SOIL REMEDIATION REPORT
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TABLE OF CONTENTS

STATEMENT OF LIMITATIONS AND PROFESSIONAL CERTIFICATION v

EXECUTIVE SUMMARY vi

1.0 INTRODUCTION 6
    1.1 Purpose and Objectives 6
    1.2 Site Location and Description 6

2.0 SITE HISTORY AND BACKGROUND 6
    2.1 Constituents of Concern 6
    2.2 Hazardous Materials and Former USTs At the Site 6
    2.3 Site Investigations Prior to Soil Excavation and Disposal 6
    2.4 Soil Remediation - Soil Excavation, Removal and Disposal 6

3.0 SITE GEOLOGY AND HYDROGEOLOGY 6
    3.1 Groundwater Quality 6

4.0 METHANE ZONE DESIGNATION 6

5.0 POST EXCAVATION INVESTIGATION 6
    5.1 Additional Site Assessment 6
    5.2 Residual Concentrations in Backfill Material and Surface Samples 6

6.0 IN SITU SOIL REMEDIATION (CHEMICAL OXIDATION) 6
    6.1 In Situ Treatment and Surface Impact Approach 6
    6.2 Chemical Oxidation Treatment Technology 6
    6.3 In-Situ Injection and Treatment (Building 11) 6
    6.4 In-Situ Soil Mixing and Treatment (Buildings 1, 2, and 3) 6
    6.5 Additional Treatment (Buildings 1, 2, 3 and 11) 6
    6.6 Surface Soil Scraping and Land Piling 6

7.0 SOIL VERIFICATION SAMPLING 6
    7.1 Soil Verification Sampling Plan - HVOCs 6
        7.1.1 Surface Soil Samples 6
        7.1.2 Stock-Pile Soil 6
        7.1.3 Buildings 1 and 2 6
        7.1.4 Buildings 3 and 11 6
    7.2 Soil Sampling Procedures and Analytical Method-HVOC 6
    7.3 Soil Analytical Results and Data Interpretation 6
        7.3.1 Surface Samples 6

7.3.2 Stock-Pile Samples 6
7.3.3 Buildings 1 and 2 6
7.3.4 Buildings 3 and 11 6
7.4 Intermediate Soil Sample Analytical Results 6
7.5 Soil Verification Emergent Chemicals (Buildings 1, 2, 3 and 4) 6
7.5.1 Soil Sampling Plan – Emergent Chemicals 6
7.5.2 Soil Sampling Procedures – Emergent Chemicals 6
7.5.3 Soil Samples Analytical Methods- Emergent Chemicals 6
7.5.4 Emergent Chemicals Analytical Results 6
7.5.5 Other Constituents of Concern (Buildings 1, 2, 3, and 11) 6

8.0 SOIL GAS SAMPLING 6
8.1 Soil Gas Sampling Plan 6
8.2 Soil Gas Probe Installation 6
8.3 Soil Gas Sampling Procedures 6
8.4 Soil-Gas Analytical Results and Data Interpretation 6

9.0 FINDINGS AND CONCLUSIONS 6

10.0 RECOMMENDATIONS 6

11.0 REFERENCES 6

TABLES

1. Soil Verification Sampling Results for HVOC, Surface Samples
2. Soil Verification Sampling Results for HVOC, Stockpile Samples
3. Soil Verification Sampling for HVOC Building 1
4. Soil Verification Sampling for HVOC Building 2
5. Soil Verification Sampling for HVOC Building 3
6. Soil Verification Sampling for HVOC Building 11
7. Post-Remediation Intermediate Results
8. Emergent Constituents: 1, 2, 3-Trichloropropane and 1, 4-Dioxane
9. Soil Gas Sampling Results

FIGURES

1. Site Location
2. Site Map
3. Site Plan Showing Former ASTs and USTs
4. Cross-Section A-A’ for Buildings 1, 2 & 3 Contaminated Soil Excavation and Disposal
5. PCE Concentrations in Groundwater Samples, January 16, 2006
6. PCE Concentrations in Backfill Material, January 16, 2006
7. Cross-Section A-A’ for Buildings 1, 2 & 3 (Existing Backfill)
8. Cross-Section B-B’ for Building 3 (Existing Backfill)
9. Cross-Section C-C’ for Building 11 (Existing Backfill)
10. Soil Sampling Results for PCE (All Grids)
11. Retreated Cells for Buildings 1, 2, 3 and 11.
12. Soil Sampling Results for PCE (Surface Samples)
13. Soil Sampling Results for PCE (Buildings 1, 2 and 3)
14. Soil Sampling Results for PCE (Building 11)
15. Soil Sampling Results for HVOCs (All Grids)
16. Emerging Constituents Sampling Results 1, 4-Dioxane and 1, 2, 3-Trichloropropane
17. Soil Gas Sampling Results for PCE

APPENDICES

A. City of Los Angeles Methane Gas Ordinance
B. Site Remediation Photos
C. RegenOx Documentation Material
D. PSI Soil Sampling Protocol
E. PSI Soil Gas Sampling Protocol
F. Soil Sampling Laboratory Data

STATEMENT OF LIMITATIONS AND PROFESSIONAL CERTIFICATION

Information provided in the Soil Remediation Report prepared by Professional Service Industries, Inc. (PSI), PSI Project Number 562-6G001 is intended for Consolidated Film Industries, LLC, for the evaluation of subsurface conditions as it pertains to the subject site at the time the data were collected. The professional services provided have been performed in accordance with practices generally accepted by other engineers, geologists, hydrologists, hydrogeologists, and environmental scientists practicing in this field. No other warranty, either expressed or implied, is made. PSI is not an insurer and makes no guarantee or warranty that the services supplied will avert or mitigate occurrences, or the consequences of occurrences, that the services are designed to prevent or ameliorate.

This Soil Remedial Report is issued with the understanding that Consolidated Film Industries, LLC is responsible for ensuring the information contained in this report is brought to the attention of the appropriate regulatory agency if required by applicable laws and regulations. This Remedial Action Work Plan has been reviewed by a Civil Engineer and/or Registered Geologist who is registered in the State of California and whose signatures (and license numbers, as appropriate) appear below.

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Regional Engineer

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CIVIL

EXECUTIVE SUMMARY

Based on the remediation activities and soil verification sampling results presented in this report, PSI recommends that the CRWQCB grant a “No Further Action Letter for Soil” for the Site located at 959 N. Seward Street in Hollywood, California.

Historically, during a removal of a diesel UST at the Site, chlorinated solvents were detected in soil and groundwater. The contamination resulted from film processing operations. The chlorinated solvent hydrocarbons detected included PCE, TCA and their breakdown products, TCE, 1,1-DCE and DCA. No other constituents of concern were detected. Subsequent Site assessments defined the vertical and horizontal extent of contamination in soil and groundwater.

Last year, the Site underwent demolition in anticipation of a real estate transaction and subsequent redevelopment. Soil excavation, removal and disposal activities were performed in conjunction with demolition activities at the Site. Approximately 3,166 cubic yards of contaminated soil were removed and disposed of from beneath the basements of Buildings 1, 2 and 3. The excavations were backfilled with crushed concrete.

Low residual contaminant concentrations (mostly PCE) were detected in the excavations of Buildings 1, 2, 3, and 11, during a due diligence assessment, conducted by a potential buyer. The backfill material was remediated in place using RegenOx, a chemical oxidant manufactured by Regenesis, Inc. The Building 11 Area was remediated using primarily an oxidant injection method and the Buildings 1, 2 and 3 Areas were remediated using a soil mixing method.

Most of the PCE concentrations in the Buildings 3 and 11 Areas were reduced to concentrations below the *Soil Screening Levels* protective of the groundwater. These levels were calculated based on the *CRWQCB Interim Site Assessment and Clean-up Guidebook,* dated May 1996. A few PCE concentrations in the Buildings 3 and 11 Areas were marginally higher than the calculated *Soil Screening Level* for PCE (5ug/kg). These residual concentrations appear to be randomly present in the backfill material and do not pose a threat to groundwater.

The PCE concentrations in the Buildings 1 and 2 Areas were also reduced to concentrations below the *Soil Screening Level* in the majority of the samples. Despite being treated multiple times, PCE concentrations in an area located on the east side of Building 2 could not be reduced to the *Soil Screening Levels*. However, the PCE concentrations in Building 2 were reduced from a maximum of

89,000ug/kg to a maximum of 100ug/kg. The area of persistent residual PCE concentrations is located above the groundwater plume and contaminant transport mechanisms, such as soil gas migration and/or groundwater upward movement through capillarity, are suspected to cause the persistence of low PCE residual concentrations. Elevated PCE concentrations in the soil gas have also been detected in this area. Based on previous data, a groundwater plume of elevated PCE concentrations is present in this area. If left in place, the low residual PCE concentrations would not further degrade the groundwater quality in this area.

Surface soil samples were collected in a grid pattern from the Site outside of the building treatment areas as well. No evidence of contamination was detected in these areas, confirming that no other areas were impacted by the presence of the contaminants of concern at the Site.

Soil-gas sampling revealed PCE concentrations that exceeded the State of California Human Health Screening Levels (HHSLs) for vapor intrusion for commercial/industrial land use in the Buildings 1, 2, 3 and 11 Areas. The distribution of PCE in soil gas correlates with the impacted groundwater plume distribution. The highest PCE concentrations are present on east side of the Building 2 Area. Based on the historical groundwater data and the PCE distribution in the soil gas, it appears that the PCE in soil gas originates from the impacted groundwater plume.

Due to the fact that this Site is located in the “Methane Zone” as defined by the City of Los Angeles Building and Safety Code, the development of the Site requires, at a minimum, a vapor barrier and a subterranean venting system to mitigate the methane intrusion risk. These engineered control systems will also mitigate the potential for vapor intrusion and human health risk from exposure through vapor inhalation. Therefore, regardless of the elevated soil gas levels, the potential impact to human health and safety from vapor inhalation originating from residual PCE concentrations in the soil or groundwater will be eliminated during Site redevelopment by the installation of engineered methane mitigation structures required by the City.

As requested by the CRWQCB, soil at the Site was tested for the presence of emergent constituents 1,4 - Dioxane and 1,2,3-Tricholoropropane. Neither contaminant was detected in any of the soil verification samples collected from the backfill material in the excavations of Buildings 1, 2, 3 and 11. Therefore, there is no perceived risk to groundwater, or human health and safety, from these constituents.

Thus, based on the remediation activities and soil verification sampling results presented in this report, PSI recommends that the CRWQCB grant a “No Further Action Letter for Soil”.

1.0 INTRODUCTION

Consolidated Film Industries, LLC (CFI) is submitting this Soil Remediation Report (SRR) to the California Regional Water Quality Control Board, Los Angeles and Ventura Counties Region 4 (CRWQCB) for the property located at 959 North Seward Street in Hollywood, Los Angeles County, California (Site).

In 2005, CFI carried out the demolition of all buildings and improvements and concurrently conducted soil remediation activities on the Site. This SRR presents a summary of the soil remediation activities conducted at the Site in the areas of concern, defined as the backfill material in the excavations of the former buildings and a limited surface area adjacent to one of the building excavations. This report documents the field remediation activities, verification sampling, and laboratory analyses. The SRR provides an evaluation of the results with respect to the completion of soil remediation at the Site to date and CFI's request for soil closure at the Site.

Groundwater contamination was encountered beneath the Site and extensive groundwater assessments were conducted. A quarterly groundwater monitoring program is implemented at the Site. Future environmental activities for the groundwater will be addressed separately in consultation with the CRWQCB, following completion of soil remediation activities.

1.1 Purpose and Objectives

The purpose of this SRR is to summarize the results of soil remediation activities conducted at the Site and the post remediation verification sampling results.

- Consistent with CRWQCB directives, the objective of this remedial action was to reduce the concentrations of Volatile Organic Compounds (VOCs) in backfill materials, to the extent practicable, to the CRWQCB Soil Screening Levels or to higher Site-specific cleanup levels (with CRWQCB guidance) protective of the groundwater and human health and safety.

1.2 Site Location and Description

The Site is located at 959 Seward Street in Los Angeles (Hollywood), California (Figure 1). The Site occupies approximately 3.5 acres in a mixed commercial and residential area. The Site is bordered on the east by Seward Street and beyond by commercial properties; on the south by Barton Avenue and residential properties; on the west by a City of Los Angeles Street Maintenance facility; and on the north by Romaine Avenue and commercial properties.

The Site consisted of approximately eleven structures (Buildings 1 through 11), parking lots and an interior courtyard. Buildings 1, 2, 3 and 11 had basements. All structures were demolished between April and August 2005. Concurrently with the demolition of the structures, soil remediation activities were conducted for Buildings 1, 2 and 3. The soil remediation activities consisted of excavation, transport and disposal of contaminated soil originating from beneath former Buildings 1, 2 and 3. All contaminated soil beneath these Buildings was removed to the groundwater. The basement excavation of Building 11 and the excavations of Buildings 1, 2 and 3 were backfilled with crushed concrete from the demolished buildings. Presently, the Site is an open lot. See Figure 2. The only structure on the Site is a small shed that houses the Site security guard to control on-Site access.

2.0 SITE HISTORY AND BACKGROUND

Film processing activities at the Site began at the Site in 1926 and continued until 2002. A detailed description of the Site history, background, and environmental activities at the Site was provided in the January 27, 2006, Soil Remediation and Additional Groundwater Site Assessment Report prepared by PSI and submitted to the CRWQCB.

The following brief summary of pertinent historical environmental information regarding the site is presented for easy site reference. For detailed site information and background please refer to the reports referenced in this document.

2.1 Constituents of Concern

Chlorinated hydrocarbons have been detected in the soil and groundwater beneath the Site. The chlorinated hydrocarbons included perchloroethylene (PCE) and its breakdown products trichloroethene (TCE) and 1,1-dichloroethene (1,1-DCE) and trichloroethane (TCA) and its breakdown product dichloroethane (DCA). These VOCs were detected under former[1] Buildings 1, 2 and 3.

Heavy metal concentrations detected during previous assessments in soil samples were near background levels. Therefore, heavy metals did not constitute a contaminant of concern as part of this SRR or CFI's remediation activities.

2.2 Hazardous Materials and Former USTs At the Site

The film processing and associated activities were conducted in three main buildings on the Site, labeled Buildings 1, 2 and 3 in the attached figures. The majority of chemicals which had been used in processing of film were stored in the basements of Buildings 2 and 3. Building 1 had only a partial basement covering a portion of the Building 1 footprint.

The VOCs were detected below the basement slabs of these three Buildings. The chemicals historically used for film processing included isopropyl alcohol, acetone, 1,1,1-trichloroethane (1,1,1-TCA), tetrachloroethylene, also known as perchloroethylene (PCE), ammonium thiosulfate, and proprietary developing solutions. This information was thoroughly discussed in the April 21, 2005 RAP and January 27, Soil Remediation and Additional Groundwater Assessment prepared by PSI and submitted to the CRWQCB.

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[1] All buildings, including Buildings 1, 2 and 3, have been demolished prior to the date hereof by CFI as part of its Site demolition, but for convenience throughout this Report, the reference is to "Buildings" and not "former Buildings" 1, 2 & 3, notwithstanding they have been demolished. Such reference is only to designate the general location being referred to in reference to the enclosed Site maps designating the location of the former Buildings 1, 2 & 3.

Three underground storage tanks (USTs) installed at the Site prior to 1985 were removed or abandoned in place between 1986 and 1999 in accordance with applicable laws and regulations. See Figure 3 for former tank locations. None of the USTs contained chlorinated hydrocarbons and they all received regulatory closure further verifying that the USTs were not a source of soil and groundwater chlorinated hydrocarbons at the Site.

2.3 Site Investigations Prior to Soil Excavation and Disposal

The previous investigations were conducted to characterize the extent and nature of the environmental impact in soil and groundwater.

The Site assessments concluded that the VOC releases occurred in the basements of Buildings 1, 2 and 3 and the lateral extent of contamination was limited to the footprint of these buildings. The vertical extent of VOCs was determined by the presence of perched groundwater at a depth of 14 feet below ground surface (bgs), or 3 feet below the basement elevation in Buildings 1 and 2. Figure 4 shows the original extent of the impacted soil in the vadose zone beneath Buildings 1, 2 and 3. VOCs were not detected in any other area investigated at the Site.

A maximum PCE concentration of 84,000 μg/kg was detected in the soil at two feet below the basement floor of Building 2, along a concrete water tank located below the basement. Elevated PCE concentrations (25,000 μg/kg) were also detected on the northeast side of Building 2 and on the east side of Building 3 (2,500 μg/kg). These areas were designated as “areas of concern” and they were further investigated prior to soil excavation and disposal for soil classification purposes. The PCE concentrations in the remaining impacted areas below Buildings 1, 2 and 3 to the groundwater, ranged between non-detect to 100 μg/kg.

Detailed information regarding the previous environmental investigations was provided in the Remedial Action Plan dated April 21, 2005, the Remedial Action Work Plan dated January 27, 2006, and the January 27, 2006, Soil Remediation and Additional Groundwater Assessment Report, prepared by PSI. The following provides a brief summary for easy reference.

2.4 Soil Remediation - Soil Excavation, Removal and Disposal

The soil remediation consisted of soil excavation and removal from below the basement of Buildings 1, 2 and 3. All soil between the basement elevation of Buildings 1, 2 and 3 and the groundwater was excavated, transported and properly disposed of.

Approximately 3166 Cubic Yards of contaminated soil and impacted concrete were disposed during remediation activities in 2005. All of the contaminated soil was removed throughout the entire footprint of Buildings 1, 2 and 3 between the basement floor and the groundwater located at approximately 14 feet below ground surface (bgs). Several areas of elevated VOC concentrations (described as “areas of concern”) were over excavated below the groundwater table. The over excavation was possible due to the slow recharge rate of the groundwater. Soil samples were collected in a grid pattern from the bottom of the excavation located at groundwater table or below in the areas of over excavation.

Upon completion of the soil removal, transport and disposal, the excavation was backfilled with processed material originating from crushing the concrete generated during building demolition. Buildings 1 and 2 excavations were backfilled to approximately 3 to 4 feet bgs. The basement excavations for Buildings 3 and 11 were backfilled with crushed concrete to match existing grade. The remaining area around these excavations consisted of exposed native soil and crushed concrete.

Furthermore, during a due diligence assessment, conducted by a potential buyer, low residual contaminant concentrations were detected in the backfill which was thought to consist of clean crushed concrete. A proposed remedial action to address the residual contamination in the backfill material was presented in the separate January 27, 2006, Remedial Action Work Plan (RAWP).

3.0 SITE GEOLOGY AND HYDROGEOLOGY

As presented in the April 21, 2005 RAP, most of the Hollywood, California Quadrangle is covered by Quaternary alluvial basin and fan deposits consisting mainly of sand, silt and clay. Older Quaternary deposits are exposed over most of the elevated region of the La Brea Plain, and two additional younger generations of alluvial deposits in the lower areas beyond the plain. Other Quaternary deposits in the quadrangle include modern streambed sediments along the Los Angeles River, Holocene and older alluvial fan deposits.

As discussed in the April 21, 2005 RAP (PSI, 2005), based upon previously completed continuous core logging, two saturated sand zones are present between an upper clayey sand and lower stiff silty clay. The silty clay has been interpreted to be a stratum of sufficient competency to impede vertical flow. The upper 10 to 15 feet of native sediment beneath the Site consists of clayey sands that transition into fine grained sandy layers, which are typically saturated. These sandy water bearing sediments are present to approximately 35 feet below ground surface (bgs), ending at stiff clay. The perched water table underlying the Site occurs at approximately 14 ft bgs based upon groundwater elevations in monitoring wells at the Site.

3.1 Groundwater Quality

The groundwater issues are not addressed in this report. The brief groundwater information included herein is presented with the intent of providing a succinct picture concerning the contamination in the soil and the impact, or lack thereof, of such contamination onto the groundwater quality.

Based upon previous groundwater monitoring results, the groundwater flow direction at the Site is generally south and southwest. The results of the previous investigations, including the previous soil remedial action, indicate that VOCs have been detected in the groundwater at the Site. The predominant VOC (based upon frequency of detection) detected in groundwater at the Site with concentrations that exceed the CRWQCB Drinking Water Standard (5 micrograms per Liter [μg/L]) is perchloroethylene (PCE). Figure 5 presents the PCE concentrations in the monitoring wells and hydro-punch samples as of January 2006.

4.0 METHANE ZONE DESIGNATION

Ordinance No. 175790 amended Section 91.106.4.1 and Division 71 of Article 1, Chapter IX of the Los Angeles Municipal Code to establish citywide methane mitigation requirements and include more current construction standards to control methane intrusion into new buildings.

Based on this amendment, the subject property is located within a designated “methane zone” as defined by the City of Los Angeles Building and Safety Code. A map with the Site’s location in the designated “Methane Zone” area is presented in Appendix A.

The City of Los Angeles has methane mitigation requirements for new building construction. Based on an initial review of the Los Angeles Municipal Code Methane Mitigation Requirements for sites located in the methane zone, at a minimum, installation of methane mitigation engineered systems consisting of an impermeable membrane and a sub-slab venting system will be required for development of the Site. The Methane Zone Mitigation Requirements Table 1, from the Los Angeles Municipal Code, is also presented in Appendix A. Depending on the methane concentration and vapor pressure, additional mitigation measures may be required by the City of Los Angeles, in order to obtain a construction permit to develop the Site. Furthermore, methane was detected at the Site by a potential buyer’s consultant. The methane concentrations were in the 100ppm range. No vapor pressure readings were collected. The implication of the methane zone designation is that any development of the Site entailing new building construction will trigger installation of the engineered methane mitigation measures. These measures would also mitigate the human health exposure risk to any volatile organics present in the soil and groundwater.

5.0 POST EXCAVATION INVESTIGATION

Following the demolition and soil excavation activities at the Site in 2005, during a due diligence assessment conducted by a potential buyer's environmental consultant in October and November 2005, low residual PCE concentrations were detected in the backfill material of the Buildings 1, 2, 3 and 11 Areas.

5.1 Additional Site Assessment

Following such detection of low residual PCE in the backfill materials, further investigation was conducted to delineate the impacted areas of backfill and surface areas requiring treatment and to collect data necessary to support the preparation of a remedial action plan. The soil sampling assessment of the backfill material and other areas of the Site were presented in the RAWP, dated January 27, 2006 prepared by PSI.

5.2 Residual Concentrations in Backfill Material and Surface Samples

The January 2006 analytical results indicated that PCE was above the CRWQCB Soil Screening Level of 5 µg/kg in several samples. PCE concentrations exceeded the Soil Screening Levels, with the highest concentration detected in the Buildings 1 and 2 Areas (200ug/kg). The results of the investigation indicated that the residual PCE concentrations were limited to the backfill material in the Buildings 1, 2 and 3 Areas. Unexpectedly, low PCE concentrations were also detected in the Building 11 Area which was used as an administrative building and no hazardous materials or PCE had been used in the administrative building. Also impacted with low PCE concentrations was an area located adjacent to the Buildings 1, 2 and 3 excavations. The PCE concentrations in the surface samples were extremely low (highest concentration 19ug/Kg). Figure 6 presents the soil sample locations and PCE concentrations detected in the soil by the potential buyer's consultant and the follow up Site assessment.

Based upon these results, it was assumed (for remediation design purposes) that VOCs were present within the entire backfilled area. Elevated PCE concentrations were detected in the Buildings 1 and 2 Areas. The maximum PCE concentration detected in the soil in the Buildings 1 and 2 Areas was 200ug/Kg. Several samples had higher PCE concentrations; however these soil samples were collected below groundwater table and had been impacted by the groundwater. The highest PCE concentrations detected in the Buildings 3 and 11 Areas were 93ug/kg and 64ug/kg, respectively. A cross-section of the impacted backfill soil in the Buildings 1, 2 and 3 Areas is presented in Figure 7. Cross sections of the impacted backfill materials in the Buildings 3 and 11 Areas are presented in Figures 8 and 9, to facilitate understanding of the impacted backfill areas subject to in-situ treatment.

6.0 IN SITU SOIL REMEDIATION (CHEMICAL OXIDATION)

A remedial action plan was prepared to evaluate remedial alternatives for the residual concentrations identified at the Site and a remedial method was selected and the proposal was presented to the CRWQCB in the RAWP dated January 27, 2006, prepared by PSI.

6.1 In Situ Treatment and Surface Impact Approach

The selected method for remediation of the residual concentrations of VOCs in the backfill material was in-situ chemical oxidation using RegenOx, a chemical oxidant manufactured by Regenesis. The feasibility of this method was determined in a bench test and several pilot tests conducted at the Site earlier this year and presented in the RAWP, dated January 27, 2006 prepared by PSI.

The proposed delivery system for chemical oxidation was direct injection using a Geoprobe™ unit and ancillary equipment (oxidant mixing tanks, pumps, etc.). This technology was used to deliver the oxidant solution in the Building 11 Area. Soil mixing was selected to enhance treatment in the Buildings 1, 2 and 3 Areas as well as for re-treatment of several recalcitrant cells in the Building 11 Area. This method was chosen for treatment in the Buildings 1, 2 and 3 Areas instead of injection, in order to achieve a faster treatment schedule while achieving a level of contact of the RegenOx chemical with the VOCs as good as or better than the injection method.

The impacted surface area delineated during the post soil excavation and disposal was proposed to be scraped and the soil stockpiled on the Site in a staging area. The stockpile soil was tested in order to determine if remediation was necessary. Any area requiring excavation in order to meet the final grade plan which was outside the known impacted area around the Buildings 1, 2 and 3 excavations was scraped and stockpiled at a different location on the Site for further testing. In addition, additional surface sampling of the Site outside of the Buildings 1, 2, 3 and 11 excavations was conducted to ensure that there was no contamination outside of these areas.

6.2 Chemical Oxidation Treatment Technology

Chemical oxidation is a technology used for destroying (oxidizing) organic contaminants such as PCE, trichloroethylene (TCE) and 1,1,1-trichloroethane (TCA) (among others). The chemical oxidant that was used was RegenOx™ manufactured by Regenesis, Inc. of San Clemente, California (Regenesis; www.regenesis.com). RegenOx™ is a solid alkaline oxidant that uses two parts: a sodium percarbonate complex; and a multi-part catalytic formula (activator). The two parts were combined and mixed with water in the field to produce an effective oxidant and injected or mixed with the soil. The RegenOx™ calculation spreadsheets and the RegenOx™ Design and Application Manual were presented in RAWP dated January 27, 2006.

Total oxygen demand (TOD) data was collected during the pre-remediation sampling investigation as presented in the January 27, 2006 RAWP. The TOD data was used to evaluate the amount of RegenOx™ needed to overcome the additional demand from the TOD.

6.3 In-Situ Injection and Treatment (Building 11)

The Building 11 Area was surveyed and a treatment grid was laid out in the field using construction stakes. Based on the field delineation of the grid, injection points spaced 7-feet on center were drilled to inject the oxidant into the subsurface. The oxidant and activator were injected using a Geoprobe™ unit and ancillary equipment (oxidant mixing tanks, pumps, etc.). The solution was injected under a pressure of 40 to 50 psi to a depth of 10 feet bgs. Four Geoprobe™ injection trucks were used concurrently to deliver the oxidant into the formation. See Photos 2 and 3 in Appendix B. Between 350 and 500 gallons of solution were injected into the backfill material at each injection point. Several points required multiple re-injections due to refusal and/or due the solution breaking out to the surface.

Three days to one week after the first round of injections, post-treatment soil samples were collected utilizing a Geoprobe™ unit. The post-treatment soil samples were analyzed for VOCs. The verification sampling methodology and soil samples analytical results are presented in Section 7 of this report. The cells that indicated post-treatment results for VOCs significantly higher than the Site cleanup levels were scheduled for a second round of treatment. Re-treatment using the soil mixing method detailed below was performed for the following cells: 11A1, 11A3, 11A6, 11B6 and 11C2.

6.4 In-Situ Soil Mixing and Treatment (Buildings 1, 2, and 3)

In Situ Enhanced Soil Mixing is a remediation technology that is used to remediate soils contaminated with volatile organic compounds (VOCs).

This technology combines soil mixing with the application of an oxidant solution, in this case RegenOx. The technology is used to treat contaminated soils, especially those with a fine-grained nature. Contaminants in the soils are oxidized in place by applying the oxidant, water and mixing them with the soil. The contact between the oxidant and the contaminant is facilitated by the mixing process. The process of mixing allows good access for reagent delivery to all soil particles and the interstices between particles.

A high power excavator with a 3-foot diameter mixing tiller was used to mix the soils in the Buildings 1, 2 and 3 Areas. See photos 5, 6 and 7. A high pressure delivery system was used to deliver the oxidant solution to the mixing unit. The ancillary equipment used for injection (oxidant mixing tanks, pumps) was also used in combination with the mixing unit.

The Buildings 1, 2 and 3 Areas were surveyed and a treatment grid was laid out in the field using construction stakes. The grid size for a treatment cell was 30x30 feet and 10 feet depth. Nine rows A through I and four columns (8 through 11) were laid to create the grid in the Buildings 1, 2 and 3 Areas. Row A in the Building 1 Area was not treated since this row was outside the basement excavation foot print. Surface soil samples were collected in this area. An additional column (7) was included in the Building 3 Area to overlap the footprint of this Building Area. The soil in this area was treated to an approximate depth of 13 to 14 feet bgs.

Post-treatment soil samples were collected and analyzed for VOCs as described in Section 7. The success of the treatment was determined based on the post-remediation sampling results. When VOC concentrations were reduced to the CRWQCB Soil Screening Levels or higher Site specific cleanup levels (subject to CRWQCB guidance) that do not pose a threat to the groundwater, the treatment was deemed complete.

6.5 Additional Treatment (Buildings 1, 2, 3 and 11)

Each cell that indicated an elevated PCE concentration at one or more depths was retreated to that depth or in its entirety. Additional verification sampling was conducted for the retreated cells to verify the reduction in PCE concentrations. Several cells have required additional chemical oxidation treatments to reach low residual PCE concentrations. Five cells required as many as six chemical oxidation treatments.

Notwithstanding the repeated treatments, recalcitrant cells with PCE concentrations were encountered. In the Buildings 1 and 2 Areas, treatment cells 2C9 and 2G9 were treated two times. Treatment cell 2G10 was treated three times and treatment cells 2E9, 2E10, 2E11, 2F10 and 2F11 were treated four or more times, with treatment cells 2E10 and 2E11 being treated six times each. The RegenOx has significantly reduced PCE concentrations for the entire Site and it is believed that the RegenOx treatment is effective; therefore, the PCE persistence in these treatment cells is surprising. Furthermore, the PCE concentrations detected in cells 2E10 and 2E11 have slightly increased after each of the last two treatments.

It is important to note that a PCE groundwater plume is located beneath these recalcitrant cells. The persistence of PCE contamination in the soil in this limited area, after multiple treatments, could be attributed to the presence of the PCE groundwater plume beneath these cells. Although the mechanisms that cause the PCE persistence in these cells are not known, capillarity and/or soil gas transport could contribute to the PCE persistence. It is possible that the same mechanisms would create a “smear zone” if clean backfill material were to be used to replace the existing backfill in this areas as a soil remediation approach, and for this reason, excavation and replacement with clean soil is not proposed at this time as an effective remediation technique.

In the Building 3 Area only treatment cell 3H8 was treated two times. This cell was retreated successfully and PCE concentrations were lowered to 6.1ug/kg at 3 feet bgs, 5.9ug/kg at 6 feet bgs, and non-detect at 9 feet bgs.

Several cells were retreated two times in the Building 11 Area. These cells are 11A1, 11A3, 11A6, 11B6, and 11C2. The residual PCE concentrations in these cells have been significantly reduced. The highest PCE residual concentration (15ug/kg) was detected at 6 feet bgs in cell 11C1.

6.6 Surface Soil Scraping and Land Piling

An approximate area of 70 x 90 x 3 feet located adjacent to the excavation of Buildings 1 and 2 was delineated during pre-remediation investigation activities as impacted with low PCE concentration levels. The area was surveyed and marked with construction stakes. The area was scraped using an excavator and the soil (consisting primarily of crushed concrete) was segregated into a stockpile located in a staging area south of the Building 3 Area. The soil was placed on an impermeable membrane and covered with plastic.

During the concrete crushing and processing that occurred concurrently with building demolition, a shallow crown of processed material was created on top of the native soil, as illustrated in Figure 6. The depth of the processed material in the shallow crown ranged from less than an inch to a couple of feet. The clean processed material, forming the shallow crown, was scraped and placed in a second stockpile in a staging area located to the west of the Building 1 Area. Prior to setting the staging areas, surface soil samples were collected from the designated staging areas and analyzed to insure that the native soil was clean. Additional material was added to this clean-soil pile during soil rough grading, conducted to bring the surface grade to final grade. This stockpile was also placed on an impermeable membrane and covered with plastic, as a precautionary measure.

Verification soil samples were collected from the impacted soil stockpile to confirm the presence of VOC concentrations and determine appropriate remedial options, if necessary, as presented in Section 7 below. The clean soil pile was also sampled in case that this soil will be used as backfill material.

All field construction work was conducted in delineated areas designated as “exclusion zones”. All heavy equipment required moving from an “exclusion zone” to a staging area, or a “non-exclusion zone”, was properly decontaminated. The construction schedule was prepared to minimize the amount of movements from the “exclusion zone” to other areas.

