Mr. Joel Haack
Haack Brothers Homes
3922 87 ${ }^{\text {th }}$ Avenue NE
Marysville, Washington 98270

Re: Additional Subsurface Investigation Work Plan
Legion Lots 1 through 4
413 and 419 Rockefeller Avenue
Everett, Washington

TRC Project Number: 015446.0001.0000

Dear Mr. Haack:

TRC Environmental Corporation (TRC), formerly Environmental Partners, Inc. (EPI), is pleased to submit the following work plan to perform an Additional Subsurface Investigation (ASI) of four building lots located at approximately 413 and 419 Rockefeller Avenue in Everett, Washington (subject property). The six lots have been termed the "Legion Lots" and were recently sold to Haack Brothers Homes (Haack Brothers) by the City of Everett (City). The general location of the subject property is indicated on Figure 1.

The subject property is within the far western boundary of the Legion Memorial Golf Course, which is a cleanup site identified by the Washington State Department of Ecology (Ecology) with Facility Site ID No. 9311679 and Cleanup Site ID No. 1653.

The Legion Memorial Golf Course was the subject of a Remedial Investigation and Feasibility Study (RI/FS) related to historical particulate emission from the historical Asarco Everett Smelter. The Legion Memorial Golf Course was found to be impacted with varying concentrations of arsenic in soil. The remedy for that Site included the use of an environmental covenant. It appears that the Legion Lots are within the bounds of the environmental covenant area, although the legal description within the covenant is not clear. Under the requirements of the environmental covenant, the City notified Ms. Sandra Matthews of the pending change in ownership in a letter dated September 8, 2019.

## BACKGROUND

TRC's review of documents related to the Legion Memorial Golf Course and Legion Lots indicate that the subject property is within the boundary of the upland portion of the Everett Smelter Cleanup Site. In the

RI/FS for the Legion Memorial Golf Course the area of the Legion Lots is identified as having less than 20 milligrams per kilogram ( $\mathrm{mg} / \mathrm{kg}$ ) of arsenic in soil, although sample locations and the arsenic isoconcentration contours are not fully surveyed or definitive.

The City previously allowed fill from a City retention pond construction project to be stored on the Legion Lots. The original land surface on the Legion Lots was leveled and there are currently between 0 and about 5 feet of fill material on the property, depending upon the original topography.

Prior to disposal by the City, the excess fill material was tested and was reportedly determined to be "clean" and was used as fill material in the Lowland portion of the Everett Smelter Cleanup Site. After the removal of fill, a contractor for the City collected three soil samples from around the area of the former fill stockpile. One of those samples, named "Site 3 (North)" contained concentrations of arsenic and lead exceeding applicable cleanup levels. That sample, based on the limited available documentation, appears to be located near the boundary between Lots 5 and 6 . The sample location was not surveyed or referenced with any dimensions from a fixed point. There is no documentation regarding sampling protocols or whether the samples were collected by an environmental professional. There was no report regarding any of the sampling procedures or results.

Haack Brothers retained TRC, through its acquisition of EPI, to complete a Targeted Subsurface Investigation of Lots 5 and 6 in December 2019. The Targeted Subsurface Investigation included investigation of Lots 5 and 6 to assess the quality in native soil at and beneath the fill material placed by the City.

Two test pits were excavated on Lot 5 and Lot 6 for a total of four test pits, and two soil samples were collected for analysis from each test pit (eight total). The soil samples were collected from the 0-to-12inch interval and the 18 -to- 24 -inch interval beneath the fill-native soil contact in each test pit. Each soil sample was submitted for analysis of arsenic, cadmium, and lead by U.S. Environmental Protection Agency (EPA) Method 6020A. None of the detected concentrations exceeded a Washington State Model Toxics Control Act (MTCA) Method A Cleanup Level (CUL) in any of the eight samples. Soil sample locations and analytical results are depicted on Figure 2.

This finding indicates that the native golf course surface in Lots 5 and 6 is not impacted with arsenic, cadmium, or lead and suggests the possibility that native soils in Lots 1 through 4 are similarly not impacted. This Work Plan presents a similar sampling and assessment approach for Lots 1 through 4 to confirm the general findings of the original RI/FS for the Legion Memorial Golf Course Site.

If it can be determined that there are no arsenic, cadmium, or lead impacts on the Legion Lots, it is reasonable to request a revision to the environmental covenant to exclude Lots 1 through 6, and to request a No Further Action (NFA) determination from Ecology for those lots.

