



March 7, 2007

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ENVIRONMENTAL HEALTH SERVICES

Mr. Barney Chan
Alameda County
Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

**NOTIFICATION OF SOIL EXCAVATION
JAMBA JUICE TENANT IMPROVEMENT PROJECT
BAY CENTER OFFICES
6475 CHRISTIE AVENUE
EMERYVILLE, CALIFORNIA**

0 64th & LaCaste St.

Dear Mr. Chan:

This notification letter has been prepared by PES Environmental, Inc. (PES) on behalf of the subject property owner, Bay Center Office, LLC, to advise Alameda County Environmental Health (ACEH) of upcoming soil excavation activities at the subject property.

As you may know, in the 1980s the property owner/developer completed environmental investigations and remediation work in association with redevelopment of the site from its past industrial uses. The work was performed with ACEH oversight and approvals. In approximately March 1990, not long after redevelopment of this and several adjacent properties was completed, a *Notice of Environmental Development Restriction* was recorded (a copy is provided for reference as Attachment A). The document requires following a safety plan (prepared in 1987) for subsurface excavation work, and notification to ACEH of any significant excavation of subsurface soil (the purpose of this letter).

The initial (1987) safety plan was updated in June 2005 (Attachment B). In addition, a work-specific safety, contingency, and soil management plan (Attachment C) was prepared for the subject tenant improvement project. The new tenant, Jamba Juice, is installing test kitchens that will result in the need to handle large volumes of wastewater. For pre-treatment prior to discharge to the sanitary sewer, a grease interceptor and sewage ejector will be constructed in a new subgrade concrete vault to be located on the western building exterior (Attachment D). The expected dimensions of the excavation will be approximately 19 feet long by 9 feet wide by 13 feet deep. The location of the vault excavation work is shown on the attached aerial photograph of the property (Attachment E).

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Site preparation activities will commence on March 12, 2007, with more intrusive activities to follow during the latter part of the week. The planned excavation and construction work is anticipated to last several weeks. There will be a PES representative at the site to monitor environmental conditions during the excavation work, and to verify adherence to the applicable safety and soil management provisions in the work-specific safety plan.

If you have any questions, please call either Robert Creps or myself at the number listed below.

Very truly yours,

PES ENVIRONMENTAL, INC.



William W. Mast, P.G.
Associate Engineer

Attachments

Cc: Ms. Donna Drogos - ACEH
Mr. Sean Donnelly - Bay Center Office, LLC

ATTACHMENT A

NOTICE OF ENVIRONMENTAL DEVELOPMENT RESTRICTION

RECORDED AT THE REQUEST OF:

JS BAY CENTER ASSOCIATES

WHEN RECORDED, RETURN TO:

JS Bay Center Associates
c/o The Martin Group
6475 Christie Avenue, Suite 500
Emeryville, CA 94608

2614/02

NOTICE OF
ENVIRONMENTAL DEVELOPMENT RESTRICTION

The undersigned is the owner of the following described real property in the City of Emeryville, California, County of Alameda, State of California:

Tract One: Parcels 1 and 2 shown on Parcel Map No. 4664, filed December 30, 1985, in Book 159 of Parcel Maps, at Pages 16 and 17, Alameda County Records.

Tract Two: Parcel A as shown on Parcel Map No. 4947, filed February 26, 1987, in Book 165 of Parcel Maps, at Pages 96 and 97, Alameda County Records.

Tract Three: Lot 3 as shown on Tract 5781, filed September 18, 1987, in Map Book 171, at Pages 65 through 79, inclusive, Alameda County Records.

Tract Four:

Sub-Parcel A: Commercial Unit 1, as such unit is defined in and shown on that certain "Condominium Plan for Tract 5781" ("Condominium Plan") attached as Exhibit "A" to and being a part of that certain "Declaration of Covenants, Conditions and Restrictions establishing a plan of condominium ownership for Bay Center" ("Declaration"), executed by Bay Center Associates, a California limited partnership ("Declarant"), recorded October 1, 1987, as Series No. 87-270768, Official Records of Alameda County.

Reserving therefrom a non-exclusive easement, appurtenant to and being part of the residential common area, as such common area is defined in the Declaration and the Condominium Plan, for ingress and egress over, along and across those two portions thereof designated "Non-Exclusive Easement for Ingress and Egress" on the Condominium Plan as shown thereon.

Sub-Parcel B: An undivided 1/6th interest in common in and to the common property, as such property is defined in the Declaration and the Condominium Plan, being portions of Lot 1 of Tract 5781, filed September 18, 1987, in Map Book 171, at Pages 65 through 79, inclusive, Alameda County Records.

Reserving therefrom all easements appurtenant to condominium units, as defined in the Declaration, and in favor of Declarant as provided for and contained in the Declaration.

Sub-Parcel C: Non-Exclusive Easement, appurtenant to Sub-Parcels A and B hereinabove, for ingress and egress and utilities over, under, along, across and through a strip of land described as follows:

All of Lot 3 as shown on Tract 5781, filed September 18, 1987, in Map Book 171, at Pages 65 through 71, inclusive, Alameda County Records

the undersigned hereby declares the title to said real property is hereby made subject to the following terms and provisions:

"By direction of Alameda County, the types of future development of the property are restricted to similar types of projects as currently exist at the property without prejudice to the filing of an application with Alameda County for other permissible uses. The

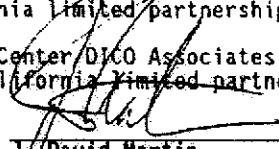
property has a history of prior industrial use and contains certain residual levels of heavy metals and other contaminants at subgrade in specific locations which are appropriately contained under the review and approval of the County. A safety plan is on file at the property owner's or property manager's office and the Alameda County Department of Environmental Health. The safety plan should be followed during the excavation of sub-surface soil. Additionally, prior to the start of construction which entails any significant excavation of sub-surface soil, one week prior notice should be given to the Alameda County Department of Environmental Health."

The foregoing shall run with said real property or any portion thereof; shall be both binding upon and benefit said real property or any portion thereof; and each and every successor or assign of the undersigned to said real property or any portion thereof shall be bound thereby for the benefit of every other owner thereof or portion thereof.

The current address of the office of the undersigned is 6475 Christie Avenue, Suite 500, Emeryville, California 94608, and the current address of the property manager's office is c/o The Martin Group, 6475 Christie Avenue, Suite 500, Emeryville, California 94608.

28th IN WITNESS WHEREOF, the undersigned has executed this Notice this day of March, 1990.

JS Bay Center Associates,
a California limited partnership

By: 
Bay Center/DICO Associates,
a California limited partnership

By: J. David Martin,
General Partner

ATTACHMENT B

2005 SAFETY PLAN




A Report Prepared for:

EmeryBay Commercial Association
100 Bush Street, 26th Floor
San Francisco, California 94104
Attention: Ms. Cathy Greenwold

**INTRUSIVE EARTHWORK GUIDANCE PLAN
BAY CENTER OFFICES AND APARTMENTS
CHRISTIE AVENUE AND 64TH STREET
EMERYVILLE, CALIFORNIA**

JUNE 24, 2005



Kris McCormick
Senior Environmental Scientist
PES Environmental, Inc.



Richard S. Krentz, CIH
Sterling & Associates

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1.0 GENERAL

1.1 Introduction

This Intrusive Earthwork Guidance Plan (plan), including additional soil management procedures, was prepared by PES Environmental, Inc. (PES) and Sterling & Associates (Sterling) to manage intrusive earthwork prior to performance of subsurface activities that may occur at an indefinite future date at the Bay Center Offices and Apartments (site) within Emery Bay Plaza. The site is bounded by 64th Street to the south, 65th Street to the north, La Coste Street to the west and Shellmound Street to the east in Emeryville, California. The Site includes three office buildings, a paved parking lot, a parking structure, a two-story parking structure set below a four-story apartment complex, and landscaped areas.

This guidance document is not intended to be utilized as a site Health and Safety Plan. A separate Safety Plan was prepared in September 1987 for the site by Earth Metrics, Inc. for a prior specific work scope (Earth Metrics, 1987). For future regulated intrusive earthwork (refer to Section 2.0), the Contractor shall develop its own Site Health and Safety Plan for any work not expressly covered in the 1987 Safety Plan for Bay Center Offices and Apartments.

This document has been developed to provide: 1) a description of regulated activities to which this plan applies; 2) an overview of subsurface conditions at the site; 3) procedures to be followed prior to commencement of regulated activities; 4) guidance for Contractor development of Health and Safety Plan; and 5) soil management procedures so that potentially hazardous materials, if encountered, are handled, managed and disposed in accordance with applicable regulatory requirements.

1.2 Background Information

The Site is located on historic San Francisco Bay tidal flats. As Emeryville expanded, the tidal flats were filled, predominantly with construction-type debris (e.g. soil, bricks, debris, etc.). Subsurface soil at the Site consists mostly of fill with silt, sand and gravel and fragments of brick, glass, and metal to approximately 16 feet below ground surface (bgs). Native silts and clays exist beneath this depth.

Prior to the construction of Bay Center Offices and Apartments, the Site was occupied by two trucking businesses (Earth Metrics, 1986). All existing structures were demolished before the Site was re-developed. Environmental and geotechnical investigations dating back to approximately 1986 are available for the Site. A listing of prior environmental documents for the site is provided in Appendix A.

During the period of use as a trucking terminal, the subject property had underground storage tank (UST) fields in three areas. Tank Pit TC-1 contained four 12,000-gallon and two 10,000-gallon diesel tanks, and one 6,000-gallon gasoline tank. Tank Pit A and Tank Pit B each contained one 10,000-gallon diesel tank. The USTs were decommissioned and removed

in about 1987 as part of the demolition and Site preparation for construction of Bay Center Apartments (Earth Metrics, 1986).

Soil sampling at the Site reported petroleum hydrocarbons in the soil from the area of the former USTs as well as a small area near a former truck terminal. Metals (including lead and zinc), pesticides (including DDT), and polychlorinated biphenyls (PCBs) were also reported in soils in various areas of the property. Excavated soils were bioremediated or aerated and used as fill on the project and/or nearby parcels (HLA, 1991).

In addition, lead levels in soil are known to range from 50 parts per million (ppm) to over 10,000 ppm at the Site. Reportedly, lead contamination does not occur at the surface in the parking lots or landscaped areas, but is confined to the areas beneath the parking garage, Christie Street, building slab, parking lots, and landscaping areas (Earth Metrics, 1987).

During previous monitoring at the Site, groundwater was generally encountered at 8 to 12 feet bgs. Groundwater in the area of the larger UST tank pit in the northeast portion of the parcel east of Christie Avenue was reported to contain separate phase and dissolved petroleum hydrocarbon, including benzene, toluene, and ethylbenzene. Groundwater also contained polynuclear aromatics, pesticides, and PCBs (GTI, 1987). A groundwater treatment system with an extraction well was installed and since has been removed (GTI, 1989).

Data presented in historical environmental and geotechnical investigation reports, as well as PES' recent investigation findings, indicate that light, non-aqueous phase liquid (LNAPL) is present at the Site in an area between Tank Pit TC-1 and recovery well RW-1 (PES, 2004b). A summary of the findings of the historical investigations is found in PES' memorandum dated April 5, 2004 (PES, 2004a). LNAPL thicknesses of up to 0.87 feet have been measured in monitoring well RW-1 as recently as April 2004. Manual LNAPL recovery efforts at RW-1 have reduced the average LNAPL thicknesses measured in RW-1 by approximately 75 percent since that time. Beginning in April 2004, groundwater gauging and manual LNAPL recovery efforts from one recovery well (RW-1; Plate 2) were reestablished at the Site (PES, 2004b). PES has prepared a remediation system work plan to address LNAPL at the request of the EmeryBay Commercial Association (EBCA). The remediation system work plan details the proposed work needed to install a LNAPL remediation system to recover LNAPL that is present in subsurface soils beneath the northern portion of the Site (PES, 2005).

