regulatory landscape to achieve their goals. He is an effective communicator with extensive experience in translating complex issues into easily understandable concepts across a range of stakeholders.
We have Demonstrated Success Clearly Communicating Complex Technical Environmental Data and Concepts to Assist OUSD's Decision Making Process and Support OUSD's Public Relations Management	We understand the community concerns as well as the sensitive nature of the potential risk associated with vapor intrusion in the vicinity of schools and have a strong track record in helping our client's understand complex technical issues to facilitate their decision-making processes. In addition, we are adept at translating technical concepts into readily understandable terms to support communications with the broader public community and stakeholders.

SECTION 2 Project Team

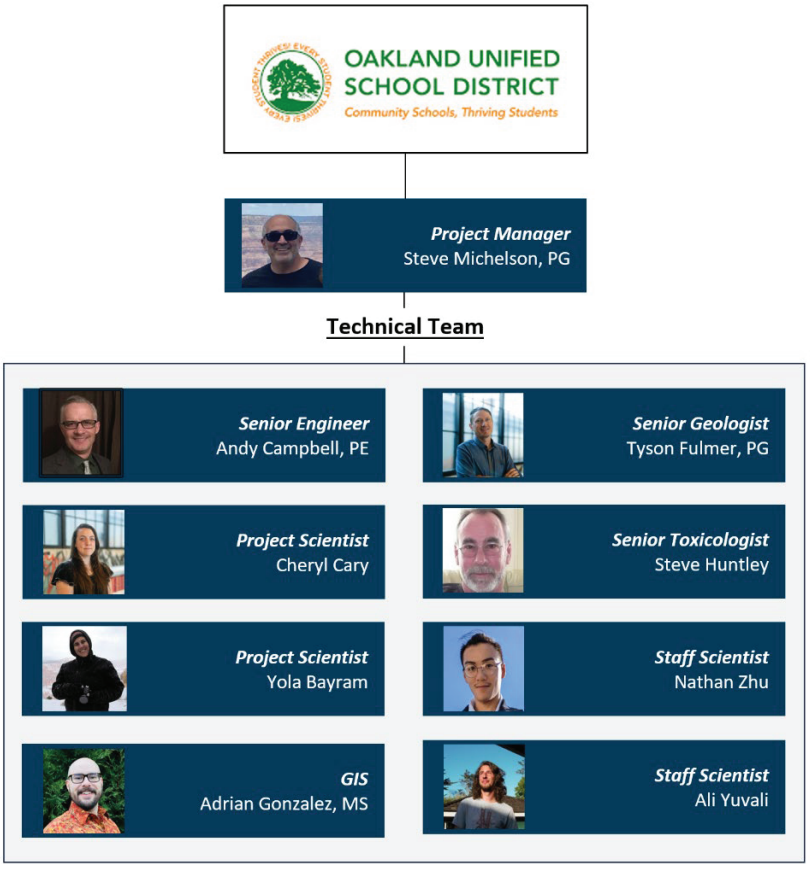
For this project, we have assembled a highly qualified team with the experience and breadth and depth of technical knowledge necessary to effectively and efficiently execute the scope of work. The team is based in our Oakland office and the key staff have worked together for over 5 years, and some for over 15 years, allowing them to seamlessly collaborate and implement the project. The key personnel for this project are described below and an overview of our project organization and broader team are provided in the organizational chart below.

Project Manager/Technical Director – Steve Michelson, PG

Education	B.S. Geology / B.S. Civil Engineering - Lehigh University
Professional Registration	State of California Professional Geologist No. 5165

Mr. Michelson brings nearly four decades of experience to resolving environmental liabilities for clients in the private and public sector. Providing solutions to both schools and developers that first characterize risks and then mitigates those risks to allow building occupancy on schedule is a key focus. His experience ranges from vapor intrusion risks posed by the rather straightforward corner service station or dry cleaner to complex interdisciplinary problems at such as the MEW Superfund Site, or regional background contamination issues in historically heavily industrialized areas of west Oakland and Emeryville. As a degreed geologist and civil engineer and licensed contractor with considerable remedial earthwork construction experience, he consistently offers creative yet pragmatic solutions to complicated problems.

Regulators and clients appreciate and respect his approach to problem solving. Geographically, Mr. Michelson's experience is focussed in the Bay Area, but ranges from New England to Alaska to New Mexico. His professional background includes designing and implementing a variety of investigations to determine the source, extent, risks, and remedial options. Strategies that limit his client's exposure and time to closure while maximizing the cost effectiveness are key elements of his service to clients. Providing well engineered vapor intrusion mitigation systems for the public and private sector is a key part of his practice.



Senior Engineer– Andy Campbell, PE

Education	M.S. Civil Engineering – University of Colorado at Boulder B.S. Biochemistry – U.C. Davis
Professional Registration	State of California Professional Engineer No. C60412

Andrew Campbell is the senior professional engineer and has held responsible charge of vapor intrusion mitigation systems and various environmental remediation projects for over 20 years. He specializes in designing optimized risk mitigation and remediation strategies for properties contaminated by volatile organic compounds, which pose the greatest risk of vapor intrusion. He is also skilled at building consensus between clientele, regulatory agencies, and other stakeholders. His expertise includes the design of low-cost vapor intrusion mitigation systems, and contaminant remediation plans by drawing upon a variety of techniques to reduce the risks associated with complete exposure pathways, most importantly vapor intrusion to indoor air. His clientele have included schools, private parties, major airlines, utilities, and state and federal government agencies.

Senior Geologist – Tyson Fulmer, PG

Education	B.S. Earth Sciences / B.A. Environmental Studies – U.C. Santa Cruz
Professional Registration	State of California Professional Geologist No. 9062

Mr. Fulmer is an accomplished geologist with over 15 years of experience in investigating and remediating a wide-variety of environmental liabilities, including vapor intrusion risks. His multidisciplinary education and work background informs his ability to perform multiple complex tasks in the environmental sector. Excellent verbal and written communication skills, effective manager and team leader.

Project Scientist – Cheryl Cary

Education	B.S. Earth Sciences – U.C. Santa Cruz

Cheryl is a Staff Scientist with over 8 years of experience investigating and remediating environmental contamination issues. Cheryl also has extensive experience managing and providing construction quality assurance during the installation of over 10 vapor intrusion mitigation systems in Alameda County alone. She also has considerable experience working with, collecting, and managing geospatial data. Cheryl applies GIS tools to analyze and present geographically distributed data in clear, insightful, and creative manner that has garnered considerable praise from regulators and our private and public sector clients.

Senior Toxicologist – Steve Huntley

Education	B.S. Environmental Toxicology – U.C. Davis

Mr. Steve Huntley has over 30 years of experience in environmental consulting in the U.S and Puerto Rico. His primary areas of expertise include human health and ecological risk assessment, toxicology, and environmental chemistry/forensics. He has worked on numerous federal and state hazardous waste sites as well as contaminated aquatic systems throughout the U.S. Mr. Huntley has participated in negotiations with the U.S. EPA as well as various state regulatory agencies including the DTSC and the SFBRWQCB.

SECTION 3 Qualifications and Experience

Our team of geologists and engineers is experienced in assessing environmental liabilities and associated risk and we work with our clients to develop and execute cost-effective strategies to address those liabilities. We have proven results in assessing, remediating, and gaining regulatory closure for a diverse range of sites and contaminants across all three-phases of media. Our experience provides us the ability to efficiently characterize the nature and extent of contaminant impacts including vapor forming chemicals (VFCs), develop conceptual site models, assess the fate and transport of contaminants in the subsurface, evaluate risks to human health and the environment, and use this information to develop a cost-effective strategy to address the issue. Our reputation and relationships with various regulatory oversight agencies provides us the ability to efficiently navigate the regulatory landscape and expedite the path site closure.

Our relevant service offerings for this project include:

- Phase I Environmental Site Assessments pursuant to ASTM E1527-21
- Vapor Encroachment Screening pursuant to ASTM E1600-22
- Site Characterization and Remediation of soil, soil vapor, and ground water pursuant to ACDEH, RWQCB, DTSC, and USEAP requirements
- Vapor Intrusion Mitigation System (VIMS) Design, Installation, and Testing
- Human Health and Ecological Risk Assessment
- Soil Vapor and Groundwater Monitoring
- Developing and Executing Strategies for Regulatory Site Closure

Since July 1, 2018, several of the vapor intrusion projects that we have worked on with the agencies and organizations specified in the RFQ/P are provided in the table on the following page.

Agency/Project	Phase 1 & Vapor Encroachment Survey	Site Characterization	Vapor Intrusion Risk Assessment	Human Health Risk Assessment	Indoor Air Quality Assessment	VIMS Design, Installation, and Testing	Remediation	Other: CEQA, Permitting, Dredging
Alameda County Department of Environmental Health ("ACDEH")								
CA Crosspoint Academy - Two New School Buildings	✓	✓	✓	✓	✓	✓		
Lincoln Landing - New $400M Development	✓	✓	✓	✓	✓	✓	✓	
EAH Housing - New Low-Income Housing	✓	✓	✓	✓		✓	✓	
ARC - 1700 Jefferson		✓	✓	✓	✓	✓	✓	
LaZBoy – 5800 Christie		✓	✓	✓	✓	✓		
California Department of Toxic Substances Control ("DTSC")								
Oakland Education Assoc - McClymonds High School			✓	✓	✓			
Ecology Control Industries – UST Recycler	✓	✓	✓	✓	✓		✓	
Los Angeles Sanitary - Exide Battery Site				✓			✓	✓
Los Angeles Sanitary - 141 W. Avenue 34 Site				✓			✓	✓
FivePoint - Mission Village School Site		✓	✓	✓			✓	✓
San Francisco Bay Regional Water Quality Control Board ("Water Board")								
Dermody - New Building (220,000 sq ft)			✓	✓	✓	✓		
Carpenters Union - 300 Hegnberger		✓	✓	✓			✓	
Carpenters Union - 45 Hegenberger Loop		✓	✓	✓			✓	
Deerfield Properties - Commercial Building	✓	✓	✓	✓	✓			
Elevate Development - Moxy Hotel	✓	✓	✓	✓	✓	✓	✓	
Thomas Cleaners - SCAP	✓	✓	✓	✓	✓	✓	✓	
United States Environmental Protection Agency ("USEPA")								
St Francis Yacht Club - Dredging		✓						✓
Reclamation District - Dredging		✓						✓
Toensikotter Dev - MEW Superfund Site	✓	✓	✓	✓	✓			
Non-Profit Organizations								
EAH Housing - New Low-Income Housing	✓	✓	✓	✓		✓	✓	
CA Crosspoint Academy - New School & Dormitory	✓	✓	✓	✓	✓	✓		
CA Crosspoint Academy - New Multipurpose Bldg	✓	✓	✓	✓	✓	✓		
CalTrout - Rose Valley Lakes Stream Restoration								✓
CalTrout - Harvey Dam Fish Passage Restoration								✓

SECTION 4 Project Management and Implementation

The following discusses our approach to effectively managing the project and an overview of the tasks involved in executing the proposed scope of work.

Project Management and Coordination

Our approach to project management is based on following guiding principles:

- Establishment of a clear process to collect the required data and obtain buy-in from OUSD regarding the process to interpret and draw conclusions from the data;
- Clear and consistent communication, collaboration, and coordination with OUSD throughout the course of the project to ensure that there are no "surprises";
- Focus on quality management, including quality assurance/control (QA/QC) reviews of all data and deliverables; and,
- Project delivery on-time and on-budget.

Our approach recognizes that there are two distinct, yet overlapping suites of risks that need to be carefully managed. First, there are technical risks that are managed by carefully and diligently collecting and interpreting the data with the goal of generating accurate, reliable, and defensible conclusions regarding the classification of vapor intrusion risk at each OUSD Facility. Second, there are public relations risks that are managed by clearly and cogently relaying the information to both OUSD and ultimately the public in a manner that are at once accurate and readily comprehensible by the lay public, yet not unnecessarily alarming.

In accordance with these principles, Steve Michelson, PG will serve as the key point-of-contact for OUSD and will be responsible for project delivery and managing all internal project team communications as well as communication with OUSD and other identified stakeholders, as appropriate. Along those lines, we propose an initial project kick-off meeting following contract award to discuss and establish expectations to ensure project success. Catalyst will work with OUSD to prepare the agenda for the kickoff meeting with likely topics to include coordination and communication with OUSD's project manager as well as central office staff, school site staff, and any other identified stakeholders; request for available data; and, project schedule. Following the kick-off meeting, we suggest monthly teleconference meetings with our Project Manager and OUSD to provide technical updates, notification of any emerging issues, and planning for upcoming tasks.

In the event that OUSD awards the Phase 1 scope to more than one consultant, then we recommend establishing a single report format and decision criteria for all to follow. In that way, OUSD is assured of coherent and consistent assessment reports and facility classifications among all Regions, which should streamline the program, reduce inconsistencies between regions, and minimize OUSD's risks and review time moving forward.

In regard to schedule, collectively we will establish the schedule and associated milestones at the project kick-off meeting and will closely monitor progress, assure that deadlines are met successfully, and respond to changes in events as they are encountered. For the purposes of this proposal, we assume the following schedule, which has been developed in consideration of the school year to enable

potentially critical follow-up invasive tasks and/or mitigation measures at a facility to be implemented during the summer break:

- Project Kickoff Meeting – December 4, 2023
- Submittal of Draft Reports – March 15, 2024
- Receipt of Comments on the Draft Report from OUSD – April 12, 2024
- Submittal of Final Reports – May 3, 2024

Catalyst has a strong track-record of meeting our project schedules. Much of our work is associated with real estate transactions and construction activities that have well-defined critical pathways. Our work, whether it be assessment, remediation, and/or vapor intrusion mitigation system installation and testing, has never resulted in a delay in the closing of a deal or the issuance of a "Certificate of Occupancy" of a building. In addition, as part of meeting project schedules, we are adept at handling and adapting to project changes and delays that are outside of our control with the most critical element being communication with our clients to ensure that there are no "surprises" and to manage expectations.

Project Approach

As discussed in the RFQ/P, the objective of Phase One of the VII is to identify potential VECs at OUSD Facilities and to categorize each OUSD Facility based on its relative potential vapor intrusion risk (Class 1 through Class 4 as defined by OUSD in the RFQ/P). The scope of work generally involves conducting a Tier 1 VES in general conformance with ASTM E2600-22 with consideration of the caveats specified in the RFQ/P. The following summarizes our scope of work.

Task 1 – Collection of Existing Environmental Data

This this task involves compiling and reviewing publicly available information regarding the environmental and regulatory history of each OUSD Facility and properties within the ASTM E2600-22 defined minimum search distance of 1/3-mile of each facility, or area of concern (AOC).

The information to be reviewed to inform the classification of each OUSD Facility will include, at a minimum, the following within the AOC associated with each OUSD Facility:

- Available local, State, Federal, and tribal environmental agency files, online environmental databases of active, inactive, and closed environmental sites, list of known gasoline stations and dry cleaners, list of commercial occupants at each address, and historical aerial photographs, topographic maps, and fire insurance maps. The vendor Environmental Data Resources (EDR) will provide this information.
- Regulatory status of identified contaminated sites (i.e., open, closed, etc.) and date of reported release.
- Subsurface lithology (i.e., clay, silt, sand, and/or gravel) and hydrogeology (i.e., depth-to-groundwater, groundwater gradient, etc.), which can affect the rate of vertical soil leaching, ground water movement, and vapor migration.
- Potential preferential pathways such as utility corridors and subsurface drainage infrastructure.

Task 2 – Site Visit

Following the collection of existing data, Catalyst will conduct a field reconnaissance survey of the entire AOC. Per OUSD's response to Question 25 (A25) in the *Question and Response* document issued by OUSD on September 27, 2023, it appears that OUSD does not want the consultant to contact school personnel, which we interpret as including no on-site inspection of the OUSD facility. The survey will include, at a minimum:

- Assessment of current land uses surrounding the OUSD facility.
- Interview of OUSD personnel with direct knowledge of OUSD Facility operations that might currently pose, or previously posed, an environmental concern.
- Ground-truthing of the information obtained as part of the Task 1 data collection.
- Drive-by inspection of all current operations within the AOC to identify potential commercial and industrial operations with the potential to pose a vapor encroachment condition that are not listed in the information reviewed in Task 1.

Task 3 – Data Review, QA/QC, and Interpretation

Catalyst will review and interpret the information collected in Tasks 1 and 2 to, at a minimum:

- Ensure only reliable and representative data are utilized in this analysis, while assuming that the data reported in the databases has already been properly vetted.
- Estimate potential for the OUSD Facility to be impacted by chemical vapors based on date of contaminant release, chemical properties, and distance between the release and OUSD property.
- Compare existing data characterizing concentrations of volatile organic compounds and petroleum in soil, soil vapor, and ground water with the Regional Water Quality Control Board's 2019 Tier 1 Residential Environmental Screening Levels, Revision 2 (ESLs).
- Identify critical data gaps that might affect a reasonable and defensible interpretation of vapor intrusion risk.
- Classify each OUSD Facility according to the criteria in the RFQ/P, summarized as:
    - Class 1 – facility with the highest probability of a realized vapor intrusion risk based on VFC concentrations greater than 10x the ESL derived from samples previously collected at or adjacent to the facility.
    - Class 2 – facility with a moderate probability of a realized vapor risk due to a VEC and likely preferential pathway to the facility, but either without sufficient data confirming a realized risk or VFC concentrations greater between 1x and 10x the ESL derived from samples previously collected at or adjacent to the facility.
    - Class 3 – facility with a low probability of a realized vapor intrusion risk because there is no obvious preferential exposure pathway between a known or likely VEC and OUSD Facility.
    - Class 4 – facilities with no VECs within the AOC.

Task 4 - Reporting

Following completion of Tasks 1, 2, and 3, we will prepare a report for each OUSD Facility in general conformance with Section 10 of ASTM E2600-22 with the following amendments:

- The technical report will be signed and stamped by a California Professional Geologist with responsible charge over the VES.
- The risk of VEC will be classified into one of the four risk classes developed by OUSD as discussed in Task 3. In addition, during the course of our scope, if we identify pursuant to E1527-21 recognized environmental conditions (RECs), historic recognized environmental conditions (HRECs), controlled recognized environmental conditions (CRECs), or environmental business risks (EBRs), then we will include this information in our report.
- Recommendations for next steps for:
    - Class 1 facilities to further characterize the risk, if needed, and mitigate the risk.
    - Class 2 facilities to further characterize the risk to determine if the facility warrants a Class 1, 3, or 4 determination.
    - Class 3 facilities to further characterize the risk, if warranted.
    - Class 4 facilities to implement no additional actions.
    - Further evaluate RECs, HRECs, CRECs, or EBRs, if warranted.

The RFQ/P requires that the report also summarize the results of VES for all OUSD Facilities within the region. The summary will generally consist of a table of the vapor intrusion risk findings and classification for all OUSD Facilities in the region and will include any additional recommendations as they relate to relative vapor intrusion risk. The report shall be used to facilitate implementation of Phase Two of the VII.

In the responses to Questions 4 (A4), 25 (A25), and 27 (A27) in the *Question and Response* document issued by OUSD on September 27, 2023, OUSD indicates that a scope of work to further assess the potential vapor intrusion risk must be prepared in addition to the VES report. As warranted, we will prepare a brief scope of work to include:

- A map depicting the recommended sampling locations and sample media;
- A table describing the rationale for each sampling location and the laboratory analytical methods; and,
- Standard Operating Procedures for the collection and preservation of the samples.

Task 5 – Public Meetings (Optional)

As an optional task, Catalyst is available to support and attend public participation meetings as needed.

OUSD Region - CENTRAL
Fee Proposal for Subsurface Contamination Consulting Services - Vapor Encroachment Condition Screening Evaluation
OUSD Project No. 23125

Prepared for:
Oakland Unified School District
1011 Union Street
Oakland, CA 94607

Prepared By:
Catalyst Environmental Solutions
2744 E. 11th Street, Suite A9
Oakland, CA 94601

October 12, 2023

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For **OUSD Region Central**, Catalyst Environmental Solutions Corporation (Catalyst) is pleased to submit this Fee Proposal to perform the scope described in the Oakland Unified School District's (OUSD) Request for Qualifications and Proposal (RFQ/P) dated August 14, 2023 (OUSD Project #23125).

For this OUSD Region, Catalyst proposes four separate lump sum fees to perform the work specified in the RFQ/P and discussed in the *Question and Response* document issued by OUSD on September 27, 2023, with rationale as follows:

- Vapor Encroachment Screening Report
  - We assume the preparation of a unique report for each OUSD Facility (also referred to as "Bid Site" in the GIS link provided in the RFQ/P) within the Region as well as a summary of the results for all OUSD Facilities within the region.
- Scope of Work for Tier 2 Vapor Encroachment Survey
  - In the response to questions, OUSD indicated that, where applicable, the consultant shall include a proposed scope of work for an invasive Tier 2 VES.
  - Since a Tier 2 VES is not anticipated to be required at all sites, we include this fee as a separate line item. The fee includes discussions with OUSD regarding the suggested scope.
- OUSD Meetings for Planning, Project Status, and/or Discussion of Findings
  - Since the number of OUSD meetings desired for planning, coordinating, assessing status, discussing findings, etc. are unknown, we include this fee as a separate line item.
- OUSD Public Meetings
  - Since the number of OUSD public meetings required in support of this project is unknown, we include this fee as a separate line item.

Item	Unit	Lump Sum Fee
Vapor Encroachment Screening Report	Report	$2,998
Tier 2 Scope of Work	Scope of Work	$1,500
OUSD Meetings for Planning, Status, Findings, etc.	Per Meeting	$500
OUSD Public Meetings	Per Meeting	$750

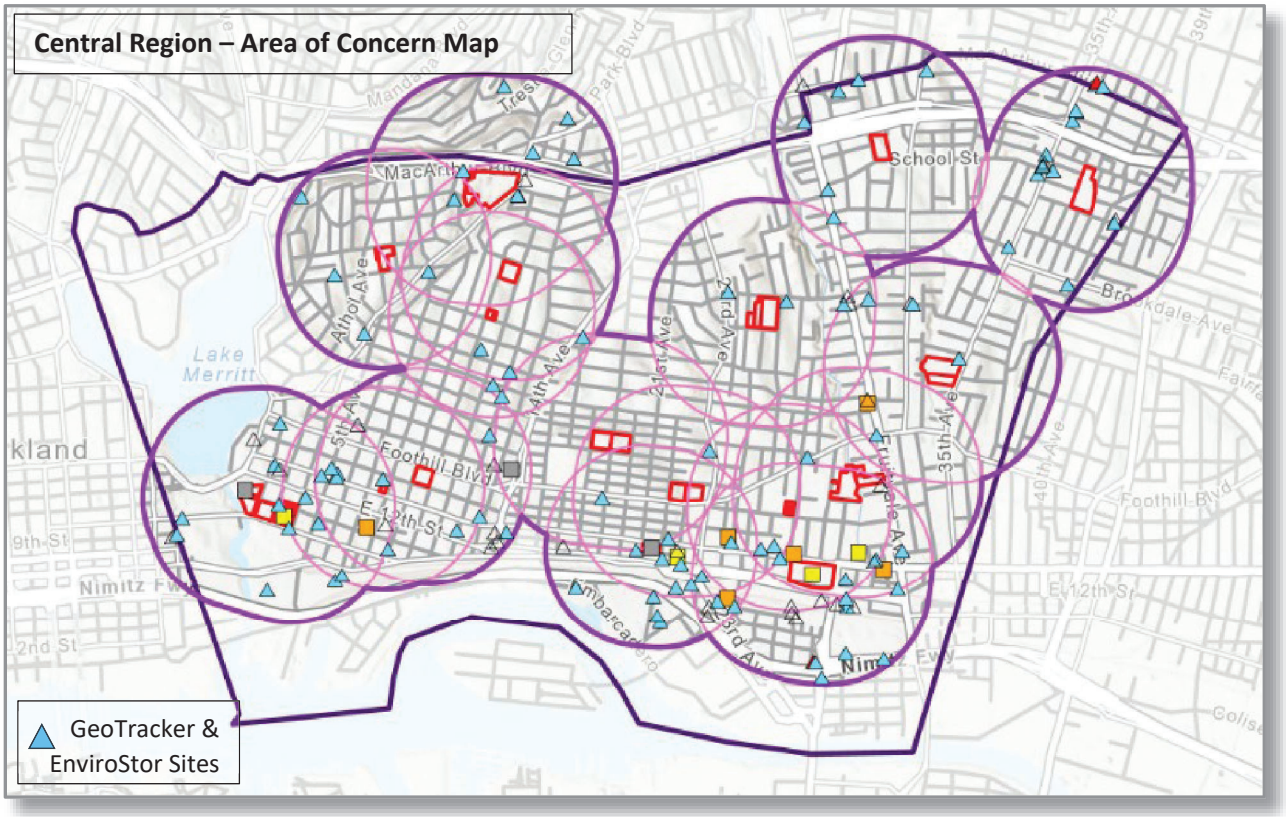
Catalyst will provide a 5% discount if more than one Region is awarded.

ASSUMPTIONS

Region Characteristics

Catalyst has proactively evaluated the number of sites listed in GeoTracker and EnviroStor within the area of concern (AOC) as defined in ASTM E2600-22 as a radius of 1/3-mile (1,760 feet) from the boundaries of each OUSD Facility. Because the AOCs overlap, roughly one-third of the GeoTracker and EnviroStor sites apply to more than one OUSD Facility. We then merged all individual AOCs into an AOC map for each region, as summarized in the table and image below.

Region	No. of OUSD Facilities	No. of GeoTracker Sites	No. of EnviroStor Sites	Total No. of Sites	Average No. of Sites per Each Facility
West	14	354	72	426	30
East	22	184	61	245	11
Central	21	133	13	146	7
Northwest	20	111	2	113	6
Northeast	20	47	8	55	3
Totals=	**97**	**829**	**156**	**985**	**10**



Scope of Work Assumptions

- One iteration of draft to final of the VES report, which assumes revisions require no more than 4 hours to complete.
- The Tier 2 VES scope of work will be prepared pursuant based on OUSD's response to Question 27 (A27) in the *Question and Response* document issued by OUSD on September 27, 2023. Specifically, the scope of work will not be prepared for formal submittal to a regulatory agency, but will be sufficient for estimating costs to implement. In addition, the scope of work will be submitted separately as a Technical Memorandum, Letter, Addendum to the Report, or similar.
- OUSD Meetings for Planning, Project Status, and/or Discussion of Findings will be no more than 1-hour in duration and will involve approximately 1-hour of preparation.
- OUSD Public Meetings will require no more than 3-hours in duration and will involve approximately 1-hour of preparation. Our fee assumes others will perform public outreach, meeting coordination, provision of informational materials, etc. Catalyst can provide these services upon request.

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October 12, 2023

Rebecca Littlejohn
Risk Management Officer
Oakland Unified School District
1011 Union Street
Oakland, CA 94607

Via email: rebecca.littlejohn@ousd.org

RE: Letter of Interest – Subsurface Contamination Consulting Services
Phase One: Vapor Encroachment Condition Screening Evaluation
OUSD Region - East
Project #23125

Rebecca,

Catalyst Environmental Solutions Corporation (Catalyst) is pleased to provide this Letter of Interest (LOI) to support the Oakland Unified School District (OUSD) with Phase One of its Vapor Intrusion Initiative which consists of a vapor encroachment condition screening evaluation. As specified in the Request for Qualifications and Proposal (RFQ/P) dated August 14, 2023, the objective of Phase One is to identify potential Vapor Encroachment Conditions (VECs) at OUSD Facilities and to categorize each OUSD Facility based on its relative potential vapor intrusion risk.

Catalyst is exceptionally suited to support OUSD with this scope of work given our extensive experience, including school-specific and public interfacing experience, in assessing and mitigating vapor intrusion risk. Because our team is Oakland-based, we have a deep knowledge of the physical factors within the OUSD boundaries that affect vapor migration and intrusion risk (e.g., geology, hydrogeology, subsurface infrastructure, and land use) as well as a keen understanding of the community concerns. Lastly, we have strong working relationships with the various regulatory agencies associated with assessing, managing, and mitigating vapor intrusion risk and a demonstrated track record of effectively working with these agencies to achieve our client's goals.

Our team will be led by Steve Michelson, a State of California Professional Geologist (PG) who is based in our Oakland office. Steve has over 25 years of relevant experience and is an effective communicator with extensive experience in translating complex issues into easily understandable concepts across a range of stakeholders. At the senior level, he will be supported by Tyson Fulmer, PG and Andy Campbell, PE who both have significant experience in assessing and addressing vapor intrusion risk. Copies of the resumes for these staff as well as associated professional certifications are provided in Attachment A.

The following provides the corporate information requested in the RFQ/P:

Legal Name: Catalyst Environmental Solutions Corporation
Organization Type: State of California S-Corporation (C3818303)
Address: 2744 E. 11th Street, Suite A9, Oakland, CA 94601
Telephone: 510-407-2864
Website: https://www.ce.solutions/

Registrations

State of California Registered Small Business (Certification #2000479)
Alameda County-Certified Small, Local, and Emerging Business (SLEB Certification No. 23-00059)
Alameda County Transportation Commission Local Small Business Certification (CAT20230403-03)

Tax ID Information

Federal Tax ID: 47-5064211
State Tax ID: 3818303

The following provides the company attestations requested in the RFQ/P:

- *I/we have received and reviewed the Template Services Agreement (available as Attachment A to the RFQ/P). I/we understand that this is the legal agreement that Catalyst will need to sign, and Catalyst agrees to sign it, without objection or reservation, if selected by the District. I/we understand that only the District, at its sole discretion, may change the terms of the Agreement.*
- *I/we certify that no official or employee of the District, nor any business entity in which an official of the District has an interest, has been employed or retained to solicit or assist in responding to the RFP and that Catalyst has no current intent (nor has promised) to employ or retain any official or employee of the District, nor any business entity in which an official of the District has an interest, to perform any of the services for which Catalyst might be selected by this RFP process.*
- *No official or employee of Catalyst has ever been convicted of an ethics violation.*
- *By virtue of submission of this Proposal, I/we declare that all information provided is true and correct.*

We appreciate the opportunity to provide you with this proposal. Please let me know if you have any questions or comments.

Sincerely,

Steven Michelson, PG[1]
Technical Director
CELL: (510) 407-2864
EMAIL: smichelson@ce.solutions

[1] Authorized to submit the RFQ/P on behalf of Catalyst Environmental Solutions Corporation.

ATTACHMENT A

RESUMES AND PROFESSIONAL CERTIFICATIONS FOR KEY STAFF

Steven Michelson, PG

Technical Director

Summary of Qualifications – Vapor Intrusion Mitigation Focus

Mr. Michelson applies technical, economic, and regulatory analysis to assist both the public and private sectors in the cost-effective management and closure of environmental liabilities. He has particular expertise regarding the assessment vapor intrusion risks followed by the mitigation risks to protect human health – ranging from children in schools, to families in low-income housing, to commercial facilities. His experience includes the investigation, mitigation, and remediation of contamination liabilities at a variety of public, school, commercial and industrial facilities, military installations, mines, and ports. His experience predominantly in the San Francisco Bay area, but ranges from dry cleaners in Alaska to uranium mill tailings in New Mexico to extensive petroleum releases in a dune system along California's central coast to legacy mercury contamination affecting wetlands, creeks, and the San Francisco Bay to dredged sediment in the California Delta to transfer of military bases to the public sector. He also brings extensive experience to resolving Natural Resource Damage claims and CERCLA liabilities.

Education

- B.S. Geology and B.S. Civil Engineering, Lehigh University

Disciplines

- Project Management
- Geology/Hydrogeology
- Site Assessment and Remediation
- Dredge Programs and Beneficial Reuse of Sediment
- Environmental Compliance & Permitting
- Water Resources

Professional Affiliations

- California Professional Geologist (No. 5165)
- State of California Contractor – General A, B, C57, C21, and HazMat

Representative Project Experience

VAPOR INTRUSION MITIGATION

California Crosspoint Academy, Hayward, CA

Program manager, technical lead and main client contact for the investigation of risks to indoor air, and subsequent design, installation, and commissioning of vapor intrusion mitigation systems at two new school buildings. One building provides classroom and dormitory services and the other is a multi-purse gymnasium and theatre. Steve provided significant strategic planning to assist the client with the management of the regulatory oversight agency and coordination with the general construction contractor and subcontractors installing the vapor intrusion mitigation system. The facility was constructed and occupied on schedule without delays caused by the mitigation of environmental risks.

Lincoln Landing, Hayward, CA

Program manager, technical lead and main client contact for the investigation of legacy environmental impacts due to lead, petroleum, PCBs, chlorinated solvents, and risks to indoor air – all in preparation for the construction of a new $400M mixed use residential and commercial development in central Hayward. He subsequently led the design and implementation of an extensive remediation effort, including excavation and installation of nearly ½-mile of horizontal soil vapor extraction pipe. Steve also directed the design, installation, and commissioning of vapor intrusion mitigation systems of 10 vapor intrusion mitigation systems. Steve provided significant strategic planning to assist the client with the management of the regulatory oversight agency and coordination with the general construction contractor and subcontractors installing the vapor intrusion mitigation system. The facility was constructed and occupied on schedule without delays caused by the mitigation of environmental risks.

EAH Housing, Hayward, CA

Program manager, technical lead and main client contact for the investigation of legacy environmental impacts due to lead based paint and risks to indoor air from neighboring sites – all in preparation for the construction of a new $50M low-income residential housing development. He led the design and implementation of an extensive site-wide soil remediation effort, which included excavation and soil stabilization. Steve directed the design, installation, and pending commissioning of the building's vapor intrusion mitigation system. Steve is currently providing significant strategic planning to assist the client with the management of the regulatory oversight agency and coordination with the general construction contractor and subcontractors installing the vapor intrusion mitigation system.

McClymonds High School, Oakland, CA

Steve was engaged to critically review and comment on technical reports prepared by another consultant working at the direction of DTSC. DTSC's responses to Steve's comments resulted in important modifications to DTSC's approach to interpreting the environmental conditions. While the risks to indoor air at the school were, nonetheless, considered nominal, DTSC did modify their approach to be consistent with their own guidance, making their findings more defensible.

Dermody Properties, Hayward, CA

Program manager, technical lead and main client contact leading the design, installation, and pending commissioning of vapor intrusion mitigation systems of a 220,000 square-foot building alone the shore of San Francisco Bay. Steve provided significant strategic planning to assist the client with the management of the regulatory oversight agency and coordination with the general construction contractor and subcontractors installing the vapor intrusion mitigation system. The facility was constructed and occupied on schedule without delays caused by the mitigation of environmental risks.

ARC, Oakland, CA

Program manager, technical lead and main client contact for the investigation of legacy environmental impacts due to petroleum released over decades from a former underground storage tank. At one point, the gasoline measured 3 feet thick floating atop ground water. The plume of extensive petroleum contamination underlies more than a city block, including a historic century old apartment building. Steve leads the investigation, monitoring, design of a soil vapor extraction and air sparge system, followed by the eventual installation and operation of that system. Steve continues to provide significant strategic planning to assist the client with the management of the regulatory oversight agency

480 Ellis, MEW Superfund Site, Mountain View, CA

Program manager, technical lead and main client contact for the investigation of vapor intrusion risks to a commercial building located above the Middlefield-Ellis-Whisman Superfund Site. Steve led the design and implementation of the assessment of vapor intrusion risks, and assisted in the negotiations of strategies with lenders to facility the purchase and sale of the property. Steve is now assisting the owner in negotiations with the USEPA and Geosyntec regarding further assessment to inform the classification of the proper risk Tier.

Other Sites

Throughout his career Steve led, designed, and implemented numerous investigations of environmental contamination, including assessing and mitigating risks to indoor air. His work in these matters ranges from the ASTM E1527 and ASTM E2600 standards to compliance with investigation requirements and guidance issued by various local, state, and federal regulatory agencies.

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ISSUANCE DATE
MAY 1, 1991

EXPIRATION DATE
JANUARY 31, 2025

CURRENT DATE / TIME
OCTOBER 12, 2023
11:7:51 AM

LICENSING DETAILS FOR: 5165

NAME: MICHELSON, STEVEN

LICENSE TYPE: GEOLOGIST

LICENSE STATUS: CLEAR

ADDRESS

42 CALIFORNIA AVENUE
ORINDA CA 94563
CONTRA COSTA COUNTY

MAP

TYSON FULMER, PG

Project Manager/Senior Geologist

Summary of Qualifications

Mr. Fulmer is an accomplished geologist with over 15 years of experience in environmental consulting. Multidisciplinary education and work background with the ability to perform multiple tasks in the environmental sector. Excellent verbal and written communication skills, effective manager and team leader. Skilled in marketing, networking and business development networking services. All relevant vapor intrusion and risk assessment project experience discussed below is currently being conducted or was completed within the last 5 years.

Representative Vapor Intrusion Mitigation Project Experience

Lincoln Landing Hayward CA | Hayward CA

Analyzed and interpreted CVOC and radon vapor data including to develop site specific attenuation factors. Evaluated data to determine risk for building occupants for a site development. Evaluated soil vapor and indoor air data to determine cumulative risk and hazard indices based on screening criteria. Analyzed differential pressure data and radon concentration data to evaluate vapor intrusion mitigation system (VIMS) performance.

Moxy Hotel Development | 3723 Haven Ave, Menlo Park CA

Evaluated existing contamination at a proposed hotel development and calculated vapor intrusion risks based on residential and commercial land use. Proposed mitigation measures based on land use and building design. Worked with engineering team to design a vapor intrusion mitigation system to attenuate human health risks. Site work also included an evaluation of discharge to terrestrial and aquatic environmental receptors in a sensitive habitat and supervising remedial activities.

CVOC and Petroleum Contaminated Site | 930 Linden Ave | South San Francisco

Evaluated risk to indoor air posed by predominantly aliphatic based petroleum compounds within the context of the low threat closure policy and existing local screening criteria. Also supervised project that included site characterization design and implementation of a direct injection remedial action for CVOCs. Used isotope analyses and functional gene assays to monitor effectiveness of remedial action.

CVOC contaminated site | 1108 Park Ave | San Jose CA:

After applying for and receiving SCAP grant funding for a CVOC project with significant vapor intrusion issues. Identified pathways for vapor migration to indoor air using passive diffusion and soil vapor well data to model where soil vapor plume was present. Collected soil vapor, crawl space and indoor air samples to evaluate vapor to indoor air migration. Implemented vapor intrusion mitigation measures such as

Education

- Bachelor of Science, Earth Studies and Bachelor of Arts, Environmental Studies (Honors), University of California, Santa Cruz 1999-2004
- Abroad Studies, University of Costa Rica 2003

Disciplines

- Project Management
- Remedial Design and Alternative Analyses
- Vapor Intrusion Risk Assessment
- Vapor Intrusion Mitigation Design
- Geologic Interpretation
- Cost estimating project budgeting
- Permitting
- ASTM compliant Phase I and II ESAs
- Subcontractor Coordination
- Environmental Site Characterization
- Grant Application and Execution
- Public Speaking and Teaching
- Soil Management and Waste Characterization
- Dredge permitting and reporting
- Natural attenuation monitoring
- Database management

Certifications

- California Professional Geologist, PG 9062
- 40-hour HAZWOPER

sealing slab, air filtration and design of a blower system to mitigate indoor air. Currently permitting SVE system to mitigate impacts to indoor air at adjacent occupied residences.

Commercial/Residential Development | Alice St | Oakland CA

Used radon detectors to generate a site-specific attenuation factor for a development in Oakland CA. Re-evaluated risk to indoor air based on soil vapor concentrations with site-specific attenuation factor.

Former Dry Cleaner with CVOC Contamination| 1534 Park St | Alameda CA

Prepared and implemented a pilot test work plan to mitigate soil vapor intrusion issues at a former dry cleaner in a dense urban setting. Evaluated risk to indoor air at property and adjacent residences. Currently preparing a long-term soil vapor extraction system to mitigate soil vapor impacts and threat to indoor air.

Former Dry Cleaner with CVOC Contamination | 3135 Stevens Creek Blvd | San Jose CA

Characterized CVOC impacts to soil vapor and ground water and implemented a soil vapor pilot test to evaluate design parameters for full scale soil vapor extraction. Summarized data in a pilot test report for recommendations in a remedial design for long term soil vapor extraction to mitigate impacts to soil vapor at the overlying commercial properties and the downgradient impacted properties.

TCE Contaminated Site | 561 Division St | Campbell CA

After characterizing soil vapor impacts to indoor air, designed and implemented a soil vapor extraction system for a former industrial property with CVOC impacts to soil vapor. Operated soil vapor extraction at the site for approximately 1-year resulting in significant contaminant mass removal and reduction of soil vapor concentrations

Former Gas Station Site| 599 N 4th St | San Jose CA

Evaluated risks to indoor air at downgradient properties impacted by a a former leaking underground storage tank in San Jose. Characterized vapor intrusion risks to residences and commercial properties at grade and with subgrade basements. Calculated site specific attenuation factors for properties based on subslab and indoor air sampling. Working with County LOP and State Water Board to remediate and achieve risk based closure.

Other Skills, Affiliated Organizations and Interests:

Languages: Fluent in oral and written Spanish communication, conversational Cantonese

Affiliated Professional Organizations:

Environmental and Engineering: Ground Water Resources Association (GRAC), Professional Environmental Marketing Association (PEMA), American Civil Engineers California (ACEC), Bay Planning Coalition, Environmental Section of the San Francisco Bar Association.

Commercial Real Estate, Development Organizations: Norcal CCIM, Commercial Brokers Association (CBA), NAIOP, Bay East Real Estate, Alameda Chamber of Commerce, Urban Land Institute (ULI).

Publications, Classes and Presentations:

- Managing real estate risk with environmental due diligence : Transaction strategies for environmentally impacted properties, Corporate Real Estate Journal Volume 12 No. 4, March 4th, 2023
- In Situ Treatment of Chlorinated Solvent Source Zone - Treatment Performance and Injection Design Assessed With Compound-Specific Isotope Analysis (CSIA), presented at Ground Water Resources Association of CA
- Environmental Due Diligence: Transacting Properties and Managing Risk (Course curriculum and class with Commercial Brokers Association)
- An Environmental History of the San Francisco Bay Area/Alameda (Presented with Norcal CCIM)

STATE OF CALIFORNIA
dca
DEPARTMENT OF CONSUMER AFFAIRS

BOARD FOR PROFESSIONAL ENGINEERS, LAND SURVEYORS, AND GEOLOGISTS

This Is To Certify That Pursuant
To The Provisions of Chapter 12.5 Division 3 of The Business and Professions Code

Tyson Robert Fulmer

IS DULY LICENSED AS A

PROFESSIONAL GEOLOGIST

In The State of California and Is Entitled To All The Rights and
Privileges Conferred In Said Code

DEPARTMENT OF CONSUMER AFFAIRS · BOARD FOR PROFESSIONAL ENGINEERS, LAND SURVEYORS, AND GEOLOGISTS · STATE OF CALIFORNIA

WITNESS OUR HAND AND SEAL

Certificate No GEO 9062

This 4th day of June, 2013, at Sacramento, California.

BOARD FOR PROFESSIONAL ENGINEERS,
LAND SURVEYORS, AND GEOLOGISTS

Executive Officer

President

EPRPGO 07/20/11

BOARD FOR PROFESSIONAL ENGINEERS, LAND SURVEYORS, AND GEOLOGISTS

LICENSING DETAILS FOR: 9062

NAME: FULMER, TYSON

LICENSE TYPE: GEOLOGIST

LICENSE STATUS: CLEAR

ADDRESS

2129 BYRON STREET
BERKELEY CA 94702
ALAMEDA COUNTY

ISSUANCE DATE

JUNE 4, 2013

EXPIRATION DATE

NOVEMBER 30, 2024

CURRENT DATE / TIME

OCTOBER 12, 2023
10:22:40 AM

ANDREW H. CAMPBELL, PE

SENIOR ENGINEER

Summary of Qualifications

Mr. Campbell has held responsible charge of environmental remediation projects since 2000. He specializes in developing optimized remediation and mitigation strategies for properties contaminated by releases of volatile organic compounds (VOCs) while building consensus between clientele, regulatory agencies, and other stakeholders. This includes the design of low-cost remediation, mitigation, and closure plans drawing upon a variety of techniques to reduce the risks associated with complete exposure pathways, most importantly vapor intrusion to indoor air. Andrew also provides construction quality assurance (CQA) oversight and system testing, commissioning, and monitoring. His clientele has included land developers, schools, major airlines, utilities, and state and federal government agencies.

