SAN FRANCISCO BAY AREA RAPID TRANSIT DISTRICT
800 Madison Street - Lake Merritt Station
P.O. Box 12688
Oakland, CA 94604-2688
Telephone (510) 464-6000

ENVIRONMENTAL PROTECTION

00 DEC 29 PM 2:51

December 26, 2000
ESD-00-0028

Mr. Barney M. Chan
Alameda County Health Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Health and Safety Plan, BART Fruitvale Intermodal Project.

Dear Mr. Chan:

Enclosed for your review is the health and safety plan for our work on the former Union Pacific right-of-way adjacent to the Fruitvale BART Station in Oakland. The work is scheduled to proceed sometime in January, 2001. I would appreciate receiving any comments you have on the plan as soon as possible.

If you have any questions, please contact me at (650) 689-8439.

Sincerely,

Gary C. Jensen, REA
Senior Engineer
System Safety Department

Enclosures

Cc: Janie Layton

Bay Area Rapid Transit
Contract No. 01GB-120

SUBMITTAL FORM

Fruitvale Station Intermodal Project
Phase II

Contractor: **OGISO Environmental, Inc.**
1504 Franklin St., Ste 304
Oakland, CA 94612
510-451-5771/510-451-5773

Subcontractor: _____
Address: _____
Address: _____
Phone/Fax _____

Supplier: _____
Address: _____
Address: _____
Phone/Fax _____

Manufacturer: _____
Address: _____
Address: _____
Phone/Fax _____

Submittal Number:	2
Submittal Date:	12/4/00
Revision Number:	1
Revision Date:	12/21/00
Revision Number:	
Revision Date:	
Revision Number:	
Revision Date:	

Subject: Safety, Health and Emergency Response Plan
Specification: Contract Specification 01160, Part 1.03
Comments: _____

Signature: _____ Stamp:

Action Block:

Neither review nor approval of any aspect of Contractor's work supplied under this contract shall in any way relieve Contractor of any of its obligations with respect to the performance of work under the contract.

☐ (1) APPROVED
☐ (2) APPROVED FOR FABRICATION AS MARKED REVISED DRAWING REQUIRED.
☐ (3) NOT APPROVED. REVISED DRAWING REQUIRED.

SAN FRANCISCO BAY AREA RAPID TRANSIT DISTRICT

Date_____ By_____

VENDOR PRINT NUMBER:
01GB-120-100-2 REV 1

Safety, Health and Emergency Response Plan
BART Fruitvale Station Intermodal Project, Phase II
Oakland, California

Prepared by

OGISO Environmental
1504 Franklin Street, Ste. 304
Oakland, California 94612

December 21, 2000

CONTENTS

FIGURE

SAFETY, HEALTH AND EMERGENCY RESPONSE PLAN ACCEPTANCE

I have read and become familiar with all aspects of this Safety, Health and Emergency Response Plan (SHERP) for work related to the BART Fruitvale Station Intermodal Project, Phase II, Oakland, California. I agree to abide by the contents of the SHERP. I also agree to inform my supervisor and/or the Site Safety and Health Officer (SSHO) of any conditions, which are or appear to be unsafe. I also understand that the SHERP may be supplemented with other site-specific health and safety documents for which I will be held equally responsible.

Name (Printed)	Signature	Company	Date

Return this signed document to Gene Fiedler, the Company Health and Safety Officer, at:

OGISO Environmental
1504 Franklin Street, Suite 304
Oakland, California 94612

1.0 INTRODUCTION

This Safety, Health and Emergency Response Plan (SHERP) has been prepared by OGISO Environmental (OGISO) for the Bay Area Rapid Transit District's (BART's) Fruitvale Station Intermodal Project, Phase II, Oakland, California.

This SHERP establishes the policies and procedures that protect the workers and the general public from potential health and safety hazards posed at this site. The SHERP establishes general personnel protection standards and mandatory safety practices and procedures, assigns of authority and responsibility, and identifies appropriate training for individuals performing tasks on this Project. This document is also intended to assist in compliance with all relevant federal, and state health and safety regulations governing demolition-related activities associated with this Project and was developed in accordance with the following:

- California Occupational Health and Safety Regulations, specifically:
  Title 8 CCR 5192 - Hazardous Waste Site Operations and Emergency Response

- NIOSH/OSHA/USCG/EPA Occupational Health and Safety Guidance Manual for Hazardous Waste Activities, October 1985

- Contract Specifications for Fruitvale Station Intermodal Project, Phase II

- OGISO Environmental's Hazard Communication/Injury and Illness Prevention Programs (Appendix A)

Because site conditions are subject to change and unforeseen conditions may arise, amendments or additions may need to be made to this SHERP during the course of work. All activities conducted by OGISO employees and its contractors will be conducted in compliance with this SHERP, and with all applicable federal, state, and local environmental and worker protection regulations. This document must be read and understood by site personnel conducting activities associated with this Project. All site personnel must be given access to this SHERP upon request.

1.1 Description of Site

The site is located at the BART Fruitvale Station in Oakland, California. Specifically, the project is primarily located along the former railroad right-of-way to the west of the Fruitvale Station parking lot, between Fruitvale Avenue and 37th Avenue. One additional area is within the parking lot along East 12th Street.

1.2 Materials of Concern

Materials of concern for which human contact may result in adverse health effects are identified below:

- Railroad ballast and soil containing arsenic and lead.

Arsenic is a heavy metal. The routes of exposure/entry for arsenic are inhalation and ingestion of arsenic-carrying dust particles (arsenic has a vapor of zero and is insoluble). Arsenic poisening can result from accumulation of arsenic in the blood and the symptoms include: upper respiratory irritation, burning and constriction of throat, abdominal pain, dermatitis, ulceration of nasal septum, and potential bronchi. Arsenic is a skin, lung, and liver carcinogen. The maximum concentration of arsenic detected on site is 230 milligrams per kilogram (parts per million).

Lead is a heavy metal. The routes of exposure/entry for lead are inhalation and ingestion of lead-carrying dust particles (lead has a vapor pressure of zero and is insoluble). Lead poisening can result from accumulation of lead in the blood and the symptoms include: general weakness, lassitude, insomnia, facial pallor, pale eyes, low weight, malnutrition, constipation, abdominal pain,colic, anemia, tremors, paralyzed wrist and ankles, encephalopathy, nephropathy, irritation of the eyes, and hypotension. The maximum concentration of lead detected on site is 250 milligrams per kilogram (parts per million).

1.3 Safety, Health and Emergency Response Plan Availability

This written SHERP shall be made available to any contractors or subcontractors or their representatives who will be involved with the Project; to employees; to employee-designated representatives; and to personnel of federal, state, or local agencies with regulatory authority over the site.

1.4 Description of Work

The project involves the removal and disposal of contaminated railroad ballast and soil, and the construction of a parking lot on a former railroad right-of-way, and the expansion of the parking lot into a landscaped area.

1.5 Subcontractor Applicability

OGISO intends to remove all contaminated and hazardous soil prior to subcontractor work on the site. OGISO also intends to import and place aggregate base before subcontractor work on site. Consequently, OGISO contends that any subcontractor contact with contaminated or hazardous soil will be deminimus contact, not requiring any training, personal protective equipment, or medical surveillance, as described in Sections 5, 6, and 7 respectively.

2.0 ORGANIZATIONAL STRUCTURE

The Project organizational structure establishes the specific chain of command and specifies the overall responsibilities of supervisors and employees. The organizational structure shall be reviewed and updated as necessary to reflect the current status of site operations. The following are the key supervisory personnel:

2.1 OGISO Health and Safety Manager (HSM)

Gene Fiedler is OGISO's Company Health and Safety Officer and will be the Health and Safety Manager (HSM). He has the responsibility and authority to direct the health and safety aspects of all field operations. The HSM is responsible for the overall design, technical development, and implementation of this SHERP. The HSM is also responsible for reviewing and approving any changes to this SHERP prior to implementation of such changes in the field. The HSM has authority over all site work, contractors, and subcontractors and may utilize this authority to order the cessation of work if compliance with this SHERP is violated, if new or previously undiscovered hazards are identified, or to cause any safety problems encountered to be corrected.

2.2 Site Safety and Health Officer (SSHO)

OGISO's Superintendent will be the SSHO. For the initial portion of the work (including the excavation and off-hauling of the contaminated soil) Gene Fiedler will act as the SSHO. The SSHO has the responsibility and authority to implement the site health and safety plan and verify compliance.

The SSHO is responsible for the following:

- Enforcing the guidelines, rules, and procedures in this document for all site work
- Being familiar with local emergency services
- Conducting safety and health meetings before work startup and as needed thereafter for specific tasks
- Maintaining and inspecting personal protective equipment (PPE), monitoring onsite hazards, and monitoring the physical condition of site personnel
- Verifying that managers and supervisors are trained in workplace safety and are familiar with the safety and health hazards to which employees under their immediate direction or control may be exposed
- Maintaining compliance with applicable federal, state, and local regulations, and requirements of this SHERP
- Verifying that employees are trained in accordance with this SHERP
- Inspecting the workplace daily to better anticipate, recognize, evaluate, and control workplace hazards on a continuing basis
- Developing methods for abating workplace hazards and checking that workplace hazards are abated in a timely and effective manner.

2.3 Site Superintendent

- Gene Fiedler will be serving as the Site Superintendent for the initial portion of the project, including the excavation and off-hauling of contaminated soil. The Site Superintendent is responsible for directing all field activities, including oversight and scheduling of all subcontractor activities. The Site Superintendent is also responsible for compliance with the site health and safety plan.

2.4 Employee Safety Responsibility

Although the employer is responsible for providing a safe and healthful workplace, each employee is responsible for his/her own safety, as well as the safety of those around him/her. The employee shall use all equipment in a safe and responsible manner, and as directed by supervisory personnel.

3.0 HAZARD ASSESSMENT AND MITIGATION

3.1 Preliminary Evaluation and Hazard Identification

A preliminary evaluation of site characteristics has been performed to aid in the selection of appropriate employee protection methods prior to site entry (see Section 4.2). The maximum level of lead detected on the site was 250 milligrams per kilogram, or parts per million by weight. The maximum level of arsenic detected on the site was 230 milligrams per kilogram.

3.2 Workplan

This section presents a workplan for the Project that may involve expose to the materials of concern. This plan addresses the tasks and objectives of the site operations and the logistics and resources required to reach those tasks and objectives.

- **Clearing and Grubbing**

Clearing and grubbing includes the removal of trash, debris, and plants from the site. The primary activities involve picking up trash and debris and placing in receptacles. The existing ground cover of primarily railroad ballast will remain. Removal of plants and roots will be by heavy equipment (such as an excavator). No contact with disturbed soil is expected. Trees may be cut above ground with a chain saw.