Methane venting systems have been installed in elevator shafts of the three office buildings and apartment complex at the Site to remove methane that might be generated from residual subsurface organic materials. In addition, methane gas-detection devices were installed in subsurface elevator shafts. A passive ventilation system has been installed in the ground on the eastern section of the Site adjacent to Shellmound Street. Methane gas monitors have also been installed in certain locations on the east side of the property (LFR, 2004).

2.0 REGULATED ACTIVITIES

This plan has been developed to provide procedures to follow to protect the public and workers involved in potential subgrade construction, maintenance, repair, inspection or other activity involving subgrade work ("regulated activities"). Regulated activities are described below.

2.1 Regulated Activities

The following subgrade activities constitute regulated work under this plan.

- **Subsurface Construction or Repair** – any activity occurring beneath the grade level of existing pavement, concrete or Christie Street grade;
- **Deep Landscaping Work** – any activity related to landscaping that extends lower than 18 inches beneath existing grade;
- **Utility Line Work** – any subterranean inspection, excavation, or repair of electrical, telephone, water, sanitary sewer or storm drains occurring within or outside of existing vaults;
- **Sub-Slab Work** – any work performed beneath the slab of the Site, including Bay Center offices, apartments, or parking garage, or any work which requires breaching the existing slabs;
- **Environmental Investigations** – any subsurface air, soil or groundwater sampling activities, groundwater monitoring well installation or destruction activities or other activities which may expose workers or the public to subsurface media; or
- **Other** – other subgrade activities not expressly listed above.

3.0 REGULATED ACTIVITIES REQUIREMENTS

Prior to commencement of any regulated activities, the following tasks must be completed:

- All contractors and subcontractors of either the owner, tenants, or another party causing regulated activities at the Site, shall read this plan and sign the Agreement and Acknowledgment Statement (Appendix B) to certify that they have read, understood and agreed to abide by its provisions;
- Review applicable environmental documents and investigations pertaining to the Site. Documents are maintained in the onsite management office;
- Location of subsurface utilities will be verified with Underground Safety Alert (USA) or a private contractor; and

- The personnel or subcontractor performing such work will be required to develop a health and safety plan in accordance with the hazardous material regulations found in the California Occupational Safety and Health Administration (CAL-OSHA), Title 8 of the California Code of Regulations (CCR), Section 5192 (Hazardous Waste Operations and Emergency Response (HAZWOPER)).

Compliance with this plan is required of all personnel, subcontractors, etc. associated with the regulated activities mentioned above.

4.0 GUIDANCE FOR CONTRACTOR DEVELOPMENT OF HEALTH AND SAFETY PLAN

All contractors and subcontractors will act in accordance with applicable federal, State, regional, and local regulations during all phases of the project. Applicable regulations include but are not limited to CAL-OSHA, 8 CCR 5192.

The Contractor's Health and Safety Plan should include, but not be limited to, the following components.

4.1 Introduction

The main purpose of the introduction is to describe the Site, the specific area of the Site that the Contractor's Health and Safety Plan will encompass, and its applicability to operations.

4.2 Key Personnel

This section should include names, descriptions of responsibilities, and ways of contact for key personnel involved with the project.

4.3 Hazard Assessment

Hazard assessment is a methodology used to identify inherent or potential hazards which may be encountered in the work environment associated with accomplishing a project. The hazard assessment should include the identification of an operation or a job to be assessed, a break down of the project, identification of the hazards associated with each task, and determination of the necessary controls for the hazards.

4.4 Safety Training

The environmental conditions of the Site shall be disclosed to all construction workers and subcontractors who will be engaged in earthwork activities including soil excavation, dewatering, and other subsurface activities where contact with potentially contaminated soil and/or groundwater is possible. It is the individual contractor/subcontractor's responsibility to

provide additional site-specific construction safety training. For construction activities, additional safety meetings must be held at least once every 10 working days and may include a discussion of site work plans, personal protective equipment, site rules, site hazards, trenching/shoring, and the requirements of the Contractor's Health and Safety Plan.

4.5 Personal Protective Equipment

Modified Level D is the minimum acceptable level for this site. The Contractor should make the appropriate personal protective equipment selection based on the specific project and site hazards.

4.6 Medical Monitoring Program

All construction personnel engaged in regulated subsurface work will be required to be medically qualified prior to donning a respirator should respiratory protection become necessary. If site conditions vary drastically from those anticipated in the plan, other medical surveillance procedures may become necessary, as required.

4.7 Air Monitoring

To the extent feasible, the presence of airborne contaminants will be evaluated through the use of sampling equipment. Information gathered will be used to ensure the adequacy of the levels of protection being employed at the site, and may be used as the basis for upgrading or downgrading levels of Personal Protection, at the discretion of the Contractor's Health & Safety representative and/or Manager.

The following air sampling equipment may be utilized for site monitoring by the Contractor's Health & Safety Representative:

- Photo-Ionization Detector (PID) – organic vapors (alternatively, a FID may also be utilized for this purpose); and
- LEL/O₂ Meter.

The PID and/or FID will serve as the primary instrument for personal exposure monitoring for organic vapors. The instrument will need to be utilized to characterize potential employee exposure and the need for equipment upgrades/downgrades.

During initial excavation activities monitoring should be conducted for explosive atmospheres using an LEL/O₂ monitor. In addition to the petroleum hydrocarbons, fill materials of the site could present methane or other flammable vapor issue.

Monitoring will be conducted to evaluate the potential for exposure to site personnel during initial operations. Continuous monitoring should be performed during operations that have not

been characterized. After initial site screening, monitoring shall be conducted periodically and when site conditions might be altered (i.e. weather, drilling, new area of excavation, etc.).

Results of monitoring information shall be recorded including time, date, location, operations, and any other conditions that may contribute to potential airborne organic vapors and lead. All maintenance and calibration information shall be maintained on-site. The monitoring equipment will be calibrated in accordance with the manufacturer's specifications, and the records of such maintained with the plan and/or project file.

4.8 Site Control

The site control program is used to control movement of people and equipment in order to minimize worker exposure to hazardous substances. Site work zones, site communication procedures, safe work practices, and a site map should be included.

4.9 Dust Control

Concentrations of lead and petroleum hydrocarbon constituents in the soil indicate that dust control measures will be, at a minimum, consistent with standard construction practices. These will include, but are not limited to, the following:

- Watering of active soil construction areas to prevent visible dust plumes from migrating outside of the site limits;
- Misting or spraying while loading transportation vehicles;
- Minimizing drop heights while loading transportation vehicles; and
- Using tarpaulins or other effective covers for trucks carrying soils that travel on public roads.

Subsurface activities shall immediately cease should airborne dust become visible, and will not recommence until the area is adequately moistened such that no visible dust will be generated. If visible dust is continually being generated, additional measures (e.g., dust monitoring) may be required.

4.10 Decontamination

All personnel and/or equipment leaving a potentially contaminated area are subject to decontamination procedures. If applicable, general decontamination procedures for personnel and equipment are outlined below.

4.10.1 Personal Decontamination

All personnel leaving areas where existing soil (below existing AC, concrete and associated base rock) has been exposed must follow decontamination procedures as outlined in the Contractor's Health and Safety Plan.

4.10.2 Equipment Decontamination

Equipment utilized in the areas of exposed soil (instruments, samples, tools, backhoes, other construction equipment) will be decontaminated prior to leaving the earthwork areas as outlined in the Contractor's Health and Safety Plan.

All contaminated articles and waste decontamination materials shall be containerized, labeled, and disposed of properly.

4.11 Soil Management

For projects where waste soil will be produced, a soil management plan shall be included. The soil management objectives are designed to: (1) reduce the potential for exposure of construction workers at the site, neighboring workers and/or pedestrians, and future users of the site to soil potentially containing chemical residuals; and (2) ensure that soil that is removed from the site is disposed at an appropriately-permitted disposal facility. All soil management and handling activities shall be conducted in accordance with applicable federal, state and local regulations.

4.11.1 Management of Excavated Soil

Soil excavated during construction activities shall be evaluated in the field using sensory and monitoring equipment for evidence of chemical contamination (i.e. staining, odors, discoloration, elevated VOC readings, etc.).

4.11.2 Management of Apparently Clean Soil

If field evaluation activities do not suggest the presence of contamination, the soil shall be stockpiled and may be reused onsite as backfill at the excavation site. If an overage of "clean" soil remains at the end of the project requiring removal from the site, appropriate soil characterization for waste disposal purposes shall be conducted.

4.11.3 Management of Suspect Soil

Excavated soil exhibiting characteristics suggesting potential contamination shall be stockpiled onsite within a designated fenced enclosure. The soil shall be placed on and covered with plastic sheeting. Characterization samples shall be collected. Pending results of the stockpile

characterization, appropriate handling and management alternatives shall be evaluated (i.e. reuse onsite or offsite as fill material or disposal at an appropriately permitted facility).

4.11.4 Excess and Suspect Soil Stockpile Sampling and Analysis

Excavated soil suspected to contain chemical residuals and/or requiring off hauling (regardless of the potential for contamination), shall be sampled to evaluate appropriate handling and management alternatives. Soil sampling shall be conducted on a minimum frequency of one discrete sample per approximately 50 cubic yards of soil or a higher frequency if otherwise required to comply with applicable regulations.

The chemical analyses to be conducted shall be determined on the basis of the destination of the material (i.e., landfill, offsite backfill area, etc.) and/or the suspected contaminant(s) (based on field evaluation techniques and/or historic sampling data relevant to the specific portion of the site from which the material was excavated).

4.11.5 Management of Groundwater

For projects where groundwater may be encountered, the groundwater shall be managed. If groundwater is encountered and requires pumping from excavations, the groundwater should be pumped into appropriate containers and samples should be obtained for analysis to determine waste classification and disposal/recycling options. The chemical analyses to be conducted shall be determined on the basis of the suspected contaminant.

5.0 REFERENCES

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APPENDIX A

ENVIRONMENTAL DOCUMENT LIST

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ENVIRONMENTAL DOCUMENT LIST

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APPENDIX B

AGREEMENT AND ACKNOWLEDGMENT STATEMENT

APPENDIX B

AGREEMENT AND ACKNOWLEDGMENT STATEMENT

Bay Center Offices and Apartments
Christie Avenue and 64th Street
Emeryville, California

Intrusive Earthwork Guidance Plan Agreement

All project personnel and subcontractors are required to sign the following agreement prior to conducting work at the site.

1. I have read and fully understand the plan and my individual responsibilities.
2. I agree to abide by the provisions of the plan.

_____	_____
Name	Signature
_____	_____
Company	Date
_____	_____
Name	Signature
_____	_____
Company	Date
_____	_____
Name	Signature
_____	_____
Company	Date
_____	_____
Name	Signature
_____	_____
Company	Date

(Add additional sheets if necessary)

ATTACHMENT C

2006 WORK-SPECIFIC SAFETY PLAN



A Report Prepared for:

Bay Center Office, LLC
c/o TMG Partners
100 Bush Street, 26th Floor
San Francisco, California 94104
Attention: Mr. Sean Donnelly

**EARTHWORK HEALTH AND SAFETY,
CONTINGENCY, AND SOIL
MANAGEMENT PLAN
JAMBA JUICE TENANT IMPROVEMENTS
BAY CENTER OFFICE
6475 CHRISTIE AVENUE
EMERYVILLE, CALIFORNIA**

DECEMBER 14, 2006

A handwritten signature in black ink, appearing to read "William W. Mast", is written over a horizontal line.