Education

- B.S., Biochemistry University of California at Davis, 1992
- M.S., Civil Engineering, University of Colorado at Boulder, 1996

Disciplines

- Project Management
- Vapor Intrusion Management System (VIMS) Design
- Remedial Design
- Stormwater Management

Certifications

- California Professional Engineer, License No. C60412
- Qualified Stormwater Pollution Prevention Plan Developer (QSD)
- Professional Engineer (Civil) - AZ, WA, NV, FL, TX, MD, NJ, OH, VA, WV, and NCEES Council Record

Representative Project Experience

Principal Engineer, California Crosspoint Academy, Hayward, CA.

Oversaw preparation of two VIMS designs for two new buildings on the campus of a growing private school. Contaminants included PCE, benzene, fuel hydrocarbons, and other chlorinated hydrocarbons. ACDEH provided lead regulatory oversight. Deliverable documents included a Basis of Design report, VIMS construction plans, CQA Plans, and an OMMR Plan. VIMS components included vapor barriers, passive SSVS, and active sub-slab depressurization (SSDS). A student dormitory also included an elevator pit and a battery pit, both of which required VIMS. Mr. Campbell provided CQA oversight per ACDEH requirements and oversaw the commissioning of both buildings' systems, including preparation of record reports of construction and commissioning.

Principal Engineer, Lincoln Landing, Hayward, CA

Designed ten distinct vapor intrusion mitigation systems (VIMS) for various new buildings on a redeveloped parcel impacted by perchloroethylene (PCE), benzene, fuel hydrocarbons, and other chlorinated hydrocarbons. Construction had already begun when Mr. Campbell was asked to begin the design process, with the Alameda County Department of Environmental Health (ACDEH) providing lead regulatory oversight. Mr. Campbell prepared a Basis of Design report, VIMS construction plans, CQA Plan, Risk Management Plan, and Operations, Maintenance, Monitoring, and Reporting (OMMR) Plan. VIMS components included vapor barriers, passive and active sub-slab ventilation systems (SSVS), conduit seals, trench dams, and above-ground ventilation. The development included four elevator pits and an indoor pool, spa, and surge tank, all of which required VIMS. He oversaw CQA oversight while facilitating overall construction progress, still ensuring the installed VIMS met stringent ACDEH requirements. Mr. Campbell prepared multiple record reports of construction and commissioning, and ACDEH issued rapid approval of occupancy for the protected buildings.

Principal Engineer, Dermody Properties, Hayward, CA

Designed a VIMS for a 220,000 SF warehouse with TCE impacts to subgrade soil. The San Francisco Bay Regional Water Quality Board served as the lead regulator. The VIMS design included a vapor barrier and a passive SSDS. Mr. Campbell is currently overseeing CQA.

Principal Engineer, Anvil Builders, Emeryville, CA

Designed a VIMS for a tenant improvement project on an existing warehouse building to be repurposed as offices. A neighboring facility had released PCE, carbon tetrachloride, chloroform, and other solvents which migrated beneath the project site. ACDEH provided lead regulatory oversight, and construction had already begun when Mr. Campbell was asked to prepare ACDEH-required deliverables. Those included a Basis of Design report, VIMS construction plans, CQA Plan, and OMMR Plan. VIMS components included an anti-vapor coating atop the concrete floor and active, indoor ventilation.

Principal Engineer, Satellite Affordable Housing Associates, Oakland, CA

Designed a VIMS for a proposed mixed-used development including affordable housing overlying a ground-floor medical clinic and community center. VOC impacts to subgrade soil included benzene, PCE, and gasoline. ACDEH served as the lead regulator. The VIMS design included a vapor barrier, a passive SSDS, and above-grade ventilation. The design also provides VIMS for an elevator pit.

Principal Engineer, EAH, Hayward, CA.

Designed a VIMS for a proposed affordable housing development with VOC impacts to subgrade soil. ACDEH served as the lead regulator. The VIMS design included a vapor barrier and a passive SSDS. The design also provides VIMS for an elevator pit. Mr. Campbell is currently overseeing CQA.

Principal Engineer, 988 Harrison St, San Francisco, CA

Designed a VIMS for a proposed mixed-use development with VOC impacts to subgrade soil. The City and County of San Francisco acted as the lead regulator. The VIMS design included a vapor barrier and sub-barrier monitoring system. The design also provides VIMS for an elevator pit. Mr. Campbell is currently overseeing CQA.

Principal Engineer, AMG & Associates, El Camino Real, San Bruno, CA

Designed a VIMS for a proposed, mixed-use development near a former dry cleaner. PCE in soil ranged up to 108,000 micrograms per cubic meter (µg/m3). The San Mateo County Department of Environmental Health served as the lead regulator. The VIMS design included a vapor barrier and an active SSDS. The design also provides VIMS for two elevator pits. San Mateo County approved the design with minimal comments, allowing the development to proceed with financing and construction permitting.

Principal Engineer, Prologis, Inc., San Leandro, CA

Designed a VIMS for the construction of a new, 100,000 SF logistics warehouse, with an elevator, to be operated by a major online retailer. Property impacts included trichloroethylene (TCE) and its biological breakdown products, including high levels of vinyl chloride. The California Department of Toxic Substances Control (DTSC) served as the lead regulator. The VIMS design included a vapor barrier and a passive sub-slab ventilation system. DTSC approved the design with minimal comment.

Principal Engineer, El Dorado County Library, South Lake Tahoe, CA

Performed pressure field extension (PFE) tests on a public library with confirmed radon impacts to indoor air. Designed a full-scale SSDS as an engineered mitigation control.

Principal Engineer, Washington Square, Petaluma, CA

Designed a VIMS for an operating strip mall that included a dry cleaner. PCE in indoor air ranged up to 301 µg/m3). DTSC provided lead regulatory oversight. VIMS components included an anti-vapor coating atop the concrete floor and active, indoor ventilation using an enhanced heating, ventilating, and air conditioning (HVAC) system. Post-implementation monitoring demonstrated successful mitigation below regulatory limits. DTSC agreed that no additional vapor intrusion mitigation activities were necessary.

State of California Department of Consumer Affairs

BOARD FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS

This Is To Certify That Pursuant
To The Provisions of Chapter 7, Division 3 of The Business and Professions Code

Andrew Hogan Campbell

IS DULY LICENSED AS A

PROFESSIONAL ENGINEER

IN

CIVIL ENGINEERING

In The State of California, and Is Entitled To All The Rights and
Privileges Conferred In Said Code

DEPARTMENT OF CONSUMER AFFAIRS · BOARD FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS · STATE OF CALIFORNIA

WITNESS OUR HAND AND SEAL

Certificate No C 60412

This 4th day of February, 2000, at Sacramento, California.

BOARD FOR PROFESSIONAL
ENGINEERS AND LAND SURVEYORS

Cinde Christenson — Executive Officer

[signature] — President

EPRENG 5/31/99

THIS CERTIFICATE IS THE PROPERTY OF THE STATE OF CALIFORNIA AND IN THE EVENT OF ITS SUSPENSION, REVOCATION OR INVALIDATION FOR ANY REASON IT MUST UPON DEMAND BE RETURNED TO THE BOARD FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS

Remove your new Pocket Certificate from the receipt portion and carry it with you at all times.

Board for Professional Engineers, Land Surveyors, and Geologists
2535 Capitol Oaks Drive, Suite 300
Sacramento, CA 95833-2944
916 999-3600

05/03/22
05/03/22

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SACRAMENTO, CA 95833-2944
(916) 999-3600 Toll Free: (866) 780-5370
www.bpelsg.ca.gov

CUT HERE

CIVIL ENGINEER

CERTIFICATE NO.
C 60412

EXPIRATION
06/30/24

ANDREW HOGAN CAMPBELL
5632 SHADLE WAY
FAIR OAKS CA 95628

Signature _____

RECEIPT NO.
21232471

I M P O R T A N T

1. Please include your Certificate Number on any correspondence to this office.
2. Notify the Board of any name or address change in writing.
3. Report any loss of this Certificate immediately in writing to the Board.
4. Please sign and carry the Pocket Certificate with you.
5. Please laminate your Certificate to avoid deterioration.

ANDREW HOGAN CAMPBELL

CERTIFICATE NO.	EXPIRATION DATE	RECEIPT NO.
C 60412	06/30/24	21232471

This is your receipt. Please save for your records.

PPRC 10/08/20

OUSD Region - EAST
Statement of Qualifications and Proposal for Subsurface Contamination Consulting Services - Vapor Encroachment Condition Screening Evaluation
OUSD Project No. 23125

Prepared for:
Oakland Unified School District
1011 Union Street
Oakland, CA 94607

Prepared By:
Catalyst Environmental Solutions
2744 E. 11th Street, Suite A9
Oakland, CA 94601

October 12, 2023

Innovative solutions for a complex world

Catalyst
ENVIRONMENTAL SOLUTIONS

Table of Contents

SECTION 1 Introduction

Catalyst Environmental Solutions Corporation (Catalyst) is pleased to submit this Statement of Qualifications (SOQ) to support the East Region of the Oakland Unified School District (OUSD) with Phase One of its Vapor Intrusion Initiative (VII) that primarily consists of a vapor encroachment survey (VES) performed in general conformance with ASTM E2600-22 to identify vapor encroachment conditions (VEC). Our SOQ responds to the Request for Qualifications and Proposal (RFQ/P) dated August 14, 2023 (OUSD Project #23125). This SOQ is organized to provide the following: an overview of our Project Understanding and a description of Catalyst; our proposed Project Team; an overview of our Qualifications and Experience; and, the Scope of Work including our approach to project management and execution.

Project Understanding

In recent years, OUSD has encountered vapor intrusion issues at facilities owned, operated, or maintained by OUSD (OUSD Facilities) and has developed the VII to proactively identify, evaluate, and (where appropriate) mitigate VECs at its facilities. For the purposes of RFQ/P, OUSD grouped its Facilities into five regions: Central; East; Northeast; Northwest; and, West. This proposal has been prepared for the East Region which, based on the GIS link provided in the RFQ/P, consists of 22 bid sites and 41 bid parcels.

The objective of Phase One of the VII, the scope of this proposal, is to identify potential VECs at OUSD Facilities and to categorize each OUSD Facility based on its relative potential vapor intrusion risk and need for additional data (Class 1 through Class 4 as defined by OUSD in the RFQ/P). The scope of work involves conducting a Tier 1 Vapor Encroachment Screen (VES) in general conformance with ASTM E2600-22 *Standard Guide for Vapor Encroachment Screening* (ASTM E2600-22) with consideration of the caveats specified in the RFQ/P.

For Phase One, the area around each OUSD Facility will be reviewed to identify known and potential sources of vapor intrusion risk and existing data will be evaluated using San Francisco Bay Regional Water Quality Control Board's Tier 1 Environmental Screening Levels (Tier 1 Residential ESLs) to inform each the classification of each OUSD Facility. We understand that the scope of work may also include preparation of a scope for a Tier 2 VES and public meetings.

Following completion of Phase One, subsequent phases of the VII will focus on further assessing specific risk at identified facilities and, where appropriate, designing and implementing mitigation measures at facilities where vapor intrusion is occurring and represents an unacceptable risk.

Overview of Catalyst

Catalyst was founded in 2015 and fills the growing gap in the market for attentive, high-quality, and full-service solutions provided by innovative, creative, and successful experts. We are California Registered Small Business with offices in Oakland, California as well as three offices across southern California and an office in Portland, Oregon. This project would be led out of our Oakland office which includes 6 staff and, as needed, will draw upon the expertise of additional staff from our other offices.

Catalyst is exceptionally suited to support OUSD with this scope of work given our extensive experience, including school-specific experience, in assessing and addressing vapor intrusion risk. Our key qualifications are summarized on the following page.

Overview of Catalyst's Qualifications

We are Experts in Assessing Vapor Intrusion Risk as well as Developing and Implementing Cost-Effective Solutions to Address Identified Issues	Our team has over 30 years of experience investigating and resolving environmental risks, including vapor intrusion assessment, human health risk assessment, and vapor intrusion mitigation. Within Alameda County alone, since 2019, our team has led over 17 projects involving the investigation and subsequent design, installation, and commissioning of vapor intrusion mitigation systems. Our experience also includes many more projects throughout the Bay Area involving the investigation of vapor intrusion risks.
We have Demonstrated Experience Supporting Schools in Assessing and Mitigating Vapor Intrusion	Our experience includes working with California Crosspoint Academy in Hayward, California in assessing vapor intrusion risk as well as designing and overseeing the construction of vapor intrusion mitigation systems for two new school buildings covering over 20,000 square feet. In addition, Catalyst staff was engaged to review and comment on technical reports characterizing vapor intrusion risks at McClymond's High School. …
We are a Local, Small-Business Enterprise that Understands the Environmental Setting and Community Concerns	Our project team is based in Oakland and has a deep knowledge of the environmental factors within the OUSD boundaries that affect vapor migration and intrusion risk (e.g., geology, hydrogeology, subsurface infrastructure, and land use) as well as a keen understanding of the political landscape and community concerns.
We have Demonstrated Success in Effectively Working with Various Regulatory Oversight Agencies to Achieve our Client's Goals	Our team has strong working relationships with the various regulatory agencies associated with assessing, managing, and mitigating vapor intrusion risk and a demonstrated track record of effectively working with these agencies to achieve our client's goals. We have extensive experience working with the Alameda County Department of Environmental Health, San Francisco Bay Regional Water Quality Control Board, and the Department of Toxic Substances Control in investigating, designing, and/or implementing vapor intrusion mitigation systems in compliance with their respective stringent requirements.
Our Project Manager is an Effective Leader and Communicator with over 30 Years of Experience in Assessing and Addressing Risks Associated with Soil Vapor Intrusion	Our team will be led by Steve Michelson, a State of California Professional Geologist who is based in our Oakland office. Steve has over 30 years of relevant experience who has personally led over 50 projects related to vapor intrusion including our work with the California Crosspoint Academy and McClymonds High School. He has been on the forefront of our work in Alameda County in helping our clients successfully navigate the regulatory landscape to achieve their goals. He is an effective communicator with extensive experience in translating complex issues into easily understandable concepts across a range of stakeholders.
We have Demonstrated Success Clearly Communicating Complex Technical Environmental Data and Concepts to Assist OUSD's Decision Making Process and Support OUSD's Public Relations Management	We understand the community concerns as well as the sensitive nature of the potential risk associated with vapor intrusion in the vicinity of schools and have a strong track record in helping our client's understand complex technical issues to facilitate their decision-making processes. In addition, we are adept at translating technical concepts into readily understandable terms to support communications with the broader public community and stakeholders.

SECTION 2 Project Team

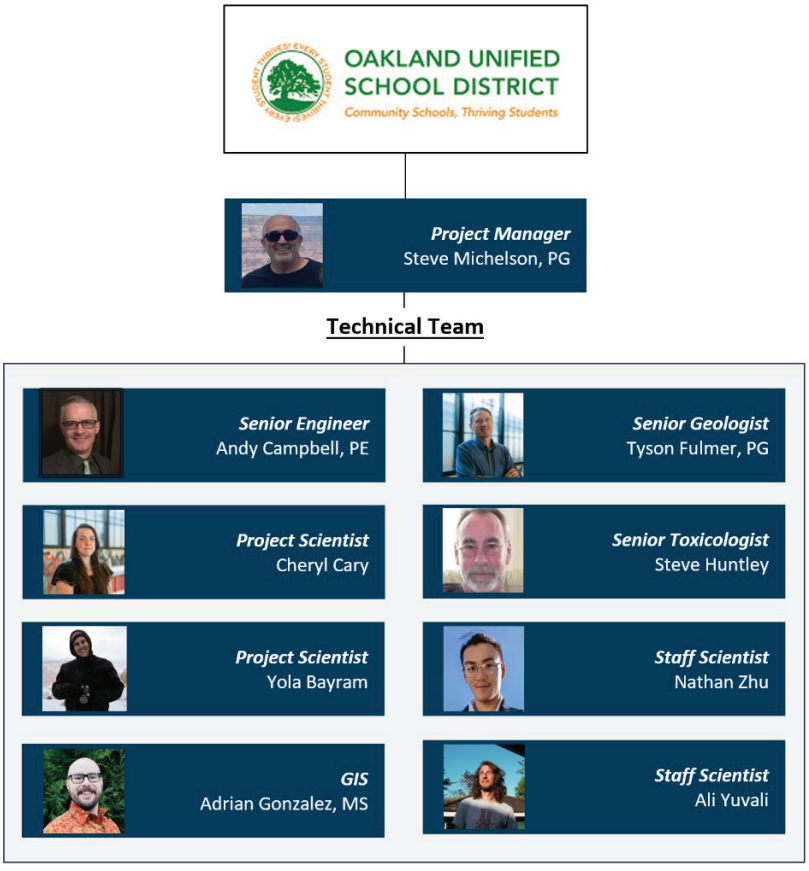
For this project, we have assembled a highly qualified team with the experience and breadth and depth of technical knowledge necessary to effectively and efficiently execute the scope of work. The team is based in our Oakland office and the key staff have worked together for over 5 years, and some for over 15 years, allowing them to seamlessly collaborate and implement the project. The key personnel for this project are described below and an overview of our project organization and broader team are provided in the organizational chart below.

Project Manager/Technical Director – Steve Michelson, PG

Education	B.S. Geology / B.S. Civil Engineering - Lehigh University
Professional Registration	State of California Professional Geologist No. 5165

Mr. Michelson brings nearly four decades of experience to resolving environmental liabilities for clients in the private and public sector. Providing solutions to both schools and developers that first characterize risks and then mitigates those risks to allow building occupancy on schedule is a key focus. His experience ranges from vapor intrusion risks posed by the rather straightforward corner service station or dry cleaner to complex interdisciplinary problems at such as the MEW Superfund Site, or regional background contamination issues in historically heavily industrialized areas of west Oakland and Emeryville. As a degreed geologist and civil engineer and licensed contractor with considerable remedial earthwork construction experience, he consistently offers creative yet pragmatic solutions to complicated problems.

Regulators and clients appreciate and respect his approach to problem solving. Geographically, Mr. Michelson's experience is focussed in the Bay Area, but ranges from New England to Alaska to New Mexico. His professional background includes designing and implementing a variety of investigations to determine the source, extent, risks, and remedial options. Strategies that limit his client's exposure and time to closure while maximizing the cost effectiveness are key elements of his service to clients. Providing well engineered vapor intrusion mitigation systems for the public and private sector is a key part of his practice.



Senior Engineer– Andy Campbell, PE

Education	M.S. Civil Engineering – University of Colorado at Boulder B.S. Biochemistry – U.C. Davis
Professional Registration	State of California Professional Engineer No. C60412

Andrew Campbell is the senior professional engineer and has held responsible charge of vapor intrusion mitigation systems and various environmental remediation projects for over 20 years. He specializes in designing optimized risk mitigation and remediation strategies for properties contaminated by volatile organic compounds, which pose the greatest risk of vapor intrusion. He is also skilled at building consensus between clientele, regulatory agencies, and other stakeholders. His expertise includes the design of low-cost vapor intrusion mitigation systems, and contaminant remediation plans by drawing upon a variety of techniques to reduce the risks associated with complete exposure pathways, most importantly vapor intrusion to indoor air. His clientele have included schools, private parties, major airlines, utilities, and state and federal government agencies.

Senior Geologist – Tyson Fulmer, PG

Education	B.S. Earth Sciences / B.A. Environmental Studies – U.C. Santa Cruz
Professional Registration	State of California Professional Geologist No. 9062

Mr. Fulmer is an accomplished geologist with over 15 years of experience in investigating and remediating a wide-variety of environmental liabilities, including vapor intrusion risks. His multidisciplinary education and work background informs his ability to perform multiple complex tasks in the environmental sector. Excellent verbal and written communication skills, effective manager and team leader.

Project Scientist – Cheryl Cary

Education	B.S. Earth Sciences – U.C. Santa Cruz

Cheryl is a Staff Scientist with over 8 years of experience investigating and remediating environmental contamination issues. Cheryl also has extensive experience managing and providing construction quality assurance during the installation of over 10 vapor intrusion mitigation systems in Alameda County alone. She also has considerable experience working with, collecting, and managing geospatial data. Cheryl applies GIS tools to analyze and present geographically distributed data in clear, insightful, and creative manner that has garnered considerable praise from regulators and our private and public sector clients.

Senior Toxicologist – Steve Huntley

Education	B.S. Environmental Toxicology – U.C. Davis

Mr. Steve Huntley has over 30 years of experience in environmental consulting in the U.S and Puerto Rico. His primary areas of expertise include human health and ecological risk assessment, toxicology, and environmental chemistry/forensics. He has worked on numerous federal and state hazardous waste sites as well as contaminated aquatic systems throughout the U.S. Mr. Huntley has participated in negotiations with the U.S. EPA as well as various state regulatory agencies including the DTSC and the SFBRWQCB.

SECTION 3 Qualifications and Experience

Our team of geologists and engineers is experienced in assessing environmental liabilities and associated risk and we work with our clients to develop and execute cost-effective strategies to address those liabilities. We have proven results in assessing, remediating, and gaining regulatory closure for a diverse range of sites and contaminants across all three-phases of media. Our experience provides us the ability to efficiently characterize the nature and extent of contaminant impacts including vapor forming chemicals (VFCs), develop conceptual site models, assess the fate and transport of contaminants in the subsurface, evaluate risks to human health and the environment, and use this information to develop a cost-effective strategy to address the issue. Our reputation and relationships with various regulatory oversight agencies provides us the ability to efficiently navigate the regulatory landscape and expedite the path site closure.

Our relevant service offerings for this project include:

- Phase I Environmental Site Assessments pursuant to ASTM E1527-21
- Vapor Encroachment Screening pursuant to ASTM E1600-22
- Site Characterization and Remediation of soil, soil vapor, and ground water pursuant to ACDEH, RWQCB, DTSC, and USEAP requirements
- Vapor Intrusion Mitigation System (VIMS) Design, Installation, and Testing
- Human Health and Ecological Risk Assessment
- Soil Vapor and Groundwater Monitoring
- Developing and Executing Strategies for Regulatory Site Closure

Since July 1, 2018, several of the vapor intrusion projects that we have worked on with the agencies and organizations specified in the RFQ/P are provided in the table on the following page.

Agency/Project	Phase 1 & Vapor Encroachment Survey	Site Characterization	Vapor Intrusion Risk Assessment	Human Health Risk Assessment	Indoor Air Quality Assessment	VIMS Design, Installation, and Testing	Remediation	Other: CEQA, Permitting, Dredging
Alameda County Department of Environmental Health ("ACDEH")								
CA Crosspoint Academy - Two New School Buildings	✓	✓	✓	✓	✓	✓		
Lincoln Landing - New $400M Development	✓	✓	✓	✓	✓	✓	✓	
EAH Housing - New Low-Income Housing	✓	✓	✓	✓		✓	✓	
ARC - 1700 Jefferson		✓	✓	✓	✓	✓	✓	
LaZBoy – 5800 Christie		✓	✓	✓	✓	✓		
California Department of Toxic Substances Control ("DTSC")								
Oakland Education Assoc - McClymonds High School			✓	✓	✓			
Ecology Control Industries – UST Recycler	✓	✓	✓	✓	✓		✓	
Los Angeles Sanitary - Exide Battery Site				✓			✓	✓
Los Angeles Sanitary - 141 W. Avenue 34 Site				✓			✓	✓
FivePoint - Mission Village School Site		✓	✓	✓			✓	✓
San Francisco Bay Regional Water Quality Control Board ("Water Board")								
Dermody - New Building (220,000 sq ft)			✓	✓	✓	✓		
Carpenters Union - 300 Hegnberger		✓	✓	✓			✓	
Carpenters Union - 45 Hegenberger Loop		✓	✓	✓			✓	
Deerfield Properties - Commercial Building	✓	✓	✓	✓	✓			
Elevate Development - Moxy Hotel	✓	✓	✓	✓	✓	✓	✓	
Thomas Cleaners - SCAP	✓	✓	✓	✓	✓	✓	✓	
United States Environmental Protection Agency ("USEPA")								
St Francis Yacht Club - Dredging		✓						✓
Reclamation District - Dredging		✓						✓
Toensikotter Dev - MEW Superfund Site	✓	✓	✓	✓	✓			
Non-Profit Organizations								
EAH Housing - New Low-Income Housing	✓	✓	✓	✓		✓	✓	
CA Crosspoint Academy - New School & Dormitory	✓	✓	✓	✓	✓	✓		
CA Crosspoint Academy - New Multipurpose Bldg	✓	✓	✓	✓	✓	✓		
CalTrout - Rose Valley Lakes Stream Restoration								✓
CalTrout - Harvey Dam Fish Passage Restoration								✓

SECTION 4 Project Management and Implementation

The following discusses our approach to effectively managing the project and an overview of the tasks involved in executing the proposed scope of work.

Project Management and Coordination

Our approach to project management is based on following guiding principles:

- Establishment of a clear process to collect the required data and obtain buy-in from OUSD regarding the process to interpret and draw conclusions from the data;
- Clear and consistent communication, collaboration, and coordination with OUSD throughout the course of the project to ensure that there are no "surprises";
- Focus on quality management, including quality assurance/control (QA/QC) reviews of all data and deliverables; and,
- Project delivery on-time and on-budget.

Our approach recognizes that there are two distinct, yet overlapping suites of risks that need to be carefully managed. First, there are technical risks that are managed by carefully and diligently collecting and interpreting the data with the goal of generating accurate, reliable, and defensible conclusions regarding the classification of vapor intrusion risk at each OUSD Facility. Second, there are public relations risks that are managed by clearly and cogently relaying the information to both OUSD and ultimately the public in a manner that are at once accurate and readily comprehensible by the lay public, yet not unnecessarily alarming.

In accordance with these principles, Steve Michelson, PG will serve as the key point-of-contact for OUSD and will be responsible for project delivery and managing all internal project team communications as well as communication with OUSD and other identified stakeholders, as appropriate. Along those lines, we propose an initial project kick-off meeting following contract award to discuss and establish expectations to ensure project success. Catalyst will work with OUSD to prepare the agenda for the kickoff meeting with likely topics to include coordination and communication with OUSD's project manager as well as central office staff, school site staff, and any other identified stakeholders; request for available data; and, project schedule. Following the kick-off meeting, we suggest monthly teleconference meetings with our Project Manager and OUSD to provide technical updates, notification of any emerging issues, and planning for upcoming tasks.

In the event that OUSD awards the Phase 1 scope to more than one consultant, then we recommend establishing a single report format and decision criteria for all to follow. In that way, OUSD is assured of coherent and consistent assessment reports and facility classifications among all Regions, which should streamline the program, reduce inconsistencies between regions, and minimize OUSD's risks and review time moving forward.

In regard to schedule, collectively we will establish the schedule and associated milestones at the project kick-off meeting and will closely monitor progress, assure that deadlines are met successfully, and respond to changes in events as they are encountered. For the purposes of this proposal, we assume the following schedule, which has been developed in consideration of the school year to enable

potentially critical follow-up invasive tasks and/or mitigation measures at a facility to be implemented during the summer break:

- Project Kickoff Meeting – December 4, 2023
- Submittal of Draft Reports – March 15, 2024
- Receipt of Comments on the Draft Report from OUSD – April 12, 2024
- Submittal of Final Reports – May 3, 2024

Catalyst has a strong track-record of meeting our project schedules. Much of our work is associated with real estate transactions and construction activities that have well-defined critical pathways. Our work, whether it be assessment, remediation, and/or vapor intrusion mitigation system installation and testing, has never resulted in a delay in the closing of a deal or the issuance of a "Certificate of Occupancy" of a building. In addition, as part of meeting project schedules, we are adept at handling and adapting to project changes and delays that are outside of our control with the most critical element being communication with our clients to ensure that there are no "surprises" and to manage expectations.

Project Approach

As discussed in the RFQ/P, the objective of Phase One of the VII is to identify potential VECs at OUSD Facilities and to categorize each OUSD Facility based on its relative potential vapor intrusion risk (Class 1 through Class 4 as defined by OUSD in the RFQ/P). The scope of work generally involves conducting a Tier 1 VES in general conformance with ASTM E2600-22 with consideration of the caveats specified in the RFQ/P. The following summarizes our scope of work.

Task 1 – Collection of Existing Environmental Data

This this task involves compiling and reviewing publicly available information regarding the environmental and regulatory history of each OUSD Facility and properties within the ASTM E2600-22 defined minimum search distance of 1/3-mile of each facility, or area of concern (AOC).

The information to be reviewed to inform the classification of each OUSD Facility will include, at a minimum, the following within the AOC associated with each OUSD Facility:

- Available local, State, Federal, and tribal environmental agency files, online environmental databases of active, inactive, and closed environmental sites, list of known gasoline stations and dry cleaners, list of commercial occupants at each address, and historical aerial photographs, topographic maps, and fire insurance maps. The vendor Environmental Data Resources (EDR) will provide this information.
- Regulatory status of identified contaminated sites (i.e., open, closed, etc.) and date of reported release.
- Subsurface lithology (i.e., clay, silt, sand, and/or gravel) and hydrogeology (i.e., depth-to-groundwater, groundwater gradient, etc.), which can affect the rate of vertical soil leaching, ground water movement, and vapor migration.
- Potential preferential pathways such as utility corridors and subsurface drainage infrastructure.

Task 2 – Site Visit

Following the collection of existing data, Catalyst will conduct a field reconnaissance survey of the entire AOC. Per OUSD's response to Question 25 (A25) in the *Question and Response* document issued by OUSD on September 27, 2023, it appears that OUSD does not want the consultant to contact school personnel, which we interpret as including no on-site inspection of the OUSD facility. The survey will include, at a minimum:

- Assessment of current land uses surrounding the OUSD facility.
- Interview of OUSD personnel with direct knowledge of OUSD Facility operations that might currently pose, or previously posed, an environmental concern.
- Ground-truthing of the information obtained as part of the Task 1 data collection.
- Drive-by inspection of all current operations within the AOC to identify potential commercial and industrial operations with the potential to pose a vapor encroachment condition that are not listed in the information reviewed in Task 1.

Task 3 – Data Review, QA/QC, and Interpretation

Catalyst will review and interpret the information collected in Tasks 1 and 2 to, at a minimum:

- Ensure only reliable and representative data are utilized in this analysis, while assuming that the data reported in the databases has already been properly vetted.
- Estimate potential for the OUSD Facility to be impacted by chemical vapors based on date of contaminant release, chemical properties, and distance between the release and OUSD property.
- Compare existing data characterizing concentrations of volatile organic compounds and petroleum in soil, soil vapor, and ground water with the Regional Water Quality Control Board's 2019 Tier 1 Residential Environmental Screening Levels, Revision 2 (ESLs).
- Identify critical data gaps that might affect a reasonable and defensible interpretation of vapor intrusion risk.
- Classify each OUSD Facility according to the criteria in the RFQ/P, summarized as:
    - Class 1 – facility with the highest probability of a realized vapor intrusion risk based on VFC concentrations greater than 10x the ESL derived from samples previously collected at or adjacent to the facility.
    - Class 2 – facility with a moderate probability of a realized vapor risk due to a VEC and likely preferential pathway to the facility, but either without sufficient data confirming a realized risk or VFC concentrations greater between 1x and 10x the ESL derived from samples previously collected at or adjacent to the facility.
    - Class 3 – facility with a low probability of a realized vapor intrusion risk because there is no obvious preferential exposure pathway between a known or likely VEC and OUSD Facility.
    - Class 4 – facilities with no VECs within the AOC.

Task 4 - Reporting

Following completion of Tasks 1, 2, and 3, we will prepare a report for each OUSD Facility in general conformance with Section 10 of ASTM E2600-22 with the following amendments:

- The technical report will be signed and stamped by a California Professional Geologist with responsible charge over the VES.
- The risk of VEC will be classified into one of the four risk classes developed by OUSD as discussed in Task 3. In addition, during the course of our scope, if we identify pursuant to E1527-21 recognized environmental conditions (RECs), historic recognized environmental conditions (HRECs), controlled recognized environmental conditions (CRECs), or environmental business risks (EBRs), then we will include this information in our report.
- Recommendations for next steps for:
    - Class 1 facilities to further characterize the risk, if needed, and mitigate the risk.
    - Class 2 facilities to further characterize the risk to determine if the facility warrants a Class 1, 3, or 4 determination.
    - Class 3 facilities to further characterize the risk, if warranted.
    - Class 4 facilities to implement no additional actions.
    - Further evaluate RECs, HRECs, CRECs, or EBRs, if warranted.

The RFQ/P requires that the report also summarize the results of VES for all OUSD Facilities within the region. The summary will generally consist of a table of the vapor intrusion risk findings and classification for all OUSD Facilities in the region and will include any additional recommendations as they relate to relative vapor intrusion risk. The report shall be used to facilitate implementation of Phase Two of the VII.

In the responses to Questions 4 (A4), 25 (A25), and 27 (A27) in the *Question and Response* document issued by OUSD on September 27, 2023, OUSD indicates that a scope of work to further assess the potential vapor intrusion risk must be prepared in addition to the VES report. As warranted, we will prepare a brief scope of work to include:

- A map depicting the recommended sampling locations and sample media;
- A table describing the rationale for each sampling location and the laboratory analytical methods; and,
- Standard Operating Procedures for the collection and preservation of the samples.

Task 5 – Public Meetings (Optional)

As an optional task, Catalyst is available to support and attend public participation meetings as needed.

OUSD Region - EAST
Fee Proposal for Subsurface Contamination Consulting Services - Vapor Encroachment Condition Screening Evaluation
OUSD Project No. 23125

Prepared for:
Oakland Unified School District
1011 Union Street
Oakland, CA 94607

Prepared By:
Catalyst Environmental Solutions
2744 E. 11th Street, Suite A9
Oakland, CA 94601

October 12, 2023

Innovative solutions for a complex world

Catalyst
ENVIRONMENTAL SOLUTIONS

For **OUSD Region East**, Catalyst Environmental Solutions Corporation (Catalyst) is pleased to submit this Fee Proposal to perform the scope described in the Oakland Unified School District's (OUSD) Request for Qualifications and Proposal (RFQ/P) dated August 14, 2023 (OUSD Project #23125).

For this OUSD Region, Catalyst proposes four separate lump sum fees to perform the work specified in the RFQ/P and discussed in the *Question and Response* document issued by OUSD on September 27, 2023, with rationale as follows:

- Vapor Encroachment Screening Report
  - We assume the preparation of a unique report for each OUSD Facility (also referred to as "Bid Site" in the GIS link provided in the RFQ/P) within the Region as well as a summary of the results for all OUSD Facilities within the region.
- Scope of Work for Tier 2 Vapor Encroachment Survey
  - In the response to questions, OUSD indicated that, where applicable, the consultant shall include a proposed scope of work for an invasive Tier 2 VES.
  - Since a Tier 2 VES is not anticipated to be required at all sites, we include this fee as a separate line item. The fee includes discussions with OUSD regarding the suggested scope.
- OUSD Meetings for Planning, Project Status, and/or Discussion of Findings
  - Since the number of OUSD meetings desired for planning, coordinating, assessing status, discussing findings, etc. are unknown, we include this fee as a separate line item.
- OUSD Public Meetings
  - Since the number of OUSD public meetings required in support of this project is unknown, we include this fee as a separate line item.

Item	Unit	Lump Sum Fee
Vapor Encroachment Screening Report	Report	$2,798
Tier 2 Scope of Work	Scope of Work	$1,500
OUSD Meetings for Planning, Status, Findings, etc.	Per Meeting	$500
OUSD Public Meetings	Per Meeting	$750

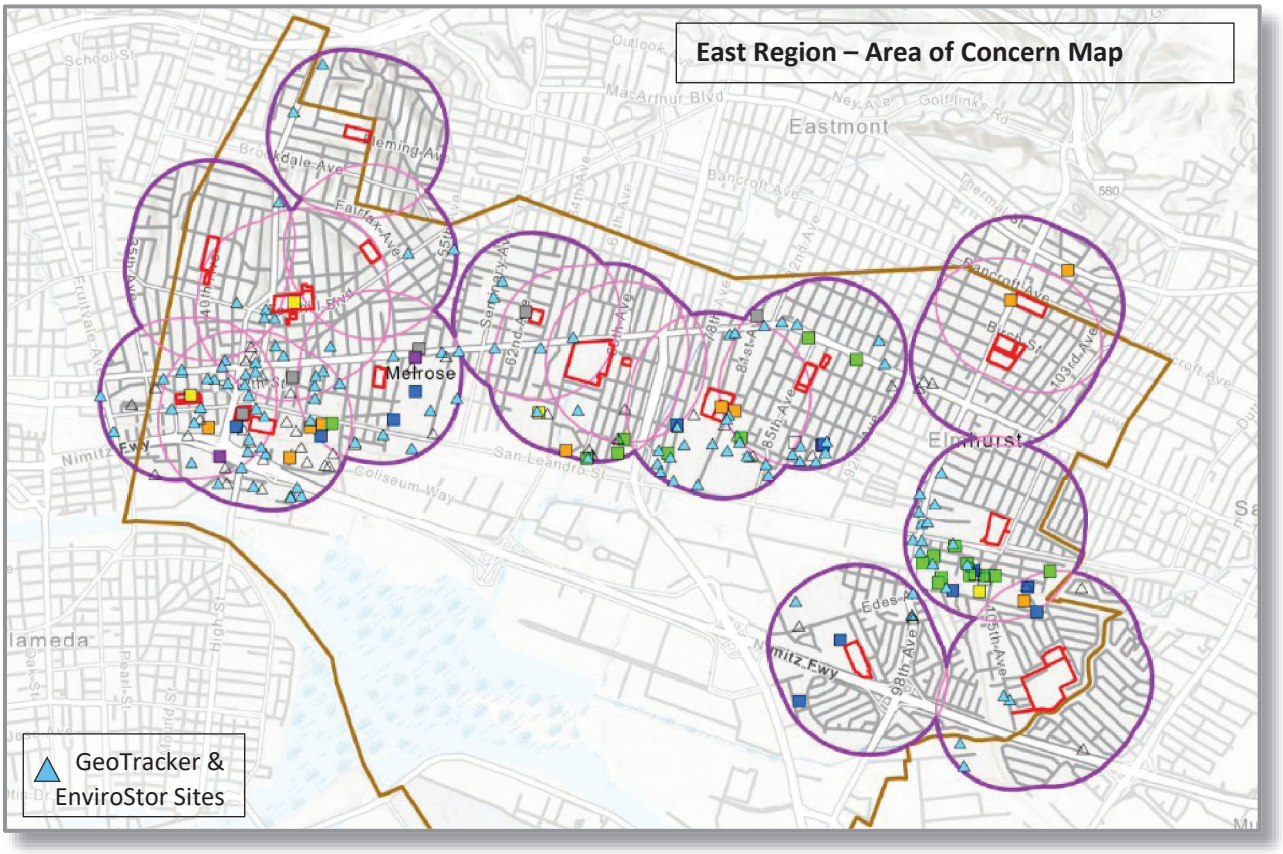
Catalyst will provide a 5% discount if more than one Region is awarded.

ASSUMPTIONS

Region Characteristics

Catalyst has proactively evaluated the number of sites listed in GeoTracker and EnviroStor within the area of concern (AOC) as defined in ASTM E2600-22 as a radius of 1/3-mile (1,760 feet) from the boundaries of each OUSD Facility. Because the AOCs overlap, roughly one-third of the GeoTracker and EnviroStor sites apply to more than one OUSD Facility. We then merged all individual AOCs into an AOC map for each region, as summarized in the table and image below.

Region	No. of OUSD Facilities	No. of GeoTracker Sites	No. of EnviroStor Sites	Total No. of Sites	Average No. of Sites per Each Facility
West	14	354	72	426	30
East	22	184	61	245	11
Central	21	133	13	146	7
Northwest	20	111	2	113	6
Northeast	20	47	8	55	3
Totals=	**97**	**829**	**156**	**985**	**10**



Scope of Work Assumptions

- One iteration of draft to final of the VES report, which assumes revisions require no more than 4 hours to complete.
- The Tier 2 VES scope of work will be prepared pursuant based on OUSD's response to Question 27 (A27) in the *Question and Response* document issued by OUSD on September 27, 2023. Specifically, the scope of work will not be prepared for formal submittal to a regulatory agency, but will be sufficient for estimating costs to implement. In addition, the scope of work will be submitted separately as a Technical Memorandum, Letter, Addendum to the Report, or similar.
- OUSD Meetings for Planning, Project Status, and/or Discussion of Findings will be no more than 1-hour in duration and will involve approximately 1-hour of preparation.
- OUSD Public Meetings will require no more than 3-hours in duration and will involve approximately 1-hour of preparation. Our fee assumes others will perform public outreach, meeting coordination, provision of informational materials, etc. Catalyst can provide these services upon request.

2744 E. 11th Street, Suite A9, Oakland, CA 94601 | (510) 407-2864 | smichelson@ce.solutions

October 12, 2023

Rebecca Littlejohn
Risk Management Officer
Oakland Unified School District
1011 Union Street
Oakland, CA 94607

Via email: rebecca.littlejohn@ousd.org

RE: Letter of Interest – Subsurface Contamination Consulting Services
Phase One: Vapor Encroachment Condition Screening Evaluation
OUSD Region - West
Project #23125

Rebecca,

Catalyst Environmental Solutions Corporation (Catalyst) is pleased to provide this Letter of Interest (LOI) to support the Oakland Unified School District (OUSD) with Phase One of its Vapor Intrusion Initiative which consists of a vapor encroachment condition screening evaluation. As specified in the Request for Qualifications and Proposal (RFQ/P) dated August 14, 2023, the objective of Phase One is to identify potential Vapor Encroachment Conditions (VECs) at OUSD Facilities and to categorize each OUSD Facility based on its relative potential vapor intrusion risk.

Catalyst is exceptionally suited to support OUSD with this scope of work given our extensive experience, including school-specific and public interfacing experience, in assessing and mitigating vapor intrusion risk. Because our team is Oakland-based, we have a deep knowledge of the physical factors within the OUSD boundaries that affect vapor migration and intrusion risk (e.g., geology, hydrogeology, subsurface infrastructure, and land use) as well as a keen understanding of the community concerns. Lastly, we have strong working relationships with the various regulatory agencies associated with assessing, managing, and mitigating vapor intrusion risk and a demonstrated track record of effectively working with these agencies to achieve our client's goals.

Our team will be led by Steve Michelson, a State of California Professional Geologist (PG) who is based in our Oakland office. Steve has over 25 years of relevant experience and is an effective communicator with extensive experience in translating complex issues into easily understandable concepts across a range of stakeholders. At the senior level, he will be supported by Tyson Fulmer, PG and Andy Campbell, PE who both have significant experience in assessing and addressing vapor intrusion risk. Copies of the resumes for these staff as well as associated professional certifications are provided in Attachment A.

The following provides the corporate information requested in the RFQ/P:

Legal Name: Catalyst Environmental Solutions Corporation
Organization Type: State of California S-Corporation (C3818303)
Address: 2744 E. 11th Street, Suite A9, Oakland, CA 94601
Telephone: 510-407-2864
Website: https://www.ce.solutions/

Registrations

State of California Registered Small Business (Certification #2000479)
Alameda County-Certified Small, Local, and Emerging Business (SLEB Certification No. 23-00059)
Alameda County Transportation Commission Local Small Business Certification (CAT20230403-03)

Tax ID Information

Federal Tax ID: 47-5064211
State Tax ID: 3818303

The following provides the company attestations requested in the RFQ/P:

- *I/we have received and reviewed the Template Services Agreement (available as Attachment A to the RFQ/P). I/we understand that this is the legal agreement that Catalyst will need to sign, and Catalyst agrees to sign it, without objection or reservation, if selected by the District. I/we understand that only the District, at its sole discretion, may change the terms of the Agreement.*
- *I/we certify that no official or employee of the District, nor any business entity in which an official of the District has an interest, has been employed or retained to solicit or assist in responding to the RFP and that Catalyst has no current intent (nor has promised) to employ or retain any official or employee of the District, nor any business entity in which an official of the District has an interest, to perform any of the services for which Catalyst might be selected by this RFP process.*
- *No official or employee of Catalyst has ever been convicted of an ethics violation.*
- *By virtue of submission of this Proposal, I/we declare that all information provided is true and correct.*

We appreciate the opportunity to provide you with this proposal. Please let me know if you have any questions or comments.