While no contaminated soil contact is expected, the trash and debris may contain sharp objects that could pose a danger. Specific PPE for this activity will include heavy leather gloves. Chain saw operators will also wear safety goggles.

- **Pole Removal**

The procedures for removal of the communication poles will be: (1) The installation of guy wires on the end poles to remain, (2) the removal of the existing communication lines, and (3) the removal of the poles. All aerial work will be completed using lifts. Removal of the poles will be done by heavy equipment (such as an excavator).

The risks from this task include fall potential from the lift and the general risks from working around heavy equipment (see Section 3.4).

- **Excavation and Loading of Non-Contaminated Soil**

Non-contaminated soil will be excavated and directly loaded into dump trucks for stockpiling in Area 4. No manual handling of the soil is expected.

The risks from this task are those associated with working around heavy equipment.

- **Excavation, Loading and Transport of Contaminated Soil**

Contaminated soil will be excavated and directly loaded into trucks for transport to the selected landfill. No manual handling of the soil is expected. Trucks leaving the site will be decontaminated as described in Section 12.1.

Risks include contact with contaminated/hazardous soil and working around heavy equipment.

- **Placement of Aggregate Base**

Prior to any other site activity, a layer of aggregate base material will be placed and spread on the remaining in-situ contaminated soil. The material will be placed by dumping the material onto the from clean soil or previously-placed aggregate base, so no decontamination of the trucks is required.

The risks from this task are those associated with working around heavy equipment.

- **Trenching for Utilities**

Any trenching for utilities in contaminated soil will be conducted by personnel trained as per Section 5.1. Soil removed during trenching will be placed onto plastic sheeting or directly into trucks for transport. No hand trenching into contaminated soil is expected.

Risks include contact with contaminated/hazardous soil and operating trenching equipment.

3.3 Material Hazards

Materials of potential concern at the site have been summarized in Section 1.2 of this SHERP. All personnel involved in the handling or loading of the contaminated ballast and soil will be HAZWOPER trained as per Title 8 CCR 5192. Further mitigation iscovered in subsequent sections.

3.4 Safety Hazards

Site features, conditions, and activities that are potential safety hazards include:

- Slip, trip, and fall hazards
- Equipment and machinery hazards
- Electrical hazards

Excavation or Falling Hazards

Personnel will be reminded daily to maintain sure footing on all surfaces, particularly uneven pavement or concrete pad surfaces in the process of demolition.

Heavy Equipment and Traffic

The use of heavy equipment onsite presents the greatest potential for injury to personnel. To minimize these hazards specific traffic patterns will be established. All trucks will use spotters for backing procedures. All personnel working along roadsides are required to wear orange safety vests.

Personnel needing to approach heavy equipment during operation will observe the following protocols:

1. Make eye contact with the operator.
2. Signal the operator to cease heavy equipment activity.
3. Approach the equipment and inform the operator of intentions.

Only qualified personnel will operate heavy equipment. Those crew members directly involved with spotting for the operator will be the only personnel allowed within the operating radius of the heavy equipment. All other personnel will remain a safe distance away from these operations. Vehicles will yield to all bikes, pedestrians, and railroad crossings.

Only equipment that is in safe working order will be used. To maintain this policy, all equipment brought onto the project site will be inspected for structural integrity, smooth operational performance, and proper functioning of all critical safety devices in accordance with the manufacture's specifications. This inspection will be performed by a qualified equipment operator and the SSHO. Equipment not conforming to the operational and safety requirements during this inspection will not be put into service until all necessary repairs are made to the satisfaction of the operator and SSHO. Only qualified operators familiar with the equipment will be permitted to operate equipment.

Electrical Hazards

To prevent accidents caused by electric shock from electric tools, the SSHO will inspect all electrical connections on a daily basis. The SSHO will oversee the shut down and lock out any equipment found to have frayed wiring or loose connections until a qualified electrician can be contacted and repairs effected. Electrical equipment will be de-energized and tested by an electrician before any electrical work is done. All equipment will be properly grounded prior to and during all work.

In addition, ground fault circuit interrupters (GFCIs) will be installed whenever possible in each circuit between the power source and tool, unless the presence of a potentially explosive atmosphere precludes this procedure. In the event that generators are used to supply power, these generators will be equipped with GFCIs.

All electrical equipment to be removed as part of the project will be confirmed as disconnected prior to removal.

Electrical installations shall be under the control of a safety representative designated by the electrical subcontractor, or landscape subcontractor, as appropriate. The SSHO will review the subcontractors' safety procedures and operations prior to and during all on-site activities.

3.5 General Health and Safety Work Practices

This SHERP advocates exercising every reasonable precaution when performing the work to prevent property damage and to protect the safety and health of employees, the public, and the environment. Failure to comply with any of the responsibilities and regulations may be considered a material breach of contract.

Employees have certain responsibilities for their own safety, as follows:

- Report to work rested, physically and mentally fit to perform the job assignment.
- Working while under the influence of intoxicants, narcotics, or controlled substances is prohibited.
- Wear suitable clothing for the weather and the work.
- Wear PPE and follow established procedures for a particular job. Do not wear jewelry or loose-fitting clothing when operating or near equipment.
- Call the supervisor's attention to any behavior or condition that may cause injury or illness to others or damage to property.
- Read warning labels on containers and equipment. Follow specified precautions.
- Discontinue any operation that could lead to injury, illness, or property damage.
- Keep horseplay and other disruptive behavior away from the job.
- Promptly report to the SSHO or Site Supervisor any occupational injury, illness, or exposure to toxic material. If injured, get first aid. Small injuries can become serious if neglected.
- Promptly inform the SSHO or Site Supervisor whenever new substances, processes, procedures, or equipment that could present new safety and health hazards are brought into work areas or onto projects.
- Do not eat, smoke and/or chew tobacco, or chew gum in the work area.
- Do not allow visitors without adequate safety training into the work area.
- Perform work in a manner that will minimize dust from becoming airborne (i.e., use water spray or wet technique when feasible).

- Do not work alone inside the work area. Use the "buddy system" during all work activities.
- While in the work area, avoid contact with objects or soil unless the contact is necessary to the field operation.
- Be alert to abnormal behavior of other personnel that may indicate distress, disorientation, or other ill effects.
- Verify that vehicles have an ABC-rated fire extinguisher and first-aid kit.
- Be aware of the amount of solar radiation exposed skin is receiving. Take steps to minimize the potential for sunburn.
- Operate a vehicle only if you are a licensed driver. Seatbelts must be worn when operating a company vehicle or when driving a private vehicle on company business.
- Drive vehicles in a safe manner and obey traffic regulations.
- Operate equipment only if you are a trained operator. Conduct and document a daily equipment inspection.

These general safety responsibilities listed above also apply to subcontractors and visitors.

4.0 SITE DESCRIPTION AND EVALUATION

4.1 Site Description

The site is located at the BART Fruitvale Station in Oakland, California. Specifically, the project is primarily located along the former railroad right-of-way to the west of the Fruitvale Station parking lot, between Fruitvale Avenue and 37th Avenue. One additional area is within the parking lot along East 12th Street.

The site is divided into 4 areas: Area 1 encompasses the former railroad right-of-way from the north side of 33rd Avenue to the north side of 35th Avenue. Area 2 encompasses the former railroad right-of-way from the south side of 35th Avenue to the north side of 37th Avenue. Area 3 encompasses the eastern part of the parking lot (along 12th Street) from the south side of 35th Avenue to the north side of 36th Avenue. Area 4 encompasses the north half of the former railroad right-of-way from the south side of Fruitvale Avenue to 33rd Avenue.

4.2 Site Evaluation

The site has been evaluated by BART's environmental consultant. The evaluation workplan, Field Sampling Workplan, BART Fruitvale Station, Oakland, California, is dated March 28, 2000. The results of that site evaluation are presented in the Revised Final In-Situ Soil Characterization Report, Fruitvale Station Intermodal Station, dated May 30, 2000. This report divides the site into areas designated by various hazardous and non-hazardous categories. This SHERP is primarily written to apply to handling of the impacted soil. ✓ TWA

The respective OSHA limits for lead and arsenic are 0.050 milligrams in 1 cubic meter of air and 0.010 milligrams per cubic meter. The action level for uncontaminated dust is 10 milligrams per cubic meter. At the maximum concentrations detected for lead and arsenic, the dust level will be reached when the lead is 1/20 of the OSHA level and arsenic is ¼ of the OSHA. Consequently, the engineering controls and PPE selected for this project are based on dust protection.

250 ppm = $250 \times 10^{-6} = .250 \times 10^{-3}$

Pb max 250 ppm ✓
As max 230

eg Pb $\frac{.05}{10}$ =

$.25 \times 10^{-3}$ mg Pb / mg dust = 2.5×10^{-3}

10 mg / m^3 : 250 ppm

.0025 mg Pb / m^3 × $\frac{1}{20}$ ✓

$10 \times .23 \times 10^{-3} = \frac{2.3 \times 10^{-3}}{.01} = .23 \times \frac{1}{4}$ ✓

5.0 PERSONNEL TRAINING REQUIREMENTS

All employees working onsite near hazardous materials and contaminated soils who may be exposed to hazardous substances, health hazards, or safety hazards, and their supervisors and management responsible for the site shall receive training meeting the requirements of this section before they are permitted to engage in hazardous waste operation that could expose them to hazardous substances, safety, or health hazards. They shall also receive annual refresher training as specified in this section.

Employees shall not be permitted to participate in or supervise field activities until they have been trained to a level required by their job function and responsibility. As previously noted, this section is not intended for subcontractors.

5.1 Hazardous Waste/Hazardous Materials Site Training

Specific training requirements for personnel are divided into the following training categories:

- Regular site personnel exposed to hazardous substances (such as equipment operators, general laborers, and supervisor personnel)
- Occasional site personnel potentially exposed to hazardous substances below permissible exposure limits (such as groundwater monitors, land surveyors, and geophysical surveyors)
- Onsite management and supervisors.

These categories are discussed below.

5.1.1 Regular Site Personnel Exposed to Hazardous Substances

Site personnel whose job responsibilities cause them to be exposed to or to have the potential to be exposed to hazardous substances or health hazards are required to comply with 29 CFR 1910.120 and 8 CCR 5192(e)(3)(A). This regulation requires site personnel exposed to hazardous substances to complete 40 hours of classroom instruction for Health and Safety Training for Hazardous Waste Operations (HAZWOPER) and three days of field experience supervised by a trained supervisor.

5.1.2 Occasional Site Personnel Potentially Exposed to Hazardous Substances Below Permissible Exposure Limits

Occasional site personnel who visit the site for a specific limited task and whose exposure is designated by the SSHO to be under Permissible Exposure Limits (PELs) are required to comply with 8 CCR 5192(e)(3)(B) or other applicable state regulations. This regulation requires that these personnel receive a minimum of 24 hours of classroom instruction and one day of field experience supervised by a trained supervisor.