William W. Mast
Associate Engineer
PES Environmental, Inc.

A handwritten signature in black ink, appearing to read "Richard S. Krentz", is written over a horizontal line.

Richard S. Krentz, CIH, REA
Sterling & Associates

241.053.03.001

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APPENDICES A - AGREEMENT AND ACKNOWLEDGMENT STATEMENT

 B - SITE SAFETY PLAN AMENDMENT SHEET

 C - EXPLANATION OF HAZARD EVALUATION GUIDELINES

 D - HOSPITAL LOCATION MAPS

1.0 GENERAL

1.1 Introduction

This Earthwork Health and Safety, Contingency, and Soil Management Plan (plan) was prepared by PES Environmental, Inc. (PES) and Sterling & Associates (Sterling) for the use of contractors performing earthwork activities as part of the Jamba Juice tenant improvement project at the Bay Center Office facility located at 6475 Christie Avenue in Emeryville, California.

The plan has been developed to provide: (1) health and safety guidelines for those who may potentially encounter subsurface chemical residuals in areas where earthwork will be performed; (2) contingency procedures to be implemented by the earthwork contractor to protect worker health and safety should hazardous materials be encountered; and (3) soil management procedures so that potentially hazardous materials, if encountered, are handled, managed and disposed in accordance with applicable regulatory requirements.

1.2 Background Information

The Bay Center site is an 18.1-acre project site located within the Emeryville Brownfield Redevelopment Area. The project site consists of 3 multi-story commercial properties, ranging from 3-5 levels and 78,409 - 124,382 square feet in size. On the eastern portion of the project site is a 2-level parking structure below a 4-story apartment complex. The Jamba Juice tenant improvement project will be performed on the 1st floor of Building C at the Bay Center Office property (6475 Christie Avenue – the furthest south of the three buildings).

According to a Phase I investigation conducted at the site in 2004 by Levine-Fricke, most of the project site was underwater and as part of the San Francisco Bay prior to 1959. The site was then filled with engineered fill and landfill debris. In the 1960s, the site was occupied by Delta Truck and Garrett Freight Lines and used as a trucking terminal into the 1970s. A number of underground fuel storage tanks and waste oil tanks were used as part of the trucking operations on the eastern portion of the site. It was reported that the underground storage tanks had impacted the soils and groundwater with petroleum hydrocarbons. Volatile organic compound (VOC) issues associated with the site are those typically associated with petroleum underground storage tank (UST) issues including: gasoline, diesel, benzene, toluene, ethylbenzene, and xylenes.

In addition, the soils at the project site also contain a variety of heavy metals (primarily Lead). Soil contaminated with Lead is characterized as widespread and sporadic on this project site. Levels of Lead were noted along Christie Avenue. Soils containing DDT (Dichlorodiphenyltrichloroethane) were also identified near Christie Avenue and 64th Street.

Also of note is the identification of Methane within shallow soils throughout the site identified during previous investigations and at similar properties within the Emeryville Brownfield area that have been subjected to similar landfill operations.

In 1988/1989 the current commercial buildings were constructed (the parking structure and apartment complex to the east were developed in 1992/1993). As part of the construction of the commercial buildings, it was reported that fill materials containing petroleum hydrocarbons and heavy metals (Lead, Zinc) were encountered. The hydrocarbon-impacted soils were either aerated or bio-remediated and capped on-site. Similarly, metal-containing soils were capped on-site. Reportedly, the capped areas included those beneath structures, pavement, and/or landscaped areas.

2.0 HEALTH AND SAFETY PLAN

Although the detected levels of hazardous materials/wastes do not pose an unacceptable health risk in most cases during the proposed earthwork activities the presence of such necessitates that protective measures be taken during earthwork activities including notification and disclosure requirements and preparation of a site-specific safety plan.

Accordingly, this plan addresses the hazardous constituents in accordance with the hazardous material regulations found in the California Occupational Safety and Health Administration (CAL-OSHA) Construction Safety Orders within Title 8 of the California Code of Regulations (CCR). Additional work tasks and/or activities performed at other locations of the site may involve compliance with other hazardous materials/safety regulations and thus, this plan may not include appropriate information or protective measures for those activities.

This plan is not intended to meet or satisfy the Hazardous Waste Operations (HAZWOPER) requirements of Title 8 CCR GISO 5192, or other applicable standards associated with construction safety (i.e., trenching/shoring, electrical safety, welding/cutting, etc.). Per the Cal-OSHA Consultation Group, the construction activities to be conducted at the site are not applicable to those requirements outlined in the HAZWOPER standard.

Compliance with this plan is required of all personnel, subcontractors, etc. associated with the earthwork activities mentioned above.

2.1 Purpose

The primary purpose of this plan is to provide earthwork personnel with an understanding of the potential chemical and general physical hazards that exist or may arise while the earthwork tasks of this project are being performed. Additionally, the information contained herein will define the safety precautions necessary to respond to such hazards should they occur.

2.2 Objective

The primary objective is to ensure the well being of all field personnel and the community surrounding this site. In order to accomplish this, project staff and approved subcontractors shall acknowledge and adhere to the policies and procedures established herein. Accordingly,

all personnel assigned to this project shall read this plan and sign the Agreement and Acknowledgment Statement (Appendix A) to certify that they have read, understood, and agreed to abide by its provisions.

2.3 Amendments

Any changes in the scope of this project and/or site conditions must be amended in writing on the plan Amendment Sheet (Appendix B) and approved by the Health and Safety Representative or applicable individual.

2.4 Medical Monitoring Program

All construction personnel engaged in subsurface work for this project will be required to be medically qualified prior to donning a respirator should respiratory protection become necessary. If site conditions vary drastically from those anticipated in the plan, other medical surveillance procedures may become necessary, as required.

2.5 Safety Training

The environmental conditions of the property shall be disclosed to all construction workers and subcontractors who will be engaged in earthwork activities including soil excavation, plumbing, electrical, and other subsurface activities where contact with potentially contaminated soil and/or groundwater is possible. It is the individual contractor/subcontractor's responsibility to provide additional site-specific construction safety training. For construction activities, additional safety meetings must be held at least once every 10 working days and may include a discussion of site work plans, personal protective equipment, site rules, site hazards, trenching/shoring, and the requirements of this Safety Plan.

The contractor should also be aware that the possibility always exists that hazardous materials and/or conditions may differ from those expected. These conditions could necessitate compliance with additional regulatory requirements such as the need for HAZWOPER trained and certified individuals.

3.0 PROJECT PERSONNEL

3.1 Background

All contractors and subcontractors will act in accordance with applicable federal, State, regional, and local regulations during all phases of the project. The following management structure will be instituted for the purpose of successfully and safely completing this project.

3.2 Contact Summary

Project Responsibility	Company Name	Name	Phone #
Client	Bay Center Office, LLC	c/o Sean Donnelly of TMG Partners	(415) 772-5900
Construction Project Manager	Skyline Construction	Adam Chelini	(415) 720-5213
Environmental Project Manager	PES Environmental	Will Mast	(415) 899-1600
Health & Safety Consultant	Sterling & Associates	Richard Krentz	(408) 262-1656

3.3 Construction Project Manager – Adam Chelini

The Construction Project Manager will be responsible for implementing the project and obtaining any necessary personnel or resources for the completion of the project. Specific duties will include:

- Coordinating the activities of contractors and subcontractors, including their acknowledgement of this plan, and ensuring that all employees and subcontractors have signed the plan Acknowledgment Statement (see Appendix A);
- Selecting field personnel for the work that is to be undertaken on site;
- Ensuring that the tasks assigned are being completed as planned and are kept on schedule;
- Providing authority and resources to ensure that the Health & Safety Representative is able to implement and manage safety procedures;
- Ensuring that all persons allowed to enter the site (i.e., contractors, client, client representatives, regulators, state officials, visitors) are made aware of the potential hazards associated with the substances known or suspected to be on site, and are knowledgeable as to the location of the on-site copy of this plan;

In addition, the Construction Project Manager has responsibilities for the overall coordination and oversight of the plan. These duties include:

- Being aware of the provisions of this plan and in instructing personnel about the safety practices and emergency procedures defined in the plan and monitoring site safety;
- Providing the various types of personal protective equipment (PPE) to be used on site for specific tasks and monitoring the compliance of field personnel for the routine and proper use of the PPE that has been designated for each task;

- Ensuring compliance with Cal-OSHA Construction Safety Orders in Title 8 of the CCR;
- Approving all field personnel conducting earthwork activities, taking into consideration their level of safety training, their physical capacity, and their eligibility to wear the protective equipment necessary for their assigned tasks;
- Stopping work or changing work assignments or procedures if any operation threatens the health and safety of workers or the public;
- Dismissing field personnel from the site if their actions or negligence endangers themselves, co-workers, or the public;
- Reporting any signs of fatigue, work-related stress, or chemical exposures immediately or as soon as possible;
- Reporting any accidents or violations of the plan immediately or as soon as possible;
- Knowing emergency procedures, evacuation routes and the telephone numbers of the ambulance, local hospital, poison control center, fire and police departments;
- Ensuring that all project-related earthwork personnel have signed the personnel agreement and acknowledgment form contained in this plan; and
- Ensuring that air monitoring will be conducted in accordance with section 7.0 of this plan.

3.4 Site Health & Safety Representative/Consultant – Sterling & Associates

The Health & Safety Representative will also be involved in the coordination and implementation of this plan. Examples of specific duties may include:

- Development of the Health and Safety and Contingency Plans;
- Being aware of the provisions of this plan and in instructing personnel about the safety practices and emergency procedures defined in the plan and monitoring site safety;
- Advising on the selection of the types of personal protective equipment (PPE) to be used on site for specific tasks and monitoring the compliance of field personnel for the routine and proper use of the PPE that has been designated for each task;
- Coordinating upgrading or downgrading PPE, as necessary, due to changes in exposure levels, monitoring results, weather, and other site conditions;
- Stopping work on the site or changing work assignments or procedures if any operation threatens the health and safety of workers or the public;

- Reporting any signs of fatigue, work-related stress, or chemical exposures to the Construction Project Manager immediately or as soon as possible;
- Reporting any field personnel if their actions or negligence endangers themselves, co-workers, or the public, and reporting the same to the Construction Project Manager immediately or as soon as possible;
- Reporting any accidents or violations of the plan to the Construction Project Manager immediately or as soon as possible;
- Knowing emergency procedures, evacuation routes and the telephone numbers of the ambulance, local hospital, poison control center, fire and police departments;
- Performing air monitoring in accordance with Section 7.0 of this plan, as accordingly.
- If necessary, recommending a suitable medical monitoring program for the site workers.

3.5 Other Field Personnel

All earthwork field personnel shall be responsible for acting in compliance with all safety procedures outlined in this plan. Any hazardous work situations or procedures should be reported to the Health and Safety Representative so that corrective steps can be taken. The Health and Safety Representative and/or Construction Project Manager has the authority to halt any operation that does not follow the provisions of this plan.