Sincerely,

Steven Michelson, PG[1]
Technical Director
CELL: (510) 407-2864
EMAIL: smichelson@ce.solutions

[1] Authorized to submit the RFQ/P on behalf of Catalyst Environmental Solutions Corporation.

ATTACHMENT A

RESUMES AND PROFESSIONAL CERTIFICATIONS FOR KEY STAFF

Steven Michelson, PG

Technical Director

Summary of Qualifications – Vapor Intrusion Mitigation Focus

Mr. Michelson applies technical, economic, and regulatory analysis to assist both the public and private sectors in the cost-effective management and closure of environmental liabilities. He has particular expertise regarding the assessment vapor intrusion risks followed by the mitigation risks to protect human health – ranging from children in schools, to families in low-income housing, to commercial facilities. His experience includes the investigation, mitigation, and remediation of contamination liabilities at a variety of public, school, commercial and industrial facilities, military installations, mines, and ports. His experience predominantly in the San Francisco Bay area, but ranges from dry cleaners in Alaska to uranium mill tailings in New Mexico to extensive petroleum releases in a dune system along California's central coast to legacy mercury contamination affecting wetlands, creeks, and the San Francisco Bay to dredged sediment in the California Delta to transfer of military bases to the public sector. He also brings extensive experience to resolving Natural Resource Damage claims and CERCLA liabilities.

Education

- B.S. Geology and B.S. Civil Engineering, Lehigh University

Disciplines

- Project Management
- Geology/Hydrogeology
- Site Assessment and Remediation
- Dredge Programs and Beneficial Reuse of Sediment
- Environmental Compliance & Permitting
- Water Resources

Professional Affiliations

- California Professional Geologist (No. 5165)
- State of California Contractor – General A, B, C57, C21, and HazMat

Representative Project Experience

VAPOR INTRUSION MITIGATION

California Crosspoint Academy, Hayward, CA

Program manager, technical lead and main client contact for the investigation of risks to indoor air, and subsequent design, installation, and commissioning of vapor intrusion mitigation systems at two new school buildings. One building provides classroom and dormitory services and the other is a multi-purse gymnasium and theatre. Steve provided significant strategic planning to assist the client with the management of the regulatory oversight agency and coordination with the general construction contractor and subcontractors installing the vapor intrusion mitigation system. The facility was constructed and occupied on schedule without delays caused by the mitigation of environmental risks.

Lincoln Landing, Hayward, CA

Program manager, technical lead and main client contact for the investigation of legacy environmental impacts due to lead, petroleum, PCBs, chlorinated solvents, and risks to indoor air – all in preparation for the construction of a new $400M mixed use residential and commercial development in central Hayward. He subsequently led the design and implementation of an extensive remediation effort, including excavation and installation of nearly ½-mile of horizontal soil vapor extraction pipe. Steve also directed the design, installation, and commissioning of vapor intrusion mitigation systems of 10 vapor intrusion mitigation systems. Steve provided significant strategic planning to assist the client with the management of the regulatory oversight agency and coordination with the general construction contractor and subcontractors installing the vapor intrusion mitigation system. The facility was constructed and occupied on schedule without delays caused by the mitigation of environmental risks.

EAH Housing, Hayward, CA

Program manager, technical lead and main client contact for the investigation of legacy environmental impacts due to lead based paint and risks to indoor air from neighboring sites – all in preparation for the construction of a new $50M low-income residential housing development. He led the design and implementation of an extensive site-wide soil remediation effort, which included excavation and soil stabilization. Steve directed the design, installation, and pending commissioning of the building's vapor intrusion mitigation system. Steve is currently providing significant strategic planning to assist the client with the management of the regulatory oversight agency and coordination with the general construction contractor and subcontractors installing the vapor intrusion mitigation system.

McClymonds High School, Oakland, CA

Steve was engaged to critically review and comment on technical reports prepared by another consultant working at the direction of DTSC. DTSC's responses to Steve's comments resulted in important modifications to DTSC's approach to interpreting the environmental conditions. While the risks to indoor air at the school were, nonetheless, considered nominal, DTSC did modify their approach to be consistent with their own guidance, making their findings more defensible.

Dermody Properties, Hayward, CA

Program manager, technical lead and main client contact leading the design, installation, and pending commissioning of vapor intrusion mitigation systems of a 220,000 square-foot building alone the shore of San Francisco Bay. Steve provided significant strategic planning to assist the client with the management of the regulatory oversight agency and coordination with the general construction contractor and subcontractors installing the vapor intrusion mitigation system. The facility was constructed and occupied on schedule without delays caused by the mitigation of environmental risks.

ARC, Oakland, CA

Program manager, technical lead and main client contact for the investigation of legacy environmental impacts due to petroleum released over decades from a former underground storage tank. At one point, the gasoline measured 3 feet thick floating atop ground water. The plume of extensive petroleum contamination underlies more than a city block, including a historic century old apartment building. Steve leads the investigation, monitoring, design of a soil vapor extraction and air sparge system, followed by the eventual installation and operation of that system. Steve continues to provide significant strategic planning to assist the client with the management of the regulatory oversight agency

480 Ellis, MEW Superfund Site, Mountain View, CA

Program manager, technical lead and main client contact for the investigation of vapor intrusion risks to a commercial building located above the Middlefield-Ellis-Whisman Superfund Site. Steve led the design and implementation of the assessment of vapor intrusion risks, and assisted in the negotiations of strategies with lenders to facility the purchase and sale of the property. Steve is now assisting the owner in negotiations with the USEPA and Geosyntec regarding further assessment to inform the classification of the proper risk Tier.

Other Sites

Throughout his career Steve led, designed, and implemented numerous investigations of environmental contamination, including assessing and mitigating risks to indoor air. His work in these matters ranges from the ASTM E1527 and ASTM E2600 standards to compliance with investigation requirements and guidance issued by various local, state, and federal regulatory agencies.

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ISSUANCE DATE
MAY 1, 1991

EXPIRATION DATE
JANUARY 31, 2025

CURRENT DATE / TIME
OCTOBER 12, 2023
11:7:51 AM

LICENSING DETAILS FOR: 5165

NAME: MICHELSON, STEVEN

LICENSE TYPE: GEOLOGIST

LICENSE STATUS: CLEAR

ADDRESS

42 CALIFORNIA AVENUE
ORINDA CA 94563
CONTRA COSTA COUNTY

MAP

TYSON FULMER, PG

Project Manager/Senior Geologist

Summary of Qualifications

Mr. Fulmer is an accomplished geologist with over 15 years of experience in environmental consulting. Multidisciplinary education and work background with the ability to perform multiple tasks in the environmental sector. Excellent verbal and written communication skills, effective manager and team leader. Skilled in marketing, networking and business development networking services. All relevant vapor intrusion and risk assessment project experience discussed below is currently being conducted or was completed within the last 5 years.

Representative Vapor Intrusion Mitigation Project Experience

Lincoln Landing Hayward CA | Hayward CA

Analyzed and interpreted CVOC and radon vapor data including to develop site specific attenuation factors. Evaluated data to determine risk for building occupants for a site development. Evaluated soil vapor and indoor air data to determine cumulative risk and hazard indices based on screening criteria. Analyzed differential pressure data and radon concentration data to evaluate vapor intrusion mitigation system (VIMS) performance.

Moxy Hotel Development | 3723 Haven Ave, Menlo Park CA

Evaluated existing contamination at a proposed hotel development and calculated vapor intrusion risks based on residential and commercial land use. Proposed mitigation measures based on land use and building design. Worked with engineering team to design a vapor intrusion mitigation system to attenuate human health risks. Site work also included an evaluation of discharge to terrestrial and aquatic environmental receptors in a sensitive habitat and supervising remedial activities.

CVOC and Petroleum Contaminated Site | 930 Linden Ave | South San Francisco

Evaluated risk to indoor air posed by predominantly aliphatic based petroleum compounds within the context of the low threat closure policy and existing local screening criteria. Also supervised project that included site characterization design and implementation of a direct injection remedial action for CVOCs. Used isotope analyses and functional gene assays to monitor effectiveness of remedial action.

CVOC contaminated site | 1108 Park Ave | San Jose CA:

After applying for and receiving SCAP grant funding for a CVOC project with significant vapor intrusion issues. Identified pathways for vapor migration to indoor air using passive diffusion and soil vapor well data to model where soil vapor plume was present. Collected soil vapor, crawl space and indoor air samples to evaluate vapor to indoor air migration. Implemented vapor intrusion mitigation measures such as

Education

- Bachelor of Science, Earth Studies and Bachelor of Arts, Environmental Studies (Honors), University of California, Santa Cruz 1999-2004
- Abroad Studies, University of Costa Rica 2003

Disciplines

- Project Management
- Remedial Design and Alternative Analyses
- Vapor Intrusion Risk Assessment
- Vapor Intrusion Mitigation Design
- Geologic Interpretation
- Cost estimating project budgeting
- Permitting
- ASTM compliant Phase I and II ESAs
- Subcontractor Coordination
- Environmental Site Characterization
- Grant Application and Execution
- Public Speaking and Teaching
- Soil Management and Waste Characterization
- Dredge permitting and reporting
- Natural attenuation monitoring
- Database management

Certifications

- California Professional Geologist, PG 9062
- 40-hour HAZWOPER

sealing slab, air filtration and design of a blower system to mitigate indoor air. Currently permitting SVE system to mitigate impacts to indoor air at adjacent occupied residences.

Commercial/Residential Development | Alice St | Oakland CA

Used radon detectors to generate a site-specific attenuation factor for a development in Oakland CA. Re-evaluated risk to indoor air based on soil vapor concentrations with site-specific attenuation factor.

Former Dry Cleaner with CVOC Contamination| 1534 Park St | Alameda CA

Prepared and implemented a pilot test work plan to mitigate soil vapor intrusion issues at a former dry cleaner in a dense urban setting. Evaluated risk to indoor air at property and adjacent residences. Currently preparing a long-term soil vapor extraction system to mitigate soil vapor impacts and threat to indoor air.

Former Dry Cleaner with CVOC Contamination | 3135 Stevens Creek Blvd | San Jose CA

Characterized CVOC impacts to soil vapor and ground water and implemented a soil vapor pilot test to evaluate design parameters for full scale soil vapor extraction. Summarized data in a pilot test report for recommendations in a remedial design for long term soil vapor extraction to mitigate impacts to soil vapor at the overlying commercial properties and the downgradient impacted properties.

TCE Contaminated Site | 561 Division St | Campbell CA

After characterizing soil vapor impacts to indoor air, designed and implemented a soil vapor extraction system for a former industrial property with CVOC impacts to soil vapor. Operated soil vapor extraction at the site for approximately 1-year resulting in significant contaminant mass removal and reduction of soil vapor concentrations

Former Gas Station Site| 599 N 4th St | San Jose CA

Evaluated risks to indoor air at downgradient properties impacted by a a former leaking underground storage tank in San Jose. Characterized vapor intrusion risks to residences and commercial properties at grade and with subgrade basements. Calculated site specific attenuation factors for properties based on subslab and indoor air sampling. Working with County LOP and State Water Board to remediate and achieve risk based closure.

Other Skills, Affiliated Organizations and Interests:

Languages: Fluent in oral and written Spanish communication, conversational Cantonese

Affiliated Professional Organizations:

Environmental and Engineering: Ground Water Resources Association (GRAC), Professional Environmental Marketing Association (PEMA), American Civil Engineers California (ACEC), Bay Planning Coalition, Environmental Section of the San Francisco Bar Association.

Commercial Real Estate, Development Organizations: Norcal CCIM, Commercial Brokers Association (CBA), NAIOP, Bay East Real Estate, Alameda Chamber of Commerce, Urban Land Institute (ULI).

Publications, Classes and Presentations:

- Managing real estate risk with environmental due diligence : Transaction strategies for environmentally impacted properties, Corporate Real Estate Journal Volume 12 No. 4, March 4th, 2023
- In Situ Treatment of Chlorinated Solvent Source Zone - Treatment Performance and Injection Design Assessed With Compound-Specific Isotope Analysis (CSIA), presented at Ground Water Resources Association of CA
- Environmental Due Diligence: Transacting Properties and Managing Risk (Course curriculum and class with Commercial Brokers Association)
- An Environmental History of the San Francisco Bay Area/Alameda (Presented with Norcal CCIM)

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Tyson Robert Fulmer

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Certificate No GEO 9062

This 4th day of June, 2013, at Sacramento, California.

BOARD FOR PROFESSIONAL ENGINEERS,
LAND SURVEYORS, AND GEOLOGISTS

Executive Officer

President

EPRPGO 07/20/11

BOARD FOR PROFESSIONAL ENGINEERS, LAND SURVEYORS, AND GEOLOGISTS

LICENSING DETAILS FOR: 9062

NAME: FULMER, TYSON

LICENSE TYPE: GEOLOGIST

LICENSE STATUS: CLEAR

ADDRESS

2129 BYRON STREET
BERKELEY CA 94702
ALAMEDA COUNTY

ISSUANCE DATE

JUNE 4, 2013

EXPIRATION DATE

NOVEMBER 30, 2024

CURRENT DATE / TIME

OCTOBER 12, 2023
10:22:40 AM

ANDREW H. CAMPBELL, PE

SENIOR ENGINEER

Summary of Qualifications

Mr. Campbell has held responsible charge of environmental remediation projects since 2000. He specializes in developing optimized remediation and mitigation strategies for properties contaminated by releases of volatile organic compounds (VOCs) while building consensus between clientele, regulatory agencies, and other stakeholders. This includes the design of low-cost remediation, mitigation, and closure plans drawing upon a variety of techniques to reduce the risks associated with complete exposure pathways, most importantly vapor intrusion to indoor air. Andrew also provides construction quality assurance (CQA) oversight and system testing, commissioning, and monitoring. His clientele has included land developers, schools, major airlines, utilities, and state and federal government agencies.

Education

- B.S., Biochemistry University of California at Davis, 1992
- M.S., Civil Engineering, University of Colorado at Boulder, 1996

Disciplines

- Project Management
- Vapor Intrusion Management System (VIMS) Design
- Remedial Design
- Stormwater Management

Certifications

- California Professional Engineer, License No. C60412
- Qualified Stormwater Pollution Prevention Plan Developer (QSD)
- Professional Engineer (Civil) - AZ, WA, NV, FL, TX, MD, NJ, OH, VA, WV, and NCEES Council Record

Representative Project Experience

Principal Engineer, California Crosspoint Academy, Hayward, CA.

Oversaw preparation of two VIMS designs for two new buildings on the campus of a growing private school. Contaminants included PCE, benzene, fuel hydrocarbons, and other chlorinated hydrocarbons. ACDEH provided lead regulatory oversight. Deliverable documents included a Basis of Design report, VIMS construction plans, CQA Plans, and an OMMR Plan. VIMS components included vapor barriers, passive SSVS, and active sub-slab depressurization (SSDS). A student dormitory also included an elevator pit and a battery pit, both of which required VIMS. Mr. Campbell provided CQA oversight per ACDEH requirements and oversaw the commissioning of both buildings' systems, including preparation of record reports of construction and commissioning.

Principal Engineer, Lincoln Landing, Hayward, CA

Designed ten distinct vapor intrusion mitigation systems (VIMS) for various new buildings on a redeveloped parcel impacted by perchloroethylene (PCE), benzene, fuel hydrocarbons, and other chlorinated hydrocarbons. Construction had already begun when Mr. Campbell was asked to begin the design process, with the Alameda County Department of Environmental Health (ACDEH) providing lead regulatory oversight. Mr. Campbell prepared a Basis of Design report, VIMS construction plans, CQA Plan, Risk Management Plan, and Operations, Maintenance, Monitoring, and Reporting (OMMR) Plan. VIMS components included vapor barriers, passive and active sub-slab ventilation systems (SSVS), conduit seals, trench dams, and above-ground ventilation. The development included four elevator pits and an indoor pool, spa, and surge tank, all of which required VIMS. He oversaw CQA oversight while facilitating overall construction progress, still ensuring the installed VIMS met stringent ACDEH requirements. Mr. Campbell prepared multiple record reports of construction and commissioning, and ACDEH issued rapid approval of occupancy for the protected buildings.

Principal Engineer, Dermody Properties, Hayward, CA

Designed a VIMS for a 220,000 SF warehouse with TCE impacts to subgrade soil. The San Francisco Bay Regional Water Quality Board served as the lead regulator. The VIMS design included a vapor barrier and a passive SSDS. Mr. Campbell is currently overseeing CQA.

Principal Engineer, Anvil Builders, Emeryville, CA

Designed a VIMS for a tenant improvement project on an existing warehouse building to be repurposed as offices. A neighboring facility had released PCE, carbon tetrachloride, chloroform, and other solvents which migrated beneath the project site. ACDEH provided lead regulatory oversight, and construction had already begun when Mr. Campbell was asked to prepare ACDEH-required deliverables. Those included a Basis of Design report, VIMS construction plans, CQA Plan, and OMMR Plan. VIMS components included an anti-vapor coating atop the concrete floor and active, indoor ventilation.

Principal Engineer, Satellite Affordable Housing Associates, Oakland, CA

Designed a VIMS for a proposed mixed-used development including affordable housing overlying a ground-floor medical clinic and community center. VOC impacts to subgrade soil included benzene, PCE, and gasoline. ACDEH served as the lead regulator. The VIMS design included a vapor barrier, a passive SSDS, and above-grade ventilation. The design also provides VIMS for an elevator pit.

Principal Engineer, EAH, Hayward, CA.

Designed a VIMS for a proposed affordable housing development with VOC impacts to subgrade soil. ACDEH served as the lead regulator. The VIMS design included a vapor barrier and a passive SSDS. The design also provides VIMS for an elevator pit. Mr. Campbell is currently overseeing CQA.

Principal Engineer, 988 Harrison St, San Francisco, CA

Designed a VIMS for a proposed mixed-use development with VOC impacts to subgrade soil. The City and County of San Francisco acted as the lead regulator. The VIMS design included a vapor barrier and sub-barrier monitoring system. The design also provides VIMS for an elevator pit. Mr. Campbell is currently overseeing CQA.

Principal Engineer, AMG & Associates, El Camino Real, San Bruno, CA

Designed a VIMS for a proposed, mixed-use development near a former dry cleaner. PCE in soil ranged up to 108,000 micrograms per cubic meter (µg/m3). The San Mateo County Department of Environmental Health served as the lead regulator. The VIMS design included a vapor barrier and an active SSDS. The design also provides VIMS for two elevator pits. San Mateo County approved the design with minimal comments, allowing the development to proceed with financing and construction permitting.

Principal Engineer, Prologis, Inc., San Leandro, CA

Designed a VIMS for the construction of a new, 100,000 SF logistics warehouse, with an elevator, to be operated by a major online retailer. Property impacts included trichloroethylene (TCE) and its biological breakdown products, including high levels of vinyl chloride. The California Department of Toxic Substances Control (DTSC) served as the lead regulator. The VIMS design included a vapor barrier and a passive sub-slab ventilation system. DTSC approved the design with minimal comment.

Principal Engineer, El Dorado County Library, South Lake Tahoe, CA

Performed pressure field extension (PFE) tests on a public library with confirmed radon impacts to indoor air. Designed a full-scale SSDS as an engineered mitigation control.

Principal Engineer, Washington Square, Petaluma, CA

Designed a VIMS for an operating strip mall that included a dry cleaner. PCE in indoor air ranged up to 301 µg/m3). DTSC provided lead regulatory oversight. VIMS components included an anti-vapor coating atop the concrete floor and active, indoor ventilation using an enhanced heating, ventilating, and air conditioning (HVAC) system. Post-implementation monitoring demonstrated successful mitigation below regulatory limits. DTSC agreed that no additional vapor intrusion mitigation activities were necessary.

State of California Department of Consumer Affairs

BOARD FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS

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To The Provisions of Chapter 7, Division 3 of The Business and Professions Code

Andrew Hogan Campbell

IS DULY LICENSED AS A

PROFESSIONAL ENGINEER

IN

CIVIL ENGINEERING

In The State of California, and Is Entitled To All The Rights and
Privileges Conferred In Said Code

DEPARTMENT OF CONSUMER AFFAIRS · BOARD FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS · STATE OF CALIFORNIA

WITNESS OUR HAND AND SEAL

Certificate No C 60412

This 4th day of February, 2000, at Sacramento, California.

BOARD FOR PROFESSIONAL
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Cinde Christenson
Executive Officer

President

EPRENG 5/31/99

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SACRAMENTO, CA 95833-2944
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CIVIL ENGINEER

CERTIFICATE NO.
C 60412

EXPIRATION
06/30/24

ANDREW HOGAN CAMPBELL
5632 SHADLE WAY
FAIR OAKS CA 95628

Signature _____

RECEIPT NO.
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PPRC 10/08/20

OUSD Region - WEST
Statement of Qualifications and Proposal for Subsurface Contamination Consulting Services - Vapor Encroachment Condition Screening Evaluation
OUSD Project No. 23125

Prepared for:
Oakland Unified School District
1011 Union Street
Oakland, CA 94607

Prepared By:
Catalyst Environmental Solutions
2744 E. 11th Street, Suite A9
Oakland, CA 94601

October 12, 2023

Innovative solutions for a complex world

Catalyst
ENVIRONMENTAL SOLUTIONS

Table of Contents

SECTION 1 Introduction

Catalyst Environmental Solutions Corporation (Catalyst) is pleased to submit this Statement of Qualifications (SOQ) to support the West Region of the Oakland Unified School District (OUSD) with Phase One of its Vapor Intrusion Initiative (VII) that primarily consists of a vapor encroachment survey (VES) performed in general conformance with ASTM E2600-22 to identify vapor encroachment conditions (VEC). Our SOQ responds to the Request for Qualifications and Proposal (RFQ/P) dated August 14, 2023 (OUSD Project #23125). This SOQ is organized to provide the following: an overview of our Project Understanding and a description of Catalyst; our proposed Project Team; an overview of our Qualifications and Experience; and, the Scope of Work including our approach to project management and execution.

Project Understanding

In recent years, OUSD has encountered vapor intrusion issues at facilities owned, operated, or maintained by OUSD (OUSD Facilities) and has developed the VII to proactively identify, evaluate, and (where appropriate) mitigate VECs at its facilities. For the purposes of RFQ/P, OUSD grouped its Facilities into five regions: Central; East; Northeast; Northwest; and, West. This proposal has been prepared for the West Region which, based on the GIS link provided in the RFQ/P, consists of 14 bid sites and 28 bid parcels.

The objective of Phase One of the VII, the scope of this proposal, is to identify potential VECs at OUSD Facilities and to categorize each OUSD Facility based on its relative potential vapor intrusion risk and need for additional data (Class 1 through Class 4 as defined by OUSD in the RFQ/P). The scope of work involves conducting a Tier 1 Vapor Encroachment Screen (VES) in general conformance with ASTM E2600-22 *Standard Guide for Vapor Encroachment Screening* (ASTM E2600-22) with consideration of the caveats specified in the RFQ/P.

For Phase One, the area around each OUSD Facility will be reviewed to identify known and potential sources of vapor intrusion risk and existing data will be evaluated using San Francisco Bay Regional Water Quality Control Board's Tier 1 Environmental Screening Levels (Tier 1 Residential ESLs) to inform each the classification of each OUSD Facility. We understand that the scope of work may also include preparation of a scope for a Tier 2 VES and public meetings.

Following completion of Phase One, subsequent phases of the VII will focus on further assessing specific risk at identified facilities and, where appropriate, designing and implementing mitigation measures at facilities where vapor intrusion is occurring and represents an unacceptable risk.

Overview of Catalyst

Catalyst was founded in 2015 and fills the growing gap in the market for attentive, high-quality, and full-service solutions provided by innovative, creative, and successful experts. We are California Registered Small Business with offices in Oakland, California as well as three offices across southern California and an office in Portland, Oregon. This project would be led out of our Oakland office which includes 6 staff and, as needed, will draw upon the expertise of additional staff from our other offices.

Catalyst is exceptionally suited to support OUSD with this scope of work given our extensive experience, including school-specific experience, in assessing and addressing vapor intrusion risk. Our key qualifications are summarized on the following page.

Overview of Catalyst's Qualifications

We are Experts in Assessing Vapor Intrusion Risk as well as Developing and Implementing Cost-Effective Solutions to Address Identified Issues	Our team has over 30 years of experience investigating and resolving environmental risks, including vapor intrusion assessment, human health risk assessment, and vapor intrusion mitigation. Within Alameda County alone, since 2019, our team has led over 17 projects involving the investigation and subsequent design, installation, and commissioning of vapor intrusion mitigation systems. Our experience also includes many more projects throughout the Bay Area involving the investigation of vapor intrusion risks.
We have Demonstrated Experience Supporting Schools in Assessing and Mitigating Vapor Intrusion	Our experience includes working with California Crosspoint Academy in Hayward, California in assessing vapor intrusion risk as well as designing and overseeing the construction of vapor intrusion mitigation systems for two new school buildings covering over 20,000 square feet. In addition, Catalyst staff was engaged to review and comment on technical reports characterizing vapor intrusion risks at McClymond's High School. …
We are a Local, Small-Business Enterprise that Understands the Environmental Setting and Community Concerns	Our project team is based in Oakland and has a deep knowledge of the environmental factors within the OUSD boundaries that affect vapor migration and intrusion risk (e.g., geology, hydrogeology, subsurface infrastructure, and land use) as well as a keen understanding of the political landscape and community concerns.
We have Demonstrated Success in Effectively Working with Various Regulatory Oversight Agencies to Achieve our Client's Goals	Our team has strong working relationships with the various regulatory agencies associated with assessing, managing, and mitigating vapor intrusion risk and a demonstrated track record of effectively working with these agencies to achieve our client's goals. We have extensive experience working with the Alameda County Department of Environmental Health, San Francisco Bay Regional Water Quality Control Board, and the Department of Toxic Substances Control in investigating, designing, and/or implementing vapor intrusion mitigation systems in compliance with their respective stringent requirements.
Our Project Manager is an Effective Leader and Communicator with over 30 Years of Experience in Assessing and Addressing Risks Associated with Soil Vapor Intrusion	Our team will be led by Steve Michelson, a State of California Professional Geologist who is based in our Oakland office. Steve has over 30 years of relevant experience who has personally led over 50 projects related to vapor intrusion including our work with the California Crosspoint Academy and McClymonds High School. He has been on the forefront of our work in Alameda County in helping our clients successfully navigate the regulatory landscape to achieve their goals. He is an effective communicator with extensive experience in translating complex issues into easily understandable concepts across a range of stakeholders.
We have Demonstrated Success Clearly Communicating Complex Technical Environmental Data and Concepts to Assist OUSD's Decision Making Process and Support OUSD's Public Relations Management	We understand the community concerns as well as the sensitive nature of the potential risk associated with vapor intrusion in the vicinity of schools and have a strong track record in helping our client's understand complex technical issues to facilitate their decision-making processes. In addition, we are adept at translating technical concepts into readily understandable terms to support communications with the broader public community and stakeholders.

SECTION 2 Project Team

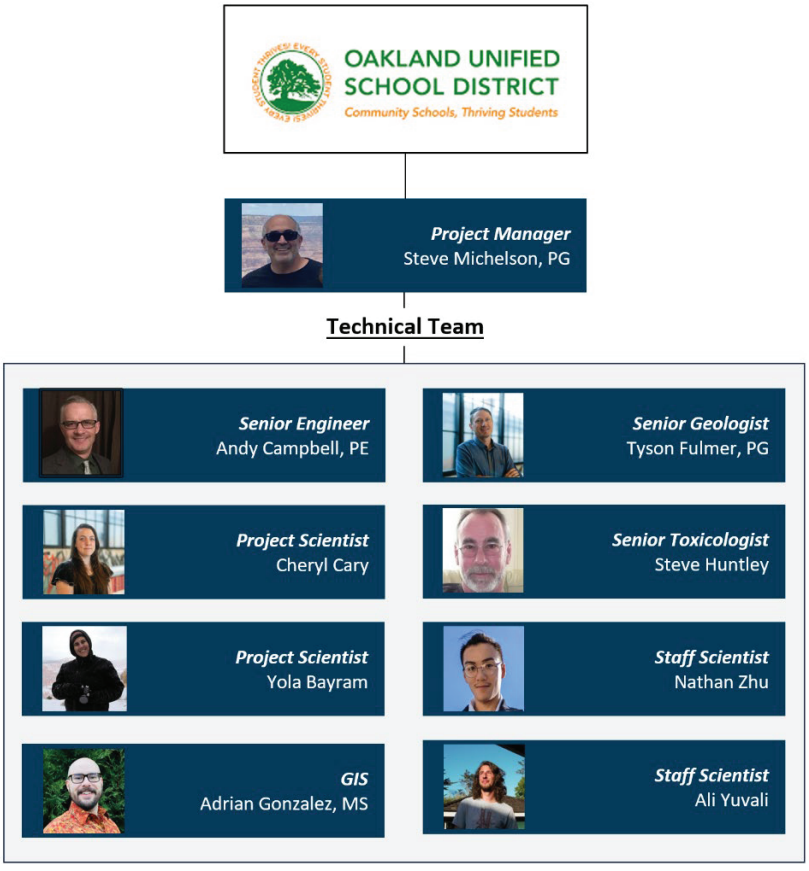
For this project, we have assembled a highly qualified team with the experience and breadth and depth of technical knowledge necessary to effectively and efficiently execute the scope of work. The team is based in our Oakland office and the key staff have worked together for over 5 years, and some for over 15 years, allowing them to seamlessly collaborate and implement the project. The key personnel for this project are described below and an overview of our project organization and broader team are provided in the organizational chart below.

Project Manager/Technical Director – Steve Michelson, PG

Education	B.S. Geology / B.S. Civil Engineering - Lehigh University
Professional Registration	State of California Professional Geologist No. 5165

Mr. Michelson brings nearly four decades of experience to resolving environmental liabilities for clients in the private and public sector. Providing solutions to both schools and developers that first characterize risks and then mitigates those risks to allow building occupancy on schedule is a key focus. His experience ranges from vapor intrusion risks posed by the rather straightforward corner service station or dry cleaner to complex interdisciplinary problems at such as the MEW Superfund Site, or regional background contamination issues in historically heavily industrialized areas of west Oakland and Emeryville. As a degreed geologist and civil engineer and licensed contractor with considerable remedial earthwork construction experience, he consistently offers creative yet pragmatic solutions to complicated problems.

Regulators and clients appreciate and respect his approach to problem solving. Geographically, Mr. Michelson's experience is focussed in the Bay Area, but ranges from New England to Alaska to New Mexico. His professional background includes designing and implementing a variety of investigations to determine the source, extent, risks, and remedial options. Strategies that limit his client's exposure and time to closure while maximizing the cost effectiveness are key elements of his service to clients. Providing well engineered vapor intrusion mitigation systems for the public and private sector is a key part of his practice.



Senior Engineer– Andy Campbell, PE

Education	M.S. Civil Engineering – University of Colorado at Boulder B.S. Biochemistry – U.C. Davis
Professional Registration	State of California Professional Engineer No. C60412

Andrew Campbell is the senior professional engineer and has held responsible charge of vapor intrusion mitigation systems and various environmental remediation projects for over 20 years. He specializes in designing optimized risk mitigation and remediation strategies for properties contaminated by volatile organic compounds, which pose the greatest risk of vapor intrusion. He is also skilled at building consensus between clientele, regulatory agencies, and other stakeholders. His expertise includes the design of low-cost vapor intrusion mitigation systems, and contaminant remediation plans by drawing upon a variety of techniques to reduce the risks associated with complete exposure pathways, most importantly vapor intrusion to indoor air. His clientele have included schools, private parties, major airlines, utilities, and state and federal government agencies.

Senior Geologist – Tyson Fulmer, PG

Education	B.S. Earth Sciences / B.A. Environmental Studies – U.C. Santa Cruz
Professional Registration	State of California Professional Geologist No. 9062

Mr. Fulmer is an accomplished geologist with over 15 years of experience in investigating and remediating a wide-variety of environmental liabilities, including vapor intrusion risks. His multidisciplinary education and work background informs his ability to perform multiple complex tasks in the environmental sector. Excellent verbal and written communication skills, effective manager and team leader.

Project Scientist – Cheryl Cary

Education	B.S. Earth Sciences – U.C. Santa Cruz

Cheryl is a Staff Scientist with over 8 years of experience investigating and remediating environmental contamination issues. Cheryl also has extensive experience managing and providing construction quality assurance during the installation of over 10 vapor intrusion mitigation systems in Alameda County alone. She also has considerable experience working with, collecting, and managing geospatial data. Cheryl applies GIS tools to analyze and present geographically distributed data in clear, insightful, and creative manner that has garnered considerable praise from regulators and our private and public sector clients.

Senior Toxicologist – Steve Huntley

Education	B.S. Environmental Toxicology – U.C. Davis

Mr. Steve Huntley has over 30 years of experience in environmental consulting in the U.S and Puerto Rico. His primary areas of expertise include human health and ecological risk assessment, toxicology, and environmental chemistry/forensics. He has worked on numerous federal and state hazardous waste sites as well as contaminated aquatic systems throughout the U.S. Mr. Huntley has participated in negotiations with the U.S. EPA as well as various state regulatory agencies including the DTSC and the SFBRWQCB.

SECTION 3 Qualifications and Experience

Our team of geologists and engineers is experienced in assessing environmental liabilities and associated risk and we work with our clients to develop and execute cost-effective strategies to address those liabilities. We have proven results in assessing, remediating, and gaining regulatory closure for a diverse range of sites and contaminants across all three-phases of media. Our experience provides us the ability to efficiently characterize the nature and extent of contaminant impacts including vapor forming chemicals (VFCs), develop conceptual site models, assess the fate and transport of contaminants in the subsurface, evaluate risks to human health and the environment, and use this information to develop a cost-effective strategy to address the issue. Our reputation and relationships with various regulatory oversight agencies provides us the ability to efficiently navigate the regulatory landscape and expedite the path site closure.

Our relevant service offerings for this project include:

- Phase I Environmental Site Assessments pursuant to ASTM E1527-21
- Vapor Encroachment Screening pursuant to ASTM E1600-22
- Site Characterization and Remediation of soil, soil vapor, and ground water pursuant to ACDEH, RWQCB, DTSC, and USEAP requirements
- Vapor Intrusion Mitigation System (VIMS) Design, Installation, and Testing
- Human Health and Ecological Risk Assessment
- Soil Vapor and Groundwater Monitoring
- Developing and Executing Strategies for Regulatory Site Closure

Since July 1, 2018, several of the vapor intrusion projects that we have worked on with the agencies and organizations specified in the RFQ/P are provided in the table on the following page.

Agency/Project	Phase 1 & Vapor Encroachment Survey	Site Characterization	Vapor Intrusion Risk Assessment	Human Health Risk Assessment	Indoor Air Quality Assessment	VIMS Design, Installation, and Testing	Remediation	Other: CEQA, Permitting, Dredging
Alameda County Department of Environmental Health ("ACDEH")								
CA Crosspoint Academy - Two New School Buildings	✓	✓	✓	✓	✓	✓		
Lincoln Landing - New $400M Development	✓	✓	✓	✓	✓	✓	✓	
EAH Housing - New Low-Income Housing	✓	✓	✓	✓		✓	✓	
ARC - 1700 Jefferson		✓	✓	✓	✓	✓	✓	
LaZBoy – 5800 Christie		✓	✓	✓	✓	✓		
California Department of Toxic Substances Control ("DTSC")								
Oakland Education Assoc - McClymonds High School			✓	✓	✓			
Ecology Control Industries – UST Recycler	✓	✓	✓	✓	✓		✓	
Los Angeles Sanitary - Exide Battery Site				✓			✓	✓
Los Angeles Sanitary - 141 W. Avenue 34 Site				✓			✓	✓
FivePoint - Mission Village School Site		✓	✓	✓			✓	✓
San Francisco Bay Regional Water Quality Control Board ("Water Board")								
Dermody - New Building (220,000 sq ft)			✓	✓	✓	✓		
Carpenters Union - 300 Hegnberger		✓	✓	✓			✓	
Carpenters Union - 45 Hegenberger Loop		✓	✓	✓			✓	
Deerfield Properties - Commercial Building	✓	✓	✓	✓	✓			
Elevate Development - Moxy Hotel	✓	✓	✓	✓	✓	✓	✓	
Thomas Cleaners - SCAP	✓	✓	✓	✓	✓	✓	✓	
United States Environmental Protection Agency ("USEPA")								
St Francis Yacht Club - Dredging		✓						✓
Reclamation District - Dredging		✓						✓
Toensikotter Dev - MEW Superfund Site	✓	✓	✓	✓	✓			
Non-Profit Organizations								
EAH Housing - New Low-Income Housing	✓	✓	✓	✓		✓	✓	
CA Crosspoint Academy - New School & Dormitory	✓	✓	✓	✓	✓	✓		
CA Crosspoint Academy - New Multipurpose Bldg	✓	✓	✓	✓	✓	✓		
CalTrout - Rose Valley Lakes Stream Restoration								✓
CalTrout - Harvey Dam Fish Passage Restoration								✓

SECTION 4 Project Management and Implementation

The following discusses our approach to effectively managing the project and an overview of the tasks involved in executing the proposed scope of work.

Project Management and Coordination

Our approach to project management is based on following guiding principles:

- Establishment of a clear process to collect the required data and obtain buy-in from OUSD regarding the process to interpret and draw conclusions from the data;
- Clear and consistent communication, collaboration, and coordination with OUSD throughout the course of the project to ensure that there are no "surprises";
- Focus on quality management, including quality assurance/control (QA/QC) reviews of all data and deliverables; and,
- Project delivery on-time and on-budget.

Our approach recognizes that there are two distinct, yet overlapping suites of risks that need to be carefully managed. First, there are technical risks that are managed by carefully and diligently collecting and interpreting the data with the goal of generating accurate, reliable, and defensible conclusions regarding the classification of vapor intrusion risk at each OUSD Facility. Second, there are public relations risks that are managed by clearly and cogently relaying the information to both OUSD and ultimately the public in a manner that are at once accurate and readily comprehensible by the lay public, yet not unnecessarily alarming.

In accordance with these principles, Steve Michelson, PG will serve as the key point-of-contact for OUSD and will be responsible for project delivery and managing all internal project team communications as well as communication with OUSD and other identified stakeholders, as appropriate. Along those lines, we propose an initial project kick-off meeting following contract award to discuss and establish expectations to ensure project success. Catalyst will work with OUSD to prepare the agenda for the kickoff meeting with likely topics to include coordination and communication with OUSD's project manager as well as central office staff, school site staff, and any other identified stakeholders; request for available data; and, project schedule. Following the kick-off meeting, we suggest monthly teleconference meetings with our Project Manager and OUSD to provide technical updates, notification of any emerging issues, and planning for upcoming tasks.

In the event that OUSD awards the Phase 1 scope to more than one consultant, then we recommend establishing a single report format and decision criteria for all to follow. In that way, OUSD is assured of coherent and consistent assessment reports and facility classifications among all Regions, which should streamline the program, reduce inconsistencies between regions, and minimize OUSD's risks and review time moving forward.

In regard to schedule, collectively we will establish the schedule and associated milestones at the project kick-off meeting and will closely monitor progress, assure that deadlines are met successfully, and respond to changes in events as they are encountered. For the purposes of this proposal, we assume the following schedule, which has been developed in consideration of the school year to enable

potentially critical follow-up invasive tasks and/or mitigation measures at a facility to be implemented during the summer break:

- Project Kickoff Meeting – December 4, 2023
- Submittal of Draft Reports – March 15, 2024
- Receipt of Comments on the Draft Report from OUSD – April 12, 2024
- Submittal of Final Reports – May 3, 2024

Catalyst has a strong track-record of meeting our project schedules. Much of our work is associated with real estate transactions and construction activities that have well-defined critical pathways. Our work, whether it be assessment, remediation, and/or vapor intrusion mitigation system installation and testing, has never resulted in a delay in the closing of a deal or the issuance of a "Certificate of Occupancy" of a building. In addition, as part of meeting project schedules, we are adept at handling and adapting to project changes and delays that are outside of our control with the most critical element being communication with our clients to ensure that there are no "surprises" and to manage expectations.

Project Approach

As discussed in the RFQ/P, the objective of Phase One of the VII is to identify potential VECs at OUSD Facilities and to categorize each OUSD Facility based on its relative potential vapor intrusion risk (Class 1 through Class 4 as defined by OUSD in the RFQ/P). The scope of work generally involves conducting a Tier 1 VES in general conformance with ASTM E2600-22 with consideration of the caveats specified in the RFQ/P. The following summarizes our scope of work.

Task 1 – Collection of Existing Environmental Data

This this task involves compiling and reviewing publicly available information regarding the environmental and regulatory history of each OUSD Facility and properties within the ASTM E2600-22 defined minimum search distance of 1/3-mile of each facility, or area of concern (AOC).

The information to be reviewed to inform the classification of each OUSD Facility will include, at a minimum, the following within the AOC associated with each OUSD Facility:

- Available local, State, Federal, and tribal environmental agency files, online environmental databases of active, inactive, and closed environmental sites, list of known gasoline stations and dry cleaners, list of commercial occupants at each address, and historical aerial photographs, topographic maps, and fire insurance maps. The vendor Environmental Data Resources (EDR) will provide this information.
- Regulatory status of identified contaminated sites (i.e., open, closed, etc.) and date of reported release.
- Subsurface lithology (i.e., clay, silt, sand, and/or gravel) and hydrogeology (i.e., depth-to-groundwater, groundwater gradient, etc.), which can affect the rate of vertical soil leaching, ground water movement, and vapor migration.
- Potential preferential pathways such as utility corridors and subsurface drainage infrastructure.

Task 2 – Site Visit

Following the collection of existing data, Catalyst will conduct a field reconnaissance survey of the entire AOC. Per OUSD's response to Question 25 (A25) in the *Question and Response* document issued by OUSD on September 27, 2023, it appears that OUSD does not want the consultant to contact school personnel, which we interpret as including no on-site inspection of the OUSD facility. The survey will include, at a minimum:

- Assessment of current land uses surrounding the OUSD facility.
- Interview of OUSD personnel with direct knowledge of OUSD Facility operations that might currently pose, or previously posed, an environmental concern.
- Ground-truthing of the information obtained as part of the Task 1 data collection.
- Drive-by inspection of all current operations within the AOC to identify potential commercial and industrial operations with the potential to pose a vapor encroachment condition that are not listed in the information reviewed in Task 1.

Task 3 – Data Review, QA/QC, and Interpretation

Catalyst will review and interpret the information collected in Tasks 1 and 2 to, at a minimum:

- Ensure only reliable and representative data are utilized in this analysis, while assuming that the data reported in the databases has already been properly vetted.
- Estimate potential for the OUSD Facility to be impacted by chemical vapors based on date of contaminant release, chemical properties, and distance between the release and OUSD property.
- Compare existing data characterizing concentrations of volatile organic compounds and petroleum in soil, soil vapor, and ground water with the Regional Water Quality Control Board's 2019 Tier 1 Residential Environmental Screening Levels, Revision 2 (ESLs).
- Identify critical data gaps that might affect a reasonable and defensible interpretation of vapor intrusion risk.
- Classify each OUSD Facility according to the criteria in the RFQ/P, summarized as:
    - Class 1 – facility with the highest probability of a realized vapor intrusion risk based on VFC concentrations greater than 10x the ESL derived from samples previously collected at or adjacent to the facility.
    - Class 2 – facility with a moderate probability of a realized vapor risk due to a VEC and likely preferential pathway to the facility, but either without sufficient data confirming a realized risk or VFC concentrations greater between 1x and 10x the ESL derived from samples previously collected at or adjacent to the facility.
    - Class 3 – facility with a low probability of a realized vapor intrusion risk because there is no obvious preferential exposure pathway between a known or likely VEC and OUSD Facility.
    - Class 4 – facilities with no VECs within the AOC.