5.1.3 Management and Supervisory Training

In accordance with 29 CFR 1910.120 and 8 CCR 5192(e)(4), individuals who manage or supervise personnel engaged in hazardous waste operations at the site must receive 40 hours of classroom instruction and three days of field experience supervised by a trained supervisor. In addition, management and supervisory personnel shall receive an additional eight hours of specialized training that addresses the safety and health program, training requirements, personal protective and respiratory equipment program, health hazard monitoring procedures, accident investigation, and emergency response procedures.

5.2 Training Certification

Employees and supervisors that have received and successfully completed the training and field experience shall be certified by their instructor or the head instructor and trained supervisor as having successfully completed the

necessary training. A written certificate shall be given to each person so certified. Any person who has not been so certified or who does not meet these training requirements shall be prohibited from engaging in operations where exposures to hazardous substances are possible.

Training must be properly documented and filed onsite for reference by the SSHO or designated representative. Personnel required to meet the training requirements must present documented evidence of this training prior to entering the site. The SSHO is responsible for checking before each activity to verify complete and current documentation. A copy of the documentation will be kept readily available or onsite, as applicable.

5.3 Refresher Training

Annual refresher training in accordance with 29 CFR 1910.120 and 8 CCR 5192(e)(8) shall be completed at least annually following the completion of the individual's initial 40-hour or 24-hour training course. Annual asbestos and lead refresher training in accordance with 40 CFR Part 763 and 29 CFR 1926.62 shall be completed within one year following completion of the individual's initial training courses.

5.4 Site Specific Health and Safety Briefing

All employees will be briefed on the contents of this SHERP prior to work on the site. Emphasis will be placed on identification of the materials of concern and contaminated/hazardous soils handling. All employees will be required to sign the acceptance page at the beginning of the Plan.

6.0 PERSONAL PROTECTIVE EQUIPMENT

PPE has been selected which will protect employees from the hazards and potential hazards they are likely to encounter as identified during the site evaluation. Due to the proximity of the public, and the primary concern one of dust generation, should levels of dust exceed the action level, additional engineering controls will be instituted as opposed to increasing the level of PPE.

6.1 PPE Selection for Soil Excavation and Loading

On the basis of the scope of work, initial PPE requirements shall be EPA Level D.

Level D PPE will comprise:

- Coveralls or jeans and workshirt
- Safety boots/shoes
- Hard hat

For clearing and grubbing by hand, heavy leather gloves will be worn.

For chain saw operation, leather gloves and safety goggles will be worn.

For laborers working on site during excavation and loading of contaminated/hazardous soil, Tyvek and rubber boots (for easier decontamination) will be worn.

7.0 MEDICAL SURVEILLANCE PROGRAM

The contractor shall maintain up-to-date proof of participation in a medical surveillance program for all workers who require medical surveillance. The medical surveillance program shall be instituted for the following employees:

- Any worker who is expected to encounter hazardous materials or hazardous waste.
- Any employee who is or may be exposed to hazardous substances or health hazards at or above the PEL or, if there is no PEL above the published exposure levels for these substances, without regard to the use of respirators, for 30 days or more a year.
- Any employee who wears a respirator during any part of a day for a period of 30 days or more in a year, or as required by 8 CCR 5144.
- Employees exhibiting symptoms due to possible overexposure involving hazardous substances or health hazards from an emergency response or hazardous waste operation.

7.1 Frequency of Medical Examinations and Consultations

Medical examinations and consultations are made available to OGISO employees covered under Section 7.0 on the following schedules:

- At least once every twelve months unless the attending physician believes a longer interval (not greater than biennially) is appropriate.
- As soon as possible, upon notification by an employee either that the employee has developed signs or symptoms indicating possible overexposure to hazardous substances or health hazards or that the employee has been injured or exposed above the PEL or published exposure levels in an emergency situation.
- At more frequent times, if the examining physician determines that an increased frequency of examination is medically necessary.

7.2 Examination by a Physician

All medical examinations and procedures shall be performed by or under the supervision of a licensed physician certified in occupational medicine by the American Board of Preventive Medicine, and shall be provided without cost to the employee, without loss of pay, and at a reasonable time and place.

7.3 Physician's Written Opinion

The written opinion obtained by the employer shall not reveal specific findings or diagnoses unrelated to occupational exposures. The physician shall provide the results of the medical examination and tests to the employee if requested. The employer shall obtain and furnish the employee with a copy of a written opinion from the examining physician containing the following:

- The physician's opinion as to whether the employee has any detected medical conditions which would place the employee at increased risk of material impairment of the employee's health from work in hazardous waste operations or emergency response, or from respirator use.
- The physician's recommended limitation upon the employee's assigned work.

- A statement that the employee has been informed by the physician of the results of the medical examination and any medical conditions which require further examination or treatment.

7.4 Medical Surveillance Recordkeeping

An accurate record of the medial surveillance shall be retained. This record shall be retained for the period specified and meet the criteria of 8 CCR 3204. The record shall include at least the following information:

- The name and social security number of the employee.
- Physician's written opinions, recommended limitations, and results of examinations and tests.
- Any employee medical complaints related to exposure to hazardous substances.
- A copy of the information provided to the examining physician by the employer, with the exception of the standard and its appendices.

8.0 MONITORING

The contaminants in the materials of concern are heavy metals adhering to the soil particles. Consequently, the route of exposure would be through inhalation of dust. In addition, the concentrations of the materials of concern are low enough that dust alone will reach as action level before OSHA limits are reached for the materials of concern. As such, the primary engineering control to eliminate the route of exposure will be to minimize dust. However, at the beginning of excavation work, OGISO will conduct air monitoring to confirm the absence of airborne contaminants.

2 Perimeter monitored on fence

8.1 Environmental Air Monitoring

Air monitoring shall be performed to evaluate engineering controls and work practices. Air monitoring is proposed only at the beginning of excavation. **Three air sampling pumps equipped with 37 mm MCE filter cassettes will be placed on the east side of Area 1 or 2, which ever area is begun first. The pumps will be placed on the east side** as prevailing **winds are from west. The pumps will be operated for a period of 8 hours.** The cassettes will be analyzed for arsenic and lead. The results will be evaluated to determine if existing engineering controls are adequate and/or if additional air monitoring is required.

24 hr TAT? ✓

action limit?

8.2 Documentation of Monitoring

Records of monitoring results shall be maintained at the site. Records shall include the date, time, contaminants or hazards monitored, person conducting monitoring, calibration date and method, operations and location of monitoring, and results. An air monitoring data sheet shall be completed for each day of operations at the site.

8.3 Personnel Air Monitoring

In addition to environmental monitoring, at the beginning of excavation work, an air sampling pump will be placed the cab of the heavy equipment used to evaluate the existing engineering controls on the most exposed employee on site.

analysis?

monitor worn by employee

miniram – dust levels

ensure spoils for reuse are secure & covered.

9.0 STANDARD PROCEDURES AND WORK PRACTICES

This section presents OGISO's standard operating procedures, engineering controls, and work practices as applicable for the Project.

9.1 Site Mobilization

OGISO, prior to commencement of work, shall establish the following:

- Haul routes, staging areas, and security and flagger positions.
- Mobilization area uses, field offices, materials storage, and traffic and parking facilities authorized by BART.

After these have been established, mobilization of equipment and supplies will begin.

9.2 Meetings

9.2.1 Preconstruction Meetings

- An initial Preconstruction Meeting will be called and performed by the BART.
- Subsequent "preconstruction meetings will held with each subcontractor prior to the start of that subcontractor's work.

9.2.2 Partnering Meetings

- An initial partnering session will be held with BART, OGISO, and all major subcontractors.
- Subsequent partnering meetings will be held as necessary (at the agreement of OGISO and BART) or at the request of any major subcontractor.

9.2.3 Safety Meetings

- An initial site safety meeting shall address the hazards of the site and provisions for reducing the hazards as presented in this SHERP. The meeting shall also be used for planning the various stages of the work and to disseminate relevant information contained in this SHERP to other contractors and subcontractors working in the vicinity of the activities discussed herein.
- A toolbox/tailgate safety meeting will be held weekly or prior to any changes in scope of work. These meetings will be recorded on safety meeting forms. Topics will include, but will not be limited to, the following: previous week's work activities, safety concerns brought about by these activities, anticipated stages of work for the day, changes in scope or original work, introduction and orientation of new employees (if any), review of previous day's sampling or analytical results, lines of communication, evacuation routes, and changes in protection levels if required.

9.3 Road Lane and/or Sidewalk Closure

Traffic control will be provided when necessary. If at any time it becomes necessary to block all or a portion of any lane or street, all applicable City of Oakland permits will be acquired. In general, temporary fencing, traffic barricades, and/or caution tape shall be used to prevent unauthorized entry to the site.

9.4 Clearing and Grubbing

Prior to clearing and grubbing, a determination will be made as to whether such activity will involve dealing with contaminated material. Specific procedures will be developed and implemented if hazardous materials are to be encountered. Clearing and grubbing will be conducted to minimize dust generation.

9.5 Excavation

All excavation, transportation, and placement operations shall be conducted to minimize dust. OGISO intends to load all excavated materials directly into trucks to be transported to the required stockpile area or disposal facility by a licensed transporter. The following safe work practices for excavations have been modified for this project to reflect the limited depth of the excavations.

- The location of identified underground utilities, such as sewer, communication, fuel, electric, or water lines, shall be determined prior to opening an excavation.
- Underground Service Alert shall be advised of the proposed work at least two workings days prior to the start of any digging or excavation work.
- When excavation operations approach the estimated location of underground installations, the exact location of the installations shall be determined by safe and acceptable means.
- Exposed underground utilities shall be protected, supported, or removed as necessary to safeguard employees.
- Exposure to vehicular traffic: Employees exposed to public vehicular traffic shall be provided with, and shall wear, warning vests or other suitable garments marked with or made of reflectorized or high-visibility material.
- Exposure to falling loads: No employee shall be permitted underneath loads handled by lifting or digging equipment. Employees shall be required to stand away from any vehicle being loaded or unloaded to avoid being struck by any spillage or falling materials. Operators may remain in the cabs of vehicles being loaded or unloaded when the vehicles are equipped to provide adequate protection for the operator during loading and unloading operations.

9.6 Site Cleanup

Site cleanup shall be accomplished, when necessary, by means that will eliminate exposures to dust and will facilitate complete removal of contaminated or hazardous materials from the site. Material shall be removed from the exteriors of transportation vehicles prior to the vehicle leaving the site. No contaminated material shall be deposited on public roadways.

9.7 Dust Control

Dust must not be created during staging, moving, or loading of materials. A hose or water truck will be provided to moisten material being moved or loaded if necessary. At no time shall runoff be generated as a result of wetting of material. All site dust caused by vehicles, equipment, or wind shall also be controlled.