Based upon analytical results indicating that detected concentrations of VOCs in the balance of the land-piled backfill materials were non-detect, these materials remained stockpiled on the Site for use as a backfill and final grading of the Site after completion of the remedial activities.

7.0 SOIL VERIFICATION SAMPLING

7.1 Soil Verification Sampling Plan - HVOCs

The verification sampling plan presented herein consisted of collection and analyses of post treatment soil verification samples. The verification samples were collected from the backfill material in the excavations of Buildings 1, 2, 3, and 11. Soil samples were also collected from the potentially impacted stockpile created by surface soil scraping activities and the clean stockpile originating from the rough grading. The analytical results of the verification soil sampling are presented in Figure 10.

7.1.1 Surface Soil Samples

A 40-foot square spacing grid was marked in the field for the collection of soil surface samples after the soil was scraped. The grid for the surface samples was delineated with stakes in the field based on surveyed control points. One soil sample was collected from each grid. The samples were collected from the center of each grid at a depth of approximately 6-inch bgs. The soil samples were collected using a hand auger in accordance with standard protocol presented in Appendix D.

The verification soil sampling grid was defined by rows A through G and columns 1 through 7 (Figure 12). On the north-east side of the property the surface soil sampling grid included cells 1A-8 through 1A-11 located in the Building 1 Area outside of the basement excavation area. The surface samples names were abbreviated to represent building number, (only when applicable) row and column (Example: Sample 1A8, meant Building 1, row A, and column 8).

Additional Surface soil samples were collected from area adjacent to the northern property lines. The sampling grid in this area was smaller. The samples collected from this area were abbreviated N1 through N11 (Figure 12).

Soil samples were also collected from the south east side of the property which used to be a parking lot. A similar grid (40 x 40 feet) was marked with stakes in this area. Nine soil samples were collected and analyzed. A total of 71 surface soil samples were collected and analyzed from the Site.

7.1.2 Stock-Pile Soil

The shallow soil scraped from the impacted surface area was stockpiled to the south of the Building 3 Area. Verification soil samples were collected from stock pile to confirm the presence, if any, of VOC concentrations and determine appropriate remedial options, if necessary,

Soil stockpile samples were collected using a hand auger in accordance with standard protocols as described in Appendix D. One soil sample for approximately each 30 cubic yards of soil was collected, for a total of 23 soil samples.

7.1.3 Buildings 1 and 2

A horizontal sampling control grid based on 30 x 30 feet spacing was delineated in the Buildings 1, and 2 Areas. The sampling grid was marked in the field with construction stakes based on previously surveyed points.

The grid for the Buildings 1 and 2 Areas consisted of seven rows (A through G), aligned in the north-south direction and 4 columns (8 through 11) aligned in the west-east direction. The soil sampling grid followed the footprint of the Buildings 1 and 2 basements (B through G). Surface soil samples were collected from the row A, since Building 1 did not have a basement in this area. A total of 72 final soil samples (not including intermediate soil samples) were collected and analyzed from the backfill in the excavation of Buildings 1 and 2.

The success of the treatment was evaluated based on analysis of post-treatment soil sampling analytical results. If the post-treatment soil sampling results remained above Site specific cleanup levels, an additional round of oxidant application was performed. 74 post-remediation intermediate samples were collected and analyzed from nine cells which were retreated multiple times.

7.1.4 Buildings 3 and 11

Upon completion of demolition and initial soil excavation and removal, Building 3 excavation was backfilled to grade. The basement under Building 11 was also removed and the excavation was backfilled to grade. Prior to soil treatment and verification sampling, the soil in the eastern portion of the Building 3 Area was moved into the Buildings 1 and 2 Areas prior to treatment of soil at such locations. This lowered the backfill material in this part of the Building 3 Area to approximately 4 feet bgs. This facilitated remediation equipment movement and soil mixing and treatment activities.

A horizontal sampling grid 30 x 30 feet was delineated in the Buildings 11 and 3 Areas. The sampling grid was staked in the field prior to verification sampling. The grid for the Building 3 Area consisted of five columns (7 through 11), aligned in the west-east direction and 2 rows (H and I), aligned in the north-south direction. The grid followed the footprint of the former Building 3 basement.

Two soil samples were collected from each grid on the eastern side of the Building 3 Area (3H9 through 3I11) at 2 and 5 feet below existing grade, equivalent to 6 and 9 feet bgs. The backfill material depth in this area was shallower, since no contamination was encountered beneath the basement of Building 3 in this area during initial soil excavation and disposal. Verification soil samples were collected at 3, 6 and 9 feet for the western part of the excavation where the soil level had not been lowered.

A total of 24 final verification samples were collected and analyzed from the backfill material in the excavation of Building 3. The success of the treatment was evaluated based on evaluation of post-treatment soil sampling analytical results. The analytical results of the verification soil samples in the Building 3 Area are presented in Table 5 and Figure 13.

The grid for the Building 11 Area consisted of seven columns (1 through 7), aligned in the west-east direction and three rows (A, B and C), aligned in the north-south direction. The grid followed the footprint of the former basement of Building 11.

A total of 63 final verification samples were collected and analyzed from the backfill material in the excavation of Building 11. The success of the treatment was evaluated based on analysis of post-treatment soil sampling analytical results.

7.2 Soil Sampling Procedures and Analytical Method-HVOC

A Geoprobe^{TM} unit was used to drill the verification soil borings in the backfill material. The borings were drilled to a depth of approximately 9 feet bgs. Soil samples were selected for chemical analysis at each borehole location from depths at approximately 3, 6 and 9 ft bgs. The soil samples were collected in accordance with the standard protocols presented in Appendix D.

The selected soil samples for laboratory analysis were sent to the Environmental Support Technologies, mobile laboratory or to Centrum Analytical Laboratory. Both are California-certified analytical laboratories. The samples were analyzed for VOC using the United States Environmental Protection Agency (USEPA) Method 8260. The soil samples were collected using the Method 5035. The laboratory analytical results of the verification soil samples are summarized in Tables 1 through 6 and Figures 10 and 12 through 15.

As presented in Table 1 through 6, a few other VOCs were detected above analytical method detection limits, but PCE was used to define the extent of VOC impact as it is the most frequently detected constituent. Tables 3 through 6 and Figure 15 present the total residual HVOC concentrations which are very similar with the residual PCE concentrations.

7.3 Soil Analytical Results and Data Interpretation

Based on the C*RWQCB Interim Site Assessment and Clean-up Guidebook*, dated May 1996, the soil clean-up criteria for volatile organic compounds that are protective of groundwater quality depend on physical properties of the impacted Site and chemical properties of the VOCs. Soil screening levels for the residual concentrations allowed to be left in soil for the contaminants of concern were calculated based on backfill material consisting of crushed concrete. The crush concrete was considered to have an equivalent permeability with sand and silty sand. The depth to groundwater used was 14 feet. However the Cone Penetration Testing and continuous core sampling suggest that at least 20% of the backfill consists of clay and at least 15% consists of silts. These percentages are not uniform in the backfill. The highest clay percentages were observed in the Buildings 1 and 2 Areas. Based on these assumptions, the screening levels for backfill materials presented in Table A and summarized below are very conservative numbers.

TABLE A – Soil Screening Levels for Backfill Material Buildings 1, 2, 3 and 11

Compound	**CRWQCB Soil Screening ug/kg**	**USEPA PRG ug/kg**
Tetrachloroethylene (PCE)	5	5700
Trichloroethene(TCE)	5	2800
1,1,1-Trichloroethane(TCA)	200	630000
1,2-Dichloroethene(cis, trans)	6	430000
1,1-Dichloroethene(DCE)	6	410000
1,1-Dichloroethane(DCA)	5	6000

The CRWQCB Soil Screening Levels calculated based on the C*RWQCB Interim Site Assessment and Clean-up Guidebook*, dated May 1996 were the presumed target clean-up levels during soil remediation activities.

The *Preliminary Remediation Goals (PRG's) and Soil Screen Level* prepared by the United States Environmental Protection Agency Region 9 are included above in the Table A to evaluate the potential human health risk based on exposure through ingestion and dermal contact. All residual concentrations are significantly below the PRG Levels. For potential human exposure through inhalation, refer to Section 8 concerning soil-gas concentration

7.3.1 Surface Samples

No PCE or total HVOCs were detected in any of the surface soil samples collected and analyzed. The analytical results are presented in Table 1 and the analytical results are presented on Figure 12.

7.3.2 Stock-Pile Samples

No PCE or HVOCs were detected in any of the soil samples collected and analyzed from the potentially impacted stock piled soil or the clean stock pile soil. The analytical results are presented in Table 2.

7.3.3 Buildings 1 and 2

The analytical results of the verification samples in the Buildings 1 and 2 Areas confirmed that the residual concentrations in the vadose zone have been significantly reduced from a maximum of 89,000ug/Kg, prior to the 2005 soil excavation and disposal, to a concentration of 100 ug/Kg after the recent soil oxidation and treatment.

Out of total of 72 final soil samples collected from the backfill material in the Buildings 1 and 2 Areas, 36 samples or 50%, showed non-detect values or below 5 ug/Kg for PCE. The average residual PCE concentration in backfill material is approximately 12.22 ug/Kg. The analytical results for the intermediate soil samples, obtained between treatments in several recalcitrant treatment grids, have not been included in this evaluation, since they were used to benchmark the reduction of concentrations after each treatment.

The highest residual PCE concentrations were detected in grids 2F10 (24/56/5.4 ug/Kg at 3, 6 and 9 feet bgs), 2F11 (29/58/82ug/kg), 2E10 (47/46/100ug/kg) and 2E11 (34,42,59ug/kg). These grids are located on top of the highest PCE concentration detected in the groundwater, approximately (6,000ug/L). Although no groundwater monitoring well is located in this area, a water sample was collected from the excavation during initial remediation. Subsequently, vertical migration of the residual contaminant to groundwater would not further deteriorate the groundwater quality beneath the Site.

Furthermore, the treatment cells 2F10, 2F11 have each been treated 6 times. The adjacent treatment cells 2E10 and 2E11, located on top of the groundwater plume, have also been treated four and five times respectively. As previously discussed, other contaminant transport mechanisms, such as capillarity and soil gas could contribute to the PCE persistence in these areas.

7.3.4 Buildings 3 and 11

The analytical results of the verification samples in the Buildings 3 and 11 Areas confirmed the excellent remediation results obtained in these buildings.

Residual concentrations in the vadose zone in the Building 3 Area were significantly reduced, from a maximum of 25,000ug/Kg prior to the 2005 soil excavation and disposal, to a maximum concentration of below 6.1ug/Kg, after excavation and disposal and the recent soil oxidation treatment.

Out of a total of 24 final soil verification samples, collected from the backfill material in the excavation of Building 3, 20 samples (83%) were non-detect. Three soil samples indicated PCE concentrations of 5 to 6.1ug/kg. The average residual PCE concentration in backfill material in the excavation of Building 3, was 0.93 ug/kg. Therefore, the soil in the Building 3 Area could be considered clean and does not pose a threat to groundwater quality and human health the safety.

Similar results were obtained for the Building 11 Area. As presented in previous sections, no hazardous materials were used in this building and therefore soil remediation using excavation and disposal was not conducted. The highest PCE concentration detected in the backfill material, during the initial assessment, was 54ug/kg. However, additional soil sampling conducted during the pilot test, identified PCE concentrations of 110ug/Kg. The residual PCE concentrations in the Building 11 Area were reduced from a maximum concentration of approximately 110ug/Kg to a highest concentration of 15 ug/kg. 33 samples (over 50%) were non-detect, out of a total of 63 final verification soil samples collected and analyzed. 51 samples (80%) showed PCE concentrations lower than 10ug/Kg. The average PCE concentration in the residual samples was 4ug/kg.

In conclusion, the residual PCE concentrations in the Building 11 Area, are randomly distributed and do not appear to cluster.

The total HVOC residual concentrations in the Building 11 Area are identical with PCE concentrations, since no other HVOC was detected in any of the samples.

Although several residual PCE concentrations exceed the PCE screening level of 5ug/kg, the residual concentrations do not appear to pose a threat to the groundwater quality beneath the Site. All PCE concentrations were significantly lower than the PRG values promulgated by EPA.

7.4 Intermediate Soil Sample Analytical Results

Each cell that indicated an elevated PCE concentration at one or more depths was retreated to that depth or in its entirety. Additional post-remediation sampling was conducted for the retreated cells to verify the reduction in PCE concentrations. The analytical results for these intermediate samples are presented in Table 7.

The highlighted treatment cells in the Buildings 1, 2, 3, and 11 Areas in Figure 11 represent cells where re-treatment occurred.

7.5 Soil Verification Emergent Chemicals (Buildings 1, 2, 3 and 4)

An individual soil sampling grid was established for each of the Buildings 1, 2, 3 and 11 Areas. Each sampling grid was marked in the field with construction stakes based on previously surveyed points.

7.5.1 Soil Sampling Plan – Emergent Chemicals

The CRWQCB has asked CFI to conduct analyses for emergent chemicals 1,4-Dioxane and 1,2,3-Trichloropropane. A 50-foot by 50-foot grid was selected for collection of the emergent chemical samples in the Buildings 1 and 2 Areas. The Buildings 1 and 2 Areas were divided in six verification sampling cells and soil samples were collected from the center of each cell. The verification soil sampling grid was defined by rows A, B and C and columns 1 and 2. An EC abbreviation was placed after each sample to denote "emergent chemical" sampling point. A total of six soil borings were drilled in the Buildings 1 and 2 Areas. A total of 18 soil samples were collected using EPA Method 5035 and Encore samples were and analyzed for 1,4-Dioxane and 1, 2, 3–Trichloropropane.

An 80-foot by 60-foot grid was selected for collection of the emergent chemical samples in the Building 3 Area. The Building 3 Area was divided in two cells and one boring was drilled in the center of each cell. The verification soil sampling grid was defined by row A and columns 1 and 2. A total of two soil borings were drilled in the Building 3 Area. A total of 6 soil samples were collected and analyzed.

An 80-foot by 40-foot grid was selected for collection of the emergent chemical samples in the Building 11 Area. The Building 11 Area was divided in four cells and one borings was drilled in the center of each cell. The verification soil sampling grid was defined by rows A and B and columns 1 and 2. A total of four soil borings were drilled in the Building 11 Area. A total of 12 soil samples were collected and analyzed

7.5.2 Soil Sampling Procedures – Emergent Chemicals

The sampling procedures were identical with HVOC sampling (See Section 7.2). One soil sample was collected from the center of each grid at the depths of 3, 6 and 9 feet bgs using a GeoProbe direct-push rig.

7.5.3 Soil Samples Analytical Methods- Emergent Chemicals

The soil samples were analyzed for emergent chemicals specifically 1,4-Dioxane by Method 8270C (Reporting Limit 2 ug/kg) and 1,2,3-Trichloropropane by EPA Method (Reporting Limit 5mg/kg). All soil samples were collected in accordance with standard protocols presented in Appendix D.

7.5.4 Emergent Chemicals Analytical Results

1,4-Dioxane and 1,2,3-Trichloropropane concentrations were not detected in any of the 36 soil samples collected and analyzed at the Site. The analytical results are presented in Table 8 and Figure 16.

7.5.5 Other Constituents of Concern (Buildings 1, 2, 3, and 11)

Heavy Metals were detected in the previous assessment at or below the background levels at the Site and additional sampling for heavy metals was not conducted.

Naphthalene and styrene were the most prevalent constituents of concern other than chlorinated solvents that were detected in verification samples. There is no historic evidence to suggest that naphthalene or styrene were used at the Site. However, the Site is located within the methane zone and the presence of methane is associated with heavy oils and petroleum products which may explain the presence of naphthalene and styrene.

Naphthalene and styrene were not detected in any of the soil gas samples.

At present concentrations in soil, naphthalene and styrene do not pose a threat to the groundwater.

8.0 SOIL GAS SAMPLING

Soil gas sampling was requested by the CRWQCB during in a meeting on May 24, 2006. Representatives from CFI, PSI and the CRWQCB were present.

Previously a soil gas survey conducted in October 2004 by a potential buyer's consultant yielded few soil-gas sample results. Soil-gas probes were installed at various locations throughout the Site and soil-gas sampled were attempted to be collected. Due to the tight formation (primarily clayey soils) beneath the Site, most of the points could not be sampled. Additional soil - gas work was not recommended as an investigative or verification sampling tool for the native soil.

Despite these difficulties, soil gas samples were collected from backfill material consisting of Site processed materials (primarily crushed concrete) and sands, silts and clayey soils. The soil-gas sampling plan presented below includes soil-gas sample collection in the backfill material in the excavations of Buildings 1, 2, 3 and 11.

8.1 Soil Gas Sampling Plan

A soil-gas sampling plan was prepared prior to field activities. The purpose of the soil-gas sampling was to provide preliminary screening values for volatile organic compounds (VOCs) in the backfill material post remediation.

The soil gas sampling plan included installing soil-gas probes to approximately 5 and 10 feet bgs at each soil gas point. A total of 22 soil gas sampling points were selected throughout the Buildings 1, 2, 3 and 11 Areas. The soil-gas sampling probes were installed in the center of each sampling grid. The soil gas sampling grid was established in the field based on the previously surveyed points. The soil gas samples were noted with SG for soil gas.

8.2 Soil Gas Probe Installation

The soil vapor survey was conducted in June, 2006 using a limited access Geoprobe GH42 drill rig and a Geoprobe 66D Track drill rig. The soil gas sampling plan included installing soil-gas probes to approximately 5 and 10 feet bgs., at 22 locations throughout the Buildings 1, 2, 3 and 11 Areas. The soil-gas probes were constructed of Teflon tubing lowered to the bottom of each boring. The boring was filled with sand and then bentonite chips and allowed to sit for at least 30 minutes to recharge the boring with soil gas prior to sampling.

Building 1 and 2

A sampling grid was selected for collection of the soil-gas samples in the Buildings 1 and 2 Areas. The Buildings 1 and 2 Areas were divided into a total of ten grids and soil-gas samples were collected from the center of each grid. The soil-gas grid was defined by rows A, B, C, D and E, columns 1 and 2. A total of 10 points and 20 soil-gas probes were installed in the Buildings 1 and 2 Areas. A total of 20 soil-gas samples were collected and analyzed.

Building 3

A soil-gas sampling grid was selected for collection of the soil-gas samples in the Building 3 Area. The Building 3 Area was divided in four grids and two soil gas probes were installed in the center of each grid. The soil-gas sampling grid was defined by row A and B and columns 1 and 2. A total of eight soil-gas probes were installed in the Building 3 Area and a total of eight soil-gas samples were collected and analyzed at the Site for VOCs.

Building 11

A soil-gas sampling grid was selected for collection of the soil-gas samples in the Building 11 Area. The area was divided in eight grids and two soil-gas probes were installed in the center of each grid. The soil-gas sampling grid was defined by row A and B and columns 1 through 4. A total of sixteen soil-gas probes were installed in the Building 11 Area and a total of sixteen soil-gas samples were collected and analyzed at the Site.

Upon completion of soil-gas sampling all probes were removed or filled with bentonite, as appropriate. Locations of the soil-gas probes are shown on Figure 17.

8.3 Soil Gas Sampling Procedures

Prior to sampling, barometric pressure was measured in each probe to insure that vapor samples were not conducted during increasing barometric pressure from a pre-frontal weather condition. The Teflon tubing was connected at the surface to a small pump which was used to pull the soil vapor through the tubing and into a valved glass bulb. The soil gas sampling protocol is presented in Appendix E. The soil vapor samples were analyzed on-Site for VOC, gas using gas chromatography/flame ionization detector (GC/FID) using a mobile laboratory. Quality Control (QC) processes were performed by the mobile laboratory and included batch accuracy, batch precision and matrix duplicate processes.

The soil gas samples were collected and analyzed for VOCs by an on site mobile California state certified laboratory using United States Environmental Protection Agency (EPA) Method 8260. The selected laboratory detection limit was 0.2ug/L.

8.4 Soil-Gas Analytical Results and Data Interpretation

Of the 44 samples, seven samples had non-detect levels of VOCs. The remaining samples indicated concentrations ranging from 0.11ug/L to 190ug/L for PCE. Other constituents of concern such as 1,1,1-trichloroethane, were also detected in these samples. The analytical results of the soil-gas samples are presented in Table 9 and Figure 17.

There are two documents typically used for the evaluation of future indoor air quality. They are the *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air* published by Cal EPA-DTSC, dated February 7, 2005 and the Use of *California Human Health Screening Levels (CHHSL's) in Evalution of Contaminated Properties,* dated January 2005. These documents are helpful in establishing target soil clean-up goals for soil at a property.

For a typical property, the soil gas samples would need to achieve the Indoor Human Health Screening Levels obtained from the California Human Health Screening Levels adjusted for the appropriate attenuation factor and the appropriate cancer risk factor for the proposed commercial development. The Table below presents an excerpt for the constituents of concern from the *California Human Health Screening Levels for Indoor Air and Soil Gas for Shallow Soil Gas, for Vapor Intrusion for Commercial Use Only.* This table was included in Appendix E and summarized below for the detected constituents at the Site.

SHALLOW SOIL GAS HUMAN HEALTH SCREENING LEVELS (VAPOR INTRUSION)

Chemical	COMERCIAL/INDUSTRIAL Use Only (ug/L)
Tetrachloroethylene (PCE)	0.603
1,1,1 Trichloroethane (TCA)	2790
Naphthalene	0.106

The screening levels presented above are based on soil gas samples collected at 1.5 meters (approximately 4.5 feet) below a building foundation or the ground surface and are intended to predict vapor intrusion.

However, since the Site development requires installation of a vapor barrier and subterranean venting system the attenuation factor will be 1. Thus, no vapor will seep into the buildings. Furthermore, the subterranean venting system required to be installed below the vapor barrier is designed to prevent vapor accumulation and pressure build-up below the barrier. Therefore, the screening levels presented herein do not apply to the Site specific building requirements.

9.0 FINDINGS AND CONCLUSIONS

- Approximately 3,166 cubic yards of chlorinated hydrocarbon impacted soil was removed, transported and properly disposed of, as part of the 2005 initial soil remedial action contemporaneously with building demolition activities on the Site. The soil was excavated approximately 3 feet below the basement of Buildings 1, 2 and 3, to groundwater. No impacted soil was left in place in the vadose zone above the groundwater table beneath the former Buildings 1, 2 and 3. Notwithstanding the screening and segregation protocols utilized during soil excavation and disposal, residual soil contamination was detected in the excavation backfill during a due diligence assessment in October/November 2005 associated with a proposed real estate transaction.

- The follow up assessment confirmed that residual contamination in the soil was limited to the backfill material in the excavation of Buildings 1, 2, 3 and 11 and a limited surface area adjacent to the Buildings 1, 2 and 3 Areas. The vertical extent of residual contamination in the backfill material was limited by the presence of groundwater at 14 feet bgs.

- Soil remediation was conducted at the Site in the areas of concern defined as the backfill material in the excavation of Buildings 1, 2, 3 and 11 and the adjacent, limited surface area. The soil remediation for the backfill materials consisted of injection and/or mixing and treatment with RegenOx, an oxidation agent supplied by Regenesis, Inc. The backfill material in the excavation of Buildings 1, 2, 3 and 11 was treated in place in a systematic manner using a grid pattern defining individual treatment cells. Upon completion of the treatment, soil verification samples were collected from the treated areas, using a similar soil sampling grid pattern. The verification soil sample confirmed that PCE concentrations in the backfill material were significantly lowered with most PCE concentrations below 5ug/kg.

- The PCE concentrations in the Buildings 1 and 2 Areas were reduced to an average concentration of less than 12ug/kg. The highest PCE concentration in the Building 2 Area was reduced from over 89,000ug/kg to a maximum 100ug/kg. A few recalcitrant cells, located on the east side of the Building 2 Area, required multiple treatments. Residual PCE concentrations that were higher than the soil screening levels calculated based on *CRWQCB Interim Site Assessment and Clean-up Guidebook,* dated May 1996, appear to be present in the backfill material in the same area of elevated soil gas concentrations. This area is located above the high PCE concentrations detected in the soil samples collected below groundwater (890ug/kg) during soil excavation and disposal conducted last year. If left in place, the soil in this area would not further degrade the groundwater quality, due to the presence of elevated PCE concentrations in the groundwater plume in this area. The residual PCE concentrations across the Site are lower than the PRG values promulgated by the EPA.

- The in-situ oxidation with RegenOx has been proven successful in reducing the PCE concentrations in the backfill material in all the building excavations. However, several treatment cells in the Building 2 Area have been retreated as many as six times. This area is located above the groundwater plume and contaminant transport mechanisms, such as soil gas migration and/or groundwater upward movement through capillarity, are suspected to cause the persistence of low PCE residual concentrations in the soil. Again, this area displayed the highest PCE concentrations in soil gas.

- Similarly, the PCE concentrations in the Buildings 3 and 11 Areas were reduced to an average concentration of less than 1ug/kg and 4ug/kg, respectively. The highest PCE concentration in the Building 3 Area was reduced from over 2,500ug/kg to 6.1ug/kg. The maximum residual PCE concentration in the Building 11 Area was 15 ug/kg. The few residual PCE concentrations that were marginally higher than the Soil Screening Level calculated based on *CRWQCB Interim Site Assessment and Clean-up Guidebook,* dated May 1996, appear to be randomly present in the backfill material of these buildings. These residual PCE concentrations, if left in place do note pose a threat to groundwater. The residual PCE concentrations in these Building Areas are also lower than the PRG values, promulgated by the EPA.

- The total HVOC final concentrations are also low in all the Building Areas since few breakdown products were detected in the soil samples.
- Section 91.106.4.1 and Division 71 of Article 1, Chapter IX of the Los Angeles Municipal Code designated the Site in the “methane zone” as defined by the City of Los Angeles Building and Safety Code. The section establishes citywide methane mitigation requirements and includes more current construction standards to control methane intrusion into buildings. The City of Los Angeles has methane mitigation requirements for new building construction in the restricted area such as the “methane zone”. Based on an initial review of the Los Angeles Municipal Code Methane Mitigation Requirements for Sites located in the methane zone, at a minimum, methane mitigation engineered systems consisting of an impermeable membrane, and a sub-slab venting system, will be required to be installed. Depending on the methane concentration and vapor pressure, additional mitigation measures may be required by the City of Los Angeles Building and Safety, in order to obtain a construction permit to develop the Site. Therefore, these engineered methods will mitigate all vapor intrusion issues.

- Soil-gas sampling revealed PCE concentrations that exceeded the State of California Human Health Screening Levels (CHHSLs) for vapor intrusion for commercial/industrial land use in all the Building Areas. Out of 44 soil-gas samples collected 32 exceeded the CHHSLs. The highest PCE soil gas concentration was detected in the Building 2 Area at 10 feet in sample 2C2-SG. This soil gas sample was collected in the same general area as the soil samples that revealed recalcitrant PCE concentrations detected in treatment cells 2E10 and 2E11. Furthermore, the area coincides with one of the “areas of concern” delineated during the previous soil excavation and disposal activities, conducted in 2005. Because the impacted soil in this area was removed to groundwater during the initial soil excavation and disposal, the elevated residual PCE concentrations are most likely present in groundwater. In conclusion, based on the evaluation of the soil gas results and distribution of PCE concentrations in soil gas it appears that the PCE in soil gas originate from the impacted groundwater plume

- The soil gas PCE concentrations detected in the Buildings 11 and 3 Areas are in general lower than in the Buildings 1 and 2 Areas. Half of the soil gas samples collected in the Building 11 Area at depths of 5 and 10 feet bgs and 25 feet from the property line were non-detect. The remaining soil gas samples displayed relatively low PCE concentrations, although higher than the CHHSLs. Since this is an area of backfill with higher permeability and pore space than the surrounding area consisting of tight clayey soil, the off gas from the groundwater plume located beneath the eastern side of the backfill may migrate and accumulate in this space. Furthermore, horizontal migration of the vapors outside of the backfill material, although possible, is most likely minimized by the presence of very tight clayey soils observed beneath the Site.

- The development of the Site requires, at the minimum, a vapor barrier and a subterranean venting system to mitigate the methane intrusion risk. These engineered control system will also mitigate the potential for vapor intrusion and human health risk from exposure through vapor inhalation. Therefore, the potential impact to human health and safety from vapor inhalation originating from residual PCE concentrations in the soil, as wells as vapor migration from the groundwater plume, would be eliminated after the Site development by the installation of engineered methane mitigation structures required by the City of Los Angeles Building and Safety Code.

- Soil contamination with emergent constituents 1,4-Dioxane and 1,2,3-Trichloropropane was not detected in any of the verification samples collected from the backfill material in the excavations of Buildings 1, 2, 3 and 11. Therefore, there is no perceived risk to groundwater, or human health and safety, from these constituents.

- In previous site assessments, soil samples were analyzed for heavy metals, total extractable petroleum hydrocarbons, diesel, and total recoverable petroleum hydrocarbons. Heavy metal concentrations were consistent with background levels and petroleum hydrocarbons were not detected in most of the samples analyzed. The limited amount of impacted soil with petroleum hydrocarbons detected on the north side of the property was excavated, transported and properly disposed of, in accordance with applicable laws and regulations, as part of the initial assessment.

- Naphthalene and Styrene concentrations levels were detected in a significant number of samples. The source of these constituents is unknown; however they may have occurred naturally. The vapor barrier required to be installed will further reduce the potential for vapor exposure and the subterranean venting system will enhance evaporation of these constituents. Due to the physical and chemical characteristics of these constituents, it is expected that Naphthalene and Styrene concentrations in the backfill material will decrease rapidly.

10.0 RECOMMENDATIONS

- Based on the remediation activities and soil verification sampling results “No Further Action” for soil is recommended at the Site.

- The chlorinated hydrocarbon concentrations in the groundwater samples are higher than the CRWQCB guidelines for clean-up levels for the constituents of concern in several monitoring wells and further groundwater monitoring and analysis is recommended.

11.0 REFERENCES

California Regional Water Quality Control Board, Los Angeles and Ventura Counties Region 4, 1996. Interim Site Assessment and Cleanup Guidebook, May 1996.

Professional Service Industries, 2005. Remedial Action Plan (RAP), Consolidated Film Industries, Inc., 959 North Seward Street, Hollywood, California, April 21, 2005.

Professional Service Industries, 2006a. Soil Remediation and Additional Groundwater Assessment Report, Consolidated Film Industries, Inc., 959 North Seward Street, Hollywood, California, January 27, 2006.

Professional Service Industries, 2006b. Groundwater Monitoring Report, Consolidated Film Industries, Inc., 959 North Seward Street, Hollywood, California, January 27, 2006.

Professional Service Industries, 2006c. Remedial Action Work Plan (RAWP), Consolidated Film Industries, Inc., 959 North Seward Street, Hollywood, California, January 27, 2006.

Regenesis 2005, RegenOx™ Design and Application Manual, September 2005.

Regenesis 2006, Regenesis Chemical Oxidation Calculation Spreadsheet.