## ADDITIONAL SUBSURFACE INVESTIGATION

## Soil Sampling

Soil sampling will be performed on Lots 1 through 4. Two test pits will be excavated on each lot for a total of eight test pits. Two soil samples will be collected from each test pit to a total of 16 samples. A standard tire-mounted backhoe/excavator will be used for test pit excavation. The proposed test pit and sample locations are indicated on Figure 2.

A test pit will be excavated at each proposed location through the fill material placed by the City. Soil samples will be collected from the underlying native soils at depths of 0 to 6 inches and 12 to 18 inches below the fill-native soil interface. The fill-native interface will be readily apparent during excavation and includes the pre-fill vegetative layer of grasses. It is anticipated that the fill material is 3.5 feet and 5 feet in the proposed sampling locations.

For excavations deeper than 4 feet, the samples will be collected using the excavator bucket. Personnel will not enter any test pits deeper than 4 feet. For test pits shallower than 4 feet, samples will be collected directly from the excavation sidewalls or bottom.

Samples will be collected using single-use disposable equipment. A representative sample from the target sampling interval will be placed in a plastic bowl and homogenized using the sampling spoon. Any pebbles or gravel larger than $1 / 4$-inch will be removed from the bowl. The sampling spoon will then be used to place a portion of the homogenized sample directly into 4-ounce laboratory-supplied glass jars with Teflon lined lids. Two blind duplicate samples will be collected as a component of the field quality assurance/quality control (QA/QC) efforts. All samples will be handled and transported under standard chain-of-custody protocols. All sampling procedures will be consistent with the standard of care for similar assessment and investigations.

After sampling is complete, the test pit excavation will be backfilled with the removed material and graded flat.

## Laboratory Analysis

Samples will be labeled and placed into an iced cooler pending submittal to ALS Laboratory (ALS) in Everett, Washington. ALS is accredited by Ecology to perform the analyses that will be requested.

Each of the 16 soil samples and 2 duplicate samples will be submitted for analysis of arsenic, cadmium and lead using EPA Method 6020A under standard turnaround time. This analysis utilizes Inductively Coupled Plasma and Mass Spectroscopy (ICP-MS).

Laboratory QA/QC will include duplicate analyses, matrix spike, and matrix spike duplicates to evaluate both accuracy and precision of the laboratory methods. Analytical results that are outside of laboratory control limits will be flagged with an appropriate data qualifier and re-analyzed. Analytical data reports will include all internal laboratory QA/QC results.

Laboratory analyses will be performed under standard 2-week turnaround time.

## Health and Safety Plan

A project-specific Health and Safety Plan (HASP) for investigation activities is required by the Code of Federal Regulations (CFR) Title 291910.120 and by the Washington State Department of Labor and Industries and under WAC 173-340-810. The HASP is a document that establishes site objectives, anticipates job hazards, provides implementation of a hazard communication and injuries/illness prevention program, and establishes policies and procedures to be followed in both routine and emergency situations.

The HASP for this project is presented in Attachment A.

## Utility Locating

TRC will notify Washington One-Call Service to identify publicly-owned subsurface utilities at the subject property. The notification will be initiated a minimum of 3 business days prior to scheduled field activities. In addition, TRC will have a private utility locator clear each sampling location prior to advancing borings. TRC is not responsible for damage to utilities that cannot be located and are not identified.

If after reviewing this Work Plan you have any questions or need additional information, please feel free to give me a call at (425) 395-0010.


Nate Hinsperger, L.G. Senior Geologist

## Enclosures: Figure 1 - General Vicinity Map

Figure 2 - Site Representation Showing Soil Analytical Results and Proposed Test Pit Locations Attachment A - Health and Safety Plan

Figures



## Attachment A Health and Safety Plan

## Health and Safety Plan

| Site Name: | Legion Lots |  |
| :--- | :--- | :--- |
| Site Address: | 413 and 419 Rockefeller Avenue, Everett, Washington |  |
| TRC Project Number: | 015446 | Phone: (425) 397-7360 |
| Client: | Haack Brothers Homes | Phone: (425) 397-7360 |
| Site Contact: | Joel Haack | Phone: N/A |
| Client Health and <br> Safety Representative: | N/A |  |


| Planned Activities: <br> Utility locate, test pit excavation, soil <br> sampling | Location Within Site: <br> Lots 1 through 4 at 413 and 419 <br> Rockefeller Avenue | Dates: <br> March through <br> May 2020 |
| :--- | :--- | :--- |
| Estimation of Hazards to TRC Personnel: <br> Arsenic, lead, and cadmium in soil, mechanical equipment, subsurface utilities. |  |  |
| Physical Description of the Facility: <br> Vacant Site in residential neighborhood. Topography is generally flat with vegetative cover. <br> Operation Description of the Facility: <br> Vacant Site in residential neighborhood adjacent to golf course. <br> Facility Status: <br> Vacant properties in a residential neighborhood. |  |  |


