October 28, 2019
File No.: MWFRESNO.001C

Ms. Kristina Chamberlin
Assistant Director
City of Fresno – PARCS Department
1515 East Divisadero Street
Fresno, CA 93721

Subject: Proposal for Additional Site Investigation – Former Imperial Laundry City of Fresno, PARCS Department Property, 2165 South Elm Street Fresno, CA 93706

Dear Ms. Chamberlin:

Kleinfelder, Inc. (Kleinfelder) has prepared this proposal (Attachment A) for the City of Fresno (Client) for Additional Site Investigation activity at the Former Imperial Laundry, located at 2165 South Elm Street in Fresno (Site). A letter from Central Valley Regional Water Quality Control Board (RWQCB) dated July 8, 2020 requested additional investigation to provide further assessment of the extent of impacted media below the Site. The purpose of the assessment is to provide further assessment of the extent of impacted soil, soil gas, and groundwater and evaluate the potential for vapor intrusion into the Community Center. Sampling and analysis of soil, soil gas, and groundwater in select areas of concern will be conducted in general accordance with United States Environmental Protection Agency (USEPA) and the California Department of Toxic Substances Control (DTSC) guidelines and industry standards. At the City's request, Kleinfelder prepared and submitted a Work Plan for additional investigation to the RWQCB on September 25, 2020. The RWQCB approved the Work Plan in a letter dated October 12, 2020. The attached proposal is for implementation of the approved Work Plan. The approach to the project and the scope of services (with associated fees) are based on our knowledge of site conditions and available information.

The attached proposed scope of work includes a discussion of the tasks associated with pre-field activities, field exploration of several areas of interest across the site, laboratory testing of soil, groundwater, and soil gas samples, and subsequent reporting.

We thank you for the opportunity to provide this proposed scope of work. If you have any questions or comments, please contact me either by email at jhelge@kleinfelder.com or telephone at 916-366-2308.

Sincerely,
KLEINFELDER, INC.

William F. Schmierer, PG
Senior Geologist

James Helge, CEM
Principal Environmental Scientist

Attachment: Attachment A –Proposed Scope of Work

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ATTACHMENT A
Proposed Scope of Work
Proposal for Site Investigation – Former Imperial Laundry
City of Fresno, PARCS Department Property
2165 South Elm Street, Fresno, CA 93706

SCOPE OF WORK

Kleinfelder has developed this proposed scope of work for an additional investigation of the Former Imperial Laundry in Fresno, California (Site) (Figure 1). The work is for the City of Fresno (Client). The Site layout and investigation locations are shown on Figure 2.

The purpose of the Work Plan is to further evaluate the extent of impacted media resulting from releases from the former Imperial Laundry and assess the risk associated with the impacted media to receptors at the Maxie L Parks Community Center. This scope of work includes a summary of proposed tasks, cost estimates, and assumptions.

The proposed scope of work consists of the following tasks:

Task 1 – Pre-Field Activities
Task 2 – Field Activities
Task 3 – Investigation-Derived Waste Characterization
Task 4 – Preparation and Submittal of the Investigation Report

1 TASK 1 – PRE-FIELD ACTIVITIES

Kleinfelder will perform the following tasks before conducting the on-site investigation:

- Prepare a Health and Safety Plan to identify key project personnel, potential site health and safety concerns, and to designate appropriate personalized protective equipment (PPE) levels
- Obtain appropriate City of Fresno Well/Boring permits and pay associated fees
- Mark proposed sample locations in white chalk or paint and obtain Underground Services Alert (USA) clearance for public utilities
- Coordinate a private utility locating contractor to conduct a utility survey of proposed sample locations and conduct a geophysical survey to determine the location and depth of any abandoned sewer lines on the Property.
- Coordinate with appropriate subcontractors

Please note: The client should be aware that penetrating the site's surface is inherently risky. It is impossible to determine with certainty the precise location of all structures, which may be buried in the ground. Kleinfelder's fee is not adequate to compensate for both the performance of the services and the assumption of risk of damage to such structures. Underground Services Alert (USA) at 811 provides a partial location service free of charge for major utility lines (that are outside of private property). Kleinfelder and our drilling subcontractor will make contact with USA to mark utilities. This proposal also includes the use of a utility survey subcontractor to further assess for potential subsurface structures. We will also hand auger borings to either 5 feet below ground surface (bgs) or refusal for additional clearance.

Pre-field and field activities will be conducted under the direction of a Professional Geologist (PG).