TABLES

Table 1: Soil Verification Sampling Results for HVOC, Surface Samples
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	1,2,4-Trimethylbenzene (µg/kg)	Naphthalene (µg/kg)	sec-Butylbenzene (µg/kg)	Styrene (µg/kg)	Tetrachloroethene (PCE) (µg/kg)	Total Xylenes (µg/kg)	Toluene (µg/kg)
1A8	6/7/2006	ND	ND	ND	ND	ND	ND	**12**
1A9	6/7/2006	ND	ND	ND	ND	ND	ND	ND
1A10	6/7/2006	ND	ND	ND	ND	ND	ND	**9.5**
1A11	6/7/2006	ND	ND	ND	ND	ND	ND	ND
N1	5/11/2006	ND	**5.5**	ND	ND	ND	ND	ND
A1	5/11/2006	ND	ND	ND	ND	ND	ND	ND
B1	5/11/2006	ND	ND	ND	ND	ND	ND	ND
C1	5/11/2006	ND	ND	ND	ND	ND	ND	ND
D1 (D1a)	3/17/2006	ND	ND	ND	ND	ND	ND	ND
E1 (E1a)	3/17/2006	ND	ND	ND	ND	ND	ND	ND
F1	6/6/2006	ND	ND	ND	ND	ND	ND	ND
G1	6/6/2006	ND	ND	ND	ND	ND	ND	ND
N2	5/11/2006	ND	ND	ND	ND	ND	ND	ND
A2	5/11/2006	ND	ND	ND	ND	ND	ND	ND
B2	5/11/2006	ND	ND	ND	ND	ND	ND	ND
C2	5/11/2006	ND	ND	ND	ND	ND	ND	ND
D2 (D2a)	3/17/2006	ND	ND	ND	ND	ND	ND	ND
E2 (E2a)	3/17/2006	ND	ND	ND	ND	ND	ND	ND
F2	6/6/2006	ND	ND	ND	ND	ND	ND	ND
G2	6/6/2006	ND	ND	ND	ND	ND	ND	ND
N3	5/11/2006	ND	ND	ND	ND	ND	ND	ND
A3	5/11/2006	ND	ND	ND	ND	ND	ND	ND
B3	5/11/2006	ND	ND	ND	ND	ND	ND	ND

Table 1: Soil Verification Sampling Results for HVOC, Surface Samples
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	1,2,4-Trimethylbenzene (µg/kg)	Naphthalene (µg/kg)	sec-Butylbenzene (µg/kg)	Styrene (µg/kg)	Tetrachloroethene (PCE) (µg/kg)	Total Xylenes (µg/kg)	Toluene (µg/kg)
C3	5/11/2006	ND	**24.0**	ND	ND	ND	ND	ND
D3	5/11/2006	ND	ND	ND	ND	ND	ND	ND
E3	5/11/2006	ND	ND	ND	ND	ND	ND	ND
F3	6/7/2006	ND	ND	ND	ND	ND	ND	ND
G3	6/7/2006	ND	ND	ND	ND	ND	ND	ND
N4	4/13/2006	ND	**5.7**	ND	ND	ND	ND	ND
A4	4/13/2006	ND	ND	ND	ND	ND	ND	ND
B4	4/13/2006	ND	ND	ND	ND	ND	ND	ND
C4	4/13/2006	ND	**7.9**	ND	ND	ND	ND	ND
D4	4/13/2006	ND	ND	ND	ND	ND	ND	ND
E4	4/13/2006	ND	ND	ND	ND	ND	ND	ND
F4	6/7/2006	ND	**9.5**	ND	ND	ND	ND	ND
G4	6/7/2006	ND	ND	ND	ND	ND	ND	**9.6**
N5 (03)	3/17/2006	ND	**68.0**	ND	ND	ND	ND	ND
A5 (A3)	3/17/2006	ND	ND	ND	ND	ND	ND	ND
B5 (B3)	3/17/2006	ND	ND	ND	ND	ND	ND	ND
C5 (C3)	3/17/2006	ND	ND	ND	ND	ND	ND	ND
D5 (D3)	3/17/2006	ND	ND	ND	ND	ND	ND	ND
E5 (E3)	3/17/2006	ND	ND	ND	ND	ND	ND	ND
F5	6/7/2006	ND	ND	ND	ND	ND	ND	**17**
G5	6/7/2006	ND	ND	ND	ND	ND	ND	ND
N6 (04)	3/9/2006	ND	ND	ND	ND	ND	ND	ND
A6 (A4)	3/9/2006	ND	ND	ND	ND	ND	ND	ND

Table 1: Soil Verification Sampling Results for HVOC, Surface Samples
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	1,2,4-Trimethylbenzene (µg/kg)	Naphthalene (µg/kg)	sec-Butylbenzene (µg/kg)	Styrene (µg/kg)	Tetrachloroethene (PCE) (µg/kg)	Total Xylenes (µg/kg)	Toluene (µg/kg)
B6 (B4)	3/9/2006	ND	ND	ND	ND	ND	ND	ND
C6 (C4)	3/9/2006	ND	ND	ND	ND	ND	ND	ND
D6 (D4)	3/9/2006	ND	ND	ND	ND	**4.9**	ND	ND
E6 (E4)	3/17/2006	ND	ND	ND	ND	ND	ND	ND
F6	6/7/2006	ND	ND	ND	ND	ND	ND	ND
G6	6/7/2006	ND	ND	ND	ND	ND	ND	ND
N7 (05)	3/9/2006	ND	ND	ND	ND	ND	ND	ND
A7 (A5)	3/9/2006	ND	ND	ND	ND	ND	ND	ND
B7 (B5)	3/9/2006	ND	ND	ND	ND	ND	ND	ND
C7 (C5)	3/9/2006	ND	ND	ND	ND	ND	ND	ND
D7 (D5)	3/9/2006	ND	ND	ND	ND	ND	ND	ND
E7 (E5)	3/17/2006	ND	ND	ND	ND	ND	ND	ND
N8	6/6/2006	ND	ND	ND	ND	ND	ND	ND
N9	6/6/2006	ND	ND	ND	ND	ND	ND	ND
N10	6/6/2006	ND	ND	ND	ND	ND	ND	ND
N11	6/6/2006	ND	ND	ND	ND	ND	ND	ND
H8	6/15/2006	ND	ND	ND	ND	ND	ND	ND
H9	6/16/2006	ND	ND	ND	ND	ND	ND	ND
H10	6/15/2006	ND	**12.0**	ND	ND	ND	ND	ND
I8	6/15/2006	ND	**6.4**	ND	ND	ND	ND	ND
I9	6/15/2006	ND	**2.3**	ND	ND	ND	ND	ND
I10	6/15/2006	ND	**2.5**	ND	ND	ND	ND	ND
J8	6/15/2006	ND	ND	ND	ND	ND	ND	ND

Table 1: Soil Verification Sampling Results for HVOC, Surface Samples
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	1,2,4-Trimethylbenzene (µg/kg)	Naphthalene (µg/kg)	sec-Butylbenzene (µg/kg)	Styrene (µg/kg)	Tetrachloroethene (PCE) (µg/kg)	Total Xylenes (µg/kg)	Toluene (µg/kg)
J9	6/15/2006	ND	**6.5**	ND	ND	ND	ND	ND
J10	6/15/2006	ND	**2.4**	ND	**4.2**	ND	ND	ND

(E2) = Sample id as it appears in the laboratory analytical report

Table 2: Soil Verification Sampling Results for HVOC, Stockpile Samples
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	1,2,4-Trimethylbenzene (μg/kg)	Naphthalene (μg/kg)	sec-Butylbenzene (μg/kg)	Styrene (μg/kg)	Tetrachloroethene (PCE) (μg/kg)	Total Xylenes (μg/kg)
ES1	4/13/2006	ND	ND	ND	ND	ND	ND
ES2	4/13/2006	ND	ND	ND	ND	ND	ND
ES3	4/13/2006	ND	ND	ND	ND	ND	ND
ES4	4/13/2006	ND	**7.7**	ND	ND	ND	ND
ES5	4/13/2006	ND	**6.3**	ND	ND	ND	ND
ES6	4/13/2006	ND	**7.0**	ND	ND	ND	ND
ES7	3/22/2006	ND	ND	ND	ND	ND	ND
ES8	3/22/2006	ND	ND	ND	ND	ND	ND
ES9	3/22/2006	ND	ND	ND	ND	ND	ND
ES10	3/22/2006	ND	ND	ND	ND	ND	ND
ES11	3/22/2006	ND	ND	ND	ND	ND	ND
ES12	3/22/2006	ND	ND	ND	ND	ND	ND
ES13	3/22/2006	ND	ND	ND	ND	ND	ND
ES14	3/22/2006	ND	ND	ND	ND	ND	ND
ES15	3/22/2006	ND	ND	ND	ND	ND	ND
ES16	3/22/2006	ND	ND	ND	ND	ND	ND
ES17	3/22/2006	ND	ND	ND	ND	ND	ND
ES18	3/22/2006	ND	ND	ND	ND	ND	ND
ES19	3/22/2006	ND	ND	ND	ND	ND	ND
ES20	3/22/2006	ND	ND	ND	ND	ND	ND
ES21	3/22/2006	ND	ND	ND	ND	ND	ND
ES22	3/22/2006	ND	ND	ND	ND	ND	ND
ES23	3/22/2006	ND	ND	ND	ND	ND	ND

Table 2: Soil Verification Sampling Results for HVOC, Stockpile Samples
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	1,2,4-Trimethylbenzene (μg/kg)	Naphthalene (μg/kg)	sec-Butylbenzene (μg/kg)	Styrene (μg/kg)	Tetrachloroethene (PCE) (μg/kg)	Total Xylenes (μg/kg)
CS1	6/20/2006	ND	ND	ND	ND	ND	ND
CS2	6/20/2006	ND	ND	ND	ND	ND	ND
CS3	6/20/2006	ND	ND	ND	ND	ND	ND
CS4	6/20/2006	ND	ND	ND	ND	ND	ND
CS5	6/20/2006	ND	ND	ND	ND	ND	ND
CS6	6/20/2006	ND	ND	ND	ND	ND	ND
CS7	6/20/2006	ND	ND	ND	ND	ND	ND
CS8	6/20/2006	ND	ND	ND	ND	ND	ND
CS9	6/20/2006	ND	ND	ND	ND	ND	ND
CS10	6/20/2006	ND	ND	ND	ND	ND	ND
CS11	6/20/2006	ND	ND	ND	ND	ND	ND
CS12	6/20/2006	ND	ND	ND	ND	ND	ND

Table 3: Soil Verification Sampling for HVOC Building 1
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	HVOC (µg/kg)	1,2,4-Trimethylbenzene (µg/kg)	1,1,1 Trichloroethane (µg/kg)	Naphthalene (µg/kg)	sec-Butylbenzene (µg/kg)	Styrene (µg/kg)	Tetrachloroethene (PCE) (µg/kg)	Total Xylenes (µg/kg)
1B8-3	5/24/2006	0.0	ND	ND	**47.0**	ND	ND	ND	ND
1B8-6	5/24/2006	0.0	ND	ND	ND	ND	ND	ND	ND
1B8-9	5/24/2006	**11.0**	ND	ND	**52.0**	ND	ND	**11.0**	ND
1B9-3	5/24/2006	**4.9**	ND	ND	**5.8**	ND	ND	**4.9**	ND
1B9-6	5/24/2006	**3.9**	ND	ND	**14.0**	ND	ND	**3.9**	ND
1B9-9	5/24/2006	**3.5**	ND	ND	**4.3**	ND	ND	**3.5**	ND
1B9*	4/11/2006	0.0	ND	ND	ND	ND	ND	ND	ND
1B10-3	6/2/2006	**5.6**	ND	ND	**6.4**	ND	ND	**5.6**	ND
1B10-6	6/2/2006	0.0	ND	ND	ND	ND	ND	ND	ND
1B10-9	6/2/2006	0.0	ND	ND	**13.0**	ND	ND	ND	ND
1B11-3	5/24/2006	0.0	ND	ND	ND	ND	ND	ND	ND
1B11-6	5/24/2006	**19.5**	ND	ND	ND	ND	ND	ND	ND
1B11-9	5/24/2006	**3.2**	ND	ND	ND	ND	ND	**3.2**	ND

* Sample collected prior to treatment

Table 4: Soil Verification Sampling for HVOC Building 2
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	HVOC (µg/kg)	1,2,4-Trimethylbenzene (µg/kg)	1,1,1 Trichloroethane (µg/kg)	Naphthalene (µg/kg)	sec-Butylbenzene (µg/kg)	Styrene (µg/kg)	Tetrachloroethene (PCE) (µg/kg)	Total Xylenes (µg/kg)
2C8-3	5/24/2006	**4.3**	ND	ND	**4.7**	ND	ND	**4.3**	ND
2C8-6	5/24/2006	0.0	ND	ND	ND	ND	ND	ND	ND
2C8-9	5/24/2006	0.0	ND	ND	ND	ND	ND	ND	ND
2C9-3	6/12/2006	0.0	ND	ND	**3.6**	ND	ND	ND	ND
2C9-6	6/12/2006	0.0	ND	ND	**7.4**	ND	ND	ND	ND
2C9-9	6/6/2006	**26.0**	ND	ND	**80.0**	ND	**28.0**	**26.0**	ND
2C10-3	5/10/2006	**11.0**	ND	ND	**52.0**	ND	**3.2**	**11.0**	ND
2C10-6	5/10/2006	**12.0**	ND	ND	**58.0**	ND	**3.2**	**12.0**	ND
2C10-9	5/10/2006	**13.0**	ND	ND	**33.0**	ND	**4.1**	**13.0**	ND
2C11-3	5/10/2006	**13.0**	ND	ND	**17.0**	ND	**5.1**	**13.0**	ND
2C11-6	5/10/2006	**5.5**	ND	ND	**15.0**	ND	ND	**5.5**	ND
2C11-9	5/10/2006	**6.2**	ND	ND	**110.0**	ND	**8.8**	**6.2**	ND
2D8-3	5/22/2006	0.0	ND	ND	ND	ND	ND	ND	ND
2D8-6	5/24/2006	0.0	ND	ND	ND	ND	ND	ND	ND
2D8-9	5/24/2006	**4.0**	ND	ND	ND	ND	ND	**4.0**	ND
2D9-3	6/6/2006	0.0	ND	ND	**4.5**	ND	ND	ND	ND
2D9-6	6/6/2006	**4.8**	ND	ND	ND	ND	ND	**4.8**	ND
2D9-9	6/6/2006	0.0	ND	ND	**8.5**	ND	ND	ND	ND
2D10-3	6/5/2006	**3.2**	ND	ND	**4.4**	ND	ND	**3.2**	ND
2D10-6	6/5/2006	0.0	ND	ND	**4.5**	ND	ND	ND	ND
2D10-9	6/5/2006	0.0	ND	ND	ND	ND	ND	ND	ND
2D11-3	6/5/2006	**4.3**	ND	ND	**7.7**	ND	ND	**4.3**	ND
2D11-6	6/5/2006	**3.8**	ND	ND	**8.7**	ND	ND	**3.8**	ND

Table 4: Soil Verification Sampling for HVOC Building 2
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	HVOC (µg/kg)	1,2,4-Trimethylbenzene (µg/kg)	1,1,1 Trichloroethane (µg/kg)	Naphthalene (µg/kg)	sec-Butylbenzene (µg/kg)	Styrene (µg/kg)	Tetrachloroethene (PCE) (µg/kg)	Total Xylenes (µg/kg)
2D11-9	6/5/2006	**12.0**	ND	ND	**36.0**	ND	**7.7**	**12.0**	ND
2E8-3	5/24/2006	0.0	ND	ND	ND	ND	ND	ND	ND
2E8-6	5/24/2006	0.0	ND	ND	ND	ND	ND	ND	ND
2E8-9	5/24/2006	0.0	ND	ND	ND	ND	ND	ND	ND
2E9-3	6/12/2006	**32.0**	ND	ND	**5.3**	ND	ND	**32.0**	ND
2E9-6	6/12/2006	**20.0**	ND	ND	ND	ND	ND	**20.0**	ND
2E9-9	6/5/2006	**28.0**	ND	ND	**61.0**	ND	**8.2**	**12.0**	ND
2E10-3	6/9/2006	**47.0**	ND	ND	**4.2**	ND	ND	**47.0**	ND
2E10-6	6/9/2006	**46.0**	ND	ND	**4.3**	ND	ND	**46.0**	ND
2E10-9	6/9/2006	**100.0**	ND	ND	**8.2**	ND	ND	**100.0**	ND
2E11-3	6/9/2006	**34.0**	ND	ND	**5.1**	ND	ND	**34.0**	ND
2E11-6	6/9/2006	**42.0**	ND	ND	**5.9**	ND	ND	**42.0**	ND
2E11-9	6/9/2006	**59.0**	ND	ND	**6.3**	ND	ND	**59.0**	ND
2F8-3	5/22/2006	**9.6**	ND	ND	ND	ND	ND	**9.6**	ND
2F8-6	5/22/2006	**4.3**	ND	ND	ND	ND	ND	**4.3**	ND
2F8-9	5/22/2006	0.0	ND	ND	ND	ND	ND	ND	ND
2F9-3	5/4/2006	**8.5**	ND	ND	**7.8**	ND	ND	**8.5**	ND
2F9-6	5/4/2006	**12.0**	ND	ND	**9.8**	ND	ND	**12.0**	ND
2F9-9	5/4/2006	0.0	ND	ND	**69.0**	ND	**12.0**	ND	**15.0**
2F10-3	6/9/2006	**24.0**	ND	ND	**6.4**	ND	ND	**24.0**	ND
2F10-6	6/9/2006	**56.0**	ND	ND	**7.7**	ND	ND	**56.0**	ND
2F10-9	6/2/2006	**5.4**	ND	ND	**130.0**	ND	**25.0**	**5.4**	ND
2F11-3	6/12/2006	**29.0**	ND	ND	**8.8**	ND	ND	**29.0**	ND

Table 4: Soil Verification Sampling for HVOC Building 2
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	HVOC (µg/kg)	1,2,4-Trimethylbenzene (µg/kg)	1,1,1 Trichloroethane (µg/kg)	Naphthalene (µg/kg)	sec-Butylbenzene (µg/kg)	Styrene (µg/kg)	Tetrachloroethene (PCE) (µg/kg)	Total Xylenes (µg/kg)
2F11-6	6/12/2006	**58.0**	ND	ND	**8.7**	ND	ND	**58.0**	ND
2F11-9	6/12/2006	**82.0**	ND	ND	**8.0**	ND	ND	**82.0**	ND
2G8-3	5/24/2006	**3.9**	ND	ND	ND	ND	ND	**3.9**	ND
2G8-6	5/24/2006	**13.0**	ND	ND	ND	ND	ND	**13.0**	ND
2G8-9	5/24/2006	0.0	ND	ND	ND	ND	ND	ND	ND
2G9-3	5/30/2006	**5.5**	ND	ND	**14.0**	ND	ND	**5.5**	ND
2G9-6	5/30/2006	**7.9**	ND	ND	**5.4**	ND	ND	**7.9**	ND
2G9-9	5/10/2006	0.0	ND	ND	**11.0**	ND	**6.0**	ND	ND
2G10-3	6/12/2006	**4.6**	ND	ND	ND	ND	ND	**4.6**	ND
2G10-6	5/30/2006	**11.0**	ND	ND	**20.0**	ND	ND	**11.0**	ND
2G10-9	5/4/2006	0.0	ND	ND	ND	ND	ND	ND	ND
2G10*	4/11/2006	0.0	ND	ND	**4.2**	ND	ND	ND	ND
2G11-3	5/4/2006	0.0	ND	ND	ND	ND	ND	ND	ND
2G11-6	5/4/2006	**8.6**	ND	ND	ND	ND	ND	**8.6**	ND
2G11-9	5/4/2006	0.0	ND	ND	**63.0**	ND	ND	ND	ND

* Sample collected prior to treatment

Table 5: Soil Verification Sampling for HVOC Building 3
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	HVOC (µg/kg)	1,2,4-Trimethylbenzene (µg/kg)	1,1,1 Trichloroethane (µg/kg)	Naphthalene (µg/kg)	sec-Butylbenzene (µg/kg)	Styrene (µg/kg)	Tetrachloroethene (PCE) (µg/kg)	Total Xylenes (µg/kg)
3H7-3	4/27/2006	0.0	ND	ND	**6.9**	ND	ND	ND	ND
3H7-6	4/27/2006	0.0	ND	ND	ND	ND	ND	ND	ND
3H7-9	4/27/2006	0.0	ND	ND	ND	ND	ND	ND	ND
3H8-3	6/9/2006	**6.1**	ND	ND	ND	ND	ND	**6.1**	ND
3H8-6	6/9/2006	**5.9**	ND	ND	**5.8**	ND	ND	**5.9**	ND
3H8-9	5/30/2006	**4.8**	ND	ND	ND	ND	ND	**4.8**	ND
3H9-2	4/28/2006	0.0	ND	ND	**22.0**	ND	ND	ND	ND
3H9-5	4/28/2006	0.0	ND	ND	ND	ND	ND	ND	ND
3H10-2	4/28/2006	0.0	ND	ND	ND	ND	ND	ND	ND
3H10-5	4/28/2006	0.0	ND	ND	**8.5**	ND	ND	ND	ND
3H11-2	4/28/2006	0.0	ND	ND	ND	ND	ND	ND	ND
3H11-5	4/28/2006	**5.0**	ND	ND	**29.0**	ND	ND	**5.0**	ND
3I7*	4/11/2006	0.0	ND	ND	ND	ND	ND	ND	ND
3I7-3	4/27/2006	0.0	ND	ND	**11.0**	ND	ND	ND	ND
3I7-6	4/27/2006	**5.5**	ND	ND	ND	ND	ND	**5.5**	ND
3I7-9	4/27/2006	0.0	ND	ND	ND	ND	ND	ND	ND
3I8-3	4/27/2006	0.0	ND	ND	ND	ND	ND	ND	ND
3I8-6	4/27/2006	0.0	ND	ND	ND	ND	ND	ND	ND
3I8-9	4/27/2006	0.0	ND	ND	ND	ND	ND	ND	ND
3I9-2	4/26/2006	0.0	ND	ND	ND	ND	ND	ND	ND
3I9-5	4/26/2006	0.0	ND	ND	**51.0**	ND	ND	ND	ND
3I10*	4/11/2006	0.0	ND	ND	ND	ND	ND	ND	ND
3I10-2	4/26/2006	0.0	ND	ND	**11.0**	ND	ND	ND	ND

Table 5: Soil Verification Sampling for HVOC Building 3
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	HVOC (μg/kg)	1,2,4-Trimethylbenzene (μg/kg)	1,1,1 Trichloroethane (μg/kg)	Naphthalene (μg/kg)	sec-Butylbenzene (μg/kg)	Styrene (μg/kg)	Tetrachloroethene (PCE) (μg/kg)	Total Xylenes (μg/kg)
3I10-5	4/26/2006	0.0	ND	ND	ND	ND	ND	ND	ND
3I11-2	4/26/2006	0.0	ND	ND	ND	ND	ND	ND	ND
3I11-5	4/26/2006	0.0	ND	ND	**94.0**	ND	ND	ND	ND

*Sample collected prior to treatment

Table 6: Soil Verification Sampling for HVOC Building 11
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	HVOC (µg/kg)	1,2,4-Trimethylbenzene (µg/kg)	1,1,1 Trichloroethane (µg/kg)	Naphthalene (µg/kg)	sec-Butylbenzene (µg/kg)	Styrene (µg/kg)	Tetrachloroethene (PCE) (µg/kg)	Total Xylenes (µg/kg)
11A1-3	5/22/2006	0.0	ND	ND	**9.6**	ND	ND	ND	ND
11A1-6	4/11/2006	0.0	ND	ND	**85.0**	ND	**19.0**	ND	ND
11A1-9	4/11/2006	**5.0**	ND	ND	**130.0**	ND	**33.0**	**5.0**	ND
11B1-3	4/11/2006	**6.3**	ND	ND	**6.1**	ND	ND	**6.3**	ND
11B1-6	4/11/2006	0.0	ND	ND	**110.0**	ND	**13.0**	ND	ND
11B1-9	4/11/2006	0.0	ND	ND	**78.0**	ND	**7.7**	ND	ND
11C1-3	4/11/2006	0.0	ND	ND	**120.0**	ND	**14.0**	ND	ND
11C1-6	4/11/2006	**15.0**	ND	ND	**130.0**	ND	**15.0**	**15.0**	ND
11C1-9	4/11/2006	**4.8**	ND	ND	**140.0**	ND	**38.0**	**4.8**	ND
11A2-3	4/10/2006	**8.9**	ND	ND	**77.0**	ND	**24.0**	**8.9**	ND
11A2-6	4/10/2006	**6.4**	**4.2**	ND	**150.0**	ND	**38.0**	**6.4**	ND
11A2-9	4/10/2006	0.0	ND	ND	**36.0**	ND	**30.0**	ND	ND
11B2-3	4/10/2006	**8.0**	ND	ND	**41.0**	ND	**23.0**	**8.0**	ND
11B2-6	4/10/2006	**14.0**	**5.1**	ND	**240.0**	ND	**53.0**	**14.0**	ND
11B2-9	4/10/2006	**5.4**	**3.8**	ND	**200.0**	ND	**35.0**	**5.4**	ND
11C2-3	5/30/2006	0.0	ND	ND	**15.0**	ND	ND	ND	ND
11C2-6	5/30/2006	0.0	ND	ND	**53.0**	ND	**7.0**	ND	ND
11C2-9	4/10/2006	0.0	ND	ND	**7.1**	ND	ND	ND	ND
11A3-3	5/22/2006	**6.6**	ND	ND	**8.5**	ND	ND	**6.6**	ND
11A3-6	4/11/2006	**5.9**	ND	ND	**220.0**	ND	**36.0**	**5.9**	**19.0**
11A3-9	4/11/2006	0.0	ND	ND	**83.0**	ND	**14.0**	ND	ND
11B3-3	4/26/2006	**7.2**	ND	ND	ND	ND	ND	**7.2**	ND
11B3-6	4/26/2006	0.0	ND	ND	ND	ND	ND	ND	ND

Table 6: Soil Verification Sampling for HVOC Building 11
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	HVOC (µg/kg)	1,2,4-Trimethylbenzene (µg/kg)	1,1,1 Trichloroethane (µg/kg)	Naphthalene (µg/kg)	sec-Butylbenzene (µg/kg)	Styrene (µg/kg)	Tetrachloroethene (PCE) (µg/kg)	Total Xylenes (µg/kg)
11B3-9	4/26/2006	0.0	ND	ND	**29.0**	ND	**10.0**	ND	ND
11C3-3	4/28/2006	**14.0**	ND	ND	**190.0**	ND	ND	**14.0**	ND
11C3-6	4/28/2006	**5.4**	ND	ND	**170.0**	ND	**41.0**	**5.4**	ND
11C3-9	4/28/2006	0.0	ND	ND	**33.0**	ND	**20.0**	ND	ND
11A4-3	4/10/2006	**11.0**	ND	ND	**120.0**	ND	**20.0**	**11.0**	ND
11A4-6	4/10/2006	0.0	ND	ND	**74.0**	ND	**13.0**	ND	ND
11A4-9	4/10/2006	0.0	ND	ND	**89.0**	ND	**16.0**	ND	ND
11B4-3	4/26/2006	0.0	ND	ND	**26.0**	ND	**51.0**	ND	ND
11B4-6	4/26/2006	0.0	ND	ND	**42.0**	ND	ND	ND	ND
11B4-9	4/26/2006	0.0	ND	ND	ND	ND	ND	ND	ND
11C4-3	4/28/2006	**6.5**	ND	ND	**66.0**	ND	**8.0**	**6.5**	ND
11C4-6	4/28/2006	**12.0**	**5.7**	ND	**140.0**	ND	**42.0**	**12.0**	ND
11C4-9	4/28/2006	0.0	ND	ND	**100.0**	ND	**34.0**	ND	ND
11A5-3	4/11/2006	0.0	ND	ND	**26.0**	ND	ND	ND	ND
11A5-6	4/11/2006	**14.0**	ND	ND	**250.0**	ND	**12.0**	**14.0**	ND
11A5-9	4/11/2006	0.0	ND	ND	ND	ND	ND	ND	ND
11B5-3	4/26/2006	**9.9**	ND	ND	**71.0**	ND	**13.0**	**9.9**	ND
11B5-6	4/26/2006	0.0	ND	ND	**63.0**	ND	**13.0**	ND	**6.2**
11B5-9	4/26/2006	**5.1**	ND	ND	**63.0**	ND	**29.0**	**5.1**	**13.6**
11C5-3	4/26/2006	**12.0**	ND	ND	**47.0**	ND	ND	**12.0**	ND
11C5-6	4/26/2006	0.0	ND	ND	**74.0**	ND	**17.0**	ND	ND
11C5-9	4/26/2006	**6.7**	ND	ND	**56.0**	ND	ND	**6.7**	ND
11A6-3	5/30/2006	0.0	ND	ND	**28.0**	ND	ND	ND	ND

Table 6: Soil Verification Sampling for HVOC Building 11
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	HVOC (µg/kg)	1,2,4-Trimethylbenzene (µg/kg)	1,1,1 Trichloroethane (µg/kg)	Naphthalene (µg/kg)	sec-Butylbenzene (µg/kg)	Styrene (µg/kg)	Tetrachloroethene (PCE) (µg/kg)	Total Xylenes (µg/kg)
11A6-6	5/30/2006	0.0	ND	ND	**17.0**	ND	ND	ND	ND
11A6-9	4/11/2006	0.0	ND	ND	ND	ND	ND	ND	ND
11B6-3	5/30/2006	0.0	ND	ND	**34.0**	ND	ND	ND	ND
11B6-6	4/26/2006	**5.5**	ND	ND	**87.0**	ND	**13.0**	**5.5**	ND
11B6-9	4/26/2006	**5.3**	ND	ND	**91.0**	ND	**12.0**	**5.3**	**6.6**
11C6-3	4/26/2006	**10.0**	ND	ND	**49.0**	ND	ND	**10.0**	ND
11C6-6	4/26/2006	0.0	ND	ND	**20.0**	ND	ND	ND	ND
11C6-9	4/26/2006	**5.9**	ND	ND	**130.0**	ND	**31.0**	**5.9**	**9.0**
11A7-3	4/11/2006	**8.0**	ND	ND	**160.0**	ND	**22.0**	**8.0**	ND
11A7-6	4/11/2006	**14.0**	ND	ND	**4.5**	ND	ND	**14.0**	ND
11A7-9	4/11/2006	0.0	ND	ND	ND	ND	ND	ND	ND
11B7-3	4/26/2006	**5.8**	ND	ND	**70.0**	ND	ND	**5.8**	ND
11B7-6	4/26/2006	0.0	ND	ND	**190.0**	ND	**22.0**	ND	ND
11B7-9	4/26/2006	0.0	ND	ND	**12.0**	ND	ND	ND	ND
11C7-3	4/26/2006	0.0	ND	ND	**17.0**	ND	ND	ND	ND
11C7-6	4/26/2006	**7.1**	ND	ND	**16.0**	ND	ND	**7.1**	ND
11C7-9	4/26/2006	0.0	ND	ND	**110.0**	ND	ND	ND	ND

Table 7: Post-Remediation Intermediate Results
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	HVOC (μg/kg)	1,2,4-Trimethylbenzene (μg/kg)	1,1,1 Trichloroethane (μg/kg)	Naphthalene (μg/kg)	sec-Butylbenzene (μg/kg)	Styrene (μg/kg)	Tetrachloroethene (PCE) (μg/kg)	Total Xylenes (μg/kg)
1B8-3	5/24/2006	0.0	ND	ND	**47.0**	ND	ND	ND	ND
1B8-6	5/24/2006	0.0	ND	ND	ND	ND	ND	ND	ND
1B8-9	5/24/2006	**11.0**	ND	ND	**52.0**	ND	ND	**11.0**	ND
1B9-3	5/24/2006	**4.9**	ND	ND	**5.8**	ND	ND	**4.9**	ND
1B9-6	5/24/2006	**3.9**	ND	ND	**14.0**	ND	ND	**3.9**	ND
1B9-9	5/24/2006	**3.5**	ND	ND	**4.3**	ND	ND	**3.5**	ND
1B9*	4/11/2006	0.0	ND	ND	ND	ND	ND	ND	ND
1B10-3	5/24/2006	**13.0**	ND	ND	ND	ND	ND	**13.0**	ND
1B10-3	6/2/2006	**5.6**	ND	ND	**6.4**	ND	ND	**5.6**	ND
1B10-6	5/24/2006	**76.0**	ND	ND	ND	ND	ND	**76.0**	ND
1B10-6	6/2/2006	0.0	ND	ND	ND	ND	ND	ND	ND
1B10-9	5/24/2006	**22.0**	ND	ND	ND	ND	ND	**22.0**	ND
1B10-9	6/2/2006	0.0	ND	ND	**13.0**	ND	ND	ND	ND
1B11-3	5/24/2006	0.0	ND	ND	ND	ND	ND	ND	ND
1B11-6	5/24/2006	**19.5**	ND	ND	ND	ND	ND	ND	ND
1B11-9	5/24/2006	**3.2**	ND	ND	ND	ND	ND	**3.2**	ND
2C8-3	5/24/2006	**4.3**	ND	ND	**4.7**	ND	ND	**4.3**	ND
2C8-6	5/24/2006	0.0	ND	ND	ND	ND	ND	ND	ND
2C8-9	5/24/2006	0.0	ND	ND	ND	ND	ND	ND	ND
2C9-3	6/6/2006	**4.9**	ND	ND	ND	ND	ND	**4.9**	ND
2C9-3	6/12/2006	0.0	ND	ND	**3.6**	ND	ND	ND	ND
2C9-6	6/6/2006	**300.0**	ND	ND	**14.0**	ND	ND	**300.0**	ND
2C9-6	6/12/2006	0.0	ND	ND	**7.4**	ND	ND	ND	ND

Table 7: Post-Remediation Intermediate Results
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	HVOC (μg/kg)	1,2,4-Trimethylbenzene (μg/kg)	1,1,1 Trichloroethane (μg/kg)	Naphthalene (μg/kg)	sec-Butylbenzene (μg/kg)	Styrene (μg/kg)	Tetrachloroethene (PCE) (μg/kg)	Total Xylenes (μg/kg)
2C9-9	6/6/2006	**26.0**	ND	ND	**80.0**	ND	**28.0**	**26.0**	ND
2C10-3	5/10/2006	**11.0**	ND	ND	**52.0**	ND	**3.2**	**11.0**	ND
2C10-6	5/10/2006	**12.0**	ND	ND	**58.0**	ND	**3.2**	**12.0**	ND
2C10-9	5/10/2006	**13.0**	ND	ND	**33.0**	ND	**4.1**	**13.0**	ND
2C11-3	5/10/2006	**13.0**	ND	ND	**17.0**	ND	**5.1**	**13.0**	ND
2C11-6	5/10/2006	**5.5**	ND	ND	**15.0**	ND	ND	**5.5**	ND
2C11-9	5/10/2006	**6.2**	ND	ND	**110.0**	ND	**8.8**	**6.2**	ND
2D8-3	5/22/2006	0.0	ND	ND	ND	ND	ND	ND	ND
2D8-6	5/24/2006	0.0	ND	ND	ND	ND	ND	ND	ND
2D8-9	5/24/2006	**4.0**	ND	ND	ND	ND	ND	**4.0**	ND
2D9-3	6/6/2006	0.0	ND	ND	**4.5**	ND	ND	ND	ND
2D9-6	6/6/2006	**4.8**	ND	ND	ND	ND	ND	**4.8**	ND
2D9-9	6/6/2006	0.0	ND	ND	**8.5**	ND	ND	ND	ND
2D10-3	6/5/2006	**3.2**	ND	ND	**4.4**	ND	ND	**3.2**	ND
2D10-6	6/5/2006	0.0	ND	ND	**4.5**	ND	ND	ND	ND
2D10-9	6/5/2006	0.0	ND	ND	ND	ND	ND	ND	ND
2D11-3	6/5/2006	**4.3**	ND	ND	**7.7**	ND	ND	**4.3**	ND
2D11-6	6/5/2006	**3.8**	ND	ND	**8.7**	ND	ND	**3.8**	ND
2D11-9	6/5/2006	**12.0**	ND	ND	**36.0**	ND	**7.7**	**12.0**	ND
2E8-3	5/24/2006	0.0	ND	ND	ND	ND	ND	ND	ND
2E8-6	5/24/2006	0.0	ND	ND	ND	ND	ND	ND	ND
2E8-9	5/24/2006	0.0	ND	ND	ND	ND	ND	ND	ND
2E9-3	6/5/2006	**150.0**	ND	**9.7**	ND	ND	ND	**150.0**	ND
2E9-3	6/12/2006	**32.0**	ND	ND	**5.3**	ND	ND	**32.0**	ND