Dust control shall be maintained until an initial layer of imported aggregate has been placed over remaining *in-situ* contaminated/hazardous soils. Placing of the aggregate is expected to occur immediately (within one or two working days) of the removal of the contaminated/hazardous soil.

9.8 Trucking and Disposal

All trucks when transporting material removed from the work area are to observe the following:

- Transportation subcontractors will provide the appropriate certificate of insurance.
- Trucks shall use the route designated.

9.9 Stormwater Control

Prior to excavation, runoff locations will be determined and sediment control will be placed either at the point where runoff will leave the site, or where runoff will enter the stormwater discharge system (e.g. catch basins or manholes). As applicable, sediment control may consist of silt fencing, hay bales, filter fabric, or other materials that will allow for the passage of water while retaining the sediment.

10.0 SITE CONTROL PROGRAM

A work area will be established to prevent or minimize exposure (of unauthorized personnel) to hazards by establishing boundaries of work areas. The work area/work zone will be identified during safety briefings and will be clearly marked by traffic cones, barricades, signs, or other means. The nature of the project area will result in significant pedestrian traffic around the site. Normal pedestrian traffic routes that cross the work area will be blocked by temporary fencing. OGISO and subcontractor employees will need to maintain constant surveillance to ensure that the public does not enter the work area.

10.1 Work Area/Work Zone

The work area includes excavation areas, areas of active material removal, and areas of active material handling. Only authorized, trained, and qualified personnel shall be admitted. Personnel entering the work area must use the buddy system. The SSHO, and all OGISO employees, shall be responsible for controlling work zone access and keeping bystanders and unauthorized personnel to a minimum.

10.2 Outside the Work Area/Work Zone

OGISO will have control of only a limited area outside of the work zone. While technically outside the work zone, the area in the former railroad right-of-way between Areas 1 and 4 will be treated as being within the work zone. This area will be used as a lay-down area, and access will be the same as for the work zone. The only other area expected to be under OGISO's control will be the on-site office trailer, to be placed adjacent to the engineers trailer.

10.3 Buddy System

The buddy system shall be used at all times at the site. Employees shall be organized into work groups in such a manner that each employee of the work group is designated to be observed by at least one other employee in the work group. The purpose of the buddy system is to provide quick assistance to employees in the event of an emergency.

10.4 Site Security

A private security guard will be onsite during non-working hours from the beginning of the excavation of contaminated/hazardous soil, until the placement of an initial layer of imported aggregate base.

11.0 PERSONNEL HYGIENE

11.1 Potable Water

An adequate supply of potable water shall be provided on the site. Portable containers used to dispense drinking water shall be capable of being tightly closed and equipped with a tap, and shall be otherwise designed, constructed, and serviced so that sanitary conditions are maintained. Water shall not be dipped from containers. Any container used to store, dispense, or distribute drinking water shall be clearly marked as to the nature of its contents and not used for any other purpose.

Where single service cups (to be used but once) are supplied, both a sanitary container for the unused cups and a receptacle for disposing of the used cups shall be provided.

11.2 Nonpotable Water

Outlets for nonpotable water, such as water for equipment decontamination, dust control, or firefighting purposes, shall be identified to indicate clearly that the water is unsafe and is not to be used for drinking, washing, or cooking purposes. There shall be no cross-connection, open or potential between a system furnishing potable water and a system furnishing non potable water.

11.3 Toilet Facilities

OGISO shall maintain a chemical toilet in the lay-down area between Areas 1 and 4. Doors entering toilet facilities shall be provided with entrance locks controlled from inside the facility. Toilet facilities shall be kept clean, maintained in good working order, and provided with an adequate supply of toilet paper.

Washing facilities shall be onsite for washing of hands and face. Washing of hands and exposed skin is mandatory prior to eating, drinking, or smoking.

11.4 Personnel Decontamination

Tyvek used by laborers during excavation and loading of contaminated/hazardous soil will be kept on site for disposal. Rubber boots worn by laborers during this time will also be kept on site and decontaminated with a laboratory-grade detergent and water. Decontamination water and used Tyvek will be disposed of upon completion of the excavation and loading of the contaminated/hazardous soil and placement of the initial layer of aggregate base, and after trenching operations are complete.

12.0 DECONTAMINATION PROCEDURES

Decontamination procedures shall be monitored by the SSHO to determine their effectiveness. When such procedures are found to be ineffective, appropriate steps shall be taken to correct any deficiencies.

12.1 Truck Decontamination Procedures

All trucks transporting excavated material off the site will be decontaminated by dry brushing to remove material from the external surfaces of the trailer and from the tires.

12.2 Equipment Decontamination Procedures

Tracks, tires, and loading buckets of large equipment shall be scraped and/or brushed to remove gross contamination before driving out of the work area or before demobilization from the site.

13.0 EMERGENCY RESPONSE PLAN

Pertinent emergency information is provided in this section.

13.1 Emergency Information

13.1.1 Telephone Numbers

Community emergency telephone number (police, ambulance, fire, poison control): **911**

Hospital: Highland Hospital, 1411 E. 31st Street, Oakland, CA: (510) 437-4800

BART Police (notify of any incidents on site): (510) 464-7000

BART Central (notify of any impact to BART operations): (510) 834-1297

13.1.2 How to Report an Emergency

Employees may respond to low danger emergencies, such as administration of first aid, fighting small fires (with fire extinguishers), and clean-ups of small chemical spills (of less than 55 gallons or 500 pounds). All employees shall evacuate from the danger area when an emergency not listed above occurs, and shall not assist in handling the emergency.

Should outside medical or other emergency assistance be required, personnel shall notify the job trailer of the nature of the emergency and a call shall be made to 911.

If the injury or illness appears to be minor, the person may be driven to the emergency room of Highland Hospital, 1411 E. 31st Street., Oakland, California (510) 437-4800.

When calling for assistance in an emergency situation, the recipient of the call should hang up first - not the caller. The following information should be provided:

- Name of person calling
- Telephone number of caller's location
- Name of person(s) exposed or injured
- Nature of emergency
- Actions already taken

13.1.3 Emergency Personnel Decontamination

Do not conduct any decontamination that could cause additional injury. Notify all emergency/medical personnel of on-site contaminants.

As the primary concern is the arsenic and lead in the soil, to the extent practical, remove all soil from the injured person. Options include brushing off soil from clothing, removing Tyvek, washing of boots, and washing exposed skin.

13.2 Site Communications and Alerting Means for Emergencies

In the unlikely event that an emergency situation occurs, all field activities at that site will cease. Temporary radio and telephone communications will be established at the site. The following hand/body emergency communication signals should be used when other forms of communication are difficult or impossible:

Signal	Meaning
Hand clutching throat	Out of air/can't breathe
Hands on top of head	Need assistance
Thumbs up	OK/I'm all right/ I understand

Minor emergencies will be handled within the work area utilizing the onsite first-aid kit. The appropriate emergency response personnel (i.e., ambulance and fire department) will be contacted for all major emergencies.

All personnel, when alerted during emergencies, shall exit the work area muster at the on-site office trailer. Personnel are to remain at the office trailer and await further instructions.

13.3 Identification of Nearest Medical Assistance

Name of Facility:	**Highland Hospital**
Telephone Number:	**(510) 437-4800**
Address:	**1411 E. 31st Street**
	Oakland, CA 94602

Figure 1 is a hospital location map. It shall be posted at the site.

14.0 HEAT/COLD STRESS

Heat Exposure

Heat stress may be caused by factors that include combinations of elevated ambient temperatures, relative humidity, radiant heat, and wearing of PPE. The effects of heat stress are heat rash, cramps, exhaustion, and in extreme cases, heat stroke. Field personnel will be trained to recognize heat stress symptoms. Cool water or fluids will be readily available to the employees, who will be encouraged to drink frequently during each break during hot weather. Use of shade canopies and work scheduled at non-peak temperature periods of the day shall be evaluated for appropriateness during hot weather.

Cold Exposure

Workers are not expected to regularly experience cold exposure at sites in the San Francisco Bay Area; however, all persons working outdoors in low temperatures during wet and windy conditions or during early morning hours may suffer from cold injury or hypothermia. During prolonged outdoor periods with inadequate clothing, effects of cold exposure may even occur at temperatures well above freezing.

Systemic hypothermia is caused by exposure to freezing or rapidly dropping temperatures. Hypothermia exhibits five stages of symptoms: (1) shivering; (2) apathy, listlessness, sleepiness, and (sometimes) rapid cooling of the body to less than 95°F; (3) unconsciousness, glassy stare, slow pulse, and slow respiratory rate; (4) freezing of the extremities; and (5) death. Hypothermia victims should be warmed, and medical help should be obtained.

15.0 LOGS, REPORTS AND RECORDKEEPING

Recordkeeping is a crucial component of any effective SHERP. Site safety records shall therefore be updated daily. The following logs, reports, and records shall be maintained as appropriate:

- Site safety meetings (toolbox/tailgate meetings)
- Employee training records
- Daily safety/production reports
- Health and safety plan signature page
- OSHA 200 log.

YAHOO! MAPS

Powered by Mapquest.com (tm)

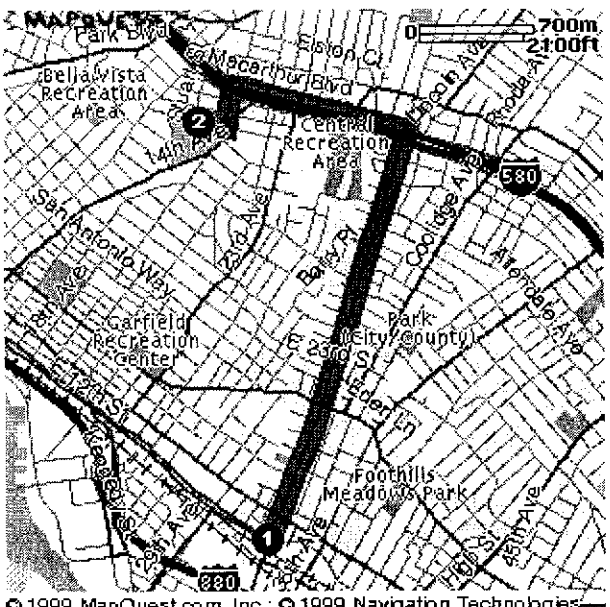
Welcome, Guest User Create My Favorite Locations - Sign In