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2 TASK 2 – FIELD ACTIVITIES

The following field activities, which include indoor and outdoor air, soil gas, and groundwater sampling; rationale for sample locations; and corresponding recommended analyses are presented on Table 1.

2.1 ADDITIONAL VAPOR INTRUSION SURVEY

For active soil gas sampling, three additional sub-slab soil vapor probes will be installed inside the Community Center. Soil gas probe installation, purging, and sampling will be conducted in general accordance with DTSC guidelines.[1]

Kleinfelder will sample the four existing and three new soil vapor probes within the Community Center concurrent with active and passive indoor and outdoor air sampling. Sampling equipment will be provided by the analytical laboratory and inspected by Kleinfelder for proper pressurization prior to sampling. The equipment will include 1-liter (L) Summa™ canisters (for US Environmental Protection Agency [US EPA] Method TO-15), sample manifolds, and tubing.

Probe Installation: The new soil vapor probes will be flush mount Vapor Pins® installed in 5/8" diameter holes drilled through the building's concrete slab with a roto-hammer. Following installation, the Vapor Pins® will be allowed to equilibrate for at least two hours.

Pre-sampling Purging and Leak Checking: After installation and equilibration of the new vapor pins, the void space inside the tubing and will be purged of a minimum of three volumes of air to remove air that may have been introduced during probe construction.

Surface seal around the vapor probes and fittings on the sampling manifold will be checked for air leakage using the following methods. Vacuum testing (a.k.a. shut in test) is performed to evaluate for leaks in the manifold between the air tight valve at the connection to the probe and the Summa™ canister. A sampling shroud consisting of an extra-large plastic bag will be placed over the top of the surface seal, canisters, and manifold. The shroud will be used to contain an atmosphere of helium gas (the chosen tracer compound) during leak checking and sampling. The helium-infused shroud (shown below) will be placed over the canisters and manifold during sampling.

Both leak testing and a vacuum testing will be conducted prior to purging and sampling.

Purging will be performed using an evacuated 6-liter Summa™ canister connected to the sampling manifold or sampling pump. The flow rate on the Summa™ canister valve will be set to draw air from the vapor probe at 100 to 200 milliliters per minute (ml/min).

Sample Collection: Following purging, the valve will be opened on the 1-liter Summa™ canister and the soil gas sample collected in the Summa™ canister. Following sampling, the Summa™ canister will be labeled and returned to their original packaging. The initial and final canister vacuum will be recorded on the labels. The soil gas probes will be left in place to allow for potential additional sampling events in the future. In accordance with the DTSC guidance documents,

[1] DTSC 2015 Advisory for Active Soil Gas Investigations, July

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sampling will not be performed for at least five days following a rain event of at least ½-inch in a 24-hour time period.

Indoor and Outdoor Air Sampling: Eight active indoor samples and three active outdoor samples will be collected in total. One blind duplicate active indoor air sample will be collected during the sampling event. The active outdoor air samples will be collected in roughly the same locations as the March 2020 sampling event. Approximate sample locations are shown in Figure 2.

The outdoor air samples will be collected simultaneously with the indoor air sample collection. Active outdoor air sampling will begin approximately one hour before indoor air sampling and will continue to at least 30 minutes before indoor sampling is complete, based on the DTSC vapor intrusion guidance.

Summa™ canisters will be used to collect both indoor and outdoor air samples. Each 6L Summa™ canister will be fitted with a flow restrictor calibrated to collect the sample at a rate not to exceed approximately 10 mL/min during an approximate period of eight hours. The Summa™ canisters along with flow regulators will be 100-percent selective ion monitoring (SIM) certified clean by the supplying laboratory. Air sampling will be performed over an eight-hour period when buildings would normally be occupied by Community Center employees and members.

Each Summa™ canister will be set at a height of approximately 3 feet to 5 feet above the floor level (to the extent practicable) in order to collect air samples representative of the breathing zone. One duplicate active indoor air sample will be collected for data quality validation and evaluation purposes.

Since the Community Center may be open to the public during sampling, sampling equipment will be placed out of the way of normal activities in each proposed sampling location. The Community Center ventilation system will be turned off during the active air sampling event.

Sampling start and end times and Summa™ canister initial and final vacuum will be recorded on COC forms and sample labels.

The active indoor and outdoor air samples will be transported, using chain-of-custody protocols, to Eurofins AirToxics in Folsom, California for EPA TO-15 SIM analysis. The samples will be analyzed on a standard laboratory turnaround schedule, requiring approximately 10 working days for receipt of results. If helium is detected in the sampling above 5% of the amount of helium recorded under the shroud during sample collection, the specific sample analytical results will be invalidated due to a leak in the sampling apparatus and the probe will be resampled.