Table 7: Post-Remediation Intermediate Results
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	HVOC (µg/kg)	1,2,4-Trimethylbenzene (µg/kg)	1,1,1 Trichloroethane (µg/kg)	Naphthalene (µg/kg)	sec-Butylbenzene (µg/kg)	Styrene (µg/kg)	Tetrachloroethene (PCE) (µg/kg)	Total Xylenes (µg/kg)
2E9-3	6/16/2006	**41.0**	ND	ND	**11.0**	ND	**4.0**	**41.0**	ND
2E9-3	6/19/2006	**40.0**	ND	ND	**10.0**	ND	ND	**40.0**	ND
2E9-6	6/5/2006	**20.0**	ND	ND	**18.0**	ND	ND	**20.0**	ND
2E9-6	6/12/2006	**20.0**	ND	ND	ND	ND	ND	**20.0**	ND
2E9-6	6/16/2006	**32.0**	ND	ND	**7.4**	ND	ND	**32.0**	ND
2E9-6	6/19/2006	**63.0**	ND	ND	**12.0**	ND	ND	**63.0**	ND
2E9-9	6/5/2006	**28.0**	ND	ND	**61.0**	ND	**8.2**	**12.0**	ND
2E10-3	6/5/2006	**23.0**	ND	ND	ND	ND	ND	**23.0**	ND
2E10-3	6/9/2006	**47.0**	ND	ND	**4.2**	ND	ND	**47.0**	ND
2E10-3	6/16/2006	**46.0**	ND	ND	**4.6**	ND	ND	**46.0**	ND
2E10-3	6/19/2006	**67.0**	ND	ND	**7.9**	ND	ND	**67.0**	ND
2E10-6	6/5/2006	**120.0**	ND	ND	**6.1**	ND	ND	**120.0**	ND
2E10-6	6/9/2006	**46.0**	ND	ND	**4.3**	ND	ND	**46.0**	ND
2E10-6	6/19/2006	**67.0**	ND	ND	**7.3**	ND	ND	**67.0**	ND
2E10-9	6/5/2006	**250.0**	ND	8.5	**14.0**	ND	ND	**250.0**	ND
2E10-9	6/9/2006	**100.0**	ND	ND	**8.2**	ND	ND	**100.0**	ND
2E10-9	6/19/2006	**56.0**	ND	ND	**6.6**	ND	ND	**56.0**	ND
2E11-3	6/2/2006	**82.0**	ND	ND	**20.0**	ND	**6.6**	**82.0**	ND
2E11-3	6/9/2006	**34.0**	ND	ND	**5.1**	ND	ND	**34.0**	ND
2E11-3	6/16/2006	**53.0**	ND	ND	**8.9**	ND	ND	**53.0**	ND
2E11-3	6/19/2006	**99.0**	ND	ND	**14.0**	ND	ND	**99.0**	ND
2E11-6	6/2/2006	**200.0**	ND	ND	**65.0**	ND	**39.0**	**200.0**	ND
2E11-6	6/9/2006	**42.0**	ND	ND	**5.9**	ND	ND	**42.0**	ND

Table 7: Post-Remediation Intermediate Results
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	HVOC (µg/kg)	1,2,4-Trimethylbenzene (µg/kg)	1,1,1 Trichloroethane (µg/kg)	Naphthalene (µg/kg)	sec-Butylbenzene (µg/kg)	Styrene (µg/kg)	Tetrachloroethene (PCE) (µg/kg)	Total Xylenes (µg/kg)
2E11-6	6/19/2006	**68.0**	ND	ND	**6.6**	ND	**4.0**	**68.0**	ND
2E11-9	6/2/2006	**340.0**	ND	**9.4**	**68.0**	ND	**10.0**	**340.0**	ND
2E11-9	6/9/2006	**59.0**	ND	ND	**6.3**	ND	ND	**59.0**	ND
2E11-9	6/19/2006	**220.0**	ND	ND	**20.0**	ND	**5.7**	**220.0**	ND
2F8-3	5/22/2006	**9.6**	ND	ND	ND	ND	ND	**9.6**	ND
2F8-6	5/22/2006	**4.3**	ND	ND	ND	ND	ND	**4.3**	ND
2F8-9	5/22/2006	0.0	ND	ND	ND	ND	ND	ND	ND
2F9-3	5/4/2006	**8.5**	ND	ND	**7.8**	ND	ND	**8.5**	ND
2F9-6	5/4/2006	**12.0**	ND	ND	**9.8**	ND	ND	**12.0**	ND
2F9-9	5/4/2006	0.0	ND	ND	**69.0**	ND	**12.0**	ND	**15.0**
2F10-3	5/4/2006	**280.0**	ND	ND	**27.0**	ND	**6.3**	**280.0**	ND
2F10-3	5/22/2006	**120.0**	ND	ND	**8.0**	ND	ND	**120.0**	ND
2F10-3	6/2/2006	**42.0**	ND	ND	**23.0**	ND	ND	**42.0**	ND
2F10-3	6/9/2006	**24.0**	ND	ND	**6.4**	ND	ND	**24.0**	ND
2F10-3	6/16/2006	**87.0**	ND	ND	**8.8**	ND	ND	**87.0**	ND
2F10-3	6/19/2006	**50.0**	ND	ND	**4.1**	ND	ND	**50.0**	ND
2F10-6	5/4/2006	**280.0**	ND	ND	**25.0**	ND	ND	**280.0**	ND
2F10-6	5/22/2006	**130.0**	ND	ND	**5.9**	ND	ND	**130.0**	ND
2F10-6	6/2/2006	**50.0**	ND	ND	**34.0**	ND	ND	**50.0**	ND
2F10-6	6/9/2006	**56.0**	ND	ND	**7.7**	ND	ND	**56.0**	ND
2F10-6	6/16/2006	**88.0**	ND	ND	**7.8**	ND	ND	**88.0**	ND
2F10-6	6/19/2006	**86.0**	ND	ND	**6.4**	ND	ND	**86.0**	ND

Table 7: Post-Remediation Intermediate Results
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	HVOC (µg/kg)	1,2,4-Trimethylbenzene (µg/kg)	1,1,1 Trichloroethane (µg/kg)	Naphthalene (µg/kg)	sec-Butylbenzene (µg/kg)	Styrene (µg/kg)	Tetrachloroethene (PCE) (µg/kg)	Total Xylenes (µg/kg)
2F10-9	5/4/2006	**15.0**	ND	ND	**66.0**	ND	**14.0**	**15.0**	**44.0**
2F10-9	5/22/2006	**25.0**	ND	ND	**7.2**	ND	ND	**250.0**	ND
2F10-9	6/2/2006	**5.4**	ND	ND	**130.0**	ND	**25.0**	**5.4**	ND
2F11-3	5/10/2006	**220.0**	**3.2**	**9.5**	**41.0**	ND	**14.0**	**220.0**	ND
2F11-3	5/22/2006	**51.0**	ND	ND	**4.8**	ND	ND	**51.0**	ND
2F11-3	6/2/2006	**65.0**	ND	ND	**24.0**	ND	ND	**65.0**	ND
2F11-3	6/12/2006	**29.0**	ND	ND	**8.8**	ND	ND	**29.0**	ND
2F11-3	6/16/2006	**88.0**	ND	ND	**8.3**	ND	ND	**88.0**	ND
2F11-3	6/19/2006	**75.0**	ND	ND	**7.2**	ND	ND	**75.0**	ND
2F11-6	5/10/2006	**310.0**	**6.5**	**12.0**	**60.0**	ND	**56.0**	**310.0**	ND
2F11-6	5/22/2006	**230.0**	ND	**5.0**	**18.0**	ND	ND	**230.0**	ND
2F11-6	6/2/2006	**75.0**	ND	**4.5**	**94.0**	ND	**4.8**	**75.0**	ND
2F11-6	6/12/2006	**58.0**	ND	ND	**8.7**	ND	ND	**58.0**	ND
2F11-6	6/16/2006	**110.0**	ND	ND	**9.9**	ND	ND	**110.0**	ND
2F11-6	6/19/2006	**41.0**	ND	ND	ND	ND	ND	**41.0**	ND
2F11-9	5/10/2006	**4200.0**	**6.1**	**20.0**	**140.0**	ND	**17.0**	**4200.0**	**9.4**
2F11-9	5/22/2006	**170.0**	ND	**4.1**	**8.6**	ND	ND	**170.0**	ND
2F11-9	6/5/2006	**55.0**	ND	ND	**8.3**	ND	ND	**55.0**	ND
2F11-9	6/12/2006	**82.0**	ND	ND	**8.0**	ND	ND	**82.0**	ND
2F11-9	6/16/2006	**61.0**	ND	ND	**4.6**	ND	ND	**61.0**	ND
2F11-9	6/19/2006	**120.0**	ND	ND	**16.0**	ND	ND	**120.0**	ND
2G8-3	5/24/2006	**3.9**	ND	ND	ND	ND	ND	**3.9**	ND
2G8-6	5/24/2006	**13.0**	ND	ND	ND	ND	ND	**13.0**	ND

Table 7: Post-Remediation Intermediate Results
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	HVOC (µg/kg)	1,2,4-Trimethylbenzene (µg/kg)	1,1,1 Trichloroethane (µg/kg)	Naphthalene (µg/kg)	sec-Butylbenzene (µg/kg)	Styrene (µg/kg)	Tetrachloroethene (PCE) (µg/kg)	Total Xylenes (µg/kg)
2G8-9	5/24/2006	0.0	ND	ND	ND	ND	ND	ND	ND
2G9-3	5/10/2006	**14.0**	ND	ND	**20.0**	ND	**4.5**	**14.0**	ND
2G9-3	5/30/2006	**5.5**	ND	ND	**14.0**	ND	ND	**5.5**	ND
2G9-6	5/10/2006	**24.0**	ND	**2.3**	**34.0**	ND	**7.5**	**24.0**	ND
2G9-6	5/30/2006	**7.9**	ND	ND	**5.4**	ND	ND	**7.9**	ND
2G9-9	5/10/2006	0.0	ND	ND	**11.0**	ND	**6.0**	ND	ND
2G10-3	5/4/2006	**20.0**	ND	ND	**24.0**	ND	ND	**20.0**	ND
2G10-3	5/30/2006	**68.0**	ND	ND	**28.0**	ND	**5.0**	**68.0**	ND
2G10-3	6/12/2006	**4.6**	ND	ND	ND	ND	ND	**4.6**	ND
2G10-6	5/4/2006	**20.0**	ND	ND	**9.8**	ND	ND	**20.0**	ND
2G10-6	5/30/2006	**11.0**	ND	ND	**20.0**	ND	ND	**11.0**	ND
2G10-9	5/4/2006	0.0	ND	ND	ND	ND	ND	ND	ND
2G10	4/11/2006	0.0	ND	ND	**4.2**	ND	ND	ND	ND
2G11-3	5/4/2006	0.0	ND	ND	ND	ND	ND	ND	ND
2G11-6	5/4/2006	**8.6**	ND	ND	ND	ND	ND	**8.6**	ND
2G11-9	5/4/2006	0.0	ND	ND	**63.0**	ND	ND	ND	ND
3H7-3	4/27/2006	0.0	ND	ND	**6.9**	ND	ND	ND	ND
3H7-6	4/27/2006	0.0	ND	ND	ND	ND	ND	ND	ND
3H7-9	4/27/2006	0.0	ND	ND	ND	ND	ND	ND	ND
3H8-3	4/27/2006	**20.0**	ND	ND	**270.0**	ND	**25.0**	**20.0**	ND
3H8-3	5/30/2006	**7.3**	ND	ND	**11.0**	ND	ND	**7.3**	ND
3H8-3	6/9/2006	**6.1**	ND	ND	ND	ND	ND	**6.1**	ND
3H8-6	4/27/2006	**6.4**	ND	ND	**25.0**	ND	ND	**6.4**	ND

Table 7: Post-Remediation Intermediate Results
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	HVOC (µg/kg)	1,2,4-Trimethylbenzene (µg/kg)	1,1,1 Trichloroethane (µg/kg)	Naphthalene (µg/kg)	sec-Butylbenzene (µg/kg)	Styrene (µg/kg)	Tetrachloroethene (PCE) (µg/kg)	Total Xylenes (µg/kg)
3H8-6	5/30/2006	**20.0**	ND	ND	**14.0**	ND	ND	**20.0**	ND
3H8-6	6/9/2006	**5.9**	ND	ND	**5.8**	ND	ND	**5.9**	ND
3H8-9	4/27/2006	**16.0**	ND	ND	ND	ND	ND	**16.0**	ND
3H8-9	5/30/2006	**4.8**	ND	ND	ND	ND	ND	**4.8**	ND
3H9-2	4/28/2006	0.0	ND	ND	**22.0**	ND	ND	ND	ND
3H9-5	4/28/2006	0.0	ND	ND	ND	ND	ND	ND	ND
3H10-2	4/28/2006	0.0	ND	ND	ND	ND	ND	ND	ND
3H10-5	4/28/2006	0.0	ND	ND	**8.5**	ND	ND	ND	ND
3H11-2	4/28/2006	0.0	ND	ND	ND	ND	ND	ND	ND
3H11-5	4/28/2006	**5.0**	ND	ND	**29.0**	ND	ND	**5.0**	ND
3I7*	4/11/2006	0.0	ND	ND	ND	ND	ND	ND	ND
3I7-3	4/27/2006	0.0	ND	ND	**11.0**	ND	ND	ND	ND
3I7-6	4/27/2006	**5.5**	ND	ND	ND	ND	ND	**5.5**	ND
3I7-9	4/27/2006	0.0	ND	ND	ND	ND	ND	ND	ND
3I8-3	4/27/2006	0.0	ND	ND	ND	ND	ND	ND	ND
3I8-6	4/27/2006	0.0	ND	ND	ND	ND	ND	ND	ND
3I8-9	4/27/2006	0.0	ND	ND	ND	ND	ND	ND	ND
3I9-2	4/26/2006	0.0	ND	ND	ND	ND	ND	ND	ND
3I9-5	4/26/2006	0.0	ND	ND	**51.0**	ND	ND	ND	ND
3I10*	4/11/2006	0.0	ND	ND	ND	ND	ND	ND	ND
3I10-2	4/26/2006	0.0	ND	ND	**11.0**	ND	ND	ND	ND
3I10-5	4/26/2006	0.0	ND	ND	ND	ND	ND	ND	ND
3I11-2	4/26/2006	16.0	ND	ND	ND	ND	ND	**16.0**	ND

Table 7: Post-Remediation Intermediate Results
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	HVOC (µg/kg)	1,2,4-Trimethylbenzene (µg/kg)	1,1,1 Trichloroethane (µg/kg)	Naphthalene (µg/kg)	sec-Butylbenzene (µg/kg)	Styrene (µg/kg)	Tetrachloroethene (PCE) (µg/kg)	Total Xylenes (µg/kg)
3I11-2	4/26/2006	0.0	ND	ND	ND	ND	ND	ND	ND
3I11-5	4/26/2006	0.0	ND	ND	**94.0**	ND	ND	ND	ND
Blank-3**	4/11/2006	0.0	ND	ND	ND	ND	ND	ND	ND
Blank-6**	4/11/2006	**4.7**	ND	ND	ND	ND	ND	**4.7**	ND
Blank-9**	4/11/2006	0.0	ND	ND	**140.0**	ND	**28.0**	ND	ND
11A1-3	4/11/2006	**17**	ND	ND	**170**	ND	**43**	**17**	ND
11A1-3	5/22/2006	0.0	ND	ND	**9.6**	ND	ND	ND	ND
11A1-6	4/11/2006	0.0	ND	ND	**85.0**	ND	**19.0**	ND	ND
11A1-9	4/11/2006	**5.0**	ND	ND	**130.0**	ND	**33.0**	**5.0**	ND
11B1-3	4/11/2006	**6.3**	ND	ND	**6.1**	ND	ND	**6.3**	ND
11B1-6	4/11/2006	0.0	ND	ND	**110.0**	ND	**13.0**	ND	ND
11B1-9	4/11/2006	0.0	ND	ND	**78.0**	ND	**7.7**	ND	ND
11C1-3	4/11/2006	0.0	ND	ND	**120.0**	ND	**14.0**	ND	ND
11C1-6	4/11/2006	**15.0**	ND	ND	**130.0**	ND	**15.0**	**15.0**	ND
11C1-9	4/11/2006	**4.8**	ND	ND	**140.0**	ND	**38.0**	**4.8**	ND
11A2-3	4/10/2006	**8.9**	ND	ND	**77.0**	ND	**24.0**	**8.9**	ND
11A2-6	4/10/2006	**6.4**	**4.2**	ND	**150.0**	ND	**38.0**	**6.4**	ND
11A2-9	4/10/2006	0.0	ND	ND	**36.0**	ND	**30.0**	ND	ND
11B2-3	4/10/2006	**8.0**	ND	ND	**41.0**	ND	**23.0**	**8.0**	ND
11B2-6	4/10/2006	**14.0**	**5.1**	ND	**240.0**	ND	**53.0**	**14.0**	ND
11B2-9	4/10/2006	**5.4**	**3.8**	ND	**200.0**	ND	**35.0**	**5.4**	ND
11C2-3	4/10/2006	**20.0**	**4.8**	ND	**180.0**	**3.8**	**75.0**	**20.0**	**15.0**
11C2-3	5/30/2006	0.0	ND	ND	**15.0**	ND	ND	ND	ND

Table 7: Post-Remediation Intermediate Results
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	HVOC (µg/kg)	1,2,4-Trimethylbenzene (µg/kg)	1,1,1 Trichloroethane (µg/kg)	Naphthalene (µg/kg)	sec-Butylbenzene (µg/kg)	Styrene (µg/kg)	Tetrachloroethene (PCE) (µg/kg)	Total Xylenes (µg/kg)
11C2-6	4/10/2006	**8.0**	**5.4**	ND	**190.0**	**4.3**	**69.0**	**8.0**	**13.0**
11C2-6	5/30/2006	0.0	ND	ND	**53.0**	ND	**7.0**	ND	ND
11C2-9	4/10/2006	0.0	ND	ND	**7.1**	ND	ND	ND	ND
11A3-3	4/11/2006	**40.0**	ND	**8.6**	**8.8**	ND	ND	**40.0**	ND
11A3-3	5/22/2006	**6.6**	ND	ND	**8.5**	ND	ND	**6.6**	ND
11A3-6	4/11/2006	**5.9**	ND	ND	**220.0**	ND	**36.0**	**5.9**	**19.0**
11A3-9	4/11/2006	0.0	ND	ND	**83.0**	ND	**14.0**	ND	ND
11B3-3	4/26/2006	**7.2**	ND	ND	ND	ND	ND	**7.2**	ND
11B3-6	4/26/2006	0.0	ND	ND	ND	ND	ND	ND	ND
11B3-9	4/26/2006	0.0	ND	ND	**29.0**	ND	**10.0**	ND	ND
11C3-3	4/28/2006	**14.0**	ND	ND	**190.0**	ND	ND	**14.0**	ND
11C3-6	4/28/2006	**5.4**	ND	ND	**170.0**	ND	**41.0**	**5.4**	ND
11C3-9	4/28/2006	0.0	ND	ND	**33.0**	ND	**20.0**	ND	ND
11A4-3	4/10/2006	**11.0**	ND	ND	**120.0**	ND	**20.0**	**11.0**	ND
11A4-6	4/10/2006	0.0	ND	ND	**74.0**	ND	**13.0**	ND	ND
11A4-9	4/10/2006	0.0	ND	ND	**89.0**	ND	**16.0**	ND	ND
11B4-3	4/26/2006	0.0	ND	ND	**26.0**	ND	**51.0**	ND	ND
11B4-6	4/26/2006	0.0	ND	ND	**42.0**	ND	ND	ND	ND
11B4-9	4/26/2006	0.0	ND	ND	ND	ND	ND	ND	ND
11C4-3	4/28/2006	**6.5**	ND	ND	**66.0**	ND	**8.0**	**6.5**	ND
11C4-6	4/28/2006	**12.0**	**5.7**	ND	**140.0**	ND	**42.0**	**12.0**	ND
11C4-9	4/28/2006	0.0	ND	ND	**100.0**	ND	**34.0**	ND	ND
11A5-3	4/11/2006	0.0	ND	ND	**26.0**	ND	ND	ND	ND

Table 7: Post-Remediation Intermediate Results
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	HVOC (µg/kg)	1,2,4-Trimethylbenzene (µg/kg)	1,1,1 Trichloroethane (µg/kg)	Naphthalene (µg/kg)	sec-Butylbenzene (µg/kg)	Styrene (µg/kg)	Tetrachloroethene (PCE) (µg/kg)	Total Xylenes (µg/kg)
11A5-6	4/11/2006	**14.0**	ND	ND	**250.0**	ND	**12.0**	**14.0**	ND
11A5-9	4/11/2006	0.0	ND	ND	ND	ND	ND	ND	ND
11B5-3	4/26/2006	**9.9**	ND	ND	**71.0**	ND	**13.0**	**9.9**	ND
11B5-6	4/26/2006	0.0	ND	ND	**63.0**	ND	**13.0**	ND	**6.2**
11B5-9	4/26/2006	**5.1**	ND	ND	**63.0**	ND	**29.0**	**5.1**	**13.6**
11C5-3	4/26/2006	**12.0**	ND	ND	**47.0**	ND	ND	**12.0**	ND
11C5-6	4/26/2006	0.0	ND	ND	**74.0**	ND	**17.0**	ND	ND
11C5-9	4/26/2006	**6.7**	ND	ND	**56.0**	ND	ND	**6.7**	ND
11A6-3	4/11/2006	0.0	ND	ND	ND	ND	ND	ND	ND
11A6-3	5/30/2006	0.0	ND	ND	**28.0**	ND	ND	ND	ND
11A6-6	4/11/2006	**50.0**	ND	ND	**70.0**	ND	**6.4**	**50.0**	ND
11A6-6	5/30/2006	0.0	ND	ND	**17.0**	ND	ND	ND	ND
11A6-9	4/11/2006	0.0	ND	ND	ND	ND	ND	ND	ND
11B6-3	4/26/2006	**28.0**	**6.5**	ND	**200.0**	ND	**43.0**	**28.0**	**16.5**
11B6-3	5/30/2006	0.0	ND	ND	**34.0**	ND	ND	ND	ND
11B6-6	4/26/2006	**5.5**	ND	ND	**87.0**	ND	**13.0**	**5.5**	ND
11B6-9	4/26/2006	**5.3**	ND	ND	**91.0**	ND	**12.0**	**5.3**	**6.6**
11C6-3	4/26/2006	**10.0**	ND	ND	**49.0**	ND	ND	**10.0**	ND
11C6-6	4/26/2006	0.0	ND	ND	**20.0**	ND	ND	ND	ND
11C6-9	4/26/2006	**5.9**	ND	ND	**130.0**	ND	**31.0**	**5.9**	**9.0**
11A7-3	4/11/2006	**8.0**	ND	ND	**160.0**	ND	**22.0**	**8.0**	ND
11A7-6	4/11/2006	**14.0**	ND	ND	**4.5**	ND	ND	**14.0**	ND
11A7-9	4/11/2006	0.0	ND	ND	ND	ND	ND	ND	ND
11B7-3	4/26/2006	**5.8**	ND	ND	**70.0**	ND	ND	**5.8**	ND
11B7-6	4/26/2006	0.0	ND	ND	**190.0**	ND	**22.0**	ND	ND

Table 7: Post-Remediation Intermediate Results
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	HVOC (µg/kg)	1,2,4-Trimethylbenzene (µg/kg)	1,1,1 Trichloroethane (µg/kg)	Naphthalene (µg/kg)	sec-Butylbenzene (µg/kg)	Styrene (µg/kg)	Tetrachloroethene (PCE) (µg/kg)	Total Xylenes (µg/kg)
11B7-9	4/26/2006	0.0	ND	ND	**12.0**	ND	ND	ND	ND
11C7-3	4/26/2006	0.0	ND	ND	**17.0**	ND	ND	ND	ND
11C7-6	4/26/2006	**7.1**	ND	ND	**16.0**	ND	ND	**7.1**	ND
11C7-9	4/26/2006	0.0	ND	ND	**110.0**	ND	ND	ND	ND

Table 8 - Emergent Constituents: 1,2,3-Trichloropropane and 1,4-Dioxane
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	1,2,3-Trichloropropane (mg/Kg)	1,4-Dioxane (mg/Kg)
11A1EC-3	6/12/2006	ND	ND
11A1EC-6	6/12/2006	ND	ND
11A1EC-9	6/12/2006	ND	ND
11A2EC-3	6/12/2006	ND	ND
11A2EC-6	6/12/2006	ND	ND
11A2EC-9	6/12/2006	ND	ND
11B1EC-3	6/12/2006	ND	ND
11B1EC-6	6/12/2006	ND	ND
11B1EC-9	6/12/2006	ND	ND
11B2EC-3	6/12/2006	ND	ND
11B2EC-6	6/12/2006	ND	ND
11B2EC-9	6/12/2006	ND	ND
3A1EC-2	6/12/2006	ND	ND
3A1EC-6	6/12/2006	ND	ND
3A2EC-2	6/12/2006	ND	ND
3A2EC-6	6/12/2006	ND	ND
2A1EC-3	6/19/2006	ND	ND
2A1EC-6	6/19/2006	ND	ND
2A1EC-9	6/19/2006	ND	ND
2A2EC-3*	6/12/2006	ND	ND
2A2EC-6	6/12/2006	ND	ND
2A2EC-9	6/12/2006	ND	ND
2B1EC-3	6/19/2006	ND	ND

Table 8 - Emergent Constituents: 1,2,3-Trichloropropane and 1,4-Dioxane
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	1,2,3-Trichloropropane (mg/Kg)	1,4-Dioxane (mg/Kg)
2B1EC-6	6/19/2006	ND	ND
2B1EC-9	6/19/2006	ND	ND
2B2EC-3	6/12/2006	ND	ND
2B2EC-6	6/12/2006	ND	ND
2B2EC-9	6/12/2006	ND	ND
2C1EC-3	6/12/2006	ND	ND
2C1EC-6	6/12/2006	ND	ND
2C1EC-9	6/12/2006	ND	ND
2C2EC-3	6/19/2006	ND	ND
2C2EC-6[1]	-	-	-
2C2EC-9[1]	-	-	-
Reporting Limit		0.04	0.003

*Labeled as 2A2EC-2 on the laboratory analytical report

[1] Refusal sample not collected

Table 9: Soil Gas Sampling Results
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	1,1-Dichloroethene (μg/L)	1,1,1 Trichloroethane (μg/L)	1,1-Dichloroethane (μg/L)	1,1,2 trichlorotrifloroethane (μg/L)	Dichlorodifloromethane (μg/L)	Tetrachloroethene (PCE) (μg/L)	Trichlorofloromethane (μg/L)	Methylene Chloride (μg/L)
11A1SG-5	5/26/2006	ND	2.3	ND	ND	1.6	ND	28.0	1.5
11A1SG-10	5/26/2006	ND	4.8	ND	ND	1.3	3.6	41.0	ND
11A2SG-3-1PV	5/31/2006	ND	3.3	ND	ND	ND	2.6	34.0	ND
11A2SG-3-3PV	5/31/2006	ND	3.7	ND	ND	ND	2.9	37.0	ND
11A2SG-3-7PV	5/31/2006	ND	3.8	ND	ND	ND	3.3	39.0	ND
11A2SG-10	5/31/2006	2.1	19.0	1.3	ND	8.4	1.7	280.0	6.7
11A3SG-5	5/31/2006	ND	2.2	ND	ND	ND	1.1	9.3	ND
11A3SG-10	5/31/2006	1.3	12.0	0.96	ND	9.0	2.1	230.0	4.7
11A4SG-5	5/31/2006	ND	10.0	ND	ND	ND	1.8	30.0	0.68
11A4SG-10	5/31/2006	0.38	12.0	ND	ND	2.4	0.5	120.0	0.72
11B1SG-5	5/26/2006	ND	ND	ND	ND	ND	2.6	8.2	ND
11B1SG-10	5/26/2006	ND	3.9	ND	ND	1.6	ND	42.0	1
11B2SG-5	5/31/2006	2.2	27.0	1.0	ND	5.1	3.2	190.0	6.2
11B2SG-10	5/31/2006	0.36	3.4	ND	ND	1.2	ND	40.0	0.7
11B3SG-5	5/31/2006	ND	1.8	ND	ND	ND	ND	21.0	0.44
11B3SG-10	5/31/2006	0.44	8.1	0.5	ND	1.2	1.4	59.0	2.6
11B4SG-5	5/31/2006	0.48	9.5	0.4	ND	1.8	1.5	63.0	0.8
11B4SG-10	5/31/2006	ND	0.92	ND	ND	ND	ND	9.8	0.44
3A1SG-2	6/2/2006	ND	ND	ND	ND	ND	0.6	ND	ND
3A1SG-6	6/2/2006	0.14	2.0	3.1	ND	ND	22.0	13.0	ND
3A2SG-2	6/2/2006	ND	1.0	ND	ND	ND	1.3	11.0	ND
3A2SG-6	6/2/2006	0.2	2.7	0.37	ND	0.88	1.7	42.0	2.6
3B1SG-2	6/1/2006	ND	1.5	0.3	ND	ND	5.0	8.9	ND

Table 9: Soil Gas Sampling Results
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	1,1-Dichloroethene (μg/L)	1,1,1 Trichloroethane (μg/L)	1,1-Dichloroethane (μg/L)	1,1,2 trichlorotrifloroethane (μg/L)	Dichlorodifloromethane (μg/L)	Tetrachloroethene (PCE) (μg/L)	Trichlorofloromethane (μg/L)	Methylene Chloride (μg/L)
3B1SG-6	6/1/2006	ND	**4.0**	**1.0**	ND	ND	**7.1**	30.0	ND
3B2SG-2	6/2/2006	ND	**8.3**	ND	ND	ND	**0.29**	ND	ND
3B2SG-6	6/2/2006	ND	ND	**0.38**	ND	**0.71**	**2.4**	**51.0**	**0.39**
2F11-6	5/26/2006	ND	**1.9**	ND	ND	ND	**5.1**	**1.4**	ND
2E11-2-1PV	5/26/2006	ND	ND	ND	ND	ND	**7.7**	ND	ND
2E11-2-3PV	5/26/2006	ND	ND	ND	ND	ND	**6.7**	ND	ND
2E11-2-7PV	5/26/2006	ND	ND	ND	ND	ND	**5.9**	ND	ND
2A1SG-2	6/21/2006	ND	**0.45**	ND	ND	ND	**1.3**	**7.9**	ND
2A1SG-6	6/21/2006	ND	**0.92**	ND	**0.23**	ND	**10.0**	**21.0**	**0.37**
2A2SG-2	6/8/2006	ND	**1.7**	ND	ND	**0.39**	**3.1**	**30.0**	ND
2A2SG-6	6/8/2006	ND	**1.4**	ND	ND	**0.61**	**1.0**	**43.0**	ND
2B1SG-2	6/21/2006	ND	ND	ND	ND	ND	**0.43**	ND	ND
2B1SG-6	6/21/2006	ND	ND	ND	ND	ND	**1.7**	**0.49**	ND
2B2SG-2	6/8/2006	ND	ND	ND	ND	ND	**3.2**	**0.79**	ND
2B2SG-6	6/8/2006	ND	ND	ND	ND	ND	**0.11**	**2.2**	ND
2C1SG-2	6/8/2006	ND	**0.31**	ND	ND	ND	**7.9**	**0.91**	ND
2C1SG-6	6/8/2006	**0.37**	**4.5**	ND	ND	**0.36**	**29.0**	**42.0**	**0.42**
2C2SG-2	6/8/2006	ND	**0.5**	ND	ND	ND	**7.8**	**0.62**	ND
2C2SG-6	6/8/2006	**1.4**	**21.0**	**0.76**	ND	**1.5**	**190.0**	**76.0**	**0.74**
2D1SG-2	6/8/2006	ND	ND	ND	ND	ND	ND	ND	ND
2D1SG-6	6/8/2006	ND	ND	ND	ND	ND	ND	ND	ND
2D2SG-2	6/8/2006	ND	**0.69**	ND	ND	ND	**24.0**	**0.23**	ND
2D2SG-6	6/8/2006	ND	**0.38**	ND	ND	ND	**7.1**	**0.26**	ND
2D11-2	5/26/2006	ND	ND	ND	ND	ND	**2.4**	**1.8**	ND
2D11-6	5/26/2006	ND	ND	ND	**1.1**	ND	**2.6**	**6.0**	ND

