



SOIL MANAGEMENT PLAN

**759 North Eckhoff Street / 752 North Poplar Street
Orange, California 92868**

Prepared on Behalf of:
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SOIL MANAGEMENT PLAN

1. INTRODUCTION

Hazard Management Consulting, Inc. (HMC) is pleased to present this Soil Management Plan (SMP) for the property located at 759 North Eckhoff Street and 752 North Poplar Street in the city of Orange, California (Site; Figures 1 and 2). HMC has prepared this SMP on behalf of IDI Logistics (IDI) who recently acquired the property for redevelopment. The Site is noted to be an approximately 12.69-acre parcel containing the National Oilwell Varco (NOV) facility. The Site is improved with five building structures, and has been used for industrial uses by notable facilities including National Oilwell Varco and formerly by Pacific Delivery Services since at least 1985. Uses observed at the Site included offices, storage, and the varying stages of the manufacturing of heavy equipment and components for the oil and gas drilling industry. The Site is located in a commercial/industrial area in the City of Orange, California.

The redevelopment plans for the Site call for the demolition of all existing structures on the site followed by grading to allow for a new industrial development. There have been previous subsurface investigations conducted at the Site related to the historical use of the Site for industrial activities. HMC completed a Phase I ESA and a Phase II Site Investigation in 2020 and found no evidence of significant contamination at the Site. There were isolated detections of certain contaminants that were not considered an immediate threat at that time, provided that the Site remained in its current use and orientation. Elevated concentrations of TPHcc were detected in soil beneath the HAZMAT area which was recommended to be removed as part of NOV closing their operations. Investigations into asbestos and lead paint were conducted by HMC and presented under separate cover. HMC recommended that prior to NOV vacating the Site, the Site should undergo closure as required by the City of Anaheim to ensure that NOV has removed all equipment and associated subsurface conduits, sumps, and chemicals; cleaned up all spills and staining, and removed the TPH impacted soil in the vicinity of the HAZMAT area and that a Soil Management Plan (SMP) should be prepared to guide future soil grading activities.

The closure of the Site and removal of all chemicals is the responsibility of NOV. This SMP starts from the premise that the Site has been demolished and provides guidance for the grading activities that will be conducted with regards to the health & safety procedures to be implemented to protect workers at the Site; the process for handling and either disposal or reuse of soil containing elevated concentrations of the COCs on Site; as well as responding to unknowns that may be encountered during grading.

2. OBJECTIVE

The objective of this SMP is to document the procedures that will be used to guide the grading and redevelopment activities at the Site so as to identify and properly manage:

- known soil impacts; and
- potentially unknown impacted soils.

3. SITE AND REMEDIAL HISTORY

The Site comprises approximately 12.69 acres and is located in the City of Orange, Orange County, set in an area zoned for light manufacturing uses (Figure 2). The Site was observed to have historically been used for agricultural purposes since at least 1938 until the Site was first seen to be vacant land in the mid-1970's. The Site was then developed with the current facility and was noted with additional development from 1985 until 2016 when the Site was first seen in the approximate orientation it is in today, improved with five building structures. Buildings 1 through 4 contain offices although they are largely used for the manufacturing process of NOV's products. Building 1 was observed with product storage in the western portion near the offices. The remainder of the warehouse was seen with a manufacturing area that included satellite chemical and chemical waste storage areas. Computer numerical control (CNC) machines were seen and noted with subsurface lines for the recirculation of coolant. The CNC machines were reported to not use subsurface tanks for the storage of coolant/lubricants but rather stored them in the machine above ground. The machines were noted to be set into pits in the concrete slab at varying depths. Evidence of staining and spills were observed in the vicinity of these machines. The entire manufacturing floor was noted to be slick from the mist of coolant. Building 2 was noted with several cranes, product storage, and stations for lighter work on the facility's products. Building 3 was seen with a media blasting booth as well CNC machines, manufacturing equipment, an electroplating dip tank, and transformers. Building 4 and 5 were noted with office and storage uses (HMC, 2020a).

The Site is located in an industrial setting and is bound:

- to the north by a railroad across which are industrial buildings;
- on the east by Caliber Collision;
- to the south by the NOV office building and distribution building as well as the Label Impressions facility,
- to the west by North Eckhoff Street across which is Orange County Communications Division, Children and Family Services, and Social Services Agency.

The Site is relatively flat with an elevation of approximately 160 feet above mean sea level (msl) with a regional slope to the south southwest. The following groundwater information was found on the Regional Water Quality Control Board's website GeoTracker. Groundwater was reported to have been detected at approximately 91 to 93 feet bgs in a 2019 groundwater monitoring report for the Orange Coast Car Wash, a facility located approximately 4,300 feet south southeast of the Site. The reported direction of groundwater flow is to the southwest (HMC, 2020a). The Site lies within the Coastal Plain of Orange County Groundwater Basin (Orange County Basin) which underlies a coastal alluvial plain in the northwestern portion of Orange County. The basin is bound by consolidated rocks exposed on the north in the Puente and Chino Hills, on the east in the Santa Ana Mountains, and on the south in the San Joaquin Hills. The basin is bound by the Pacific Ocean on the southwest and by a low topographic divide approximated by the Orange County - Los Angeles County line on the northwest. The basin underlies the lower Santa Ana River watershed. (HMC, 2020a).

3.1 Initial Phase I ESA Investigations, HMC, October 27, 2020

As part of a due diligence effort initiated on behalf of IDI, HMC conducted a Phase I ESA to evaluate the Site for potential RECs. It was HMC's understanding plans for the Site were for redevelopment of the Site under continued commercial and industrial land use. The ESA included a review of the historical, existing, and off-site property uses to evaluate whether there were issues of concern at the Site.

Based on the information obtained as part of the Phase I investigation prepared by HMC, the Site was observed to have historically been used for agricultural land since at least 1938 until the Site was seen to be vacant land in the mid-1970's. The Site was then developed with the current facility and was noted with additional development from 1985 until 2016 when the Site was first seen in the approximate orientation it is in today. The Site has been used by industrial facilities since it's development who have used hazardous chemicals at the Site given the nature of the businesses that historically and currently occupy the Site. Of note, the current occupant National Oilwell Varco's activities include the manufacturing of heavy equipment for the oil and gas industry which included suspect areas such as current and former machinery pits, trenching, a wash pad, and an associated sump as well as staining and spills observed during the Site reconnaissance portion of HMC Phase I ESA investigation. The wash pad sump contents were reported to HMC by NOV personnel to be pumped periodically and disposed of as hazardous waste. Historic UST files indicate that Pacific Delivery Service formerly located on the eastern side of the Site at Building 3 (752 North Poplar Street), operated three gasoline USTs (two 10,000-gallon and one 1,000-gallon) and one 1,000-gallon waste oil UST. A 1989 permit for removal from Orange County Healthcare Agency for the removal of the two 10,000-gallon USTs was found for the Site, however no additional documentation providing under what conditions the tanks were closed under was discovered by HMC. Based on the review of off-Site facilities, Inland Specialty Chemical Company, located approximately 497 feet northwest of the Site, was identified to pose a potential vapor intrusion condition to the Site. This facility has been under investigation and remediation for chlorinated solvents and received closure from the RWQCB in 1995. No reports were found that detailed off-Site concentrations.

In summary, the following REC's were identified for the Site:

- The approximately 30-year industrial use of the Site and associated chemical uses as well as significant areas of staining and spills, subsurface piping, trenches, metal plates, concrete patches, and machinery pits;
- Unknown status of historical USTs in the vicinity of Building 3;
- Potential vapor intrusion condition from on and off-Site facilities; and,
- The reported clarifier/sump below the wash pad.

Key findings of this Phase I ESA were as follows:

- Buildings 1 through 3 of the NOV facility were noted with significant areas of staining and spills, subsurface piping, trenches, metal plates, concrete patches, and machinery pits. Staining and spills were also noted in the hazardous waste areas along with surface staining seen in various areas around the Site, such as staining in drainage swales lead toward storm drains. What appeared to be oil was seen to be leaking from a refuse bin located in the hazardous waste storage area and entering a drain near the bin;
- A clarifier/sump was reported to be in use in conjunction with the wash pad located at the Site. The wash pad was indicated to be the location of where machined parts are washed and degreased;
- Historic UST files indicate that Pacific Delivery Service formerly located on the eastern side of the Site at Building 3 (752 North Poplar Street), operated three gasoline USTs (two 10,000-gallon and one 1,000-gallon) and one 1,000-gallon waste oil UST. No records indicating confirmation that the tanks were removed, or conditions of the surrounding soil were found;
- Based on the review of the available regulatory information, the Site is located in an area with an approximately 30-year history of industrial uses. Several facilities were identified to store and use hazardous chemicals, and some have had releases that were subsequently closed with the relative oversight agency. None of these facilities were found to pose an environmental threat to the Site with the exception of the Inland Specialty Chemical Company. This facility has been under investigation and remediation for chlorinated solvents and received closure from the RWQCB in 1995. Given perched groundwater was encountered at 53 feet bgs, the potential for migratory VOCs poses a vapor intrusion condition at the Site, in particular the western portion of the Site given the southerly flow of groundwater reported at this facility. Review of the records indicate only a closure letter for this facility being available. No data from off-Site investigation into soil vapor was found;
- Given the findings of this Phase I ESA, there is potential for a vapor intrusion condition from on-Site and off-Site sources;
- The Site was developed with the current structures during times when asbestos containing materials (ACMs) were commonly used in construction. Suspect ACMs should be treated as such until they can be ruled out as asbestos containing through sampling. Suspect ACMs include but are not limited to joint compound, drywall, vinyl floor tiles, mastic, and roofing tar; and,
- Flaking paint was observed at various surfaces at the Site.

Based on the findings of this ESA, HMC recommended the following:

- A Site wide Phase II subsurface survey should be conducted;
- A geophysical survey should be conducted around Building 3 to assess the potential presence of historical USTs;
- A lead-based paint survey should be conducted at the Site; and,
- Sample all suspect ACMs prior to any disturbance such as demolition.

3.2 Phase II ESA Soil and Soil Vapor Investigation, HMC, November 20, 2020

HMC conducted a Phase II ESA, dated November 20, 2020, to assess if releases of hazardous chemicals from on Site or off-Site sources have affected subsurface conditions at the Site and, to assess the presence of USTs in the vicinity of Building 3. The soil and soil vapor investigation included the advancement of 29 borings (designated B1 through B29), on October 25 and 31 as well as November 1, 2020. Soil samples were collected from each boring at depths of approximately 1, 5, 10, and/or 15 feet bgs. After the collection of soil samples, a soil vapor probe was installed at each location at approximately five feet bgs.

The data set collected through soil sampling generally reported non-detectable to very low concentrations of TPH as well as concentrations of metals that are considered to be found in ranges typical of Southern California soils. VOCs were not detected in any of the analyzed soil samples. One soil sample, B26-1, collected at one-foot bgs was reported with TPHcc above current LARWQCB screening levels, however the subsequent sample taken at five feet bgs at the location was reported to contain non-detectable to very low concentrations of TPHcc, indicating that the contamination was isolated and showed no evidence of horizontal migration at that time.

Soil vapor concentrations at the Site were generally reported with non-detectable concentrations of VOCs. Soil vapor locations were reported with non-detectable to extremely low concentrations of VOCs below any actionable level with the exception of B14-SV-5, which reported a low concentration of benzene, however the concentration of this compound exceeded current screening levels. Given that this data point was located outdoors and was the only concentration of benzene reported at the Site, this detection was not considered to pose an actionable threat or a vapor intrusion condition at the Site.

A geophysical was conducted in the vicinity of Building 3 to assess the unknown status of historical USTs. No evidence of USTs were found. All subsurface anomalies were reported to coincide with interference from above ground features.