Indoor and Outdoor Passive Air Sample Collection and Analysis: Three passive indoor samples and one passive outdoor sample will be collected in total. One duplicate passive indoor air sample will be collected during the sampling event. The passive outdoor air samples will be collected in roughly the same locations as the March 2020 sampling event.

Passive indoor and outdoor air samples are being collected to account for variation and to capture ambient air results over a longer duration than the 8-hour active air sampling. The four total passive indoor and outdoor samples will be collected over a two-week period using the radiello® diffusive air sampler. Samples will be collected in the breathing zone, approximately three to five feet off the ground. The Community Center HVAC system will be operational during the passive sampling event.

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Since the Community Center may be open to the public during sampling, the radiello® samplers will be placed out of the way of normal activities in each proposed sampling location. This will reduce the chances of the samplers being disturbed during sample collection.

Standard quality assurance / quality control (QA/QC) practices will be followed while deploying and collecting the sample containers. Sample start and finish times will be recorded on the chain of custody form.

The air samples will be submitted to Eurofins Air Toxics in Folsom, California, an accredited laboratory for analysis of volatile organic compounds (VOCs) by EPA Method TO-17. It is assumed that the air samples will be analyzed using a standard reporting turnaround time of 10 business days

2.2 CPT/HPT/ MIP INVESTIGATION

Kleinfelder proposes the following drilling program for the further investigation of soil and groundwater in the areas of concern identified on Figure 2 and Table 1. The purpose of this investigation is to gather high quality subsurface profile, including soil classification, hydraulic conductivity, and further evaluate the extent of chemical impacts in soil and groundwater.

CPT/HPT/MIP Borings: To further assess the extent and distribution of chemicals to soils and into the groundwater, a California licensed C-57 driller will be contracted to advance at least six borings to between 60 and 120 feet below ground surface (bgs). These borings will have combined tooling for cone penetrometer test (CPT), hydraulic profiling tool (HPT) and membrane interface probe (MIP). Three additional CPT/HPT/MIP locations to 20 feet bgs have been chosen at the Site. These three additional borings are time permitting and are within the approximate location of the former dry cleaner to better identify the location of historical release(s). The proposed drilling locations are shown in Figure 3. Hard surface at boring locations will be cored, and hand augered to five feet bgs to screen for utilities.

The CPT provides a near continuous log of the site stratigraphy. The CPT provides detailed hydrogeologic information about the subsurface soils and groundwater with continuous piezometric data and dissipation tests. This will assist in evaluating if preferential flow paths for contaminant migration exists in the natural formation.

The HPT is a logging tool that measure the pressure required to inject water into the soil as the probe is advanced into the subsurface, which is an indicator of formation permeability. The HPT also is used to measure hydrostatic pressure under the zero-flow condition. This allows the development of a hydrostatic pressure graph for the log and prediction of the position of the water table. It can also be used to predict the permeability in the vadose zone. Permeability in the vadose zone can effect how contaminants migrate after release, and how soil vapors may migrate in the vadose zone.

The MIP is a screening tool that semi quantitatively identifies the presence VOC contaminants in the subsurface at a near continuous rate. The MIP works by heating a small membrane on the side of the down hole probe to 120°C (degrees Celsius). The heated membrane causes VOCs in the soil to mobilize and cross through the membrane due to diffusion. The carrier gas passing by the inside of the membrane picks up the VOCs and sweeps them to the surface to be detected by three different sensors.

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This data can be used for both evaluation of site conditions and future remedial planning.

2.3 GROUNDWATER SAMPLING

The on-site monitoring well, IL-MW-1 and the 12 monitoring wells associated with Valley Gas will be sampled during this investigation. The depth to water will be measured at each well, and the at least three well volumes of water will be purged until water quality parameters stabilize. At each well, Kleinfelder will collect samples in laboratory supplied bottles appropriate for VOC and Total Petroleum Hydrocarbon as gasoline (TPHg) and diesel (TPHd) analysis. One duplicate sample will be collected for quality control purposes.

The groundwater sample containers will be labeled and placed in a cooler with ice, pending transfer under chain-of-custody control to APPL Labs in Fresno, California.

2.4 LABORATORY ANALYSES

Samples will be analyzed for the constituents listed below using the indicated test methods for soil gas, indoor and outdoor ambient air and groundwater.