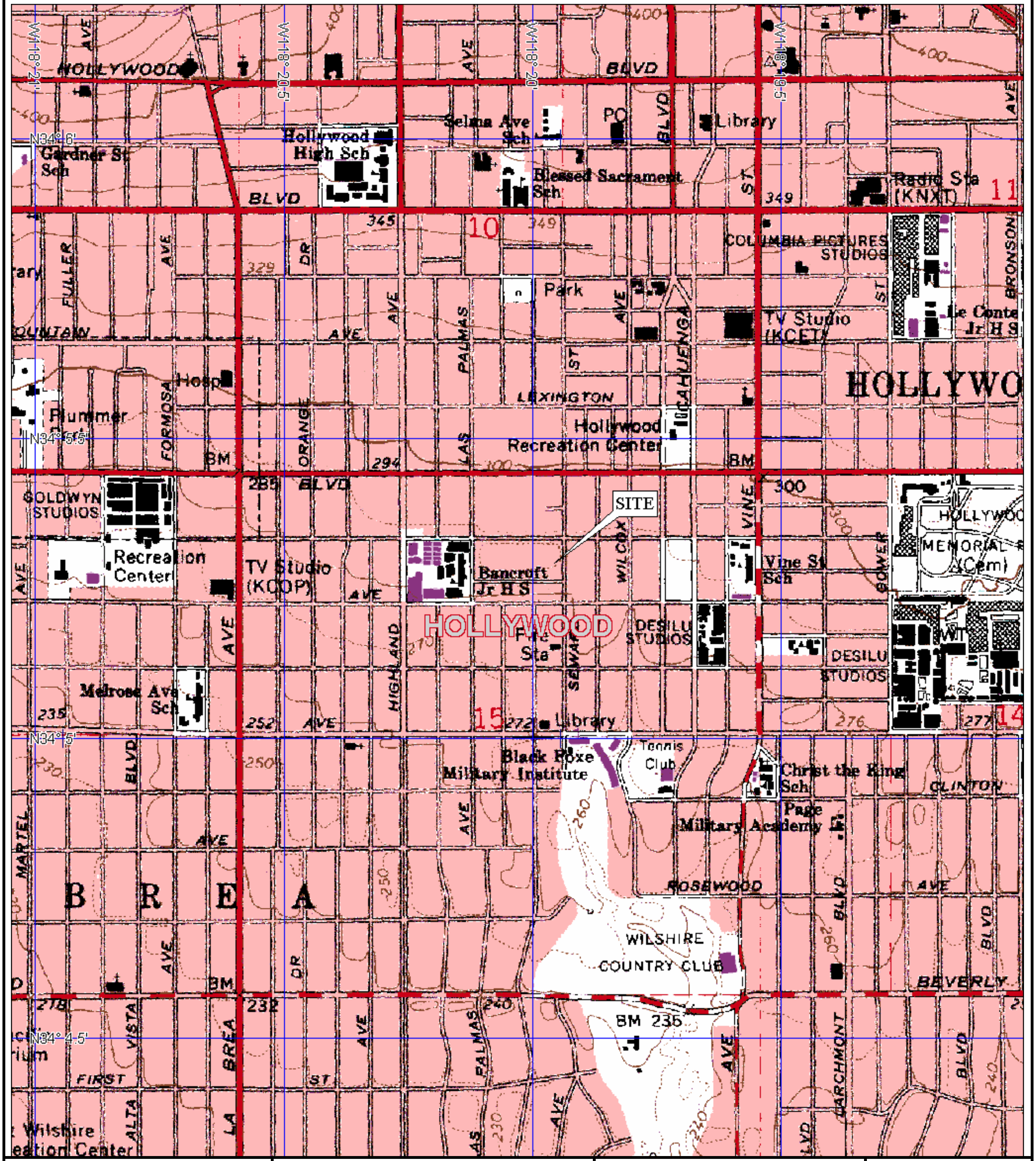
Table 9: Soil Gas Sampling Results
CFI / 959 Seward Street
Los Angeles, California

Sample Identification	Date Sampled	1,1-Dichloroethene (μg/L)	1,1,1 Trichloroethane (μg/L)	1,1-Dichloroethane (μg/L)	1,1,2 trichlorotrifloroethane (μg/L)	Dichlorodifloromethane (μg/L)	Tetrachloroethene (PCE) (μg/L)	Trichlorofloromethane (μg/L)	Methylene Chloride (μg/L)
2D9-2	5/26/2006	ND	ND	ND	ND	ND	**2.7**	**12.0**	ND
2D9-6	5/26/2006	**1.7**	**1.7**	ND	**1.3**	**1.0**	**4.5**	**40.0**	ND
2E1SG-2	6/8/2006	ND	ND	ND	ND	ND	**1.4**	**4.5**	ND
2E1SG-6	6/8/2006	**1.4**	**3.3**	**0.46**	**4.0**	**2.1**	**8.7**	**90.0**	**1.5**
2E2SG-2	6/8/2006	ND	**0.52**	ND	ND	ND	**4.9**	**2.8**	ND
2E2SG-6	6/8/2006	ND	**0.94**	ND	ND	ND	**11.0**	**0.28**	ND
2E9-2	5/26/2006	ND	ND	ND	ND	ND	ND	ND	ND
2E9-6	5/26/2006	**5.9**	**2.7**	**1.2**	**1.9**	**2.5**	**4.1**	**83.0**	**1.1**
2E11SG-2	6/1/2006	ND	ND	ND	ND	ND	**0.32**	**0.15**	**ND**
2E11SG-6	6/1/2006	**0.06**	**0.98**	ND	ND	**0.15**	**1.2**	**8.3**	**ND**
2F11SG-2	6/1/2006	ND	**0.18**	ND	ND	ND	**2.0**	**2.0**	**ND**
2F11SG-6	6/1/2006	ND	ND	ND	ND	ND	**0.06**	**0.17**	**ND**

ug/l = micrograms per liter PV = pressure volume

Samples collected at 2 and 6 feet reported as 5 and 10 feet below ground surface in the closure report

FIGURES



psi Information To Build On
Engineering • Consulting • Testing

3960 Gilman Street
Long Beach, CA 90815
562/597-3977
Fax 562/597-8459

Consolidated Film Industries

959 Seward Street
Hollywood, California

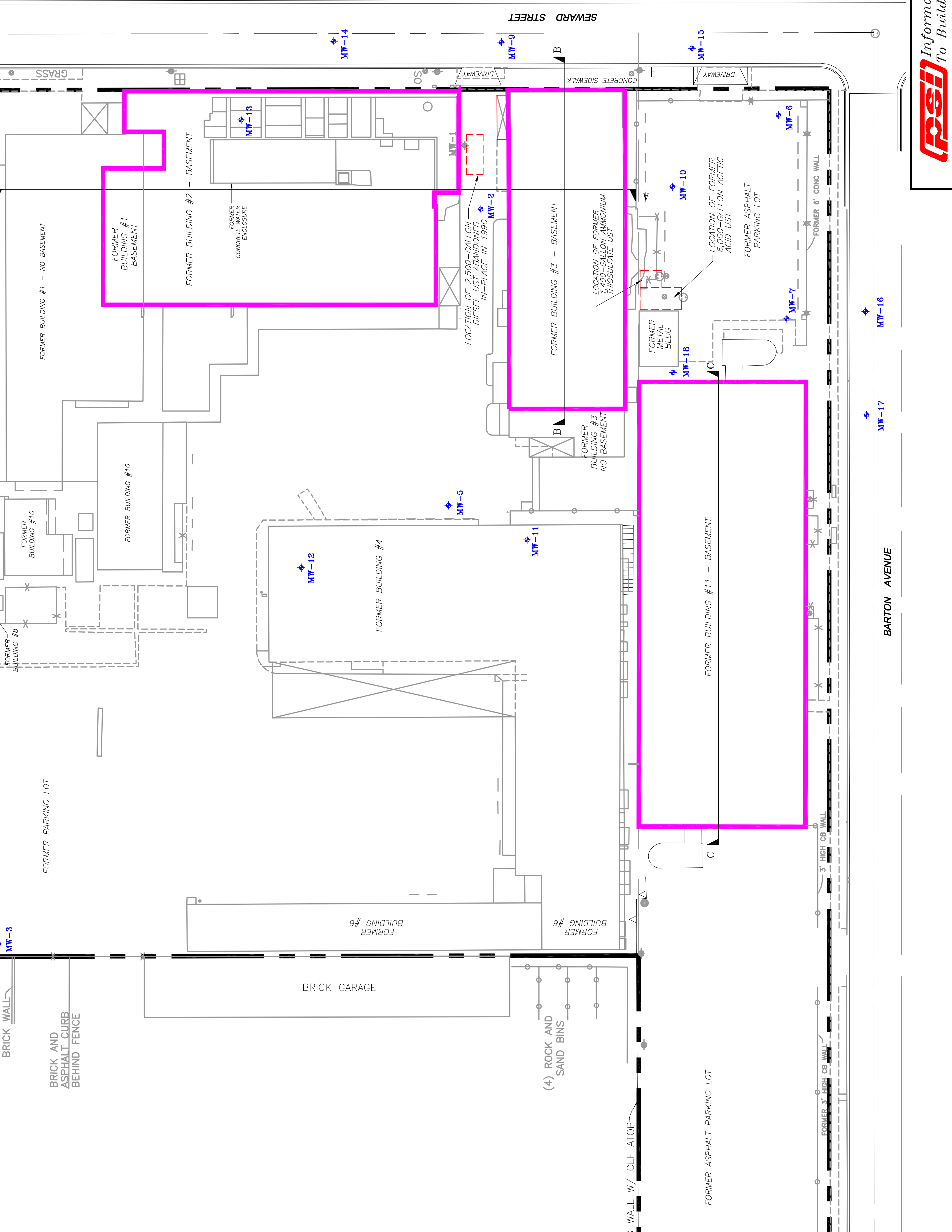
PROJECT NO: 562-6G001

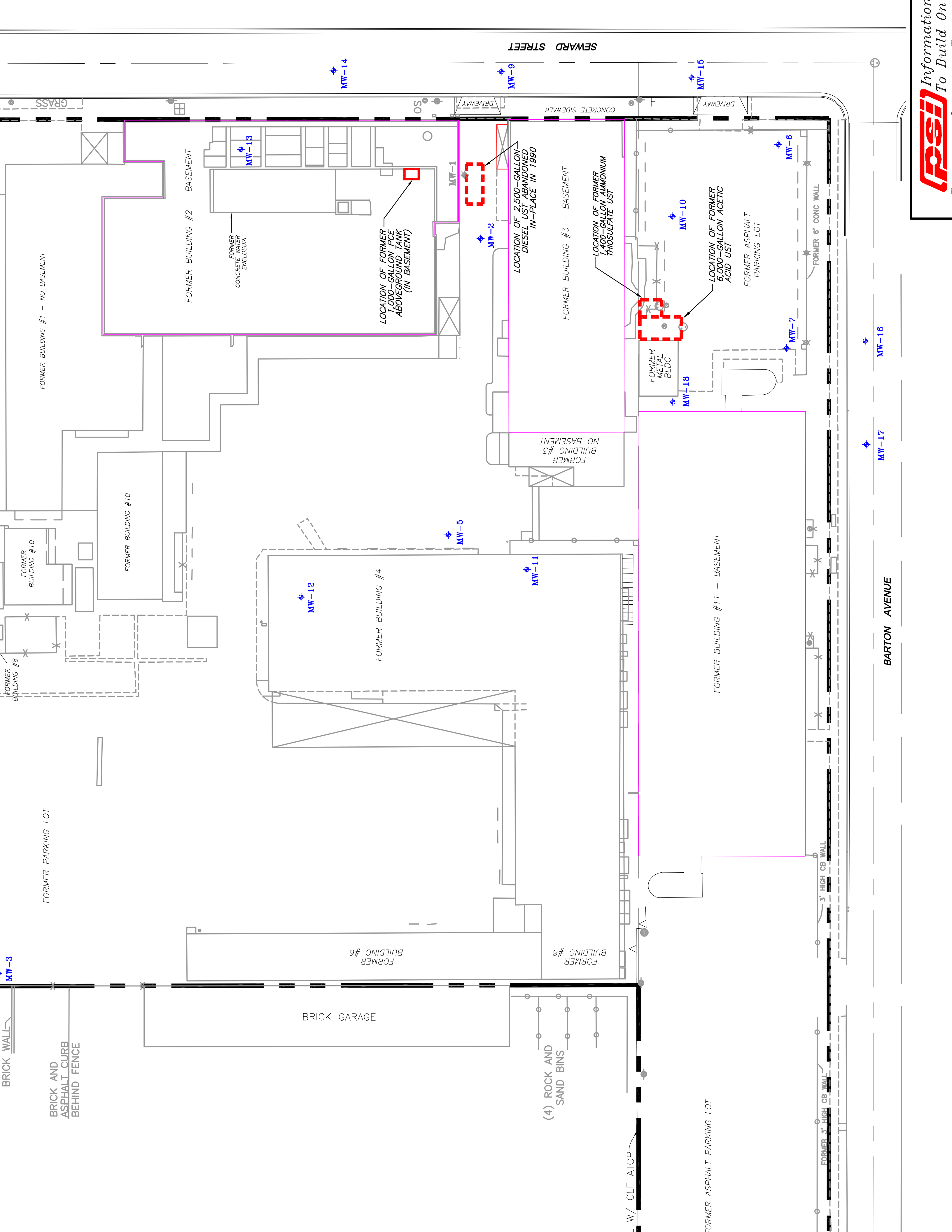
Figure 1: Site Location

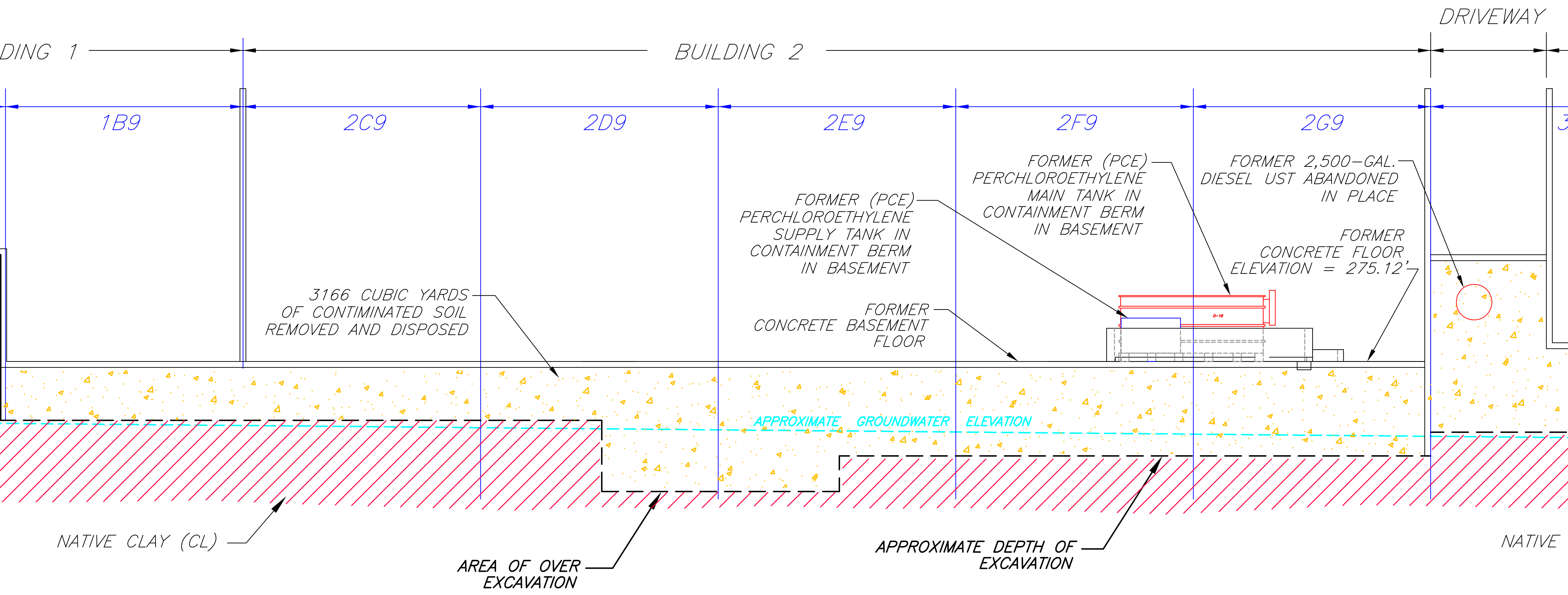
Map:
Hollywood, California Quadrangle
7.5' USGS Topographic Map

Scale: 1: 16,000

N


SEWARD STREET
BARTON AVENUE
MW-1
MW-2
MW-3
MW-5
MW-6
MW-7
MW-9
MW-10
MW-11
MW-12
MW-13
MW-14
MW-15
MW-16
MW-17
MW-18
GRASS
DRIVEWAY
DRIVEWAY
CONCRETE SIDEWALK
FORMER BUILDING #1 - NO BASEMENT
FORMER BUILDING #1 BASEMENT
FORMER BUILDING #2 - BASEMENT
FORMER CONCRETE WATER ENCLOSURE
LOCATION OF 2,500-GALLON DIESEL UST ABANDONED IN-PLACE IN 1990
FORMER BUILDING #3 - BASEMENT
LOCATION OF FORMER 1,400-GALLON AMMONIUM THIOSULFATE UST
LOCATION OF FORMER 6,000-GALLON ACETIC ACID UST
FORMER ASPHALT PARKING LOT
FORMER 6' CONC WALL
FORMER METAL BLDG
FORMER BUILDING #3 NO BASEMENT
FORMER BUILDING #10
FORMER BUILDING #10
FORMER BUILDING #8
FORMER BUILDING #4
FORMER BUILDING #11 - BASEMENT
FORMER PARKING LOT
FORMER BUILDING #6
FORMER BUILDING #6
3' HIGH CB WALL
BRICK GARAGE
BRICK WALL
BRICK AND ASPHALT CURB BEHIND FENCE
(4) ROCK AND SAND BINS
WALL W/ CLF ATOP
FORMER ASPHALT PARKING LOT
FORMER 3' HIGH CB WALL
A
B
B
C
C
PSI
Informa
To Build


SEWARD STREET
BARTON AVENUE
MW-14
MW-9
MW-15
MW-13
MW-1
MW-2
MW-6
MW-10
MW-7
MW-18
MW-16
MW-17
MW-5
MW-11
MW-12
MW-3
GRASS
DRIVEWAY
CONCRETE SIDEWALK
DRIVEWAY
FORMER BUILDING #1 - NO BASEMENT
FORMER BUILDING #2 - BASEMENT
FORMER CONCRETE WATER ENCLOSURE
LOCATION OF FORMER 1,000-GALLON PCE ABOVEGROUND TANK (IN BASEMENT)
LOCATION OF 2,500-GALLON DIESEL UST ABANDONED IN-PLACE IN 1990
FORMER BUILDING #3 - BASEMENT
LOCATION OF FORMER 1,400-GALLON AMMONIUM THIOSULFATE UST
LOCATION OF FORMER 6,000-GALLON ACETIC ACID UST
FORMER ASPHALT PARKING LOT
FORMER 6' CONC WALL
FORMER METAL BLDG
FORMER BUILDING #3 NO BASEMENT
FORMER BUILDING #10
FORMER BUILDING #10
FORMER BUILDING #8
FORMER BUILDING #4
FORMER BUILDING #11 - BASEMENT
FORMER PARKING LOT
FORMER BUILDING #6
FORMER BUILDING #6
3' HIGH CB WALL
BRICK GARAGE
BRICK WALL
BRICK AND ASPHALT CURB BEHIND FENCE
(4) ROCK AND SAND BINS
W/ CLF ATOP
FORMER ASPHALT PARKING LOT
FORMER 3' HIGH CB WALL
PSI
Information To Build On



SOIL EXCAVATED, REMOVED AND DISPOSED

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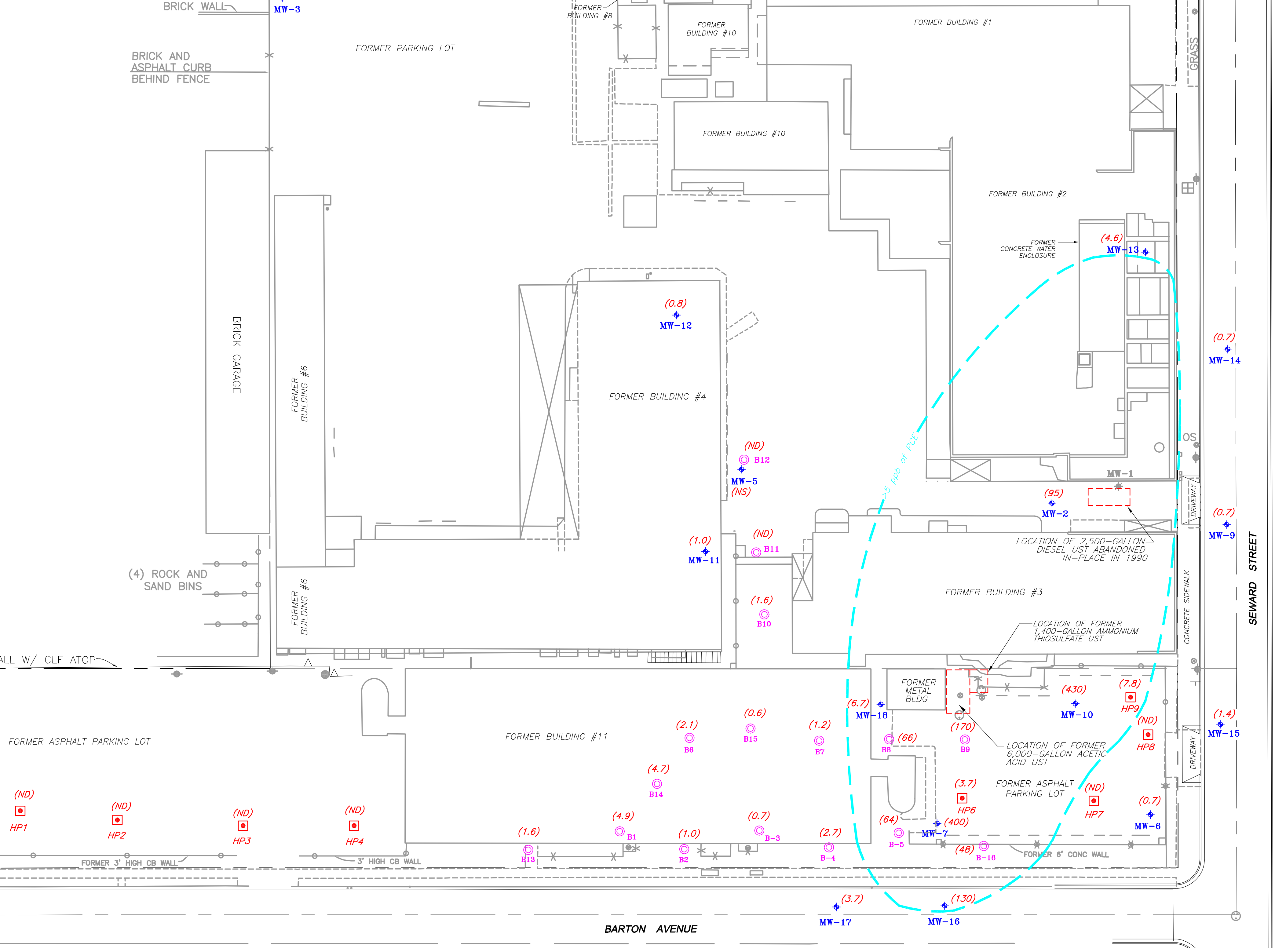
SEWARD STREET
BARTON AVENUE
CONCRETE SIDEWALK
DRIVEWAY
DRIVEWAY
GRASS
OS
FORMER BUILDING #1
FORMER BUILDING #2
FORMER BUILDING #3
FORMER BUILDING #4
FORMER BUILDING #6
FORMER BUILDING #6
FORMER BUILDING #8
FORMER BUILDING #10
FORMER BUILDING #10
FORMER BUILDING #11
FORMER METAL BLDG
FORMER CONCRETE WATER ENCLOSURE
FORMER PARKING LOT
FORMER ASPHALT PARKING LOT
FORMER ASPHALT PARKING LOT
BRICK GARAGE
BRICK WALL
BRICK AND ASPHALT CURB BEHIND FENCE
(4) ROCK AND SAND BINS
ALL W/ CLF ATOP
FORMER 3' HIGH CB WALL
3' HIGH CB WALL
FORMER 6' CONC WALL
LOCATION OF 2,500-GALLON DIESEL UST ABANDONED IN-PLACE IN 1990
LOCATION OF FORMER 1,400-GALLON AMMONIUM THIOSULFATE UST
LOCATION OF FORMER 6,000-GALLON ACETIC ACID UST
>5 ppb of PCE
MW-1
(95) MW-2
MW-3
(0.7) MW-6
(430) MW-10
(1.0) MW-11
(0.8) MW-12
(4.6) MW-13
(0.7) MW-14
(0.7) MW-9
(1.4) MW-15
(130) MW-16
(3.7) MW-17
(6.7) MW-18
(400) MW-7
(ND) B12
MW-5 (NS)
(ND) B11
(1.6) B10
(2.1) B6
(0.6) B15
(1.2) B7
(66) B8
(170) B9
(4.7) B14
(4.9) B1
(1.0) B2
(0.7) B-3
(2.7) B-4
(64) B-5
(48) B-16
(1.6) B13
(3.7) HP6
(ND) HP7
(ND) HP8
(7.8) HP9
(ND) HP1
(ND) HP2
(ND) HP3
(ND) HP4
psi
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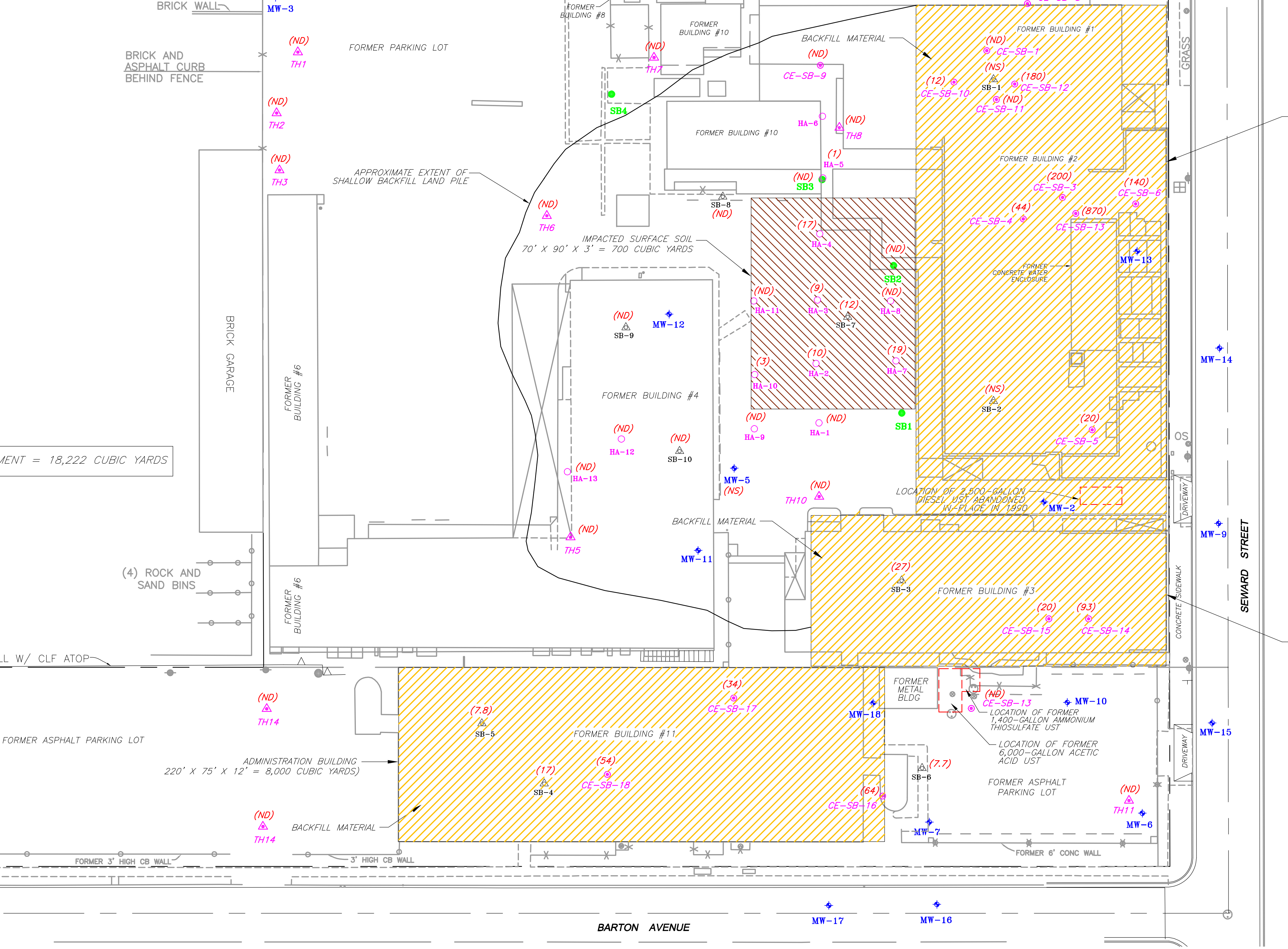
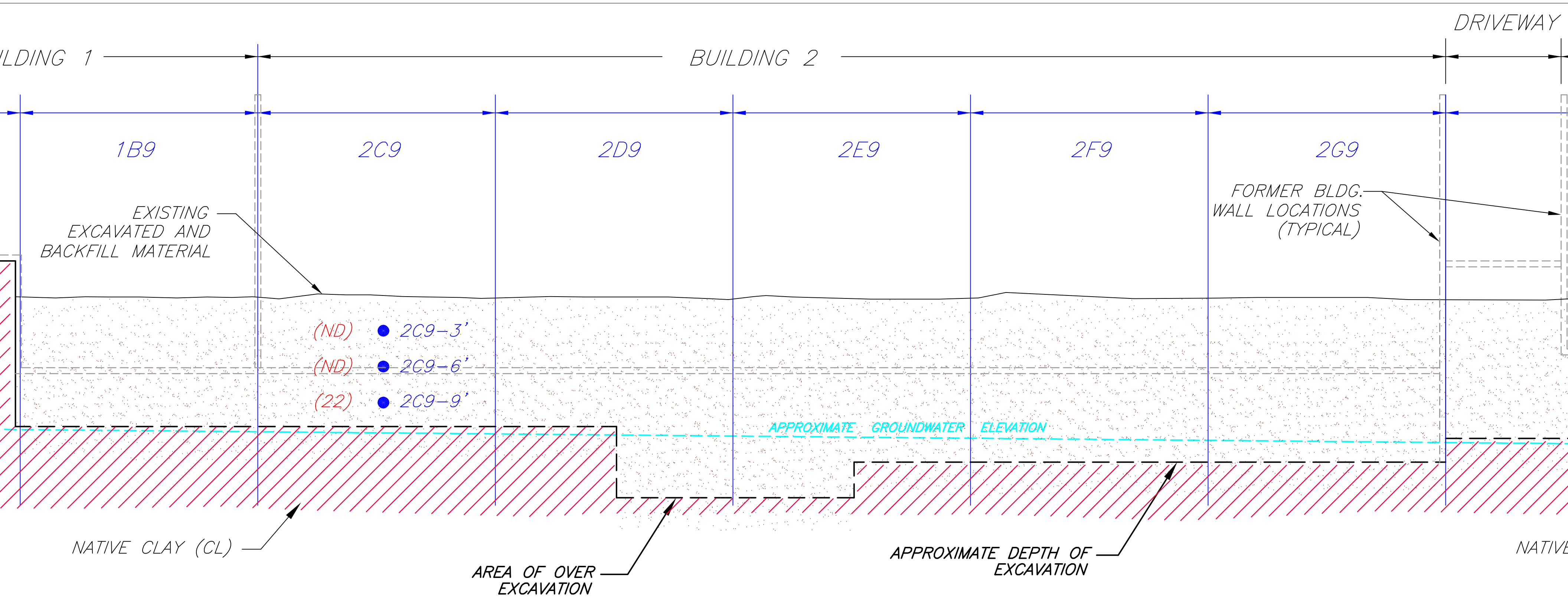