Task 4 - Reporting

Following completion of Tasks 1, 2, and 3, we will prepare a report for each OUSD Facility in general conformance with Section 10 of ASTM E2600-22 with the following amendments:

- The technical report will be signed and stamped by a California Professional Geologist with responsible charge over the VES.
- The risk of VEC will be classified into one of the four risk classes developed by OUSD as discussed in Task 3. In addition, during the course of our scope, if we identify pursuant to E1527-21 recognized environmental conditions (RECs), historic recognized environmental conditions (HRECs), controlled recognized environmental conditions (CRECs), or environmental business risks (EBRs), then we will include this information in our report.
- Recommendations for next steps for:
    - Class 1 facilities to further characterize the risk, if needed, and mitigate the risk.
    - Class 2 facilities to further characterize the risk to determine if the facility warrants a Class 1, 3, or 4 determination.
    - Class 3 facilities to further characterize the risk, if warranted.
    - Class 4 facilities to implement no additional actions.
    - Further evaluate RECs, HRECs, CRECs, or EBRs, if warranted.

The RFQ/P requires that the report also summarize the results of VES for all OUSD Facilities within the region. The summary will generally consist of a table of the vapor intrusion risk findings and classification for all OUSD Facilities in the region and will include any additional recommendations as they relate to relative vapor intrusion risk. The report shall be used to facilitate implementation of Phase Two of the VII.

In the responses to Questions 4 (A4), 25 (A25), and 27 (A27) in the *Question and Response* document issued by OUSD on September 27, 2023, OUSD indicates that a scope of work to further assess the potential vapor intrusion risk must be prepared in addition to the VES report. As warranted, we will prepare a brief scope of work to include:

- A map depicting the recommended sampling locations and sample media;
- A table describing the rationale for each sampling location and the laboratory analytical methods; and,
- Standard Operating Procedures for the collection and preservation of the samples.

Task 5 – Public Meetings (Optional)

As an optional task, Catalyst is available to support and attend public participation meetings as needed.

OUSD Region - WEST
Fee Proposal for Subsurface Contamination Consulting Services - Vapor Encroachment Condition Screening Evaluation
OUSD Project No. 23125

Prepared for:
Oakland Unified School District
1011 Union Street
Oakland, CA 94607

Prepared By:
Catalyst Environmental Solutions
2744 E. 11th Street, Suite A9
Oakland, CA 94601

October 12, 2023

Innovative solutions for a complex world

Catalyst
ENVIRONMENTAL SOLUTIONS

For **OUSD Region WEST**, Catalyst Environmental Solutions Corporation (Catalyst) is pleased to submit this Fee Proposal to perform the scope described in the Oakland Unified School District's (OUSD) Request for Qualifications and Proposal (RFQ/P) dated August 14, 2023 (OUSD Project #23125).

For this OUSD Region, Catalyst proposes four separate lump sum fees to perform the work specified in the RFQ/P and discussed in the *Question and Response* document issued by OUSD on September 27, 2023, with rationale as follows:

- Vapor Encroachment Screening Report
  - We assume the preparation of a unique report for each OUSD Facility (also referred to as "Bid Site" in the GIS link provided in the RFQ/P) within the Region as well as a summary of the results for all OUSD Facilities within the region.
- Scope of Work for Tier 2 Vapor Encroachment Survey
  - In the response to questions, OUSD indicated that, where applicable, the consultant shall include a proposed scope of work for an invasive Tier 2 VES.
  - Since a Tier 2 VES is not anticipated to be required at all sites, we include this fee as a separate line item. The fee includes discussions with OUSD regarding the suggested scope.
- OUSD Meetings for Planning, Project Status, and/or Discussion of Findings
  - Since the number of OUSD meetings desired for planning, coordinating, assessing status, discussing findings, etc. are unknown, we include this fee as a separate line item.
- OUSD Public Meetings
  - Since the number of OUSD public meetings required in support of this project is unknown, we include this fee as a separate line item.

Item	Unit	Lump Sum Fee
Vapor Encroachment Screening Report	Report	$2,998
Tier 2 Scope of Work	Scope of Work	$1,500
OUSD Meetings for Planning, Status, Findings, etc.	Per Meeting	$500
OUSD Public Meetings	Per Meeting	$750

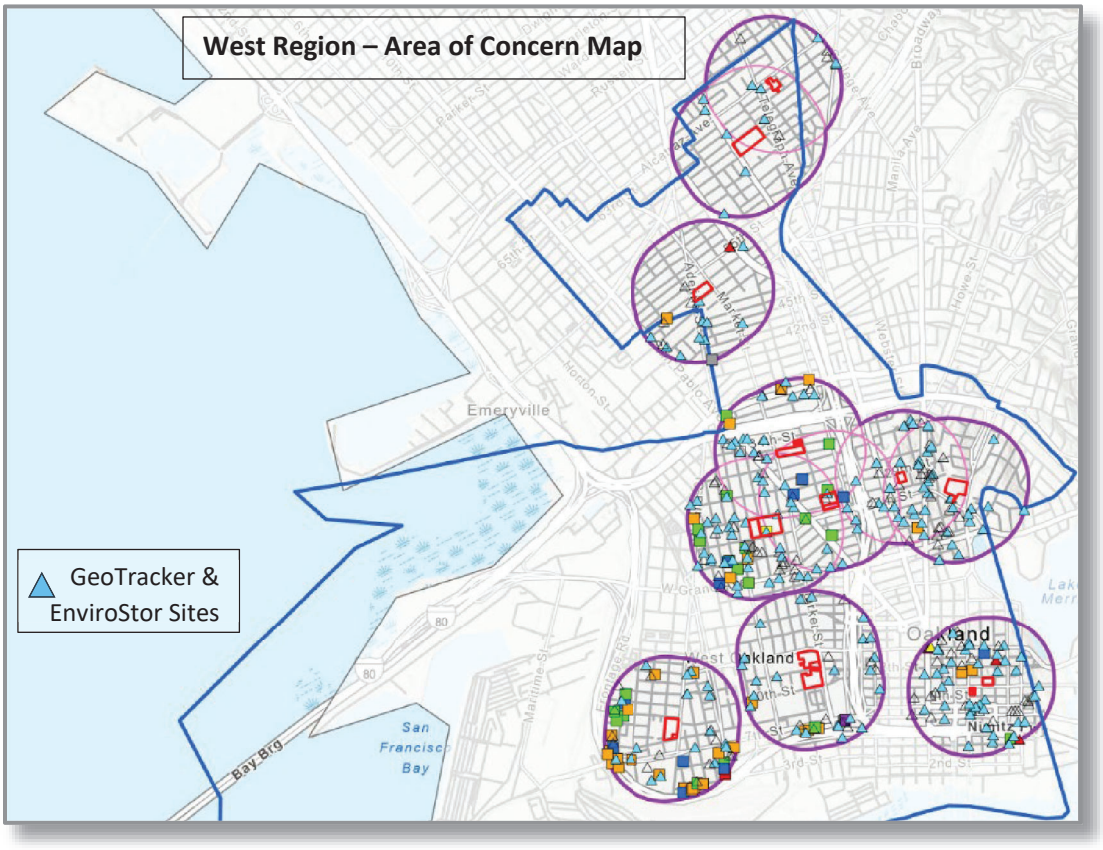
Catalyst will provide a 5% discount if more than one Region is awarded.

ASSUMPTIONS

Region Characteristics

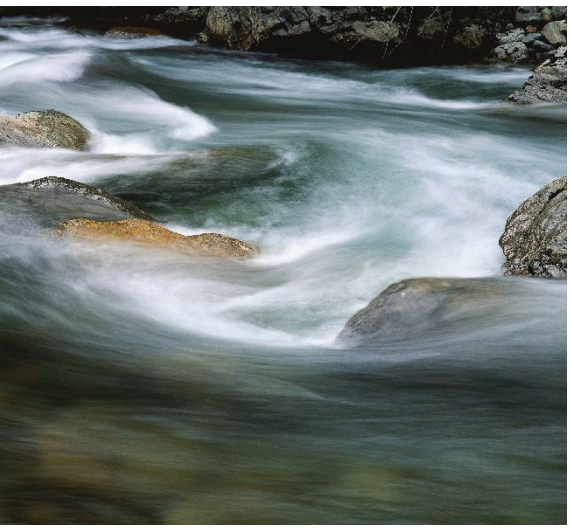
Catalyst has proactively evaluated the number of sites listed in GeoTracker and EnviroStor within the area of concern (AOC) as defined in ASTM E2600-22 as a radius of 1/3-mile (1,760 feet) from the boundaries of each OUSD Facility. Because the AOCs overlap, roughly one-third of the GeoTracker and EnviroStor sites apply to more than one OUSD Facility. We then merged all individual AOCs into an AOC map for each region, as summarized in the table and image below.

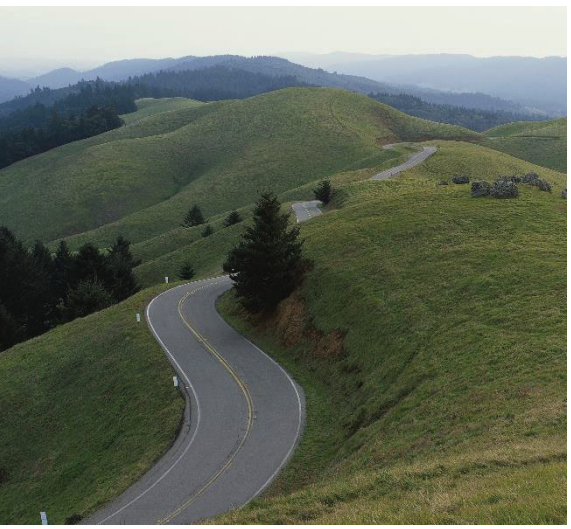
Region	No. of OUSD Facilities	No. of GeoTracker Sites	No. of EnviroStor Sites	Total No. of Sites	Average No. of Sites per Each Facility
West	14	354	72	426	30
East	22	184	61	245	11
Central	21	133	13	146	7
Northwest	20	111	2	113	6
Northeast	20	47	8	55	3
Totals=	**97**	**829**	**156**	**985**	**10**



Scope of Work Assumptions

- One iteration of draft to final of the VES report, which assumes revisions require no more than 4 hours to complete.
- The Tier 2 VES scope of work will be prepared pursuant based on OUSD's response to Question 27 (A27) in the *Question and Response* document issued by OUSD on September 27, 2023. Specifically, the scope of work will not be prepared for formal submittal to a regulatory agency, but will be sufficient for estimating costs to implement. In addition, the scope of work will be submitted separately as a Technical Memorandum, Letter, Addendum to the Report, or similar.
- OUSD Meetings for Planning, Project Status, and/or Discussion of Findings will be no more than 1-hour in duration and will involve approximately 1-hour of preparation.
- OUSD Public Meetings will require no more than 3-hours in duration and will involve approximately 1-hour of preparation. Our fee assumes others will perform public outreach, meeting coordination, provision of informational materials, etc. Catalyst can provide these services upon request.





Vapor Intrusion Initiative
Project #: 23125
Oakland Unified School District

Region: Central

SUBMITTED TO:
Rebecca Littlejohn
Oakland Unified School District
1000 Broadway Ste 450
Oakland, CA 94607
Rebecca.Littlejohn@ousd.org

October 12, 2023

P24169.000.001

ENGEO
Expect Excellence

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Project No.
P24169.000.001

October 12, 2023

Rebecca Littlejohn
Oakland Unified School District
1000 Broadway Ste 450
Oakland, CA 94607
Rebecca.Littlejohn@ousd.org

Subject: Vapor Intrusion Initiative, Project #: 23125
Region: Central
Oakland, California

A. LETTER OF INTEREST

Dear Ms. Littlejohn:

Founded in 1971, ENGEO is an employee-owned, award-winning firm of geotechnical and civil engineers, geologists, environmental scientists, hydrologists, hydrogeologists, coastal engineers, construction quality-assurance representatives, and laboratory testing specialists.

We have built a reputation for delivering high-quality environmental services to clients across various industries. Our team of experts specializes in vapor intrusion assessment, site characterization, risk assessment, mitigation, remediation, and long-term risk management making us well-equipped to address the specific challenges associated with your projects.

When you select ENGEO as your consultant, you can expect to receive the following.

Proven Track Record: We have successfully completed numerous vapor intrusion projects for clients in both the public and private sectors. We have worked together with OUSD since 2011 on several successful projects and look forward to continue to build upon our partnership.

Experienced Team: We have assembled a talented group of engineers and scientists who will work collaboratively to ensure the success of your projects. ENGEO will support OUSD through our local Oakland office as well as our other surrounding San Francisco Bay Area offices. We also have numerous California Professional Engineers, Geologist, and Geotechnical Engineers.

Regulatory Compliance: We have extensive knowledge of local, state, and federal regulations and will ensure that your project is compliant with all relevant requirements. We have numerous current projects with oversight from Alameda County Department of Environmental Health, Department of Toxic Substances Control, San Francisco Regional Water Quality Control Board, and United States Environmental Protection Agency.

Cost-Effective Solutions: We are committed to providing cost-effective solutions that minimize environmental risks. As part of preparing this submittal we reviewed OUSD sites, nearby ENGEO projects, as well as offsite impacted sites that could impact multiple OUSD sites and identified cost-efficiencies opportunities including performing multiple OUSD site studies in parallel.

Ability to Meet Deadlines: We understand the importance of meeting project timelines and will work diligently to ensure that your project stays on schedule. We are accustomed to providing high-quality services with relatively short notice. Our clients, both public and private, have come to know and trust us for this aspect of our service offering.

Legal Name and Address

ENGEO Incorporated
2010 Crown Canyon Place, Suite 250
San Ramon, CA 94583
(925) 866-9000 | Fax (888) 279-2698
www.engeo.com
Employee-owned California Corporation
Federal Tax ID: 94-1748418
Federal Tax Classification: C Corp

Project Managers

Scott Johns, PE, QSD – Associate
Jeff Adams, PhD, PE – Principal
Shawn Munger, PG, CHG – Principal

Statements

We have received and reviewed the Template Services Agreement. We understand that this is the legal agreement that ENGEO will need to sign, and ENGEO agrees to sign it, without objection or reservation, if selected by the District. We understand that only the District, at its sole discretion, may change the terms of the Agreement.

We certify that no official or employee of the District, nor any business entity in which an official of the District has an interest, has been employed or retained to solicit or assist in responding to the RFP and that ENGEO has no current intent (nor has promised) to employ or retain any official or employee of the District, nor any business entity in which an official of the District has an interest, to perform any of the services for which ENGEO might be selected by this RFP process.

No official or employee of the ENGEO has ever been convicted of an ethics violation.

By virtue of submission of this Proposal, we declare that all information provided is true and correct.

If you have any questions or comments regarding this letter, please call and we will be glad to discuss them with you.

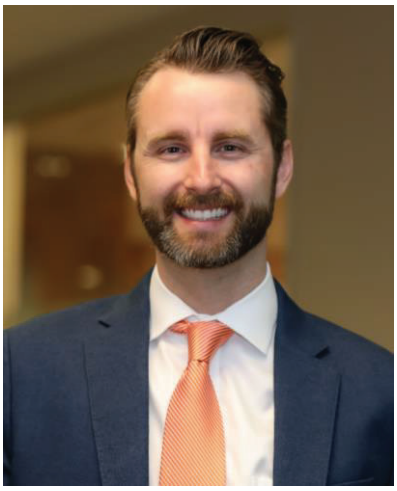
Sincerely,

ENGEO Incorporated

Scott Johns, PE

Shawn Munger, CHG

Attachments: Resumes of Project Managers
Professional Certifications



EDUCATION
BS Civil Engineering Santa Clara University 2007

EXPERIENCE
Years with ENGEO: 16
Years with Other Firms: 0

REGISTRATIONS & CERTIFICATIONS
Professional Engineer, CA 78253
CASQA QSD Certified, CA 25073
HAZWOPER 40 Hour Training, CA 110908110562

SPECIALIZATIONS
- Environmental Assessments and Remediation
- Environmental Restoration
- Groundwater Modeling
- Hydraulic Engineering
- Hydrology
- Petroleum Hydrocarbon Site Assessment and Remediation
- Phase 1 Environmental Audits
- Stormwater Management
- SWPPP Implementation
- SWPPP Preparation
- Water Quality Studies
- Water Resources
- Water Wells/Hydrogeology

AFFILIATIONS
ASCE American Society of Civil Engineers

SCOTT R. JOHNS, PE, QSD
Associate

Scott joined ENGEO in 2007 and serves projects of various scale for private and public clients. He conducts complex field investigations, data analysis, and provides management services. Additionally, he conducts and oversees Site Investigation Reports (SIRs), Phase I and II Environmental Site Assessments (ESAs) as well as remedial actions for contaminated sites with impacts that include petroleum hydrocarbons, metals, pesticides, PCBs, volatile organic compounds (VOCs), and semi-VOCs in soil, groundwater, and soil vapor/vapor intrusion. Scott is experienced with working with various regulatory agencies including U.S EPA, California DTSC, California Regional Water Quality Control Boards, ACDEH, BAAQMD, as well as city, county, and CUPA agencies throughout California.

SELECT PROJECT EXPERIENCE

Howard Terminal; Oakland Athletics New Ballpark Development—Oakland, CA
Project Manager. While working with stakeholders including but not limited to the Oakland Athletics, Department of Toxics Substances Control, and Port of Oakland, Scott performed environmental review of past site use, creation of comprehensive subsurface investigation to support site-specific human health and ecological risk assessment, and future remedial action work plan. The Howard Terminal site is a former container terminal along the Port of Oakland's Inner Harbor. The site was originally a bulk-break terminal dating back to the early 1900s with a manufactured gas plant located in the eastern portion of the site. The terminal was expanded and converted to a container terminal in the 1980s. Improvements at the site will include a Major League Baseball stadium as well as midrise and high-rise buildings to provide a mix of residential, retail, and other commercial uses. The project plans also include construction of an overhead gondola from the Oakland Convention Center to Jack London Square. The site grade will be raised to address sea-level rise. The existing wharf will be retained as part of the site redevelopment. The site is underlain by liquefiable fill and soft compressible Young Bay Mud. The past industrial uses of the site resulted in hazardous material impacts within the soil, groundwater, and soil vapor/vapor intrusion that will be mitigated as part of redevelopment.

Google Downtown Development—San Jose, CA
Project Manager. Scott performed a comprehensive Environmental Site Assessment for various industrial and commercial properties over approximately 50 acres in

Downtown San Jose being considered for Google's campus. As part of the assessment, Scott identified known and unknown environmental concerns and recommended appropriate actions to quantify potential risks. Scott also prepared the risk assessment utilizing a Geographic Information System (GIS) that is a digital interactive platform that provides additional data beyond typical environmental information and is scalable for future project plans.

Alameda Marina Redevelopment—Alameda, CA
Project Manager. The 12-acre Alameda Marina redevelopment project includes residential townhome buildings with a total of 180 units as well as associated streets, utilities, and open space. Scott performed or oversaw environmental, geotechnical, GIS, dust and air monitoring, and construction observation services for the townhome builder. Through site characterization activities and coordination with Alameda County Department of Environmental Health (ACDEH), ENGEO identified key environmental issues including potential vapor intrusion risks. ENGEO utilized field instrumentation coupled with outside laboratory results to efficiently keep redevelopment activities progressing. ENGEO utilized statistical modeling to assist with remediation and mitigation of potentially hazardous materials. ENGEO also worked with ACDEH and landfills to stabilize and characterize hazardous material. This innovative approach saved the project millions of dollars in total. Besides technical challenges with the site, political and public challenges existed and were mitigated through community outreach and transparent notifications of upcoming work.

Mare Island Naval Base Redevelopment—Vallejo, CA
Project Manager. Scott provides project management and quality control of geotechnical, environmental, hydrologic and construction services related to residential, commercial, and industrial development of this historic Naval Base redevelopment. In addition, Scott manages the Mare Island project GIS and continues to add features to the GIS based on stakeholder requests.

Henkel Chemical Manufactory Site—Fremont, CA
Project Manager. Site was a previous chemical manufacturing facility that resulted in impacts related to total petroleum hydrocarbons, metals, and dioxins/furans. Scott prepared a Site Investigation Report that discussed the potential site concerns and prepared a Removal Action Work Plan to allow for residential redevelopment that was approved by the San Francisco Regional Water Quality Control Board. During remedial actions, Scott directed appropriate management and monitoring of soil, stormwater, dust, and construction debris. The implementation report was submitted to RWQCB who reviewed and approved that no further remediation is needed and is suitable for residential redevelopment.

Heritage Fields, Great Park Neighborhood—Irvine, CA
Project Manager. Scott performed and provided oversight to over 50 phase I and Phase II Environmental Site assessments and consultation services regarding environmental site characterization and remediation for the former El Toro Marine Corps Air Station (MCAS). The project is a master-planned community that will include roughly 9,500 residential units, schools, parks, open space, commercial, and industrial developments along with associated drainage and utility improvements. The project encompasses approximately 4,700 acres and is a base reuse project for the former El Toro Marine Corps Air Station (MCAS) and former Bordiers Nursery. Several active drainage corridors pass through portions of the site including Marshburn, Bee Canyon, Agua Chinon, Borrego Canyon Serrano Creek, and San Diego Creek.

VTA BART Silicon Valley Berryessa Extension Design-Build Project—San Jose, CA
Project Manager. As a leading project team member with respect to hazardous materials, Scott provided a range of value engineering consulting services with respect to existing soils,

groundwater, and building materials. Following a complex right-of-way that extends across multiple city and county lines through numerous developed areas. The project generated hundreds of thousands of yards of excavated soil with potential toxic and hazard concerns. The proposed right-of-way intersects several groundwater plumes emanating from industrial and commercial sources. Scott led the team effort to accurately quantify these materials and devise strategies to effectively manage and mitigate these materials to drive overall project cost savings. The project is a comprehensive design/build package for the Bay Area Rapid Transit (BART) extension project from Fremont to San Jose, with track alignment and two stations: one at Milpitas and one at Berryessa.

277 Fairchild 228/236 Evandale Ave—Mountain View, CA
Associate Engineer. Scott provided oversight of soil, groundwater and soil gas/vapor intrusion characterizations, risk evaluations and Response Action Plan preparation under USEPA oversight. The site is within the Middlefield-Ellis-Whisman (MEW) Superfund site, contaminated with chlorinated solvents from legacy semiconductor plant operations. On-going remedial activities included soil vapor extraction, groundwater treatment using bioaugmentation, and groundwater/soil gas monitoring. The proposed site development consists of detached single-family homes and townhomes.

Ohlone Community College—Newark, CA
Project Manager. Scott is working with various stakeholders and agencies including DTSC to evaluate potential risks associated with proposed college and flood control improvements.

Sparklizing Cleaners and Laundry—Fremont, CA
Staff Engineer. Scott designed and executed field activities to delineate the tetrachloroethylene plume associated with past drycleaner practices located onsite. The project site consists of a dry-cleaning facility located within a commercial/retail center. Dry-cleaning operations have been conducted at the facility since 1974 and have resulted in chlorinated solvent impacts to subsurface soil, groundwater, and soilgas/vapor intrusion risks. We prepared a Corrective Action Plan (CAP) and coordinated the in-situ chemical oxidation program which consisted of injecting 35,000 gallons of potassium permanganate to the subsurface to oxidize chlorinated solvents.

Montecito Vista II—San Jose, CA
Project Manager. Scott reviewed the complex site history that included former automobile wreckage/salvage yards and based on his findings was able to negotiate with the lead regulating agency, Department of Toxic Substances (DTSC), supplemental characterization activities to address potential residential redevelopment concerns. Based on the supplemental characterization activities, Scott was able to identify the constituents of concern and associated risks. Scott worked with the regulators and stakeholders to develop and implement an efficient remediation program that resulted in cleaning up the Site for residential and park use.

930 University Ave—Los Gatos, CA
Project Manager. Scott performed site assessment for the Town of Los Gatos. Known environmental concerns included an on-site historic leaking underground storage tank and an operational hydraulic lift. Scott developed and implemented a sampling procedure to effectively delineate the impacted areas. After analyzing the results, Scott communicated with the client the options to mitigate the area and coordinated with regulatory agencies to progress to site redevelopment that includes a community park with associated facilities and improvements including parking, roadways, and utilities. The site was a Verizon maintenance yard and located adjacent to Vasona Reservoir.

EDUCATION

BS Civil Engineering University of Illinois at Chicago 1994

MS Civil Engineering University of Illinois at Chicago 1996

PhD Civil Engineering University of Illinois at Chicago 1999

MBA University of Washington 2004

EXPERIENCE

Years with ENGEO: 25
Years with Other Firms: 0

REGISTRATIONS & CERTIFICATIONS

Environmental Manager, NV 2150

Professional Engineer, CA 69633

Envision ENV SP Credentialed

SPECIALIZATIONS

- Environmental Assessment, Characterization, and Remediation
- Green and Sustainable Remediation (GSR)
- Resilient and Sustainable Infrastructure Analysis and Applications
- Geologic Hazard Abatement Districts (GHADs)

AFFILIATIONS

ASCE American Society of Civil Engineers

ASCE Geo-Institute

JEFFREY ADAMS, PHD, PE

Principal

Jeff joined ENGEO in 1999. For over 25 years, Jeff has provided efficient, innovative solutions to clients by addressing geoenvironmental issues within the natural and built environment. He leads environmental assessment, characterization, and remediation projects; prepares various environmental health and safety (EHS) documents and deliverables; and provides a range of consultation services for Geologic Hazard Abatement District (GHAD) formation and operation.

A noted thought leader across several technical dimensions, Jeff's research interests include sustainability, green and sustainable remediation (GSR), resilient infrastructure solutions, environmental applications, and emerging public/private financial mechanisms to mitigate flood-related losses. He has authored and co-authored numerous environmental remediation-related textbooks, instructional materials, and research papers that have been presented worldwide and published in a diverse group of academic and professional journals.

SELECT PROJECT EXPERIENCE

Howard Terminal—Oakland, CA

Lead Environmental Principal. Jeff has provided ongoing technical leadership during several environmental studies for the redevelopment of the Howard Terminal site. The approximately 62.1-acre Property is a former container terminal along the Port of Oakland's Inner Harbor. The Property was originally a bulk-break terminal dating back to the early 1900s, with a manufactured gas plant located in the eastern portion of the Property. The terminal was expanded and converted to a container terminal in the 1980s. Improvements will include a Major League Baseball stadium as well as mid-rise and high-rise buildings to provide a mix of residential, retail, and other commercial uses. ENGEO performed a phase I environmental site assessment (ESA), phase II ESAs consisting of soil, soil gas, and groundwater sampling across the property, EIR preparation support, the preparation of a human health and ecological risk assessment (HHERA), and a draft remedial action plan (RAP). Additional technical work included assessment of the potential effects of sea level rise (SLR), on-site contamination conditions, and scoping of subarea-specific remediation design and implementation plans (RDIPs).

1511 Jefferson—Oakland, CA
Project Manager. Jeff provided environmental and geotechnical consultation services for a Brownfields redevelopment project in downtown Oakland. The project included several challenges, including limited site access due to on-site business activities, environmental impact related to previous site use, and the presence of several adjacent mid-rise structures. Jeff developed cost effective remedial value engineering solutions to mitigate the presence of geotechnically and environmentally constraining subsurface solutions. Jeff worked with the design team to establish cost-effective retaining wall and foundation systems, designed and observed a subsurface environmental mitigation program, and assisted in the design of a structure-wide vapor barrier. The project, serving as a cornerstone of the revitalization of downtown Oakland, consists of a multi-story residential condominium structure.

Crown Chevrolet Property—Dublin, CA
Project Manager. Jeff provided comprehensive environmental consultation services for the project. Working on behalf of the purchaser, Jeff collaborated with a multi-firm consulting team to characterize and mitigate environmental impacts resulting from previous on-site automotive maintenance activities and off-site businesses. Jeff designed and managed a site characterization program that definitively demonstrated that groundwater and soil gas impacts at the site were the result of off-site releases. He peer reviewed the design and implementation of a permeable reactive barrier (PRB), which serves to remediate an encroaching groundwater plume, as well as vapor intrusion mitigation systems for the site. He also completed a Phase I ESA for a remnant parcel subsequently developed for housing for veterans. The site consists of a multi-story commercial and residential apartment/condominium "transit village" complex.

3512 Clayton Road—Concord, CA
Lead Environmental Principal. Jeff provided technical leadership and review for a Brownfields redevelopment project in Concord. Following the Phase I and Phase II ESAs that identified soil and soil gas impacts, he assisted in the development of a remediation program that included a comprehensive pre-characterization program, accurately delineating soil impacts from past light-industrial uses and soil gas impacts from off-site businesses, allowing for accelerated field implementation. Following active soil remediation and post-remediation soil gas sampling, Jeff and the ENGEO team performed a vapor intrusion risk assessment that confirmed the site did not require long-term vapor mitigation systems. The site was granted case closure from the oversight regulatory agency within an accelerated review and approval timeframe. The project consists of a high-density residential development.

Google San Jose Downtown West—San Jose, CA
Project Manager. Jeff provided technical leadership and review for a comprehensive ESA for various industrial and commercial properties over approximately 50 acres in downtown San Jose considered for acquisition by Google. The purpose of the assessment was to identify known and unknown environmental concerns and recommended appropriate actions to quantify potential risks to inform due diligence efforts. The risk assessment utilized an innovative Geographic Information System (GIS) digital interactive platform that provides additional data beyond typical environmental information and is scalable for future project plans.

Blacow Road Project—Fremont, CA
Environmental Principal. Jeff has provided technical assistance for project remediation activities and prepared a Phase I ESA for site. The site is an active, open remediation site under the regulatory oversight of the San Francisco Bay Regional Water Quality Control Board (RWQCB). Impacts resulted from a variety of on-site and off-site commercial and industrial land uses dating back over 50 years. ENGEO has performed numerous characterization, remediation design, and monitoring

services for the Site. Remediation activities are underway at the site to address groundwater and soil gas impacts from volatile organic compounds (VOCs) and petroleum hydrocarbons. The remediation approach consists of several remedial and mitigative technologies, including soil vapor extraction (SVE), in-situ enhanced bioremediation, and post-remediation vapor intrusion mitigation systems to be installed in future residential structures. The project consists of a residential development.

The South Lathrop Commerce Center—Tracy, CA
Lead Environmental Principal. Jeff provided technical leadership and review for a Phase I ESA for the approximately 245-acre master-planned industrial development. The 4.2-million-square-foot development includes nine tilt-up concrete buildings, ranging in size from 282,000 square feet to over 1,000,000 square feet. Additional improvements for the logistics center include detention and retention basins, paved streets, parking, and drive lanes, a stormwater pump station and outfall, and a sewer lift station. Site development activities include grading operations, primarily consisting of minor cuts and fills, for individual pads and roadways, underground utility installation, pump station and outfall structure construction, flexible and rigid pavement construction, and vertical construction.

Alameda Landing—Alameda, CA
Lead Environmental Principal. Jeff has provided comprehensive environmental consultation services for the Alameda Landing project. He has prepared and managed the completion of Phase I ESA and ESA Update studies for subunits of the greater project area. He directed environmental characterization operations for the site, which was suspected of having been affected by naturally occurring methane deposits within the subsurface. Working closely with innovative protocols, Jeff was able to demonstrate to regulatory oversight officials that expensive vapor intrusion mitigation systems were not necessary for proposed residential structures, potentially saving millions of dollars to the site developer. Additionally, he has prepared several Remedial Action Completion Reports (RACRs) of development phases to achieve regulatory case closure. The project consists of a multi-phased residential housing community built as part of a master-planned redevelopment of a former United States Navy facility.

VTA BART Silicon Valley Berryessa Extension Design-Build Project—San Jose, CA
Project Manager. As the lead project team member with respect to hazardous materials, Jeff provided a range of value engineering consulting services relating to existing soils, groundwater, and building materials. ENGEO provided a range of value engineering consulting services to address existing soils, hydrology resources, SWPPP, and building materials.

Following a complex right-of-way that extended through numerous developed areas and paralleled an existing rail line, the project generated hundreds of thousands of cubic yards of excavated soil with potential toxic and hazard concerns. The right-of-way intersected several groundwater plumes emanating from former industrial and commercial sources. Further, a number of structures in the project footprint harbored lead-based paint and asbestos-containing building materials. ENGEO led the effort to accurately quantify these materials and devise strategies to effectively manage and mitigate these materials to drive overall project cost savings.

EDUCATION
BS Geology, University of California, Davis, 1985

EXPERIENCE
Years with ENGEO: 38
Years with Other Firms: 0

REGISTRATIONS & CERTIFICATIONS
Certified Hydrogeologist, CA 413
Professional Geologist, CA 5810
Certified Environmental Manager, NV EM-1332
HAZWOPER 40 Hour Training, CA 100830513934

SPECIALIZATIONS
- Environmental Assessments and Remediation
- Environmental Restoration
- Water Quality Studies
- Water Wells/Hydrogeology

SHAWN MUNGER, PG, CHG, CEM
Principal

Since 1985, Shawn has been managing groundwater supply evaluations, hydrogeologic studies, chemical assessments, Phase I and II Site Assessments, UST site investigations, risk-based corrective action, VOC remediation, and agricultural impact evaluations. He serves as Principal-in-Charge or Project Manager with extensive expertise in environmental and hazardous materials projects involving groundwater, hydrology, contaminant fate and transport, and complex remediation programs. A renowned expert in his field, Shawn has successfully solved many difficult environmental challenges to achieve desired project outcomes.

SELECT PROJECT EXPERIENCE

Vita Pakt—Covina, CA
Principal in Charge. Shawn provided principal oversight, data analysis, and consultation regarding site characterization, and risk evaluation. The project consists of a proposed multi-story residential development. Under Department of Toxic Substances Control (DTSC) oversight, work included review of historical data, soil, soil gas, and groundwater analysis, and consultation regarding potential vapor intrusion issues. The site was formerly operated as fruit packing and processing business from the 1940s through 2016. Work plans were developed for DTSC approval which included soil and soil gas risk assessments, resulting in DTSC concurring with a status of “no further action” for the site.

Hanover Cannery Park Project No. 14-473—San Jose, CA
Principal in Charge. Shawn provided principal oversight and review of site assessments, soil, soil gas, and groundwater. The historical use of the 9-acre commercial/industrial property site resulted in chlorinated solvent impacts to groundwater and soil gas. Extensive remediation consisting of soil vapor extraction and groundwater treatment was performed under RWQCB oversight. Successful remediation was achieved, and the site has been developed with a multi-story apartment complex.

Blake Avenue Project, Frogtown, Los Angeles—Los Angeles, CA
Principal in Charge. Shawn provided principal oversight, data analysis, and consultation regarding site characterization, and risk evaluation. The project consists of a proposed multi-story residential development. Work included review of historical data, groundwater analysis and consultation regarding potential vapor intrusion issues.

277 Fairchild 228/236 Evandale Ave—Mountain View, CA
Principal in Charge. Shawn provided oversight of soil, groundwater and soil gas characterizations, risk evaluations and Response Action Plan preparation under USEPA oversight. The site is within the Middlefield-Ellis-Whisman (MEW) Superfund site, contaminated with chlorinated solvents from legacy semiconductor plant operations. On-going remedial activities included soil vapor extraction, groundwater treatment using bioaugmentation, and groundwater/soil gas monitoring. The proposed site development consists of detached single-family homes and townhomes.

Value Marine Facility—Sacramento, CA
Principal in Charge. Shawn provided principal oversight and quality control services. The project site consists of a former gasoline service station and is in the State Leaking Underground Storage Tank (LUST) program, with lead agency oversight provided by the Sacramento County Environmental Health Department. Soil and groundwater impacts resulted from four former underground storage tanks. Remediation of vadose zone soil impacts (source) is currently being performed with a soil vapor extraction (SVE) system.

Gale Ranch Middle School, Preliminary Endangerment Assessment—San Ramon, CA
Principal in Charge. Shawn provided review and supervision of a Preliminary Endangerment Assessment prepared for this school site under the oversight of DTSC. This former site was developed into a public middle school.

Heritage Fields, Great Park Neighborhood—Irvine, CA
Principal in Charge. Shawn provided principal oversight of the preparation of over 50 phase I and Phase II Environmental Site assessments for the former El Toro Marine Corps Air Station (MCAS). The site is currently under development as a large-scale mixed-use development including several schools, residential subdivisions, recreational facilities and commercial development. Shawn also provided consultation regarding environmental site characterization and remediation at the site.

Sparklizing Cleaners and Laundry—Fremont, CA
Principal in Charge. Shawn provided principal review and data analysis for this former dry cleaning facility which had released tetrachloroethylene (PCE) to site soil and groundwater. Dry-cleaning operations have been conducted at the facility since 1974 and have resulted in chlorinated solvent impacts to soil and groundwater beneath the site. ENGEO prepared a Corrective Action Plan (CAP) and coordinated the in situ chemical oxidation program which consisted of injecting 35,000 gallons of potassium permanganate to the subsurface to oxidize chlorinated solvents.

The Rivers—West Sacramento, CA
Principal in Charge. Shawn provided oversight of during the preparation of a Removal Action Workplan (RAW) in coordination with CAL-EPA DTSC. The property is a proposed charter school site. ENGEO performed environmental site characterization work to address residual pesticide contamination die to historic termiticide applications. A Removal Action Workplan was developed under the oversight of CAL-EPA to excavate and remove the pesticide impacted soil. Remedial activities were completed in 2018 and DTSC issued a “no further action” letter. In addition, ENGEO performed a design-level geotechnical investigation for a proposed large water storage tank.

One Lake Development—Fairfield, CA
Principal in Charge. Shawn provided oversight, data analysis, and collaboration with DTSC personnel for Ole Lake Holdings, LLC. The project site consists of a 2,400-foot proposed mixed-use City of Fairfield trail, formerly operated as a Union Pacific railroad right-of-way. The alignment was impacted with arsenic and other constituents of concern. A Preliminary Endangerment Assessment (PEA) and soil encapsulation cleanup was successfully completed under DTSC oversight to successful completion to allow for future recreational use.

700 Parc on Main Development—Vacaville, CA
Principal in Charge. Shawn provided oversight of soil, groundwater, and risk evaluations, PEA preparation, and Removal Action Workplans (RAW) under DTSC oversight for mitigation of lead and pesticide-impacted soil. The site is proposed for mixed-use residential development. Soil mitigation is planned for 2024.

Highlands Ranch—Pittsburgh, CA
Principal in Charge. Shawn provided oversight, data analysis, and collaboration with RWQCB personnel. The project site consists of a 140-acre portion of the former Chevron Los Medanos Tank Farm located in Pittsburg, California. The site was historically occupied by 24 crude oil tanks and four wax ponds. Remediation of the crude oil tank and wax pond locations was conducted according to a remedial action plan (RAP) and oversight was provided by the CRWQCB. Remediation was performed over a period of four months and consisted of excavating approximately 110,000 cubic yards of impacted soil and placing the material in windrows for ex-situ bioremediation.

1000 Howe Road - Site Remediation—Martinez, CA
Principal in Charge. Shawn provided oversight and analysis for this soil remediation project. He worked closely with RWQCB personnel to develop a cost effective and timely closure for site closure and approval for residential development. The site is occupied by a general engineering contractor and a former bus leasing company. Improvements at the property included an office/warehouse structure and an equipment yard. The proposed development consists of a single-family residential subdivision.

Riverside Avenue Property—Roseville, CA
Principal in Charge. Shawn provided principal oversight of a Phase II Environmental Site Assessments and site characterization. The project site consists of an active auto sales and service facility. The historic use of the facility for industrial purposes resulted in soil and groundwater impacts beneath the site. The City of Roseville revised its plans for acquiring and redeveloping the site due to the identified soil and groundwater impacts.

STATE OF CALIFORNIA
dca
DEPARTMENT OF CONSUMER AFFAIRS

BOARD FOR PROFESSIONAL ENGINEERS, LAND SURVEYORS, AND GEOLOGISTS

This Is To Certify That Pursuant
To The Provisions of Chapter 7, Division 3 of The Business and Professions Code

Scott Robert Johns

IS DULY LICENSED AS A

PROFESSIONAL ENGINEER

IN

CIVIL ENGINEERING

In The State of California and Is Entitled To All The Rights and
Privileges Conferred In Said Code

DEPARTMENT OF CONSUMER AFFAIRS · BOARD FOR PROFESSIONAL ENGINEERS, LAND SURVEYORS, AND GEOLOGISTS · STATE OF CALIFORNIA ·

WITNESS OUR HAND AND SEAL

Certificate No C 78253

This 10th day of June, 2011, at Sacramento, California.

BOARD FOR PROFESSIONAL ENGINEERS,
LAND SURVEYORS, AND GEOLOGISTS

Interim Executive Officer

President

EPRENG 05/18/11

State of California Department of Consumer Affairs

BOARD FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS

This Is To Certify That Pursuant
To The Provisions of Chapter 7, Division 3 of The Business and Professions Code

Jeffrey Alan Adams

IS DULY LICENSED AS A

PROFESSIONAL ENGINEER

IN

CIVIL ENGINEERING

In The State of California, and Is Entitled To All The Rights and
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DEPARTMENT OF CONSUMER AFFAIRS · BOARD FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS · STATE OF CALIFORNIA

WITNESS OUR HAND AND SEAL

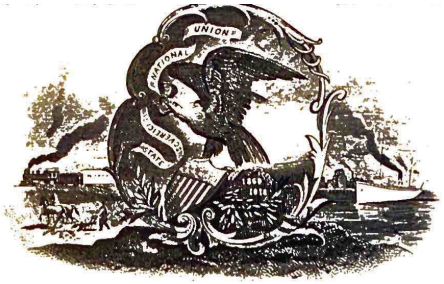
Certificate No C 69633

This 20th day of January, 2006, at Sacramento, California.

BOARD FOR PROFESSIONAL
ENGINEERS AND LAND SURVEYORS

Executive Officer

President



By authority of the Board of Trustees of the

UNIVERSITY OF ILLINOIS

and upon recommendation of the Senate

at Chicago

Jeffrey A. Adams

has been admitted to the Degree of

Doctor of Philosophy in Civil Engineering

and is entitled to all rights and honors thereto appertaining

Witness the Seal of the University and the Signatures of its Officers

this ninth day of May, nineteen hundred and ninety-nine.

UNIVERSITY OF ILLINOIS
LEARNING & LABOR
CHARTERED 1867

Chair of the Board of Trustees

Secretary of the Board of Trustees

President of the University

Chancellor

STATE OF CALIFORNIA

State of California Department of Consumer Affairs

State Board of Registration for Geologists and Geophysicists

CERTIFICATE

IT IS HEREBY CERTIFIED THAT

SHAWN PATRICK MUNGER

IS A DULY

REGISTERED GEOLOGIST

Certificate No. 5810

STATE BOARD OF REGISTRATION FOR GEOLOGISTS AND GEOPHYSICISTS

By _____
President

_____
Executive Officer

This 1st day of September, 1993

STATE OF CALIFORNIA

State of California Department of Consumer Affairs

State Board of Registration for Geologists and Geophysicists

CERTIFICATE

IT IS HEREBY CERTIFIED THAT

SHAWN PATRICK MUNGER

IS A DULY

CERTIFIED HYDROGEOLOGIST

Certificate No. HG 413

STATE BOARD OF REGISTRATION FOR GEOLOGISTS AND GEOPHYSICISTS

By Robert Lindblom
President

Dalton Pollard
Executive Officer

This 31st day of May, 1996

B. STATEMENT OF QUALIFICATIONS

B.1. SERVICES AND CAPABILITIES

ENGEO is an award-winning, employee-owned California Corporation of more than 400 geotechnical and civil engineers, geologists, hydrologists, hydrogeologists, environmental scientists, coastal engineers, construction quality-assurance representatives, and laboratory testing specialists serving clients in the U.S. and abroad for over 50 years. ENGEO has served many iconic and highly visible projects with complex engineering and geologic challenges.

ENGEO serves all types of projects including education, transportation, flood control, water storage, conveyance and treatment, industrial facilities, civic structures, healthcare, energy, manufacturing, ports, harbors, waterfront development, residential, mixed-use communities, and urban development.