Active Soil Gas (Eurofins AirToxics)

- Sub Slab soil gas - Full Scan VOCs by gas chromatography (GC) and mass selective detection (MS), (gas samples) by EPA Method TO-15
- Indoor and Outdoor Air - Full Scan VOCs by gas chromatography (GC) and mass selective detection (MS), (gas samples) by EPA Method TO-15-Selected Ion Monitoring (SIM)
- Helium (tracer compound) by ASTM Method D-1946

Passive Indoor and Outdoor Air (Eurofins AirToxics)

- VOCs by EPA Method TO-17

Groundwater (APPL Lab)

- TPH-g and VOCs including fuel oxygenates by EPA Method 8260
- TPH-d by EPA Method 8015

3 TASK 3 – INVESTIGATION-DERIVED WASTE CHARACTERIZATION

The subsurface exploration and sampling processes described above will generate investigation derived waste (IDW) in the form of soil cuttings and purge water and equipment rinse water. The IDW will be retained in drums and stored in an area that is designated by the client. IDW will be left on site pending disposal at an appropriate licensed facility by the client. Samples of the IDW will be collected for laboratory analysis (TPH-g, TPH-d,o, VOCs, and CAM 17 Metals) Kleinfelder will review the analytical data and discuss with the Client appropriate disposal options for the IDW. Disposal of these materials have not been included in the cost estimate.

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4 TASK 4 – PREPARATION AND SUBMITTAL OF AN INVESTIGATION REPORT

The information accumulated during this Investigation will be presented in a report to the Water Board. The report will include all data collected during the investigation and conclusions and recommendations for future work.

FEE ESTIMATE

Based on the level of effort and scope of work described herein, Kleinfelder has developed a budget estimate. The budget estimate is summarized below.

Table of Estimated Fees		
Task	**Description**	**Fee**
1	Pre-Field Activities Labor	$9,800
1	Pre-Field Activity Subcontractor	$2,475
2A	Field Activities Labor	$11,450
2B	Field Activity Drilling Subcontractor	$70,050
2C	Field Activity Laboratory Subcontractor	$9,600
2D	Other Feld Activity Subcontractors	$6,700
3	Investigation Derived Waste Lab Analytical and Coordination	$3,050
4	Preparation and Submittal of an Investigation Report	$12,750
Total Estimated Fees		**$125,875**

SCHEDULE

Field activities will commence within 4 weeks of authorization from the Client, dependent on availability of a driller. A report will be provided to the Client within two weeks of receiving the analytical data from the laboratory.

ASSUMPTIONS AND CLIENT RESPONSIBILITIES

Kleinfelder used the following assumptions in order to develop the scope of work and estimate of fees presented below. It is possible other unforeseen conditions or situations may arise that could impact this cost estimate. Such conditions and responses would be discussed with you and authorized prior to Kleinfelder expending the additional funds.

- The Client will provide or arrange right-of-entry and unrestricted access to the Site;
- Sample locations will be made accessible for roto-hammer, concrete coring and drilling as described above.

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- Unanticipated conditions that may be present (i.e., inability to clear or core through concrete) or that would require additional study, assessment or remediation will be provided at additional costs upon approval.
- Estimated labor hours include the following: One day to install subslab soil gas sampling points; five days of CPT/HPT/MIP activities; two days of monitoring well sampling; and, one day of sampling soil gas and indoor/outdoor air.

Kleinfelder is committed to providing quality service to our Clients, commensurate with their wants, needs and desired level of risk. If a portion of this proposal does not meet your needs, or if those needs have changed, we will consider appropriate modifications, subject to the standards of care to which we adhere as professionals. Modifications such as changes in scope, methodology, scheduling and contract terms may result in changes to the risks assumed by you, as well as adjustments to our fees.

LIMITATIONS

Our work will be performed in a manner consistent with that level of care and skill ordinarily exercised by other members of Kleinfelder's profession practicing in the same locality, under similar conditions and at the date the services are provided. Our conclusions, opinions, and recommendations will be based on a limited number of observations and data. It is possible that conditions could vary between or beyond the data evaluated. Kleinfelder makes no guarantee or warranty, express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

This proposal is valid for a period of 45 days from the date of this proposal, unless a longer period is specifically required by the RFP in which case that time frame will apply. This proposal was prepared specifically for the client and its designated representatives and may not be provided to others without Kleinfelder's express permission.