NOTE:
LAB DATA PRESENTED IS FOR SAMPLES COLLECTED
BETWEEN 2/1/05 AND 1/13/06



PLE DEPTH AT 3 FEET BELOW GROUND SURFACE

PLE DEPTH AT 6 FEET BELOW GROUND SURFACE

PLE DEPTH AT 9 FEET BELOW GROUND SURFACE

RESULTS IN SOIL SAMPLE

DETECTED ABOVE LABORATORY DETECTION LIMIT

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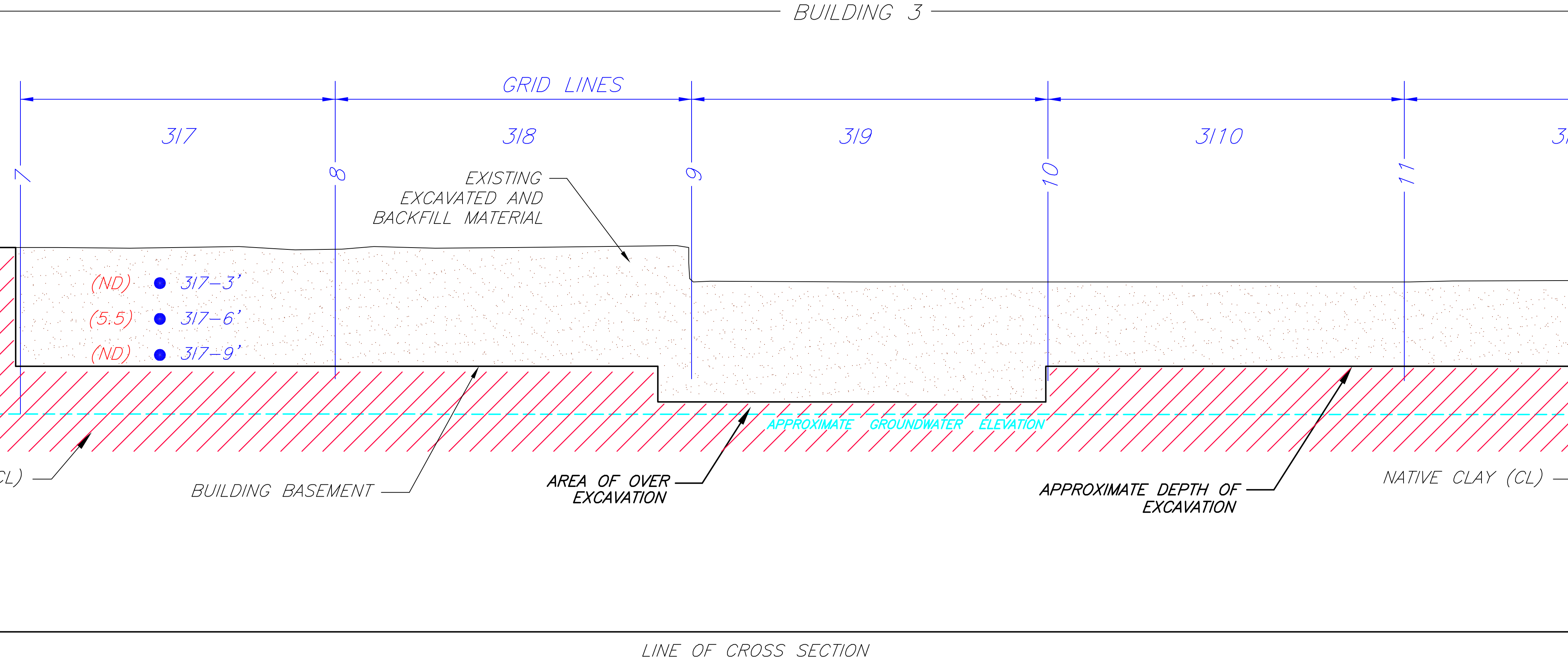


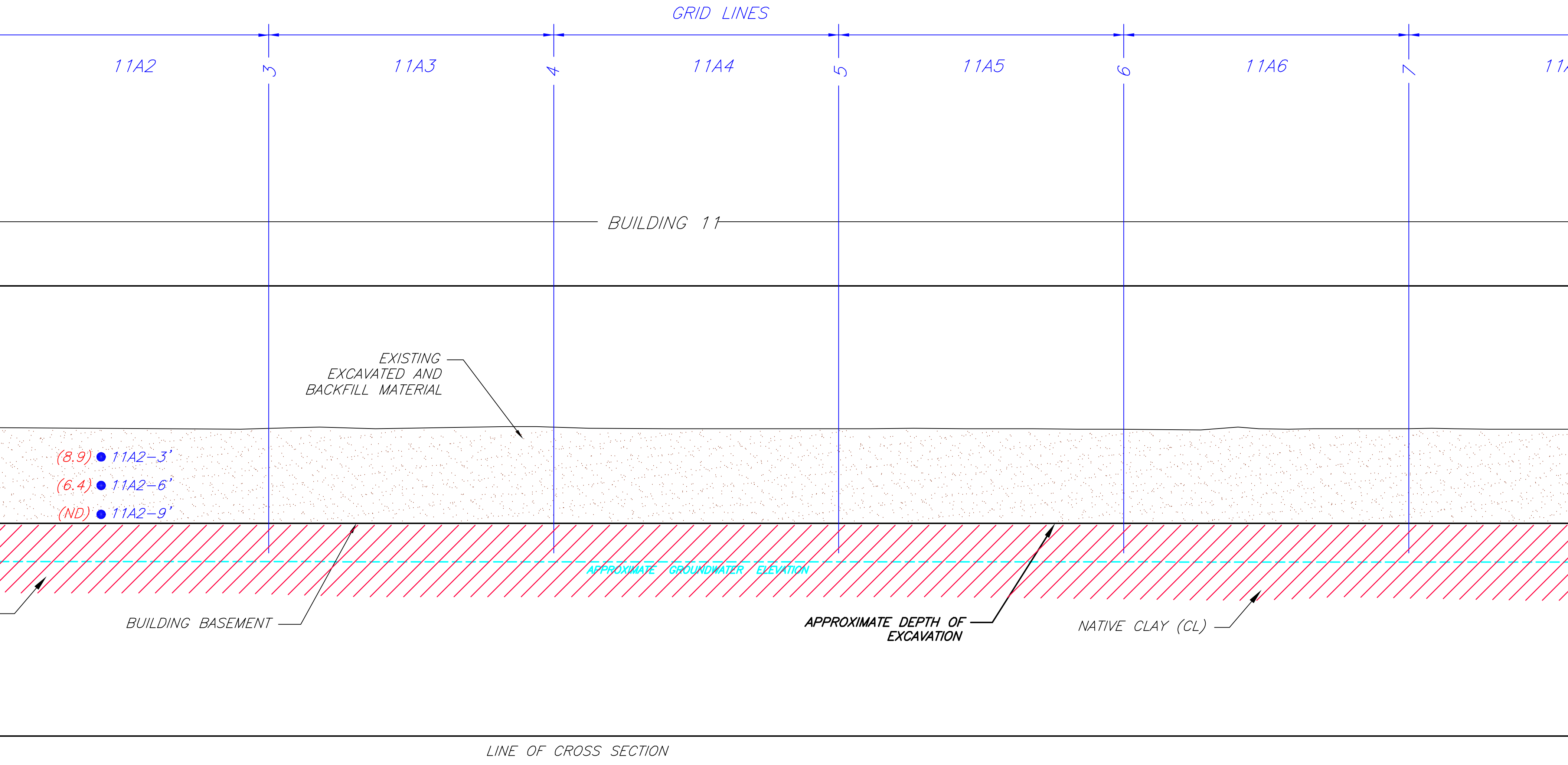
PLE DEPTH AT 3 FEET BELOW GROUND SURFACE

PLE DEPTH AT 6 FEET BELOW GROUND SURFACE

PLE DEPTH AT 9 FEET BELOW GROUND SURFACE

RESULTS IN SOIL SAMPLE

DETECTED ABOVE LABORATORY DETECTION LIMIT



AT 3 FEET BELOW GROUND SURFACE

AT 6 FEET BELOW GROUND SURFACE

AT 9 FEET BELOW GROUND SURFACE

N SOIL SAMPLE

ABOVE LABORATORY DETECTION LIMIT

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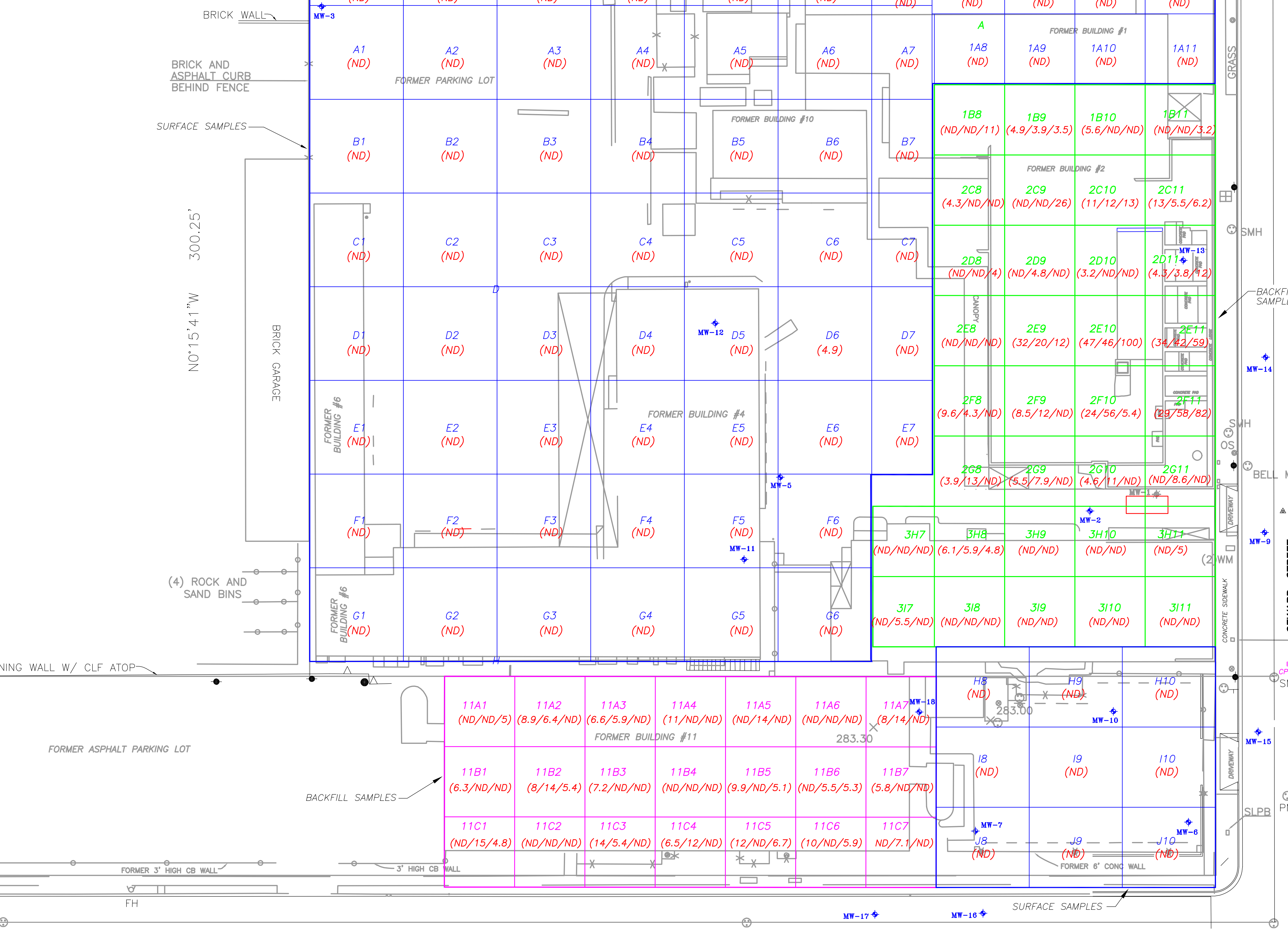
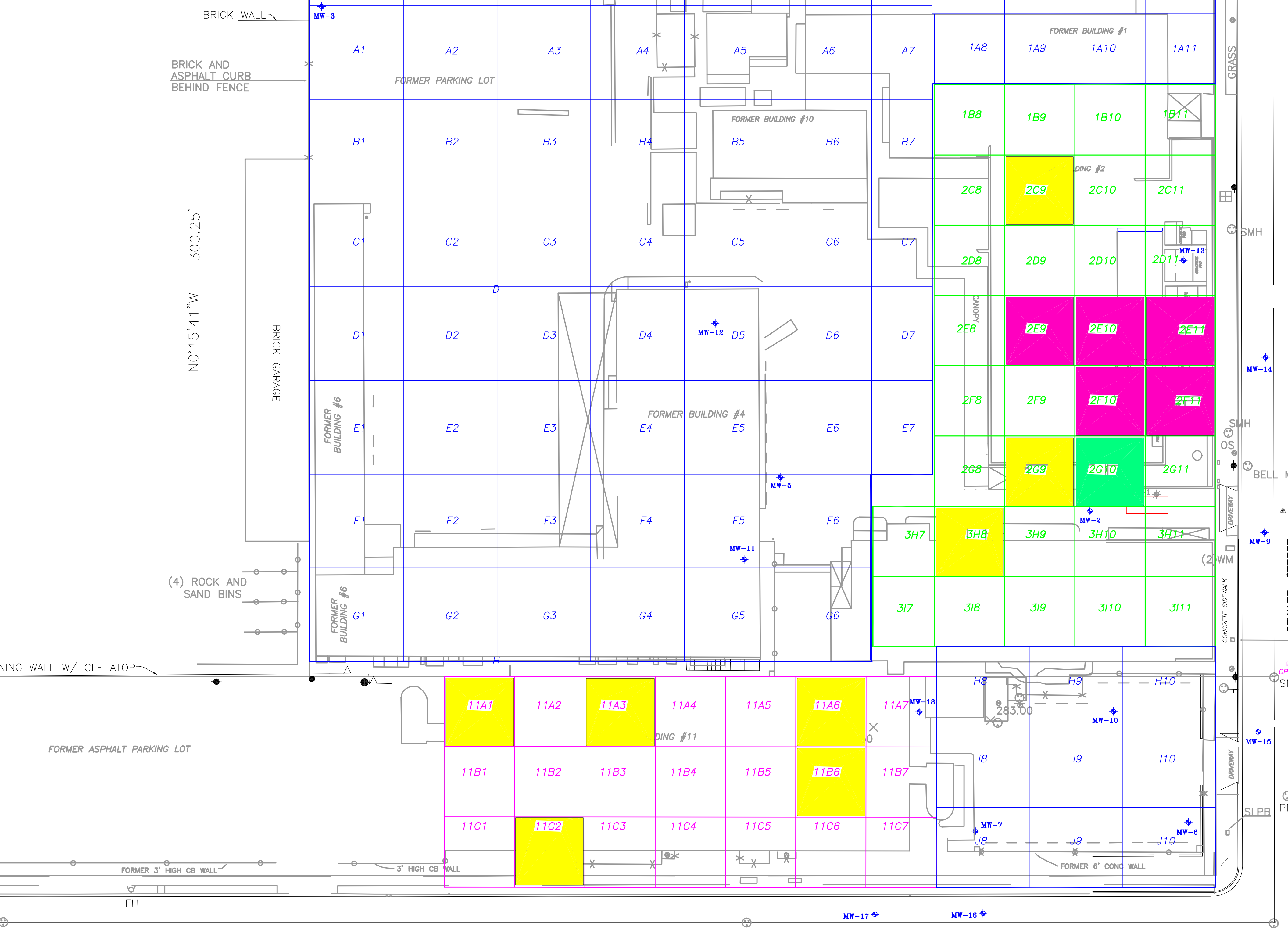


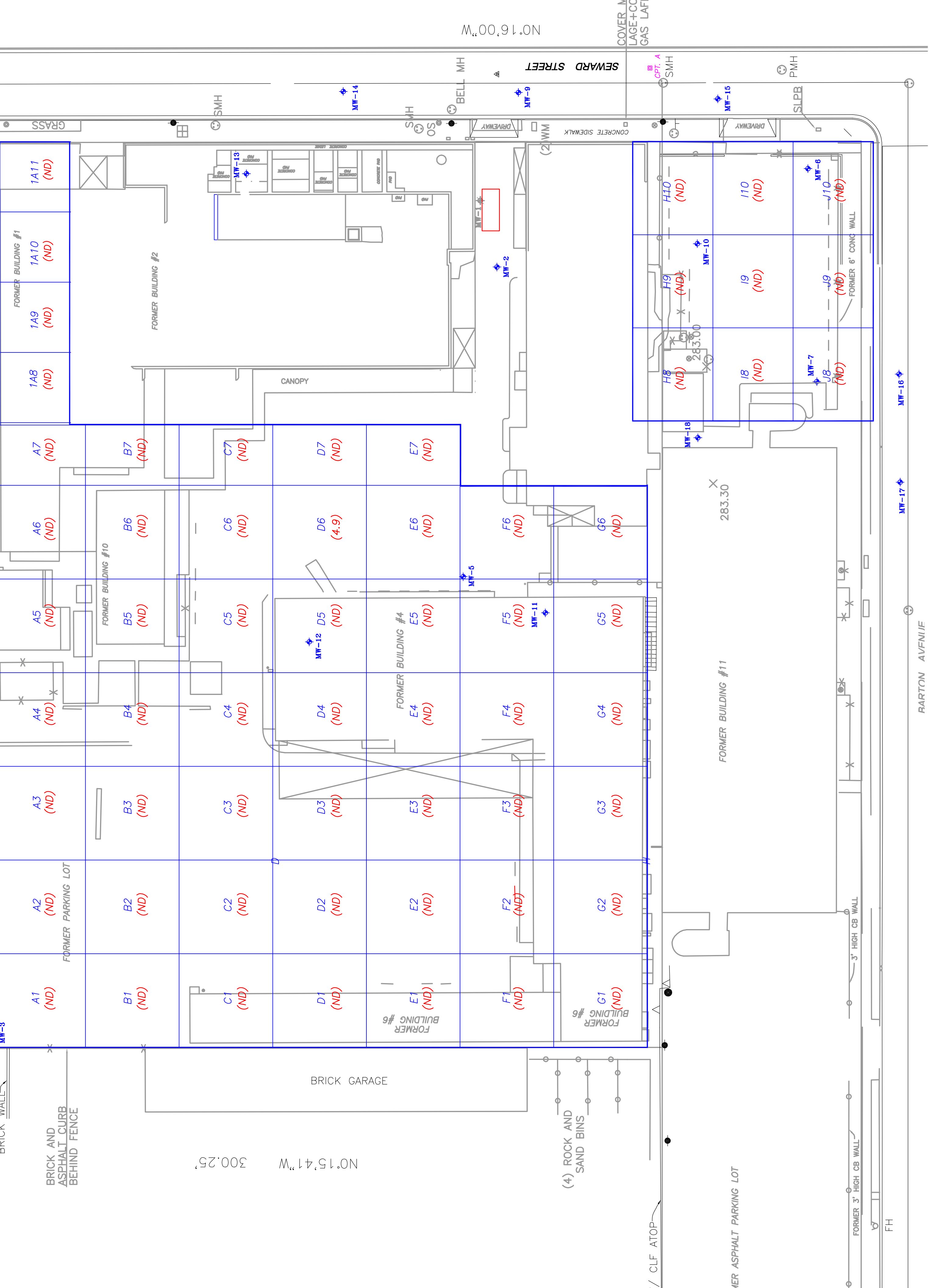
PCE – TETRACHLOROETHENE

ALL SAMPLES ARE IN MICROGRAMS PER LITER (ug/kg)

Information To Build On



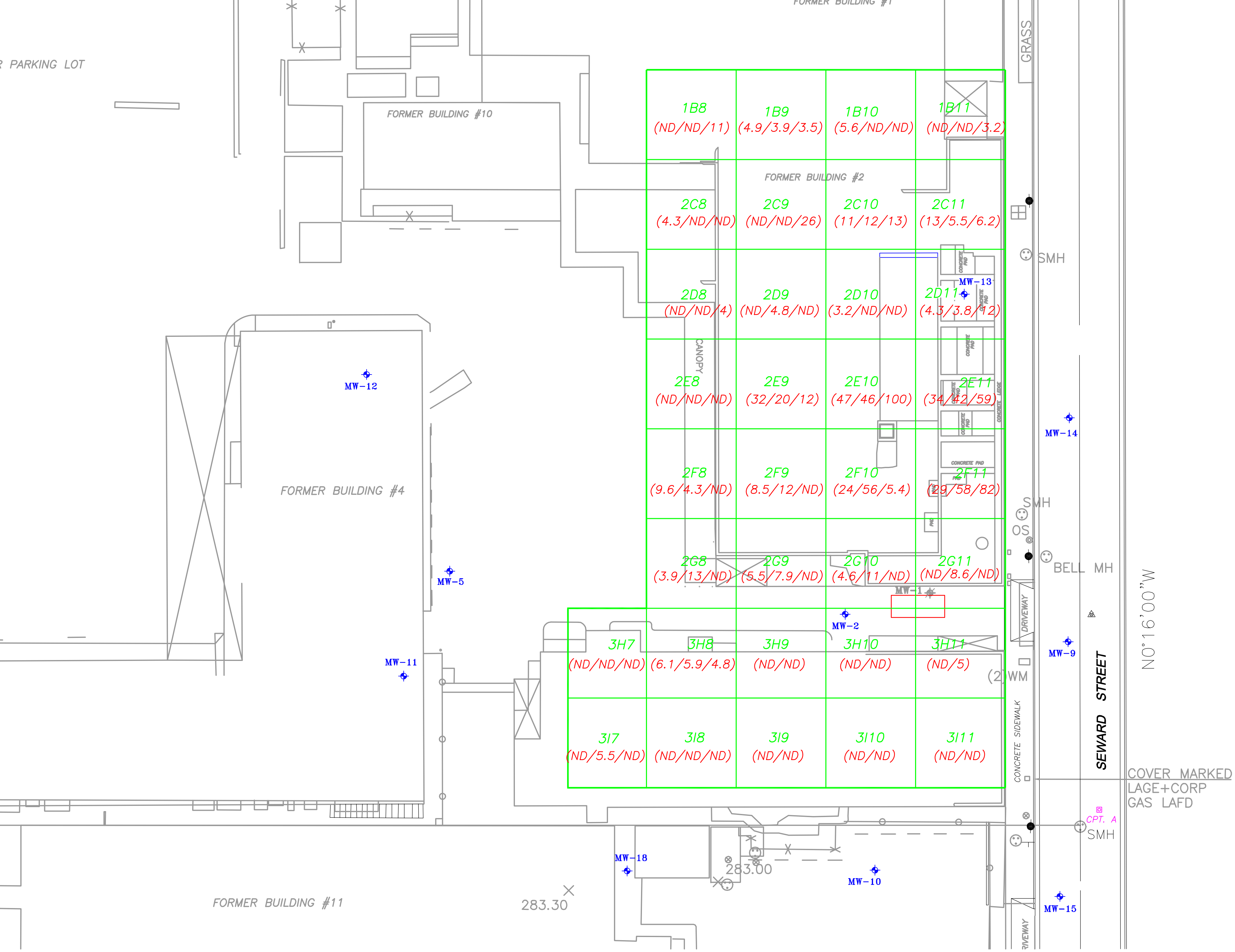
Information To Build On



PCE – TETRACHLOROETHENE

ALL SAMPLES ARE IN MICROGRAMS PER LITER (ug/kg)

Information To Build On



PCE – TETRACHLOROETHENE

ALL SAMPLES ARE IN MICROGRAMS PER LITER (ug/kg)

ORING WELL

(13/5.5/6.2) – INDICATES SAMPLES COLLECTED AT DEPTHS OF 3, 6 AND 9 FEET

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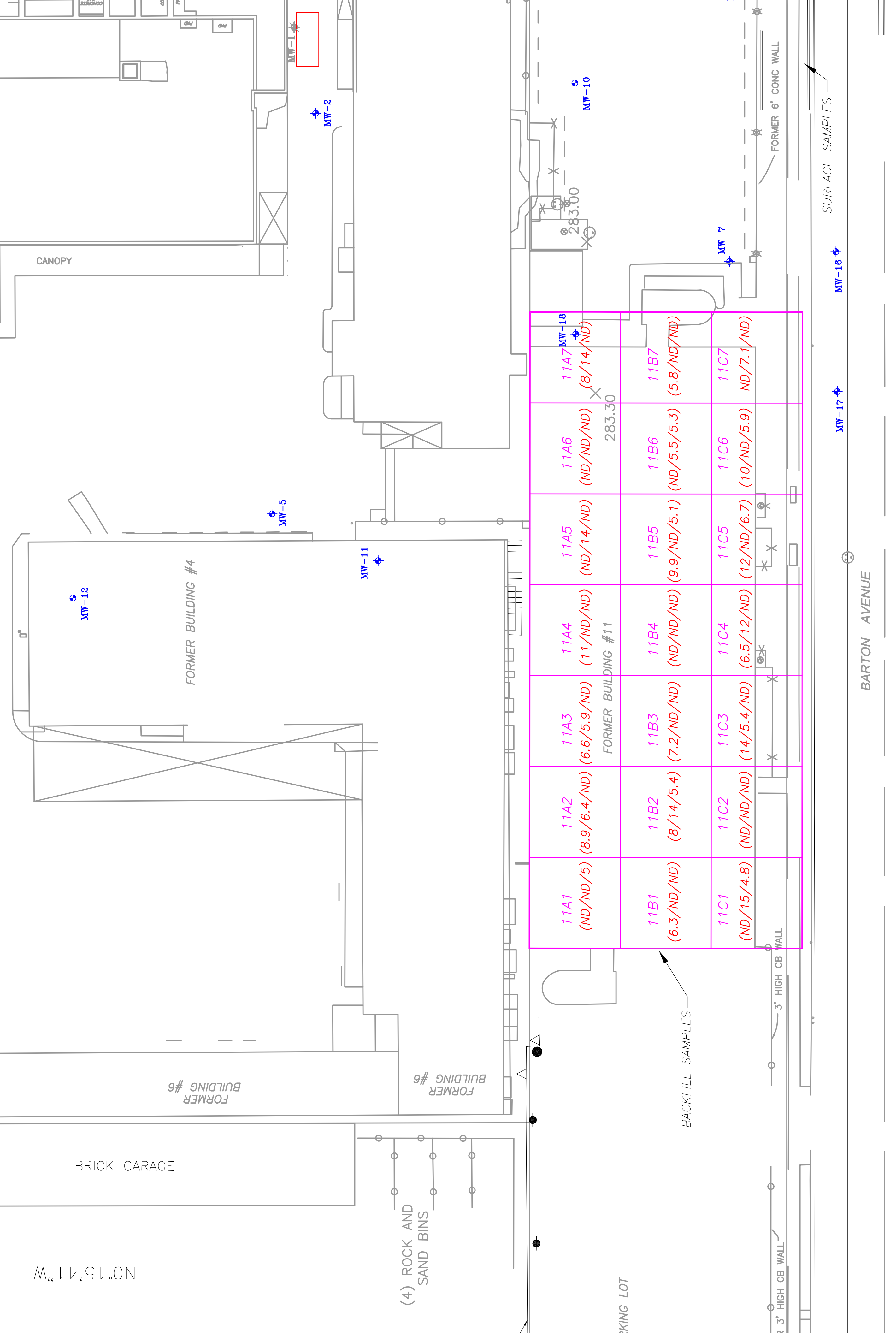
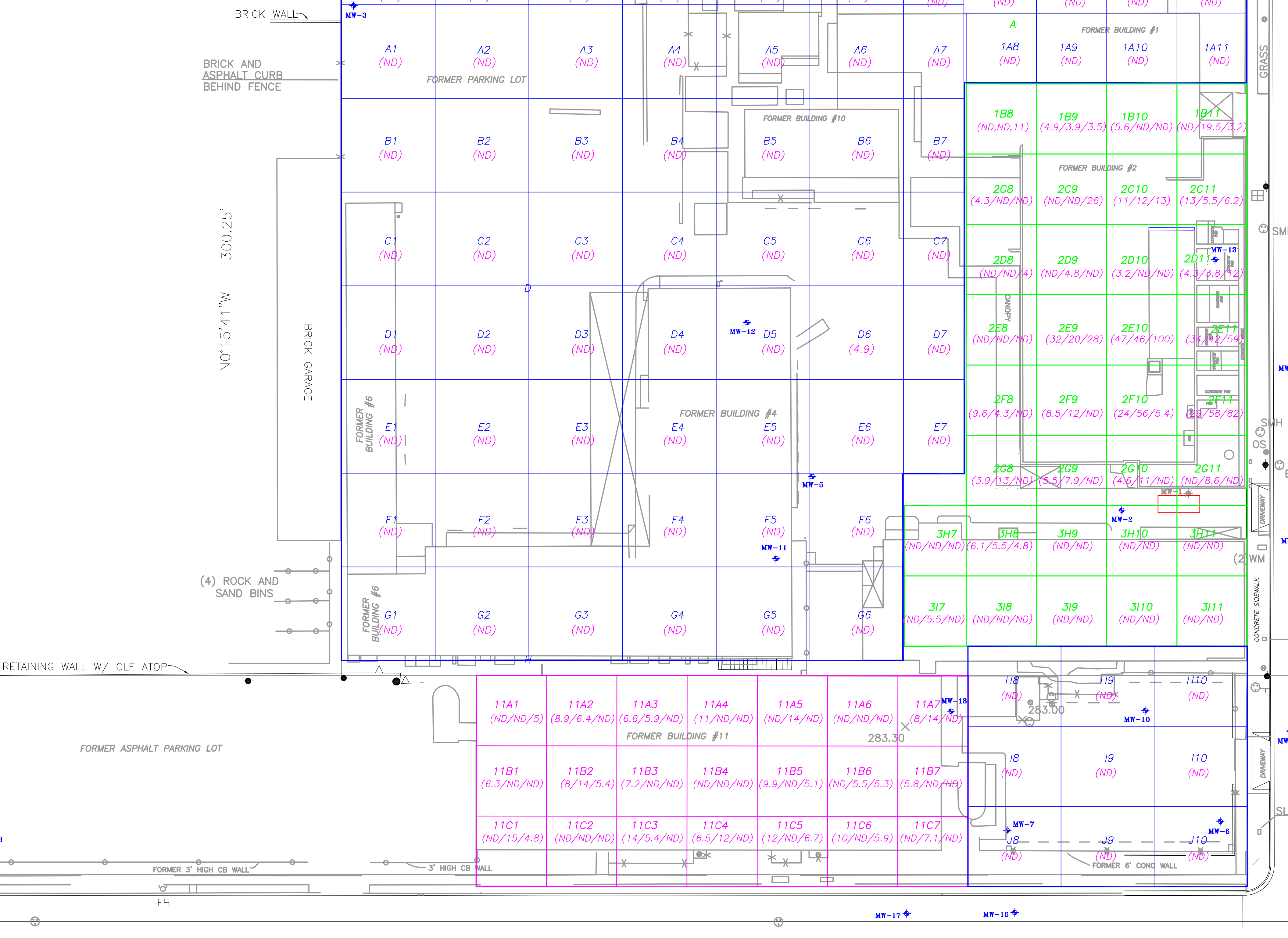