| Hazard Assessment |  |  |  |  |  |  |  |
| :--- | :---: | :--- | :--- | :--- | :--- | :--- | :---: |
| Chemical State: | $\square$ | Liquid | $\square$ | Solid | $\square$ | Gas |  |
|  | $\square$ | Vapor | $\square$ | Unknown |  |  |  |
| Chemical | $\square$ | Corrosive | $\square$ | Flammable | $\boxtimes$ | Toxic |  |
| Characteristics: | $\square$ | Volatile | $\square$ | Inert | $\square$ | Other: |  |
|  |  |  |  |  |  |  |  |


| Describe Potential Chemical Hazards and Modes of Exposure |  |
| :--- | :--- |
| Chemical Hazards: | Arsenic, lead, and cadmium in soil. |
| Potential Modes of <br> Exposure: | Primary mode: Inhalation, Secondary mode: ingestion. Potential dust hazard <br> during test pit excavation. Will monitor for dust during test pit excavation. |


| Potential Chemical Hazards |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Chemical <br> Name | Action Levels |  |  | Exposure Route | Target Organs | Symptoms |
|  | PEL | STEL | IDLH |  |  |  |
| Metals |  |  |  |  |  |  |
| Arsenic | $\begin{aligned} & 0.002 \\ & \mathrm{mg} / \mathrm{m}^{3} \end{aligned}$ | $\begin{aligned} & 0.010 \\ & \mathrm{mg} / \mathrm{m}^{3} \end{aligned}$ | $\stackrel{5}{\mathrm{mg} / \mathrm{m}^{3}}$ | Inhalation, skin absorption, skin/eye contact, ingestion | Liver, kidneys, skin, lungs, lymphatic system | Ulceration of nasal septum, dermatitis, gastrointestinal disturbances, peripheral neuropathy, respiratory irritation, hyperpigmentation of skin [potential occupational carcinogen] |
| Cadmium | $\begin{aligned} & 0.005 \\ & \mathrm{mg} / \mathrm{m}^{3} \end{aligned}$ |  | $\begin{gathered} 9 \\ \mathrm{mg} / \mathrm{m}^{3} \end{gathered}$ | Inhalation, ingestion | Respiratory <br> system, <br> kidneys, <br> prostate, blood | Pulmonary edema, breathing difficulty, cough, chest tightness, sub sternal (chest) pain, headache, chills, muscle aches, nausea, vomiting, diarrhea, loss of sense of smell, emphysema, proteinuria, mild anemia, [potential occupational carcinogen] |
| Lead | $\begin{aligned} & 0.050 \\ & \mathrm{mg} / \mathrm{m}^{3} \end{aligned}$ |  | $\begin{gathered} 100 \\ \mathrm{mg} / \mathrm{m}^{3} \end{gathered}$ | Inhalation, ingestion, skin/eye contact | Eyes, gastrointestina I tract, CNS, kidneys, blood, gingival tissue | Weakness, exhaustion, insomnia, facial pallor, anorexia, weight loss, malnutrition, constipation, abdominal pain, colic, anemia, gingival lead line, tremor, paralysis, wrist, ankles, encephalopathy, kidney disease, irritation eyes, hypertension |

## Describe Potential Physical Worker Hazards:

Heavy equipment, slip, trip, and fall, cold stress

## Potential Physical Hazards

Heat StressNoise
$\boxtimes$ Traffic or heavy equipment $\square$ Overhead hazards

## Cold Stress

Confined-Space Entry
Heights

Dust (non-toxic)
$\square$ Explosion/Flammability
$\square$ Oxygen-Deficient Atmosphere $\boxtimes$ Slip, trip, fall
$\square$ Other:

## Prevention of Physical Hazards

| Category | Cause | Preventive Measures |
| :--- | :--- | :--- |
| Head Hazards | Falling and/or sharp objects, bumping <br> hazards. | Hard hats will be worn by all personnel at <br> all times when working around overhead <br> hazards and heavy equipment. |