Yahoo! Maps - Driving Directions

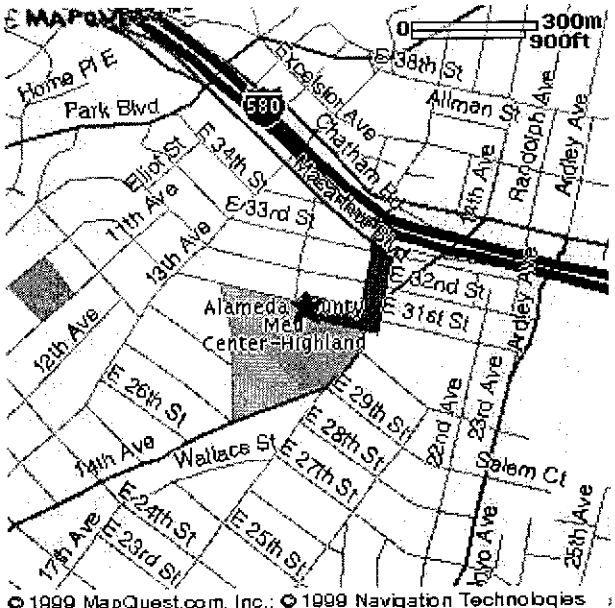
Email Directions | New Location

Starting From:	Arriving At:	Distance:	Approximate Travel Time:	
Fruitvale Ave. at East 12 Street Oakland, CA	1411 East 31st Street Oakland, CA 94602-1018	2.6 miles	6 mins	Reverse Driving Directions

Directions	Miles
1. Start out going West on E 12TH ST towards FRUITVALE AVE by turning left.	0.0
2. Turn RIGHT onto FRUITVALE AVE.	1.6
3. Turn LEFT to take the I-580 WEST ramp towards HAYWARD.	0.2
4. Merge onto I-580 W.	0.2
5. Take the exit towards 14TH AVENUE/PARK BLVD.	0.3
6. Turn LEFT onto BEAUMONT AVE.	0.2
7. Turn RIGHT onto E 31ST ST.	0.1



Full Route



Destination

Yahoo! Maps - Driving Directions

Create My Favorite Locations - Sign In

Bay Area Rapid Transit
Contract No. 01GB-120

SUBMITTAL FORM

Fruitvale Station Intermodal Project
Phase II

Contractor: **OGISO Environmental, Inc.**
1504 Franklin St., Ste 304
Oakland, CA 94612
510-451-5771/510-451-5773

Subcontractor: _____
Address: _____
Address: _____
Phone/Fax _____

Supplier: _____
Address: _____
Address: _____
Phone/Fax _____

Submittal Number:	2
Submittal Date:	12/4/00
Revision Number:	1
Revision Date:	12/21/00
Revision Number:	
Revision Date:	
Revision Number:	
Revision Date:	

Manufacturer: _____
Address: _____
Address: _____
Phone/Fax _____

Subject: Safety, Health and Emergency Response Plan
Specification: Contract Specification 01160, Part 1.03
Comments: _____

Signature: _____ Stamp:

Action Block:

Neither review nor approval of any aspect of Contractor's work supplied under this contract shall in any way relieve Contractor of any of its obligations with respect to the performance of work under the contract.

☐ (1) APPROVED
☐ (2) APPROVED FOR FABRICATION AS MARKED REVISED DRAWING REQUIRED.
☐ (3) NOT APPROVED. REVISED DRAWING REQUIRED.

SAN FRANCISCO BAY AREA RAPID TRANSIT DISTRICT

Date_____ By_____

VENDOR PRINT NUMBER:
01GB-120-100-2 REV 1

Safety, Health and Emergency Response Plan
BART Fruitvale Station Intermodal Project, Phase II
Oakland, California

Prepared by

OGISO Environmental
1504 Franklin Street, Ste. 304
Oakland, California 94612

December 21, 2000

CONTENTS

FIGURE

SAFETY, HEALTH AND EMERGENCY RESPONSE PLAN ACCEPTANCE

I have read and become familiar with all aspects of this Safety, Health and Emergency Response Plan (SHERP) for work related to the BART Fruitvale Station Intermodal Project, Phase II, Oakland, California. I agree to abide by the contents of the SHERP. I also agree to inform my supervisor and/or the Site Safety and Health Officer (SSHO) of any conditions, which are or appear to be unsafe. I also understand that the SHERP may be supplemented with other site-specific health and safety documents for which I will be held equally responsible.

Name (Printed)	Signature	Company	Date

Return this signed document to Gene Fiedler, the Company Health and Safety Officer, at:

OGISO Environmental
1504 Franklin Street, Suite 304
Oakland, California 94612

1.0 INTRODUCTION

This Safety, Health and Emergency Response Plan (SHERP) has been prepared by OGISO Environmental (OGISO) for the Bay Area Rapid Transit District's (BART's) Fruitvale Station Intermodal Project, Phase II, Oakland, California.

This SHERP establishes the policies and procedures that protect the workers and the general public from potential health and safety hazards posed at this site. The SHERP establishes general personnel protection standards and mandatory safety practices and procedures, assigns of authority and responsibility, and identifies appropriate training for individuals performing tasks on this Project. This document is also intended to assist in compliance with all relevant federal, and state health and safety regulations governing demolition-related activities associated with this Project and was developed in accordance with the following:

- California Occupational Health and Safety Regulations, specifically:
  Title 8 CCR 5192 - Hazardous Waste Site Operations and Emergency Response

- NIOSH/OSHA/USCG/EPA Occupational Health and Safety Guidance Manual for Hazardous Waste Activities, October 1985

- Contract Specifications for Fruitvale Station Intermodal Project, Phase II

- OGISO Environmental's Hazard Communication/Injury and Illness Prevention Programs (Appendix A)

Because site conditions are subject to change and unforeseen conditions may arise, amendments or additions may need to be made to this SHERP during the course of work. All activities conducted by OGISO employees and its contractors will be conducted in compliance with this SHERP, and with all applicable federal, state, and local environmental and worker protection regulations. This document must be read and understood by site personnel conducting activities associated with this Project. All site personnel must be given access to this SHERP upon request.

1.1 Description of Site

The site is located at the BART Fruitvale Station in Oakland, California. Specifically, the project is primarily located along the former railroad right-of-way to the west of the Fruitvale Station parking lot, between Fruitvale Avenue and 37th Avenue. One additional area is within the parking lot along East 12th Street.

1.2 Materials of Concern

Materials of concern for which human contact may result in adverse health effects are identified below:

- Railroad ballast and soil containing arsenic and lead.

Arsenic is a heavy metal. The routes of exposure/entry for arsenic are inhalation and ingestion of arsenic-carrying dust particles (arsenic has a vapor of zero and is insoluble). Arsenic poisening can result from accumulation of arsenic in the blood and the symptoms include: upper respiratory irritation, burning and constriction of throat, abdominal pain, dermatitis, ulceration of nasal septum, and potential bronchi. Arsenic is a skin, lung, and liver carcinogen. The maximum concentration of arsenic detected on site is 230 milligrams per kilogram (parts per million).

Lead is a heavy metal. The routes of exposure/entry for lead are inhalation and ingestion of lead-carrying dust particles (lead has a vapor pressure of zero and is insoluble). Lead poisening can result from accumulation of lead in the blood and the symptoms include: general weakness, lassitude, insomnia, facial pallor, pale eyes, low weight, malnutrition, constipation, abdominal pain,colic, anemia, tremors, paralyzed wrist and ankles, encephalopathy, nephropathy, irritation of the eyes, and hypotension. The maximum concentration of lead detected on site is 250 milligrams per kilogram (parts per million).

1.3 Safety, Health and Emergency Response Plan Availability

This written SHERP shall be made available to any contractors or subcontractors or their representatives who will be involved with the Project; to employees; to employee-designated representatives; and to personnel of federal, state, or local agencies with regulatory authority over the site.

1.4 Description of Work

The project involves the removal and disposal of contaminated railroad ballast and soil, and the construction of a parking lot on a former railroad right-of-way, and the expansion of the parking lot into a landscaped area.

1.5 Subcontractor Applicability

OGISO intends to remove all contaminated and hazardous soil prior to subcontractor work on the site. OGISO also intends to import and place aggregate base before subcontractor work on site. Consequently, OGISO contends that any subcontractor contact with contaminated or hazardous soil will be deminimus contact, not requiring any training, personal protective equipment, or medical surveillance, as described in Sections 5, 6, and 7 respectively.

2.0 ORGANIZATIONAL STRUCTURE

The Project organizational structure establishes the specific chain of command and specifies the overall responsibilities of supervisors and employees. The organizational structure shall be reviewed and updated as necessary to reflect the current status of site operations. The following are the key supervisory personnel:

2.1 OGISO Health and Safety Manager (HSM)

Gene Fiedler is OGISO's Company Health and Safety Officer and will be the Health and Safety Manager (HSM). He has the responsibility and authority to direct the health and safety aspects of all field operations. The HSM is responsible for the overall design, technical development, and implementation of this SHERP. The HSM is also responsible for reviewing and approving any changes to this SHERP prior to implementation of such changes in the field. The HSM has authority over all site work, contractors, and subcontractors and may utilize this authority to order the cessation of work if compliance with this SHERP is violated, if new or previously undiscovered hazards are identified, or to cause any safety problems encountered to be corrected.

2.2 Site Safety and Health Officer (SSHO)

OGISO's Superintendent will be the SSHO. For the initial portion of the work (including the excavation and off-hauling of the contaminated soil) Gene Fiedler will act as the SSHO. The SSHO has the responsibility and authority to implement the site health and safety plan and verify compliance.

The SSHO is responsible for the following:

- Enforcing the guidelines, rules, and procedures in this document for all site work
- Being familiar with local emergency services
- Conducting safety and health meetings before work startup and as needed thereafter for specific tasks
- Maintaining and inspecting personal protective equipment (PPE), monitoring onsite hazards, and monitoring the physical condition of site personnel
- Verifying that managers and supervisors are trained in workplace safety and are familiar with the safety and health hazards to which employees under their immediate direction or control may be exposed
- Maintaining compliance with applicable federal, state, and local regulations, and requirements of this SHERP
- Verifying that employees are trained in accordance with this SHERP
- Inspecting the workplace daily to better anticipate, recognize, evaluate, and control workplace hazards on a continuing basis
- Developing methods for abating workplace hazards and checking that workplace hazards are abated in a timely and effective manner.

2.3 Site Superintendent

- Gene Fiedler will be serving as the Site Superintendent for the initial portion of the project, including the excavation and off-hauling of contaminated soil. The Site Superintendent is responsible for directing all field activities, including oversight and scheduling of all subcontractor activities. The Site Superintendent is also responsible for compliance with the site health and safety plan.

2.4 Employee Safety Responsibility

Although the employer is responsible for providing a safe and healthful workplace, each employee is responsible for his/her own safety, as well as the safety of those around him/her. The employee shall use all equipment in a safe and responsible manner, and as directed by supervisory personnel.

3.0 HAZARD ASSESSMENT AND MITIGATION

3.1 Preliminary Evaluation and Hazard Identification

A preliminary evaluation of site characteristics has been performed to aid in the selection of appropriate employee protection methods prior to site entry (see Section 4.2). The maximum level of lead detected on the site was 250 milligrams per kilogram, or parts per million by weight. The maximum level of arsenic detected on the site was 230 milligrams per kilogram.