4.0 SITE CHARACTERIZATION & ANALYSIS

4.1 Site Description

Client name: EmeryBay Commercial Association

Location of site: Bay Center (Jamba Juice) – 6475 Christie Ave. in Emeryville, CA

Topography of area surrounding the site:

Hilly _____	Flat <u> X </u>	Hummocky _____
Marshy _____	Mountainous _____	Other _____

Area affected:

Urban _____	Rural _____	Residential _____
Industrial <u> X </u>	Commercial <u> X </u>	Other _____

Types of bodies of water bordering the site, if any:

Stream _____ River _____ Pond _____ Lake _____
 Bay X - (800-1,000 ft west of site) Ocean _____ Other _____

Properties bordering the site:

North: 65th Street
 South: 64th Street
 East: Shellmound Street
 West: La Coste Street

4.2 Project Tasks

Per the design drawings provided for the Jamba Juice tenant improvements (dated 9/25/06), construction tasks that may encounter subgrade soil and potential hazardous materials are presented in the following sections.

4.2.1 Preliminary sub-slab Methane evaluation

A number of penetrations thru the building slab will be made to accommodate for various mechanical, electrical, and plumbing ("MEP") modifications as part of the Jamba Juice tenant improvement project. The Bay Center site was constructed on fill materials that historically have been shown to generate Methane gas. As such, there is a concern for potential generation and release of Methane gas during saw cutting and sub-base excavation activities. The generation and release of Methane gas during this project poses the potential for flammable atmospheres that must be evaluated prior to the use or generation of ignition sources.

As such, an evaluation of the potential Methane concentration will be performed prior to the main saw cutting/excavation project. The concrete will be core-sampled (3-6" diameter) at four to six locations where slab cutting is to be performed as part of the MEP installation. Standard coring operations will be sufficient, ensuring that sufficient water application is provided. Monitoring for flammable concentrations of Methane will be performed during the coring operation and upon removal of the core/plug. This information will be evaluated and appropriate safety precautions taken to eliminate flammable atmospheres, as applicable.

The contractor should ensure that the HVAC system serving this area has been isolated and shut down and/or the return air ducts sealed to prevent the introduction of construction-related dusts and/or vapors generated during the excavation from entering other areas of the building. In addition, the contractor may need to provide additional exhaust to the interior of the space (i.e. fans exhausting from the project area to the outside air) to reduce potential exposure to construction workers and others within the building.

4.2.2 Slab cutting

As part of the tenant improvement project, a number of areas of the slab will need to be saw cut to enable the installation of various plumbing and electrical installations. The appropriate safety precautions will be made during saw cutting, pending the results of the Methane evaluation, as described in Section 4.2.1.

4.2.3 Trench excavation (sub-slab)

Following removal of concrete/slab, trenches will be excavated to accommodate electrical and plumbing runs. Shallow electrical runs (i.e. 6" below slab level) will be performed in the future conference rooms. Deeper excavations (i.e. 3-4 feet) will be made to accommodate plumbing runs beneath the slab, and have a higher potential of encountering potentially impacted soils. Of primary concern will be dermal contact with subsurface soils (i.e. hands and feet). In addition, the potential for vapor generation from the excavation exists. This will be evaluated using direct-reading air monitoring equipment (refer to Section 7.0).

Installation of piping, conduit, or replacement rebar tie-ins should be made from the slab surface rather than having the worker stand within the trench or contacting the trench walls. In addition, elevated levels of methane gas are possible in these areas and the potential for flammable atmospheres must be evaluated prior to the use of potential ignition sources such as welding, sawzall cutting, hammer drill operation, etc.

The contractor should attempt to reuse the excavated soils during backfill operations, to the extent practicable.

4.2.4 Grease interceptor excavation

The deepest excavation associated with this project will be for the installation of the grease interceptor and sewage ejector, extending 7-8 feet in depth. The precast interceptor will be placed within the landscaped area on the south side of the building. As such, this excavation has a potential to encounter impacted soils and perhaps groundwater.

Personnel entering the excavation should be avoided, if at all possible. Similarly, the primary concern will be dermal contact with subsurface soils at the hands, feet, and whole body contact at sidewalls of the excavation. In addition, the potential for vapor generation from the excavation exists. This will be evaluated using direct-reading air monitoring equipment (refer to Section 7.0 of this plan).

The excavation will likely need to be shored and an excavation permit obtained from Cal/OSHA (if an employee will be entering the excavation, even momentarily). The contractor will also need to make provisions to appropriately stockpile excavated materials (refer to Section 11 "Soil Management Plan"). In addition, the contractor may need to make provisions for the collection and management of groundwater and/or rainwater during this phase of the project (Section 11.3).

The contractor should attempt to reuse the excavated soils during backfill operations, to the extent practicable.

4.3 Hazardous Chemicals

Potential effects of any exposure are dependent on several factors such as: toxicity of substance, time frame of exposure, concentration of substance producing the exposure, general health of person exposed, and individual use of hazard reduction methods. Based on previous soil sampling results, the primary classification of contaminants identified include: heavy metals such as Lead, gasoline, diesel, benzene, ethyl benzene, toluene, xylenes, methane, and DDT. Therefore, this plan concentrates on the hazards and measures necessary to prevent unnecessary exposure to these potential contaminants, as summarized in Table 1.

Table 1. Hazardous Chemicals Detected On-Site

Chemical Name	Benzene	4,4 - DDT	Diesel/Kerosene	Ethyl Benzene	Gasoline	Lead
Physical Description	A clear, volatile colorless, highly flammable liquid with a sweet aromatic odor.	Colorless crystals or white powder. Odorless or with a slight aromatic odor.	Combustible, brown, slightly viscous liquid with a characteristic odor.	A clear, colorless, flammable liquid; characteristic aromatic hydrocarbon odor.	Highly flammable, mobile liquid with a characteristic odor.	Bluish-white, silvery, gray, very soft metal.
Chemical/Physical Properties						
flash point	12°F	162-171°F	100°F (varies)	64°F	-45°F	None
vapor dens.	2.7	-	not available	3.7	3-4	None
Relative dens.	0.88	-	0.87	0.86	0.72-0.76	11.34
LEL-UEL	1.3-7.1%	Unknown	0.6-7.5%	1-6.7%	1.4-7.6%	None
vapor pressure	100mmHg @ 79°F	0.0000002mm	not available	7.1 torr @ 68°F	not available	1.77mm @ 1832 °F
Toxicological Effects	Chronic exposure to benzene vapor can produce neurotoxic blood system effects. Other effects can include headache, dizziness, nausea, convulsions, coma, & possible death if exposure isn't reversed. The most significant chronic effect is bone marrow toxicity. It is believed that there might be a strong association between chronic exposures to benzene & the development of leukemia.	DDT is a suspected carcinogen. DDT is known for its action or ability to readily enter the body through the skin. Systemic effects include: anesthetic, convulsions, headache, analgesia, cardiac arrhythmia, nausea, or vomiting. DDT and its degradation products (especially DDE) are stored in the fat. This storage effect can lead to concentration at higher levels of the food chain.	Diesel is available in a variety of differing grades. Its toxicity is thought to be similar to that of kerosene, although somewhat more toxic because of the addition of additives. Diesel is an eye, skin and respiratory irritant, and is a Central Nervous System (CNS) depressant. It is not as acutely hazardous as many other petroleum products such as gasoline.	Ethyl benzene is an eye, mucous membrane, respiratory tract, and skin irritant. High air levels can cause central nervous system depression, sense of chest constriction, headache and dizziness. Skin contact may cause irritation, inflammation and first or second degree burns.	Gasoline is a complex mixture of hydrocarbons and additives. Chronic exposures or exposures to a high concentration of gasoline vapor may cause unconsciousness, coma and possibly death from respiratory failure. Exposure to low concentrations of gasoline vapor may produce flushing of the face, slurred speech, and mental confusion.	Lead is normally absorbed through inhalation. Inorganic lead is not commonly absorbed through skin contact. Symptoms of lead intoxication are commonly gastrointestinal disorders. However, the early symptoms of lead poisoning are non-specific and, except by laboratory testing, are difficult to distinguish from the symptoms of minor seasonal illness. These include: aching muscles and joints, headache, constipation, & abdominal pain. These symptoms are reversible and complete recovery is probable.
Exposure Limits						
Cal/OSHA (PEL)	1 ppm	1mg/M3	not established	100 ppm	300ppm	0.05 mg/M ³
ACGIH (TLV)	10 ppm	1mg/M3	100 mg/M ³	100 ppm	300ppm	0.05 mg/M ³
NIOSH (REL)	0.1 ppm	0.5mg/M3	Kerosene - 100 mg/M ³	100 ppm	not established	<0.1 mg/M ³

Table 1. Hazardous Chemicals Detected On-Site

Chemical Name	Methane	Toluene	Xylene
Physical Description	A colorless, odorless, tasteless, extremely flammable gas.	A clear, colorless liquid with a characteristic aromatic odor.	A clear liquid with an aromatic hydrocarbon odor.
Chemical/Physical Properties			
flash point	-213°F	40°F	81-90°F
vapor dens.	0.54	3.1	3.7
Relative dens.	NA	0.87	0.86
LEL-UEL	5-15%	1.3-7.1%	1-7%
vapor pressure	NA	22mmHg @ 68°F	7-9 torr @ 68°F
Toxicological Effects	Methane is a simple asphyxiant and does not cause physiological responses, but it can displace Oxygen.	Inhalation of toluene vapors can produce effects such as central nervous system depression. Signs and symptoms can include headache, dizziness, fatigue, muscular weakness, lack of coordination, drowsiness, collapse, and possible coma. Toluene can be a skin and mucous membrane irritant and has been shown to cause liver and kidney damage when over-exposure is significant.	Inhalation of xylene vapor may produce central nervous system excitation followed by depression. Exposure to xylene vapor can produce dizziness, staggering, drowsiness, and unconsciousness. At very high concentrations, xylene vapor may produce lung irritation, nausea, vomiting, & abdominal pain. Xylene is not known to possess the chronic bone marrow toxicity of benzene, but liver enlargement and nerve cell damage have been noted from chronic overexposure.
Exposure Limits			
Cal-OSHA (PEL)	none established	50 ppm (skin)	100 ppm
ACGIH (TLV)	none established	50 ppm (skin)	100 ppm
NIOSH (REL)	none established	100 ppm	100 ppm

4.4 Hazard Determination

Serious _____ Moderate _____ Low X Unknown _____

• Non-chemical hazards:

confined space _____ drill rig _____ traffic _____

underground utilities X overhead lines _____ backhoe X

poisonous animals _____ dangerous animals _____ ticks _____

high crime area _____ slip/fall hazards X welding X

heat/cold stress _____ excavation > 5 ft X trench > 4
ft X-possible

leaking containers _____ electrical _____ hot surface _____

low light conditions _____ lifting hazard _____ noise X

heavy construction equipment _____ poisonous insects _____

other _____

If confined space entry was checked above, of what type is the confined space?

shed _____ subsurface vault _____ manhole _____ basement _____

trench _____ excavated pit _____ other _____

• Chemicals utilized to perform on-site tasks (include chemicals used to maintain equipment):

4.5 Other Hazards/Procedures for Reducing Hazards

The potential for unknown hazards cannot be eliminated. Hazards can exist for all exposure routes such as inhalation, dermal contact, ingestion, and eye contact.