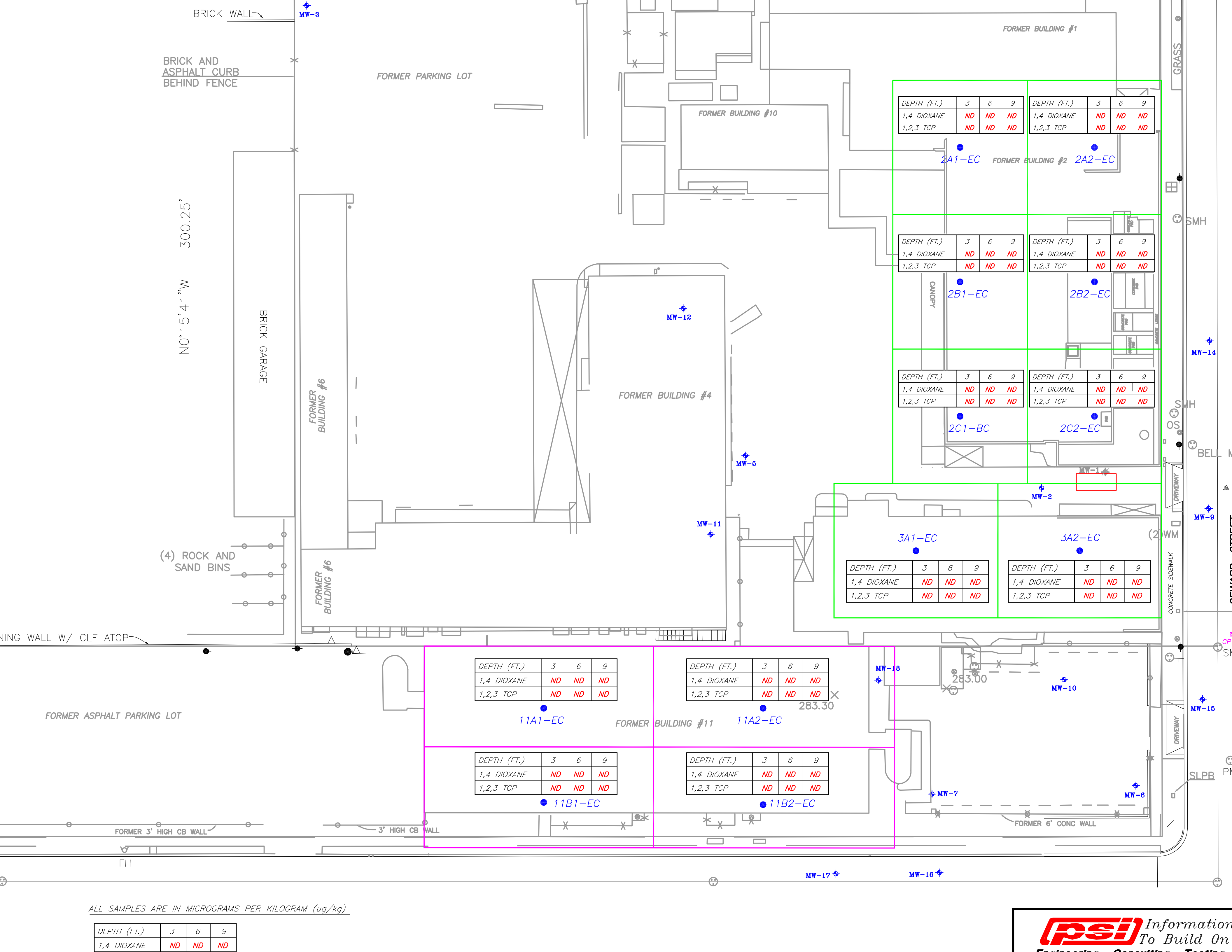
PCE – TETRACHLOROETHENE

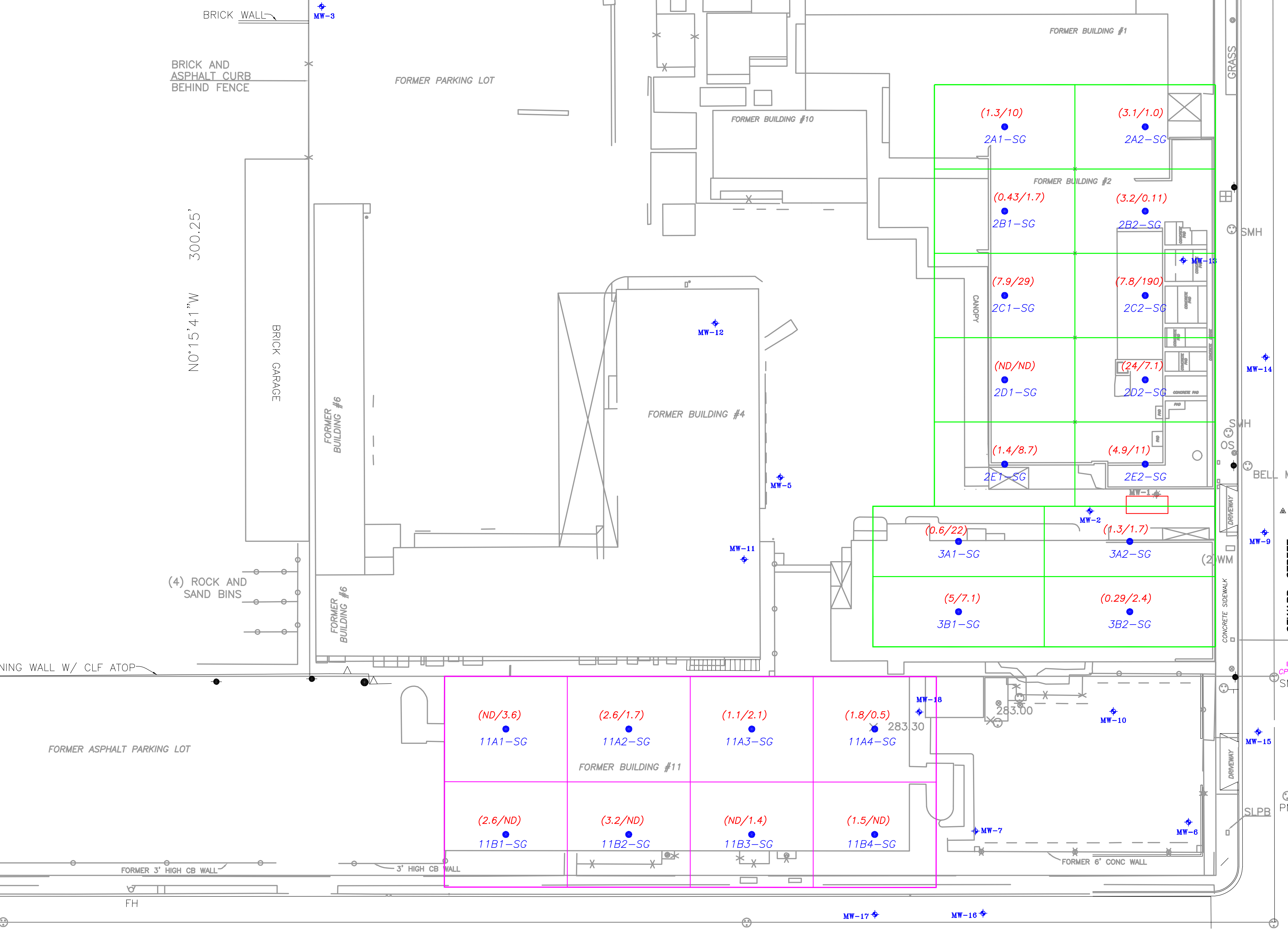
ALL SAMPLES ARE IN MICROGRAMS PER LITER (ug/kg)

(8/14/5.4) – INDICATES SAMPLES COLLECTED AT DEPTHS OF 3, 6 AND 9 FEET BELOW GROUND SURFACE FOR PCE



PCE ALL SAMPLES ARE FOR HVOC'S
ALL SAMPLES ARE IN MICROGRAMS PER LITER (ug/kg)


BRICK WALL
MW-3
BRICK AND ASPHALT CURB BEHIND FENCE
FORMER PARKING LOT
FORMER BUILDING #1
FORMER BUILDING #10
FORMER BUILDING #2
GRASS
2A1-EC
2A2-EC
2B1-EC
2B2-EC
2C1-BC
2C2-EC
3A1-EC
3A2-EC
11A1-EC
11A2-EC
11B1-EC
11B2-EC
DEPTH (FT.) 3 6 9
1,4 DIOXANE ND ND ND
1,2,3 TCP ND ND ND
CANOPY
SMH
MW-14
MW-12
MW-5
MW-11
MW-1
MW-2
MW-9
MW-18
MW-10
MW-15
MW-7
MW-6
MW-17
MW-16
SMH
OS
BELL
DRIVEWAY
(2) WM
CONCRETE SIDEWALK
SLPB
300.25'
N0°15'41"W
BRICK GARAGE
FORMER BUILDING #6
FORMER BUILDING #4
FORMER BUILDING #11
(4) ROCK AND SAND BINS
NING WALL W/ CLF ATOP
FORMER ASPHALT PARKING LOT
283.00
283.30
FORMER 3' HIGH CB WALL
3' HIGH CB WALL
FORMER 6' CONC WALL
FH
ALL SAMPLES ARE IN MICROGRAMS PER KILOGRAM (ug/kg)
DEPTH (FT.) 3 6 9
1,4 DIOXANE ND ND ND
Information To Build On



ALL SAMPLES ARE IN MICROGRAMS PER KILOGRAM (ug/kg)

Information To Build On

APPENDICES A - E

SOIL REMEDIATION REPORT
CONSOLIDATED FILM INDUSTRIES, LLC PROPERTY

959 NORTH SEWARD STREET
HOLLYWOOD, CALIFORNIA 90038
SLIC No. 1131

Prepared by:

Professional Service Industries, Inc.
3960 Gilman Street
Long Beach, California 90815
Telephone: (562) 597-3977
June 28, 2006
PSI Project No. 562- 6g- 001

APPENDIX A

CITY OF LOS ANGELES METHANE GAS ORDINANCE

Home Back Department of Building and Safety

CITY LA DBS

DEPARTMENT OF BUILDING AND SAFETY

PARCEL PROFILE REPORT

Report Execution Date: February 28, 2006 - 02:45 PM

Job Address(es) -
1) 6624 W. ROMAINE ST. , 90038
2) 933 N. SEWARD ST. , 90038
3) 959 N. SEWARD ST. , 90038

1. PARCEL LEGAL DESCRIPTION INFORMATION:

Legal Description:	
Tract :	TR 215
Block :	
Lot :	1
Arb :	4
Modifier:	PT
Map Reference Number for Tract Recordation:	M B 14-42/43
Parcel ID Number; (PIN):	144B185 969
Assessor Parcel Number:	5532-014-038 click on APN to see map

2. BASIC ZONING INFORMATION FOR PARCEL:

Alquist-Priolo Fault Zone:	NO
Council District:	4
Community Redevelopment Area:	NO
District Map:	144B185
Flood Hazard Zone:	NO
Hillside Grading Area:	NO
Hillside Ordinance Area:	NO
Planning Area & Community Name:	Hollywood
Zone(s):	MR1-1

3. GEOGRAPHICALLY ORIENTED" PARCEL INFORMATION:

Building and Safety Branch Office:	LA
Census Tract:	1) 1918.10 2) 1919.00

Energy Zone:	9
Fire District:	2
Lot Cut Date:	1) 08/28/1947 2) PRIOR-07/29/1962
Methane Hazard Site:	Methane Zone
Near Source Zone Distance:	2
Parcel Area (sqft):	116226.4
Thomas Brothers Map Grid:	593-E6

4. **CITY DOCUMENTS ASSOCIATED WITH PARCEL:**

Affidavit:	AFF-36067
City Planning Cases:	1) CPC-18473-ZC 2) CPC-1984-1-HD 3) CPC-8222
Ordinance:	1) ORD-161116 2) ORD-161687
Parking Layout:	1) PKG-5023 2) PKG-5024 3) PKG-5025

5. **OTHER PARCEL RELATED INFORMATION:**

Seismic Gas Shut Off Valve Installed: NO

Parcel Profile Report Disclaimer

The purpose of this application is to allow easy access and visual display of city parcel legal and zoning information as a convenience to our customers. Every reasonable effort has been made to assure the accuracy of the data provided; nevertheless, some information may not be completely accurate and more importantly, it may need to be properly interpreted by city staff. The City of Los Angeles assumes no responsibility arising from the use of this information and it is provided without a warranty of any kind, either expressed or implied. We do not recommend basing important business, legal, or real estate transactions solely on this information without receiving validation and interpretation of the data from staff at your nearest LADBS branch office.

--- Parcel Profile Report Definitions ---

ORDINANCE NO. 175790

An ordinance amending Section 91.106.4.1 and Division 71 of Article 1, Chapter IX of the Los Angeles Municipal Code to establish citywide methane mitigation requirements and include more current construction standards to control methane intrusion into buildings.

WHEREAS, there was a fire in the Fairfax Area of the City of Los Angeles in 1985, due to high volume of methane gas seepage through cracks in the concrete floor of a building;

WHEREAS, the City of Los Angeles adopted an Ordinance, (Ord. No. 161,552, Eff. 8-31-86) which required mitigation for methane gas intrusion into buildings located in the Fairfax area of Los Angeles;

WHEREAS, methane gas which percolates from subsurface geological formations to the atmosphere is a natural phenomenon;

WHEREAS, in 1999, large pockets of methane gas in subsurface geological formations were discovered at the Playa Vista project area of West Los Angeles;

WHEREAS, in 2001, new methane mitigating systems were developed and used in the Playa Vista Project;

WHEREAS, in Council File No. 01-1305, the City Council directed the City=s Departments of Building and Safety, Engineering, and Planning, as well as, the Chief Legislative Analyst and Office of Administrative and Research Services, to form a work group and recommend uniform safety requirements regarding methane, for all future development throughout the City;

WHEREAS, a study by the work group was conducted regarding areas throughout the City of Los Angeles to identify areas where subsurface methane gas may be found;

WHEREAS, from the information and data provided by the Division of Oil, Gas and Geothermal Resources, Department of Conservation, State of California, City of Los Angeles Department of Environmental Affairs, Department of Building and Safety and the Fire Department a map was plotted by the Department of Public Works to show other areas within the City of Los Angeles, where there exists a possible potential hazard of methane gas;

WHEREAS, modem construction standards were successfully used as methane mitigation systems for many projects in Playa Vista;

WHEREAS, the work group utilized the research and knowledge gained through the development of the Playa Vista methane mitigation systems;

WHEREAS, many of the modern construction standards to mitigate potential hazard of methane gas intrusion into building were incorporated into the Los Angeles Municipal Code as more restrictive provisions than found in the 2001 edition of the California Building Code based on local geological conditions;

NOW, THEREFORE,

THE PEOPLE OF THE CITY OF LOS ANGELES
DO ORDAIN AS FOLLOWS:

Section 1. Exception 6 of Section 91.106.4.1 of the Los Angeles Municipal Code is amended to read:

> **6.** The Department shall have the authority to withhold permits on projects located within a Methane Zone or Methane Buffer Zone established under Sections 91.7101 *et seq.* of this Code. Permits may be issued upon submittal of detailed plans that show adequate protection against flammable gas incursion by providing the installation of suitable methane mitigation systems.

Sec. 2. Division 71 of Article 1, Chapter IX of the Los Angeles Municipal Code is amended to read:

DIVISION 71
METHANE SEEPAGE REGULATIONS

SEC. 91.7101. PURPOSE.

This division sets forth the minimum requirements of the City of Los Angeles for control of methane intrusion emanating from geologic formations. The requirements do not regulate flammable vapor that may originate in and propagate from other sources, which include, but are not limited to, ruptured hazardous material transmission lines, underground atmospheric tanks, or similar installations.

SEC. 91.7102. DEFINITIONS.

For the purpose of this division, certain words and phrases are defined as follows:

Alarm System shall mean a group of interacting elements consisting of components and circuits arranged to monitor and annunciate the status of gas concentration levels or supervisory signal-initiating devices and to initiate the appropriate response to those signals.

Buildings with Raised Floor Construction shall mean a building with the bottom of the floor system raised above grade where the clearance for each of the following items shall be at least: 12 inches for the girder, 18 inches for the floor joist and 24 inches for the structural floors.

Cable or Conduit Seal Fitting shall mean an approved fitting provided in a cable or conduit system to prevent the passage of gases, vapors, or flames through electrical cable or conduit.

Design Methane Concentration shall mean the highest concentration of methane gas found during site testing.

Design Methane Pressure shall mean the highest pressure of methane gas found during site testing.

De-watering System shall mean a permanent water removal system, consisting of perforated pipes, gravel, sump pumps and pits, designed to permanently maintain the ground water level one foot below the sub-slab vent system.

Gas Detection System shall mean one or more electrical devices that measure the methane gas concentration and communicate the information to the occupants, building management, central station or alarm company with audible or visual signals.

Gravel Blanket shall mean a layer of gravel, sand, or approved material designed to transmit gas to the vent riser without obstructing the venting system.

Impervious Membrane shall mean a continuous gas barrier made of material approved by the Department and installed beneath a building for the purpose of impeding methane migration to the interior of the building.

Mechanical Extraction System shall mean a system operated by a machine which is designed to remove methane gas from below the impervious membrane through the use of fans, blowers, or other powered devices.

Mechanical Ventilation shall mean a fan, blower or other similar group of interacting elements operated by a machine within the building, which introduce and/or remove air from an enclosed space.

Narrow Building shall mean a building that has a width less than 50 feet, a footprint of less than 50,000 square feet and having a minimum 2-foot wide landscaped area immediately adjacent to the exterior wall for at least 50 percent of the perimeter of the building.

Oil Well shall mean a deep hole or shaft sunk into the earth for the exploration of oil or gas; or which is on lands producing or reasonably presumed to contain oil or gas; or which is drilled for the purpose of injecting fluids or gas for stimulating oil recovery, re-pressurizing or pressure maintenance of oil or gas, or disposing of waste fluids from an oil or gas field.

Perforated Horizontal Pipe shall mean an approved pipe which contains a series of small holes or narrow openings placed equidistant along the length of the approved pipe, which is placed horizontally beneath the foundation of a building, for the purpose of venting accumulated methane gas and preventing the development of elevated gas pressures, or for drainage of ground water to an approved location.

PPMV shall mean Parts per Million by Volume.

Pressure Sensor shall mean a device that measures and communicates surrounding gas pressure to an alarm or control system.

Single Station Gas Detector shall mean a device consisting of electrical components capable of measuring methane gas concentration and initiating an alarm.

Trench Dam shall mean an approved subsurface barrier installed within a furrow or ditch adjacent to the foundation of a building, for the purpose of preventing the migration of methane gas beneath that foundation.

Unobstructed Opening shall mean a permanent clearing or gap in the walls, floors or roof-ceiling assemblies without windows, doors, skylights or other solid barriers that may restrict the flow of air.

Vent Riser shall mean an approved pipe which is placed vertically with joints and fittings connected to Perforated Horizontal Pipes to convey and discharge the gas to the atmosphere.

SEC. 91.7103. GENERAL METHANE MITIGATION REQUIREMENTS.

All new buildings and paved areas located in a Methane Zone or Methane Buffer Zone shall comply with these requirements and the Methane Mitigation Standards established by the Superintendent of Building. The Methane Mitigation Standards provide information describing the installation procedures, design parameters and test protocols for the methane gas mitigation system, which are not set forth in the provisions of this division.

Boundaries of the Methane Zones and Methane Buffer Zones are shown on the AMethane and Methane Buffer Zones Map@ designated as Map number A-20960, dated September 21, 2003, which is attached to Council File No. 01-1305.

SEC. 91.7104. GENERAL METHANE REQUIREMENTS.

91.7104.1. Site Testing. Site testing of subsurface geological formations shall be conducted in accordance with the Methane Mitigation Standards. The site testing shall be conducted under the supervision of a licensed Architect or registered Engineer or Geologist and shall be performed by a testing agency approved by the Department.

The licensed Architect, registered Engineer or Geologist shall indicate in a report to the Department, the testing procedure, the testing instruments used to measure the concentration and pressure of the methane gas. The measurements of the concentration and pressure of the methane gas shall be used to determine the Design Methane Concentration and the Design Methane Pressure. The Design Methane Concentration and the Design Methane Pressure shall determine the Site Design Level of Table 71.

> **EXCEPTION:** Site testing is not required for buildings designed to the requirements of Site Design Level V as described in Table 71, or for buildings designed using the exceptions set forth in Sections 91.7104.3.2 or 91.7104.3.3.

91.7104.2. Methane Mitigation Systems. All buildings located in the Methane Zone and Methane Buffer Zone shall provide a methane mitigation system as required by Table 71 based on the appropriate Site Design Level. The Superintendent of Building may approve an equivalent methane mitigation system designed by an Architect, Engineer or Geologist.

Table 71 prescribes the minimum methane mitigation systems, such as, the passive, active and miscellaneous systems, depending on the concentration and pressure of the methane present at the site. Each component of the passive, active and miscellaneous systems shall be constructed of an approved material and shall be installed in accordance with the Methane Mitigation Standards.

91.7104.2.1. Passive System. The passive system is a methane mitigation system installed beneath or near the building. The components of the passive system may consist of a de-watering system, the sub-slab vent system, and impervious membrane. The sub-slab vent system shall consist of Perforated Horizontal Pipes, Vent Risers, and Gravel Blankets for the purpose of collecting and conveying methane from the soil underneath the building to the atmosphere.

91.7104.2.1.1. De-watering System. The de-watering system is used to lower the ground water table to a level more than 12 inches below the bottom of the Perforated Horizontal Pipes. The de-watering system shall conduct ground water to an approved location.

91.7104.2.2. Active System. The components of the active system shall consist of one or more of the following, sub-slab system, gas detection system, mechanical ventilation, alarm system and control panel. All components shall be constructed of an approved material, installed in accordance with the Methane Mitigation Standards.

91.7104.2.3. Miscellaneous System. The components of the miscellaneous system may consist of Trench Dam, Cable or Conduit Seal Fitting, or Additional Vent Risers. The component of the miscellaneous system shall be a material approved by the Department and shall be installed in accordance with the Methane Mitigation Standards.

91.7104.3. Exceptions to Table 71. The provisions of this section are exceptions to the construction requirements of Table 71.

91.7104.3.1. Narrow Buildings. Narrow Buildings may substitute Pressure Sensors below the Impervious Membrane in lieu of the Gas Detection System and Mechanical Ventilation, if the installation of the Pressure Sensors below the Impervious Membrane is not required per Table 71 and the Narrow Building is constructed with a minimum two feet wide landscaped area covering at least 50 percent of the ground immediately adjacent to the exterior building walls.

91.7104.3.2. Buildings with Raised Floor Construction. If a Building with Raised Floor Construction has underfloor ventilation construction in accordance with the standards below, then the utilities shall be installed with Trench Dams and Cable or Conduit Seal Fittings and a four inch thick gravel blanket shall be installed under and around the elevator pits.

Underfloor ventilation shall be provided by an approved mechanical ventilation system capable of exhausting underfloor air an equivalent of every 20 minutes, or by openings in the underfloor area complying with the following:

A. The top of the openings shall be located not more than 12 inches below the bottom of the floor joists.

B. The openings shall be distributed approximately equally and located to provide cross ventilation, for example, by locating the opening along the length of at least two opposite sides of the building.

C. The openings shall be the larger of:

1. Openings of not less than 1.5 square feet for each 25 linear feet or fraction of exterior wall; or

2. Openings shall be equal to 1 percent of underfloor area.

D. The openings may be covered with corrosion-resistant wire mesh with mesh openings of greater than 3 inch and less than 2 inch in dimension.

91.7104.3.3. Buildings with Natural Ventilation. A building with natural ventilation is a building constructed with the following:

A. The Unobstructed Openings shall exchange outside air.

B. The size of the Unobstructed Opening shall be the larger of:

1. Opening equal to at least 25 percent of the total perimeter wall area of the lowest level of the building, or

2. Opening equal to at least 25 percent of the floor area of the lowest level of the building.

C. The Unobstructed Openings shall be evenly distributed and located within the upper portion of at least two opposite exterior walls of the lowest level of the building.

Buildings with natural ventilation that are constructed as described above, shall have the utilities constructed with Trench Dams and Cable or Conduit Seal Fittings. If there is an enclosed room or space less than 150 square feet within the building, then the enclosed room or space shall be constructed with vent openings that comply with the requirements of Section 91.7104.3.4.

91.7104.3.4. Enclosed Room or Space within Building. Individual enclosed rooms or enclosed spaces with floor area less than 2,000 square feet may be exempt from providing the Active System as required by Table 71, provided the vent openings comply with all of the following:

1. Vent openings are Unobstructed Openings, except screens made with at least 3 inch mesh or wind driven turbines on the roof shall be permitted.

2. The aggregate size of vent openings shall be the larger of either five percent of the total floor area of the room or the area of enclosed space, or ten percent of the area of walls on the perimeter of the room or enclosed space.

3. The vent openings shall be located to prevent the accumulation of methane gases within the room or enclosed space.

4. The top of the vent opening shall be located not more than 12 inches below roof joists or ceiling joists if located in a wall of a building.

5. The vent openings shall be located on either two opposite walls or two adjacent walls of the room or enclosed space if located in a wall of a building.

6. The vent openings shall be located no more than 50 feet from any point within the room or enclosed space.

7. When using wind driven turbine, the area of the vent opening shall be calculated by the area of the opening at the attachment of the wind driven turbine at the roof.

8. When the vent opening is located in a wall of an adjoining room, then the adjoining room shall be constructed of either an Active System, or have Natural Ventilation as described in Section 91.7104.3.3.

91.7104.3.5. Single Family Dwelling. Single Family Dwellings and buildings accessory to single family dwellings shall comply with all the Methane Mitigation requirements of Table 71, except that the following mitigation system may be substituted:

A. Pressure Sensors below Impervious Membrane may be installed in lieu of

Gas Detection System when Pressure Sensors below Impervious Membrane is not required; or

B. Single Station Gas Detectors with battery back-up may be installed in lieu of Alarm System and Gas Detection System; or

C. 6 mil thick Visquene may be used in lieu of Impervious Membrane, when the Site Design Levels are I or II; or

D. Additional Vent Risers or Mechanical Ventilation may be omitted for buildings with width less than 50 feet and footprint less than 6,000 square feet in area; or

E. Vent Risers may be substituted in lieu of Mechanical Extraction System, provided the Vent Risers are designed at a rate twice that established by the Methane Mitigation Standards.

91.7104.3.6. Buildings Located in the Methane Buffer Zone. A building, located entirely or partially in the Methane Buffer Zone, shall be designed to the requirements of the Methane Buffer Zone. Buildings located in the Methane Buffer Zone shall not be required to provide any methane mitigation system, if the Design Methane Pressure is less than or equal to two inches of water pressure and is either of the following:

A. Areas which qualify as Site Design Level I or II; or

B. Areas which qualify as Site Design Level III and the utilities are installed with Trench Dams and Cable or Conduit Seal Fitting.

91.7104.3.7. De-watering System. A De-watering system is not required for either of the following:

A. If during the site testing, the groundwater level is deeper than 10 feet below the Perforated Horizontal Pipes, or

B. If the soil investigation or analysis, as approved by the Department, reveals the groundwater level is more than 12 inches below the bottom of the Perforated Horizontal Pipes.

91.7104.3.8. Buildings Located in the First Phase Playa Vista Project. The First Phase Playa Vista project, as approved by the City on September 21, 1993 and December 8, 1995, shall comply with the methane mitigation program as required by the Department pursuant to the Methane Prevention, Detection and Monitoring Program approved by the Department on January 31, 2001, in lieu of the requirements of this division.

91.7104.4. Paved Areas. Paved areas that are over 5,000 square feet in area and within 15 feet of the exterior wall of a commercial, industrial, institutional or residential building, shall be vented in accordance with the Methane Mitigation Standards.

EXCEPTION: Paved areas located in the Methane Buffer Zone and which qualify for Site Design Levels I, II or III.

SEC. 91.7105. EXISTING BUILDINGS.

Additions, alterations, repairs, changes of use or changes of occupancy to existing buildings shall comply with the methane mitigation requirements of Sections 91.7104.1 and 91.7104.2, when required by Divisions 34, 81 or 82 of this Code.

Approved methane mitigation systems in existing buildings shall be maintained in accordance with Section 91.7106.

SEC. 91.7106. TESTING, MAINTENANCE AND SERVICE OF GAS-DETECTION AND MECHANICAL VENTILATION SYSTEMS.

All gas detection and mechanical ventilation systems shall be maintained and serviced in proper working condition and meet all requirements of the Electrical and Mechanical Code. The testing, maintenance and service procedure for each gasBdetection and mechanical ventilation systems shall be performed in accordance with the manufacturer=s current written instructions and the following:

A. Fire Department. The manufacturer=s instructions shall be approved by the Fire Department. Testing and servicing of each system shall be performed by a person certified by the Fire Department.

B. Notification Placard. A permanent notification placard shall be posted and maintained at the front entrance of a building that is constructed with Impervious Membrane, except in residential buildings. The placard shall indicate the presence of the Impervious Membrane.

SEC. 91.7107. EMERGENCY PROCEDURES.

With the exception of single-family dwellings, all buildings required by this division to have a gas-detection system or sub-slab vent system shall, subject to Fire Department approval, have established emergency procedures that include, but are not limited to, the following:

A. Assignment of a responsible person as safety director to work with the Fire Department in the establishment, implementation and maintenance of an emergency plan.

B. Conspicuous posting of the Fire Department=s telephone number in areas designated by the Fire Department.

C. Conspicuous posting of emergency plan procedures approved by the Fire Department.

SEC. 91.7108. APPLICATION OF METHANE SEEPAGE REGULATIONS TO LOCATIONS OR AREAS OUTSIDE THE METHANE ZONE AND METHANE BUFFER ZONE BOUNDARIES.

Upon a determination by the Department of Building and Safety that a hazard may exist from methane intrusion at a geographical location or in an area outside the boundaries established in Section 91.7103 of this Code, the Department of Building and Safety and the Fire Department may enforce any or all of the requirements of Division 71 of this Code as required to preclude potential fire or explosion from methane concentration.

SEC. 91.7109. ADDITIONAL REMEDIAL MEASURES.

91.7109.1. General Remedial Measures. In the event the concentration of methane gas in any building located in a Methane Zone or Methane Buffer Zone reaches or exceeds 25 percent of the minimum concentration of gas that will form an ignitable mixture with air at ambient temperature and pressure, the owner shall hire an engineer to investigate, recommend and implement mitigating measures. These measures shall be subject to approval of this Department and the Fire Department.

91.7109.2. Abandoned Oil Well. Any abandoned oil well encountered during construction shall be evaluated by the Fire Department and may be required to be re-abandoned in accordance with applicable rules and regulations of the Division of Oil, Gas and Geothermal Resources of the State of California. Buildings shall comply with these provisions and the requirements of Section 91.6105 of this Code, whichever is more restrictive.

TABLE 71. MINIMUM METHANE MITIGATION REQUIREMENTS.

Site Design Level			LEVEL I		LEVEL II		LEVEL III		LEVEL IV		LEVEL V
Design Methane Concentration (ppmv)			0-100		101-1,000		1,001-5,000		5,001-12,500		>12,500
Design Methane Pressure (inches of water pressure)			• 2	>2	• 2	>2	• 2	>2	• 2	>2	All Pressures
PASSIVE SYSTEM	De-watering System[1]		X	X	X	X	X	X	X	X	X
	Sub-Slab Vent System	Perforated Horizontal Pipes	X	X	X	X	X	X	X	X	X
		Gravel Blanket Thickness Under Impervious Membrane	2"	2"	2"	3"	2"	3"	2"	4"	4"
		Gravel Thickness Surrounding Perforated Horizontal Pipes	2"	2"	2"	3"	2"	3"	2"	4"	4"
		Vent Risers	X	X	X	X	X	X	X	X	X
	Impervious Membrane		X	X	X	X	X	X	X	X	X
ACTIVE SYSTEM	Sub-Slab System	Pressure Sensors Below Impervious Membrane								X	X
		Mechanical Extraction System[2]								X	X
	Lowest Occupied Space System	Gas Detection System[3]		X		X	X	X	X	X	X
		Mechanical Ventilation[3, 4, 5]		X		X	X	X	X	X	X
		Alarm System		X		X	X	X	X	X	X
	Control Panel			X		X	X	X	X	X	X
MISC. SYSTEM	Trench Dam		X	X	X	X	X	X	X	X	X
	Conduit or Cable Seal Fitting		X	X	X	X	X	X	X	X	X
	Additional Vent Risers[6]										X

X = Indicates a Required Mitigation Component

[1] See Section 91.7104.3.7 for exception.

[2] The Mechanical Extraction System shall be capable of providing an equivalent of a complete change of air every 20 minutes of the total volume of the Gravel Blanket.

[3] See Section 91.7104.3.1 for Narrow Buildings.

[4] The Mechanical Ventilation systems shall be capable of providing an equivalent of one complete change of the lowest occupied space air every 15 minutes.

[5] Vent opening complying with Section 91.7104.3.4 may be used in lieu of mechanical ventilation.

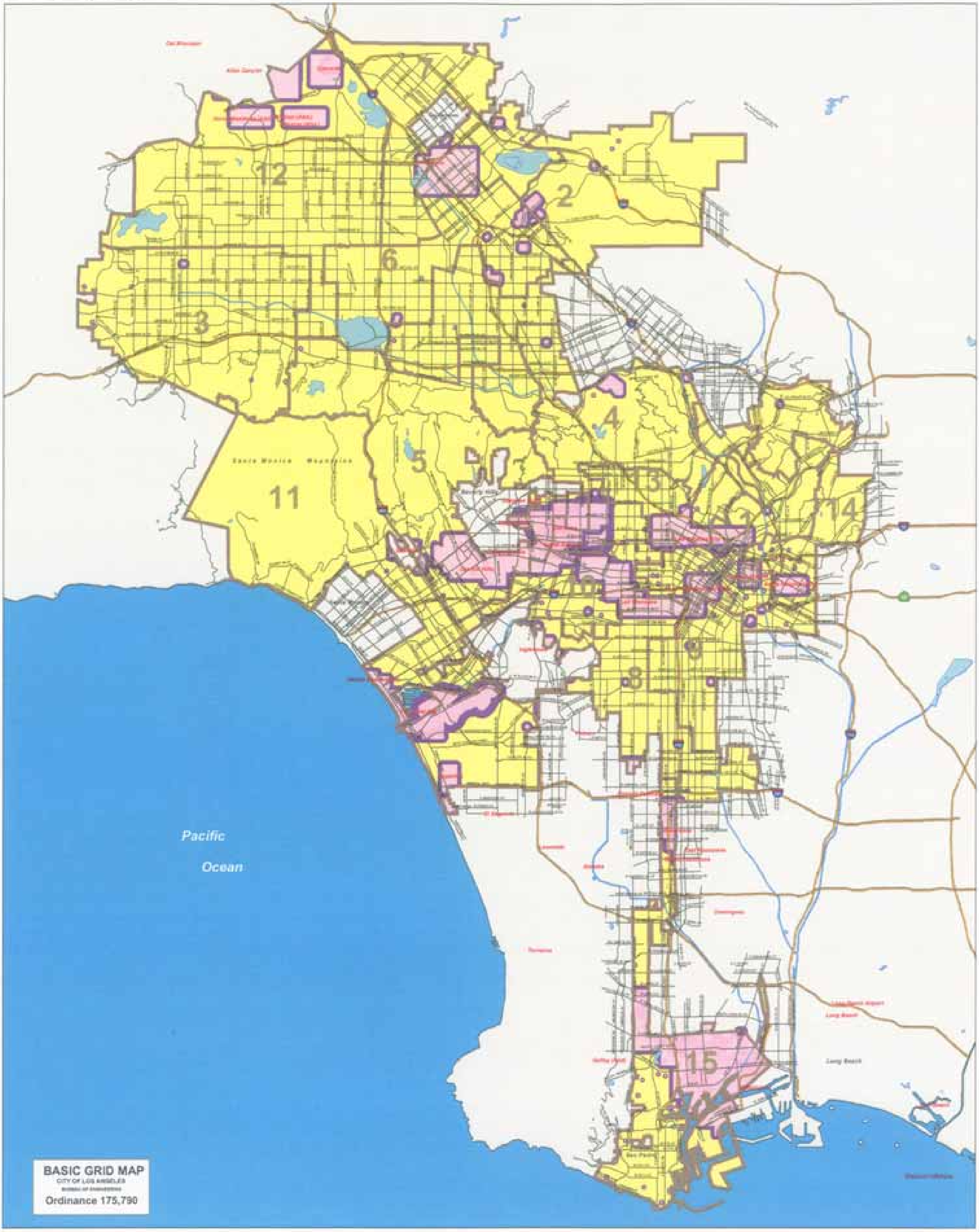
[6] The total quantity of installed Vent Risers shall be increased to double the rate for the Passive System.