Conclusions/Recommendations

The following conclusions and recommendations were presented by HMC: HMC completed a Phase II SI and has found no evidence of significant contamination at the Site. There were isolated detections of certain contaminants that are not considered an immediate threat at this time, provided that the Site remain in its current use and orientation. Elevated concentrations of TPHcc were detected in soil beneath the HAZMAT area which should be removed as part of NOW closing their operations. Investigations into asbestos and lead paint were recommended by HMC. HMC also recommended that prior to National Oilwell Varco vacating the Site, the Site should undergo closure to ensure that NOV has removed all equipment and associated subsurface conduits, sumps, all chemicals, cleaned up all spills and staining, and removed the TPH impacted soil in the vicinity of boring B26; and, should prepare a Soil Management Plan (SMP) to guide soil handling if contaminated soils are encountered during future grading and development.

4. ENVIRONMENTAL CONSIDERATIONS

As noted, there were activities, equipment and chemicals present as part of NOV's operations on Site. Removal of those chemicals and any closure activity is the responsibility of NOV. This plan begins after the Site has been closed and all demolition activities complete. This plan has been prepared to guide soil handling and grading activities. During grading activities, the soil with known impacts as described above will be removed for off-site disposal prior to mass grading activities. In addition, there is always a chance of encountering previously unknown impacted soil. Given the known conditions and Site history, grading activities will need to take into consideration the South Coast Air Quality Management District's (SCAQMD's) Rule 1166 should any "VOC Contaminated soil," be encountered as well as the general need for monitoring both for general health & safety needs as well as to monitor for potential VOC Contaminated soil.

4.1 Known Soil Impacts

HMC has found no evidence of significant contamination at the Site. There were isolated detections of certain contaminants as shown on Figure 3. Elevated concentrations of TPHcc were detected in soil beneath the HAZMAT area. After demolition, this area will be cordoned off and the impacted soil removed for off site disposal prior to any mass grading activities.

4.2 Unknown Soil Impacts

There is always the potential to encounter unanticipated subsurface features or soil conditions during demolition and grading of an historical industrial Site. Section 9 of this SMP presents the procedures if an unanticipated issue is discovered during grading. Under these conditions, the procedures in Section 10 will be followed to guide the characterization, excavation, and removal processes, as necessary.

5. PROGRAM PARTICIPANTS

5.1 Environmental Consultant

HMC will act as the environmental consultant and provide field oversight and management services for the SMP. HMC personnel will include the following Environmental Program Manager (EPM) and Environmental Field Coordinator (EFC):

- EPM - Mark S. Cousineau, NREP, Hazard Management Consulting
- EFC - To be Determined (TBD)

5.2 Contractor

The general contractor for the project is.

TBD

5.3 Owner's Participants

The Owner's Project Director is:
Brendan Dickens

6. INDIVIDUAL RESPONSIBILITIES

6.1 Environmental Consultant's Program Manager

The EPM will perform for the following tasks:

- Monitor the work of the EFC;
- Communicate field activities to the Owner's Project Director;
- Communicate with the EFC to investigate unknown features and other unknown environmental conditions, if encountered;
- Evaluate results of all soil sampling conducted;
- After consultation with the EFC and the Owner's Project Director, characterize, delineate, and supervise the proper management of unknown features, and other unanticipated environmental conditions;
- Report sample results to regulatory agencies as required; and,
- Prepare reports of field activities.

6.2 Environmental Field Coordinator (EFC)

The EFC will perform the following tasks:

- Monitor grading operations visually and with the appropriate monitoring equipment to assess potential unknowns in the field and respond to requests based on questions and findings from the contractor's representative;
- Provide oversight of the implementation of the SMP and Health & Safety Plan including air monitoring;
- Collect soil samples and arrange for laboratory analyses if needed;
- Maintain records of soil sample locations;
- Report suspected unknown features and other unanticipated environmental conditions to the EPM. The EPM will initiate and approve all non-emergency contacts with the appropriate agencies; and
- Supervise activities related to investigating and remediating unknown features and other unanticipated environmental conditions.

6.3 Contractor's Field Coordinator

The Contractor's Field Coordinator shall be responsible for the following task:

- Coordinate with the EPM regarding identification and removal of impacted soil or other unknown structures found during grading.

7. **ACTIVITIES BEFORE GRADING**

The Owner's Project Director and the EPM will provide the Contractor and Site workers with this SMP prior to implementation of any applicable field activities. A kickoff meeting will take place with all parties involved in the movement of soil to review the components of the plan.

8. **HEALTH AND SAFETY**

A Health & Safety (H&S) Plan that will govern the work is included in Appendix A. Contractors are required to have their own H&S Plan that at a minimum includes the provisions of this H&S in addition to whatever additional H&S procedures are necessary and required for their specific activity.

All applicable federal, state, and local regulations and codes relating to health and safety shall be adhered to by the Contractor. The Contractor shall adhere to all sections of Cal OSHA regulations contained in Title 8 of the California Code of Regulations (8 CCR) as they apply to the Site activities. Applicable requirements may include but are not limited to the following:

- Injury and Illness Prevention Program (8 CCR 1509 and 8 CCR 3203)
- Hazardous Waste Operations and Emergency Response (8 CCR 5192)
- Hazard Communication (8 CCR 5194)
- Personal Protective Equipment (8 CCR Article 10)
- Respiratory Protective Equipment (8 CCR 5144)
- Control of Noise Exposure (8 CCR 5095-5100)
- Excavations (8 CCR 1503 and 8 CCR 1539- 1547)
- Fire Prevention and Suppression Procedures (8 CCR 4848)
- Portable Fire Extinguishers (8 CCR 6151)
- Cleaning, Repairing, Servicing, and Adjusting Prime Movers, Machinery, and Equipment Lockout/Tagout (8 CCR 3314)
- Medical Services and First Aid (8 CCR 3400).

9. **SOIL MANAGEMENT ACTIVITIES**

The activity taking place that is subject to this SMP is the over excavation and recompaction of shallow

soil for the development of building pads, drive aisles and parking areas of the Site. Soil excavation and grading operations will be conducted in accordance with the following Site-specific soil management protocols, developed after considering the Site history and previous subsurface investigations. These protocols are intended to be followed during all grading activities and cover both known and, if encountered, unanticipated environmental conditions. The EFC will periodically inspect the work locations to assess potential unknowns and monitor general grading practices. The Contractor's Field Coordinator will notify the EFC if any odorous or discolored soil is encountered. Procedures to be followed if odorous or discolored soil is encountered are presented in Section 9.3.

For clarity, there are three types of soil sampling that may be conducted as part of this plan including:

- **Soil for Off Site Disposal:** Samples will be collected and analyzed as required by the receiving facility to develop an approved "soil profile" for disposal purposes;
- **Imported Fill:** Any imported fill brought to the Site will be tested in accordance with the procedures presented in Section 9.5.
- **Soil to be Reused On-Site:** Excess soil that is placed in stockpiles for potential reuse on Site shall be sampled and evaluated for reuse in accordance with the methodologies presented in US EPA SW-846 and guidance presented by the Bay Area RWQCB (2006) as further described below. It is anticipated that most of the soil will be reused on the Site. The EFC will be on the Site to assist in segregating impacted soil from non-impacted soil and assisting in selection of potential disposal options should impacted soil be encountered.

9.1 Known Conditions

Based on the results of investigations to date, there are a few known areas of soil that will require removal and disposal of soil during grading. Elevated concentrations of TPHcc were detected in soil beneath the HAZMAT area and in the vicinity of boring B26. Furthermore, given the potential to encounter impacted soil in the areas where elevated soil gas concentrations were reported in the 2020 Phase II ESA prepared by HMC, care will be conducted when soil is disturbed in these areas.

The following reuse criteria as obtained from the LA RWQCB are proposed to guide decisions regarding off-site disposal or reuse of soil:

| Contaminant | Industrial Soils Reuse Threshold ppm |
|--------------------|--------------------------------------|
| TPH-Gasoline Range | 500 |
| TPH-Diesel Range | 1,000 |
| TPH-Oil Range | 10,000 |

9.2 South Coast Air Quality Management District Rule 1166

Monitoring for the presence of “VOC-Contaminated” soil as that term is defined and implementing a VOC-impacted soil mitigation plan approved by the SCAQMD Executive Officer will be required if VOC-impacted soil is encountered during grading and excavation work. As VOCs were detected in previous assessments, soil movement at the Site will require monitoring to evaluate whether VOC Contaminated Soil is present. IF VOC Contaminated Soil is encountered, a Various Sites Permit will be used initially. A copy of the plan must be on the Site during the entire excavation period, and the provisions for monitoring and reporting under the Rule 1166 permit/plan must be implemented. The following vapor or odor mitigation measures may be implemented if real-time air monitoring exceeds the action level of 50 ppm per Rule 1166 or if odors are encountered that requires mitigation from a health and safety perspective:

- Cover subject soil with clean soil or plastic sheeting;
- Reduce the pace of work;
- Reduce size of area being excavated; and/or
- Apply vapor suppression.

Construction procedures or vapor/odor control measures may be altered based on observations of the effectiveness of such measures. Work must stop until such measures are improved, or additional or more effective measures are employed. Additional air monitoring may be conducted to confirm the effectiveness of emission reduction activities.

9.3 Unanticipated Environmental Conditions

The following process will be followed if unanticipated environmental conditions are encountered, including unusual odors, sustained elevated OVA readings (greater than 25 parts per million), pH less than 2, unusual staining or discoloration, or other characteristics judged by the EFC to not be representative of previously assessed Site conditions:

1. The Contractor will discontinue work in the area immediately and notify the EFC. The suspect area will be delineated with caution tape to prevent unauthorized entry.
2. The EFC will notify the EPM who will communicate to the Client that unanticipated impacted soil has been encountered and potentially to regulatory agencies as required.
3. The Contractor shall not move potentially impacted soil, or other materials, such as debris, from the suspect area to other parts of the Site unless otherwise directed by the EFC.
4. The EFC will collect samples of the potentially impacted soil and document the location. Soil sampling methodologies are included in Appendix B.
5. Depending on the nature of impact, soil samples will be analyzed for some or all the following: TPH-GRO, TPH-DRO, and TPH-MO by USEPA Method 8015M, VOCs by USEPA Method 8260 and metals.
6. Once the analytical results are obtained, the EPM will compare the results to the soil screening criteria to assess whether further action is warranted and, if so, what action is appropriate under

the circumstances, including further appropriate agency notifications.

7. Grading in any suspect area will not continue until any required remediation or removal is complete and only with the approval of the EFC or EPM.

9.4 Soil Stockpiling

Soil to be stockpiled from areas known to be impacted or soil that is potentially impacted based on field observations shall be segregated from other soils, placed on plastic sheeting, and covered at the end of each workday. Stockpiled soil awaiting characterization shall be treated as impacted soil until results are obtained. Daily cover and dust control shall be provided. Storm water management practices shall be consistent with Storm Water Management Protection Plan issued to the Site.

9.5 Off-Site Disposal

Soil to be disposed of off the Site shall be characterized to determine if it is a hazardous waste in accordance with California Code of Regulations (CCR), Title 22, and to respond to the requirements of the accepting disposal facility (e.g., hazardous, non-hazardous, or recycling). All soil will be handled and disposed of according to current regulatory guidelines.

9.6 Imported Fill Material

Imported fill material must meet the minimum requirements for soil sampling and analysis outlined in the DTSC's October 2001 *Information Advisory, Clean Imported Fill Material* to avoid the placement of chemically impacted soil on the Site. Imported fill material will be sampled in general accordance with the requirements for soil sampling and analysis outlined in the DTSC's October 2001 *Information Advisory, Clean Imported Fill Material* to avoid the placement of chemically impacted soil on the Site. The import fill material will be analyzed for the chemical parameters based on the nature and use of the Source location consistent with the procedures specified in the DTSC guidance.