Environmental Engineering

Geotechnical Engineering

Engineering Geology

Water Resources & Hydrology

Construction-Phase Testing & Observation

Special Inspection & Materials Testing

Stormwater Management

GIS/GPS

Geologic Hazard Abatement Districts (GHADs)

Entitlement & Permitting Support

Environmental Services

ENGEO provides comprehensive environmental engineering services with extensive experience in investigating contamination and providing remediation services to both public and private clients. Comprehensive environmental approaches are developed to meet project goals in planning, development, construction, and regulatory compliance.

To stay current with policies and keep every project on schedule, ENGEO routinely provides contact and coordination with project- and region-specific regulatory agencies to comply with Federal and State guidelines. Many clients rely on ENGEO as an advocate in working with Alameda County Department of Environmental Health (ACDEH), the Department of Toxics Substances Control (DTSC), the Regional Water Quality Control Boards (RWQCB), and United States Environmental Protection Agency (U.S. EPA).

ENGEO's expertise is recognized in conducting Preliminary Endangerment Assessments—obtaining DTSC approval on one of California's first school-related Assessments in early 2000. ENGEO is also working on the Oakland Athletics Howard Terminal Redevelopment project and obtaining DTSC approval for site investigations and human health risk assessments, including vapor intrusion concerns.

Our environmental services include:

- Phase I and II Environmental Site Assessments
- Vapor Intrusion Risk Assessment
- Design and Installation of Mitigation Measures
- Long-Term Stewardship and Management of Risk
- Underground Storage Tank Consultation
- Soil, Groundwater, and Soil Gas Remediation
- Subsurface Characterization
- Health Risk Assessments
- Input for EIR/EIS/CEQA
- Hydrogeologic Characterization
- Preliminary Endangerment Assessments
- HAZMAT Assessments, Permitting, and Disposal Services

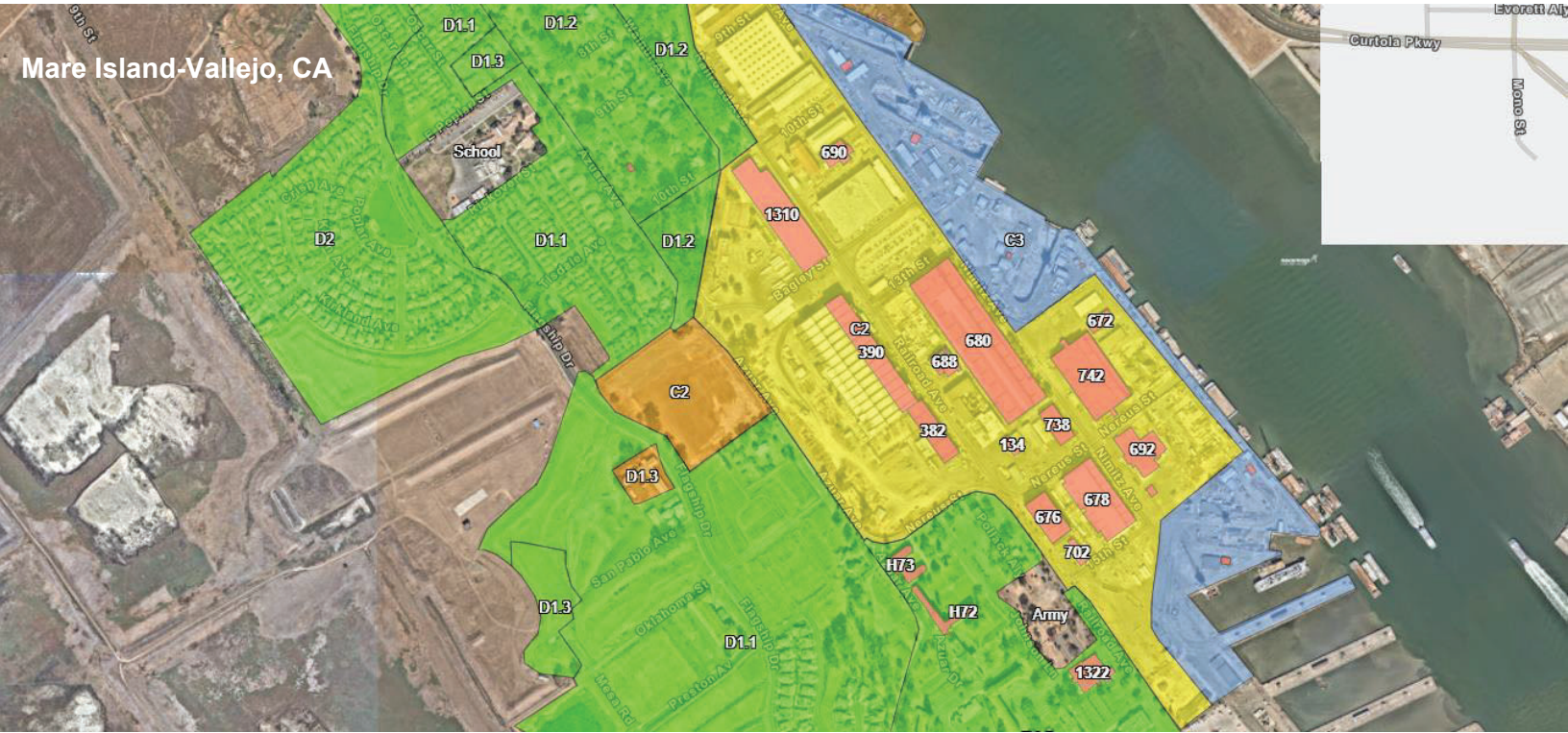
- Groundwater Monitoring Well Installation and Sampling
- Soil and Groundwater Characterization
- Risk Assessment and Management
- Naturally Occurring Asbestos (NOA) Dust Mitigation Plans (ADMP) and asbestos air monitoring

Geographical Information System (GIS) Services

The use of geospatial mapping and data visualization tools is rooted in earth science and engineering applications. For over 20 years, ENGEO has utilized and maintained Geographical Information System (GIS) capability using both proprietary and commercial systems. The 2-D, 3-D, and 4-D GIS and data visualization are used to support a broad range of disciplines, including geology and soil, hydrology, hazardous materials, historical analysis, wildfire impacts, construction, and business analytics. ENGEO utilizes GIS to elevate projects to new levels by creating interactive, web-based, project portals. These flexible portals allow us to capture, analyze, manage, and present relevant project data such as tables, images, and reports in one consolidated place. Each project dashboard serves as a central point of collaboration among owners, consultants, contractors, and other approved stakeholders. ENGEO has helped clients manage multiple complex projects including Storm Water Pollution Prevention Plans (SWPPPs), master-planned communities, Environmental Site Assessments (ESAs), and Geologic Hazard Abatement Districts (GHADs).

This GIS portal can adapt with OUSD's needs over time, set up maintenance alerts, prioritize action items, track progress, as well as include other information that OUSD values.

Below is a screen shot of the Mare Island Naval Base reuse GIS project that ENGEO has been working on and evolving for decades. ENGEO created a cross-functional GIS portal for project stakeholders (client, consultants, and contractors). The GIS portal is the primary collaboration tool used for planning, reporting, and collecting field data. It hosts spatial information from various disciplines (environmental, geotechnical, facility operations, landscaping, etc.). For example, reports were attached to the current and historic building layer to help facilitate environmental decision-making as well as identify potential asbestos containing building materials. In addition, numerous utilities are tracked in the GIS portal to document inspections, identify potential conflicts, and streamline data management.



Vapor Intrusion Risk Assessment Expertise

ENGEO understands every site is different with multiple variables to evaluate potential vapor intrusion risk (VIR). ENGEO works with regulatory agencies in Oakland as well as throughout California to assess risks for sensitive receptors including, but not limited to, potential child exposure, hospital occupants, residential, commercial, industrial, and ecological exposures. ENGEO utilizes multiple lines of evidence to evaluate potential VIR at a site. We develop Conceptual Site Models that convey soil, water, and vapor impacts as it relates to possible exposure pathways including potential vapor entry points and preferential pathways to evaluate vapor intrusion risk. With our experiences and relationships with regulators, we have had success with gaining regulatory approval of site-specific screening levels and associated risk that are more representative of site conditions which results in shorter project timelines and reduced costs.

Design and Installation of Mitigation Measures

We have extensive knowledge designing and installing vapor intrusion remediation and mitigation measures at projects with regulatory approval. While vapor intrusion might be the primary concern, it is critical to have a complete site characterization model and assess if there are contributory sources such as subsurface soil and/or groundwater impacts. ENGEO incorporates this information so we can develop an efficient mitigation plan for a particular site. We have extensive project experiences and strong relationships with owners, contractors, consultants, and regulators to design and install appropriate mitigation measures that are tailored to the concerns of a given site.

Long-Term Stewardship and Management of Risk

We have employed various risk management approaches to help manage site risks over time and are designed to address project-specific conditions. Risk management is often dynamic and may change over time; therefore, re-evaluation is critical over the life of a project.

B.2. WORKING WITH OUSD

Since 2011, we have collaborated with OUSD, offering geotechnical engineering and environmental engineering services for numerous schools within the district. Our approach has involved providing innovative solutions with a combination of geotechnical and environmental services. We have successfully accomplished the designated scope of services while remaining within the approved budget.

We have a strong understanding of the review process conducted by the State of California Division of State Architect (DSA) and California Geological Survey (CGS). Throughout the design and construction phases of school projects, we have achieved successful DSA approval for numerous projects. For example, as recently as July 2021, we received CGS approval of the first submission of our geotechnical report for OUSD's Laurel Child Development Center in Oakland, California.

ENGEO has also successfully worked with CAL-EPA DTSC for the approval of numerous new school sites and renovations, performing Preliminary Endangerment Assessments (PEA), risk evaluations and remedial actions.

Our approach to serving OUSD involves close collaboration with the District's staff. Our goal is to establish seamless communication, ensuring that our team integrates effectively with the District's staff. We understand the sensitive nature of working on school properties and will coordinate with OUSD staff, school staff, and school communities for any on-site visits, as needed. We also will be glad to support and attend public meetings as needed.

Our Project Manager, Scott Johns, PE, QSD, will be the main point of contact and will assist the District to address any issues and questions. Mr. Johns will be responsible for informing OUSD regarding project progress and upcoming steps.

After receiving authorization, we will contact OUSD to discuss the work to be performed as well as if there are any priority OUSD sites. If OUSD is able to provide site-specific information, we can review and incorporate into the assessment. ENGEO has worked extensively throughout Oakland and the San Francisco Bay Region and will review internal ENGEO documents to help with OUSD site assessments (see Figure 1 in Section B.4). We will also review on- and off-site conditions related to potential vapor intrusion concerns. As we are gathering and assessing information, we will compare to applicable regulatory agency requirements including U.S EPA, RWQCB, DTSC, and ACDEH. Throughout the project we can provide progress updates to OUSD as well as discuss preliminary findings. A draft report with our findings will be provided to OUSD. We will also provide an OUSD GIS Project Portal to help manage site risks and easily access assessment reports.

In addition to our local Oakland office, we have additional staff available to assist from nearby offices including San Francisco, San Ramon, and San Jose if needed. Among our more than 400 employees, we have 30 licensed California Geotechnical Engineers, 32 Professional Engineer, 15 Certified Engineering Geologists, 4 Certified Hydrogeologists, and 22 Professional Geologist.

Upon authorization, ENGEO has the expertise and staff that can complete assessments in an efficient and timely manner for all five regions and we will commit to completing all assessments within 12 months after authorization.

B.3. SCHEDULE CONTROL

A primary cornerstone of our company culture is adherence to deadlines. Timely delivery of projects to our clients according to agreed-upon schedules is essential. We establish internal project check-ins along the way and provide your project manager with regular updates of our work completion progress and budget status. Through these check-ins, we are able to make adjustments, if necessary, to maintain the project schedule. We know that if we keep the project on schedule, this is one of the best tools to also keep the project on budget.

Effective schedule control not only helps in delivering projects on time but also enhances overall project predictability, allowing stakeholders to make informed decisions and mitigate potential risks. It is a pivotal aspect of successful project management, ensuring that time remains a valuable and well-managed resource throughout the project's lifecycle.

Every day, we collaborate with our clients on various projects to assess risk. We routinely work on sites with our clients who are looking to purchase property and inherit liability on a condensed timeline, sometimes in less than 30 days. Through our experience, we know it is critical to have a well thought out plan to complete a project, as well as several contingency plans.

Examples of Demonstrated Success

EL TORO MARINE BASE
IRVINE, CALIFORNIA

This project presented numerous potential challenges, but through effective planning, communication, and execution, we managed to achieve success. Our client had to complete a full risk assessment (soil, water, vapor intrusion, hazardous materials, etc.) for over 50 properties ranging from approximately 3 to 40 acres that had decades of various military use and associated contamination. Our client was looking to develop sensitive residential housing on these properties and needed to assess potential risks before purchasing and taking ownership. We completed the risk assessments ahead of schedule and under budget partly because we identified critical items ahead of time, such as including potential site access limitations and agency response times and developed backup strategies with the client. There were also unforeseen field conditions, including encountering unknown contamination, which could have derailed the schedule and budget; though we quickly identified the risks, discussed the options with the client, and continued to move the project forward.

OAKLAND ATHLETICS BASEBALL STADIUM (HOWARD TERMINAL)
OAKLAND, CALIFORNIA

Howard Terminal is a very visible project with numerous agencies, companies, and public participation. We identified scheduling opportunities and saved the client time and money. One of ENGEO's responsibilities was to perform site characterization, human health risk assessment, and related remediation and mitigation measures for the project. The DTSC is the lead environmental regulatory agency and required a formal work plan for their review, comment, and approval prior to performing work. To streamline agency response times and field work, our work plan and reporting included items that the project team initially was not going to perform for months, which would have prompted additional work plans and risk possible approval delays. By including those items in our report, we were able to limit the agency review and decision time as well as eliminating the supplemental work plans for additional field work.

B.4. PROJECT EXPERIENCE

ENGEO routinely collaborates with regulatory oversight agencies. We work with clients to navigate ever-changing regulations, and we consult directly with regulatory agencies as experts in the field. We know that good relationships with regulatory agencies from the local to federal levels translate into practical solutions and improved schedules. ENGEO leadership proactively informs staff on regulations affecting our clients.

The Alameda County Department of Environmental Health ("ACDEH")

Alameda Marina Townhomes Redevelopment—Alameda, CA
The 12-acre property is being redeveloped into 31 residential townhome buildings with a total of 180 units as well as associated streets, utilities and open space. ENGEO performed environmental, geotechnical, GIS, dust and air monitoring, and construction observation services for the townhome builder. ENGEO performed site characterization activities related to soil, water, and soil gas/vapor intrusion impacts. With ACDEH approval, we prepared remediation and mitigation measures that were implemented and allowed redevelopment to proceed. ENGEO prepared information for the public and also participated in public meetings.

The Launch Development—Alameda, CA
ENGEO was brought into the project replacing the incumbent engineer and ENGEO performed site characterization and risk assessment activities for soil, water, and soil gas/vapor intrusion that culminated in formal ACDEH Case Closure.

The Foundry Development—Alameda, CA
ENGEO is currently performing site characterization and risk assessment activities for soil, water, and soil gas/vapor intrusion. ENGEO will discuss risks with the owner, ACDEH, public, and other stakeholders and then will design remediation and mitigation measure that will be implemented.

Malibu Grand Prix—Oakland, CA
ENGEO is working with ownership and prospective lessee to assess site impacts and related risks regarding soil, water, and soil gas/vapor intrusion. ENGEO will assist with public documentation and public meetings as requested.

West MacArthur Boulevard—Oakland, CA
Performed site assessment and vapor intrusion mitigation system design oversight with implementation support.

Gibbons Drive—Alameda, CA
Performed site assessment and dual phase extraction pilot study.

The California Department of Toxic Substances Control ("DTSC")

Howard Terminal—Oakland, CA
ENGEO performed geotechnical design and environmental hazardous materials risk assessments for The Howard Terminal site that was a former manufactured gas plant being considered for redevelopment for the Oakland Athletics Baseball Stadium and high-rise project. One of ENGEO's responsibilities was to perform site characterization, human health risk assessment, and designing related remediation and mitigation measures for the project.

Mora Ortega—Mountain View, CA
Following installation of vapor intrusion mitigation systems, ENGEO performs vapor intrusion monitoring related to a subsurface plume. The site is a new residential development.

Ohlone College—Newark, CA
ENGEO performed site characterization and risk assessment activities for soil, water, and soil gas/vapor intrusion. ENGEO prepared remediation and mitigation documents for the property.

Irvington Village—Newark, CA
ENGEO performed site characterization and risk assessment activities for soil, water, and soil gas/vapor intrusion. The case includes a historic dry cleaner that released chemicals impacting subsurface soil, water, and soil gas/vapor representing risk to current and future uses. ENGEO prepared remediation and mitigation documents for the property.

Mission Village Proposed School Site—Valencia, CA
ENGEO performed phase I and phase II ESAs for the proposed school site that is located within an abandoned oil field. We coordinated with DTSC and prepared Supplemental Site Investigation Report that included assess site risk, including soil gas/vapor intrusion assessment and DTSC concurred with our findings that "no further action" is recommended for the site.

Clayton Road—Concord, CA
ENGEO performed phase I and phase II ESAs for site that had past commercial and industrial uses as well as petroleum tank release. We assessed risks and worked with the DTSC to prepare site conceptual model and remedial action work plan for the planned residential redevelopment project. ENGEO performed supplemental testing pre, during, and post construction that concluded with "no further action" designation from the DTSC.

The San Francisco Bay Regional Water Quality Control Board ("RWQCB")

Henkel Chemical Manufacturing—Milpitas, CA
ENGEO has provided risk assessment activities for soil, water, and soil gas/vapor intrusion. Site Was used for industrial purposes beginning in the early 1900s and included manufacturing metal-treating chemicals as well as formulated herbicides. A former railroad track was onsite and located adjacent to the warehouses were most of the chemicals were loaded onto rail cars. Various chemical spills resulted in contamination of site soil, groundwater, and soil gas/vapor intrusion concern. Sensitive Alameda Creek is located along the southern boundary of the site, further complicating the site impacts. ENGEO designed remediation and risk management mitigation measures for the property. RWQCB issued a No Further Action designation.

1646 Centre Pointe Drive—Milpitas, CA
ENGEO provided risk assessment activities for soil, water, and soil gas/vapor intrusion. ENGEO worked closely with numerous project stakeholders, including the project proponent, the City of Milpitas, and the San Francisco Bay Regional Quality Control Board (RWQCB) to develop a comprehensive conceptual site model and facilitate a mitigation approach that will be protective of future residents and commercial tenants.

37343 & 37359 Blacow Road—Fremont, CA
The site is a former commercial and industrial site with hazardous materials. ENGEO provided closure of a leaking UST case, development of site-specific screening criteria, and preparation of a remedial plan that was approved by RWQCB including water and vapor remediation. RWQCB approved the Site with No Further Remedial Action needed. The site is a residential subdivision under construction.

Cannery Park Village—San Jose, CA
ENGEO worked extensively with the site owner and the RWQCB to prepare and implement a "Response Plan" to address chlorinated solvent impacts at the site that represent a risk to soil, water, and soil gas/vapor intrusion. soil gas and groundwater results have demonstrated that the extensive cleanup activities have been effective. The site has been developed as a large multi-story apartment complex.

Napa Pipeline—Napa, CA
ENGEO provides geotechnical and environmental services for the group of landowners and developers as required by regulatory agencies. We have completed risk assessment activities for soil, water, and soil gas/vapor intrusion. The site is a planned residential development.

Wiliam Street—San Leandro, CA
ENGEO assessed vapor intrusion risk at site. We also designed and implemented three soil vapor extraction/subslab depression systems in three buildings.

The United States Environmental Protection Agency ("USEPA")

Fairchild Drive—Mountain View, CA
ENGEO performed soil, groundwater and soil gas/vapor intrusion characterizations, risk evaluations and Response Action Plan preparation under USEPA oversight. The site is within the Middlefield-Ellis-Whisman (MEW) Superfund site, contaminated with chlorinated solvents from legacy semiconductor plant operations. On-going remedial activities included soil vapor extraction, groundwater treatment using bioaugmentation, and groundwater/soil gas monitoring. The site has been developed with detached single-family homes and townhomes.

Mare Island Former Navy Base—Vallejo, CA
The former Mare Island Navy Base is approximately 2,500 acres and ENGEO has been providing environmental and geotechnical services for decades. Our work has included risk assessments related to soil, water, soil gas/vapor intrusion and related construction/remediation activities.

Concord Naval Weapons Station—Concord, CA
We represent multiple potential developers planning to redevelop the Concord Naval Weapons Station (CNWS). We have reviewed decades of numerous reports for our clients to assess potential property risks based on planned uses.

Alameda Point West Midway—Alameda, CA
ENGEO represents a developer who is redeveloping the Alameda Point West Midway (APWM) site. We initially reviewed extensive documents for the property to assess risks, then working with the client, regulatory agency, and other stakeholders we completed robust environmental assessments including soil, water, and soil gas/vapor intrusion.

Fort Ord—Monterey, CA
We are working with the USEPA, the Army, and the developer to modify the existing well network to facilitate on-going remediation and monitoring activities. We have developed work plans and assessments for various phases of redevelopment including assessing potential risks from soil, water, and soil gas/ vapor intrusion.

Heritage Fields, Great Park Neighborhood—Irvine, CA
We prepared over 50 Phase I and Phase II Environmental Site Assessments for the former El Toro Marine Corps Air Station (MCAS). The site is currently under development as a large-scale mixed-use development including several schools, residential subdivisions, recreational facilities and commercial development.

Non-profit Organizations

Oakland Zoo—Oakland, CA (Conservation Society of America)
ENGEO provided permitting support, prepared construction plans and provided testing and observations services for the project. The 72-inch culvert underneath the entrance road to the Oakland Zoo suddenly and unexpectedly collapsed during a rainstorm on December 31, 2022. The collapse closed operations at the Zoo until the repair was completed. ENGEO worked with City of Oakland Staff and a contractor to obtain emergency permits from Federal and State agencies, re-construct the culvert and re-open the entrance road to the Zoo in approximately 3.5 weeks.

Dignity Village—Alameda, CA (Dignity Moves)
ENGEO provided an exploration and design recommendations for the 48-unit interim supportive housing community. Given the size of the parcel and the timing of product delivery, traditional ground improvement, such as a surcharge program, was not feasible. ENGEO worked with the team to design the project such that it could be constructed on-time despite the challenging conditions.

Dangermond Preserve—Santa Barbara, CA (The Nature Conservancy)
ENGEO provided various geotechnical, geologic, and permitting consultation services. We completed design and construction oversite of various mitigation of storm related damages located in areas adjacent to the access road to the Cojo Ranch headquarters. Mitigation included rebuilding of a slope failure with a geogrid reinforced slope and rebuilding of erosion gullies including replacement of culverts.

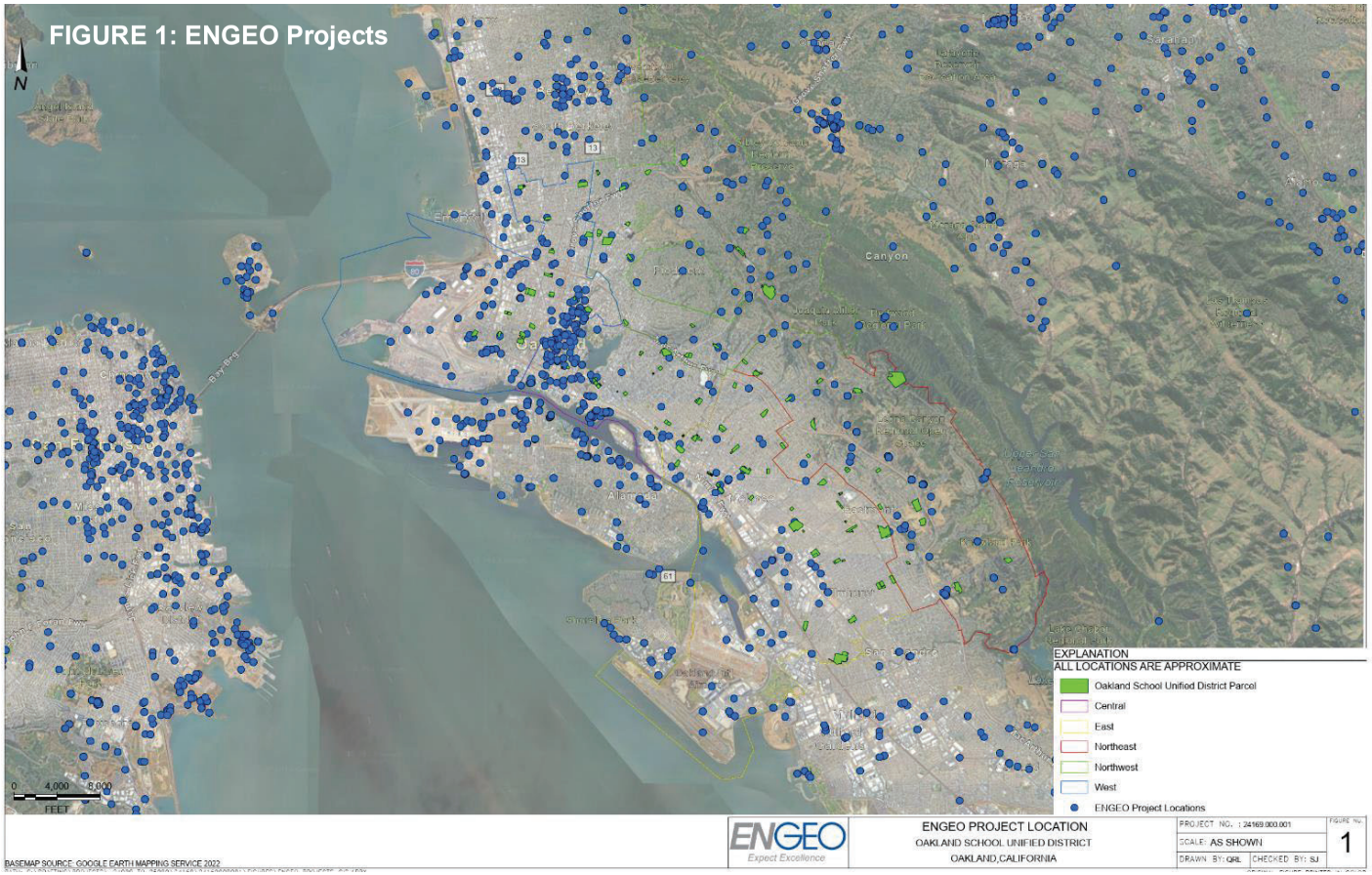
San Diego Safari Park—Sand Diego, CA (San Diego Zoo Wildlife Alliance)
ENGEO developed and continues to update a cross-functional GIS platform for all Safari Park stakeholders. The GIS platform is used for regular project progress updates and could also be used for document archiving, repository for digital imagery, links to video surveys, and a means for real-time improvement plan overlay creation. The GIS platform can continue to be utilized and is readily extendable as an asset management system, for future operations and maintenance, and for planning and maintenance of other park utilities and infrastructure.

Museum of Jazz and Art—Oakland, CA (Oakland Museum of Jazz and Art)
ENGEO provided investigation and consultation services for the historic, one-story building with a partial basement. The proposed museum will consist of a four-story concrete- or steel-frame museum building with one partial level of below-grade parking and office space.

La Vista Residential—Alameda, CA (Eden Housing)
The La Vista Residential project is a part of a new community in Hayward consisting of the two proposed residential buildings, a proposed 36,000-square-foot school that will serve up to 384 students from preschool through 6th grade, and a proposed neighboring 50 acre park. ENGEO is working with Eden Housing and the Pacific Companies to provide geotechnical consultation services during the feasibility stage, project design, and site development construction. ENGEO began working on the project with Eden Housing in 2020.

Local Project Experience

ENGEO has been providing environmental and vapor intrusion services for decades throughout Oakland and the San Francisco Bay Region. Figure 1 shows ENGEO projects (blue) as well as OUSD sites (green).



B.5. NUMBER OF EMPLOYEES

ENGEO employs more registered geotechnical engineers and certified engineering geologists than any firm of our relative size. Our teams collaborate across offices and disciplines to bring the absolute best resources to each project.

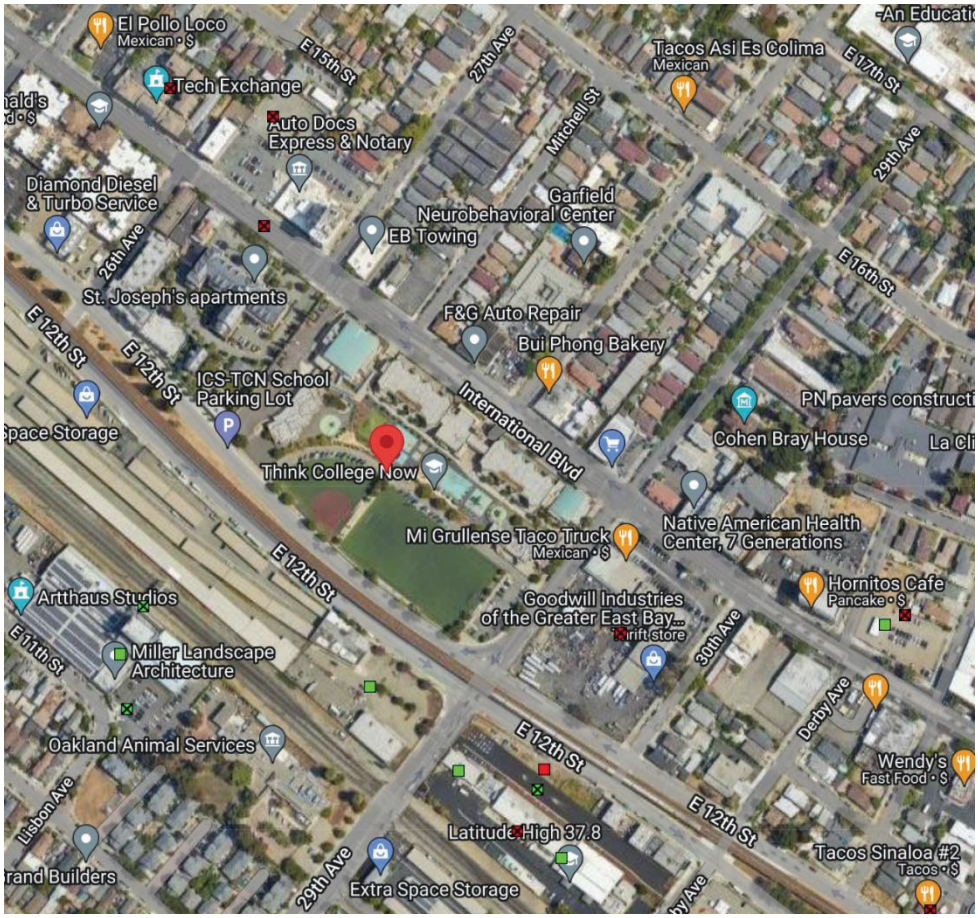
We currently have 120 employees that reside in the nine Bay Area counties.

C. FEE PROPOSAL

In preparation of this submittal we reviewed the provided OUSD GIS link of facilities and compared to publicly available documents as well as internal ENGEO documents to accurately estimate the risk profiles and associated fee to complete an appropriate assessment. Our fee also includes creating a GIS portal for OUSD.

OUSD facilities with numerous surrounding impacted sites will require relatively more assessment time to determine if nearby sites are impacting OUSD sites than sites with less surrounding impacted sites.

For example, the site located at 2825 International Boulevard (Central Region) has many reported cases surrounding the area per GeoTracker Database, as shown below.

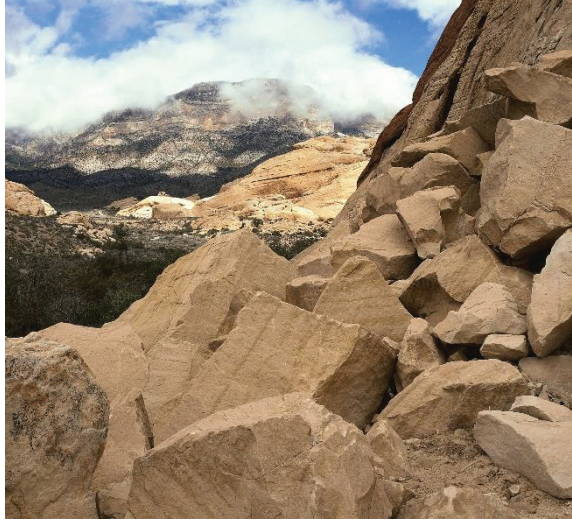


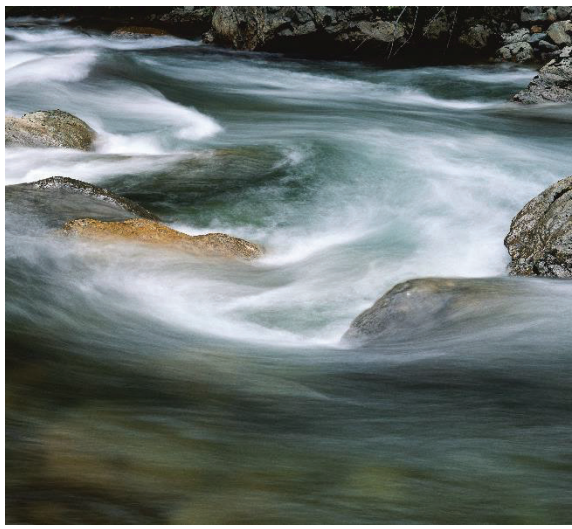
For the Central Region, we propose a lump sum of $60,900 (21 sites of $2,900/site).

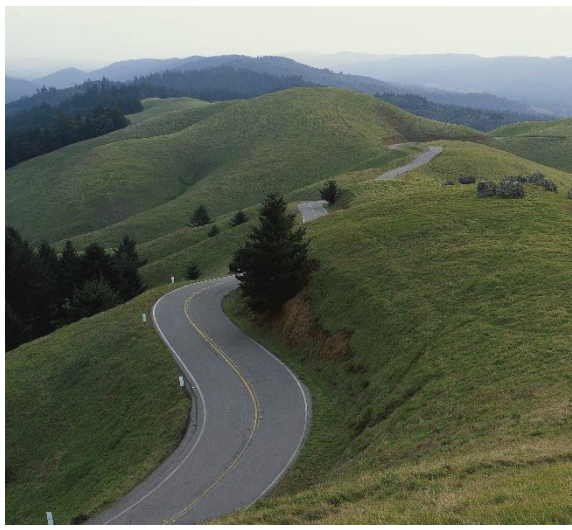
ENGEO proposes to provide a fee discount if awarded all five regions. For all five regions, we propose a total lump sum of $180,000 (96 sites of $1,875/site).

C.1. EXCLUSIONS OR ASSUMPTIONS UNDERLYING THE FEE PROPOSAL

- Upon authorization, multiple sites can be worked on in parallel.
- In response to question and answer #25 (OUSD letter dated September 27, 2023) interviews and site reconnaissance will not be conducted. If desired by OUSD, ENGEO will be glad to coordinate with OUSD on scope, timing, and fee.
- Our assessment fee includes preparation of up to one draft document and a response to one round of comments. Additional response to comments or preparation of additional draft documents will be considered extra work and will be billed on a time-and-expenses basis in accordance with our current fee schedule.
- ENGEO will be glad to support and attend public participation meetings upon request. As an estimate or schedule has not been provided, we suggest a budget of $10,000 per region.

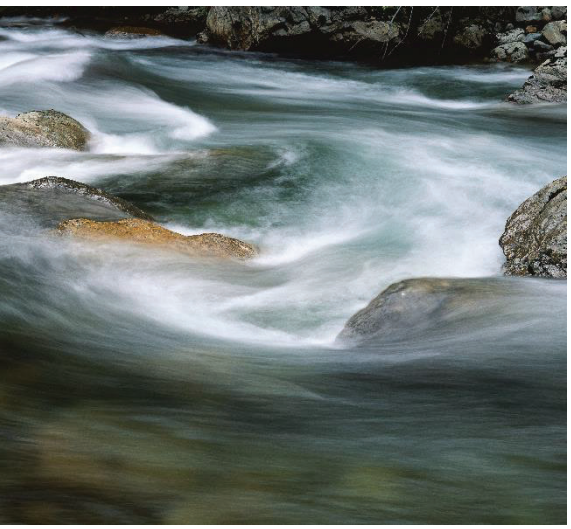


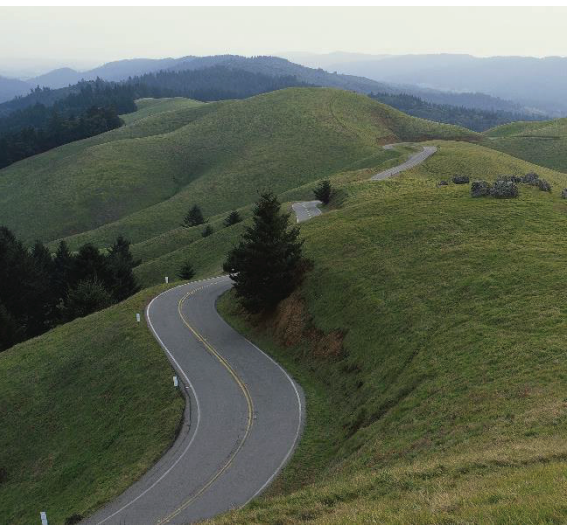




ENGEO

Expect Excellence





Vapor Intrusion Initiative
Project #: 23125
Oakland Unified School District

Region: East

SUBMITTED TO:
Rebecca Littlejohn
Oakland Unified School District
1000 Broadway Ste 450
Oakland, CA 94607
Rebecca.Littlejohn@ousd.org

October 12, 2023

P24169.000.001

ENGEO
Expect Excellence

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Project No.
P24169.000.001

October 12, 2023

Rebecca Littlejohn
Oakland Unified School District
1000 Broadway Ste 450
Oakland, CA 94607
Rebecca.Littlejohn@ousd.org

Subject: Vapor Intrusion Initiative, Project #: 23125
Region: East
Oakland, California

A. LETTER OF INTEREST

Dear Ms. Littlejohn:

Founded in 1971, ENGEO is an employee-owned, award-winning firm of geotechnical and civil engineers, geologists, environmental scientists, hydrologists, hydrogeologists, coastal engineers, construction quality-assurance representatives, and laboratory testing specialists.

We have built a reputation for delivering high-quality environmental services to clients across various industries. Our team of experts specializes in vapor intrusion assessment, site characterization, risk assessment, mitigation, remediation, and long-term risk management making us well-equipped to address the specific challenges associated with your projects.

When you select ENGEO as your consultant, you can expect to receive the following.

Proven Track Record: We have successfully completed numerous vapor intrusion projects for clients in both the public and private sectors. We have worked together with OUSD since 2011 on several successful projects and look forward to continue to build upon our partnership.

Experienced Team: We have assembled a talented group of engineers and scientists who will work collaboratively to ensure the success of your projects. ENGEO will support OUSD through our local Oakland office as well as our other surrounding San Francisco Bay Area offices. We also have numerous California Professional Engineers, Geologist, and Geotechnical Engineers.

Regulatory Compliance: We have extensive knowledge of local, state, and federal regulations and will ensure that your project is compliant with all relevant requirements. We have numerous current projects with oversight from Alameda County Department of Environmental Health, Department of Toxic Substances Control, San Francisco Regional Water Quality Control Board, and United States Environmental Protection Agency.

Cost-Effective Solutions: We are committed to providing cost-effective solutions that minimize environmental risks. As part of preparing this submittal we reviewed OUSD sites, nearby ENGEO projects, as well as offsite impacted sites that could impact multiple OUSD sites and identified cost-efficiencies opportunities including performing multiple OUSD site studies in parallel.

Ability to Meet Deadlines: We understand the importance of meeting project timelines and will work diligently to ensure that your project stays on schedule. We are accustomed to providing high-quality services with relatively short notice. Our clients, both public and private, have come to know and trust us for this aspect of our service offering.

Legal Name and Address

ENGEO Incorporated
2010 Crown Canyon Place, Suite 250
San Ramon, CA 94583
(925) 866-9000 | Fax (888) 279-2698
www.engeo.com
Employee-owned California Corporation
Federal Tax ID: 94-1748418
Federal Tax Classification: C Corp

Project Managers

Scott Johns, PE, QSD – Associate
Jeff Adams, PhD, PE – Principal
Shawn Munger, PG, CHG – Principal

Statements

We have received and reviewed the Template Services Agreement. We understand that this is the legal agreement that ENGEO will need to sign, and ENGEO agrees to sign it, without objection or reservation, if selected by the District. We understand that only the District, at its sole discretion, may change the terms of the Agreement.

We certify that no official or employee of the District, nor any business entity in which an official of the District has an interest, has been employed or retained to solicit or assist in responding to the RFP and that ENGEO has no current intent (nor has promised) to employ or retain any official or employee of the District, nor any business entity in which an official of the District has an interest, to perform any of the services for which ENGEO might be selected by this RFP process.

No official or employee of the ENGEO has ever been convicted of an ethics violation.

By virtue of submission of this Proposal, we declare that all information provided is true and correct.

If you have any questions or comments regarding this letter, please call and we will be glad to discuss them with you.

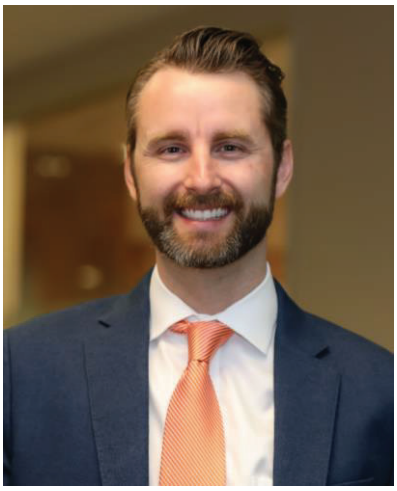
Sincerely,

ENGEO Incorporated

Scott Johns, PE

Shawn Munger, CHG

Attachments: Resumes of Project Managers
Professional Certifications



EDUCATION
BS Civil Engineering Santa Clara University 2007

EXPERIENCE
Years with ENGEO: 16
Years with Other Firms: 0

REGISTRATIONS & CERTIFICATIONS
Professional Engineer, CA 78253
CASQA QSD Certified, CA 25073
HAZWOPER 40 Hour Training, CA 110908110562

SPECIALIZATIONS
- Environmental Assessments and Remediation
- Environmental Restoration
- Groundwater Modeling
- Hydraulic Engineering
- Hydrology
- Petroleum Hydrocarbon Site Assessment and Remediation
- Phase 1 Environmental Audits
- Stormwater Management
- SWPPP Implementation
- SWPPP Preparation
- Water Quality Studies
- Water Resources
- Water Wells/Hydrogeology

AFFILIATIONS
ASCE American Society of Civil Engineers

SCOTT R. JOHNS, PE, QSD
Associate

Scott joined ENGEO in 2007 and serves projects of various scale for private and public clients. He conducts complex field investigations, data analysis, and provides management services. Additionally, he conducts and oversees Site Investigation Reports (SIRs), Phase I and II Environmental Site Assessments (ESAs) as well as remedial actions for contaminated sites with impacts that include petroleum hydrocarbons, metals, pesticides, PCBs, volatile organic compounds (VOCs), and semi-VOCs in soil, groundwater, and soil vapor/vapor intrusion. Scott is experienced with working with various regulatory agencies including U.S EPA, California DTSC, California Regional Water Quality Control Boards, ACDEH, BAAQMD, as well as city, county, and CUPA agencies throughout California.

SELECT PROJECT EXPERIENCE

Howard Terminal; Oakland Athletics New Ballpark Development—Oakland, CA
Project Manager. While working with stakeholders including but not limited to the Oakland Athletics, Department of Toxics Substances Control, and Port of Oakland, Scott performed environmental review of past site use, creation of comprehensive subsurface investigation to support site-specific human health and ecological risk assessment, and future remedial action work plan. The Howard Terminal site is a former container terminal along the Port of Oakland's Inner Harbor. The site was originally a bulk-break terminal dating back to the early 1900s with a manufactured gas plant located in the eastern portion of the site. The terminal was expanded and converted to a container terminal in the 1980s. Improvements at the site will include a Major League Baseball stadium as well as midrise and high-rise buildings to provide a mix of residential, retail, and other commercial uses. The project plans also include construction of an overhead gondola from the Oakland Convention Center to Jack London Square. The site grade will be raised to address sea-level rise. The existing wharf will be retained as part of the site redevelopment. The site is underlain by liquefiable fill and soft compressible Young Bay Mud. The past industrial uses of the site resulted in hazardous material impacts within the soil, groundwater, and soil vapor/vapor intrusion that will be mitigated as part of redevelopment.