Sec. 3. The City Clerk shall certify to the passage of this ordinance and have it published in accordance with Council policy, either in a daily newspaper circulated in the City of Los Angeles or by posting for ten days in three public places in the City of Los Angeles: one copy on the bulletin board located in the Main Street lobby to the City Hall; one copy on the bulletin board located at the ground level at the Los Angeles Street entrance to the Los Angeles Police Department; and one copy on the bulletin board located at the Temple Street entrance to the Los Angeles County Hall of Records.

I hereby certify that this ordinance was passed by the Council of the City of Los Angeles, at its meeting of February 12, 2004.

J. MICHAEL CAREY, City Clerk
By Maria Kostrencich, Deputy
Approved February 12, 2004
JAMES K. HAHN, Mayor
Approved as to Form and Legality
January 8, 2004
Rockard J. Delgadillo, City Attorney
By Sharon Siedorf Cardenas
Assistant City Attorney
C.F. 01-1305

EFFECTIVE DATE: 3-29-04



BASIC GRID MAP
CITY OF LOS ANGELES
BUREAU OF ENGINEERING
Ordinance 175,790

METHANE AND METHANE BUFFER ZONES

CITY OF LOS ANGELES

- Methane Zone
- Methane Buffer Zone
- Council District Boundary

APPENDIX B

SITE REMEDIATION PHOTOS

Soil Excavation and Disposal

RegenOx Injection

RegenOx Injection

RegenOx Mixing

In Situ Soil Mixing

In Situ Soil Mixing

In Situ Soil Mixing

Present Site Condition

APPENDIX C

REGENOX DOCUMENTATION MATERIAL

Regen OX – Part A (Oxidizer Complex)

Material Safety Data Sheet (MSDS)

Last Revised: November 7, 2005

Section 1 – Supplier Information and Material Identification

Supplier:

REGENESIS
1011 Calle Sombra
San Clemente, CA 92673
Telephone: 949.366.8000
Fax: 949.366.8090
E-mail: info@regenesis.com

Chemical Description:	A mixture of sodium percarbonate [$2Na_2CO_3\cdot 3H_2O_2$], sodium carbonate [Na_2CO_3], sodium silicate and silica gel.
Chemical Family:	Inorganic Chemicals
Trade Name:	Regen Ox – Part A (Oxidizer Complex)
Product Use:	Used to remediate contaminated soil and groundwater (environmental applications)

Section 2 – Chemical Information/Other Designations

CAS No.	Chemical
15630-89-4	Sodium Percarbonate
5968-11-6	Sodium Carbonate Monohydrate
1344-09-8	Silicic Acid, Sodium Salt, Sodium Silicate
63231-67-4	Silica Gel

Section 3 – Physical Data

Form:	Powder
Color:	White
Odor:	Odorless
Melting Point:	NA
Boiling Point:	NA

Section 3 – Physical Data (cont)

Flammability/Flash Point:	NA
Vapor Pressure:	NA
Bulk Density:	0.9 – 1.2 g/cm^3
Solubility:	Min 14.5g/100g water @ 20 °C
Viscosity:	NA
pH (3% solution):	~ 10.5
Decomposition Temperature:	Self-accelerating decomposition with oxygen release starts at 50 °C.

Section 4 – Reactivity Data

Stability:	Stable under normal conditions
Conditions to Avoid/Incompatibility:	Acids, bases, salts of heavy metals, reducing agents, and flammable substances
Hazardous Decomposition Products:	Oxygen. Contamination with many substances will cause decomposition. The rate of decomposition increases with increasing temperature and may be very vigorous with rapid generation of oxygen and steam.

Section 5 – Regulations

TSCA Inventory Listed: Yes

CERCLA Hazardous Substance (40 CFR Part 302)

Listed Substance: *No*

Unlisted Substance: *Yes*

SARA, Title III, Sections 313 (40 CFR Part 372) – Toxic Chemical Release Reporting: Community Right-To-Know

Extremely Hazardous Substance:	No
WHMIS Classification:	C, D2B
Canadian Domestic Substance List:	Appears

Section 6 – Protective Measures, Storage and Handling

Technical Protective Measures

Storage:	Oxidizer. Store in a cool, well ventilated area away from all sources of ignition and out of the direct sunlight. Store in a dry location away from heat and in temperatures less than 40 $^{?}$C. Keep away from incompatible materials and keep lids tightly closed. Do not store in improperly labeled containers. Protect from moisture. Do not store near combustible materials. Keep containers well sealed. Store separately from reducing materials. Avoid contamination which may lead to decomposition.
Handling:	Avoid contact with eyes, skin and clothing. Use with adequate ventilation. Do not swallow. Avoid breathing vapors, mists or dust. Do not eat, drink or smoke in the work area. Label containers and keep them tightly closed when not in use. Wash hands thoroughly after handling.

Personal Protective Equipment (PPE)

Engineering Controls:	General room ventilation is required if used indoors. Local exhaust ventilation, process enclosures or other engineering controls may be needed to maintain airborne levels below recommended exposure limits. Avoid creating dust or mists. Maintain adequate ventilation at all times. Do not use in confined areas. Keep levels below recommended exposure limits. To determine actual exposure limits, monitoring should be performed on a routine basis.
Respiratory Protection:	For many conditions, no respiratory protection is necessary; however, in dusty or unknown conditions or when exposures exceed limit values a NIOSH approved respirator should be used.
Hand Protection:	Wear chemical resistant gloves (neoprene, rubber, or PVC).

Section 6 – Protective Measures, Storage and Handling (cont)

Eye Protection:	Wear chemical safety goggles. A full face shield may be worn in lieu of safety goggles.
Skin Protection:	Try to avoid skin contact with this product. Chemical resistant gloves (neoprene, PVC or rubber) and protective clothing should be worn during use.
Other:	Eye wash station.
Protection Against Fire & Explosion:	Product is non-explosive. In case of fire, evacuate all non-essential personnel, wear protective clothing and a self-contained breathing apparatus, stay upwind of fire, and use water to spray cool fire-exposed containers.

Section 7 – Hazards Identification

Potential Health Effects

Inhalation:	Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath, and irritations to mucous membranes, nose and throat.
Eye Contact:	Causes irritation, redness and pain.
Skin Contact:	Causes slight irritation.
Ingestion:	May be harmful if swallowed (vomiting and diarrhea).

Section 8 – Measures in Case of Accidents and Fire

After Spillage/Leakage:	Eliminate all ignition sources. Evacuate unprotected personnel and never exceed any occupational exposure limit. Shovel or sweep spilt material into plastic bags or vented containers for disposal. Do not return spilled or contaminated material to the inventory.
Extinguishing Media:	Water

First Aid

Eye Contact:	Flush eyes with running water for at least 15 minutes with eyelids held open. Seek a specialist.
Inhalation:	Remove affected person to fresh air. Seek medical attention if the effects persist.
Ingestion:	If the individual is conscious and not convulsing, give two-four cups of water to dilute the chemical and seek medical attention immediately. **Do Not** induce vomiting.

Section 8 – Measures in Case of Accidents and Fire (cont)

Skin Contact:	Wash affected areas with soap and a mild detergent and large amounts of water.

Section 9 – Accidental Release Measures

Precautions:	
Cleanup Methods:	Shovel or sweep spilt material into plastic bags or vented containers for disposal. Do not return spilled or contaminated material to the inventory.

Section 10 – Information on Toxicology

Toxicity Data

LD50 Oral (rat):	2,400 mg/kg
LD50 Dermal (rabbit):	Min 2,000 mg/kg
LD50 Inhalation (rat):	Min 4,580 mg/kg

Section 11 – Information on Ecology

Ecology Data

Ecotoxicological Information:	NA

Section 12 – Disposal Considerations

Waste Disposal Method

Waste Treatment:	Dispose of in an approved waste facility operated by an authorized contactor in compliance with local regulations.
Package (Pail) Treatment:	The empty and clean containers are to be recycled or disposed of in conformity with local regulations.

Section 13 – Shipping/Transport Information

D.O.T. Shipping Name:	Oxidizing Solid, N.O.S. [A mixture of sodium percarbonate [$2Na_2CO_3 \cdot 3H2O_2$], sodium carbonate [Na_2CO_3], sodium silicate and silica gel.]
UN Number:	1479
Hazard Class:	5.1
Labels:	5.1 (Oxidizer)
Packaging Group:	III

Section 14 – Other Information

HMIS® Rating	Health – 1 (slight)	Reactivity – 1 (slight)
	Flammability – 0 (none)	Lab PPE – goggles, gloves, and lab coat

HMIS® is a registered trademark of the National Painting and Coating Association.

Section 15 – Further Information

The information contained in this document is the best available to the supplier at the time of writing, but is provided without warranty of any kind. Some possible hazards have been determined by analogy to similar classes of material. The items in this document are subject to change and clarification as more information become available. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose.

Regen™

CHEMICAL OXIDATION REDEFINED...

RegenOx™ is an advanced in situ chemical oxidation technology designed to treat organic contaminants including high concentration source areas in the saturated and vadose zones*

PRODUCT FEATURES:

RegenOx product application

- Rapid and sustained oxidation of target compounds
- Easily applied with readily available equipment
- Destroys a broad range of contaminants
- More efficient than other solid oxidants
- Enhances subsequent bioremediation
- Avoids detrimental impacts to groundwater aquifers

HOW IT WORKS:

RegenOx maximizes in situ performance using a solid alkaline oxidant that employs a sodium percarbonate complex with a multi-part catalytic formula. The product is delivered as two parts that are combined and injected into the subsurface using common drilling or direct-push equipment. Once in the subsurface, the combined product produces an effective oxidation reaction comparable to that of Fenton's Reagent without a violent exothermic reaction. RegenOx safely, effectively and rapidly destroys a wide range of contaminants in both soil and groundwater (Table 1).

ACHIEVES RAPID OXIDATION VIA A NUMBER OF MECHANISMS

RegenOx directly oxidizes contaminants while its unique catalytic complex generates a suite of highly charged, oxidative free radicals that are responsible for the rapid destruction of contaminants. The mechanisms by which RegenOx operates are:

- Surface- Mediated Oxidation: (see Figure 1 and description below)
- Direct Oxidation: $C_2Cl_4 + 2\ Na_2CO_3 \cdot 3\ H_2O_2 + 2\ H_2O \leftrightarrow 2CO_2 + 4\ NaCl + 4\ H_2O + 2\ H_2CO_3$
- Free Radical Oxidation:
  - Perhydroxyl Radical ($HO_2\bullet$)
  - Hydroxyl Radical ($OH\bullet$)
  - Superoxide Radical ($O_2\bullet$)

Figure 1. RegenOx™ Surface-Mediated Oxidation

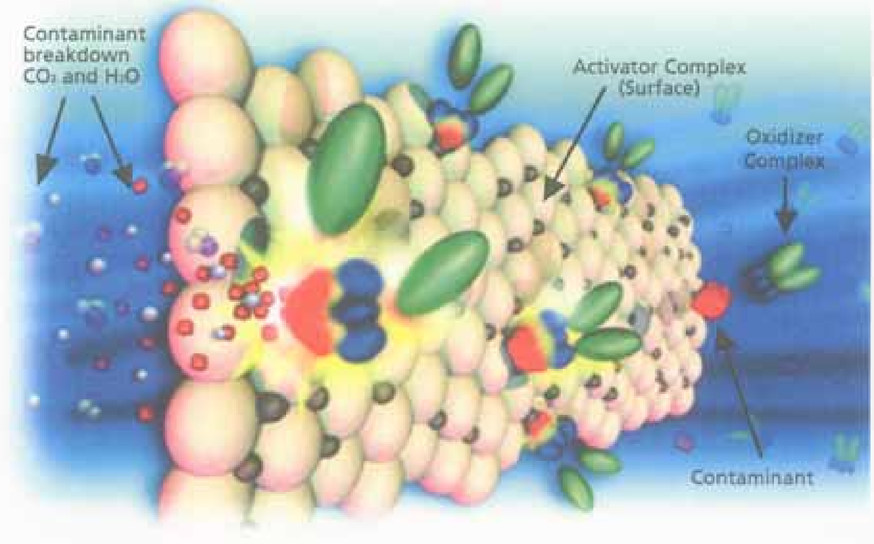


Figure 1. Surface-Mediated Oxidation is responsible for the majority of RegenOx contaminant destruction. This process takes place in two stages. First, the RegenOx activator complex coats the subsurface. Second, the oxidizer complex and contaminant react with the activator complex surface destroying the contaminant.

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* Patent applied for

Regen™

From Mass Reduction to Bioremediation:

RegenOx™ is an effective and rapid contaminant mass reduction technology. A single injection will remove significant amounts of target contaminants from the subsurface. Strategies employing multiple Regenox injections coupled with follow-on accelerated bioremediation can be used to treat highly contaminated sites to regulatory closure. In fact, RegenOx was designed specifically to allow for a seamless transition to low-cost accelerated bioremediation using any of Regenesis controlled release compounds.

Significant Longevity:

RegenOx has been shown to destroy contaminants for periods of up to one month.

Product Application Made Safe and Easy:

RegenOx produces minimal heat and as with all oxidants proper health and safety procedures must be followed. The necessary safety guidance accompanies all shipments of RegenOx and additional resources are available on request. Through the use of readily available, highly mobile, direct-push equipment and an array of pumps, RegenOx has been designed to be as easy to install as other Regenesis products like ORC® and HRC®.

Effective on a Wide Range of Contaminants:

RegenOx has been rigorously tested in both the laboratory and the field on petroleum hydrocarbons (aliphatics and aromatics), gasoline oxygenates (e.g., MTBE and TAME), polyaromatic hydrocarbons (e.g., naphthalene and phenanthrene) and chlorinated hydrocarbons (e.g., PCE, TCE, TCA).

Oxidant Effectiveness vs. Contaminant Type:

Table 1

Contaminant	RegenOx™	Fenton's Reagent	Permanganate	Persulfate	Activated Persulfate	Ozone
Petroleum Hydrocarbons	A	A	B	B	B	A
Benzene	A	A	D	B	B	A
MTBE	A	B	B	C	B	B
Phenols	A	A	B	C	B	A
Chlorinated Ethenes (PCE, TCE, DCE, VC)	A	A	A	B	A	A
Chlorinated Ethanes (TCA, DCA)	A	B	C	D	C	B
Polycyclic Aromatic Hydrocarbons (PAHs)	A	A	B	B	A	A
Polychlorinated Biphenyls (PCBs)	B	C	D	D	D	B
Explosives (RDX, HMX)	A	A	A	A	A	A

Based on laboratory kinetic data, thermodynamic calculations, and literature reports.

Oxidant Effectiveness Key:

A = Short half life, low free energy (most energetically favored), most complete
B = Intermediate half life, low free energy, intermediate degree of completion
C = Intermediate half life, intermediate free energy, low degree of completion
D = Long half life, high free energy (least favored), very low degree of completion

REGENESIS
Advanced Technologies for Groundwater Resources

1011 Calle Sombra / San Clemente / California 92673-6244
Tel: 949/366-8000 / Fax: 949/366-8090 / www.regenesis.com

Regen OX – Part B (Activator Complex)

Material Safety Data Sheet (MSDS)

Last Revised: November 7, 2005

Section 1 – Supplier Information and Material Identification

Supplier:

REGENESIS
1011 Calle Sombra
San Clemente, CA 92673
Telephone: 949.366.8000
Fax: 949.366.8090
E-mail: info@regenesis.com

Chemical Description:	A mixture of sodium silicate solution, silica gel and ferrous sulfate
Chemical Family:	Inorganic Chemicals
Trade Name:	Regen Ox – Part B (Activator Complex)
Product Use:	Used for environmental remediation of contaminated soils and groundwater

Section 2 – Chemical Information/Other Designations

CAS No.	Chemical
1344-09-8	Silicic Acid, Sodium Salt, Sodium Silicate
63231-67-4	Silica Gel
7720-78-7	Ferrous Sulfate
7732-18-5	Water

Section 3 – Physical Data

Form:	Liquid
Color:	Blue/Green
Odor:	Odorless
Melting Point:	NA
Boiling Point:	NA
Flammability/Flash Point:	NA
Vapor Pressure:	NA

Section 3 – Physical Data (cont)

Specific Gravity	1.39 g/cm^3
Solubility:	Miscible
Viscosity:	NA
pH (3% solution):	11
Hazardous Decomposition Products:	Oxides of carbon and silicon may be formed when heated to decomposition.

Section 4 – Reactivity Data

Stability:	Stable under normal conditions.
Conditions to Avoid:	None.
Incompatibility:	Avoid hydrogen fluoride, fluorine, oxygen difluoride, chlorine trifluoride, strong acids, strong bases, oxidizers, aluminum, fiberglass, copper, brass, zinc, and galvanized containers.

Section 5 – Regulations

TSCA Inventory Listed: Yes

CERCLA Hazardous Substance (40 CFR Part 302)

Listed Substance: *No*

Unlisted Substance: *Yes*

SARA, Title III, Sections 302/303 (40 CFR Part 355) – Emergency Planning and Notification

Extremely Hazardous Substance: No

SARA, Title III, Sections 311/312 (40 CFR Part 370) – Hazardous Chemical Reporting: Community Right-To-Know

Hazard Category: Acute

SARA, Title III, Sections 313 (40 CFR Part 372) – Toxic Chemical Release Reporting: Community Right-To-Know

Extremely Hazardous Substance: No

Section 6 – Protective Measures, Storage and Handling

Technical Protective Measures

Storage:	Keep in a tightly closed container (steel or plastic) and store in a cool, well ventilated area away from all incompatible materials (acids, reactive metals, and ammonium salts). Store in a dry location away from heat and in temperatures less than 24 $^{?}$C. Do not store in aluminum, fiberglass, copper, brass, zinc or galvanized containers.
Handling:	Avoid contact with eyes, skin and clothing. Avoid breathing spray mist. Use with adequate ventilation. Do not use product if it is brownish-yellow in color.

Personal Protective Equipment (PPE)

Engineering Controls:	General room ventilation is required if used indoors. Local exhaust ventilation, process enclosures or other engineering controls may be needed to maintain airborne levels below recommended exposure limits. Safety shower and eyewash station should be within direct access.
Respiratory Protection:	Use NIOSH-approved dust and mist respirator where spray mist exists. Respirators should be used in accordance with 29 CFR 1910.134.
Hand Protection:	Wear chemical resistant gloves.
Eye Protection:	Wear chemical safety goggles. A full face shield may be worn in lieu of safety goggles.
Skin Protection:	Try to avoid skin contact with this product. Gloves and protective clothing should be worn during use.
Other:	
Protection Against Fire & Explosion:	Product is non-explosive and non-combustible.

Section 7 – Hazards Identification

Potential Health Effects	
Inhalation:	Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath, and irritations to mucous membranes, nose and throat.
Eye Contact:	Causes irritation, redness and pain.
Skin Contact:	Causes irritation. Symptoms include redness, itching and pain.
Ingestion:	May cause irritation to mouth, esophagus, and stomach.

Section 8 – Measures in Case of Accidents and Fire

After Spillage/Leakage (small):	Mop up and neutralize liquid, then discharge to sewer in accordance with local, state and federal regulations.
After Spillage/Leakage (large):	Keep unnecessary personnel away; isolate hazard area and do not allow entrance into the affected area. Do not touch or walk through spilled material. Stop leak if possible without risking injury. Prevent runoff from entering into storm sewers and ditches that lead to natural waterways. Isolate the material if at all possible. Sand or earth may be used to contain the spill. If containment is not possible, neutralize the contaminated area and flush with large quantities of water.
Extinguishing Media:	Material is compatible with all extinguishing media.
Further Information:	
First Aid	
Eye Contact:	Flush eyes with running water for at least 15 minutes with eyelids held open. Seek a specialist.
Inhalation:	Remove affected person to fresh air. Give artificial respiration if individual is not breathing. If breathing is difficult, give oxygen. Seek medical attention if the effects persist.
Ingestion:	If the individual is conscious and not convulsing, give two-four cups of water to dilute the chemical and seek medical attention immediately. <u>**DO NOT**</u> induce vomiting.
Skin Contact:	Wash affected areas with soap and a mild detergent and large amounts of water. Remove contaminated clothing and shoes.

Section 9 – Accidental Release Measures

Precautions:	
PPE:	Wear chemical goggles, body-covering protective clothing, chemical resistant gloves, and rubber boots (see Section 6).
Environmental Hazards:	Sinks and mixes with water. High pH of this material may be harmful to aquatic life. Only water will evaporate from a spill of this material.
Cleanup Methods:	Pick-up and place in an appropriate container for reclamation or disposal. US regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities.

Section 10 – Information on Toxicology

Toxicity Data	
Sodium Silicate:	When tested for primary eye irritation potential according to OECD Guidelines, Section 405, a similar sodium silicate solution produced corneal, iridal and conjunctival irritation. Some eye irritation was still present 14 days after treatment, although the average primary irritation score has declined from 29.7 after 1 day to 4.0 after 14 days. When tested for primary skin irritation potential, a similar sodium silicate solution produced irritation with a primary irritation index of 3 to abraded skin and 0 to intact skin. Human experience confirms that irritation occurs when sodium silicates get on clothes at the collar, cuffs, or other areas where abrasion may exist. The acute oral toxicity of this product has not been tested.
Ferrous Sulfate:	LD50 Oral (rat): 319 mg/kg not a suspected carcinogen.

Section 11 – Information on Ecology

Ecology Data

Ecotoxicological Information:	Based on 100% solid sodium silicate, a 96 hour median tolerance for fish of 2,320 mg/l; a 96 hour median tolerance for water fleas of 247 mg/L; a 96 hour median tolerance for snail eggs of 632 mg/L; and a 96 hour median tolerance for Amphipoda of 160 mg/L.

Section 12 – Disposal Considerations

Waste Disposal Method

Waste Treatment:	Neutralize and landfill solids in an approved waste facility operated by an authorized contactor in compliance with local regulations.
Package (Pail) Treatment:	The empty and clean containers are to be recycled or disposed of in conformity with local regulations.

Section 13 – Shipping/Transport Information

D.O.T.	This product is not regulated as a hazardous material so there are no restrictions.

Section 14 – Other Information

HMIS® Rating	Health – 2 (moderate)	Reactivity – 0 (none)
	Flammability – 0 (none)	Lab PPE – goggles, gloves, and lab coat
	Contact – 1 (slight)	

HMIS® is a registered trademark of the National Painting and Coating Association.

Section 15 – Further Information

The information contained in this document is the best available to the supplier at the time of writing, but is provided without warranty of any kind. Some possible hazards have been determined by analogy to similar classes of material. The items in this document are subject to change and clarification as more information become available. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose.

APPENDIX D

PSI SOIL SAMPLING PROTOCOL

PSI PROCEDURES FOR SOIL SAMPLING USING A GEOPROBE RIG

The following paragraphs describe the PSI procedures for soil sampling during drilling, using a GeoProbe rig.

1. Soil samples are collected into 1.0-inch inside-diameter sampling tubes. The sampling tubes are composed of acetate, Teflon, or brass.

2. To avoid cross-contamination of samples, all reusable parts are washed in a phosphate-free solution, double rinsed in tap water and receive a final rinse in deionized water or are steam-cleaned, prior to use.

3. The sampler is attached to the drive rod and advanced between 18 and 24 inches (depending upon the length of the sampling tube) into undisturbed soil below the lead pipe with a hydraulic percussive hammer. The time required per foot of depth can be used as a qualitative indicator of soil consistency and density. In addition, the soil samples can usually be observed through transparent polyacetate sample tube and aliquots removed for logging purposes.

4. At the prescribed depth, a stock-pin is released to allow soil into the sampling tube. The sample tube is recovered from the sampler and is sealed by placing Teflon lined plastic caps on both ends. The sample tube is labeled and placed on ice or equivalent medium sufficient to maintain a sample temperature of approximately 4 degrees centigrade until the samples are received by a California-certified hazardous waste testing laboratory.

5. The sample is recorded on a chain-of-custody form to document trackability of the sample.

PSI PROCEDURES FOR GROUNDWATER SAMPLING USING A GEOPROBE RIG

The following paragraphs describe the PSI procedures for groundwater sampling during drilling, using a GeoProbe rig.

Equipment

A Geoprobe® Screen Point 15 Groundwater Sampler is used for collection of groundwater. The Screen Point 15 Groundwater Sampler has a 41-inch stainless steel wire wound 0.004 slot screen. The stainless steel screen is enclosed in a 4-foot long x 1 ½-inch outside diameter barrel. An expendable drive point is attached on the end of the 1 ¼-inch barrel to displace the soil as the sampler is being driven.

Sampling Procedures

1. Upon reaching the top of the ground water, as determined by visual inspection for moisture in the samples, a Screen Point 15 Groundwater Sampler is advanced to a minimum of 3 feet below the top of water and 2 feet above water using a 1 ¼-inch drive rod. Once at the desired depth, the entire tool chain is pulled back to expose the desired amount of screen. From the surface, 3/8-inch polyethylene tubing is inserted down the inside of the 1 ¼-inch drive rod to the screen zone.

2. The groundwater sample is brought to the surface by one of three ways:

   a) Peristaltic Pump
   b) Check Valve attached to the end of the 3/8-inch polyethylene tubing
   c) 7/16" diameter bailer (3/8-inch tubing not required)

3. Collected water is decanted directly into laboratory supplied Teflon-capped vials for organic analyses or into plastic bottles for inorganic analyses.

4. Each collected water sample is labeled, recorded on a chain-of-custody form, and placed on ice while awaiting transport to a certified hazardous waste laboratory.

5. When the sampling evolution is complete, the entire tool chain is removed and decontaminated. Only the expendable drive point is left in the boring.

PSI PROCEDURES FOR SOIL SAMPLING USING A HAND AUGER

The following paragraphs describe PSI procedures for soil sampling using a hand auger.

1. The clean sampler is lined with two clean, 1.5-inch-diameter, stainless-steel or brass tubes and advanced to a specified depth where two samples can be collected by driving the sampler into the soil with the drive hammer.

2. The tubes are removed from the sampler, sealed with Teflon liners and plastic caps on both ends, labeled, placed in a plastic sealable bag, and placed on ice or equivalent medium sufficient to maintain a sample temperature of less than 4 degrees centigrade until the samples are received by a certified hazardous waste laboratory.

3. The sample is recorded on a chain-of-custody form to document trackability of the sample.

APPENDIX E

PSI SOIL GAS PROTOCOL

STANDARD METHODS AND PROCEDURES
FOR
MONITORING OF SOIL GAS PROBES

ENVIRONMENTAL SUPPORT TECHNOLOGIES, INC.
360 Goddard
Irvine, California 92618-4601
(949) 679-9500
Fax (949) 679-9501

2006

INITIAL MULTI-POINT EQUIPMENT CALIBRATION

The GC/FID used for methane analysis will be calibrated using a compressed gas standard obtained from a certified vendor. Initial calibration will be performed using multiple standard injections of varying volumes to establish a multi-point calibration curve. The multi-point calibration will be used to establish an average response factor (ARF). The ARF will be used to quantitate methane in the samples. Identification and quantitation of methane will be performed under the same analytical conditions as for the initial calibration.

LABORATORY CONTROL SAMPLE

A laboratory control sample (LCS) from a second source will be analyzed for methane.

INITIAL CALIBRATION VERIFICATION

A daily Initial Calibration Verification (ICV) will consist of a mid-point concentration of the initial calibration using the compressed gas methane standard used for the initial multi-point calibration. Daily ICV will be performed prior to the first sample analysis of the day. Daily ICV will also be performed to verify the validity of the initial multi-point calibration.

BLANK INJECTIONS

The syringes used for soil gas sample collection will be filled with ambient air. The ambient air will be injected directly into the GC.

DUPLICATE SAMPLES

Duplicate samples will be collected at a minimum of one (1) per day. Duplicate samples will be collected from areas of concern. A duplicate sample will be collected in a separate sample container at the same location and depth immediately after the original sample.

DECONTAMINATION PROCEDURES

Soil gas sampling syringes and applicable fittings will be decontaminated by placing the equipment in the gas chromatograph oven and heating at a temperature ranging from 100 to 120 degrees centigrade (°C) for minimum of 30 minutes. The syringe will be allowed to cool to ambient temperature before use on the next sampling location.

Table 2. California Human Health Screening Levels for Indoor Air and Soil Gas

Chemical	[1]Indoor Air Human Health Screening Levels ($\mu g/m^3$)		[2]Shallow Soil Gas Human Health Screening Levels (Vapor Intrusion) ($\mu g/m^3$)	
	Residential Land Use	**Commercial/ Industrial Land Use Only**	**Residential Land Use**	**Commercial/ Industrial Land Use Only**
Benzene	8.40 E-02	1.41 E-01	3.62 E+01	1.22 E+02
Carbon Tetrachloride	5.79 E-02	9.73 E-02	2.51 E+01	8.46 E+01
1,2-Dichloroethane	1.16 E-01	1.95 E-01	4.96 E+01	1.67 E+02
cis-1,2-Dichloroethylene	3.65 E+01	5.11 E+01	1.59 E+04	4.44 E+04
trans-1,2-Dichloroethylene	7.30 E+01	1.02 E+02	3.19 E+04	8.87 E+04
Ethylbenzene	Postponed[3]	Postponed[3]	Postponed[3]	Postponed[3]
Mercury, elemental	9.40 E-02	1.31 E-01	4.45 E+01	1.25 E+02
Methyl tert-Butyl Ether	9.35 E+00	1.57 E+01	4.00 E+03	1.34 E+04
Naphthalene	7.20 E-02	1.20 E-01	3.19 E+01	1.06 E+02
Tetrachloroethylene	4.12 E-01	6.93 E-01	1.80 E+02	6.03 E+02
Tetraethyl Lead	3.65 E-04	5.11 E-04	2.06 E-01	5.78 E-01
Toluene	3.13 E+02	4.38 E+02	1.35 E+05	3.78 E+05
1,1,1-Trichloroethane	2.29 E+03	3.21 E+03	9.91 E+05	2.79 E+06
Trichloroethylene	1.22 E+00	2.04 E+00	5.28 E+02	1.77 E+03
Vinyl Chloride	3.11 E-02	5.24 E-02	1.33 E+01	4.48 E+01
m-Xylene	7.30 E+02	1.02 E+03	3.19 E+05	8.87 E+05
o-Xylene	7.30 E+02	1.02 E+03	3.15 E+05[4]	8.79 E+05[4]
p-Xylene	7.30 E+02	1.02 E+03	3.17 E+05	8.87 E+05

Reference: Appendix 1, OEHHA Target Indoor Air Concentrations and Soil-Gas Screening Numbers for Existing Buildings under Residential and Industrial/Commercial land uses.

Notes:

1. "Residential Land Use" screening levels generally considered adequate for other sensitive uses (e.g., day-care centers, hospitals, etc.). Commercial/industrial properties should be evaluated using both residential and commercial/industrial CHHSLs. A deed restriction that prohibits use of the property for sensitive purposes may be required at sites that are evaluated and/or remediated under a commercial/industrial land use scenario only.

Calculation of cumulative risk may be required at sites where multiple contaminants with similar health effects are present.

Carcinogens: CHHSLS based on target cancer risk of 10-6. Cal/EPA cancer slope factors used when available.

Noncarcinogens: CHHSLS based on target hazard quotient of 1.0.

2. Soil Gas: Screening levels based on soil gas data collected <1.5 meters (five feet) below a building foundation or the ground surface. Intended for evaluation of potential vapor intrusion into buildings and subsequent impacts to indoor-air. Soil gas data should be collected and evaluated at all sites with significant areas of VOC-impacted soil. Screening levels also apply to sites that overlie plumes of VOC-impacted groundwater.

3. Calculation of a screening number for the chemical has been postponed (pp) until the toxicity criterion currently being developed by OEHHA is published as a final document.

4. Representative Screening Numbers for mixed xylenes. The representative value for mixed xylenes is based on the calculated lowest one amongst the three isomers.