The following sampling frequency:

| Area of Individual Borrow Area | Sampling Requirements |
|---------------------------------|--|
| 2 acres or less | Minimum of 4 samples |
| 2 to 4 acres | Minimum of 1 sample every ½ acre |
| 4 to 10 acres | Minimum of 8 samples |
| Greater than 10 acres | Minimum of 8 locations with 4 sub-samples pre location (32 total samples) |
| Volume of Borrow Area Stockpile | Sample per Volume |
| Up to 1,000 cubic yards | 1 sample per 250 cubic yards |
| 1,000 to 5,000 cubic yards | 4 samples for first 1,000 cubic yards +1 sample per each additional 500 cubic yards |
| Greater than 5,000 cubic yards | 12 samples for first 5,000 cubic yards +1 sample per each additional 1,000 cubic yards |

9.7 Dust Control and Air Monitoring

Any chemically affected soil brought to the surface by grading shall be managed in accordance with all applicable provisions of the State of California and/or federal law. For example, excavation of soil will require dust control measures, such as the application of water to exposed areas, in accordance with California Occupational Safety and Health Administration (Cal OSHA) and SCAQMD requirements.

The Contractor shall be responsible for the mitigation of dust during construction activities. If visible dust is observed at the perimeter of the Site boundaries because of construction activities at the Site, the Contractor shall enhance mitigation measures to eliminate the presence of visible dust at the Site boundary. Additional dust control measures that may be implemented, if necessary, include:

- Increased watering of the work area;
- Covering of stockpiles;
- Decreasing drop heights; and/or
- Use of dust palliatives.

The EFC will monitor Site conditions and evaluate what dust control measures (e.g., water application) will be implemented, as needed.

9.8 Equipment Cleaning

Track out of soil or other materials from the project Site is prohibited. Soil or other materials adhered to vehicles shall be removed via brushing or washing before exiting the Site.

If water is used for washing; it shall be collected and contained on the Site. Sampling may be needed prior to disposal in compliance with any sewer discharge permit(s). Sampling and compliance shall be the responsibility of the Contractor.

9.9 Soil Sampling Procedures

Soil samples may be collected using hand tools or a direct push drill rig. Soil sampling and sample handling procedures are presented in Appendix B.

9.10 Notifications

Should any notifications be necessary to involved agencies such as the City of Industry, they shall be made by the owner in coordination with the EPM.

10. REPORTING

Upon completion of the initial soil removal activity, a report outlining the work undertaken will be prepared and submitted to the RWQCB. The report will provide a summary of the work conducted, results of confirmation sampling and will contain copies of all daily field logs including all OVA monitoring results, laboratory results, and manifests used to dispose of soil from the Site. Upon completion of all grading and soil movement activity, a final SMP Implementation Report will be prepared to document the balance of the work that was conducted including whether any unknown conditions were encountered and how they were addressed.

11. REFERENCES

Hazard Management Consulting, Inc. (HMC). 2020a. Phase I Environmental Site Assessment: 759 North Eckhoff Street and 752 North Poplar Street, Orange, California 92868. October 27, 2020.

Hazard Management Consulting, Inc. (HMC). 2020b. Phase II Soil and Soil Vapor Investigation: 759 North Eckhoff Street and 752 North Poplar Street, Orange, California 92868. November 20, 2020.

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TABLES

TABLE 1 - LABORATORY RESULTS OF SOIL VAPOR SAMPLING

| Location and Rationale | Boring ID | Date Sampled | Sample Depth (feet bgs) | Volatile Organic Compounds (µg/L) | | | | Tracer Compounds |
|--|-------------|--------------|-------------------------|-----------------------------------|------------------|------------------------|-------------|--------------------|
| | | | | Benzene | Isopropylbenzene | Trichlorofluoromethane | Other VOCs | 1,1-Difluoroethane |
| Building 1 | B1-SV-5 | 10/30/20 | 5 | ND<0.10 | ND<0.50 | ND<0.50 | ND<0.05-5.0 | ND<0.50 |
| | B2-SV-5 | 10/30/20 | 5 | ND<0.10 | ND<0.50 | ND<0.50 | ND<0.05-5.0 | ND<0.50 |
| | B3-SV-5 | 10/30/20 | 5 | ND<0.10 | ND<0.50 | ND<0.50 | ND<0.05-5.0 | ND<0.50 |
| | B4-SV-5 | 10/30/20 | 5 | ND<0.10 | ND<0.50 | ND<0.50 | ND<0.05-5.0 | ND<0.50 |
| | B5-SV-5 | 10/30/20 | 5 | ND<0.10 | ND<0.50 | ND<0.50 | ND<0.05-5.0 | ND<0.50 |
| | B6-SV-5 | 10/30/20 | 5 | ND<0.10 | ND<0.50 | ND<0.50 | ND<0.05-5.0 | ND<0.50 |
| | B7-SV-5 | 10/30/20 | 5 | ND<0.10 | ND<0.50 | ND<0.50 | ND<0.05-5.0 | ND<0.50 |
| | B8-SV-5 | 10/30/20 | 5 | ND<0.10 | ND<0.50 | ND<0.50 | ND<0.05-5.0 | ND<0.50 |
| Building 2 | B9-SV-5 | 10/30/20 | 5 | ND<0.10 | ND<0.50 | ND<0.50 | ND<0.05-5.0 | ND<0.50 |
| Building 3 | B10-SV-5 | 10/30/20 | 5 | ND<0.10 | ND<0.50 | ND<0.50 | ND<0.05-5.0 | ND<0.50 |
| | B10-SV-5REP | 10/30/20 | 5 | ND<0.10 | ND<0.50 | ND<0.50 | ND<0.05-5.0 | ND<0.50 |
| | B11-SV-5 | 10/30/20 | 5 | ND<0.10 | ND<0.50 | ND<0.50 | ND<0.05-5.0 | ND<0.50 |
| Former UST Area | B12-SV-5 | 11/1/20 | 5 | ND<0.10 | ND<0.50 | ND<0.50 | ND<0.05-5.0 | ND<0.50 |
| General Screening | B13-SV-5 | 11/1/20 | 5 | ND<0.10 | ND<0.50 | ND<0.50 | ND<0.05-5.0 | ND<0.50 |
| | B14-SV-5 | 11/1/20 | 5 | 0.12 | ND<0.50 | ND<0.50 | ND<0.05-5.0 | ND<0.50 |
| | B15-SV-5 | 11/1/20 | 5 | ND<0.10 | ND<0.50 | ND<0.50 | ND<0.05-5.0 | ND<0.50 |
| Regulatory Screening Levels - Protection of Human Health | | | | | | | | |
| DTSC-Sli | | | | 0.014 | NA | 5.3 | Various | NA |
| SFBRWQCB-ESLi | | | | 0.014 | NA | NA | Various | NA |
| Tracer Gas Limit | | | | NA | NA | NA | NA | 5 |

Notes:

Boring ID - Boring Identification

feet bgs - feet below ground surface

VOCs - volatile organic compounds analyzed in general accordance with EPA Method No. 8260B

ug/L - micrograms per liter

ND - no detectable concentrations above the laboratory reporting limit

* - Not Sampled

DTSC-SII - California Department of Toxic Substance Control, Human and Ecological Risk Office Note 3, for ambient air for industrial/commercial land use modified for soil gas using the DTSC attenuation factor of 0.03 for a sample at the contaminant source of a potential future commercial building, dated 2019

SFBRWQCB-ESLI - San Francisco Bay Regional Water Quality Control Board Subslab/Soil Gas Vapor Intrusion: Human Health Risk Levels Commercial/ Industrial Caner Risk
Revision 2 2019

Green highlighted areas indicate tracer compound detected above 10 times the reporting limit rendering the sample invalid per DTSC Active Soil Gas Investigation Guidelines July 2015

Yellow Highlighted areas indicated concentrations that exceeded screening levels

TABLE 1 - LABORATORY RESULTS OF SOIL VAPOR SAMPLING

| Location and Rationale | Boring ID | Date Sampled | Sample Depth (feet bgs) | Volatile Organic Compounds (µg/L) | | | | Tracer Compounds |
|--|-------------|--------------|-------------------------|-----------------------------------|------------------|------------------------|-------------|--------------------|
| | | | | Benzene | Isopropylbenzene | Trichlorofluoromethane | Other VOCs | 1,1-Difluoroethane |
| General Screening | B16-SV-5 | 11/1/20 | 5 | ND<0.10 | ND<0.50 | ND<0.50 | ND<0.05-5.0 | ND<0.50 |
| | B17-SV-5 | 11/1/20 | 5 | ND<0.10 | 1.2 | ND<0.50 | ND<0.05-5.0 | ND<0.50 |
| | B18-SV-5 | 11/1/20 | 5 | ND<0.10 | ND<0.50 | ND<0.50 | ND<0.05-5.0 | ND<0.50 |
| | B19-SV-5 | 11/1/20 | 5 | ND<0.10 | ND<0.50 | ND<0.50 | ND<0.05-5.0 | ND<0.50 |
| Vicinity of Wash Pad and Clarifier | B20-SV-5 | 11/1/20 | 5 | ND<0.10 | ND<0.50 | ND<0.50 | ND<0.05-5.0 | ND<0.50 |
| Machinery Pits and Drains | B21-SV-5 | 11/1/20 | 5 | ND<0.10 | ND<0.50 | ND<0.50 | ND<0.05-5.0 | ND<0.50 |
| | B22-SV-5 | 11/1/20 | 5 | ND<0.10 | ND<0.50 | ND<0.50 | ND<0.05-5.0 | ND<0.50 |
| General Screening | B23-SV-5 | 11/1/20 | 5 | ND<0.10 | ND<0.50 | 0.56 | ND<0.05-5.0 | ND<0.50 |
| | B23-SV-5REP | 11/1/20 | 5 | ND<0.10 | ND<0.50 | 0.52 | ND<0.05-5.0 | ND<0.50 |
| | B24-SV-5 | 10/30/20 | 5 | ND<0.10 | ND<0.50 | ND<0.50 | ND<0.05-5.0 | ND<0.50 |
| HAZMAT Storage | B25-SV-5 | 10/30/20 | 5 | ND<0.10 | ND<0.50 | ND<0.50 | ND<0.05-5.0 | ND<0.50 |
| | B26-SV-5 | 10/30/20 | 5 | ND<0.10 | ND<0.50 | ND<0.50 | ND<0.05-5.0 | ND<0.50 |
| General Screening | B27-SV-5 | 10/30/20 | 5 | ND<0.10 | ND<0.50 | ND<0.50 | ND<0.05-5.0 | ND<0.50 |
| | B28-SV-5 | 11/1/20 | 5 | ND<0.10 | ND<0.50 | ND<0.50 | ND<0.05-5.0 | ND<0.50 |
| | B29-SV-5 | 11/1/20 | 5 | ND<0.10 | ND<0.50 | ND<0.50 | ND<0.05-5.0 | ND<0.50 |
| Regulatory Screening Levels - Protection of Human Health | | | | | | | | |
| DTSC-Sli | | | | 0.014 | NA | 5.3 | Various | NA |
| SFBRWQCB-ESLi | | | | 0.014 | NA | NA | Various | NA |
| Tracer Gas Limit | | | | NA | NA | NA | NA | 5 |

Notes:

Boring ID - Boring Identification

feet bgs - feet below ground surface

VOCs - volatile organic compounds analyzed in general accordance with EPA Method No. 8260B

µg/L - micrograms per liter

ND - no detectable concentrations above the laboratory reporting limit

* - Not Sampled

DTSC-Sli - California Department of Toxic Substance Control, Human and Ecological Risk Office Note 3, for ambient air for industrial/commercial land use modified for soil gas using the DTSC attenuation factor of 0.03 for a sample at the contaminant source of a potential future commercial building, dated 2019