Google Downtown Development—San Jose, CA
Project Manager. Scott performed a comprehensive Environmental Site Assessment for various industrial and commercial properties over approximately 50 acres in

Downtown San Jose being considered for Google's campus. As part of the assessment, Scott identified known and unknown environmental concerns and recommended appropriate actions to quantify potential risks. Scott also prepared the risk assessment utilizing a Geographic Information System (GIS) that is a digital interactive platform that provides additional data beyond typical environmental information and is scalable for future project plans.

Alameda Marina Redevelopment—Alameda, CA
Project Manager. The 12-acre Alameda Marina redevelopment project includes residential townhome buildings with a total of 180 units as well as associated streets, utilities, and open space. Scott performed or oversaw environmental, geotechnical, GIS, dust and air monitoring, and construction observation services for the townhome builder. Through site characterization activities and coordination with Alameda County Department of Environmental Health (ACDEH), ENGEO identified key environmental issues including potential vapor intrusion risks. ENGEO utilized field instrumentation coupled with outside laboratory results to efficiently keep redevelopment activities progressing. ENGEO utilized statistical modeling to assist with remediation and mitigation of potentially hazardous materials. ENGEO also worked with ACDEH and landfills to stabilize and characterize hazardous material. This innovative approach saved the project millions of dollars in total. Besides technical challenges with the site, political and public challenges existed and were mitigated through community outreach and transparent notifications of upcoming work.

Mare Island Naval Base Redevelopment—Vallejo, CA
Project Manager. Scott provides project management and quality control of geotechnical, environmental, hydrologic and construction services related to residential, commercial, and industrial development of this historic Naval Base redevelopment. In addition, Scott manages the Mare Island project GIS and continues to add features to the GIS based on stakeholder requests.

Henkel Chemical Manufactory Site—Fremont, CA
Project Manager. Site was a previous chemical manufacturing facility that resulted in impacts related to total petroleum hydrocarbons, metals, and dioxins/furans. Scott prepared a Site Investigation Report that discussed the potential site concerns and prepared a Removal Action Work Plan to allow for residential redevelopment that was approved by the San Francisco Regional Water Quality Control Board. During remedial actions, Scott directed appropriate management and monitoring of soil, stormwater, dust, and construction debris. The implementation report was submitted to RWQCB who reviewed and approved that no further remediation is needed and is suitable for residential redevelopment.

Heritage Fields, Great Park Neighborhood—Irvine, CA
Project Manager. Scott performed and provided oversight to over 50 phase I and Phase II Environmental Site assessments and consultation services regarding environmental site characterization and remediation for the former El Toro Marine Corps Air Station (MCAS). The project is a master-planned community that will include roughly 9,500 residential units, schools, parks, open space, commercial, and industrial developments along with associated drainage and utility improvements. The project encompasses approximately 4,700 acres and is a base reuse project for the former El Toro Marine Corps Air Station (MCAS) and former Bordiers Nursery. Several active drainage corridors pass through portions of the site including Marshburn, Bee Canyon, Agua Chinon, Borrego Canyon Serrano Creek, and San Diego Creek.

VTA BART Silicon Valley Berryessa Extension Design-Build Project—San Jose, CA
Project Manager. As a leading project team member with respect to hazardous materials, Scott provided a range of value engineering consulting services with respect to existing soils,

groundwater, and building materials. Following a complex right-of-way that extends across multiple city and county lines through numerous developed areas. The project generated hundreds of thousands of yards of excavated soil with potential toxic and hazard concerns. The proposed right-of-way intersects several groundwater plumes emanating from industrial and commercial sources. Scott led the team effort to accurately quantify these materials and devise strategies to effectively manage and mitigate these materials to drive overall project cost savings. The project is a comprehensive design/build package for the Bay Area Rapid Transit (BART) extension project from Fremont to San Jose, with track alignment and two stations: one at Milpitas and one at Berryessa.

277 Fairchild 228/236 Evandale Ave—Mountain View, CA
Associate Engineer. Scott provided oversight of soil, groundwater and soil gas/vapor intrusion characterizations, risk evaluations and Response Action Plan preparation under USEPA oversight. The site is within the Middlefield-Ellis-Whisman (MEW) Superfund site, contaminated with chlorinated solvents from legacy semiconductor plant operations. On-going remedial activities included soil vapor extraction, groundwater treatment using bioaugmentation, and groundwater/soil gas monitoring. The proposed site development consists of detached single-family homes and townhomes.

Ohlone Community College—Newark, CA
Project Manager. Scott is working with various stakeholders and agencies including DTSC to evaluate potential risks associated with proposed college and flood control improvements.

Sparklizing Cleaners and Laundry—Fremont, CA
Staff Engineer. Scott designed and executed field activities to delineate the tetrachloroethylene plume associated with past drycleaner practices located onsite. The project site consists of a dry-cleaning facility located within a commercial/retail center. Dry-cleaning operations have been conducted at the facility since 1974 and have resulted in chlorinated solvent impacts to subsurface soil, groundwater, and soilgas/vapor intrusion risks. We prepared a Corrective Action Plan (CAP) and coordinated the in-situ chemical oxidation program which consisted of injecting 35,000 gallons of potassium permanganate to the subsurface to oxidize chlorinated solvents.

Montecito Vista II—San Jose, CA
Project Manager. Scott reviewed the complex site history that included former automobile wreckage/salvage yards and based on his findings was able to negotiate with the lead regulating agency, Department of Toxic Substances (DTSC), supplemental characterization activities to address potential residential redevelopment concerns. Based on the supplemental characterization activities, Scott was able to identify the constituents of concern and associated risks. Scott worked with the regulators and stakeholders to develop and implement an efficient remediation program that resulted in cleaning up the Site for residential and park use.

930 University Ave—Los Gatos, CA
Project Manager. Scott performed site assessment for the Town of Los Gatos. Known environmental concerns included an on-site historic leaking underground storage tank and an operational hydraulic lift. Scott developed and implemented a sampling procedure to effectively delineate the impacted areas. After analyzing the results, Scott communicated with the client the options to mitigate the area and coordinated with regulatory agencies to progress to site redevelopment that includes a community park with associated facilities and improvements including parking, roadways, and utilities. The site was a Verizon maintenance yard and located adjacent to Vasona Reservoir.

EDUCATION

BS Civil Engineering University of Illinois at Chicago 1994

MS Civil Engineering University of Illinois at Chicago 1996

PhD Civil Engineering University of Illinois at Chicago 1999

MBA University of Washington 2004

EXPERIENCE

Years with ENGEO: 25
Years with Other Firms: 0

REGISTRATIONS & CERTIFICATIONS

Environmental Manager, NV 2150

Professional Engineer, CA 69633

Envision ENV SP Credentialed

SPECIALIZATIONS

- Environmental Assessment, Characterization, and Remediation
- Green and Sustainable Remediation (GSR)
- Resilient and Sustainable Infrastructure Analysis and Applications
- Geologic Hazard Abatement Districts (GHADs)

AFFILIATIONS

ASCE American Society of Civil Engineers

ASCE Geo-Institute

JEFFREY ADAMS, PHD, PE

Principal

Jeff joined ENGEO in 1999. For over 25 years, Jeff has provided efficient, innovative solutions to clients by addressing geoenvironmental issues within the natural and built environment. He leads environmental assessment, characterization, and remediation projects; prepares various environmental health and safety (EHS) documents and deliverables; and provides a range of consultation services for Geologic Hazard Abatement District (GHAD) formation and operation.

A noted thought leader across several technical dimensions, Jeff's research interests include sustainability, green and sustainable remediation (GSR), resilient infrastructure solutions, environmental applications, and emerging public/private financial mechanisms to mitigate flood-related losses. He has authored and co-authored numerous environmental remediation-related textbooks, instructional materials, and research papers that have been presented worldwide and published in a diverse group of academic and professional journals.

SELECT PROJECT EXPERIENCE

Howard Terminal—Oakland, CA

Lead Environmental Principal. Jeff has provided ongoing technical leadership during several environmental studies for the redevelopment of the Howard Terminal site. The approximately 62.1-acre Property is a former container terminal along the Port of Oakland's Inner Harbor. The Property was originally a bulk-break terminal dating back to the early 1900s, with a manufactured gas plant located in the eastern portion of the Property. The terminal was expanded and converted to a container terminal in the 1980s. Improvements will include a Major League Baseball stadium as well as mid-rise and high-rise buildings to provide a mix of residential, retail, and other commercial uses. ENGEO performed a phase I environmental site assessment (ESA), phase II ESAs consisting of soil, soil gas, and groundwater sampling across the property, EIR preparation support, the preparation of a human health and ecological risk assessment (HHERA), and a draft remedial action plan (RAP). Additional technical work included assessment of the potential effects of sea level rise (SLR), on-site contamination conditions, and scoping of subarea-specific remediation design and implementation plans (RDIPs).

1511 Jefferson—Oakland, CA
Project Manager. Jeff provided environmental and geotechnical consultation services for a Brownfields redevelopment project in downtown Oakland. The project included several challenges, including limited site access due to on-site business activities, environmental impact related to previous site use, and the presence of several adjacent mid-rise structures. Jeff developed cost effective remedial value engineering solutions to mitigate the presence of geotechnically and environmentally constraining subsurface solutions. Jeff worked with the design team to establish cost-effective retaining wall and foundation systems, designed and observed a subsurface environmental mitigation program, and assisted in the design of a structure-wide vapor barrier. The project, serving as a cornerstone of the revitalization of downtown Oakland, consists of a multi-story residential condominium structure.

Crown Chevrolet Property—Dublin, CA
Project Manager. Jeff provided comprehensive environmental consultation services for the project. Working on behalf of the purchaser, Jeff collaborated with a multi-firm consulting team to characterize and mitigate environmental impacts resulting from previous on-site automotive maintenance activities and off-site businesses. Jeff designed and managed a site characterization program that definitively demonstrated that groundwater and soil gas impacts at the site were the result of off-site releases. He peer reviewed the design and implementation of a permeable reactive barrier (PRB), which serves to remediate an encroaching groundwater plume, as well as vapor intrusion mitigation systems for the site. He also completed a Phase I ESA for a remnant parcel subsequently developed for housing for veterans. The site consists of a multi-story commercial and residential apartment/condominium "transit village" complex.

3512 Clayton Road—Concord, CA
Lead Environmental Principal. Jeff provided technical leadership and review for a Brownfields redevelopment project in Concord. Following the Phase I and Phase II ESAs that identified soil and soil gas impacts, he assisted in the development of a remediation program that included a comprehensive pre-characterization program, accurately delineating soil impacts from past light-industrial uses and soil gas impacts from off-site businesses, allowing for accelerated field implementation. Following active soil remediation and post-remediation soil gas sampling, Jeff and the ENGEO team performed a vapor intrusion risk assessment that confirmed the site did not require long-term vapor mitigation systems. The site was granted case closure from the oversight regulatory agency within an accelerated review and approval timeframe. The project consists of a high-density residential development.

Google San Jose Downtown West—San Jose, CA
Project Manager. Jeff provided technical leadership and review for a comprehensive ESA for various industrial and commercial properties over approximately 50 acres in downtown San Jose considered for acquisition by Google. The purpose of the assessment was to identify known and unknown environmental concerns and recommended appropriate actions to quantify potential risks to inform due diligence efforts. The risk assessment utilized an innovative Geographic Information System (GIS) digital interactive platform that provides additional data beyond typical environmental information and is scalable for future project plans.

Blacow Road Project—Fremont, CA
Environmental Principal. Jeff has provided technical assistance for project remediation activities and prepared a Phase I ESA for site. The site is an active, open remediation site under the regulatory oversight of the San Francisco Bay Regional Water Quality Control Board (RWQCB). Impacts resulted from a variety of on-site and off-site commercial and industrial land uses dating back over 50 years. ENGEO has performed numerous characterization, remediation design, and monitoring

services for the Site. Remediation activities are underway at the site to address groundwater and soil gas impacts from volatile organic compounds (VOCs) and petroleum hydrocarbons. The remediation approach consists of several remedial and mitigative technologies, including soil vapor extraction (SVE), in-situ enhanced bioremediation, and post-remediation vapor intrusion mitigation systems to be installed in future residential structures. The project consists of a residential development.

The South Lathrop Commerce Center—Tracy, CA
Lead Environmental Principal. Jeff provided technical leadership and review for a Phase I ESA for the approximately 245-acre master-planned industrial development. The 4.2-million-square-foot development includes nine tilt-up concrete buildings, ranging in size from 282,000 square feet to over 1,000,000 square feet. Additional improvements for the logistics center include detention and retention basins, paved streets, parking, and drive lanes, a stormwater pump station and outfall, and a sewer lift station. Site development activities include grading operations, primarily consisting of minor cuts and fills, for individual pads and roadways, underground utility installation, pump station and outfall structure construction, flexible and rigid pavement construction, and vertical construction.

Alameda Landing—Alameda, CA
Lead Environmental Principal. Jeff has provided comprehensive environmental consultation services for the Alameda Landing project. He has prepared and managed the completion of Phase I ESA and ESA Update studies for subunits of the greater project area. He directed environmental characterization operations for the site, which was suspected of having been affected by naturally occurring methane deposits within the subsurface. Working closely with innovative protocols, Jeff was able to demonstrate to regulatory oversight officials that expensive vapor intrusion mitigation systems were not necessary for proposed residential structures, potentially saving millions of dollars to the site developer. Additionally, he has prepared several Remedial Action Completion Reports (RACRs) of development phases to achieve regulatory case closure. The project consists of a multi-phased residential housing community built as part of a master-planned redevelopment of a former United States Navy facility.

VTA BART Silicon Valley Berryessa Extension Design-Build Project—San Jose, CA
Project Manager. As the lead project team member with respect to hazardous materials, Jeff provided a range of value engineering consulting services relating to existing soils, groundwater, and building materials. ENGEO provided a range of value engineering consulting services to address existing soils, hydrology resources, SWPPP, and building materials.

Following a complex right-of-way that extended through numerous developed areas and paralleled an existing rail line, the project generated hundreds of thousands of cubic yards of excavated soil with potential toxic and hazard concerns. The right-of-way intersected several groundwater plumes emanating from former industrial and commercial sources. Further, a number of structures in the project footprint harbored lead-based paint and asbestos-containing building materials. ENGEO led the effort to accurately quantify these materials and devise strategies to effectively manage and mitigate these materials to drive overall project cost savings.

EDUCATION
BS Geology, University of California, Davis, 1985

EXPERIENCE
Years with ENGEO: 38
Years with Other Firms: 0

REGISTRATIONS & CERTIFICATIONS
Certified Hydrogeologist, CA 413
Professional Geologist, CA 5810
Certified Environmental Manager, NV EM-1332
HAZWOPER 40 Hour Training, CA 100830513934

SPECIALIZATIONS
- Environmental Assessments and Remediation
- Environmental Restoration
- Water Quality Studies
- Water Wells/Hydrogeology

SHAWN MUNGER, PG, CHG, CEM
Principal

Since 1985, Shawn has been managing groundwater supply evaluations, hydrogeologic studies, chemical assessments, Phase I and II Site Assessments, UST site investigations, risk-based corrective action, VOC remediation, and agricultural impact evaluations. He serves as Principal-in-Charge or Project Manager with extensive expertise in environmental and hazardous materials projects involving groundwater, hydrology, contaminant fate and transport, and complex remediation programs. A renowned expert in his field, Shawn has successfully solved many difficult environmental challenges to achieve desired project outcomes.

SELECT PROJECT EXPERIENCE

Vita Pakt—Covina, CA
Principal in Charge. Shawn provided principal oversight, data analysis, and consultation regarding site characterization, and risk evaluation. The project consists of a proposed multi-story residential development. Under Department of Toxic Substances Control (DTSC) oversight, work included review of historical data, soil, soil gas, and groundwater analysis, and consultation regarding potential vapor intrusion issues. The site was formerly operated as fruit packing and processing business from the 1940s through 2016. Work plans were developed for DTSC approval which included soil and soil gas risk assessments, resulting in DTSC concurring with a status of “no further action” for the site.

Hanover Cannery Park Project No. 14-473—San Jose, CA
Principal in Charge. Shawn provided principal oversight and review of site assessments, soil, soil gas, and groundwater. The historical use of the 9-acre commercial/industrial property site resulted in chlorinated solvent impacts to groundwater and soil gas. Extensive remediation consisting of soil vapor extraction and groundwater treatment was performed under RWQCB oversight. Successful remediation was achieved, and the site has been developed with a multi-story apartment complex.

Blake Avenue Project, Frogtown, Los Angeles—Los Angeles, CA
Principal in Charge. Shawn provided principal oversight, data analysis, and consultation regarding site characterization, and risk evaluation. The project consists of a proposed multi-story residential development. Work included review of historical data, groundwater analysis and consultation regarding potential vapor intrusion issues.

277 Fairchild 228/236 Evandale Ave—Mountain View, CA
Principal in Charge. Shawn provided oversight of soil, groundwater and soil gas characterizations, risk evaluations and Response Action Plan preparation under USEPA oversight. The site is within the Middlefield-Ellis-Whisman (MEW) Superfund site, contaminated with chlorinated solvents from legacy semiconductor plant operations. On-going remedial activities included soil vapor extraction, groundwater treatment using bioaugmentation, and groundwater/soil gas monitoring. The proposed site development consists of detached single-family homes and townhomes.

Value Marine Facility—Sacramento, CA
Principal in Charge. Shawn provided principal oversight and quality control services. The project site consists of a former gasoline service station and is in the State Leaking Underground Storage Tank (LUST) program, with lead agency oversight provided by the Sacramento County Environmental Health Department. Soil and groundwater impacts resulted from four former underground storage tanks. Remediation of vadose zone soil impacts (source) is currently being performed with a soil vapor extraction (SVE) system.

Gale Ranch Middle School, Preliminary Endangerment Assessment—San Ramon, CA
Principal in Charge. Shawn provided review and supervision of a Preliminary Endangerment Assessment prepared for this school site under the oversight of DTSC. This former site was developed into a public middle school.

Heritage Fields, Great Park Neighborhood—Irvine, CA
Principal in Charge. Shawn provided principal oversight of the preparation of over 50 phase I and Phase II Environmental Site assessments for the former El Toro Marine Corps Air Station (MCAS). The site is currently under development as a large-scale mixed-use development including several schools, residential subdivisions, recreational facilities and commercial development. Shawn also provided consultation regarding environmental site characterization and remediation at the site.

Sparklizing Cleaners and Laundry—Fremont, CA
Principal in Charge. Shawn provided principal review and data analysis for this former dry cleaning facility which had released tetrachloroethylene (PCE) to site soil and groundwater. Dry-cleaning operations have been conducted at the facility since 1974 and have resulted in chlorinated solvent impacts to soil and groundwater beneath the site. ENGEO prepared a Corrective Action Plan (CAP) and coordinated the in situ chemical oxidation program which consisted of injecting 35,000 gallons of potassium permanganate to the subsurface to oxidize chlorinated solvents.

The Rivers—West Sacramento, CA
Principal in Charge. Shawn provided oversight of during the preparation of a Removal Action Workplan (RAW) in coordination with CAL-EPA DTSC. The property is a proposed charter school site. ENGEO performed environmental site characterization work to address residual pesticide contamination die to historic termiticide applications. A Removal Action Workplan was developed under the oversight of CAL-EPA to excavate and remove the pesticide impacted soil. Remedial activities were completed in 2018 and DTSC issued a “no further action” letter. In addition, ENGEO performed a design-level geotechnical investigation for a proposed large water storage tank.

One Lake Development—Fairfield, CA
Principal in Charge. Shawn provided oversight, data analysis, and collaboration with DTSC personnel for Ole Lake Holdings, LLC. The project site consists of a 2,400-foot proposed mixed-use City of Fairfield trail, formerly operated as a Union Pacific railroad right-of-way. The alignment was impacted with arsenic and other constituents of concern. A Preliminary Endangerment Assessment (PEA) and soil encapsulation cleanup was successfully completed under DTSC oversight to successful completion to allow for future recreational use.

700 Parc on Main Development—Vacaville, CA
Principal in Charge. Shawn provided oversight of soil, groundwater, and risk evaluations, PEA preparation, and Removal Action Workplans (RAW) under DTSC oversight for mitigation of lead and pesticide-impacted soil. The site is proposed for mixed-use residential development. Soil mitigation is planned for 2024.

Highlands Ranch—Pittsburgh, CA
Principal in Charge. Shawn provided oversight, data analysis, and collaboration with RWQCB personnel. The project site consists of a 140-acre portion of the former Chevron Los Medanos Tank Farm located in Pittsburg, California. The site was historically occupied by 24 crude oil tanks and four wax ponds. Remediation of the crude oil tank and wax pond locations was conducted according to a remedial action plan (RAP) and oversight was provided by the CRWQCB. Remediation was performed over a period of four months and consisted of excavating approximately 110,000 cubic yards of impacted soil and placing the material in windrows for ex-situ bioremediation.

1000 Howe Road - Site Remediation—Martinez, CA
Principal in Charge. Shawn provided oversight and analysis for this soil remediation project. He worked closely with RWQCB personnel to develop a cost effective and timely closure for site closure and approval for residential development. The site is occupied by a general engineering contractor and a former bus leasing company. Improvements at the property included an office/warehouse structure and an equipment yard. The proposed development consists of a single-family residential subdivision.

Riverside Avenue Property—Roseville, CA
Principal in Charge. Shawn provided principal oversight of a Phase II Environmental Site Assessments and site characterization. The project site consists of an active auto sales and service facility. The historic use of the facility for industrial purposes resulted in soil and groundwater impacts beneath the site. The City of Roseville revised its plans for acquiring and redeveloping the site due to the identified soil and groundwater impacts.

STATE OF CALIFORNIA
dca
DEPARTMENT OF CONSUMER AFFAIRS

BOARD FOR PROFESSIONAL ENGINEERS, LAND SURVEYORS, AND GEOLOGISTS

This Is To Certify That Pursuant
To The Provisions of Chapter 7, Division 3 of The Business and Professions Code

Scott Robert Johns

IS DULY LICENSED AS A

PROFESSIONAL ENGINEER

IN

CIVIL ENGINEERING

In The State of California and Is Entitled To All The Rights and
Privileges Conferred In Said Code

DEPARTMENT OF CONSUMER AFFAIRS · BOARD FOR PROFESSIONAL ENGINEERS, LAND SURVEYORS, AND GEOLOGISTS · STATE OF CALIFORNIA ·

WITNESS OUR HAND AND SEAL

Certificate No C 78253

This 10th day of June, 2011, at Sacramento, California.

BOARD FOR PROFESSIONAL ENGINEERS,
LAND SURVEYORS, AND GEOLOGISTS

Interim Executive Officer

President

EPRENG 05/18/11

State of California Department of Consumer Affairs

BOARD FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS

This Is To Certify That Pursuant
To The Provisions of Chapter 7, Division 3 of The Business and Professions Code

Jeffrey Alan Adams

IS DULY LICENSED AS A

PROFESSIONAL ENGINEER

IN

CIVIL ENGINEERING

In The State of California, and Is Entitled To All The Rights and
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DEPARTMENT OF CONSUMER AFFAIRS · BOARD FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS · STATE OF CALIFORNIA

WITNESS OUR HAND AND SEAL

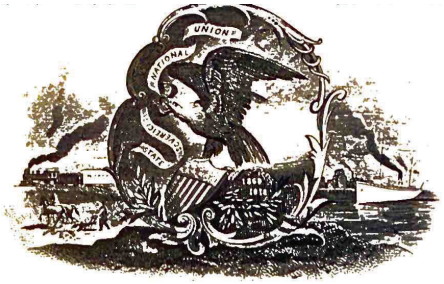
Certificate No C 69633

This 20th day of January, 2006, at Sacramento, California.

BOARD FOR PROFESSIONAL
ENGINEERS AND LAND SURVEYORS

Executive Officer

President



By authority of the Board of Trustees of the

UNIVERSITY OF ILLINOIS

and upon recommendation of the Senate

at Chicago

Jeffrey A. Adams

has been admitted to the Degree of

Doctor of Philosophy in Civil Engineering

and is entitled to all rights and honors thereto appertaining

Witness the Seal of the University and the Signatures of its Officers

this ninth day of May, nineteen hundred and ninety-nine.

UNIVERSITY OF ILLINOIS
LEARNING & LABOR
CHARTERED 1867

Chair of the Board of Trustees

Secretary of the Board of Trustees

President of the University

Chancellor

STATE OF CALIFORNIA

State of California Department of Consumer Affairs

State Board of Registration for Geologists and Geophysicists

CERTIFICATE

IT IS HEREBY CERTIFIED THAT

SHAWN PATRICK MUNGER

IS A DULY

REGISTERED GEOLOGIST

Certificate No. 5810

STATE BOARD OF REGISTRATION FOR GEOLOGISTS AND GEOPHYSICISTS

By _____
President

_____
Executive Officer

This 1st day of September, 1993

STATE OF CALIFORNIA

State of California Department of Consumer Affairs

State Board of Registration for Geologists and Geophysicists

CERTIFICATE

IT IS HEREBY CERTIFIED THAT

SHAWN PATRICK MUNGER

IS A DULY

CERTIFIED HYDROGEOLOGIST

Certificate No. HG 413

STATE BOARD OF REGISTRATION FOR GEOLOGISTS AND GEOPHYSICISTS

By Robert Lindblom
President

Dalton Pollard
Executive Officer

This 31st day of May, 1996

B. STATEMENT OF QUALIFICATIONS

B.1. SERVICES AND CAPABILITIES

ENGEO is an award-winning, employee-owned California Corporation of more than 400 geotechnical and civil engineers, geologists, hydrologists, hydrogeologists, environmental scientists, coastal engineers, construction quality-assurance representatives, and laboratory testing specialists serving clients in the U.S. and abroad for over 50 years. ENGEO has served many iconic and highly visible projects with complex engineering and geologic challenges.

ENGEO serves all types of projects including education, transportation, flood control, water storage, conveyance and treatment, industrial facilities, civic structures, healthcare, energy, manufacturing, ports, harbors, waterfront development, residential, mixed-use communities, and urban development.

Environmental Engineering

Geotechnical Engineering

Engineering Geology

Water Resources & Hydrology

Construction-Phase Testing & Observation

Special Inspection & Materials Testing

Stormwater Management

GIS/GPS

Geologic Hazard Abatement Districts (GHADs)

Entitlement & Permitting Support

Environmental Services

ENGEO provides comprehensive environmental engineering services with extensive experience in investigating contamination and providing remediation services to both public and private clients. Comprehensive environmental approaches are developed to meet project goals in planning, development, construction, and regulatory compliance.

To stay current with policies and keep every project on schedule, ENGEO routinely provides contact and coordination with project- and region-specific regulatory agencies to comply with Federal and State guidelines. Many clients rely on ENGEO as an advocate in working with Alameda County Department of Environmental Health (ACDEH), the Department of Toxics Substances Control (DTSC), the Regional Water Quality Control Boards (RWQCB), and United States Environmental Protection Agency (U.S. EPA).

ENGEO's expertise is recognized in conducting Preliminary Endangerment Assessments—obtaining DTSC approval on one of California's first school-related Assessments in early 2000. ENGEO is also working on the Oakland Athletics Howard Terminal Redevelopment project and obtaining DTSC approval for site investigations and human health risk assessments, including vapor intrusion concerns.

Our environmental services include:

- Phase I and II Environmental Site Assessments
- Vapor Intrusion Risk Assessment
- Design and Installation of Mitigation Measures
- Long-Term Stewardship and Management of Risk
- Underground Storage Tank Consultation
- Soil, Groundwater, and Soil Gas Remediation
- Subsurface Characterization
- Health Risk Assessments
- Input for EIR/EIS/CEQA
- Hydrogeologic Characterization
- Preliminary Endangerment Assessments
- HAZMAT Assessments, Permitting, and Disposal Services

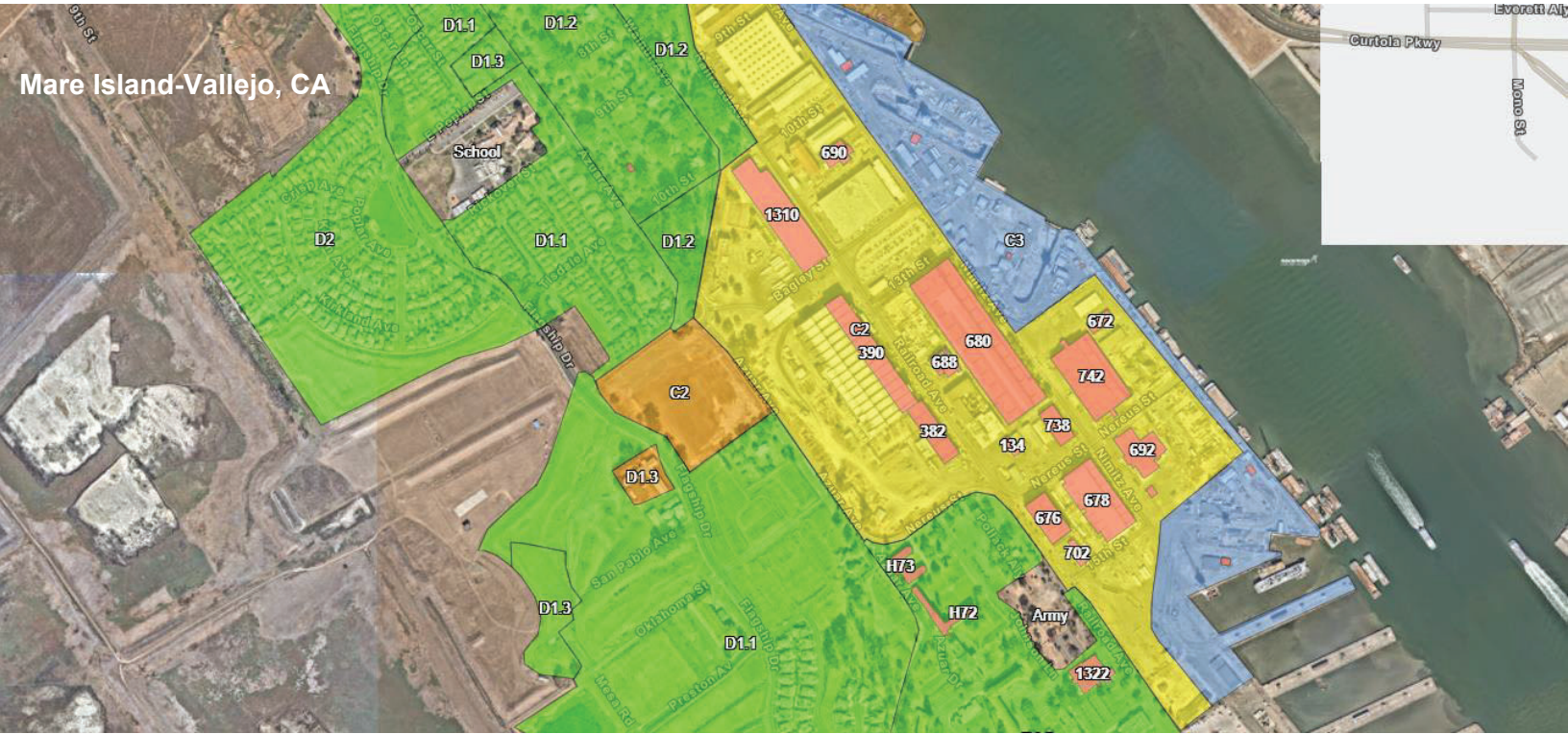
- Groundwater Monitoring Well Installation and Sampling
- Soil and Groundwater Characterization
- Risk Assessment and Management
- Naturally Occurring Asbestos (NOA) Dust Mitigation Plans (ADMP) and asbestos air monitoring

Geographical Information System (GIS) Services

The use of geospatial mapping and data visualization tools is rooted in earth science and engineering applications. For over 20 years, ENGEO has utilized and maintained Geographical Information System (GIS) capability using both proprietary and commercial systems. The 2-D, 3-D, and 4-D GIS and data visualization are used to support a broad range of disciplines, including geology and soil, hydrology, hazardous materials, historical analysis, wildfire impacts, construction, and business analytics. ENGEO utilizes GIS to elevate projects to new levels by creating interactive, web-based, project portals. These flexible portals allow us to capture, analyze, manage, and present relevant project data such as tables, images, and reports in one consolidated place. Each project dashboard serves as a central point of collaboration among owners, consultants, contractors, and other approved stakeholders. ENGEO has helped clients manage multiple complex projects including Storm Water Pollution Prevention Plans (SWPPPs), master-planned communities, Environmental Site Assessments (ESAs), and Geologic Hazard Abatement Districts (GHADs).

This GIS portal can adapt with OUSD's needs over time, set up maintenance alerts, prioritize action items, track progress, as well as include other information that OUSD values.

Below is a screen shot of the Mare Island Naval Base reuse GIS project that ENGEO has been working on and evolving for decades. ENGEO created a cross-functional GIS portal for project stakeholders (client, consultants, and contractors). The GIS portal is the primary collaboration tool used for planning, reporting, and collecting field data. It hosts spatial information from various disciplines (environmental, geotechnical, facility operations, landscaping, etc.). For example, reports were attached to the current and historic building layer to help facilitate environmental decision-making as well as identify potential asbestos containing building materials. In addition, numerous utilities are tracked in the GIS portal to document inspections, identify potential conflicts, and streamline data management.



Vapor Intrusion Risk Assessment Expertise

ENGEO understands every site is different with multiple variables to evaluate potential vapor intrusion risk (VIR). ENGEO works with regulatory agencies in Oakland as well as throughout California to assess risks for sensitive receptors including, but not limited to, potential child exposure, hospital occupants, residential, commercial, industrial, and ecological exposures. ENGEO utilizes multiple lines of evidence to evaluate potential VIR at a site. We develop Conceptual Site Models that convey soil, water, and vapor impacts as it relates to possible exposure pathways including potential vapor entry points and preferential pathways to evaluate vapor intrusion risk. With our experiences and relationships with regulators, we have had success with gaining regulatory approval of site-specific screening levels and associated risk that are more representative of site conditions which results in shorter project timelines and reduced costs.

Design and Installation of Mitigation Measures

We have extensive knowledge designing and installing vapor intrusion remediation and mitigation measures at projects with regulatory approval. While vapor intrusion might be the primary concern, it is critical to have a complete site characterization model and assess if there are contributory sources such as subsurface soil and/or groundwater impacts. ENGEO incorporates this information so we can develop an efficient mitigation plan for a particular site. We have extensive project experiences and strong relationships with owners, contractors, consultants, and regulators to design and install appropriate mitigation measures that are tailored to the concerns of a given site.

Long-Term Stewardship and Management of Risk

We have employed various risk management approaches to help manage site risks over time and are designed to address project-specific conditions. Risk management is often dynamic and may change over time; therefore, re-evaluation is critical over the life of a project.

B.2. WORKING WITH OUSD

Since 2011, we have collaborated with OUSD, offering geotechnical engineering and environmental engineering services for numerous schools within the district. Our approach has involved providing innovative solutions with a combination of geotechnical and environmental services. We have successfully accomplished the designated scope of services while remaining within the approved budget.

We have a strong understanding of the review process conducted by the State of California Division of State Architect (DSA) and California Geological Survey (CGS). Throughout the design and construction phases of school projects, we have achieved successful DSA approval for numerous projects. For example, as recently as July 2021, we received CGS approval of the first submission of our geotechnical report for OUSD's Laurel Child Development Center in Oakland, California.

ENGEO has also successfully worked with CAL-EPA DTSC for the approval of numerous new school sites and renovations, performing Preliminary Endangerment Assessments (PEA), risk evaluations and remedial actions.

Our approach to serving OUSD involves close collaboration with the District's staff. Our goal is to establish seamless communication, ensuring that our team integrates effectively with the District's staff. We understand the sensitive nature of working on school properties and will coordinate with OUSD staff, school staff, and school communities for any on-site visits, as needed. We also will be glad to support and attend public meetings as needed.

Our Project Manager, Scott Johns, PE, QSD, will be the main point of contact and will assist the District to address any issues and questions. Mr. Johns will be responsible for informing OUSD regarding project progress and upcoming steps.

After receiving authorization, we will contact OUSD to discuss the work to be performed as well as if there are any priority OUSD sites. If OUSD is able to provide site-specific information, we can review and incorporate into the assessment. ENGEO has worked extensively throughout Oakland and the San Francisco Bay Region and will review internal ENGEO documents to help with OUSD site assessments (see Figure 1 in Section B.4). We will also review on- and off-site conditions related to potential vapor intrusion concerns. As we are gathering and assessing information, we will compare to applicable regulatory agency requirements including U.S EPA, RWQCB, DTSC, and ACDEH. Throughout the project we can provide progress updates to OUSD as well as discuss preliminary findings. A draft report with our findings will be provided to OUSD. We will also provide an OUSD GIS Project Portal to help manage site risks and easily access assessment reports.

In addition to our local Oakland office, we have additional staff available to assist from nearby offices including San Francisco, San Ramon, and San Jose if needed. Among our more than 400 employees, we have 30 licensed California Geotechnical Engineers, 32 Professional Engineer, 15 Certified Engineering Geologists, 4 Certified Hydrogeologists, and 22 Professional Geologist.

Upon authorization, ENGEO has the expertise and staff that can complete assessments in an efficient and timely manner for all five regions and we will commit to completing all assessments within 12 months after authorization.

B.3. SCHEDULE CONTROL

A primary cornerstone of our company culture is adherence to deadlines. Timely delivery of projects to our clients according to agreed-upon schedules is essential. We establish internal project check-ins along the way and provide your project manager with regular updates of our work completion progress and budget status. Through these check-ins, we are able to make adjustments, if necessary, to maintain the project schedule. We know that if we keep the project on schedule, this is one of the best tools to also keep the project on budget.

Effective schedule control not only helps in delivering projects on time but also enhances overall project predictability, allowing stakeholders to make informed decisions and mitigate potential risks. It is a pivotal aspect of successful project management, ensuring that time remains a valuable and well-managed resource throughout the project's lifecycle.

Every day, we collaborate with our clients on various projects to assess risk. We routinely work on sites with our clients who are looking to purchase property and inherit liability on a condensed timeline, sometimes in less than 30 days. Through our experience, we know it is critical to have a well thought out plan to complete a project, as well as several contingency plans.

Examples of Demonstrated Success

EL TORO MARINE BASE
IRVINE, CALIFORNIA

This project presented numerous potential challenges, but through effective planning, communication, and execution, we managed to achieve success. Our client had to complete a full risk assessment (soil, water, vapor intrusion, hazardous materials, etc.) for over 50 properties ranging from approximately 3 to 40 acres that had decades of various military use and associated contamination. Our client was looking to develop sensitive residential housing on these properties and needed to assess potential risks before purchasing and taking ownership. We completed the risk assessments ahead of schedule and under budget partly because we identified critical items ahead of time, such as including potential site access limitations and agency response times and developed backup strategies with the client. There were also unforeseen field conditions, including encountering unknown contamination, which could have derailed the schedule and budget; though we quickly identified the risks, discussed the options with the client, and continued to move the project forward.

OAKLAND ATHLETICS BASEBALL STADIUM (HOWARD TERMINAL)
OAKLAND, CALIFORNIA

Howard Terminal is a very visible project with numerous agencies, companies, and public participation. We identified scheduling opportunities and saved the client time and money. One of ENGEO's responsibilities was to perform site characterization, human health risk assessment, and related remediation and mitigation measures for the project. The DTSC is the lead environmental regulatory agency and required a formal work plan for their review, comment, and approval prior to performing work. To streamline agency response times and field work, our work plan and reporting included items that the project team initially was not going to perform for months, which would have prompted additional work plans and risk possible approval delays. By including those items in our report, we were able to limit the agency review and decision time as well as eliminating the supplemental work plans for additional field work.

B.4. PROJECT EXPERIENCE

ENGEO routinely collaborates with regulatory oversight agencies. We work with clients to navigate ever-changing regulations, and we consult directly with regulatory agencies as experts in the field. We know that good relationships with regulatory agencies from the local to federal levels translate into practical solutions and improved schedules. ENGEO leadership proactively informs staff on regulations affecting our clients.

The Alameda County Department of Environmental Health ("ACDEH")

Alameda Marina Townhomes Redevelopment—Alameda, CA
The 12-acre property is being redeveloped into 31 residential townhome buildings with a total of 180 units as well as associated streets, utilities and open space. ENGEO performed environmental, geotechnical, GIS, dust and air monitoring, and construction observation services for the townhome builder. ENGEO performed site characterization activities related to soil, water, and soil gas/vapor intrusion impacts. With ACDEH approval, we prepared remediation and mitigation measures that were implemented and allowed redevelopment to proceed. ENGEO prepared information for the public and also participated in public meetings.

The Launch Development—Alameda, CA
ENGEO was brought into the project replacing the incumbent engineer and ENGEO performed site characterization and risk assessment activities for soil, water, and soil gas/vapor intrusion that culminated in formal ACDEH Case Closure.

The Foundry Development—Alameda, CA
ENGEO is currently performing site characterization and risk assessment activities for soil, water, and soil gas/vapor intrusion. ENGEO will discuss risks with the owner, ACDEH, public, and other stakeholders and then will design remediation and mitigation measure that will be implemented.

Malibu Grand Prix—Oakland, CA
ENGEO is working with ownership and prospective lessee to assess site impacts and related risks regarding soil, water, and soil gas/vapor intrusion. ENGEO will assist with public documentation and public meetings as requested.

West MacArthur Boulevard—Oakland, CA
Performed site assessment and vapor intrusion mitigation system design oversight with implementation support.

Gibbons Drive—Alameda, CA
Performed site assessment and dual phase extraction pilot study.

The California Department of Toxic Substances Control ("DTSC")

Howard Terminal—Oakland, CA
ENGEO performed geotechnical design and environmental hazardous materials risk assessments for The Howard Terminal site that was a former manufactured gas plant being considered for redevelopment for the Oakland Athletics Baseball Stadium and high-rise project. One of ENGEO's responsibilities was to perform site characterization, human health risk assessment, and designing related remediation and mitigation measures for the project.

Mora Ortega—Mountain View, CA
Following installation of vapor intrusion mitigation systems, ENGEO performs vapor intrusion monitoring related to a subsurface plume. The site is a new residential development.

Ohlone College—Newark, CA
ENGEO performed site characterization and risk assessment activities for soil, water, and soil gas/vapor intrusion. ENGEO prepared remediation and mitigation documents for the property.

Irvington Village—Newark, CA
ENGEO performed site characterization and risk assessment activities for soil, water, and soil gas/vapor intrusion. The case includes a historic dry cleaner that released chemicals impacting subsurface soil, water, and soil gas/vapor representing risk to current and future uses. ENGEO prepared remediation and mitigation documents for the property.

Mission Village Proposed School Site—Valencia, CA
ENGEO performed phase I and phase II ESAs for the proposed school site that is located within an abandoned oil field. We coordinated with DTSC and prepared Supplemental Site Investigation Report that included assess site risk, including soil gas/vapor intrusion assessment and DTSC concurred with our findings that "no further action" is recommended for the site.

Clayton Road—Concord, CA
ENGEO performed phase I and phase II ESAs for site that had past commercial and industrial uses as well as petroleum tank release. We assessed risks and worked with the DTSC to prepare site conceptual model and remedial action work plan for the planned residential redevelopment project. ENGEO performed supplemental testing pre, during, and post construction that concluded with "no further action" designation from the DTSC.

The San Francisco Bay Regional Water Quality Control Board ("RWQCB")

Henkel Chemical Manufacturing—Milpitas, CA
ENGEO has provided risk assessment activities for soil, water, and soil gas/vapor intrusion. Site Was used for industrial purposes beginning in the early 1900s and included manufacturing metal-treating chemicals as well as formulated herbicides. A former railroad track was onsite and located adjacent to the warehouses were most of the chemicals were loaded onto rail cars. Various chemical spills resulted in contamination of site soil, groundwater, and soil gas/vapor intrusion concern. Sensitive Alameda Creek is located along the southern boundary of the site, further complicating the site impacts. ENGEO designed remediation and risk management mitigation measures for the property. RWQCB issued a No Further Action designation.