The following are potential site hazards and the corresponding procedures for hazard reduction:

POTENTIAL HAZARDS	PROCEDURES FOR HAZARD REDUCTION
<p>1. Ingestion of hazardous materials can occur by accidental swallowing of contaminated soils, liquids and/or transfer of the contaminated particles onto ingestible substances (such as food).</p>	<p>1. Eating, smoking, drinking and application of cosmetics is prohibited on-site. This minimizes the possibility of exposure to hazardous materials potentially encountered on-site via ingestion.</p>
<p>2. Physical hazards in general such as:</p>	
<p>a) Slippery surfaces.</p>	<p>a) Use of approved skid-proof boots shall be required.</p>
<p>b) Noise.</p>	<p>b) Approved ear plugs/muffs shall be made available for noisy work operations such as pounding.</p>
<p>c) Contaminated surfaces.</p>	<p>c) Contact with contaminated surfaces, or surfaces suspected of being contaminated, should be avoided. This includes walking through, kneeling or placing equipment in puddles, mud, or discolored surfaces.</p>
<p>d) Exposure.</p>	<p>d) Heat stress: Provide plenty of liquids to replace loss of body fluids. Appropriate liquids should consist of juices, juice products, and water.</p> <p>Establish a work schedule that will provide sufficient rest periods for cooling down. As the temperature increases, more frequent and longer rest periods are required.</p> <p>Cold Stress: Establish a work schedule that will provide sufficient rest periods for warming-up. As the temperature drops, more frequent and longer rest periods are required.</p> <p>Provide adequate thermal protective clothing.</p>
<p>e) Head/eye protection</p>	<p>e) ANSI approved hard hats and safety glasses and will be worn at all times while on-site, and/or when head or eye hazards are present.</p>

<p>f) Other hazards.</p>	<p>f) Avoid standing near the edge of excavations. -Look for falling objects, slipping and tripping hazards (i.e. visqueen sheets used to hold excavated soil can be slippery). -Secure the site with fences and post warning signs to prevent the exposure of unauthorized, unprotected people to site hazards. -Do not park or leave equipment near the edge of an excavation.</p>
---------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

4.6 Required Personal Protective Equipment

Modified Level D is the minimum acceptable level for this site. Modified Level D provides minimal dermal protection. Respiratory protection is optional unless air-monitoring data indicates otherwise. Consult the Site Action Level chart located in section 4.8 of this plan.

Modified Level D includes:

- Normal work uniform;
- Tyvek suit (if working within an electrical or plumbing trench, interceptor/vault excavation or handling/working with potentially contaminated soils is necessary);
- Nitrile gloves (when handling potentially contaminated soil), such as the ultra-thin Nitrile gloves;
- Boots/shoes with steel shank and approved toe protection. Chemical resistant (PVC or neoprene) boots or overboots are necessary when working in exposed soils (i.e. within trench excavation or interceptor excavation) or when handling potentially contaminated soil; and
- ANSI approved industrial safety glasses and hardhat.

Additional equipment upgrade:

1. Protocols for upgrading:

Once air monitoring data are complete and results are tabulated on the initial site entry, the Health & Safety Representative will determine if changes in PPE are needed.

2. Upgraded equipment:

- a. Respirators

If respirators become necessary, potentially affected personnel will be required to be medically qualified and trained under the Respiratory Protection Standard found in Title 8 CCR 5144.

Half mask air purifying respirators equipped with high efficiency particulate air (HEPA) cartridges shall be worn by all potentially affected personnel if monitoring results exceed the applicable action levels (see section 4.9 for information).

If significant levels of airborne VOCs and/or hydrocarbons are detected (refer to Section 4.9), respiratory protection including organic vapor/carbon cartridges may become necessary. Alternatively, an organic vapor/HEPA cartridge may be used.

Note: Respirator cartridges shall be replaced at least daily. If cartridges begin to restrict breathing or if breakthrough (ability to smell, taste, or be physically affected by the contaminant) occurs, replace cartridges immediately.

b. Other

Appropriate dermal protection (i.e. gloves, coveralls, etc.) shall be worn if the potential for exposure exists while performing job tasks.

4.7 Levels of Protection

LEVEL A (not anticipated)

Level A personal protection is required in the area where the highest levels of contamination exist and is designated as the area where maximum respiratory, skin, and eye protection are required.

LEVEL B (not anticipated)

Level B personal protection is required in the area where maximum respiratory protection is required, however, there is a low probability of dermal toxicity.

LEVEL C (not anticipated)

Level C personal protection is required in the area where respiratory protection of a lesser degree than the criteria established for Levels A or B is required, and the probability of skin contamination by dermal toxic materials is unlikely. An area may be designated as Level C when:

- Monitored levels of air contamination do not exceed the protection factors afforded by Air-Purifying Respirators (APR).

- Air contaminants have good warning properties.
- Contaminants are not known to be absorbed through, or toxic to, skin surface.
- A reliable history of prior site entries exists without indications of acute or chronic health effects.

LEVEL D

Level D personal protection is required in the area where respiratory protection is not a requirement. An area may be designated as Level D when:

- No hazardous airborne contaminants are known to be present, and the potential for a release of such hazards is low;
- Work operations preclude the splashing of hazardous/toxic materials on body surfaces; and
- There are no Level A zones within the same exclusion area.

4.8 Action Levels

SITE ACTION LEVEL* = 50 ppm (see table below)

SITE SHALL BE EVACUATED IF <19.5% or > 23.5% O₂

SITE SHALL BE EVACUATED IF LEL > 10%

Air Monitoring Equipment and Levels of Protection

Air Monitoring Instruments	Level D	Level C	Level B	Level A
PID or FID	0-50 ppm	50 - 500ppm	Not Anticipated	Not Anticipated
O ₂	19.5%-23.5%	19.5%-23.5%	< 19.5%	Not Anticipated
LEL	Stop all operations, evacuate immediate area when > 10% LEL encountered			

* Site action level is based on sustained VOC concentrations above background, detected in the breathing zone of the worker (refer to Air Monitoring section 7.0)

The protection factor assigned for APRs is 10 and 50 for half-face and full-face APRs, respectively.

If conditions require Level B personal protective measures and the appropriate Level B equipment is unavailable, site personnel shall evacuate immediately. See Section 3.7 for personal protective equipment (PPE) level guidance.

5.0 SITE ACCESS

Site access should be limited and secured by a fence or similar site control device during construction activities and associated stockpile areas during construction or maintenance work. Breaches to the fence or locked gates, should they occur, will be repaired as soon as possible. In addition, signs should be posted indicating the presence of hazards on-site and that unauthorized individuals should keep out.

6.0 ENGINEERING CONTROLS AND WORK PRACTICES

6.1 Engineering Controls

Concentrations of Lead and petroleum hydrocarbon constituents in the soil indicate that dust control measures will be, at a minimum, consistent with standard construction practices. These will include, but are not limited to, the following:

- Watering of active soil construction areas to prevent visible dust plumes from migrating outside of the site limits;
- Misting or spraying while loading transportation vehicles;
- Minimizing drop heights while loading transportation vehicles; and
- Using tarpaulins or other effective covers for trucks carrying soils that travel on public roads.
- Using sufficient water during slab coring/cutting operations. If flammable atmospheres are detected below the slab, ventilating or inerting that area may be necessary prior to cutting or using other potential ignition sources.

Subsurface activities shall immediately cease should airborne dust become visible, and will not recommence until the area is adequately moistened such that no visible dust will be generated. If visible dust is continually being generated, additional measures (e.g., dust monitoring) may be required.

6.2 Work Practices

Workers are expected to adhere to established safe work practices for their respective specialties (i.e. piping, trenching, construction, etc.). The need to exercise caution in the performance of

specific work tasks while wearing PPE is made more acute due to: (1) weather conditions; (2) restricted mobility and reduced peripheral vision caused by the protective gear itself; (3) the need to maintain the integrity of the protective gear; and (4) the increased difficulty in communicating caused by respirators. Work at the site will be conducted according to established protocol and guidelines for the safety and health of all involved.

Among the most important of these principles for working at a site where hazardous materials are present are the following:

- In any unknown situation, always assume the worst conditions and plan responses accordingly;
- Because no Personal Protective Equipment (PPE) is 100% effective, all personnel must minimize contact with excavated or potentially contaminated materials. Plan work areas, decontamination areas, and procedures accordingly. Do not place equipment on drums or the ground. Do not sit on drums or other materials. Do not sit or kneel on the ground. Avoid standing in or walking through puddles or stained soils;
- **Smoking, eating, or drinking in potentially contaminated work areas will not be allowed.** Prior to doing such activities (outside of potentially contaminated areas), individual shall wash his/her hands and face prior to such. Oral ingestion of contaminants is a major route of entry for introducing toxic substances into the body;
- Avoid heat and other work stresses related to wearing protective gear. Work breaks should be planned to prevent stress-related accidents and fatigue;
- Personnel must be observant of not only their own immediate surroundings, but also those of others. Everyone will be working under constraints; therefore, a team effort is needed to notice and warn of impending dangerous situations. Extra precautions are necessary when working near heavy equipment and while utilizing PPE because vision, hearing, and communication may be impaired;
- Personnel with any facial hair that interferes with the proper fit of the respirator will not be allowed to work on sites requiring Levels C, B, or A;
- Rigorous contingency planning and dissemination of plans to all personnel minimizes the impact of rapidly changing safety protocols in response to changing site conditions; and
- Personnel must be aware that chemical contaminants may mimic or enhance symptoms of other illnesses or intoxication. Drinking of alcohol while working on-site is prohibited during field investigation assignments.

7.0 AIR MONITORING

To the extent feasible, the presence of airborne contaminants will be evaluated through the use of sampling equipment. Information gathered will be used to ensure the adequacy of the levels of protection being employed at the site, and may be used as the basis for upgrading or downgrading levels of Personal Protection, at the discretion of the Health & Safety Representative and/or Construction Project Manager.

The following air sampling equipment may be utilized for site monitoring by the Site Health & Safety Representative:

- Photo-Ionization Detector (PID) – organic vapors (alternatively, a FID may also be utilized for this purpose); and
- LEL/O₂ Meter; and
- Integrated air sampling for airborne Lead (during soil excavation operations)

The PID or FID will serve as the primary instrument for personal exposure monitoring for organic vapors. The instrument will need to be utilized to characterize potential employee exposure and the need for equipment upgrades/downgrades.

During initial excavation and slab opening/cutting activities, monitoring should be conducted for explosive atmospheres using an LEL/O₂ monitor. In addition to the petroleum hydrocarbons, fill materials of the site could present methane or other flammable vapor issue.

Monitoring will be conducted to evaluate the potential for exposure to site personnel during initial operations. Continuous monitoring should be performed during operations that have not been characterized. After initial site screening, monitoring shall be conducted periodically and when site conditions might be altered (i.e. weather, new area of excavation, etc.).

Results of Monitoring information shall be recorded including time, date, location, operations, and any other conditions that may contribute to potential airborne organic vapors and Lead. All maintenance and calibration information shall be maintained on-site. The monitoring equipment will be calibrated in accordance with the manufacturer's specifications, and the records of such maintained with this plan and/or project file.

8.0 DECONTAMINATION

All personnel and/or equipment leaving a potentially contaminated area are subject to decontamination procedures. If applicable, general decontamination procedures for personnel and equipment are outlined below.

8.1 Personal Decontamination

All personnel leaving areas where existing soil (below the existing slab or landscape excavation area) has been exposed must follow decontamination procedures.

At a minimum, individuals involved in this project should wash their face and hands prior to eating, smoking, and/or applying cosmetics. If water is not readily available on-site, the use of sanitary wipes or similar materials may be used. If boot covers are worn, they should be disposed of properly in appropriate containers.