Attachments:
Figure 1 – Site Location Map
Figure 2 – Indoor Air, Outdoor Air, and Sub-Slab Sample Locations
Figure 3 – Locations of Soil Borings, Soil Vapor Probes, Monitoring Wells, and CPT/MIP Borings
Figure 4 - Locations of CPT/MIP Borings
Figure 5 - Locations of Groundwater Monitoring Wells

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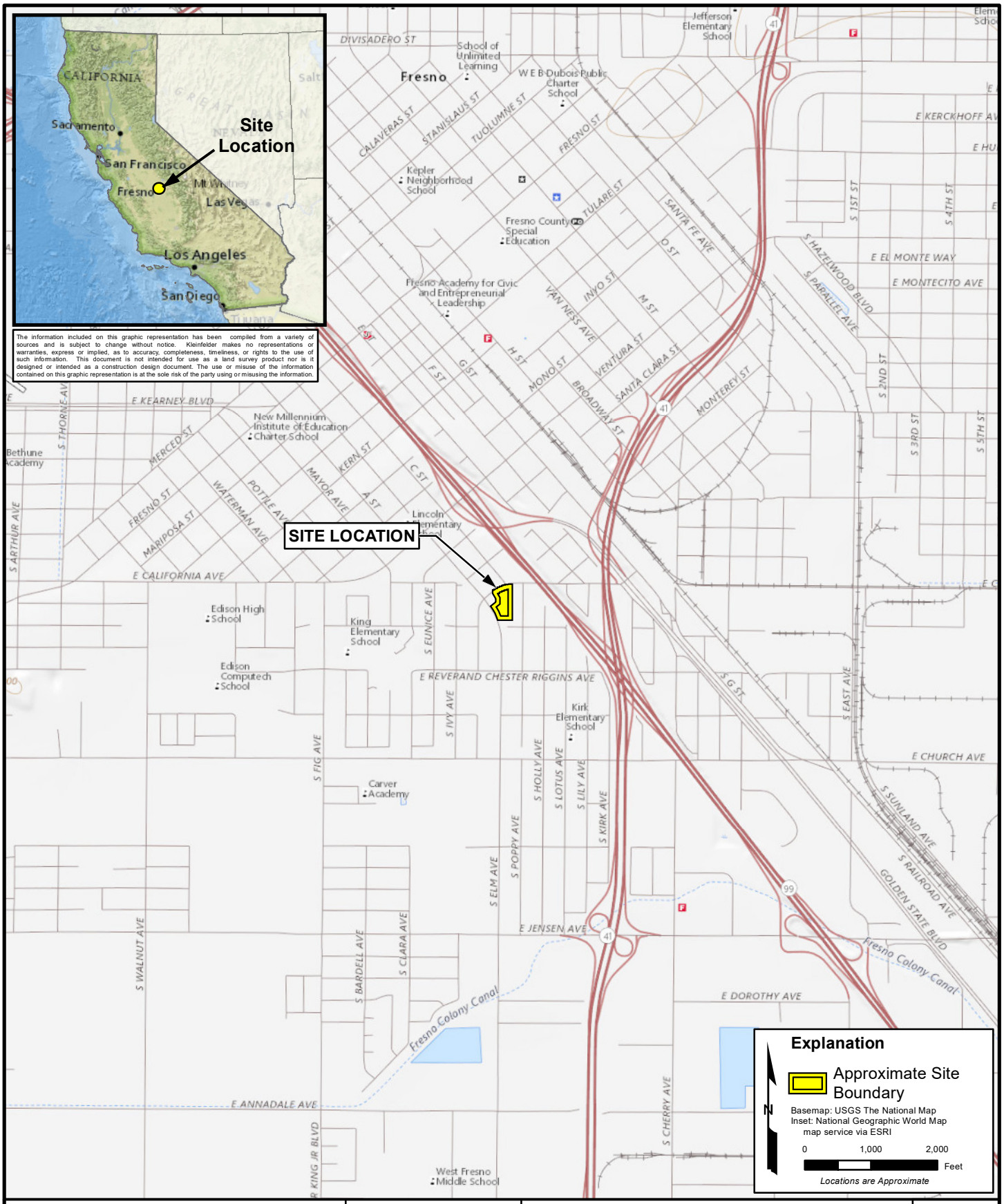
PLOTTED: 10/8/2019, KHagan