1646 Centre Pointe Drive—Milpitas, CA
ENGEO provided risk assessment activities for soil, water, and soil gas/vapor intrusion. ENGEO worked closely with numerous project stakeholders, including the project proponent, the City of Milpitas, and the San Francisco Bay Regional Quality Control Board (RWQCB) to develop a comprehensive conceptual site model and facilitate a mitigation approach that will be protective of future residents and commercial tenants.

37343 & 37359 Blacow Road—Fremont, CA
The site is a former commercial and industrial site with hazardous materials. ENGEO provided closure of a leaking UST case, development of site-specific screening criteria, and preparation of a remedial plan that was approved by RWQCB including water and vapor remediation. RWQCB approved the Site with No Further Remedial Action needed. The site is a residential subdivision under construction.

Cannery Park Village—San Jose, CA
ENGEO worked extensively with the site owner and the RWQCB to prepare and implement a "Response Plan" to address chlorinated solvent impacts at the site that represent a risk to soil, water, and soil gas/vapor intrusion. soil gas and groundwater results have demonstrated that the extensive cleanup activities have been effective. The site has been developed as a large multi-story apartment complex.

Napa Pipeline—Napa, CA
ENGEO provides geotechnical and environmental services for the group of landowners and developers as required by regulatory agencies. We have completed risk assessment activities for soil, water, and soil gas/vapor intrusion. The site is a planned residential development.

Wiliam Street—San Leandro, CA
ENGEO assessed vapor intrusion risk at site. We also designed and implemented three soil vapor extraction/subslab depression systems in three buildings.

The United States Environmental Protection Agency ("USEPA")

Fairchild Drive—Mountain View, CA
ENGEO performed soil, groundwater and soil gas/vapor intrusion characterizations, risk evaluations and Response Action Plan preparation under USEPA oversight. The site is within the Middlefield-Ellis-Whisman (MEW) Superfund site, contaminated with chlorinated solvents from legacy semiconductor plant operations. On-going remedial activities included soil vapor extraction, groundwater treatment using bioaugmentation, and groundwater/soil gas monitoring. The site has been developed with detached single-family homes and townhomes.

Mare Island Former Navy Base—Vallejo, CA
The former Mare Island Navy Base is approximately 2,500 acres and ENGEO has been providing environmental and geotechnical services for decades. Our work has included risk assessments related to soil, water, soil gas/vapor intrusion and related construction/remediation activities.

Concord Naval Weapons Station—Concord, CA
We represent multiple potential developers planning to redevelop the Concord Naval Weapons Station (CNWS). We have reviewed decades of numerous reports for our clients to assess potential property risks based on planned uses.

Alameda Point West Midway—Alameda, CA
ENGEO represents a developer who is redeveloping the Alameda Point West Midway (APWM) site. We initially reviewed extensive documents for the property to assess risks, then working with the client, regulatory agency, and other stakeholders we completed robust environmental assessments including soil, water, and soil gas/vapor intrusion.

Fort Ord—Monterey, CA
We are working with the USEPA, the Army, and the developer to modify the existing well network to facilitate on-going remediation and monitoring activities. We have developed work plans and assessments for various phases of redevelopment including assessing potential risks from soil, water, and soil gas/ vapor intrusion.

Heritage Fields, Great Park Neighborhood—Irvine, CA
We prepared over 50 Phase I and Phase II Environmental Site Assessments for the former El Toro Marine Corps Air Station (MCAS). The site is currently under development as a large-scale mixed-use development including several schools, residential subdivisions, recreational facilities and commercial development.

Non-profit Organizations

Oakland Zoo—Oakland, CA (Conservation Society of America)
ENGEO provided permitting support, prepared construction plans and provided testing and observations services for the project. The 72-inch culvert underneath the entrance road to the Oakland Zoo suddenly and unexpectedly collapsed during a rainstorm on December 31, 2022. The collapse closed operations at the Zoo until the repair was completed. ENGEO worked with City of Oakland Staff and a contractor to obtain emergency permits from Federal and State agencies, re-construct the culvert and re-open the entrance road to the Zoo in approximately 3.5 weeks.

Dignity Village—Alameda, CA (Dignity Moves)
ENGEO provided an exploration and design recommendations for the 48-unit interim supportive housing community. Given the size of the parcel and the timing of product delivery, traditional ground improvement, such as a surcharge program, was not feasible. ENGEO worked with the team to design the project such that it could be constructed on-time despite the challenging conditions.

Dangermond Preserve—Santa Barbara, CA (The Nature Conservancy)
ENGEO provided various geotechnical, geologic, and permitting consultation services. We completed design and construction oversite of various mitigation of storm related damages located in areas adjacent to the access road to the Cojo Ranch headquarters. Mitigation included rebuilding of a slope failure with a geogrid reinforced slope and rebuilding of erosion gullies including replacement of culverts.

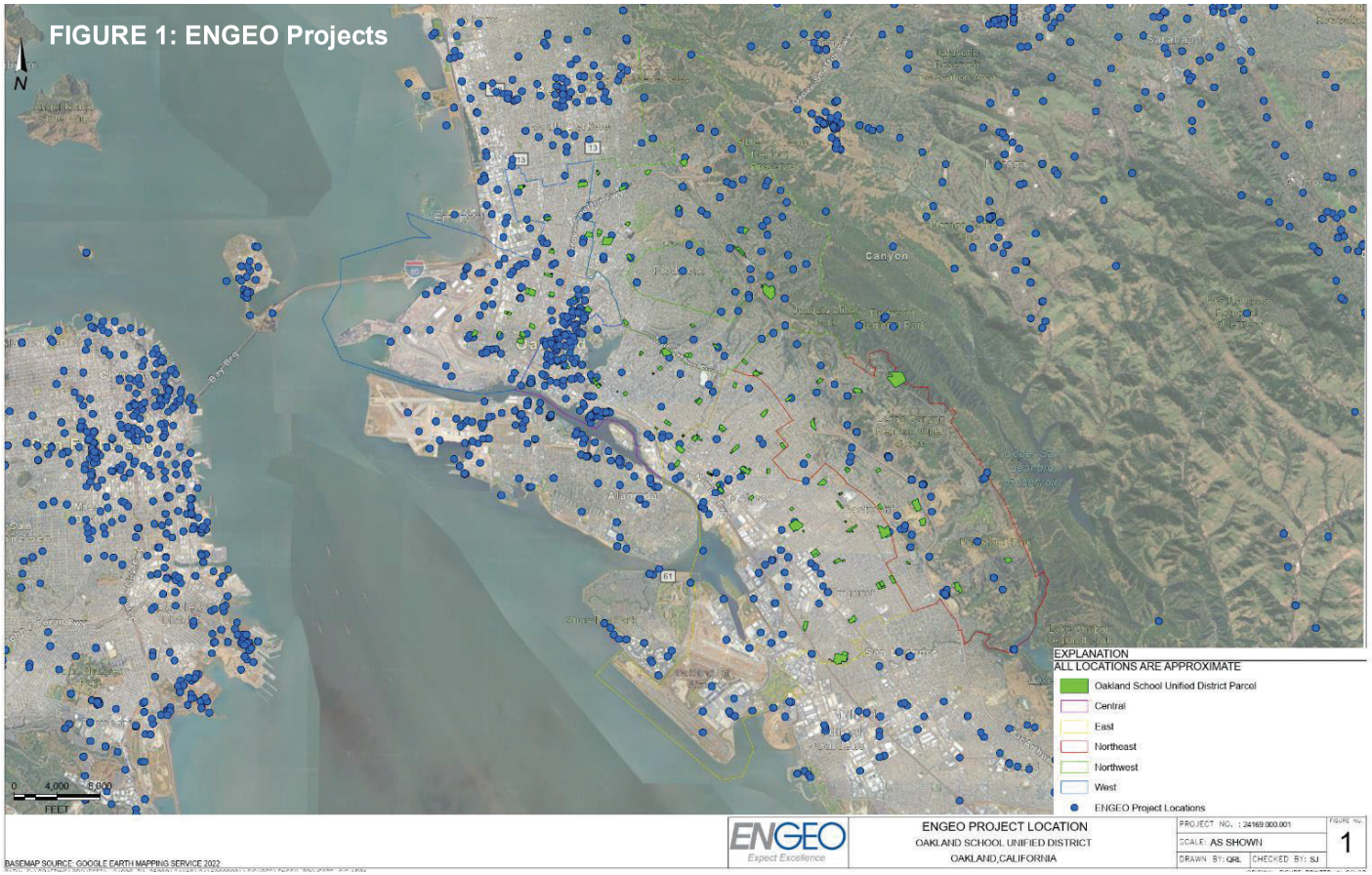
San Diego Safari Park—Sand Diego, CA (San Diego Zoo Wildlife Alliance)
ENGEO developed and continues to update a cross-functional GIS platform for all Safari Park stakeholders. The GIS platform is used for regular project progress updates and could also be used for document archiving, repository for digital imagery, links to video surveys, and a means for real-time improvement plan overlay creation. The GIS platform can continue to be utilized and is readily extendable as an asset management system, for future operations and maintenance, and for planning and maintenance of other park utilities and infrastructure.

Museum of Jazz and Art—Oakland, CA (Oakland Museum of Jazz and Art)
ENGEO provided investigation and consultation services for the historic, one-story building with a partial basement. The proposed museum will consist of a four-story concrete- or steel-frame museum building with one partial level of below-grade parking and office space.

La Vista Residential—Alameda, CA (Eden Housing)
The La Vista Residential project is a part of a new community in Hayward consisting of the two proposed residential buildings, a proposed 36,000-square-foot school that will serve up to 384 students from preschool through 6th grade, and a proposed neighboring 50 acre park. ENGEO is working with Eden Housing and the Pacific Companies to provide geotechnical consultation services during the feasibility stage, project design, and site development construction. ENGEO began working on the project with Eden Housing in 2020.

Local Project Experience

ENGEO has been providing environmental and vapor intrusion services for decades throughout Oakland and the San Francisco Bay Region. Figure 1 shows ENGEO projects (blue) as well as OUSD sites (green).



B.5. NUMBER OF EMPLOYEES

ENGEO employs more registered geotechnical engineers and certified engineering geologists than any firm of our relative size. Our teams collaborate across offices and disciplines to bring the absolute best resources to each project.

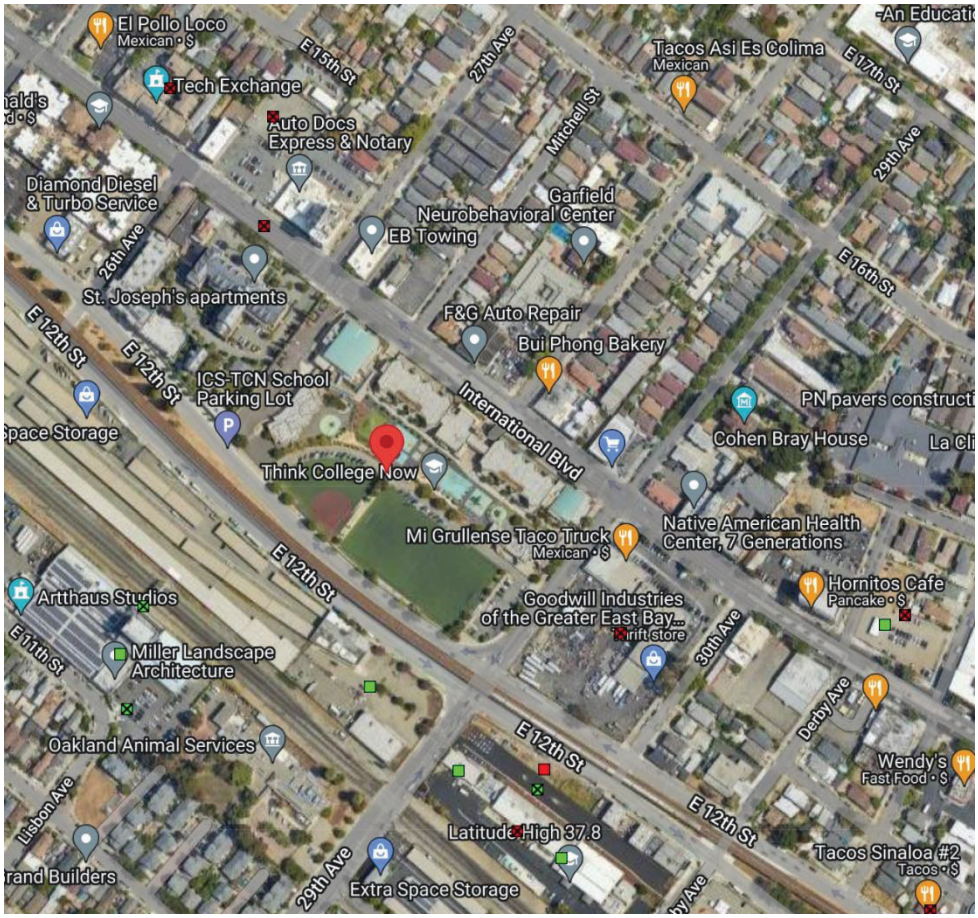
We currently have 120 employees that reside in the nine Bay Area counties.

C. FEE PROPOSAL

In preparation of this submittal we reviewed the provided OUSD GIS link of facilities and compared to publicly available documents as well as internal ENGEO documents to accurately estimate the risk profiles and associated fee to complete an appropriate assessment. Our fee also includes creating a GIS portal for OUSD.

OUSD facilities with numerous surrounding impacted sites will require relatively more assessment time to determine if nearby sites are impacting OUSD sites than sites with less surrounding impacted sites.

For example, the site located at 2825 International Boulevard (Central Region) has many reported cases surrounding the area per GeoTracker Database, as shown below.

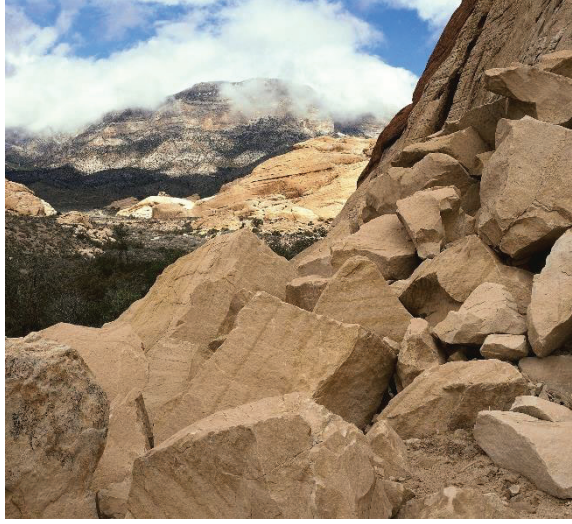


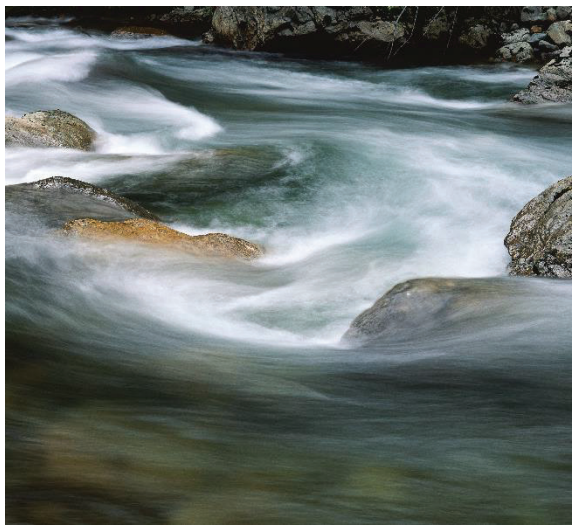
For the East Region, we propose a lump sum of B $55,000 (22 sites of $2,500/site).

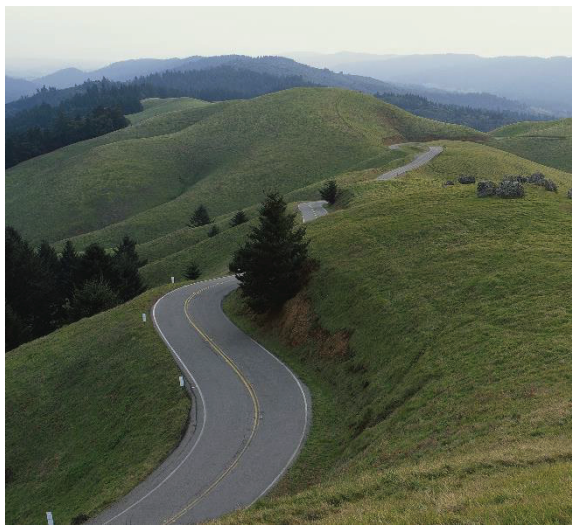
ENGEO proposes to provide a fee discount if awarded all five regions. For all five regions, we propose a total lump sum of $180,000 (96 sites of $1,875/site).

C.1. EXCLUSIONS OR ASSUMPTIONS UNDERLYING THE FEE PROPOSAL

- Upon authorization, multiple sites can be worked on in parallel.
- In response to question and answer #25 (OUSD letter dated September 27, 2023) interviews and site reconnaissance will not be conducted. If desired by OUSD, ENGEO will be glad to coordinate with OUSD on scope, timing, and fee.
- Our assessment fee includes preparation of up to one draft document and a response to one round of comments. Additional response to comments or preparation of additional draft documents will be considered extra work and will be billed on a time-and-expenses basis in accordance with our current fee schedule.
- ENGEO will be glad to support and attend public participation meetings upon request. As an estimate or schedule has not been provided, we suggest a budget of $10,000 per region.

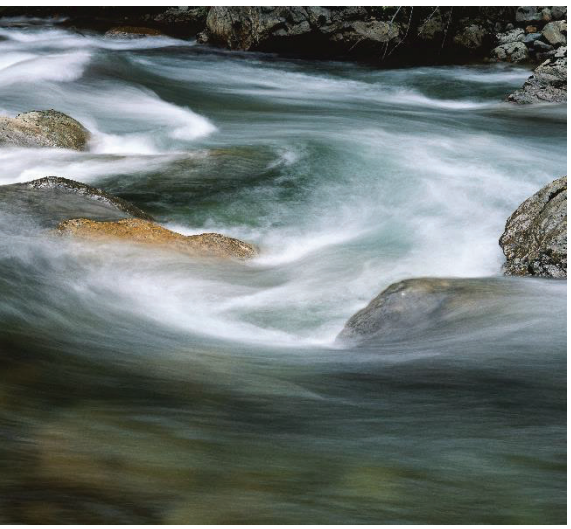


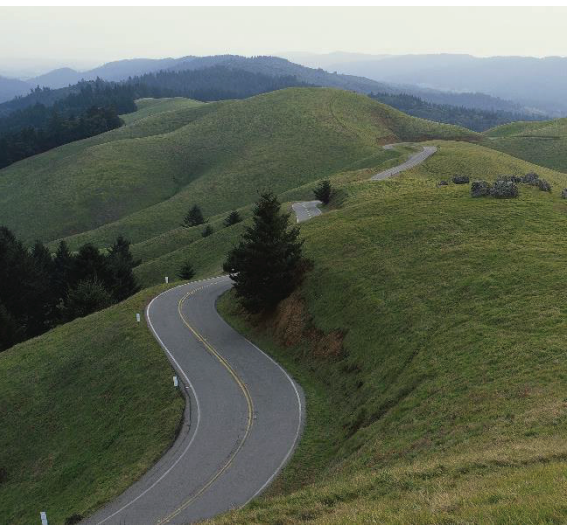




ENGEO

Expect Excellence





Vapor Intrusion Initiative
Project #: 23125
Oakland Unified School District

Region: West

SUBMITTED TO:
Rebecca Littlejohn
Oakland Unified School District
1000 Broadway Ste 450
Oakland, CA 94607
Rebecca.Littlejohn@ousd.org

October 12, 2023

P24169.000.001

ENGEO
Expect Excellence

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Project No.
P24169.000.001

October 12, 2023

Rebecca Littlejohn
Oakland Unified School District
1000 Broadway Ste 450
Oakland, CA 94607
Rebecca.Littlejohn@ousd.org

Subject: Vapor Intrusion Initiative, Project #: 23125
Region: West
Oakland, California

A. LETTER OF INTEREST

Dear Ms. Littlejohn:

Founded in 1971, ENGEO is an employee-owned, award-winning firm of geotechnical and civil engineers, geologists, environmental scientists, hydrologists, hydrogeologists, coastal engineers, construction quality-assurance representatives, and laboratory testing specialists.

We have built a reputation for delivering high-quality environmental services to clients across various industries. Our team of experts specializes in vapor intrusion assessment, site characterization, risk assessment, mitigation, remediation, and long-term risk management making us well-equipped to address the specific challenges associated with your projects.

When you select ENGEO as your consultant, you can expect to receive the following.

Proven Track Record: We have successfully completed numerous vapor intrusion projects for clients in both the public and private sectors. We have worked together with OUSD since 2011 on several successful projects and look forward to continue to build upon our partnership.

Experienced Team: We have assembled a talented group of engineers and scientists who will work collaboratively to ensure the success of your projects. ENGEO will support OUSD through our local Oakland office as well as our other surrounding San Francisco Bay Area offices. We also have numerous California Professional Engineers, Geologist, and Geotechnical Engineers.

Regulatory Compliance: We have extensive knowledge of local, state, and federal regulations and will ensure that your project is compliant with all relevant requirements. We have numerous current projects with oversight from Alameda County Department of Environmental Health, Department of Toxic Substances Control, San Francisco Regional Water Quality Control Board, and United States Environmental Protection Agency.

Cost-Effective Solutions: We are committed to providing cost-effective solutions that minimize environmental risks. As part of preparing this submittal we reviewed OUSD sites, nearby ENGEO projects, as well as offsite impacted sites that could impact multiple OUSD sites and identified cost-efficiencies opportunities including performing multiple OUSD site studies in parallel.

Ability to Meet Deadlines: We understand the importance of meeting project timelines and will work diligently to ensure that your project stays on schedule. We are accustomed to providing high-quality services with relatively short notice. Our clients, both public and private, have come to know and trust us for this aspect of our service offering.

Legal Name and Address

ENGEO Incorporated
2010 Crown Canyon Place, Suite 250
San Ramon, CA 94583
(925) 866-9000 | Fax (888) 279-2698
www.engeo.com
Employee-owned California Corporation
Federal Tax ID: 94-1748418
Federal Tax Classification: C Corp

Project Managers

Scott Johns, PE, QSD – Associate
Jeff Adams, PhD, PE – Principal
Shawn Munger, PG, CHG – Principal

Statements

We have received and reviewed the Template Services Agreement. We understand that this is the legal agreement that ENGEO will need to sign, and ENGEO agrees to sign it, without objection or reservation, if selected by the District. We understand that only the District, at its sole discretion, may change the terms of the Agreement.

We certify that no official or employee of the District, nor any business entity in which an official of the District has an interest, has been employed or retained to solicit or assist in responding to the RFP and that ENGEO has no current intent (nor has promised) to employ or retain any official or employee of the District, nor any business entity in which an official of the District has an interest, to perform any of the services for which ENGEO might be selected by this RFP process.

No official or employee of the ENGEO has ever been convicted of an ethics violation.

By virtue of submission of this Proposal, we declare that all information provided is true and correct.

If you have any questions or comments regarding this letter, please call and we will be glad to discuss them with you.

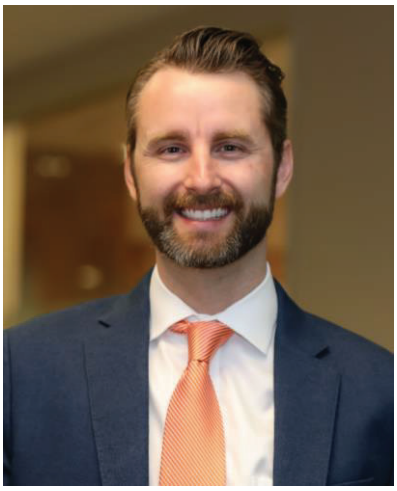
Sincerely,

ENGEO Incorporated

Scott Johns, PE

Shawn Munger, CHG

Attachments: Resumes of Project Managers
Professional Certifications



EDUCATION
BS Civil Engineering Santa Clara University 2007

EXPERIENCE
Years with ENGEO: 16
Years with Other Firms: 0

REGISTRATIONS & CERTIFICATIONS
Professional Engineer, CA 78253
CASQA QSD Certified, CA 25073
HAZWOPER 40 Hour Training, CA 110908110562

SPECIALIZATIONS
- Environmental Assessments and Remediation
- Environmental Restoration
- Groundwater Modeling
- Hydraulic Engineering
- Hydrology
- Petroleum Hydrocarbon Site Assessment and Remediation
- Phase 1 Environmental Audits
- Stormwater Management
- SWPPP Implementation
- SWPPP Preparation
- Water Quality Studies
- Water Resources
- Water Wells/Hydrogeology

AFFILIATIONS
ASCE American Society of Civil Engineers

SCOTT R. JOHNS, PE, QSD
Associate

Scott joined ENGEO in 2007 and serves projects of various scale for private and public clients. He conducts complex field investigations, data analysis, and provides management services. Additionally, he conducts and oversees Site Investigation Reports (SIRs), Phase I and II Environmental Site Assessments (ESAs) as well as remedial actions for contaminated sites with impacts that include petroleum hydrocarbons, metals, pesticides, PCBs, volatile organic compounds (VOCs), and semi-VOCs in soil, groundwater, and soil vapor/vapor intrusion. Scott is experienced with working with various regulatory agencies including U.S EPA, California DTSC, California Regional Water Quality Control Boards, ACDEH, BAAQMD, as well as city, county, and CUPA agencies throughout California.

SELECT PROJECT EXPERIENCE

Howard Terminal; Oakland Athletics New Ballpark Development—Oakland, CA
Project Manager. While working with stakeholders including but not limited to the Oakland Athletics, Department of Toxics Substances Control, and Port of Oakland, Scott performed environmental review of past site use, creation of comprehensive subsurface investigation to support site-specific human health and ecological risk assessment, and future remedial action work plan. The Howard Terminal site is a former container terminal along the Port of Oakland's Inner Harbor. The site was originally a bulk-break terminal dating back to the early 1900s with a manufactured gas plant located in the eastern portion of the site. The terminal was expanded and converted to a container terminal in the 1980s. Improvements at the site will include a Major League Baseball stadium as well as midrise and high-rise buildings to provide a mix of residential, retail, and other commercial uses. The project plans also include construction of an overhead gondola from the Oakland Convention Center to Jack London Square. The site grade will be raised to address sea-level rise. The existing wharf will be retained as part of the site redevelopment. The site is underlain by liquefiable fill and soft compressible Young Bay Mud. The past industrial uses of the site resulted in hazardous material impacts within the soil, groundwater, and soil vapor/vapor intrusion that will be mitigated as part of redevelopment.

Google Downtown Development—San Jose, CA
Project Manager. Scott performed a comprehensive Environmental Site Assessment for various industrial and commercial properties over approximately 50 acres in

Downtown San Jose being considered for Google's campus. As part of the assessment, Scott identified known and unknown environmental concerns and recommended appropriate actions to quantify potential risks. Scott also prepared the risk assessment utilizing a Geographic Information System (GIS) that is a digital interactive platform that provides additional data beyond typical environmental information and is scalable for future project plans.

Alameda Marina Redevelopment—Alameda, CA
Project Manager. The 12-acre Alameda Marina redevelopment project includes residential townhome buildings with a total of 180 units as well as associated streets, utilities, and open space. Scott performed or oversaw environmental, geotechnical, GIS, dust and air monitoring, and construction observation services for the townhome builder. Through site characterization activities and coordination with Alameda County Department of Environmental Health (ACDEH), ENGEO identified key environmental issues including potential vapor intrusion risks. ENGEO utilized field instrumentation coupled with outside laboratory results to efficiently keep redevelopment activities progressing. ENGEO utilized statistical modeling to assist with remediation and mitigation of potentially hazardous materials. ENGEO also worked with ACDEH and landfills to stabilize and characterize hazardous material. This innovative approach saved the project millions of dollars in total. Besides technical challenges with the site, political and public challenges existed and were mitigated through community outreach and transparent notifications of upcoming work.

Mare Island Naval Base Redevelopment—Vallejo, CA
Project Manager. Scott provides project management and quality control of geotechnical, environmental, hydrologic and construction services related to residential, commercial, and industrial development of this historic Naval Base redevelopment. In addition, Scott manages the Mare Island project GIS and continues to add features to the GIS based on stakeholder requests.

Henkel Chemical Manufactory Site—Fremont, CA
Project Manager. Site was a previous chemical manufacturing facility that resulted in impacts related to total petroleum hydrocarbons, metals, and dioxins/furans. Scott prepared a Site Investigation Report that discussed the potential site concerns and prepared a Removal Action Work Plan to allow for residential redevelopment that was approved by the San Francisco Regional Water Quality Control Board. During remedial actions, Scott directed appropriate management and monitoring of soil, stormwater, dust, and construction debris. The implementation report was submitted to RWQCB who reviewed and approved that no further remediation is needed and is suitable for residential redevelopment.

Heritage Fields, Great Park Neighborhood—Irvine, CA
Project Manager. Scott performed and provided oversight to over 50 phase I and Phase II Environmental Site assessments and consultation services regarding environmental site characterization and remediation for the former El Toro Marine Corps Air Station (MCAS). The project is a master-planned community that will include roughly 9,500 residential units, schools, parks, open space, commercial, and industrial developments along with associated drainage and utility improvements. The project encompasses approximately 4,700 acres and is a base reuse project for the former El Toro Marine Corps Air Station (MCAS) and former Bordiers Nursery. Several active drainage corridors pass through portions of the site including Marshburn, Bee Canyon, Agua Chinon, Borrego Canyon Serrano Creek, and San Diego Creek.

VTA BART Silicon Valley Berryessa Extension Design-Build Project—San Jose, CA
Project Manager. As a leading project team member with respect to hazardous materials, Scott provided a range of value engineering consulting services with respect to existing soils,

groundwater, and building materials. Following a complex right-of-way that extends across multiple city and county lines through numerous developed areas. The project generated hundreds of thousands of yards of excavated soil with potential toxic and hazard concerns. The proposed right-of-way intersects several groundwater plumes emanating from industrial and commercial sources. Scott led the team effort to accurately quantify these materials and devise strategies to effectively manage and mitigate these materials to drive overall project cost savings. The project is a comprehensive design/build package for the Bay Area Rapid Transit (BART) extension project from Fremont to San Jose, with track alignment and two stations: one at Milpitas and one at Berryessa.

277 Fairchild 228/236 Evandale Ave—Mountain View, CA
Associate Engineer. Scott provided oversight of soil, groundwater and soil gas/vapor intrusion characterizations, risk evaluations and Response Action Plan preparation under USEPA oversight. The site is within the Middlefield-Ellis-Whisman (MEW) Superfund site, contaminated with chlorinated solvents from legacy semiconductor plant operations. On-going remedial activities included soil vapor extraction, groundwater treatment using bioaugmentation, and groundwater/soil gas monitoring. The proposed site development consists of detached single-family homes and townhomes.

Ohlone Community College—Newark, CA
Project Manager. Scott is working with various stakeholders and agencies including DTSC to evaluate potential risks associated with proposed college and flood control improvements.

Sparklizing Cleaners and Laundry—Fremont, CA
Staff Engineer. Scott designed and executed field activities to delineate the tetrachloroethylene plume associated with past drycleaner practices located onsite. The project site consists of a dry-cleaning facility located within a commercial/retail center. Dry-cleaning operations have been conducted at the facility since 1974 and have resulted in chlorinated solvent impacts to subsurface soil, groundwater, and soilgas/vapor intrusion risks. We prepared a Corrective Action Plan (CAP) and coordinated the in-situ chemical oxidation program which consisted of injecting 35,000 gallons of potassium permanganate to the subsurface to oxidize chlorinated solvents.

Montecito Vista II—San Jose, CA
Project Manager. Scott reviewed the complex site history that included former automobile wreckage/salvage yards and based on his findings was able to negotiate with the lead regulating agency, Department of Toxic Substances (DTSC), supplemental characterization activities to address potential residential redevelopment concerns. Based on the supplemental characterization activities, Scott was able to identify the constituents of concern and associated risks. Scott worked with the regulators and stakeholders to develop and implement an efficient remediation program that resulted in cleaning up the Site for residential and park use.

930 University Ave—Los Gatos, CA
Project Manager. Scott performed site assessment for the Town of Los Gatos. Known environmental concerns included an on-site historic leaking underground storage tank and an operational hydraulic lift. Scott developed and implemented a sampling procedure to effectively delineate the impacted areas. After analyzing the results, Scott communicated with the client the options to mitigate the area and coordinated with regulatory agencies to progress to site redevelopment that includes a community park with associated facilities and improvements including parking, roadways, and utilities. The site was a Verizon maintenance yard and located adjacent to Vasona Reservoir.

EDUCATION

BS Civil Engineering University of Illinois at Chicago 1994

MS Civil Engineering University of Illinois at Chicago 1996

PhD Civil Engineering University of Illinois at Chicago 1999

MBA University of Washington 2004

EXPERIENCE

Years with ENGEO: 25
Years with Other Firms: 0

REGISTRATIONS & CERTIFICATIONS

Environmental Manager, NV 2150

Professional Engineer, CA 69633

Envision ENV SP Credentialed

SPECIALIZATIONS

- Environmental Assessment, Characterization, and Remediation
- Green and Sustainable Remediation (GSR)
- Resilient and Sustainable Infrastructure Analysis and Applications
- Geologic Hazard Abatement Districts (GHADs)

AFFILIATIONS

ASCE American Society of Civil Engineers

ASCE Geo-Institute

JEFFREY ADAMS, PHD, PE

Principal

Jeff joined ENGEO in 1999. For over 25 years, Jeff has provided efficient, innovative solutions to clients by addressing geoenvironmental issues within the natural and built environment. He leads environmental assessment, characterization, and remediation projects; prepares various environmental health and safety (EHS) documents and deliverables; and provides a range of consultation services for Geologic Hazard Abatement District (GHAD) formation and operation.

A noted thought leader across several technical dimensions, Jeff's research interests include sustainability, green and sustainable remediation (GSR), resilient infrastructure solutions, environmental applications, and emerging public/private financial mechanisms to mitigate flood-related losses. He has authored and co-authored numerous environmental remediation-related textbooks, instructional materials, and research papers that have been presented worldwide and published in a diverse group of academic and professional journals.

SELECT PROJECT EXPERIENCE

Howard Terminal—Oakland, CA

Lead Environmental Principal. Jeff has provided ongoing technical leadership during several environmental studies for the redevelopment of the Howard Terminal site. The approximately 62.1-acre Property is a former container terminal along the Port of Oakland's Inner Harbor. The Property was originally a bulk-break terminal dating back to the early 1900s, with a manufactured gas plant located in the eastern portion of the Property. The terminal was expanded and converted to a container terminal in the 1980s. Improvements will include a Major League Baseball stadium as well as mid-rise and high-rise buildings to provide a mix of residential, retail, and other commercial uses. ENGEO performed a phase I environmental site assessment (ESA), phase II ESAs consisting of soil, soil gas, and groundwater sampling across the property, EIR preparation support, the preparation of a human health and ecological risk assessment (HHERA), and a draft remedial action plan (RAP). Additional technical work included assessment of the potential effects of sea level rise (SLR), on-site contamination conditions, and scoping of subarea-specific remediation design and implementation plans (RDIPs).

1511 Jefferson—Oakland, CA
Project Manager. Jeff provided environmental and geotechnical consultation services for a Brownfields redevelopment project in downtown Oakland. The project included several challenges, including limited site access due to on-site business activities, environmental impact related to previous site use, and the presence of several adjacent mid-rise structures. Jeff developed cost effective remedial value engineering solutions to mitigate the presence of geotechnically and environmentally constraining subsurface solutions. Jeff worked with the design team to establish cost-effective retaining wall and foundation systems, designed and observed a subsurface environmental mitigation program, and assisted in the design of a structure-wide vapor barrier. The project, serving as a cornerstone of the revitalization of downtown Oakland, consists of a multi-story residential condominium structure.

Crown Chevrolet Property—Dublin, CA
Project Manager. Jeff provided comprehensive environmental consultation services for the project. Working on behalf of the purchaser, Jeff collaborated with a multi-firm consulting team to characterize and mitigate environmental impacts resulting from previous on-site automotive maintenance activities and off-site businesses. Jeff designed and managed a site characterization program that definitively demonstrated that groundwater and soil gas impacts at the site were the result of off-site releases. He peer reviewed the design and implementation of a permeable reactive barrier (PRB), which serves to remediate an encroaching groundwater plume, as well as vapor intrusion mitigation systems for the site. He also completed a Phase I ESA for a remnant parcel subsequently developed for housing for veterans. The site consists of a multi-story commercial and residential apartment/condominium "transit village" complex.

3512 Clayton Road—Concord, CA
Lead Environmental Principal. Jeff provided technical leadership and review for a Brownfields redevelopment project in Concord. Following the Phase I and Phase II ESAs that identified soil and soil gas impacts, he assisted in the development of a remediation program that included a comprehensive pre-characterization program, accurately delineating soil impacts from past light-industrial uses and soil gas impacts from off-site businesses, allowing for accelerated field implementation. Following active soil remediation and post-remediation soil gas sampling, Jeff and the ENGEO team performed a vapor intrusion risk assessment that confirmed the site did not require long-term vapor mitigation systems. The site was granted case closure from the oversight regulatory agency within an accelerated review and approval timeframe. The project consists of a high-density residential development.

Google San Jose Downtown West—San Jose, CA
Project Manager. Jeff provided technical leadership and review for a comprehensive ESA for various industrial and commercial properties over approximately 50 acres in downtown San Jose considered for acquisition by Google. The purpose of the assessment was to identify known and unknown environmental concerns and recommended appropriate actions to quantify potential risks to inform due diligence efforts. The risk assessment utilized an innovative Geographic Information System (GIS) digital interactive platform that provides additional data beyond typical environmental information and is scalable for future project plans.

Blacow Road Project—Fremont, CA
Environmental Principal. Jeff has provided technical assistance for project remediation activities and prepared a Phase I ESA for site. The site is an active, open remediation site under the regulatory oversight of the San Francisco Bay Regional Water Quality Control Board (RWQCB). Impacts resulted from a variety of on-site and off-site commercial and industrial land uses dating back over 50 years. ENGEO has performed numerous characterization, remediation design, and monitoring

services for the Site. Remediation activities are underway at the site to address groundwater and soil gas impacts from volatile organic compounds (VOCs) and petroleum hydrocarbons. The remediation approach consists of several remedial and mitigative technologies, including soil vapor extraction (SVE), in-situ enhanced bioremediation, and post-remediation vapor intrusion mitigation systems to be installed in future residential structures. The project consists of a residential development.

The South Lathrop Commerce Center—Tracy, CA
Lead Environmental Principal. Jeff provided technical leadership and review for a Phase I ESA for the approximately 245-acre master-planned industrial development. The 4.2-million-square-foot development includes nine tilt-up concrete buildings, ranging in size from 282,000 square feet to over 1,000,000 square feet. Additional improvements for the logistics center include detention and retention basins, paved streets, parking, and drive lanes, a stormwater pump station and outfall, and a sewer lift station. Site development activities include grading operations, primarily consisting of minor cuts and fills, for individual pads and roadways, underground utility installation, pump station and outfall structure construction, flexible and rigid pavement construction, and vertical construction.

Alameda Landing—Alameda, CA
Lead Environmental Principal. Jeff has provided comprehensive environmental consultation services for the Alameda Landing project. He has prepared and managed the completion of Phase I ESA and ESA Update studies for subunits of the greater project area. He directed environmental characterization operations for the site, which was suspected of having been affected by naturally occurring methane deposits within the subsurface. Working closely with innovative protocols, Jeff was able to demonstrate to regulatory oversight officials that expensive vapor intrusion mitigation systems were not necessary for proposed residential structures, potentially saving millions of dollars to the site developer. Additionally, he has prepared several Remedial Action Completion Reports (RACRs) of development phases to achieve regulatory case closure. The project consists of a multi-phased residential housing community built as part of a master-planned redevelopment of a former United States Navy facility.

VTA BART Silicon Valley Berryessa Extension Design-Build Project—San Jose, CA
Project Manager. As the lead project team member with respect to hazardous materials, Jeff provided a range of value engineering consulting services relating to existing soils, groundwater, and building materials. ENGEO provided a range of value engineering consulting services to address existing soils, hydrology resources, SWPPP, and building materials.

Following a complex right-of-way that extended through numerous developed areas and paralleled an existing rail line, the project generated hundreds of thousands of cubic yards of excavated soil with potential toxic and hazard concerns. The right-of-way intersected several groundwater plumes emanating from former industrial and commercial sources. Further, a number of structures in the project footprint harbored lead-based paint and asbestos-containing building materials. ENGEO led the effort to accurately quantify these materials and devise strategies to effectively manage and mitigate these materials to drive overall project cost savings.

EDUCATION
BS Geology, University of California, Davis, 1985

EXPERIENCE
Years with ENGEO: 38
Years with Other Firms: 0

REGISTRATIONS & CERTIFICATIONS
Certified Hydrogeologist, CA 413
Professional Geologist, CA 5810
Certified Environmental Manager, NV EM-1332
HAZWOPER 40 Hour Training, CA 100830513934

SPECIALIZATIONS
- Environmental Assessments and Remediation
- Environmental Restoration
- Water Quality Studies
- Water Wells/Hydrogeology

SHAWN MUNGER, PG, CHG, CEM
Principal

Since 1985, Shawn has been managing groundwater supply evaluations, hydrogeologic studies, chemical assessments, Phase I and II Site Assessments, UST site investigations, risk-based corrective action, VOC remediation, and agricultural impact evaluations. He serves as Principal-in-Charge or Project Manager with extensive expertise in environmental and hazardous materials projects involving groundwater, hydrology, contaminant fate and transport, and complex remediation programs. A renowned expert in his field, Shawn has successfully solved many difficult environmental challenges to achieve desired project outcomes.

SELECT PROJECT EXPERIENCE

Vita Pakt—Covina, CA
Principal in Charge. Shawn provided principal oversight, data analysis, and consultation regarding site characterization, and risk evaluation. The project consists of a proposed multi-story residential development. Under Department of Toxic Substances Control (DTSC) oversight, work included review of historical data, soil, soil gas, and groundwater analysis, and consultation regarding potential vapor intrusion issues. The site was formerly operated as fruit packing and processing business from the 1940s through 2016. Work plans were developed for DTSC approval which included soil and soil gas risk assessments, resulting in DTSC concurring with a status of “no further action” for the site.

Hanover Cannery Park Project No. 14-473—San Jose, CA
Principal in Charge. Shawn provided principal oversight and review of site assessments, soil, soil gas, and groundwater. The historical use of the 9-acre commercial/industrial property site resulted in chlorinated solvent impacts to groundwater and soil gas. Extensive remediation consisting of soil vapor extraction and groundwater treatment was performed under RWQCB oversight. Successful remediation was achieved, and the site has been developed with a multi-story apartment complex.

Blake Avenue Project, Frogtown, Los Angeles—Los Angeles, CA
Principal in Charge. Shawn provided principal oversight, data analysis, and consultation regarding site characterization, and risk evaluation. The project consists of a proposed multi-story residential development. Work included review of historical data, groundwater analysis and consultation regarding potential vapor intrusion issues.

277 Fairchild 228/236 Evandale Ave—Mountain View, CA
Principal in Charge. Shawn provided oversight of soil, groundwater and soil gas characterizations, risk evaluations and Response Action Plan preparation under USEPA oversight. The site is within the Middlefield-Ellis-Whisman (MEW) Superfund site, contaminated with chlorinated solvents from legacy semiconductor plant operations. On-going remedial activities included soil vapor extraction, groundwater treatment using bioaugmentation, and groundwater/soil gas monitoring. The proposed site development consists of detached single-family homes and townhomes.