3.2 Workplan

This section presents a workplan for the Project that may involve expose to the materials of concern. This plan addresses the tasks and objectives of the site operations and the logistics and resources required to reach those tasks and objectives.

- **Clearing and Grubbing**

Clearing and grubbing includes the removal of trash, debris, and plants from the site. The primary activities involve picking up trash and debris and placing in receptacles. The existing ground cover of primarily railroad ballast will remain. Removal of plants and roots will be by heavy equipment (such as an excavator). No contact with disturbed soil is expected. Trees may be cut above ground with a chain saw.

While no contaminated soil contact is expected, the trash and debris may contain sharp objects that could pose a danger. Specific PPE for this activity will include heavy leather gloves. Chain saw operators will also wear safety goggles.

- **Pole Removal**

The procedures for removal of the communication poles will be: (1) The installation of guy wires on the end poles to remain, (2) the removal of the existing communication lines, and (3) the removal of the poles. All aerial work will be completed using lifts. Removal of the poles will be done by heavy equipment (such as an excavator).

The risks from this task include fall potential from the lift and the general risks from working around heavy equipment (see Section 3.4).

- **Excavation and Loading of Non-Contaminated Soil**

Non-contaminated soil will be excavated and directly loaded into dump trucks for stockpiling in Area 4. No manual handling of the soil is expected.

The risks from this task are those associated with working around heavy equipment.

- **Excavation, Loading and Transport of Contaminated Soil**

Contaminated soil will be excavated and directly loaded into trucks for transport to the selected landfill. No manual handling of the soil is expected. Trucks leaving the site will be decontaminated as described in Section 12.1.

Risks include contact with contaminated/hazardous soil and working around heavy equipment.

- **Placement of Aggregate Base**

Prior to any other site activity, a layer of aggregate base material will be placed and spread on the remaining in-situ contaminated soil. The material will be placed by dumping the material onto the from clean soil or previously-placed aggregate base, so no decontamination of the trucks is required.

The risks from this task are those associated with working around heavy equipment.

- **Trenching for Utilities**

Any trenching for utilities in contaminated soil will be conducted by personnel trained as per Section 5.1. Soil removed during trenching will be placed onto plastic sheeting or directly into trucks for transport. No hand trenching into contaminated soil is expected.

Risks include contact with contaminated/hazardous soil and operating trenching equipment.

3.3 Material Hazards

Materials of potential concern at the site have been summarized in Section 1.2 of this SHERP. All personnel involved in the handling or loading of the contaminated ballast and soil will be HAZWOPER trained as per Title 8 CCR 5192. Further mitigation iscovered in subsequent sections.

3.4 Safety Hazards

Site features, conditions, and activities that are potential safety hazards include:

- Slip, trip, and fall hazards
- Equipment and machinery hazards
- Electrical hazards

Excavation or Falling Hazards

Personnel will be reminded daily to maintain sure footing on all surfaces, particularly uneven pavement or concrete pad surfaces in the process of demolition.

Heavy Equipment and Traffic

The use of heavy equipment onsite presents the greatest potential for injury to personnel. To minimize these hazards specific traffic patterns will be established. All trucks will use spotters for backing procedures. All personnel working along roadsides are required to wear orange safety vests.

Personnel needing to approach heavy equipment during operation will observe the following protocols:

1. Make eye contact with the operator.
2. Signal the operator to cease heavy equipment activity.
3. Approach the equipment and inform the operator of intentions.

Only qualified personnel will operate heavy equipment. Those crew members directly involved with spotting for the operator will be the only personnel allowed within the operating radius of the heavy equipment. All other personnel will remain a safe distance away from these operations. Vehicles will yield to all bikes, pedestrians, and railroad crossings.

Only equipment that is in safe working order will be used. To maintain this policy, all equipment brought onto the project site will be inspected for structural integrity, smooth operational performance, and proper functioning of all critical safety devices in accordance with the manufacture's specifications. This inspection will be performed by a qualified equipment operator and the SSHO. Equipment not conforming to the operational and safety requirements during this inspection will not be put into service until all necessary repairs are made to the satisfaction of the operator and SSHO. Only qualified operators familiar with the equipment will be permitted to operate equipment.

Electrical Hazards

To prevent accidents caused by electric shock from electric tools, the SSHO will inspect all electrical connections on a daily basis. The SSHO will oversee the shut down and lock out any equipment found to have frayed wiring or loose connections until a qualified electrician can be contacted and repairs effected. Electrical equipment will be de-energized and tested by an electrician before any electrical work is done. All equipment will be properly grounded prior to and during all work.

In addition, ground fault circuit interrupters (GFCIs) will be installed whenever possible in each circuit between the power source and tool, unless the presence of a potentially explosive atmosphere precludes this procedure. In the event that generators are used to supply power, these generators will be equipped with GFCIs.

All electrical equipment to be removed as part of the project will be confirmed as disconnected prior to removal.

Electrical installations shall be under the control of a safety representative designated by the electrical subcontractor, or landscape subcontractor, as appropriate. The SSHO will review the subcontractors' safety procedures and operations prior to and during all on-site activities.

3.5 General Health and Safety Work Practices

This SHERP advocates exercising every reasonable precaution when performing the work to prevent property damage and to protect the safety and health of employees, the public, and the environment. Failure to comply with any of the responsibilities and regulations may be considered a material breach of contract.

Employees have certain responsibilities for their own safety, as follows:

- Report to work rested, physically and mentally fit to perform the job assignment.
- Working while under the influence of intoxicants, narcotics, or controlled substances is prohibited.
- Wear suitable clothing for the weather and the work.
- Wear PPE and follow established procedures for a particular job. Do not wear jewelry or loose-fitting clothing when operating or near equipment.
- Call the supervisor's attention to any behavior or condition that may cause injury or illness to others or damage to property.
- Read warning labels on containers and equipment. Follow specified precautions.
- Discontinue any operation that could lead to injury, illness, or property damage.
- Keep horseplay and other disruptive behavior away from the job.
- Promptly report to the SSHO or Site Supervisor any occupational injury, illness, or exposure to toxic material. If injured, get first aid. Small injuries can become serious if neglected.
- Promptly inform the SSHO or Site Supervisor whenever new substances, processes, procedures, or equipment that could present new safety and health hazards are brought into work areas or onto projects.
- Do not eat, smoke and/or chew tobacco, or chew gum in the work area.
- Do not allow visitors without adequate safety training into the work area.
- Perform work in a manner that will minimize dust from becoming airborne (i.e., use water spray or wet technique when feasible).

- Do not work alone inside the work area. Use the "buddy system" during all work activities.
- While in the work area, avoid contact with objects or soil unless the contact is necessary to the field operation.
- Be alert to abnormal behavior of other personnel that may indicate distress, disorientation, or other ill effects.
- Verify that vehicles have an ABC-rated fire extinguisher and first-aid kit.
- Be aware of the amount of solar radiation exposed skin is receiving. Take steps to minimize the potential for sunburn.
- Operate a vehicle only if you are a licensed driver. Seatbelts must be worn when operating a company vehicle or when driving a private vehicle on company business.
- Drive vehicles in a safe manner and obey traffic regulations.
- Operate equipment only if you are a trained operator. Conduct and document a daily equipment inspection.

These general safety responsibilities listed above also apply to subcontractors and visitors.

4.0 SITE DESCRIPTION AND EVALUATION

4.1 Site Description

The site is located at the BART Fruitvale Station in Oakland, California. Specifically, the project is primarily located along the former railroad right-of-way to the west of the Fruitvale Station parking lot, between Fruitvale Avenue and 37th Avenue. One additional area is within the parking lot along East 12th Street.

The site is divided into 4 areas: Area 1 encompasses the former railroad right-of-way from the north side of 33rd Avenue to the north side of 35th Avenue. Area 2 encompasses the former railroad right-of-way from the south side of 35th Avenue to the north side of 37th Avenue. Area 3 encompasses the eastern part of the parking lot (along 12th Street) from the south side of 35th Avenue to the north side of 36th Avenue. Area 4 encompasses the north half of the former railroad right-of-way from the south side of Fruitvale Avenue to 33rd Avenue.

4.2 Site Evaluation

The site has been evaluated by BART's environmental consultant. The evaluation workplan, Field Sampling Workplan, BART Fruitvale Station, Oakland, California, is dated March 28, 2000. The results of that site evaluation are presented in the Revised Final In-Situ Soil Characterization Report, Fruitvale Station Intermodal Station, dated May 30, 2000. This report divides the site into areas designated by various hazardous and non-hazardous categories. This SHERP is primarily written to apply to handling of the impacted soil.

The respective OSHA limits for lead and arsenic are 0.050 milligrams in 1 cubic meter of air and 0.010 milligrams per cubic meter. The action level for uncontaminated dust is 10 milligrams per cubic meter. At the maximum concentrations detected for lead and arsenic, the dust level will be reached when the lead is 1/20 of the OSHA level and arsenic is ¼ of the OSHA. Consequently, the engineering controls and PPE selected for this project are based on dust protection.

5.0 PERSONNEL TRAINING REQUIREMENTS

All employees working onsite near hazardous materials and contaminated soils who may be exposed to hazardous substances, health hazards, or safety hazards, and their supervisors and management responsible for the site shall receive training meeting the requirements of this section before they are permitted to engage in hazardous waste operation that could expose them to hazardous substances, safety, or health hazards. They shall also receive annual refresher training as specified in this section.

Employees shall not be permitted to participate in or supervise field activities until they have been trained to a level required by their job function and responsibility. As previously noted, this section is not intended for subcontractors.

5.1 Hazardous Waste/Hazardous Materials Site Training

Specific training requirements for personnel are divided into the following training categories:

- Regular site personnel exposed to hazardous substances (such as equipment operators, general laborers, and supervisor personnel)
- Occasional site personnel potentially exposed to hazardous substances below permissible exposure limits (such as groundwater monitors, land surveyors, and geophysical surveyors)
- Onsite management and supervisors.

These categories are discussed below.

5.1.1 Regular Site Personnel Exposed to Hazardous Substances

Site personnel whose job responsibilities cause them to be exposed to or to have the potential to be exposed to hazardous substances or health hazards are required to comply with 29 CFR 1910.120 and 8 CCR 5192(e)(3)(A). This regulation requires site personnel exposed to hazardous substances to complete 40 hours of classroom instruction for Health and Safety Training for Hazardous Waste Operations (HAZWOPER) and three days of field experience supervised by a trained supervisor.

5.1.2 Occasional Site Personnel Potentially Exposed to Hazardous Substances Below Permissible Exposure Limits

Occasional site personnel who visit the site for a specific limited task and whose exposure is designated by the SSHO to be under Permissible Exposure Limits (PELs) are required to comply with 8 CCR 5192(e)(3)(B) or other applicable state regulations. This regulation requires that these personnel receive a minimum of 24 hours of classroom instruction and one day of field experience supervised by a trained supervisor.