Although not anticipated, if a level of protection greater than Level D is necessary, no personnel will be allowed to leave an earthwork area prior to decontamination. Generalized procedures for removal of protective clothing are as follows:

- 1) Drop tools, equipment, samples, and trash at designated drop stations (i.e., plastic containers or drop sheets);
- 2) Wash down boots with clear water in the designated wash pit area. If non-disposable clothing is utilized, wash down outer protective garments;
- 3) Remove tape from boots and gloves;
- 4) Remove boots or boot covers and discard in container;
- 5) Remove gloves and place in container;
- 6) Remove outer garment and discard in container;
- 7) Remove respiratory equipment, place in designated area;
- 8) If the site requires use of a decontamination trailer, all personnel must shower prior to leaving the site; and
- 9) Wash face and hands prior to eating, smoking, and/or applying cosmetics.

NOTE: Disposable items (i.e., Tyvek coveralls, respirator cartridges, gloves, and latex overboots) will be changed daily unless there is reason to change sooner.

Pressurized sprayers or other designated equipment may be available in the decontamination area for wash down and cleaning of personnel and equipment.

Respirators will be decontaminated daily. The masks will be disassembled, the cartridges replaced, and all other parts placed in a cleaning solution (typically warm soapy water). Prior to re-use of the respirator, employees will inspect their mask to ensure there are no apparent defects, tears, etc.

8.2 Equipment Decontamination

Equipment utilized in the areas of exposed soil (instruments, samples, tools, backhoes, other construction equipment) will be decontaminated prior to leaving the earthwork areas. Smaller equipment can be protected from contamination by draping, masking, or otherwise covering the instruments with plastic (to the extent feasible) without hindering operation of the unit.

The contaminated equipment will be taken from the drop area and the protective coverings removed and disposed of in appropriate containers. Any dirt or obvious contamination will be brushed or wiped off with a disposable paper wipe. The units can then be placed inside in a clean plastic tub, wiped off with damp disposable wipes, and dried. The units will be checked, standardized, and recharged as necessary for the next day's operation, and then prepared with new protective coverings.

All contaminated articles and waste decontamination materials shall be containerized, labeled, and disposed of properly.

9.0 EMERGENCY RESPONSE/CONTINGENCY PLAN

This contingency plan applies to "on-site emergency responses" only. Much of the information for this section is covered elsewhere within this plan, therefore, only the items not previously addressed will be included.

9.1 Lines of Authority/Communication

The Health & Safety Representative is the primary authority for directing site operations under emergency conditions. All emergency communications both on and off-site will be directed through the Construction Project Manager.

9.2 Emergency Telephone Numbers

In the event of an accident or emergency situation, immediate action must be taken by the first person to recognize the event. First aid equipment is typically located with the construction field office. Notify (1) the Construction Project Manager, and, (2) the Health and Safety Representative about the situation immediately after emergency procedures are implemented.

Emergency Telephone Numbers:

Immediate Emergencies:

Local Police: 911
 State Police: 911
 Fire: 911
 Ambulance: 911

Medical:

Nearest Hospital: Alta Bates Medical Center
 Telephone #: (510) 204-4444
 Directions: 2450 Ashby Ave., Berkeley, CA (see Appendix D)

Poison Control Center: 911

Environmental Emergency:

PES Office: (415) 899-1600

Regional EPA Office: (415) 744-2000

9.3 Usual Procedure for Injury

1. Call for ambulance/medial assistance, if necessary. Notify the receiving hospital of the nature of physical injury or chemical overexposure.
2. If time allows, send/take pertinent information (i.e. Table 2) to medical facility.
3. If the injury is minor, proceed to administer first aid and then immediately notify the Construction Project Manager.
4. Construction Project Manager and Health and Safety Representative must be notified of situation.

9.4 Emergency Treatment

When transporting an injured person to a hospital, bring this plan to assist medical personnel with diagnosis and treatment. In all cases of chemical overexposure, follow standard procedures as outlined below for poison management, first aid, and, if applicable, cardiopulmonary resuscitation. Four different routes of exposure and their respective first aid/poison management procedures are outlined below:

1. Ingestion:

Refer to Table 1 or the applicable MSDS (if available) for specific recommendation and/or CALL THE POISON CONTROL CENTER AT: 911 FOR INSTRUCTIONS.

2. Inhalation:

DO NOT ENTER CONFINED SPACE UNLESS PROPERLY EQUIPPED AND HAVE A STANDBY PERSON.

Move the person from the contaminated environment. Initiate CPR if necessary. Call, or have someone call, for medical assistance. Refer to Table 2 for additional specific information. If necessary, transport the victim to the nearest hospital as soon as possible.

3. Skin Contact:

Wash off skin with a large amount of water immediately. Remove any contaminated clothing and rewash skin using soap, if available. Transport person to a medical facility if necessary.

4. Eyes:

Hold eyelids open and rinse the eyes immediately with copious amounts of water for 15 minutes. If possible, have the person remove his/her contact lenses (if worn). Never permit the eyes to be rubbed. Transport person to a hospital as soon as possible.

9.5 Evacuation Procedures

Various emergencies may warrant a site evacuation. These may include: fire, explosion, chemical release, or personal injury.

Personnel encountering a hazardous situation shall **instruct others on site to evacuate the vicinity IMMEDIATELY** and call the (1) Health & Safety Representative and, (2) the Construction Project Manager for instructions.

The site must not be re-entered until the situation has been corrected.

In the event of an evacuation, the work party will move upwind. Wind direction can be noted by the use of a windsock located on the site or other indicators (i.e. flags, trees, waves, etc.). When conditions warrant moving away from the work site, the crew will relocate upwind a distance of approximately 100 feet or further, as indicated by the site monitoring instruments. If the decontamination area is upwind and far enough from the event, the work crew will quickly pass through the decontamination area to remove contaminated clothing.

When the Health & Safety Representative determines that conditions warrant evacuation of downwind residences and commercial operations, local agencies will be notified and assistance

requested. Designated on-site personnel will initiate evacuation of the immediate off-site area without delay.

The following signals will be utilized for site evacuation/emergencies:

1 long blast	Evacuate
1 short blast	Attention
2 blasts	Fire

(i.e. truck/car horn)

9.6 First Aid Equipment

Vehicles used for site work will be equipped with a first aid kit and safety equipment including:

fluorescent vests	cones
barricades	fire extinguisher
flashlight	water, suitable for drinking
portable eyewash	emergency bandage materials

10.0 OTHER

10.1 Confined Space Entry

Not Applicable

10.2 Sanitation

Provisions must be made for sanitation facilities (i.e. bathrooms and handwashing) for the earthwork work force. If it is a mobile crew and they have transport readily available, the requirements do not apply. At a minimum, the provision of toilet facilities must meet the requirements of 29 CFR 1910.141 which include one facility for less than 20 employees; or one toilet and one urinal for every 40 employees, up to 200; then one of each for every 50 employees thereafter.

In addition, an adequate supply of potable water must be available at each jobsite for drinking and decontamination for earthwork operations involving potentially hazardous materials.

10.3 Illumination

Earthwork operations will not be permitted without adequate lighting. Therefore, unless provisions are made for artificial light, downrange operations must halt in time to permit personnel and equipment to exit the site and proceed through decontamination before dusk. Conversely, earthwork operations will not be permitted to begin until lighting is adequate.

10.4 Electrical Equipment Safety

All portable electrical hand tools and cords will be inspected daily or when used to ensure safe operation.

Any equipment found defective is to be tagged and removed from service until repairs are completed.

All portable equipment will be run through a portable ground fault circuit interrupter (GFCI).

Each GFCI will be tested daily using the test circuit built into the unit. Any unit failing the test will be tagged and removed from service until repairs can be completed.

All receptacles will be tested prior to use (using portable tester) to ensure that the receptacle has an adequate ground circuit and the wiring is proper.

Units that fail the test will be tagged and put out of service until repairs can be made.

All electrical equipment and power cables used in and around wells or structures containing petrochemical contamination must be explosion-proof and/or intrinsically safe and equipped with a three-wire ground lead.

10.5 Fire Prevention

If the potential for the accumulation of flammable vapors exist, periodic vapor-concentration measurements should be taken with an explosimeter or combustimeter. If at any time the vapor concentrations exceed 10% of LEL, then the Health & Safety Representative, or designated field worker, should immediately shut down all operations.

Only approved safety cans will be used to transport and store flammable liquids.

All gasoline and diesel-driven engines requiring refueling must be shut down and allowed to cool before filling.

Smoking is not allowed during any operations within 15 feet of any work area in which petroleum products or solvents in free-floating, dissolved or vapor forms, or other flammable liquids may be present.

No open flame or spark is allowed in any area containing petroleum products, or other flammable liquids.

10.6 General Health

Medicine and alcohol can increase the effects of exposure to toxic chemicals. Unless specifically approved by a qualified physician, prescription drugs should not be taken by personnel assigned to operations where the potential for absorption, inhalation, or ingestion of toxic substances exists.

Drinking and driving is prohibited at any time. Driving at excessive speeds is always prohibited.

Skin abrasions must be thoroughly protected to prevent chemicals from penetrating the abrasion.

Contact lenses should not be worn by persons working on the site.

10.7 Noise

Control of noise hazards shall be in accordance with 29 CFR 1910.95. Noise hazard areas (greater than the 8-hour Time Weighted Average of 85 dBA or 140 dB impact/pulse) must be appropriately marked and hearing protection for noise attenuation worn when in the area.

11.0 SOIL MANAGEMENT PLAN

The soil management objectives are designed to reduce the potential for exposure of construction workers at the site, neighboring workers, and/or pedestrians, and future users of the site to soil potentially containing chemical residuals. All soil management and handling activities described herein will be conducted in accordance with applicable federal, state, and local regulations.

11.1 Air Monitoring

During construction activities exposed and excavated soil suspected of containing chemical residuals will be monitored for VOCs. Air monitoring equipment and documentation procedures are discussed in Section 7.0 above. VOCs will be monitored by taking head-space readings using either a PID or FID meter.

11.2 Management of Excavated Soil

Soil excavated during construction activities will be evaluated in the field using sensory and monitoring equipment for evidence of chemical contamination (i.e. staining, odors, discoloration, elevated VOC readings, etc.).

11.2.1 Management of Apparently Clean Soil

If field evaluation activities do not suggest the presence of contamination, the soil will be stockpiled and may be reused onsite as backfill at the excavation site. If an overage of "clean" soil remains at the end of the project requiring removal from the site, appropriate soil characterization will be conducted, as discussed in Section 11.2.3, below.

11.2.2 Management of Suspect Soil

Excavated soil exhibiting characteristics suggesting potential contamination will be stockpiled onsite within a designated fenced enclosure. The soil will be placed on and covered with plastic sheeting. Characterization samples will be collected, as discussed in Section 11.2.3, below. Pending results of the stockpile characterization, appropriate handling and management alternatives will be evaluated (i.e. reuse onsite or offsite as fill material or disposal at an appropriately permitted facility).

11.2.3 Excess and Suspect Soil Stockpile Sampling and Analysis

Excavated soil suspected to contain chemical residuals and/or requiring off hauling (regardless of the potential for contamination), will be sampled to evaluate appropriate handling and management alternatives. Soil sampling will be conducted on a minimum frequency of one discrete sample per approximately 50 cubic yards of soil.

The chemical analyses to be conducted will be determined on the basis of the destination of the material (i.e., landfill, offsite backfill area, etc...) and/or the suspected contaminant(s) (based on field evaluation techniques and/or historic sampling data relevant to the specific portion of the site from which the material was excavated).