SFBRWQCB-ESLi - San Francisco Bay Regional Water Quality Control Board Subslab/Soil Gas Vapor Intrusion: Human Health Risk Levels Commercial/ Industrial Cancer Risk Revision 2 2019

Green highlighted areas indicate tracer compound detected above 10 times the reporting limit rendering the sample invalid per DTSC Active Soil Gas Investigation Guidelines July 2015

Yellow Highlighted areas indicated concentrations that exceeded screening levels

FIGURES

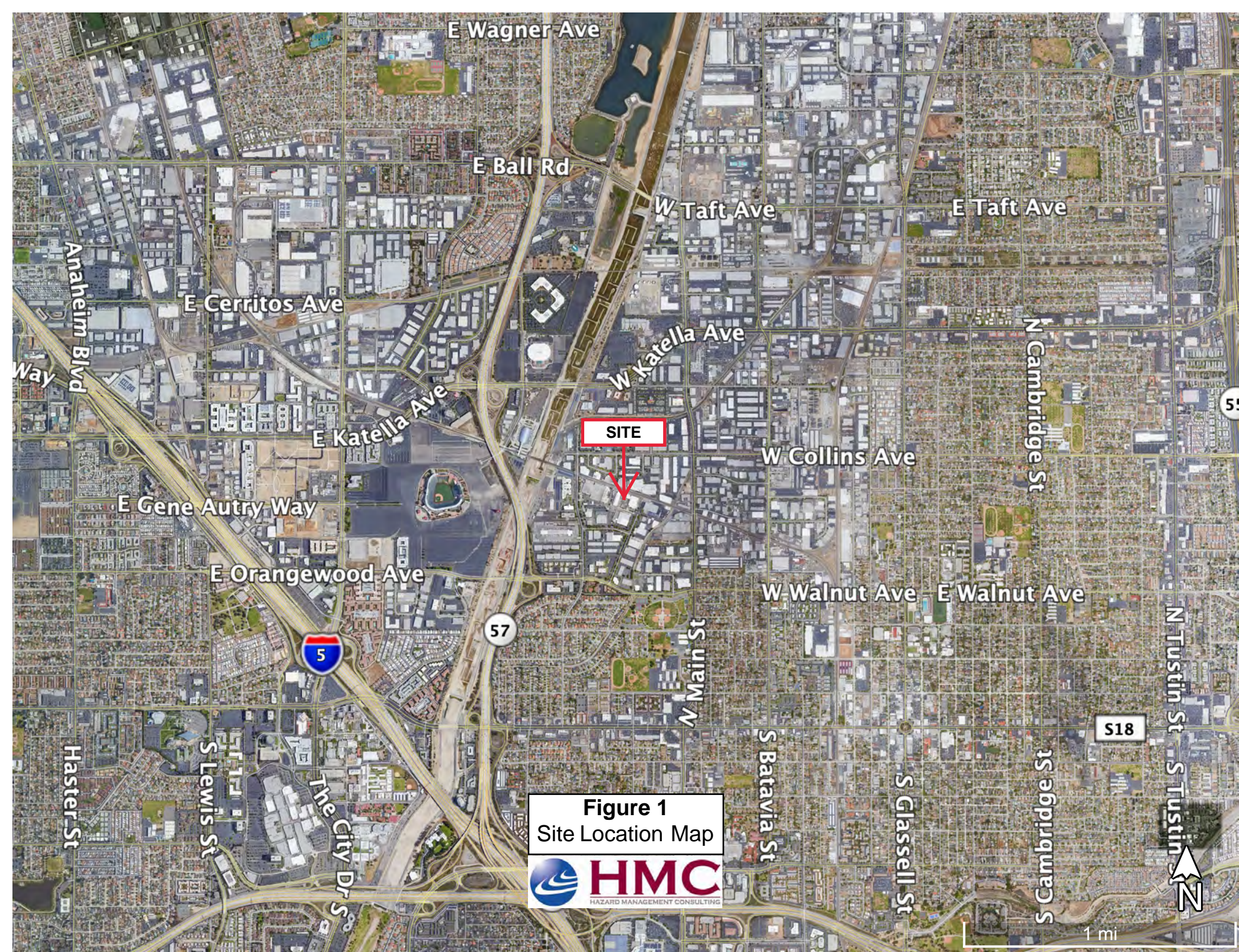
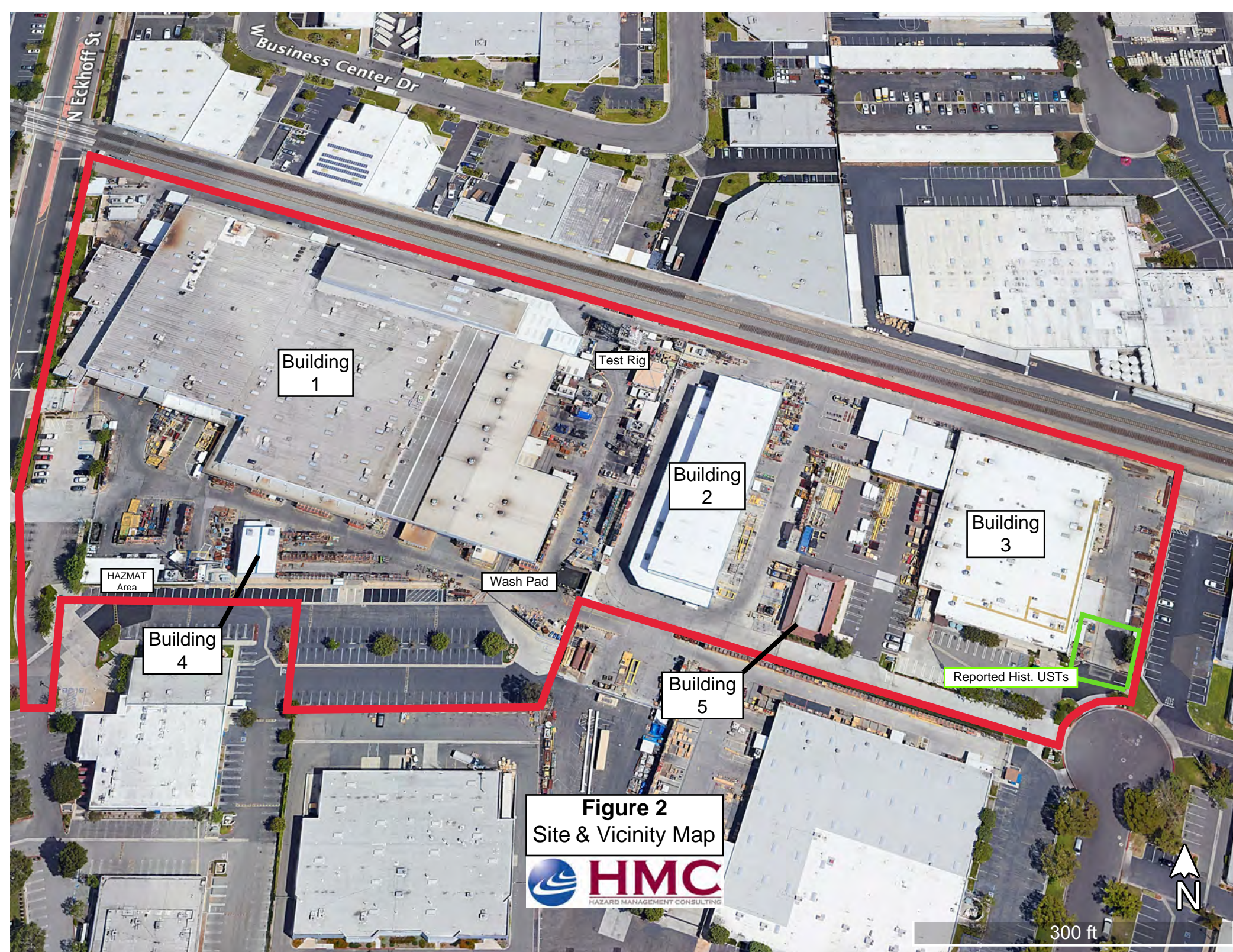


Figure 1
Site Location Map





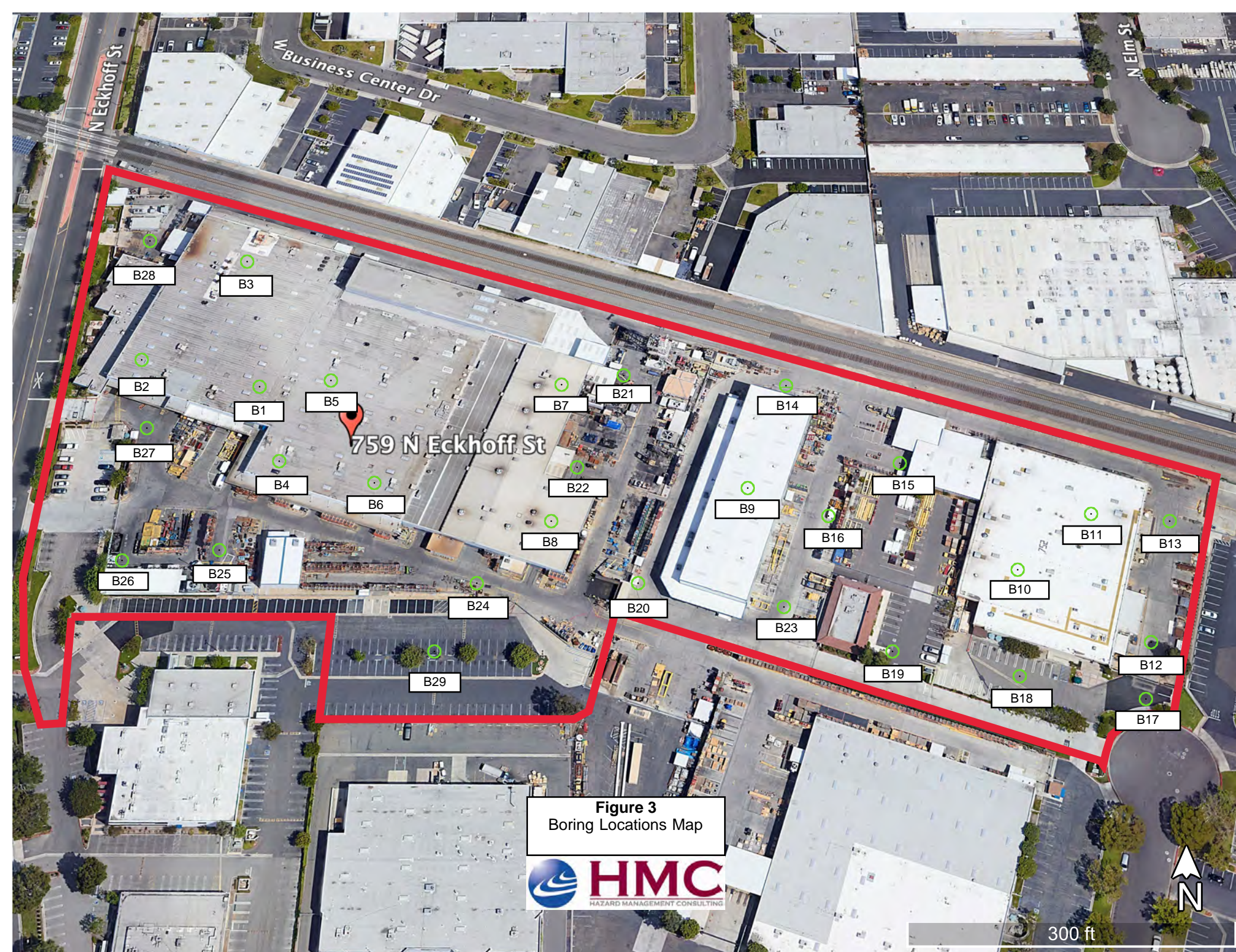


Figure 3
Boring Locations Map



300 ft

APPENDIX A



Zero Accidents Safety - First and Always

HEALTH AND SAFETY PLAN
759 North Eckhoff Street / 752 North Poplar Street
Orange, California 92868