5.1.3 Management and Supervisory Training

In accordance with 29 CFR 1910.120 and 8 CCR 5192(e)(4), individuals who manage or supervise personnel engaged in hazardous waste operations at the site must receive 40 hours of classroom instruction and three days of field experience supervised by a trained supervisor. In addition, management and supervisory personnel shall receive an additional eight hours of specialized training that addresses the safety and health program, training requirements, personal protective and respiratory equipment program, health hazard monitoring procedures, accident investigation, and emergency response procedures.

5.2 Training Certification

Employees and supervisors that have received and successfully completed the training and field experience shall be certified by their instructor or the head instructor and trained supervisor as having successfully completed the

necessary training. A written certificate shall be given to each person so certified. Any person who has not been so certified or who does not meet these training requirements shall be prohibited from engaging in operations where exposures to hazardous substances are possible.

Training must be properly documented and filed onsite for reference by the SSHO or designated representative. Personnel required to meet the training requirements must present documented evidence of this training prior to entering the site. The SSHO is responsible for checking before each activity to verify complete and current documentation. A copy of the documentation will be kept readily available or onsite, as applicable.

5.3 Refresher Training

Annual refresher training in accordance with 29 CFR 1910.120 and 8 CCR 5192(e)(8) shall be completed at least annually following the completion of the individual's initial 40-hour or 24-hour training course. Annual asbestos and lead refresher training in accordance with 40 CFR Part 763 and 29 CFR 1926.62 shall be completed within one year following completion of the individual's initial training courses.

5.4 Site Specific Health and Safety Briefing

All employees will be briefed on the contents of this SHERP prior to work on the site. Emphasis will be placed on identification of the materials of concern and contaminated/hazardous soils handling. All employees will be required to sign the acceptance page at the beginning of the Plan.

6.0 PERSONAL PROTECTIVE EQUIPMENT

PPE has been selected which will protect employees from the hazards and potential hazards they are likely to encounter as identified during the site evaluation. Due to the proximity of the public, and the primary concern one of dust generation, should levels of dust exceed the action level, additional engineering controls will be instituted as opposed to increasing the level of PPE.

6.1 PPE Selection for Soil Excavation and Loading

On the basis of the scope of work, initial PPE requirements shall be EPA Level D.

Level D PPE will comprise:

- Coveralls or jeans and workshirt
- Safety boots/shoes
- Hard hat

For clearing and grubbing by hand, heavy leather gloves will be worn.

For chain saw operation, leather gloves and safety goggles will be worn.

For laborers working on site during excavation and loading of contaminated/hazardous soil, Tyvek and rubber boots (for easier decontamination) will be worn.

7.0 MEDICAL SURVEILLANCE PROGRAM

The contractor shall maintain up-to-date proof of participation in a medical surveillance program for all workers who require medical surveillance. The medical surveillance program shall be instituted for the following employees:

- Any worker who is expected to encounter hazardous materials or hazardous waste.
- Any employee who is or may be exposed to hazardous substances or health hazards at or above the PEL or, if there is no PEL above the published exposure levels for these substances, without regard to the use of respirators, for 30 days or more a year.
- Any employee who wears a respirator during any part of a day for a period of 30 days or more in a year, or as required by 8 CCR 5144.
- Employees exhibiting symptoms due to possible overexposure involving hazardous substances or health hazards from an emergency response or hazardous waste operation.

7.1 Frequency of Medical Examinations and Consultations

Medical examinations and consultations are made available to OGISO employees covered under Section 7.0 on the following schedules:

- At least once every twelve months unless the attending physician believes a longer interval (not greater than biennially) is appropriate.
- As soon as possible, upon notification by an employee either that the employee has developed signs or symptoms indicating possible overexposure to hazardous substances or health hazards or that the employee has been injured or exposed above the PEL or published exposure levels in an emergency situation.
- At more frequent times, if the examining physician determines that an increased frequency of examination is medically necessary.

7.2 Examination by a Physician

All medical examinations and procedures shall be performed by or under the supervision of a licensed physician certified in occupational medicine by the American Board of Preventive Medicine, and shall be provided without cost to the employee, without loss of pay, and at a reasonable time and place.

7.3 Physician's Written Opinion

The written opinion obtained by the employer shall not reveal specific findings or diagnoses unrelated to occupational exposures. The physician shall provide the results of the medical examination and tests to the employee if requested. The employer shall obtain and furnish the employee with a copy of a written opinion from the examining physician containing the following:

- The physician's opinion as to whether the employee has any detected medical conditions which would place the employee at increased risk of material impairment of the employee's health from work in hazardous waste operations or emergency response, or from respirator use.
- The physician's recommended limitation upon the employee's assigned work.

- A statement that the employee has been informed by the physician of the results of the medical examination and any medical conditions which require further examination or treatment.

7.4 Medical Surveillance Recordkeeping

An accurate record of the medial surveillance shall be retained. This record shall be retained for the period specified and meet the criteria of 8 CCR 3204. The record shall include at least the following information:

- The name and social security number of the employee.
- Physician's written opinions, recommended limitations, and results of examinations and tests.
- Any employee medical complaints related to exposure to hazardous substances.
- A copy of the information provided to the examining physician by the employer, with the exception of the standard and its appendices.

8.0 MONITORING

The contaminants in the materials of concern are heavy metals adhering to the soil particles. Consequently, the route of exposure would be through inhalation of dust. In addition, the concentrations of the materials of concern are low enough that dust alone will reach as action level before OSHA limits are reached for the materials of concern. As such, the primary engineering control to eliminate the route of exposure will be to minimize dust. However, at the beginning of excavation work, OGISO will conduct air monitoring to confirm the absence of airborne contaminants.

8.1 Environmental Air Monitoring

Air monitoring shall be performed to evaluate engineering controls and work practices. Air monitoring is proposed only at the beginning of excavation. Three air sampling pumps equipped with 37 mm MCE filter cassettes will be placed on the east side of Area 1 or 2, which ever area is begun first. The pumps will be placed on the east side as prevailing winds are from west. The pumps will be operated for a period of 8 hours. The cassettes will be analyzed for arsenic and lead. The results will be evaluated to determine if existing engineering controls are adequate and/or if additional air monitoring is required.

8.2 Documentation of Monitoring

Records of monitoring results shall be maintained at the site. Records shall include the date, time, contaminants or hazards monitored, person conducting monitoring, calibration date and method, operations and location of monitoring, and results. An air monitoring data sheet shall be completed for each day of operations at the site.

8.3 Personnel Air Monitoring

In addition to environmental monitoring, at the beginning of excavation work, an air sampling pump will be placed the cab of the heavy equipment used to evaluate the existing engineering controls on the most exposed employee on site.

9.0 STANDARD PROCEDURES AND WORK PRACTICES

This section presents OGISO's standard operating procedures, engineering controls, and work practices as applicable for the Project.

9.1 Site Mobilization

OGISO, prior to commencement of work, shall establish the following:

- Haul routes, staging areas, and security and flagger positions.
- Mobilization area uses, field offices, materials storage, and traffic and parking facilities authorized by BART.

After these have been established, mobilization of equipment and supplies will begin.

9.2 Meetings

9.2.1 Preconstruction Meetings

- An initial Preconstruction Meeting will be called and performed by the BART.
- Subsequent "preconstruction meetings will held with each subcontractor prior to the start of that subcontractor's work.

9.2.2 Partnering Meetings

- An initial partnering session will be held with BART, OGISO, and all major subcontractors.
- Subsequent partnering meetings will be held as necessary (at the agreement of OGISO and BART) or at the request of any major subcontractor.

9.2.3 Safety Meetings

- An initial site safety meeting shall address the hazards of the site and provisions for reducing the hazards as presented in this SHERP. The meeting shall also be used for planning the various stages of the work and to disseminate relevant information contained in this SHERP to other contractors and subcontractors working in the vicinity of the activities discussed herein.
- A toolbox/tailgate safety meeting will be held weekly or prior to any changes in scope of work. These meetings will be recorded on safety meeting forms. Topics will include, but will not be limited to, the following: previous week's work activities, safety concerns brought about by these activities, anticipated stages of work for the day, changes in scope or original work, introduction and orientation of new employees (if any), review of previous day's sampling or analytical results, lines of communication, evacuation routes, and changes in protection levels if required.

9.3 Road Lane and/or Sidewalk Closure

Traffic control will be provided when necessary. If at any time it becomes necessary to block all or a portion of any lane or street, all applicable City of Oakland permits will be acquired. In general, temporary fencing, traffic barricades, and/or caution tape shall be used to prevent unauthorized entry to the site.

9.4 Clearing and Grubbing

Prior to clearing and grubbing, a determination will be made as to whether such activity will involve dealing with contaminated material. Specific procedures will be developed and implemented if hazardous materials are to be encountered. Clearing and grubbing will be conducted to minimize dust generation.

9.5 Excavation

All excavation, transportation, and placement operations shall be conducted to minimize dust. OGISO intends to load all excavated materials directly into trucks to be transported to the required stockpile area or disposal facility by a licensed transporter. The following safe work practices for excavations have been modified for this project to reflect the limited depth of the excavations.

- The location of identified underground utilities, such as sewer, communication, fuel, electric, or water lines, shall be determined prior to opening an excavation.
- Underground Service Alert shall be advised of the proposed work at least two workings days prior to the start of any digging or excavation work.
- When excavation operations approach the estimated location of underground installations, the exact location of the installations shall be determined by safe and acceptable means.
- Exposed underground utilities shall be protected, supported, or removed as necessary to safeguard employees.
- Exposure to vehicular traffic: Employees exposed to public vehicular traffic shall be provided with, and shall wear, warning vests or other suitable garments marked with or made of reflectorized or high-visibility material.
- Exposure to falling loads: No employee shall be permitted underneath loads handled by lifting or digging equipment. Employees shall be required to stand away from any vehicle being loaded or unloaded to avoid being struck by any spillage or falling materials. Operators may remain in the cabs of vehicles being loaded or unloaded when the vehicles are equipped to provide adequate protection for the operator during loading and unloading operations.

9.6 Site Cleanup

Site cleanup shall be accomplished, when necessary, by means that will eliminate exposures to dust and will facilitate complete removal of contaminated or hazardous materials from the site. Material shall be removed from the exteriors of transportation vehicles prior to the vehicle leaving the site. No contaminated material shall be deposited on public roadways.

9.7 Dust Control

Dust must not be created during staging, moving, or loading of materials. A hose or water truck will be provided to moisten material being moved or loaded if necessary. At no time shall runoff be generated as a result of wetting of material. All site dust caused by vehicles, equipment, or wind shall also be controlled.