11.3 Management of Groundwater

The contractor should be aware that the potential for groundwater does exist on the site, particularly with the depth of the interceptor excavation. In addition, due to the timing of this project, seasonal rains could impact the excavation and collect therein. Collected rainwater within the excavation should be treated/handled as if it were groundwater. If groundwater is encountered and requires pumping from excavations, the groundwater should be pumped into appropriate containers and samples should be obtained for analysis to determine waste classification and disposal/recycling options. The chemical analyses to be conducted will be determined on the basis of the suspected contaminant.

APPENDIX A

Agreement and Acknowledgment Statement

APPENDIX A

Agreement and Acknowledgment Statement

Site Safety Plan Agreement

All project personnel and subcontractors are required to sign the following agreement prior to conducting work at the site.

1. I have read and fully understand the plan and my individual responsibilities.
2. I agree to abide by the provisions of the plan.

_____	_____
Name	Signature
_____	_____
Company	Date

_____	_____
Name	Signature
_____	_____
Company	Date

_____	_____
Name	Signature
_____	_____
Company	Date

_____	_____
Name	Signature
_____	_____
Company	Date

_____	_____
Name	Signature
_____	_____
Company	Date

_____ Name	_____ Signature
_____ Company	_____ Date

_____ Name	_____ Signature
_____ Company	_____ Date

_____ Name	_____ Signature
_____ Company	_____ Date

_____ Name	_____ Signature
_____ Company	_____ Date

_____ Name	_____ Signature
_____ Company	_____ Date

_____ Name	_____ Signature
_____ Company	_____ Date

_____ Name	_____ Signature
_____ Company	_____ Date

APPENDIX B

Site Safety Plan Amendment Sheet

APPENDIX B

Site Safety Plan Amendment Sheet

Project Name: _____

Project Number: _____

Location: _____

Changes in field activities or hazards:

Proposed Amendment:

Proposed by: _____ Date: _____

Approved by: _____ Date: _____

Declined by: _____ Date: _____

Amendment Number: _____

Amendment Effective Date: _____

APPENDIX C

Explanation of Hazard Evaluation Guidelines

APPENDIX C

Explanation of Hazard Evaluation GuidelinesHazard: Airborne Contaminants

<u>Guideline</u>	<u>Explanation</u>
Threshold Limit Value Time-Weighted Average	The time-weighted average concentration for a (TLV-TWA) normal 8-hour workday and a 40-nearly all workers may be repeatedly exposed without adverse effect.
Permissible Exposure Limit (PEL)	Time-weighted average concentration similar to (and in many cases derived from) TLV values.
Immediately Dangerous to Life or Health (IDLH)	"IDLH" or "Immediately Dangerous To Life or Health" means any atmospheric condition which poses an immediate threat to life, or which is likely to result in acute or immediate severe health effects. This includes oxygen deficiency conditions.

Hazard: Explosion

<u>Guideline</u>	<u>Explanation</u>
Lower Explosive Limit (LEL)	The minimum concentration of vapor in air below which the propagation of a flame will not occur in the presence of an ignition source.
Upper Explosive Limit (UEL)	The maximum concentration of vapor in air above which propagation of a flame will not occur in the presence of an ignition source.

Hazard: Fire

<u>Guideline</u>	<u>Explanation</u>
Flash Point	The lowest temperature at which the vapor of a combustible liquid can be made to ignite momentarily in air.

APPENDIX D

Hospital Location Maps

YAHOO! DRIVING DIRECTIONS

A 6475 CHRISTIE AVE, Emeryville, CA, 94608

1. Start at **6475 CHRISTIE AVE, EMERYVILLE** going toward **64TH ST - go 0.2 mi**
2. Turn **R** on **65TH ST - go 0.6 mi**
3. Turn **L** on **SAN PABLO AVE - go 0.3 mi**
4. Turn **R** on **ASHBY AVE - go 1.6 mi**
5. Arrive at **2450 ASHBY AVE, BERKELEY**, on the **R**

B Alta Bates Medical Center (510) 204-4444 ★★★★★ 2450 ASHBY AVE, Berkeley, CA, 94705

Total Distance: 2.8 miles, Total Travel Time: 8 mins

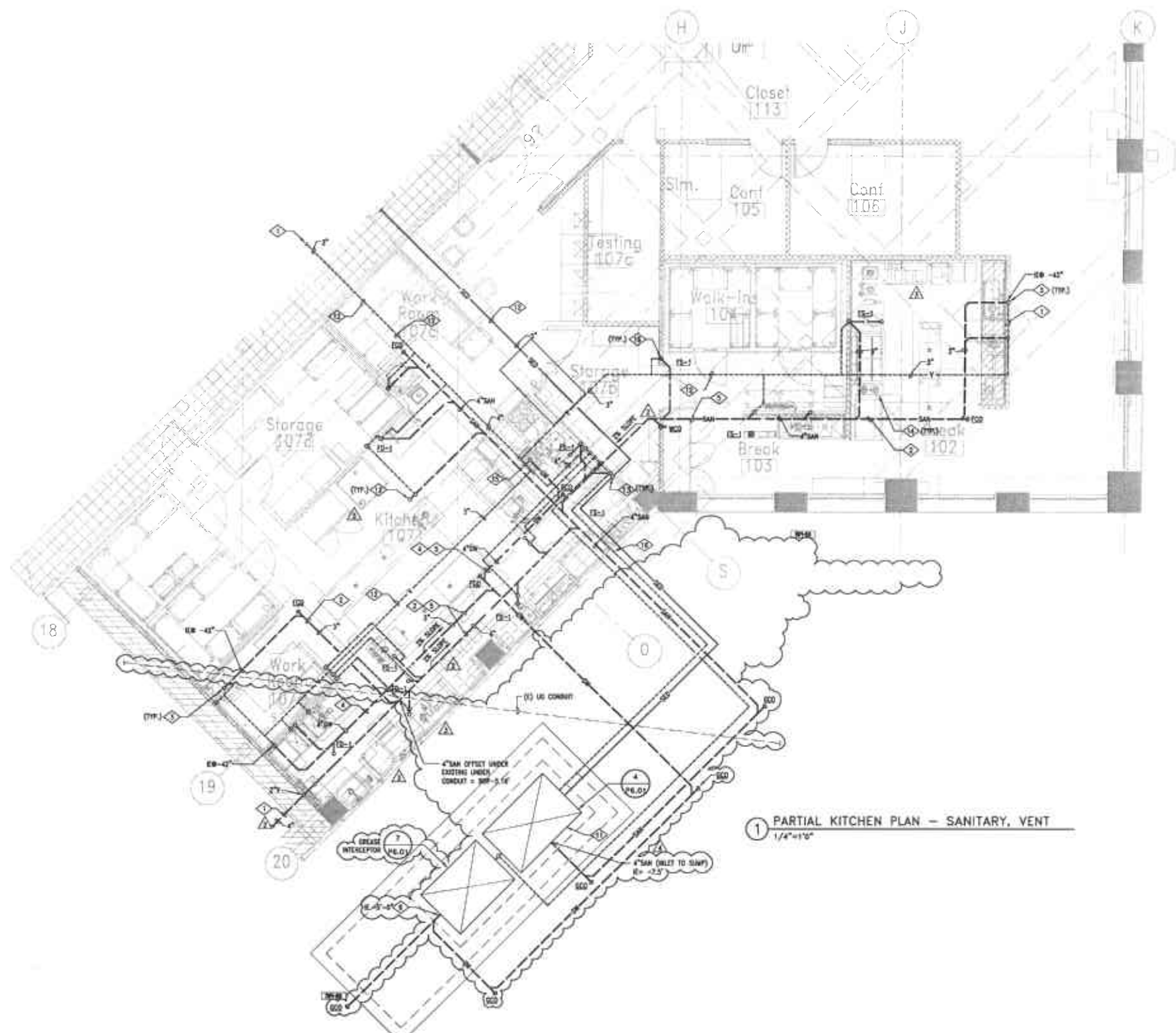


When using any driving directions or map, it's a good idea to do a reality check and make sure the road still exists, watch out for construction, and follow all traffic safety precautions. This is only to be used as an aid in planning.

ATTACHMENT D
CONSTRUCTION PLAN

NUMBERED NOTES

- 1 REFER TO DWG. P2.01 FOR CONTINUATION OF PIPE.
- 2 RUN PIPE BELOW SLAB.
- 3 2" DIA. IN.
- 4 2" DIA. PIPE BELOW FLOOR, RUN PIPING AT 20% SLOPE.
- 5 COORDINATE LOCATION OF UNDER FLOOR PIPING WITH EXISTING CONDITIONS.
- 6 CONNECT 4" IN. TO GREASE INTERCEPTOR.
- 7 1" VENT BELOW GROUND.
- 8 330 GALLON GREASE INTERCEPTOR.
- 9 PROVIDE SAMPLING SOIL.
- 10 4" PIPE TO SEWAGE EJECTOR.
- 11 PROVIDE DUPLEX EJECTOR PUMP PUMP 5" DIA. SIMILAR TO WEL MODEL 2426 300RPM @ 20' HEAD, CURVE #400, 1.5HP, 208V, 60HZ, 3PH, CONTROL PANEL FOR DUPLEX PUMP SIMILAR TO WEL MODEL B100, EXPLOSION PROOF NEMA 4 MODEL 2200 LEVEL CONTROLS.
- 12 RUN PIPE ABOVE CEILING.
- 13 UP 2" DIA.
- 14 CONNECT 1/2" IN. & 2" IN. TO ALL FD & TS.
- 15 ON 1/2" IN. FROM TRICKY IN/AN.
- 16 UP 2" IN.
- 17 CO DOWN IN WALL & RUN TO FLOOR SINK.