January 20, 2021

Prepared for:

IDI Logistics
840 Apollo Street, Suite 343
El Segundo, CA 90245

Prepared by:

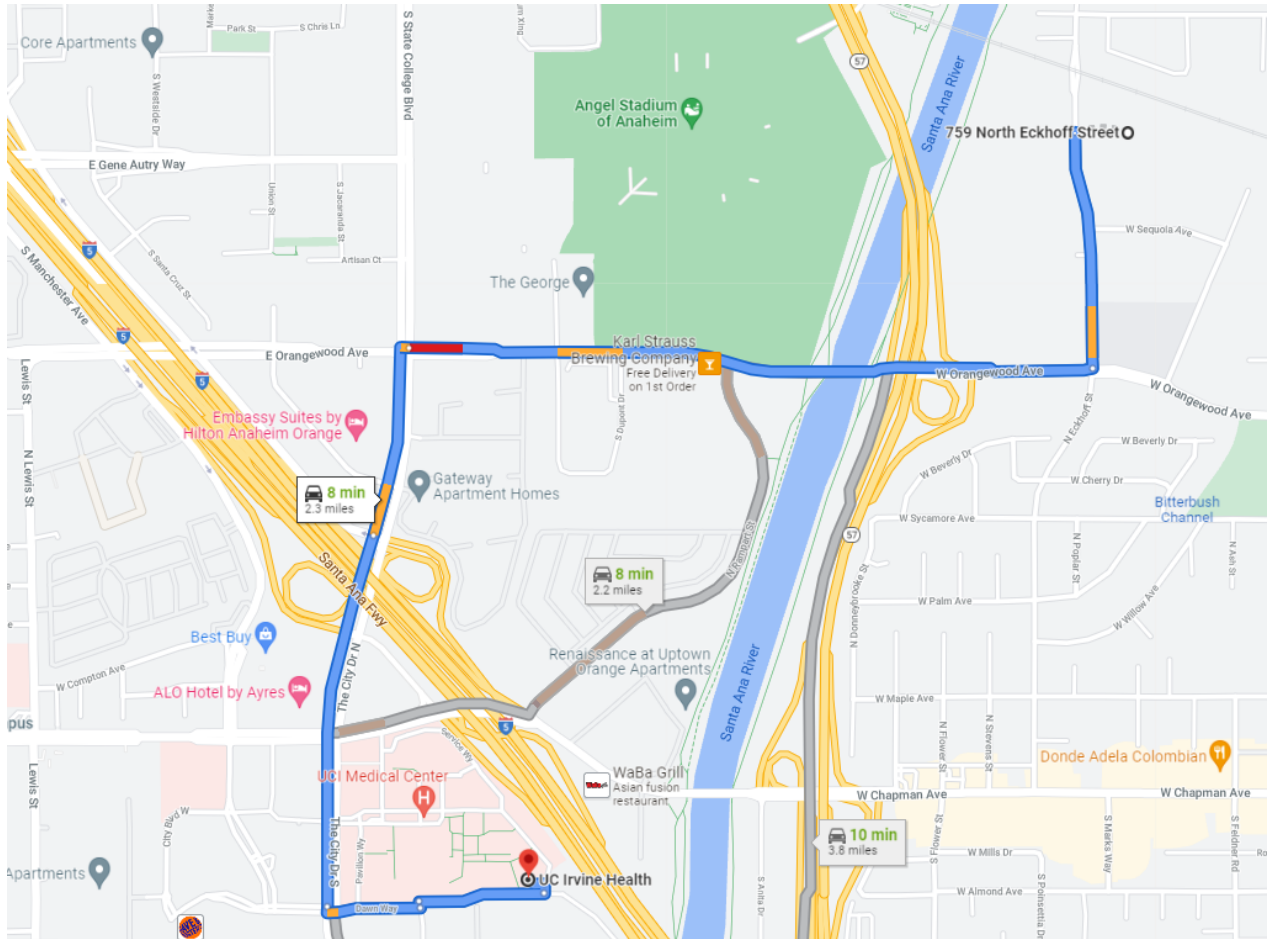
Hazard Management Consulting Inc.
211 Avenida Cordoba, Suite 200
San Clemente, California 92672

HMC Inc is dedicated to providing a safe and healthful environment for employees, contractors and subcontractors, and protecting our clients' employees and assets, as well as the public. The guidelines set forth in this Health and Safety Plan summarize the minimum mandatory standards, requirements, and expectations to ensure the protection and safety of all HMC Inc team members while conducting environmental consulting activities at the Prairie Property Project Site. Each contractor or subcontractor must assume direct responsibility for their own employees' health and safety. Please note: **You are the person most responsible for safety in the workplace. You are encouraged to fully accept this responsibility and to be continuously aware of the conditions and situations that may compromise safety. No job is so urgent that it cannot be conducted safely.**

Emergency Contact Information

| Title | Name | Phone & PagerNumber |
|---|-----------------------------|---------------------|
| <i>Emergency – Call 911</i> | | |
| Ambulance | | 911 |
| Police | | 911 |
| Fire | | 911 |
| Local Hospital | UCI Health Douglas Hospital | + 17144567890 |
| Emergency Coordinators | Pat Stich (HMC) | (949) 705-8055 cell |
| Alternate Emergency Coordinator | | |
| <i>Project/Business</i> | | |
| Project Manager / Designated Health and Safety Officer (DHSO) | Mark Cousineau (HMC) | (949) 361-3902 |
| Field Supervisors / Site Health and Safety Officer (SHSO) | TBD | (TBD) |
| Client Contact | Brandon Dickens | (714) 915-7678 |

ROUTE TO HOSPITAL:



Head south on N Eckhoff St toward W Sequoia Ave
39 s (0.3 mi)

Continue on W Orangewood Ave to Dawn Way
5 min (1.6 mi)

Follow Dawn Way and Service Way S to your destination
2 min (0.3 mi)

HASP ACKNOWLEDGEMENT SHEET

All project staff must sign, indicating they have read and understand the HASP and other referenced documents. A copy of this HASP and other referenced documents must be made available for their review and readily available at the job site.

[illegible]

CONTRACTOR HASP ACKNOWLEDGEMENT SHEET

A copy of this safety plan shall be provided to contractors and subcontractors who may be affected by activities covered under the scope of this HASP. All contractors and subcontractors must comply with applicable OSHA, EPA, and local government rules and regulations.

[illegible]

ALL PERSONNEL PARTICIPATING IN THE PROJECT MUST RECEIVE INITIAL HEALTH ANDSAFETY ORIENTATION. THEREAFTER, A BRIEF TAILGATE SAFETY MEETING IS REQUIRED AS DEEMED NECESSARY BY THE SITE SAFETY OFFICER (OR AT LEAST ONCE EVERY 10 WORKING DAYS).

[illegible]

VISITOR LOG

IT IS HMC'S POLICY THAT VISITORS MUST FURNISH HIS/HER OWN PERSONAL PROTECTIVE EQUIPMENT.

ALL VISITORS ARE REQUIRED TO SIGN THE VISITOR LOG AND COMPLY WITH THE SAFETY PLAN REQUIREMENTS. IF THE VISITOR REPRESENTS A REGULATORY AGENCY CONCERNED WITH SITE HEALTH AND SAFETY ISSUES, THE SITE SAFETY OFFICER SHALL ALSO IMMEDIATELY NOTIFY DHSO.

[illegible]

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1.0 INTRODUCTION

This Health and Safety Plan document (HASP) has been developed to support soil movement and grading activities overseen by Hazard Management Consulting Inc (HMC Inc) as part of grading and redevelopment of the Site.

This HASP establishes the responsibilities, requirements and procedures for the protection of personnel while conducting on-site work. Working conditions may necessitate modification of this plan. Except in emergencies, no deviations from this plan may be implemented without the prior notification and approval by the Project Manager with consultation from the Designated Health and Safety Officer (DHSO). The specific requirements of this HASP apply to HMC employees, contractors and subcontractors involved in implementing the described scope of work. It is not applicable to other contractors and/or site tasks unless specifically authorized in writing for such use by a designated HMC representative.

The health and safety protocols outlined in this plan are designed to ensure compliance with Federal, State and local regulations governing worker safety on hazardous waste sites. Incorporated in this HASP by either direct or indirect reference are all appropriate and applicable sections of the *HMC Safety and Health Program Manual*. In the case where an apparent conflict exists between what is presented in the HASP and the above referenced document the most conservative of the documents will initially be followed. The apparent conflict will be brought to the attention of the Project Manager and with consultation from the DHSO, and as appropriate the Client and/or Site Contact, a written resolution presented in the form of an addendum to this HASP prepared and presented to all field staff.

HMC's intent is to provide a safe and healthful work environment for all employees and subcontractors. This HASP has been developed to fulfill the following objectives:

- Perform a hazard assessment to identify and assess health and safety hazards associated with project tasks and activities.
- Specify and establish procedures and practices to provide a safe and healthful workplace for employees, subcontractors, and site visitors.
- Detail personal protective equipment needed to protect employees and subcontractors conducting field task activities.
- Instruct employees, subcontractors and site visitors on procedures to minimize the potential for injury or exposure to a hazardous condition.
- Train employees and subcontractors on the proper action to be taken if a hazardous condition cannot be avoided by engineering controls.
- Provide guidelines for emergency response for known hazards and hazardous situations.
- Establish procedures to minimize or prevent adverse impact to employees, subcontractors, site visitors and the surrounding environment and community in the event of a release of a toxic chemical or substance.

1.1 Implementation And Modification of The HASP

This HASP and other referenced documents are to be read and understood by all on-site field personnel. Site personnel are required to complete and sign a Personnel Acknowledge Form indicating acknowledgment, agreement, acceptance, and understanding of the contents of all appropriate health and safety documentation including but not limited to this HASP and HASP addendums.

All persons entering the site will receive a safety and health indoctrination/overview of the site that discusses site health and safety issues. Site workers and long-term visitors are required to read this HASP and sign and date the log as having read and understood the provisions of the HASP. Before any field activities begin, weekly, to discuss HASP addendums, and/or as conditions warrant health and safety tailgate meetings will be held with on-site field personnel to discuss safety procedures and to familiarize personnel with the potential hazards of the site. The Site Health and Safety Officer (SHSO) will document all tailgate and/or other health and safety meetings in a logbook. The SHSO will conduct routine (e.g., daily) assessments of the work area and on-site field personnel to ensure that the documented health and safety procedures are implemented and adequate. If any operation, practice, and/or equipment are not adequate, based on the SHSOs assessment, the SHSO will document the item in a logbook and notify the DSHO. Operations will cease or the faulty equipment will be removed and replaced, as appropriate. Unacceptable practices and/or faulty equipment will be remedied immediately, and the HASP will be modified to correct any deficiencies in the effectiveness of the Plan.

As, and if, required this HASP may be modified. The HASP will be modified in writing by preparing an addendum. Each addendum will be reviewed and approved by the Project Manager with consultation from the DSHO.