Value Marine Facility—Sacramento, CA
Principal in Charge. Shawn provided principal oversight and quality control services. The project site consists of a former gasoline service station and is in the State Leaking Underground Storage Tank (LUST) program, with lead agency oversight provided by the Sacramento County Environmental Health Department. Soil and groundwater impacts resulted from four former underground storage tanks. Remediation of vadose zone soil impacts (source) is currently being performed with a soil vapor extraction (SVE) system.

Gale Ranch Middle School, Preliminary Endangerment Assessment—San Ramon, CA
Principal in Charge. Shawn provided review and supervision of a Preliminary Endangerment Assessment prepared for this school site under the oversight of DTSC. This former site was developed into a public middle school.

Heritage Fields, Great Park Neighborhood—Irvine, CA
Principal in Charge. Shawn provided principal oversight of the preparation of over 50 phase I and Phase II Environmental Site assessments for the former El Toro Marine Corps Air Station (MCAS). The site is currently under development as a large-scale mixed-use development including several schools, residential subdivisions, recreational facilities and commercial development. Shawn also provided consultation regarding environmental site characterization and remediation at the site.

Sparklizing Cleaners and Laundry—Fremont, CA
Principal in Charge. Shawn provided principal review and data analysis for this former dry cleaning facility which had released tetrachloroethylene (PCE) to site soil and groundwater. Dry-cleaning operations have been conducted at the facility since 1974 and have resulted in chlorinated solvent impacts to soil and groundwater beneath the site. ENGEO prepared a Corrective Action Plan (CAP) and coordinated the in situ chemical oxidation program which consisted of injecting 35,000 gallons of potassium permanganate to the subsurface to oxidize chlorinated solvents.

The Rivers—West Sacramento, CA
Principal in Charge. Shawn provided oversight of during the preparation of a Removal Action Workplan (RAW) in coordination with CAL-EPA DTSC. The property is a proposed charter school site. ENGEO performed environmental site characterization work to address residual pesticide contamination die to historic termiticide applications. A Removal Action Workplan was developed under the oversight of CAL-EPA to excavate and remove the pesticide impacted soil. Remedial activities were completed in 2018 and DTSC issued a “no further action” letter. In addition, ENGEO performed a design-level geotechnical investigation for a proposed large water storage tank.

One Lake Development—Fairfield, CA
Principal in Charge. Shawn provided oversight, data analysis, and collaboration with DTSC personnel for Ole Lake Holdings, LLC. The project site consists of a 2,400-foot proposed mixed-use City of Fairfield trail, formerly operated as a Union Pacific railroad right-of-way. The alignment was impacted with arsenic and other constituents of concern. A Preliminary Endangerment Assessment (PEA) and soil encapsulation cleanup was successfully completed under DTSC oversight to successful completion to allow for future recreational use.

700 Parc on Main Development—Vacaville, CA
Principal in Charge. Shawn provided oversight of soil, groundwater, and risk evaluations, PEA preparation, and Removal Action Workplans (RAW) under DTSC oversight for mitigation of lead and pesticide-impacted soil. The site is proposed for mixed-use residential development. Soil mitigation is planned for 2024.

Highlands Ranch—Pittsburgh, CA
Principal in Charge. Shawn provided oversight, data analysis, and collaboration with RWQCB personnel. The project site consists of a 140-acre portion of the former Chevron Los Medanos Tank Farm located in Pittsburg, California. The site was historically occupied by 24 crude oil tanks and four wax ponds. Remediation of the crude oil tank and wax pond locations was conducted according to a remedial action plan (RAP) and oversight was provided by the CRWQCB. Remediation was performed over a period of four months and consisted of excavating approximately 110,000 cubic yards of impacted soil and placing the material in windrows for ex-situ bioremediation.

1000 Howe Road - Site Remediation—Martinez, CA
Principal in Charge. Shawn provided oversight and analysis for this soil remediation project. He worked closely with RWQCB personnel to develop a cost effective and timely closure for site closure and approval for residential development. The site is occupied by a general engineering contractor and a former bus leasing company. Improvements at the property included an office/warehouse structure and an equipment yard. The proposed development consists of a single-family residential subdivision.

Riverside Avenue Property—Roseville, CA
Principal in Charge. Shawn provided principal oversight of a Phase II Environmental Site Assessments and site characterization. The project site consists of an active auto sales and service facility. The historic use of the facility for industrial purposes resulted in soil and groundwater impacts beneath the site. The City of Roseville revised its plans for acquiring and redeveloping the site due to the identified soil and groundwater impacts.

STATE OF CALIFORNIA
dca
DEPARTMENT OF CONSUMER AFFAIRS

BOARD FOR PROFESSIONAL ENGINEERS, LAND SURVEYORS, AND GEOLOGISTS

This Is To Certify That Pursuant
To The Provisions of Chapter 7, Division 3 of The Business and Professions Code

Scott Robert Johns

IS DULY LICENSED AS A

PROFESSIONAL ENGINEER

IN

CIVIL ENGINEERING

In The State of California and Is Entitled To All The Rights and
Privileges Conferred In Said Code

DEPARTMENT OF CONSUMER AFFAIRS · BOARD FOR PROFESSIONAL ENGINEERS, LAND SURVEYORS, AND GEOLOGISTS · STATE OF CALIFORNIA ·

WITNESS OUR HAND AND SEAL

Certificate No C 78253

This 10th day of June, 2011, at Sacramento, California.

BOARD FOR PROFESSIONAL ENGINEERS,
LAND SURVEYORS, AND GEOLOGISTS

Interim Executive Officer

President

EPRENG 05/18/11

State of California Department of Consumer Affairs

BOARD FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS

This Is To Certify That Pursuant
To The Provisions of Chapter 7, Division 3 of The Business and Professions Code

Jeffrey Alan Adams

IS DULY LICENSED AS A

PROFESSIONAL ENGINEER

IN

CIVIL ENGINEERING

In The State of California, and Is Entitled To All The Rights and
Privileges Conferred In Said Code

DEPARTMENT OF CONSUMER AFFAIRS · BOARD FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS · STATE OF CALIFORNIA

WITNESS OUR HAND AND SEAL

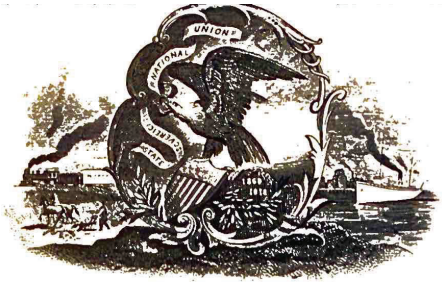
Certificate No C 69633

This 20th day of January, 2006, at Sacramento, California.

BOARD FOR PROFESSIONAL
ENGINEERS AND LAND SURVEYORS

Executive Officer

President



By authority of the Board of Trustees of the

UNIVERSITY OF ILLINOIS

and upon recommendation of the Senate

at Chicago

Jeffrey A. Adams

has been admitted to the Degree of

Doctor of Philosophy in Civil Engineering

and is entitled to all rights and honors thereto appertaining

Witness the Seal of the University and the Signatures of its Officers

this ninth day of May, nineteen hundred and ninety-nine.

UNIVERSITY OF ILLINOIS
LEARNING & LABOR
CHARTERED 1867

Chair of the Board of Trustees

Secretary of the Board of Trustees

President of the University

Chancellor

STATE OF CALIFORNIA

State of California Department of Consumer Affairs

State Board of Registration for Geologists and Geophysicists

CERTIFICATE

IT IS HEREBY CERTIFIED THAT

SHAWN PATRICK MUNGER

IS A DULY

REGISTERED GEOLOGIST

Certificate No. 5810

STATE BOARD OF REGISTRATION FOR GEOLOGISTS AND GEOPHYSICISTS

By _____
President

_____
Executive Officer

This 1st day of September, 1993

STATE OF CALIFORNIA

State of California Department of Consumer Affairs

State Board of Registration for Geologists and Geophysicists

CERTIFICATE

IT IS HEREBY CERTIFIED THAT

SHAWN PATRICK MUNGER

IS A DULY

CERTIFIED HYDROGEOLOGIST

Certificate No. HG 413

STATE BOARD OF REGISTRATION FOR GEOLOGISTS AND GEOPHYSICISTS

By Robert Lindblom
President

Dalton Pollard
Executive Officer

This 31st day of May, 1996

B. STATEMENT OF QUALIFICATIONS

B.1. SERVICES AND CAPABILITIES

ENGEO is an award-winning, employee-owned California Corporation of more than 400 geotechnical and civil engineers, geologists, hydrologists, hydrogeologists, environmental scientists, coastal engineers, construction quality-assurance representatives, and laboratory testing specialists serving clients in the U.S. and abroad for over 50 years. ENGEO has served many iconic and highly visible projects with complex engineering and geologic challenges.

ENGEO serves all types of projects including education, transportation, flood control, water storage, conveyance and treatment, industrial facilities, civic structures, healthcare, energy, manufacturing, ports, harbors, waterfront development, residential, mixed-use communities, and urban development.

Environmental Engineering

Geotechnical Engineering

Engineering Geology

Water Resources & Hydrology

Construction-Phase Testing & Observation

Special Inspection & Materials Testing

Stormwater Management

GIS/GPS

Geologic Hazard Abatement Districts (GHADs)

Entitlement & Permitting Support

Environmental Services

ENGEO provides comprehensive environmental engineering services with extensive experience in investigating contamination and providing remediation services to both public and private clients. Comprehensive environmental approaches are developed to meet project goals in planning, development, construction, and regulatory compliance.

To stay current with policies and keep every project on schedule, ENGEO routinely provides contact and coordination with project- and region-specific regulatory agencies to comply with Federal and State guidelines. Many clients rely on ENGEO as an advocate in working with Alameda County Department of Environmental Health (ACDEH), the Department of Toxics Substances Control (DTSC), the Regional Water Quality Control Boards (RWQCB), and United States Environmental Protection Agency (U.S. EPA).

ENGEO's expertise is recognized in conducting Preliminary Endangerment Assessments—obtaining DTSC approval on one of California's first school-related Assessments in early 2000. ENGEO is also working on the Oakland Athletics Howard Terminal Redevelopment project and obtaining DTSC approval for site investigations and human health risk assessments, including vapor intrusion concerns.

Our environmental services include:

- Phase I and II Environmental Site Assessments
- Vapor Intrusion Risk Assessment
- Design and Installation of Mitigation Measures
- Long-Term Stewardship and Management of Risk
- Underground Storage Tank Consultation
- Soil, Groundwater, and Soil Gas Remediation
- Subsurface Characterization
- Health Risk Assessments
- Input for EIR/EIS/CEQA
- Hydrogeologic Characterization
- Preliminary Endangerment Assessments
- HAZMAT Assessments, Permitting, and Disposal Services

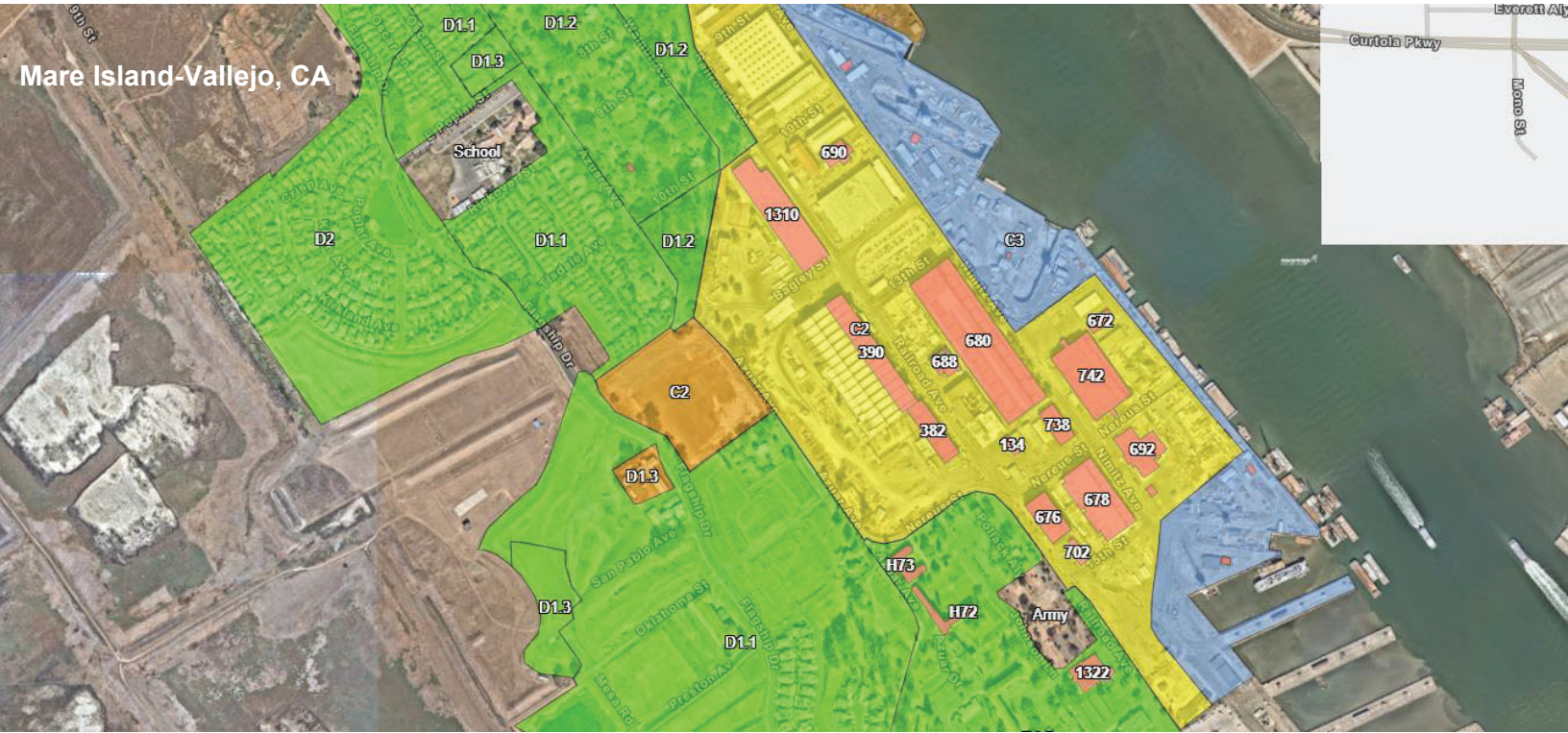
- Groundwater Monitoring Well Installation and Sampling
- Soil and Groundwater Characterization
- Risk Assessment and Management
- Naturally Occurring Asbestos (NOA) Dust Mitigation Plans (ADMP) and asbestos air monitoring

Geographical Information System (GIS) Services

The use of geospatial mapping and data visualization tools is rooted in earth science and engineering applications. For over 20 years, ENGEO has utilized and maintained Geographical Information System (GIS) capability using both proprietary and commercial systems. The 2-D, 3-D, and 4-D GIS and data visualization are used to support a broad range of disciplines, including geology and soil, hydrology, hazardous materials, historical analysis, wildfire impacts, construction, and business analytics. ENGEO utilizes GIS to elevate projects to new levels by creating interactive, web-based, project portals. These flexible portals allow us to capture, analyze, manage, and present relevant project data such as tables, images, and reports in one consolidated place. Each project dashboard serves as a central point of collaboration among owners, consultants, contractors, and other approved stakeholders. ENGEO has helped clients manage multiple complex projects including Storm Water Pollution Prevention Plans (SWPPPs), master-planned communities, Environmental Site Assessments (ESAs), and Geologic Hazard Abatement Districts (GHADs).

This GIS portal can adapt with OUSD's needs over time, set up maintenance alerts, prioritize action items, track progress, as well as include other information that OUSD values.

Below is a screen shot of the Mare Island Naval Base reuse GIS project that ENGEO has been working on and evolving for decades. ENGEO created a cross-functional GIS portal for project stakeholders (client, consultants, and contractors). The GIS portal is the primary collaboration tool used for planning, reporting, and collecting field data. It hosts spatial information from various disciplines (environmental, geotechnical, facility operations, landscaping, etc.). For example, reports were attached to the current and historic building layer to help facilitate environmental decision-making as well as identify potential asbestos containing building materials. In addition, numerous utilities are tracked in the GIS portal to document inspections, identify potential conflicts, and streamline data management.



Vapor Intrusion Risk Assessment Expertise

ENGEO understands every site is different with multiple variables to evaluate potential vapor intrusion risk (VIR). ENGEO works with regulatory agencies in Oakland as well as throughout California to assess risks for sensitive receptors including, but not limited to, potential child exposure, hospital occupants, residential, commercial, industrial, and ecological exposures. ENGEO utilizes multiple lines of evidence to evaluate potential VIR at a site. We develop Conceptual Site Models that convey soil, water, and vapor impacts as it relates to possible exposure pathways including potential vapor entry points and preferential pathways to evaluate vapor intrusion risk. With our experiences and relationships with regulators, we have had success with gaining regulatory approval of site-specific screening levels and associated risk that are more representative of site conditions which results in shorter project timelines and reduced costs.

Design and Installation of Mitigation Measures

We have extensive knowledge designing and installing vapor intrusion remediation and mitigation measures at projects with regulatory approval. While vapor intrusion might be the primary concern, it is critical to have a complete site characterization model and assess if there are contributory sources such as subsurface soil and/or groundwater impacts. ENGEO incorporates this information so we can develop an efficient mitigation plan for a particular site. We have extensive project experiences and strong relationships with owners, contractors, consultants, and regulators to design and install appropriate mitigation measures that are tailored to the concerns of a given site.

Long-Term Stewardship and Management of Risk

We have employed various risk management approaches to help manage site risks over time and are designed to address project-specific conditions. Risk management is often dynamic and may change over time; therefore, re-evaluation is critical over the life of a project.

B.2. WORKING WITH OUSD

Since 2011, we have collaborated with OUSD, offering geotechnical engineering and environmental engineering services for numerous schools within the district. Our approach has involved providing innovative solutions with a combination of geotechnical and environmental services. We have successfully accomplished the designated scope of services while remaining within the approved budget.

We have a strong understanding of the review process conducted by the State of California Division of State Architect (DSA) and California Geological Survey (CGS). Throughout the design and construction phases of school projects, we have achieved successful DSA approval for numerous projects. For example, as recently as July 2021, we received CGS approval of the first submission of our geotechnical report for OUSD's Laurel Child Development Center in Oakland, California.

ENGEO has also successfully worked with CAL-EPA DTSC for the approval of numerous new school sites and renovations, performing Preliminary Endangerment Assessments (PEA), risk evaluations and remedial actions.

Our approach to serving OUSD involves close collaboration with the District's staff. Our goal is to establish seamless communication, ensuring that our team integrates effectively with the District's staff. We understand the sensitive nature of working on school properties and will coordinate with OUSD staff, school staff, and school communities for any on-site visits, as needed. We also will be glad to support and attend public meetings as needed.

Our Project Manager, Scott Johns, PE, QSD, will be the main point of contact and will assist the District to address any issues and questions. Mr. Johns will be responsible for informing OUSD regarding project progress and upcoming steps.

After receiving authorization, we will contact OUSD to discuss the work to be performed as well as if there are any priority OUSD sites. If OUSD is able to provide site-specific information, we can review and incorporate into the assessment. ENGEO has worked extensively throughout Oakland and the San Francisco Bay Region and will review internal ENGEO documents to help with OUSD site assessments (see Figure 1 in Section B.4). We will also review on- and off-site conditions related to potential vapor intrusion concerns. As we are gathering and assessing information, we will compare to applicable regulatory agency requirements including U.S EPA, RWQCB, DTSC, and ACDEH. Throughout the project we can provide progress updates to OUSD as well as discuss preliminary findings. A draft report with our findings will be provided to OUSD. We will also provide an OUSD GIS Project Portal to help manage site risks and easily access assessment reports.

In addition to our local Oakland office, we have additional staff available to assist from nearby offices including San Francisco, San Ramon, and San Jose if needed. Among our more than 400 employees, we have 30 licensed California Geotechnical Engineers, 32 Professional Engineer, 15 Certified Engineering Geologists, 4 Certified Hydrogeologists, and 22 Professional Geologist.

Upon authorization, ENGEO has the expertise and staff that can complete assessments in an efficient and timely manner for all five regions and we will commit to completing all assessments within 12 months after authorization.

B.3. SCHEDULE CONTROL

A primary cornerstone of our company culture is adherence to deadlines. Timely delivery of projects to our clients according to agreed-upon schedules is essential. We establish internal project check-ins along the way and provide your project manager with regular updates of our work completion progress and budget status. Through these check-ins, we are able to make adjustments, if necessary, to maintain the project schedule. We know that if we keep the project on schedule, this is one of the best tools to also keep the project on budget.

Effective schedule control not only helps in delivering projects on time but also enhances overall project predictability, allowing stakeholders to make informed decisions and mitigate potential risks. It is a pivotal aspect of successful project management, ensuring that time remains a valuable and well-managed resource throughout the project's lifecycle.

Every day, we collaborate with our clients on various projects to assess risk. We routinely work on sites with our clients who are looking to purchase property and inherit liability on a condensed timeline, sometimes in less than 30 days. Through our experience, we know it is critical to have a well thought out plan to complete a project, as well as several contingency plans.

Examples of Demonstrated Success

EL TORO MARINE BASE
IRVINE, CALIFORNIA

This project presented numerous potential challenges, but through effective planning, communication, and execution, we managed to achieve success. Our client had to complete a full risk assessment (soil, water, vapor intrusion, hazardous materials, etc.) for over 50 properties ranging from approximately 3 to 40 acres that had decades of various military use and associated contamination. Our client was looking to develop sensitive residential housing on these properties and needed to assess potential risks before purchasing and taking ownership. We completed the risk assessments ahead of schedule and under budget partly because we identified critical items ahead of time, such as including potential site access limitations and agency response times and developed backup strategies with the client. There were also unforeseen field conditions, including encountering unknown contamination, which could have derailed the schedule and budget; though we quickly identified the risks, discussed the options with the client, and continued to move the project forward.

OAKLAND ATHLETICS BASEBALL STADIUM (HOWARD TERMINAL)
OAKLAND, CALIFORNIA

Howard Terminal is a very visible project with numerous agencies, companies, and public participation. We identified scheduling opportunities and saved the client time and money. One of ENGEO's responsibilities was to perform site characterization, human health risk assessment, and related remediation and mitigation measures for the project. The DTSC is the lead environmental regulatory agency and required a formal work plan for their review, comment, and approval prior to performing work. To streamline agency response times and field work, our work plan and reporting included items that the project team initially was not going to perform for months, which would have prompted additional work plans and risk possible approval delays. By including those items in our report, we were able to limit the agency review and decision time as well as eliminating the supplemental work plans for additional field work.

B.4. PROJECT EXPERIENCE

ENGEO routinely collaborates with regulatory oversight agencies. We work with clients to navigate ever-changing regulations, and we consult directly with regulatory agencies as experts in the field. We know that good relationships with regulatory agencies from the local to federal levels translate into practical solutions and improved schedules. ENGEO leadership proactively informs staff on regulations affecting our clients.

The Alameda County Department of Environmental Health ("ACDEH")

Alameda Marina Townhomes Redevelopment—Alameda, CA
The 12-acre property is being redeveloped into 31 residential townhome buildings with a total of 180 units as well as associated streets, utilities and open space. ENGEO performed environmental, geotechnical, GIS, dust and air monitoring, and construction observation services for the townhome builder. ENGEO performed site characterization activities related to soil, water, and soil gas/vapor intrusion impacts. With ACDEH approval, we prepared remediation and mitigation measures that were implemented and allowed redevelopment to proceed. ENGEO prepared information for the public and also participated in public meetings.

The Launch Development—Alameda, CA
ENGEO was brought into the project replacing the incumbent engineer and ENGEO performed site characterization and risk assessment activities for soil, water, and soil gas/vapor intrusion that culminated in formal ACDEH Case Closure.

The Foundry Development—Alameda, CA
ENGEO is currently performing site characterization and risk assessment activities for soil, water, and soil gas/vapor intrusion. ENGEO will discuss risks with the owner, ACDEH, public, and other stakeholders and then will design remediation and mitigation measure that will be implemented.

Malibu Grand Prix—Oakland, CA
ENGEO is working with ownership and prospective lessee to assess site impacts and related risks regarding soil, water, and soil gas/vapor intrusion. ENGEO will assist with public documentation and public meetings as requested.

West MacArthur Boulevard—Oakland, CA
Performed site assessment and vapor intrusion mitigation system design oversight with implementation support.

Gibbons Drive—Alameda, CA
Performed site assessment and dual phase extraction pilot study.

The California Department of Toxic Substances Control ("DTSC")

Howard Terminal—Oakland, CA
ENGEO performed geotechnical design and environmental hazardous materials risk assessments for The Howard Terminal site that was a former manufactured gas plant being considered for redevelopment for the Oakland Athletics Baseball Stadium and high-rise project. One of ENGEO's responsibilities was to perform site characterization, human health risk assessment, and designing related remediation and mitigation measures for the project.

Mora Ortega—Mountain View, CA
Following installation of vapor intrusion mitigation systems, ENGEO performs vapor intrusion monitoring related to a subsurface plume. The site is a new residential development.

Ohlone College—Newark, CA
ENGEO performed site characterization and risk assessment activities for soil, water, and soil gas/vapor intrusion. ENGEO prepared remediation and mitigation documents for the property.

Irvington Village—Newark, CA
ENGEO performed site characterization and risk assessment activities for soil, water, and soil gas/vapor intrusion. The case includes a historic dry cleaner that released chemicals impacting subsurface soil, water, and soil gas/vapor representing risk to current and future uses. ENGEO prepared remediation and mitigation documents for the property.

Mission Village Proposed School Site—Valencia, CA
ENGEO performed phase I and phase II ESAs for the proposed school site that is located within an abandoned oil field. We coordinated with DTSC and prepared Supplemental Site Investigation Report that included assess site risk, including soil gas/vapor intrusion assessment and DTSC concurred with our findings that "no further action" is recommended for the site.

Clayton Road—Concord, CA
ENGEO performed phase I and phase II ESAs for site that had past commercial and industrial uses as well as petroleum tank release. We assessed risks and worked with the DTSC to prepare site conceptual model and remedial action work plan for the planned residential redevelopment project. ENGEO performed supplemental testing pre, during, and post construction that concluded with "no further action" designation from the DTSC.

The San Francisco Bay Regional Water Quality Control Board ("RWQCB")

Henkel Chemical Manufacturing—Milpitas, CA
ENGEO has provided risk assessment activities for soil, water, and soil gas/vapor intrusion. Site Was used for industrial purposes beginning in the early 1900s and included manufacturing metal-treating chemicals as well as formulated herbicides. A former railroad track was onsite and located adjacent to the warehouses were most of the chemicals were loaded onto rail cars. Various chemical spills resulted in contamination of site soil, groundwater, and soil gas/vapor intrusion concern. Sensitive Alameda Creek is located along the southern boundary of the site, further complicating the site impacts. ENGEO designed remediation and risk management mitigation measures for the property. RWQCB issued a No Further Action designation.

1646 Centre Pointe Drive—Milpitas, CA
ENGEO provided risk assessment activities for soil, water, and soil gas/vapor intrusion. ENGEO worked closely with numerous project stakeholders, including the project proponent, the City of Milpitas, and the San Francisco Bay Regional Quality Control Board (RWQCB) to develop a comprehensive conceptual site model and facilitate a mitigation approach that will be protective of future residents and commercial tenants.

37343 & 37359 Blacow Road—Fremont, CA
The site is a former commercial and industrial site with hazardous materials. ENGEO provided closure of a leaking UST case, development of site-specific screening criteria, and preparation of a remedial plan that was approved by RWQCB including water and vapor remediation. RWQCB approved the Site with No Further Remedial Action needed. The site is a residential subdivision under construction.

Cannery Park Village—San Jose, CA
ENGEO worked extensively with the site owner and the RWQCB to prepare and implement a "Response Plan" to address chlorinated solvent impacts at the site that represent a risk to soil, water, and soil gas/vapor intrusion. soil gas and groundwater results have demonstrated that the extensive cleanup activities have been effective. The site has been developed as a large multi-story apartment complex.

Napa Pipeline—Napa, CA
ENGEO provides geotechnical and environmental services for the group of landowners and developers as required by regulatory agencies. We have completed risk assessment activities for soil, water, and soil gas/vapor intrusion. The site is a planned residential development.

Wiliam Street—San Leandro, CA
ENGEO assessed vapor intrusion risk at site. We also designed and implemented three soil vapor extraction/subslab depression systems in three buildings.

The United States Environmental Protection Agency ("USEPA")

Fairchild Drive—Mountain View, CA
ENGEO performed soil, groundwater and soil gas/vapor intrusion characterizations, risk evaluations and Response Action Plan preparation under USEPA oversight. The site is within the Middlefield-Ellis-Whisman (MEW) Superfund site, contaminated with chlorinated solvents from legacy semiconductor plant operations. On-going remedial activities included soil vapor extraction, groundwater treatment using bioaugmentation, and groundwater/soil gas monitoring. The site has been developed with detached single-family homes and townhomes.

Mare Island Former Navy Base—Vallejo, CA
The former Mare Island Navy Base is approximately 2,500 acres and ENGEO has been providing environmental and geotechnical services for decades. Our work has included risk assessments related to soil, water, soil gas/vapor intrusion and related construction/remediation activities.

Concord Naval Weapons Station—Concord, CA
We represent multiple potential developers planning to redevelop the Concord Naval Weapons Station (CNWS). We have reviewed decades of numerous reports for our clients to assess potential property risks based on planned uses.

Alameda Point West Midway—Alameda, CA
ENGEO represents a developer who is redeveloping the Alameda Point West Midway (APWM) site. We initially reviewed extensive documents for the property to assess risks, then working with the client, regulatory agency, and other stakeholders we completed robust environmental assessments including soil, water, and soil gas/vapor intrusion.

Fort Ord—Monterey, CA
We are working with the USEPA, the Army, and the developer to modify the existing well network to facilitate on-going remediation and monitoring activities. We have developed work plans and assessments for various phases of redevelopment including assessing potential risks from soil, water, and soil gas/ vapor intrusion.

Heritage Fields, Great Park Neighborhood—Irvine, CA
We prepared over 50 Phase I and Phase II Environmental Site Assessments for the former El Toro Marine Corps Air Station (MCAS). The site is currently under development as a large-scale mixed-use development including several schools, residential subdivisions, recreational facilities and commercial development.

Non-profit Organizations

Oakland Zoo—Oakland, CA (Conservation Society of America)
ENGEO provided permitting support, prepared construction plans and provided testing and observations services for the project. The 72-inch culvert underneath the entrance road to the Oakland Zoo suddenly and unexpectedly collapsed during a rainstorm on December 31, 2022. The collapse closed operations at the Zoo until the repair was completed. ENGEO worked with City of Oakland Staff and a contractor to obtain emergency permits from Federal and State agencies, re-construct the culvert and re-open the entrance road to the Zoo in approximately 3.5 weeks.

Dignity Village—Alameda, CA (Dignity Moves)
ENGEO provided an exploration and design recommendations for the 48-unit interim supportive housing community. Given the size of the parcel and the timing of product delivery, traditional ground improvement, such as a surcharge program, was not feasible. ENGEO worked with the team to design the project such that it could be constructed on-time despite the challenging conditions.

Dangermond Preserve—Santa Barbara, CA (The Nature Conservancy)
ENGEO provided various geotechnical, geologic, and permitting consultation services. We completed design and construction oversite of various mitigation of storm related damages located in areas adjacent to the access road to the Cojo Ranch headquarters. Mitigation included rebuilding of a slope failure with a geogrid reinforced slope and rebuilding of erosion gullies including replacement of culverts.

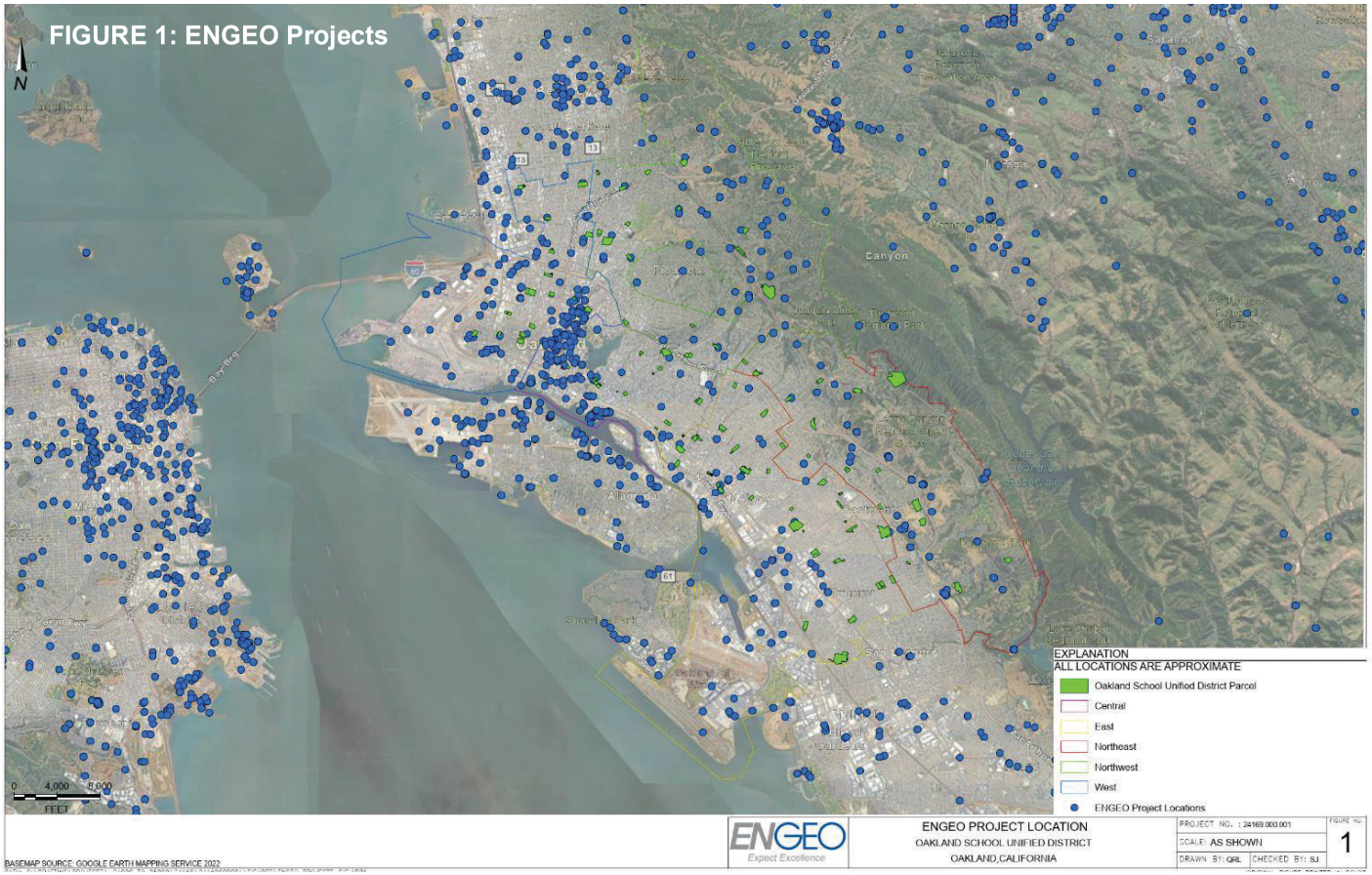
San Diego Safari Park—Sand Diego, CA (San Diego Zoo Wildlife Alliance)
ENGEO developed and continues to update a cross-functional GIS platform for all Safari Park stakeholders. The GIS platform is used for regular project progress updates and could also be used for document archiving, repository for digital imagery, links to video surveys, and a means for real-time improvement plan overlay creation. The GIS platform can continue to be utilized and is readily extendable as an asset management system, for future operations and maintenance, and for planning and maintenance of other park utilities and infrastructure.

Museum of Jazz and Art—Oakland, CA (Oakland Museum of Jazz and Art)
ENGEO provided investigation and consultation services for the historic, one-story building with a partial basement. The proposed museum will consist of a four-story concrete- or steel-frame museum building with one partial level of below-grade parking and office space.

La Vista Residential—Alameda, CA (Eden Housing)
The La Vista Residential project is a part of a new community in Hayward consisting of the two proposed residential buildings, a proposed 36,000-square-foot school that will serve up to 384 students from preschool through 6th grade, and a proposed neighboring 50 acre park. ENGEO is working with Eden Housing and the Pacific Companies to provide geotechnical consultation services during the feasibility stage, project design, and site development construction. ENGEO began working on the project with Eden Housing in 2020.

Local Project Experience

ENGEO has been providing environmental and vapor intrusion services for decades throughout Oakland and the San Francisco Bay Region. Figure 1 shows ENGEO projects (blue) as well as OUSD sites (green).



B.5. NUMBER OF EMPLOYEES

ENGEO employs more registered geotechnical engineers and certified engineering geologists than any firm of our relative size. Our teams collaborate across offices and disciplines to bring the absolute best resources to each project.

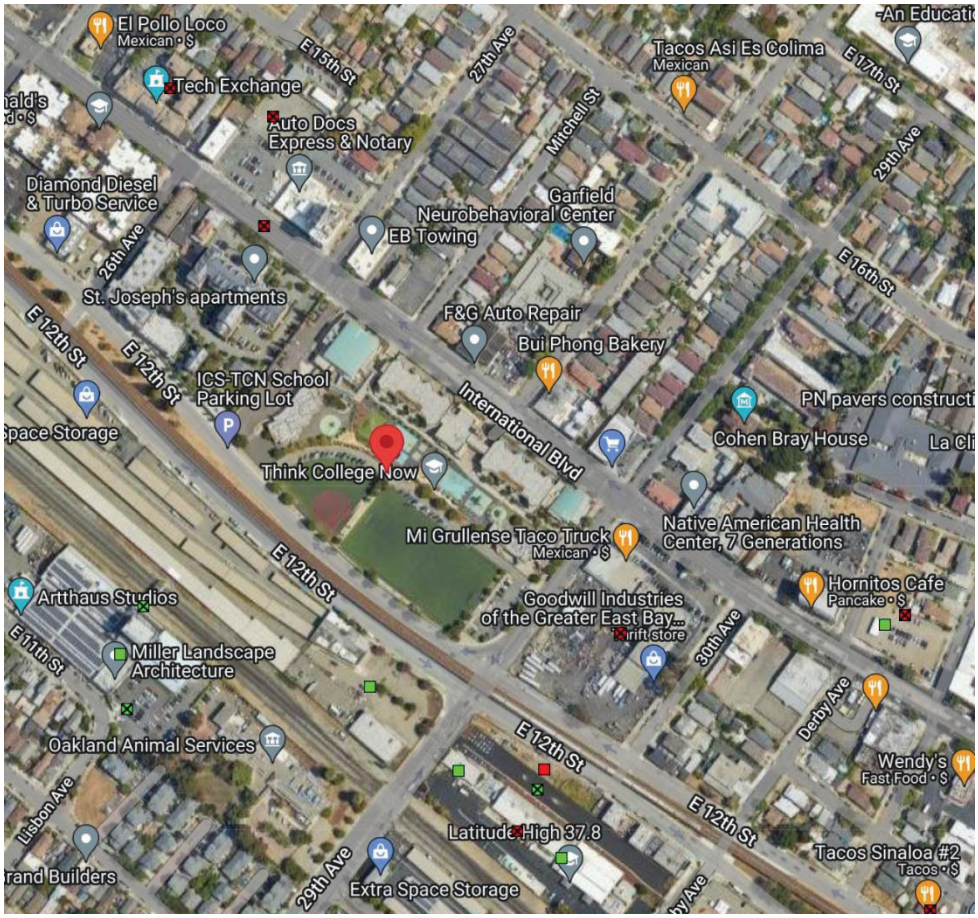
We currently have 120 employees that reside in the nine Bay Area counties.

C. FEE PROPOSAL

In preparation of this submittal we reviewed the provided OUSD GIS link of facilities and compared to publicly available documents as well as internal ENGEO documents to accurately estimate the risk profiles and associated fee to complete an appropriate assessment. Our fee also includes creating a GIS portal for OUSD.

OUSD facilities with numerous surrounding impacted sites will require relatively more assessment time to determine if nearby sites are impacting OUSD sites than sites with less surrounding impacted sites.

For example, the site located at 2825 International Boulevard (Central Region) has many reported cases surrounding the area per GeoTracker Database, as shown below.

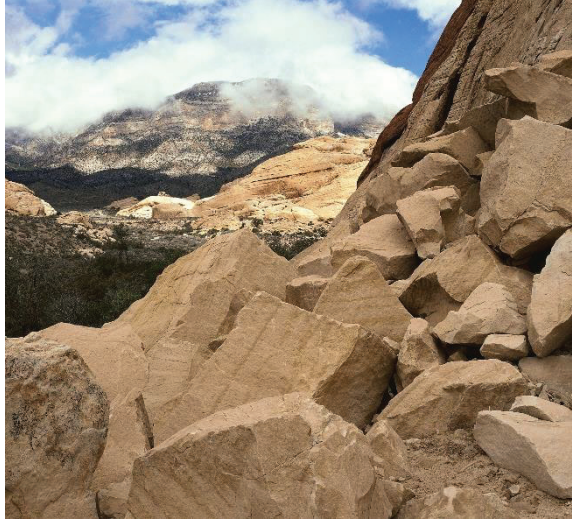


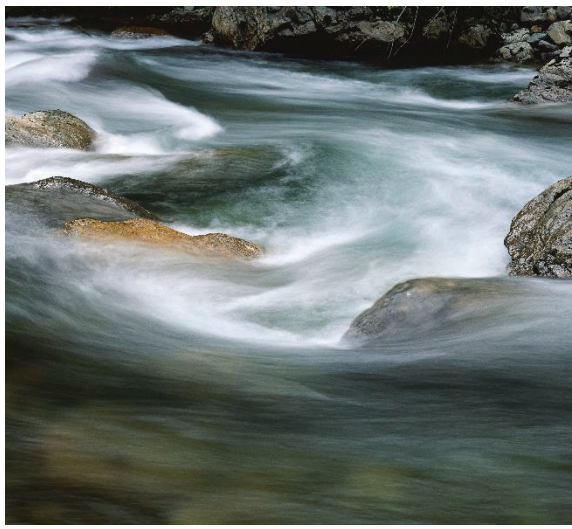
For the West Region, we propose a lump sum of $35,000 (14 sites of $2,500/site).

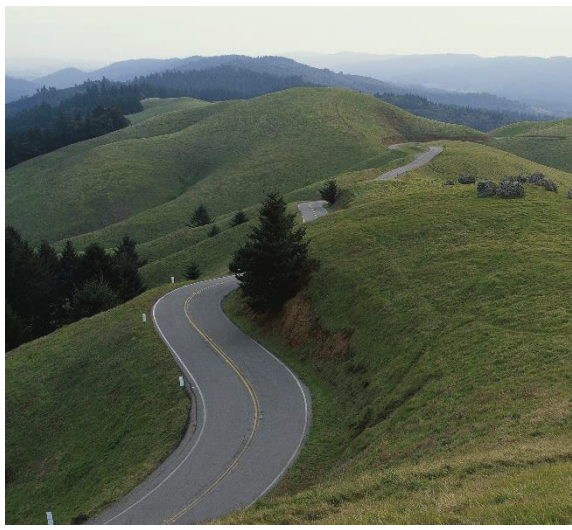
ENGEO proposes to provide a fee discount if awarded all five regions. For all five regions, we propose a total lump sum of $180,000 (96 sites of $1,875/site).

C.1. EXCLUSIONS OR ASSUMPTIONS UNDERLYING THE FEE PROPOSAL

- Upon authorization, multiple sites can be worked on in parallel.
- In response to question and answer #25 (OUSD letter dated September 27, 2023) interviews and site reconnaissance will not be conducted. If desired by OUSD, ENGEO will be glad to coordinate with OUSD on scope, timing, and fee.
- Our assessment fee includes preparation of up to one draft document and a response to one round of comments. Additional response to comments or preparation of additional draft documents will be considered extra work and will be billed on a time-and-expenses basis in accordance with our current fee schedule.
- ENGEO will be glad to support and attend public participation meetings upon request. As an estimate or schedule has not been provided, we suggest a budget of $10,000 per region.







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