| Foot/Ankle Hazards | Sharp objects, dropped objects, uneven <br> and/or slippery surfaces, and chemical <br> exposure. | Chemical resistant, steel-toed boots must <br> be worn at all times on-site. |
| :--- | :--- | :--- |
| Eye Hazards | Sharp objects, poor lighting, bright lights <br> (welding equipment), exposure due to <br> splashes. | Safety glasses/face shields will be worn <br> when appropriate. Shaded welding <br> protection will be worn when appropriate. |
| Electrical Hazards | Underground utilities, overhead utilities, <br> motors, electrical panels equip. and <br> breakers. | Locator service mark-outs, visual <br> inspection of work area prior to starting <br> work. |
| Mechanical Hazards | Heavy equipment such as drill rigs, service <br> trucks, excavation equipment, saws, drills, <br> etc. | Competent operators, backup alarms, <br> regular maintenance, daily mechanical <br> checks, proper guards. |
| Noise Hazards | Machinery creating >85 decibels TWA, <br> $>115$ decibels continuous noise, or peak at <br> $>140$ decibels. | Wear earplugs or protective earmuffs. |
| Fall Hazards | Elevated and/or slippery or uneven <br> surfaces. Trips caused by poor <br> "housekeeping" practices. | Care should be used to avoid such <br> accidents and to maintain good <br> "housekeeping". Fall protection devices <br> must be used when work proceeds on <br> elevated surfaces. |
| Lifting Hazards | Injury due to improper lifting techniques, <br> overreaching/overextending, heavy <br> objects. | Use proper lifting techniques, mechanical <br> devices where appropriate. |
| Lighting Hazards | Improper illumination. | Limit work to daylight hours or rent <br> additional construction lighting. |


| Site Activity Considerations |  |  |  |  |  |  |  |  |  |  |
| :--- | :---: | :--- | :--- | :--- | :--- | :--- | :---: | :---: | :---: | :---: |
| Will Client Site Representative be Present? | $\square$ | Yes | $\square$ | No | $\boxtimes$ Sometimes |  |  |  |  |  |
| Exact Locations of Chemicals: | $\square$ | Known | $\boxed{l n}$ | Assumed | $\square$ Unknown |  |  |  |  |  |
| Identify Nearest Off-Site Population: | $\square$ | Rural | $\square$ | Industrial | $\boxtimes$ Residential |  |  |  |  |  |
|  | $\square$ | Urban | $\square$ | Commercial |  |  |  |  |  |  |

## Monitoring Equipment

PIDFIDCombustible gas indicatorColorimetric tubes$\mathrm{H}_{2} \mathrm{~S} / \mathrm{O}_{2}$ Meter
囚
Particulate meter
$\square \quad$ Other (describe):Carbon monoxide meter

## Monitoring Action Guidelines

| Instrument | Reading/Obser <br> vation | Action Required |
| :--- | :---: | :--- |
| Particulate Meter | Observable dust | Notify Project Manager to determine <br> potential engineering controls |
|  | See Potential <br> Chemical Hazards <br> Section Above | Evacuate all workers from work area. <br> Notify Project Manager and Company <br> Safety Officer |


\section*{Special Safety Considerations <br> If there is more than one level of hazard, or if there are multiple "sites" within a site, the hazards associated with each should be considered. A separate "Special Safety Considerations" section should be completed for each "site." <br> Work Location: Lots 1 through 4 at 319 Rockefeller Avenue <br> Objective of work at this Location: Test pit advancement, soil sampling <br> Level of Protection Planned: $\square$ Level C $\square$ Level D | $\quad$ |
| :--- |
|  | <br> Modifications to Level of Protection: Hard hat, safety glasses, steel toe boots, and hearing protection required when working near drill rigs or heavy equipment. DOT-approved safety vest required when working near vehicle traffic or heavy equipment. TRC staff may not enter any un-shored excavation greater than 4 -feet deep unless 1:1 sidewall slope is present.}


| Types of PPE to be Used |  |
| :--- | :--- |
| Foot | Steel-toed, steel shank boots. Rubber steel toed boots or rubber boot covers <br> required if boot decontamination is warranted. |
| Hand | Double layer of nitrile gloves when handling potentially contaminated media, <br> temperature-appropriate gloves for protection during cold weather. |
| Eye/Face | Safety glasses |
| Clothing | Temperature appropriate, long pants are required. Tyvek coveralls should be <br> available to all on-site workers. |
| Respiratory | Based on monitoring requirements (full- or half-face respirator should be <br> available to all on-site workers). |
| Additional Gear | Hardhat, earplugs, face shield, DOT-approved safety vest |


| Work Party |  |  |
| :---: | :---: | :---: |
| Name | Responsibility | Level of Protection |
| Nate Hinsperger |  |  |
|  |  |  |
|  |  |  |

## Site Entry Procedure

Upon site arrival but before walking onto the property, send an email with the following information to the Project Manager and to onsite-iss@trccompanies.com:

- Property address
- Who is with you at the job site (if anyone)
- Description and license number of the vehicle you are using
- What time you anticipate leaving the property

When leaving the site for the day, send another email to the Project Manager and onsite-
iss@trccompanies.com stating that you are off-site. The email can be as simple as: "It's 5:00pm and I'm leaving the property."