SACRAMENTO, CA

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PROJECT:	MWFRESNO
DRAWN:	OCT 2019
DRAWN BY:	KFH
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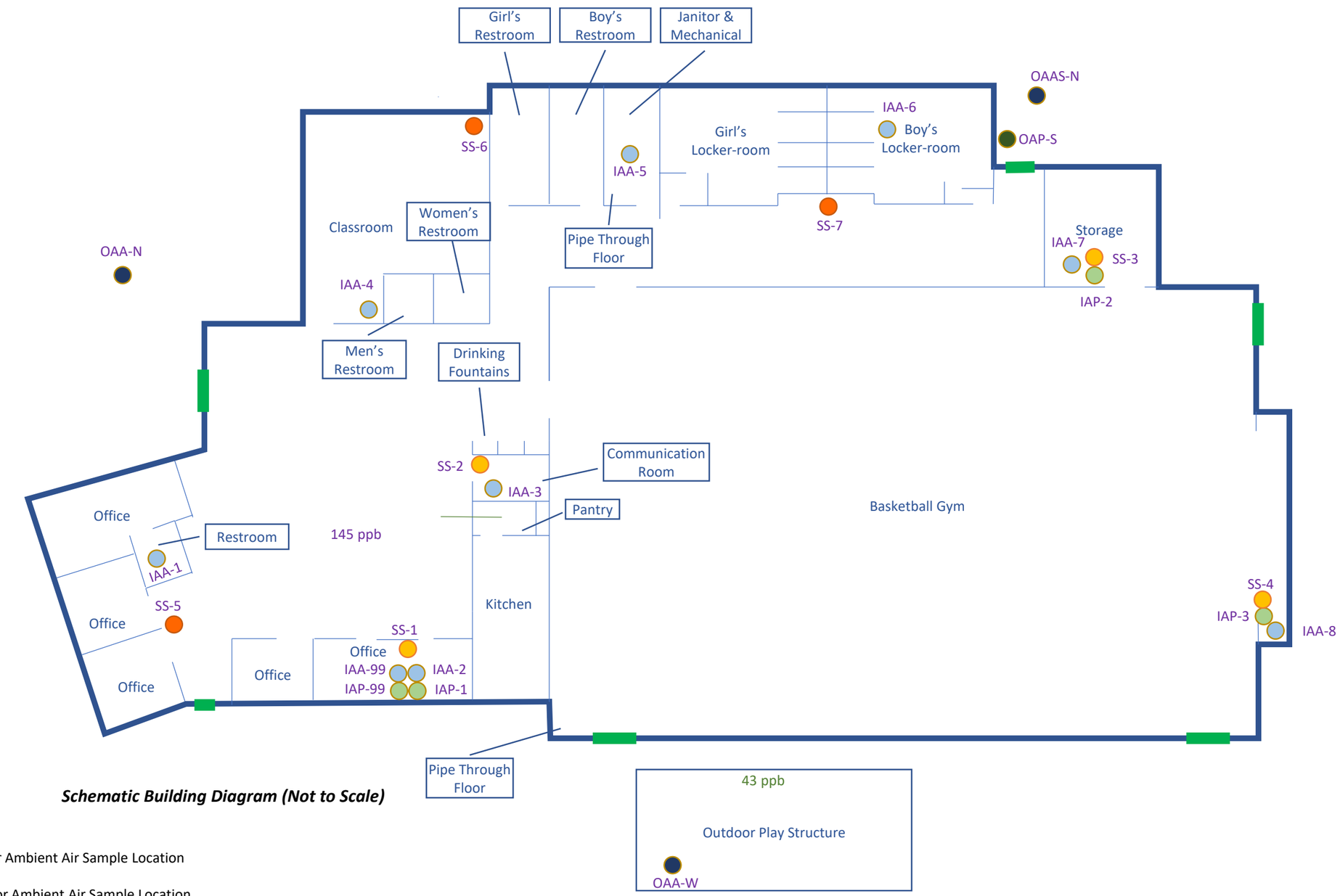
FILE NAME:	Figure1.mxd

SITE LOCATION MAP

FORMER IMPERIAL LAUNDRY
CITY OF FRESNO, PARCS DEPARTMENT PROPERTY
2165 SOUTH ELM STREET
FRESNO, CA 93706

FIGURE

1



Schematic Building Diagram (Not to Scale)

Legend

- Active Indoor Ambient Air Sample Location
- Passive Indoor Ambient Air Sample Location
- Active Outdoor Ambient Air Sample Location
- Passive Outdoor Ambient Air Sample Location
- Sub-Slab Sample Location (March 2020)
- Proposed Sub-Slab Sample Location
- Exterior Doorway

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PROJECT NO: 20203368.001A	**Indoor Air, Outdoor Air, and Sub-Slab Sample Locations**	FIGURE
DRAWN: 9/8/2020		
DRAWN BY: S MANN	FORMER IMPERIAL LAUNDRY 2165 S. ELM AVENUE **FRESNO, CALIFORNIA 93706**	**2**
CHECKED BY: B SCHMIERER		
FIGURE.PPTX		