1 PARTIAL KITCHEN PLAN - SANITARY, VENT
1/4"=1'-0"

4



JAMBA JUICE
 8475 CHRISTIE STREET
 EMERYVILLE, CA
 Project Number: 05090.00

Issue Record

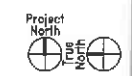
#	Description	Date	By
1	Issue for Permit, Piping, and Construction	11/25/2006	
	Issue for Plan Check Response	11/28/2006	
	Bulletin #1	12/26/2006	
	Bulletin #2	1/12/2007	
	RF-55	2/07/2007	

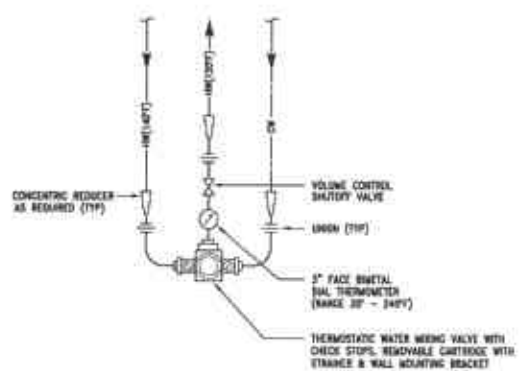


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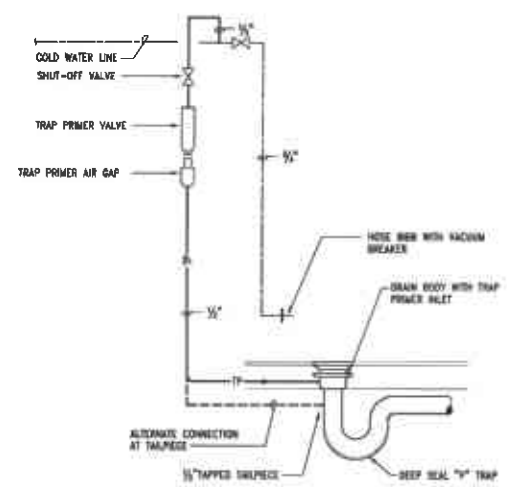
POLLACK
 architecture
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 1000 Broadway, Suite 100, San Francisco, CA 94107
 Pollack 1000.000

P4.01
 PLUMBING
 FOOD SERVICE EQUIPMENT
 SANITARY/VENT PIPING



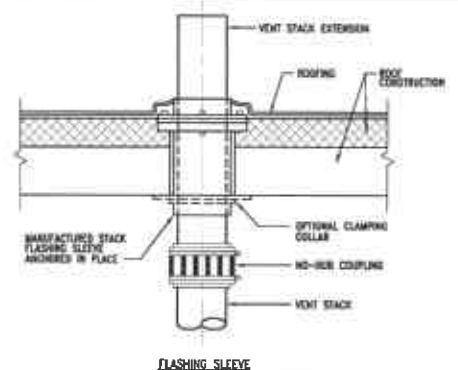


9 WATER MIXING VALVE VALVE PIPING DIAGRAM NO SCALE



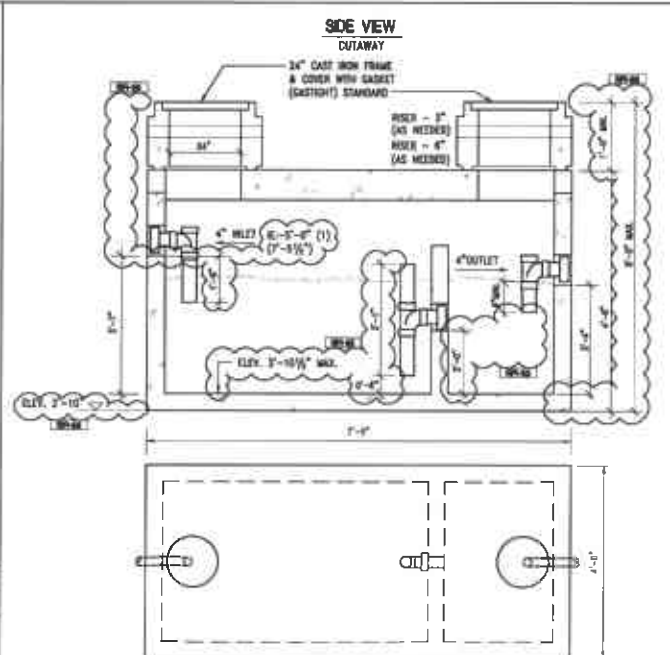
NOTES:
 1. TRAP PRIMER VALVE SHALL BE MOUNTED ONE FOOT ABOVE THE FINISHED FLOOR FOR EVERY 20 FEET OF PRIMER LINE.
 2. INSTALL TRAP PRIMER PIPING AND UNIT PER MANUFACTURER'S RECOMMENDATIONS. PIPING MUST SLOPE TO POINT OF CONNECTION TO DRAIN WITHOUT TRAPS IN PIPING.

10 TRAP PRIMER INSTALLATION NO SCALE



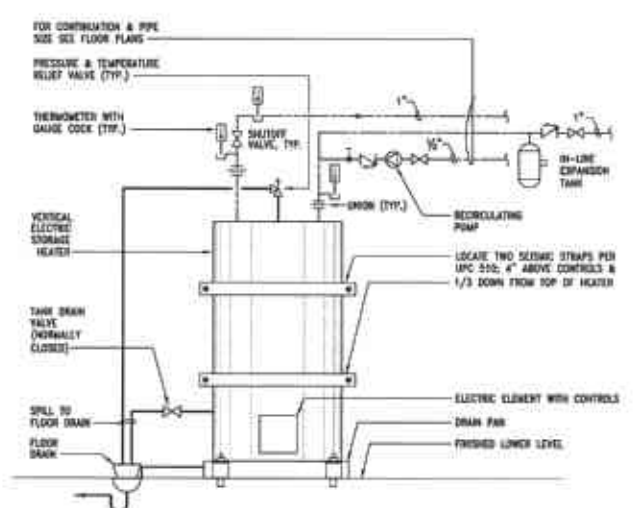
NOTE
 VENT STACK OUTLET TO BE 10 FT. (MIN.) FROM ANY WALL OR 3 FT. ABOVE STRUCTURE.

11 VENT THRU ROOF NO SCALE

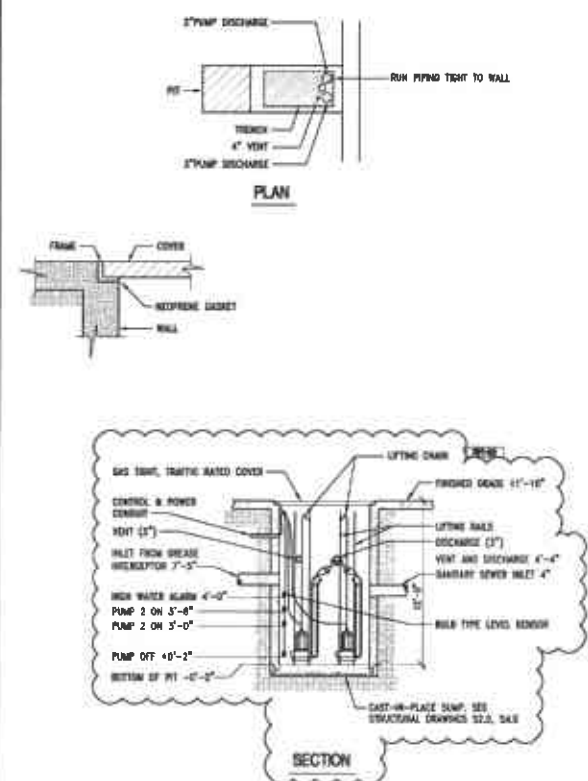


NOTES:
 1. INLET INVERT ELEVATION IS 2'-0" BELOW FINISHED FLOOR WHICH IS NOTED AT 12.45 FT ABOVE SEA LEVEL.
 2. CONTRACTOR SHALL DETERMINE WALL AND FLOOR CONCRETE THICKNESS AND SHALL PROVIDE A MINIMUM LIQUID CAPACITY OF 300 GALLONS.
 3. GREASE INTERCEPTOR SHALL BE LOCATED INSIDE CAST-IN-PLACE VAULT. SEE STRUCTURAL DRAWINGS FOR VAULT DETAILS.

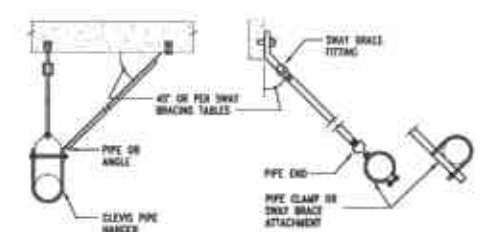
7 320 GALLON GREASE INTERCEPTOR NO SCALE



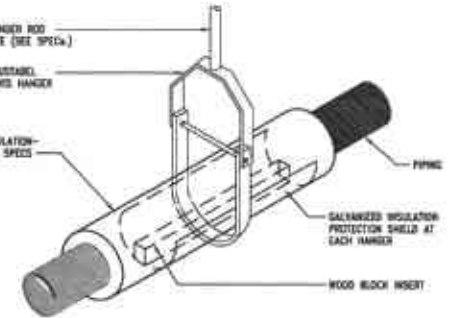
8 ELECTRIC WATER HEATER NO SCALE



4 DUPLEX SEWAGE EJECTOR NO SCALE

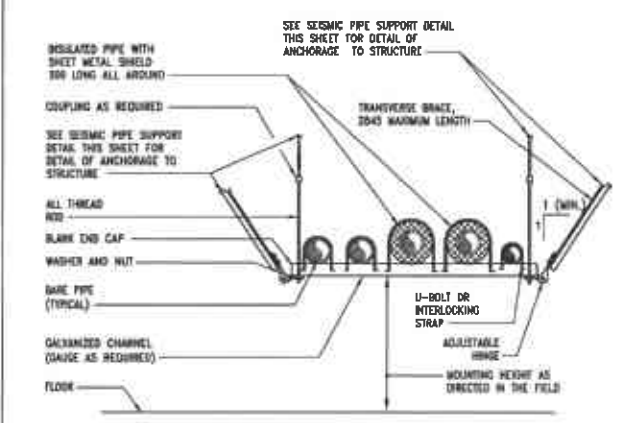


5 SWAY BRACING DETAIL NO SCALE



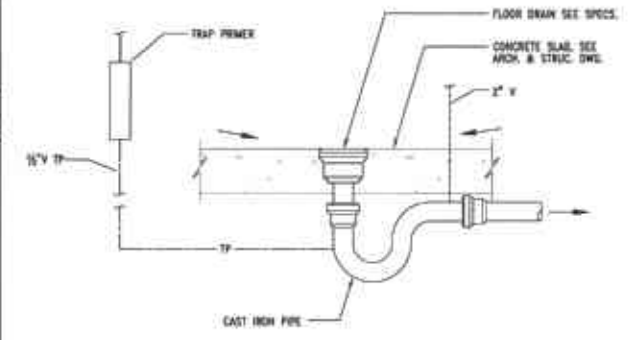
NOTE
 1. SEE STRUCTURAL DRAWINGS FOR HANGER ROD CONNECTION TO STRUCTURE.

6 PIPE HANGER AND INSULATION DETAIL NO SCALE



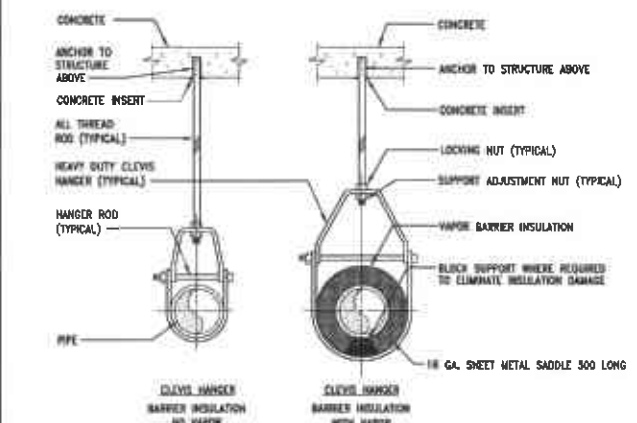
NOTES:
 1. ALL PIPING SUPPORT SYSTEM COMPONENTS SHALL HAVE A NON-CORROSIVE METAL FINISH.
 2. ALL COPPER PIPING SHALL BE PROTECTED FROM CONTACT WITH DISSIMILAR METALS.

1 TRAPEZE PIPE SUPPORT DETAIL NO SCALE



NOTES:
 1. PROVIDE TRAP PRIMER AT ALL FLOOR DRAIN LOCATION

2 FLOOR DRAIN DETAIL NO SCALE



NOTES:
 1. ALL HANGERS FOR COPPER PIPING SHALL BE COPPER COATED.
 2. THIS DETAIL SHALL BE APPLICABLE TO PLUMBING PIPING SMALLER THAN SO.

3 PIPE SUPPORT DETAIL NO SCALE



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P6.01
 PLUMBING
 DETAILS

ATTACHMENT E

AERIAL PHOTO SHOWING LOCATION OF VAULT EXCAVATION



ATTACHMENT E