1.2 Project Specific Tasks Covered by This Health and Safety Plan

This HASP covers the following environmental consulting activities to be conducted by HMC at the Site. Tasks to be conducted include

- Conduct Tailgate Safety Meeting
- Heavy Equipment Operations including Site Grading
- Drill, Sample, and Abandon Soil Borings
- Soil Loading Operations and Truck Traffic

2.0 ORGANIZATION, QUALIFICATIONS, AND RESPONSIBILITIES

2.1 All Personnel

All field personnel are responsible for continuous adherence to health and safety procedures during the performance of any and all assigned work. In no case may work be performed in a manner that conflicts with the intent of this plan or the inherent health and safety cautions outlined in this HASP and other referenced documentation. **Please note that you are the person most responsible for safety in the workplace.** You are encouraged to fully accept this responsibility and to be continuously aware of the conditions and situations that may compromise safety. **No job is so urgent that it cannot be conducted safely.**

Any person who observes unsafe acts or conditions or other safety problems must immediately report observations/concerns to supervisory personnel (e.g., SHSO, DHSO, and Project Manager). If there is any dispute with regard to health and safety, the on-site HMC staff will attempt to resolve the issue and if the issue cannot be resolved, they will consult off-site technical staff and supervisors for assistance. The specific task or operation in question must be discontinued until the issue is resolved. No person may work in a manner that conflicts with the safety and environmental precautions expressed in this HASP. HMC employees are subject to progressive discipline and may be terminated for blatant or continued violations.

2.2 Project Manager

The Project Manager is responsible for ensuring that the necessary personnel, equipment, and other applicable resources are available for this project and that the reporting, scheduling, and budgetary obligations for this project are met.

The Project Manager is ultimately responsible for ensuring that all project activities are completed in accordance with requirements set forth in this HASP and other referenced documentation. The Project Manager must perform at least one on-site safety review during the project. The Project Manager is responsible for ensuring that all incidents are reported and thoroughly investigated. The Project Manager must approve in writing any addenda or modifications to the HASP.

2.3 Field Supervisor

The Field Supervisor is responsible for field implementation of the HASP in connection with the SHSO (there is some overlap of the health and safety responsibilities of the Field Supervisor and SHSO. In the case where these responsibilities are assigned to more than one individual it is up to these individuals to coordinate their respective activities to ensure all their responsibilities are fully carried out and executed). This includes communicating site requirements to all on-site project personnel. The Field Supervisor is responsible for informing the SHSO and the Project Manager of any changes in the plan work elements, so that those changes may be properly addressed from a health and safety perspective. The Field Supervisor, as the on-site representative of HMC, is responsible for maintaining contact with the Client and/or Site Contact, and the Project Manager. Along with the SHSO the Field Supervisor is responsible for coordinating and enforcing on-site health and safety activities for all HMC team members (inclusive of contractors, subcontractors, and visitors) on site at all times. The Field Supervisor reports to the Project Manager and works directly with the Client and Site Contacts.

Other responsibilities of the Field Supervisor include:

- Conducting tailgate safety meetings and maintaining attendance logs and records.
- Enforcing the requirements of the HASP. This includes performing daily safety inspections of the work site.
- Stopping work, as required, in order to ensure personal safety and protection of property, or where life or property-threatening noncompliance with safety requirements is found.
- Determining and posting routes to capable medical facilities, emergency telephone numbers, and arranging emergency transportation to medical facilities.
- Notifying local public emergency officers of the nature of the site operations and posting of their telephone numbers in an appropriate location.
- Observing on-site project personnel for signs of chemical or physical trauma.
- Ensuring that all HMC field personnel have been given the proper medical clearance, ensuring that all personnel have met appropriate training requirements and have the appropriate training documentation on site, and monitoring all team members to ensure compliance with the HASP.

2.4 Site Health And Safety Officer (SHSO)

The SHSO will have the responsibility and authority to implement and enforce the approved HASP, this includes modifying/halting work, and removal of personnel from the work area if conditions change and effect on-site/off-site health and safety matters. The SHSO serves as the main contact for any on-site emergency situation. The SHSO conducts daily inspections to determine if operations are being conducted in accordance with the HASP and Cal-OSHA/OSHA regulations. The SHSO is assigned to the Project Manager for the duration of the project but reports directly to the DHSO with operational issues. An open dialogue is kept between the SHSO and supervisory personnel of the project to ensure that safety issues are quickly recognized, addressed, and corrective action taken (as required).

The SHSO has the ultimate responsibility to stop any operation that threatens the health and safety of the team, client employees and assets, the surrounding community, or that causes significant adverse impact to the environment. Other responsibilities include, but are not limited to:

- Implementing all on-site health and safety procedures and operations.
- Observing work crew members for symptoms of on-site exposure or stress.
- Upgrading or downgrading, in coordination with the DHSO and the Project Manager, the levels of personal protection based upon site observations and monitoring results.
- Informing the Project Manager of significant changes in the site environment that require equipment or procedure changes.
- Arranging and ensuring the availability of first aid and on-site emergency medical care, as necessary.
- Determining evacuation routes, establishing, and posting local emergency telephone numbers, and arranging emergency transportation.
- Ensuring that all site personnel and visitors have received the proper training and medical clearance before entering the site.
- Establishing exclusion, contamination reduction, and support zones.
- Ensuring that the respiratory protection program is implemented.
- Ensuring that decontamination procedures meet established criteria.
- Ensuring that there is a qualified first-aid person on site.

2.5 Designated Health And Safety Officer (DHSO)

The DHSO is responsible for the development, implementation, and oversight of the Health and Safety Program and the HASP. The specific duties of the DHSO include:

- Providing technical input into the design and implementation of the site HASP.
- Advising on potential for worker exposure to project hazards along with appropriate methods and/or controls to eliminate site hazards.
- Working with, supporting, and providing consultation to, the Project Manager on health and safety issues to ensure a safe workplace is maintained throughout field activities and to ensure continuous compliance with the HASP and other referenced documents.

2.6 Subcontractors, Visitors And Other On-Site Personnel

Subcontractors are responsible for the health and safety of their employees and for complying with the standards established in this HASP and other referenced documentation. Subcontractors will report to the Field Supervisor. All subcontractors, visitors, and other on-site personnel must check in with the Field Supervisor prior to gaining access to the work areas, in order to verify that all appropriate entry requirements are met.

3.0 HAZARD ASSESSMENT

3.1 Physical Hazard Assessment

The typical physical hazards that have been identified for the scope of work to be conducted under this HASP are listed below in Table 1.

Table 1
Physical Hazard Assessment

| Tasks | Hazard | Tasks | Hazard | Tasks | Hazards |
|-------|---------------------------------------|-------|---|-------|------------------------------------|
| All | Lifting | All | Fire, explosion | All | Noise |
| All | Electrical | All | Vehicular operation | All | Heat exhaustion |
| All | Material handling | All | Uneven terrain, slips, trips, falls | All | Underground and overhead utilities |
| All | Hand and power tools | All | Equipment and personnel decontamination | NA | Hot work, welding, cutting |
| All | Heavy equipment, excavation, drilling | | | All | Poisonous plants and animals |

NA = Not Anticipated but may occur.

3.2 Chemical Hazard Assessment

Based on discussions with site personnel chemicals of potential concern (COPC), which might be encountered during field activities include total petroleum hydrocarbons (TPH); various volatile organic compounds (VOCs, e.g., benzene, toluene, xylenes, ethylbenzene). Table 2 lists the maximum chemical concentration detected in soil samples obtained from the facility.

Table 2A
Summary of Contaminants Present in Soil

| Chemical | Location | Maximum Concentration (** above 2019 SFRWQCB ESLs) |
|----------------------------|-----------------|---|
| TPH-Diesel Range (C13-C28) | B26-1 | 1,800** |
| TPH-Oil Range (C29-C40) | B26-1 | 10,000** |

mg/kg = milligram /kilogram

Table 2B
Summary of Contaminants Present in Soil Vapor

| Chemical | Location | Maximum Concentration (** above 2019 SFRWQCB ESLs) |
|------------------------|-----------------|---|
| Benzene | B14-SV-5 | 0.12** |
| Isopropylbenzene | B17-SV-5 | 1.2 |
| Trichlorofluoromethane | B23-SV-5 | 0.56 |

ug/L = micrograms per liter

4.0 PERSONAL PROTECTIVE EQUIPMENT

Personal protective equipment (PPE) will be required during the fieldwork. PPE levels will be based primarily on background hazard assessment data, work task requirements, and real-time monitoring data obtained by monitoring instrumentation (discussed in Section 6.0 of this HASP). The initial levels of protection anticipated for each task, based on existing site characterization data, are presented on Table 3.

Table 3
Anticipated Personal Protective Equipment Requirements

| Task | PPE | Upgrade | Special Requirements for Upgrade |
|--|---------|--|----------------------------------|
| Task 1 Tailgate Meeting | Level D | Level C (OV +P100) | Notify SHSO orPM |
| Task 2 Mark and Clear Soil Boring Locations | Level D | Level C (OV+P100) | Notify SHSO orPM |
| Task 3 Drill, sample, and abandon soil vapor probes, soil borings and hand auger borings | Level D | Level C (OV +P100) 1/2 mask minimum | Notify SHSO orPM |
| Task 5 Excavation & General Grading | Level D | Level C (OV +P100) 1/2 mask minimum | Notify SHSO orPM |

OV+P100 = Organic vapor plus P100 pre-filter respirator cartridge. Only PPE that meets the following American National Standards Institute (ANSI) standards are to be worn.

- Eye protection - ANSI Z87.1
- Head protection - ANSI Z89.1
- Foot protection - ANSI Z41

Respiratory protective equipment must be NIOSH approved for the anticipated chemicals and hazards.

Level D PPE shall consist of:

- Hardhat
- Safety glasses (with side shields optional)
- Steel-toed work boots
- Traffic safety vest if traffic is present
- Long pants and shirt
- Work or protective gloves

Modified Level D in addition to the above may include:

- Level D PPE plus
- Nitrile gloves - N-dex for sampling (or another approved equivalent)
- Nitrile or rubber gloves - for chemical activities.
- Steel-toed, rubber boots - for activities inside the exclusion/regulated and decontamination areas.

5.0 EXPOSURE MONITORING

Exposure Monitoring will be conducted to assess hazard control measures that must be implemented. Assessing control measures involves characterization of the chemical, physical, and other safety hazards at the site using a PID in the breathing space. Hazard assessment is an on-going process. This section addresses the procedures for monitoring both chemical and physical hazards specific to the work tasks to be conducted.

5.1 Air- Monitoring and Sampling Program

An air-monitoring program will be implemented for monitoring petroleum hydrocarbons and volatile organic vapors in air. Data obtained from air monitoring will be utilized to assess proper levels of PPE in accordance with the action levels presented in Table 4 thereby ensuring worker safety and preventing off-site releases of hazardous substances in concentrations that threaten human health. The action levels are for air within the breathing zone of field personnel. The minimum requirements for the air-monitoring program are summarized on Table 5.