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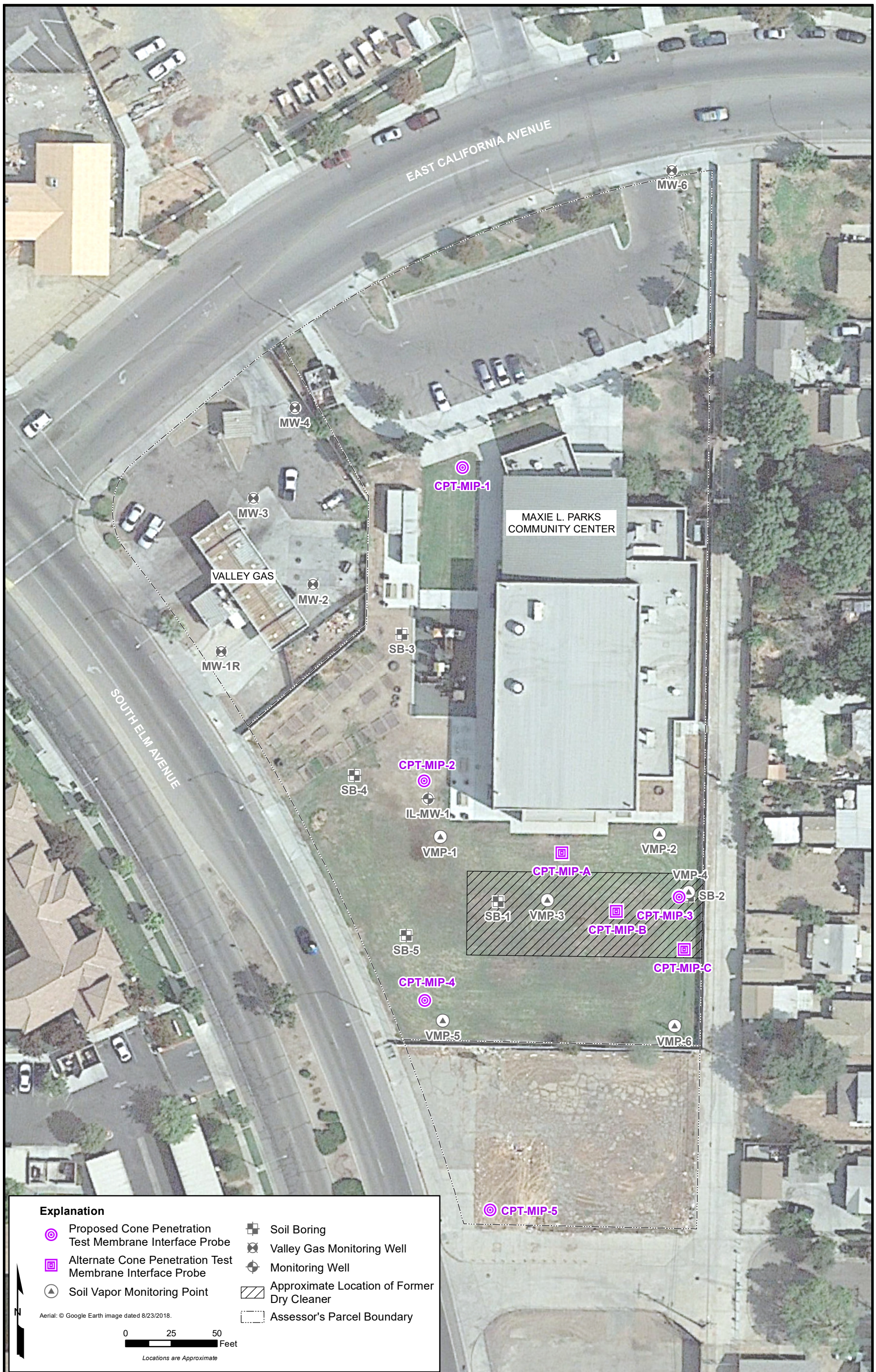

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FILE NAME:	Figure3_Sep20.mxd