## Criteria for Changing Personal Protection

Air monitoring threshold limits. When visible dust is noted.

Criteria for Implementing Engineering Controls:
When air monitoring threshold limits are exceeded:.
Decontamination Procedures
Remove PPE and wash hands and face prior to eating or leaving Site. Eye wash kit, washing dermal with soap and water

Work Limitations (i.e., time of day, conditions, etc.)
Daylight hours only.

## Placement of Disposable Materials

N/A

Placement of Investigation-Derived Residuals (i.e., drilling spoils, decon. water, purge/dev. water) Test pit spoils will be placed back into excavation.

## Location of Nearest:

Cellular Phone: With TRC field representative
Running Water: N/A
Public Road: Rockefeller Road
Lavatory: N/A

| Emergency Planning |  |  |  | Name | Number |
| :--- | :---: | :--- | :---: | :---: | :---: |
| Service | Everett Police Department | 911 |  |  |  |
| Local Police: | Everett Fire Department | 911 |  |  |  |
| Local EMS: | Everett Fire Department | 911 |  |  |  |
| Local Fire Department: | Providence Medical Center | $(425)$ 261-2000 |  |  |  |
| Local Hospital: | Joel Haack | (425) 397-7360 |  |  |  |
| Client Contact: |  |  |  |  |  |


| Site Phone Number: | Nate Hinsperger | $(206) 851-3312$ |
| :--- | :--- | :--- |
| TRC Office (425-395-0010) | Douglas Kunkel | $425-395-0016$ office |
|  |  | $425-241-8170$ cell |

## Directions to Nearest Medical Facility (Map Attached):

The recommended route to Providence Medical Center is highlighted on attached map. The hospital is located approximately 0.9 miles from the site.

| Approvals | Title | Signature |
| :--- | :--- | :--- |
| Site Safety Officer, Nate Hinsperger |  | Date |
| Project Manager, Nate Hinsperger |  |  |
| Company H\&S Officer, <br> TRC Safety Officer, Doug Kunkel |  |  |

Additional Site Personnel

| Printed Name and Company | Approvals Signature | Date |
| :--- | :--- | :--- |
|  |  |  |
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|  |  |  |
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|  |  |  |
|  |  |  |
|  |  |  |

## Daily Safety Meeting

| Date: |  |
| :--- | :--- |
| TRC Project Number: |  |
| Site Address: |  |
| TRC Personnel Conducting Meeting: |  |


| Known or Suspected Potential Hazards | Personal Protective Equipment |
| :---: | :---: |
| Chemicals of Potential Concern Traffic (Vehicle and Pedestrian) Trips Falls Drilling Equipment Excavation Equipment Noise Hot/Cold Utilities, Subsurface, and Overhead Other, Describe: | Hard Hat Eye Protection High-Visibility Clothing Flame-Resistant Clothing Protective Footwear Coveralls Hearing Protection Respirator Exclusion Zone (Cones, Signs, Etc.) Other, Describe: |
|  Locations of Emergency Equipment <br> $\square$ Fire Extinguishers <br> $\square$ Eye Wash <br> $\square$ First Aid Kit <br> $\square$ Nearest Medical Facility <br> $\square$ Potable Water <br> $\square$ Restroom <br> $\square$ Equipment Shutdown Procedures <br> $\square$ Other, Describe: | Decon, Emergency Signals, Rally Point, Etc. <br> Decon Procedures Waste Management Hand Signals for Shutdown Audible Signals for Shutdown Primary Rally Point Secondary Rally Point Other Emergency Info, Describe: |

Persons Attending Safety Meeting

Name / Affiliation (Print)
Time

|  | $/$ |
| :---: | :---: |
|  | $/$ |
|  | $/$ |
|  | $/$ |

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419 Rockefeller Ave, Everett, WA 98201 to Providence Drive 0.9 mile, 4 min Regional Medical Center - Everett


## 419 Rockefeller Ave

Everett, WA 98201
$\uparrow$ 1. Head south on Rockefeller Ave toward 5th St
$\boldsymbol{r}$ 2. Rockefeller Ave turns right and becomes 5th St

4 3. Turn left onto Wetmore Ave
$\rightarrow$ 4. Turn left onto 13th St
5. Turn right
(i) Destination will be on the right

## Providence Regional Medical Center - Everett

1700 13th St, Everett, WA 98201