Table 4
Air Monitoring Action Levels and PPE Requirements

| COC | Action Levels(ppm) | PPE / Action |
|--|---|--|
| TPH | <50 50 to 100 >100 ppm >200 ppm | Level D Level D – Notify SHSO or PM Level C – Notify SHSO or PM Level C – Notify SHSO or PM, Stop work, Leave area |
| Aromatic Volatile Organic Compounds | <50 50 to 100 >100 ppm >200 ppm | Level D Level D – Notify SHSO or PM Level C – Notify SHSO or PM Level C – Notify SHSO or PM, Stop work, Leave area |
| Benzene | <1 0.25 to 1 >1 >10 to 50 >50 | Level D Level D – Notify SHSO or PM Level C - half mask respirator Level C - Full face respirator Notify SHSO or PM, Stop work, Leave area |
| Halogenated Volatile Organic Compounds | <25 25 to 50 >50 | Level D Level D – Notify SHSO or PM Level C – Notify SHSO or PM, Stop work, Leave area |
| Dust (metals) | <10 mg/m ³ | Dust (metals) |

Table 5
Air Monitoring Program Minimum Requirements

| Chemical of Concern | Instrument | Frequency | Special Equipment \Method |
|--|---|--|---|
| TPH and Aromatic Hydrocarbons and Volatile Organic Compounds | PID (or other equivalent direct reading instrument [DRI]) | During activities that can disturb impacted soil, groundwater and/or surface water, and FHP. 1. At the beginning of the task. 2. When the task changes. 3. Indications of chemical exposure or release. 4. Every 30 minutes unless readings are less than 10% of action level. 5. Every 60 minutes if concentrations are less than 10% of the action level 6. 1 time per shift if non-detected. | Lamp 10.2ev |
| Benzene | PID, or Colorimetric Detector Tube | 1. Monitor contaminant concentrations in the workers breathing zone with a PID as stated above. 2. A PID reading of one (1.0) unit above background sustained for a period of one (1) minute shall be further characterized using a colorimetric detector tube sensitive to 0.5- ppm benzene. 3. A colorimetric detector tube reading of one (1.0) ppm benzene or greater will be verified by a second measurement, at the end of a ten (10) minute interval. As long as a reading of greater than one (1.0) ppm benzene is detected periodic measurements will be taken. Continuous readings using the PID will be taken during this period. Refer to Section 6.1 of the HASP for more detailed procedures. | Lamp 10.2ev Benzene colorimetric detector tube |
| Dust | Visual | No visual emissions permitted at boundary of worksite | |

A portable photoionization detector (PID) with a 10.2 electron-volt (eV) ultra-violet radiation source will be used as the "front-line" instrument for monitoring petroleum hydrocarbons and volatile organic compounds in air (or other equivalent direct reading instrument [DRI]). The PID will be calibrated to isobutylene or hexane. In using a PID or other DRI an action level will be considered met or exceeded when the instrument reading exceeds the specific action level continuously for one (1) minute. Upon this condition, a second measurement will be taken at the end of a ten (10) minute interval.

Since benzene is considered most toxic compound and the benzene action level is the most conservative it will be used as the driver for assessing exposure and determining appropriate levels of PPE. The action level for benzene combines the occupational exposure standard for benzene listed in 29 CFR Part 1910.1028, and the ACGIH TLV-TWA. The following protocol will be used for monitoring exposure and establishing the appropriate level of protection for these exposures.

- Monitor contaminant concentrations in the workers breathing zone with a PID (or other DRI) sensitive to aromatic compounds.
- Level D protection is considered acceptable if instrument readings remain below one (1) unit above background.
- An instrument reading of one (1.0) unit above background sustained for a period of one (1) minute shall be further characterized by taking a breathing zone air sample using a colorimetric detector tube. The colorimetric detector tube must be sensitive to 0.5-ppm benzene.
- A colorimetric detector tube indication of one (1.0) ppm benzene or greater shall be verified by a second measurement, using a colorimetric detector tube, at the end of a ten (10) minute interval. As long as a reading of greater than one (1.0) ppm benzene is detected periodic measurements should be taken with the colorimetric detector tube. Continuous readings using the PID will be taken during this period.
- Level C protection is required as long as colorimetric detector tube readings indicate benzene equal to or greater than one (1) ppm in the workers breathing zone. Alternatively, the work area may be evacuated until readings drop back to acceptable levels for a period of no less than 10 continuous minutes and/or engineering controls are instituted to ensure worker safety.
- Level C protection with a half face respirator is considered acceptable if the colorimetric detector tube indicates greater than one (1.0) but less than ten (10) ppm benzene.
- Level C protection with a full-face respirator is considered acceptable if the colorimetric detector tube indicates greater than ten (10) but less fifty (50) ppm benzene.
- If levels of greater than 50 units above background with the PID or 50 ppm benzene using a colorimetric detector tube are detected work will stop and the work area evacuated. Periodic measurements will be taken and/or engineering controls instituted to ensure worker safety and prevent off-site releases of hazardous substances in concentrations that threaten human health. Work may resume when PID reading and colorimetric tubes indicated that benzene measurements have been reduced below 50 units/ppm.

5.2 Explosion Hazards

Explosion hazards exist from the presence of volatile and potentially explosive hydrocarbon vapors in saturated soils and groundwater. Explosion hazards will not be monitored during work activities.

5.3 Noise

Action levels for noise exposure are provided on Table 6.

Table 6
Noise Monitoring Action Levels

| Intensity (dBA) | Action |
|-----------------|-----------------------------------|
| <85 | Work may continue without change. |
| >85 | Hearing protection required. |

5.4 Heat Stress Monitoring

The stress of working in a hot environment can cause a variety of illnesses including heat exhaustion or heat stroke. Heat stroke can be fatal. Personal protective equipment can significantly increase heat stress. To reduce or prevent heat stress, frequent rest periods and controlled beverage consumption to replace body fluids and electrolytes may be required.

Additionally, quantitative physiological monitoring for heat stress may be conducted. Physiological monitoring for heat stress includes heart rate as a primary indicator. The frequency of monitoring depends on the ambient temperature, the level of protection used on-site, and the type of work being performed. To determine the initial monitoring frequency, after a work period of moderate exertion, use the information provided on Table 7.

Table 7
Heat Stress Monitoring Frequency

| Adjusted Temperature* | Level D | Level C |
|-----------------------|-------------------|-------------------|
| 90 °F or above | after 45 minutes | after 15 minutes |
| 87.5 to 90 °F | after 60 minutes | after 30 minutes |
| 82.5 to 87.5 °F | after 90 minutes | after 60 minutes |
| 77.5 to 82.5 °F | after 120 minutes | after 90 minutes |
| 72.5 to 77.5 °F | after 150 minutes | after 120 minutes |

°F = temperature in degree Fahrenheit.

* Adjusted air temperature equals the observed temp + (13 x % sunshine); air temp measured with bulb shielded from radiant heat, percent sunshine is the time sun is not covered by clouds thick enough to produce a shadow (100% = no cloud cover and a sharp, distinct shadow; 0% = no shadows)

Physiological monitoring of heat stress will be conducted by counting the radial pulse during a 30 second period as early as possible in the rest cycle. If the heart rate exceeds 110 beats per minute, shorten the next work cycle by one third while keeping the rest cycle the same. At the next rest cycle, count the radial pulse during a 30 second period as early as possible in the rest cycle. If the heart rate again exceeds 110 beats per minute, shorten the next work cycle by one third while keeping the rest period the same. In addition, take the oral temperature of the worker.

On-site personnel shall be trained to recognize the symptoms of heat stress and the appropriate action to take upon recognition. Even though physiological monitoring is not always necessary, it is essential that personnel understand the significance of heat stress and its recognition. It is also important that personnel understand the difference between heat exhaustion and heat stroke. Some of the symptoms for heat exhaustion and heat stroke are provided in Table 8.

Table 8
Heat Exhaustion versus Heat Stroke Symptoms

| Heat Exhaustion | Heat Stroke |
|---|---|
| Clammy skin Weakness Fatigue Light headiness Fainting Rapid pulse Nausea (vomiting) | Staggering gait Mental confusion Hot skin Temperature rise (yet may feel chilled) Convulsions Unconsciousness Incoherent, delirious |

If a worker exhibits the symptoms of heat exhaustion conduct the following:

- Remove the victim to a cool and uncontaminated area. Elevate the victim's feet and allow him/her to rest.
- Remove protective clothing. Loosen tight or constrictive clothing.
- Cool the victim with cold cloths and give "sips" of cool water. Cool the temperature control areas of the body, forehead, back of neck and wrists

If a worker exhibits the symptoms of heat stroke immediately perform the following steps:

- Remove victim to a cool, uncontaminated area.
- Cool the victims' whole body with water compresses and/or rapid fanning.
- Give water to drink if conscious.
- Transport the victim to a medical facility for further cooling and monitoring of body functions.

HEAT STROKE IS A LIFE-THREATENING MEDICAL EMERGENCY!

6.0 MEDICAL MONITORING, SANITATION AND HYGIENE PRACTICES

6.1 Medical Surveillance Program

Based on current data characterizing the site contamination and potential hazards to personnel involved in project activities, a project specific medical surveillance program is not required beyond that which is required under Title 8 CCR 5194 HAZWOPER. Employee exposure to airborne contaminants is not expected to approach the applicable Cal-OSHA action levels or permissible exposure levels under foreseeable work conditions.

Medical evaluations for the wearing of respiratory protection will be given to each worker required to wear a respirator in accordance with Title 8 CCR Section 5144. A certification by a licensed physician of fitness to wear respiratory protection is required for each worker entering the regulated area/exclusion zone if they are required to wear respiratory protection.

6.2 Sanitation And Personal Hygiene

Sanitation and personal hygiene facilities are available at the site. Workers are expected and encouraged to wash their face and hands before leaving the site and before smoking, eating, or taking breaks.

6.3 Drinking Water

Drinking water will not be provided and is unavailable at the site. Each employee shall bring their own drinking water to the site and keep it inside their vehicle. The water will be kept cool to encourage personnel to drink. If temperatures exceed 75 °F, break periods will be provided to encourage people to drink water and metabolite supplements such as Gatorade.

7.0 TRAINING

All site workers have received the following information:

The SHSO shall ensure that each site worker has a working knowledge of the HASP and other referenced documentation and is responsible for conducting regular Tailgate Safety Meeting(s) (at the beginning of each shift, whenever new personnel arrive at the site, and as site conditions change, as tasks are added, revised, and/or changed, and as addendum to this HASP require). The typical Tailgate Safety Meeting will be brief and address only the most critical safety issues, such as the types of accidents most likely to occur, and areas where improvements need to be made with respect to health and safety. A more in-depth tailgate session will be held at the beginning of each week, whenever new personnel arrive at the site, and when new types of activities are undertaken. The physical hazards of concern will be identified at each meeting. Potential topics of discussion at these meetings include the following:

- Protective Clothing/Equipment (Task Specific).
- Chemical Hazards (Task Specific).
- Physical Hazards (Task Specific).
- Emergency Procedures.
- Hospital/Ambulance Route.
- Standard Operating Procedures.
- Other safety topics which are relevant to the site

If workers are required to work in and around impacted material, Hazwoper training will be required. At the present time though, it is not anticipated that workers will have such exposures given the findings of the previous Site Investigations.

8.0 CONTINGENCY PLAN AND EMERGENCY EVACUATION PLAN

At least one person trained in first aid and CPR will be present on site at all times work is being conducted. First aid and blood borne pathogen supplies shall be available at the site at all times. Personnel shall be informed of the location of such supplies during the tailgate safety meeting. In the event of an emergency, personnel will immediately leave the work area and assemble at a prearranged area,

If a fire occurs, personnel shall assess the size and nature of the fire. If it is safe to do so, it shall be extinguished with a fire extinguisher. If it is not safe to extinguish with a fire extinguisher, the CountyFire Authority will be contacted at 911.

In the event of a first aid emergency, if the injured person can self-administer first aid they should be encouraged to do so. If the person cannot self-administer first aid, the on-site qualified first aid person shall administer first aid if it is safe to do so. Personnel shall not endanger themselves to render aid to another person.

A cell phone will be easily accessible at the work areas for emergency notifications.

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9.0 DECONTAMINATION PROCEDURES

Establishment of decontamination procedures for personnel and equipment is necessary to control contamination and to protect field personnel.

9.1 Equipment Decontamination and Disposal of Contaminated Materials

Equipment requiring decontamination may include excavation equipment, hand tools, soil and water sampling devices, and certain protective equipment. Tools and protective equipment shall be decontaminated using a soft bristle brush and a detergent (Alconox or TSP mixed in water) followed by two water rinses.

All materials and equipment used for decontamination must be disposed of properly in onsite 200-gallon totes located behind the former Building 41A location. Disposable clothing, tools, buckets, brushes, and all other equipment that is contaminated will be secured in appropriately Department of Transportation (DOT) specification 55-gallon drums or other containers. Clothing that will be reused, but which is not completely decontaminated on the site, will be secured in plastic bags before being removed from the site.