LOCATIONS OF SOIL BORINGS, SOIL VAPOR PROBES, MONITORING WELLS, AND CPT/MIP BORINGS

FORMER IMPERIAL LAUNDRY
CITY OF FRESNO, PARCS DEPARTMENT PROPERTY
2165 SOUTH ELM STREET
FRESNO, CA 93706

FIGURE
3

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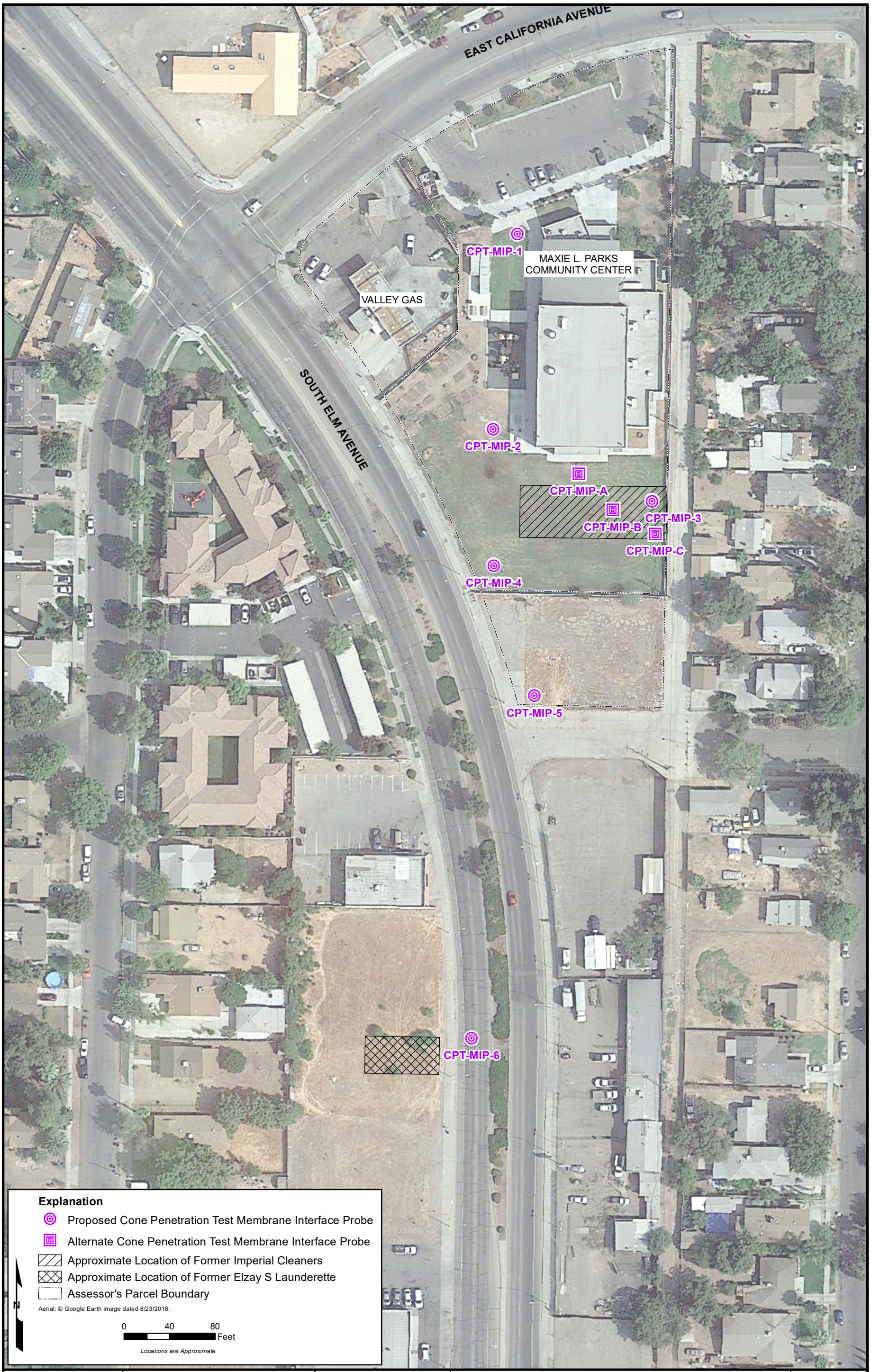

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FILE NAME:	Figure4.mxd

LOCATIONS OF CPT/MIP BORINGS

FORMER IMPERIAL LAUNDRY
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FRESNO, CA 93706

FIGURE
4

PLOTTED: 9/25/2020, KHagan

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0 125
Feet
Locations are Approximate

Aerial: ESRI World Imagery (Clarity)

Explanation

MW-9 Monitoring Well Location
Well Name

Approximate Location of Former Dry Cleaner
Assessor's Parcel Boundary

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LOCATIONS OF GROUNDWATER WELLS

FORMER IMPERIAL LAUNDRY
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FIGURE
5

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