Contaminated wash water solutions shall be transferred into portable storage tanks, pending disposal. All soil cuttings produced during soil sampling will be centrally located for subsequent characterization and disposal. Exposure to chemicals can be divided into two categories:

- Injuries from direct contact, such as acid burns or inhalation of toxic chemicals.
- Potential injury due to gross contamination on clothing or equipment.
-

For inhalation exposure cases, a qualified physician can only perform treatment. If the contaminant is on the skin or the eyes, immediate measures can be taken on-site to counteract the substance's effect. First aid treatment consists of flooding the affected area with copious amounts of water. The SHSO must assure that an adequate supply of running water or a portable emergency eyewash is available on-site.

When protective clothing is grossly contaminated, contaminants can possibly be transferred to treatment personnel and cause an exposure. Unless severe medical problems have occurred simultaneously with personnel contamination, the protective clothing should be carefully removed.

10.0 SITE AND TRAFFIC CONTROL PLAN

10.1 Traffic Control

Vehicular traffic is limited to onsite personnel and authorized contractors working onsite. Traffic control at the site is controlled through locked gates at the entrance/exit. All contractor personnel entering the site are required to have entry permissions.

APPENDIX A
CODE OF SAFE PRACTICES
General Construction Services Code of Safe Practices

1. All persons shall follow these safe practices rules, render every possible aid to safe operations, and report all unsafe conditions or practices to the foreman or superintendent.
2. Foremen shall insist on employees observing and obeying every rule, regulation, and order as is necessary to the safe conduct of the work and shall take such action as is necessary to obtain observance.
3. All employees shall be given frequent accident prevention instructions. Instructions shall be given atleast every 10 working days.
4. Anyone known to be under the influence of drugs or intoxication substances which impair the employee's ability to safely perform the assigned duties shall not be allowed on the job while in thatcondition.
5. Horseplay, scuffling, and other Prairie which tend to have an adverse influence on the safety or well-being of the employees shall be prohibited.
6. Work shall be well planned and supervised to prevent injuries in the handling of materials and in working together with equipment.
7. No one shall knowingly be permitted or required to work while the employee's ability or alertness isso impaired by fatigue, illness, or other causes that it might unnecessarily expose the employee or others to injury.
8. Employees shall not enter manholes, underground vaults, chambers, tanks, silos, or other similar places that receive little ventilation, unless it has been determined that it is safe to enter.
9. Employees shall be instructed to ensure that all guards and other protective devices are in proper places and adjusted and shall report deficiencies promptly to the foreman or superintendent.
10. Crowding or pushing when boarding or leaving any vehicle or other conveyance shall be prohibited.
11. Workers shall not handle or tamper with any electrical equipment, machinery, or air or water lines ina manner not within the scope of their duties, unless they have received instructions from their foreman.
12. All injuries shall be reported promptly to the foreman or superintendent so that arrangements can bemade for medical or first aid treatment.
13. When lifting heavy objects, the large muscles of the leg instead of the smaller muscles of the back shall be used.
14. Inappropriate footwear or shoes with thin or badly worn soles shall not be worn.
15. Materials, tools, or other objects shall not be thrown from buildings or structures until proper precautions are taken to protect others from the falling objects.
16. Employees shall cleanse thoroughly after handling hazardous substances and follow special instructions from authorized sources.
17. Work shall be so arranged that employee are able to face each ladder and use both hands while climbing.
18. Gasoline shall not be used for cleaning purposes.
19. No burning, welding, or other source of ignition shall be applied to any enclosed tank or vessel, evenif there are some openings, until it has first been determined that no possibility of explosion exists, and authority for the work is obtained from the foreman or superintendent.
20. Any damage to scaffolds, falsework, or other supporting structures shall be immediately reported tothe foreman and repaired before use.
21. All tools and equipment shall be maintained in good condition.
22. Damaged tools or equipment shall be removed from service and tagged "**DEFECTIVE.**"

23. Pipe or Stillson wrenches shall not be used as a substitute for other wrenches.
24. Only appropriate tools shall be used for the job.
25. Wrenches shall not be altered by the addition of handle extensions or “cheaters.”
26. Files shall be equipped with handles and not used to punch or pry.
27. A screwdriver shall not be used as a chisel.
28. Wheelbarrows shall not be pushed with handles in an upright position.
29. Portable electric tools shall not be lifted or lowered by means of the power cord. Ropes shall be used.
30. Electric cords shall not be exposed to damage from vehicles.
31. In locations where the use of a portable power tool is difficult, the tool shall be supported by means of a rope or similar support of adequate strength.
32. Only authorized persons shall operate machinery or equipment.
33. Loose or frayed clothing, or long hair, dangling ties, finger rings, etc. shall not be worn around moving machinery or other sources of entanglement.
34. Machinery shall not be serviced, repaired, or adjusted while in operation, nor shall oiling of moving parts be attempted, except on equipment that is designed or fitted with safeguards to protect the person performing the work.
35. Where appropriate, lock-out procedures shall be used. Refer to HSPP Section 6.7 (Equipment Lockout and Tagout Procedures).
36. Employees shall not work under vehicles supported by jacks or chain hoists, without protective blocking that will prevent injury if jacks or hoists should fail.
37. Air hoses shall not be disconnected at compressors until hose line has been bled.
38. All excavations shall be visually inspected before backfilling, to ensure that it is safe to backfill.
39. Excavating equipment shall not be operated near tops of cuts, banks, and cliffs if employees are working below.
40. Tractors, bulldozers, scrapers, and carryalls shall not be operated where there is possibility of overturning in dangerous areas like edges of deep fills, cut banks, and steep slopes.
41. When loading where there is a probability of dangerous slides or movement of material, the wheels, ortreads of loading equipment, other than that riding on rails, should be turned in the direction which will facilitate escape in case of danger, except in a situation where this position of the wheels or treads would cause a greater operational hazard.

APPENDIX B

SOIL SAMPLING PROCEDURES

This appendix summarizes soil sampling procedures that may be used at the Site. The specific sampling procedure selected generally depends on the purpose of the sample. Soil samples will typically be collected with a trowel or hand auger as described in Section C.4. If unanticipated soil impacts are encountered and additional delineation is required, drilling methods will be considered as described in Sections B.2 and B.3.

C.1 SOIL SAMPLING FROM EXCAVATIONS, FILLS OR STOCKPILES

1. Soil samples collected from excavations, fills, or stockpiles for chemical analyses will be collected in laboratory-supplied glass containers or by using a slide-hammer-style sampler with 4-inch-long brass or stainless-steel tubes.
2. If a slide-hammer-style sampler is used the sampler will be washed between samples using an inorganic detergent followed by two tap water rinses and a deionized water rinse. Following retrieval of the sample, the sample tube will be removed from the sampler and the ends will be fitted with PVC end caps.
3. Each sample jar or tube will be labeled with the sample number and date.
4. Samples will be transferred to the analytical laboratory using standard chain-of-custody protocols. At least one chain-of-custody form will be used for each delivery group. The following information will be clearly written on each chain of custody form:
 - HMC project number;
 - Laboratory name, address, and phone number;
 - Date;
 - Project manager and phone number;
 - Sample identification;
 - Sample date and time;
 - Analysis requested, including U.S. EPA method number;
 - Preservation;
 - Sampler name and signature;
 - Special instructions;
 - Date results requested;
 - Date delivered to laboratory; and
 - Signature, date, and time for all subsequent changes in sample control.

A copy of the completed chain of custody form for each cooler will be sealed in a plastic bag and placed in the cooler. A copy will be retained by field personnel to be placed in the project file. The cooler lid will then be secured with a numbered custody seal. The laboratory performing the analysis will be instructed to return a completed copy of the chain of custody with the analytical results.

C.2 DRILLING AND SOIL SAMPLING PROCEDURES

1. Borings will be drilled by a State-licensed drilling contractor with a truck-mounted drill rig equipped with hollow-stem augers.
2. The augers will be pressure washed or steam cleaned prior to drilling.
3. Soil descriptions, in general accordance with the Unified Soil Classification System, sample type and depth, and related drilling information, will be recorded on a boring log under the supervision of a registered geologist.
4. Soil samples will be collected using a split-barrel modified California sampler at intervals to be determined by the specific conditions being assessed.
5. The sampler will be washed between sampling intervals with an inorganic detergent; followed by two tap water rinses and a deionized-water rinse.

6. Soil samples will be collected in stainless steel or brass sampling tubes inside the sampler.
7. Following retrieval of the sampler, the second tube from the shoe of the sampler will be removed from the sampler and the ends will be fitted with PVC end caps. The sample will be labeled retained for potential laboratory analysis.
8. The soil in the first sample tube from the shoe of the sampler will be used to describe the soil.

C.3 GEOPROBE PROCEDURES

1. Points will be advanced to the specific intervals below ground surface to be determined by the specific conditions being assessed, using a Geoprobe sampling rig.
2. The Geoprobe points will be cleaned prior to sampling.
3. The plastic sample liner containing soil from the collected sample depth will be removed from the sampler and a six-inch portion of the plastic sampler containing the 2-to-3-foot sample will be cut, capped, and retained in an ice chest for chemical analyses.
4. The Geoprobe points will be washed prior to the start of work and between sampling intervals.

C.4 HAND-AUGERING PROCEDURES

1. Hand augered samples will be collected using a slide hammer hand sampler with 4- inch-long brass or stainless-steel sample tubes.
2. Hand-augering equipment will be washed between borings with an inorganic detergent, followed by two tap water rinses and a final deionized-water rinse.
3. Immediately after sample collection, the ends of sample tubes will be fitted with PVC end caps.

C.5 SAMPLE HANDLING

1. The samples retained for chemical analyses will be placed in Ziploc bags and stored in an ice chest cooled using water ice or "blue" ice. Samples may be transferred to and stored in a refrigerator prior to delivery to the laboratory.
2. The samples will be delivered to a State-certified laboratory within one working day of collection, or a State-certified mobile laboratory will analyze the samples on-Site. Sample handling, transport, and delivery to the laboratory will be documented using chain-of-custody procedures, including the use of chain-of-custody forms.

C.6 SAMPLE LOCATION

1. All sample locations will be documented using to accuracy sufficient to meet the requirements of the specific Site conditions being assessed.
2. Sample locations and sample depths will be made by HMC or other designated field participants.

C.7 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

1. Trip Blanks: These samples are used to demonstrate that the samples have not been contaminated during transportation or at the laboratory. If VOC analyses are being conducted, two trip blanks (VOC vials containing high-performance liquid chromatography-grade water) will be present in each cooler received from the laboratory. These will be uniquely labeled in the field, recorded on the chain of custody for the cooler in which they are present, and returned to the laboratory for VOC analysis, as necessary.
2. Equipment Blanks: If non-dedicated sampling equipment is being use (e.g., hand auger, trowel) on equipment blank will be collected per day of sampling by pouring laboratory-prepared deionized water over the equipment and collecting a sample of the rinsate.
3. Temperature Blank: A temperature blank will be present in each cooler received from the laboratory; it will be used to record the temperature inside the cooler upon receipt by the laboratory.
4. A matrix spike/matrix spike duplicate (MS/MSD) sample pair will be collected at a rate of one per 20 samples. These samples will be designated on the chain-of-custody.
5. The laboratory will perform analysis on laboratory control spike samples in accordance with their internal Quality Assurance Plan.
6. Data provided by the laboratory will be reviewed for data representativeness, reproducibility, completeness, erroneous data, and discrepancies to evaluate the data usability. Data will be assessed in accordance with guidance from the EPA Contract Laboratory Program National Functional Guidelines.