Dust control shall be maintained until an initial layer of imported aggregate has been placed over remaining *in-situ* contaminated/hazardous soils. Placing of the aggregate is expected to occur immediately (within one or two working days) of the removal of the contaminated/hazardous soil.

9.8 Trucking and Disposal

All trucks when transporting material removed from the work area are to observe the following:

- Transportation subcontractors will provide the appropriate certificate of insurance.
- Trucks shall use the route designated.

9.9 Stormwater Control

Prior to excavation, runoff locations will be determined and sediment control will be placed either at the point where runoff will leave the site, or where runoff will enter the stormwater discharge system (e.g. catch basins or manholes). As applicable, sediment control may consist of silt fencing, hay bales, filter fabric, or other materials that will allow for the passage of water while retaining the sediment.

10.0 SITE CONTROL PROGRAM

A work area will be established to prevent or minimize exposure (of unauthorized personnel) to hazards by establishing boundaries of work areas. The work area/work zone will be identified during safety briefings and will be clearly marked by traffic cones, barricades, signs, or other means. The nature of the project area will result in significant pedestrian traffic around the site. Normal pedestrian traffic routes that cross the work area will be blocked by temporary fencing. OGISO and subcontractor employees will need to maintain constant surveillance to ensure that the public does not enter the work area.

10.1 Work Area/Work Zone

The work area includes excavation areas, areas of active material removal, and areas of active material handling. Only authorized, trained, and qualified personnel shall be admitted. Personnel entering the work area must use the buddy system. The SSHO, and all OGISO employees, shall be responsible for controlling work zone access and keeping bystanders and unauthorized personnel to a minimum.

10.2 Outside the Work Area/Work Zone

OGISO will have control of only a limited area outside of the work zone. While technically outside the work zone, the area in the former railroad right-of-way between Areas 1 and 4 will be treated as being within the work zone. This area will be used as a lay-down area, and access will be the same as for the work zone. The only other area expected to be under OGISO's control will be the on-site office trailer, to be placed adjacent to the engineers trailer.

10.3 Buddy System

The buddy system shall be used at all times at the site. Employees shall be organized into work groups in such a manner that each employee of the work group is designated to be observed by at least one other employee in the work group. The purpose of the buddy system is to provide quick assistance to employees in the event of an emergency.

10.4 Site Security

A private security guard will be onsite during non-working hours from the beginning of the excavation of contaminated/hazardous soil, until the placement of an initial layer of imported aggregate base.

11.0 PERSONNEL HYGIENE

11.1 Potable Water

An adequate supply of potable water shall be provided on the site. Portable containers used to dispense drinking water shall be capable of being tightly closed and equipped with a tap, and shall be otherwise designed, constructed, and serviced so that sanitary conditions are maintained. Water shall not be dipped from containers. Any container used to store, dispense, or distribute drinking water shall be clearly marked as to the nature of its contents and not used for any other purpose.

Where single service cups (to be used but once) are supplied, both a sanitary container for the unused cups and a receptacle for disposing of the used cups shall be provided.

11.2 Nonpotable Water

Outlets for nonpotable water, such as water for equipment decontamination, dust control, or firefighting purposes, shall be identified to indicate clearly that the water is unsafe and is not to be used for drinking, washing, or cooking purposes. There shall be no cross-connection, open or potential between a system furnishing potable water and a system furnishing non potable water.

11.3 Toilet Facilities

OGISO shall maintain a chemical toilet in the lay-down area between Areas 1 and 4. Doors entering toilet facilities shall be provided with entrance locks controlled from inside the facility. Toilet facilities shall be kept clean, maintained in good working order, and provided with an adequate supply of toilet paper.

Washing facilities shall be onsite for washing of hands and face. Washing of hands and exposed skin is mandatory prior to eating, drinking, or smoking.

11.4 Personnel Decontamination

Tyvek used by laborers during excavation and loading of contaminated/hazardous soil will be kept on site for disposal. Rubber boots worn by laborers during this time will also be kept on site and decontaminated with a laboratory-grade detergent and water. Decontamination water and used Tyvek will be disposed of upon completion of the excavation and loading of the contaminated/hazardous soil and placement of the initial layer of aggregate base, and after trenching operations are complete.

12.0 DECONTAMINATION PROCEDURES

Decontamination procedures shall be monitored by the SSHO to determine their effectiveness. When such procedures are found to be ineffective, appropriate steps shall be taken to correct any deficiencies.

12.1 Truck Decontamination Procedures

All trucks transporting excavated material off the site will be decontaminated by dry brushing to remove material from the external surfaces of the trailer and from the tires.

12.2 Equipment Decontamination Procedures

Tracks, tires, and loading buckets of large equipment shall be scraped and/or brushed to remove gross contamination before driving out of the work area or before demobilization from the site.

13.0 EMERGENCY RESPONSE PLAN

Pertinent emergency information is provided in this section.

13.1 Emergency Information

13.1.1 Telephone Numbers

Community emergency telephone number (police, ambulance, fire, poison control): **911**

Hospital:	Highland Hospital, 1411 E. 31st Street, Oakland, CA:	(510) 437-4800
BART Police (notify of any incidents on site):		(510) 464-7000
BART Central (notify of any impact to BART operations):		(510) 834-1297

13.1.2 How to Report an Emergency

Employees may respond to low danger emergencies, such as administration of first aid, fighting small fires (with fire extinguishers), and clean-ups of small chemical spills (of less than 55 gallons or 500 pounds). All employees shall evacuate from the danger area when an emergency not listed above occurs, and shall not assist in handling the emergency.

Should outside medical or other emergency assistance be required, personnel shall notify the job trailer of the nature of the emergency and a call shall be made to 911.

If the injury or illness appears to be minor, the person may be driven to the emergency room of Highland Hospital, 1411 E. 31st Street., Oakland, California (510) 437-4800.

When calling for assistance in an emergency situation, the recipient of the call should hang up first - not the caller. The following information should be provided:

- Name of person calling
- Telephone number of caller's location
- Name of person(s) exposed or injured
- Nature of emergency
- Actions already taken

13.1.3 Emergency Personnel Decontamination

Do not conduct any decontamination that could cause additional injury. Notify all emergency/medical personnel of on-site contaminants.

As the primary concern is the arsenic and lead in the soil, to the extent practical, remove all soil from the injured person. Options include brushing off soil from clothing, removing Tyvek, washing of boots, and washing exposed skin.

13.2 Site Communications and Alerting Means for Emergencies

In the unlikely event that an emergency situation occurs, all field activities at that site will cease. Temporary radio and telephone communications will be established at the site. The following hand/body emergency communication signals should be used when other forms of communication are difficult or impossible:

Signal	Meaning
Hand clutching throat	Out of air/can't breathe
Hands on top of head	Need assistance
Thumbs up	OK/I'm all right/ I understand

Minor emergencies will be handled within the work area utilizing the onsite first-aid kit. The appropriate emergency response personnel (i.e., ambulance and fire department) will be contacted for all major emergencies.

All personnel, when alerted during emergencies, shall exit the work area muster at the on-site office trailer. Personnel are to remain at the office trailer and await further instructions.

13.3 Identification of Nearest Medical Assistance

Name of Facility:	**Highland Hospital**
Telephone Number:	**(510) 437-4800**
Address:	**1411 E. 31st Street**
	Oakland, CA 94602

Figure 1 is a hospital location map. It shall be posted at the site.

14.0 HEAT/COLD STRESS

Heat Exposure

Heat stress may be caused by factors that include combinations of elevated ambient temperatures, relative humidity, radiant heat, and wearing of PPE. The effects of heat stress are heat rash, cramps, exhaustion, and in extreme cases, heat stroke. Field personnel will be trained to recognize heat stress symptoms. Cool water or fluids will be readily available to the employees, who will be encouraged to drink frequently during each break during hot weather. Use of shade canopies and work scheduled at non-peak temperature periods of the day shall be evaluated for appropriateness during hot weather.

Cold Exposure

Workers are not expected to regularly experience cold exposure at sites in the San Francisco Bay Area; however, all persons working outdoors in low temperatures during wet and windy conditions or during early morning hours may suffer from cold injury or hypothermia. During prolonged outdoor periods with inadequate clothing, effects of cold exposure may even occur at temperatures well above freezing.

Systemic hypothermia is caused by exposure to freezing or rapidly dropping temperatures. Hypothermia exhibits five stages of symptoms: (1) shivering; (2) apathy, listlessness, sleepiness, and (sometimes) rapid cooling of the body to less than 95°F; (3) unconsciousness, glassy stare, slow pulse, and slow respiratory rate; (4) freezing of the extremities; and (5) death. Hypothermia victims should be warmed, and medical help should be obtained.

15.0 LOGS, REPORTS AND RECORDKEEPING

Recordkeeping is a crucial component of any effective SHERP. Site safety records shall therefore be updated daily. The following logs, reports, and records shall be maintained as appropriate:

- Site safety meetings (toolbox/tailgate meetings)
- Employee training records
- Daily safety/production reports
- Health and safety plan signature page
- OSHA 200 log.

YAHOO! MAPS

Yahoo! - Maps - Yellow Pages - Help

Powered by Mapquest.com (tm)

Click Here!

Welcome, Guest User Create My Favorite Locations - Sign In

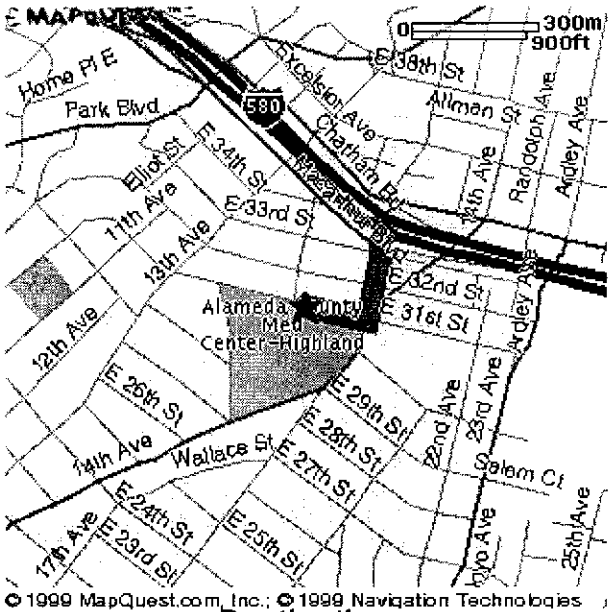
Yahoo! Maps - Driving Directions

Email Directions | New Location

Starting From:	Arriving At:	Distance:	Approximate Travel Time:	
Fruitvale Ave. at East 12 Street Oakland, CA	1411 East 31st Street Oakland, CA 94602-1018	2.6 miles	6 mins	Reverse Driving Directions

	Directions	Miles
1.	Start out going West on E 12TH ST towards FRUITVALE AVE by turning left.	0.0
2.	Turn RIGHT onto FRUITVALE AVE.	1.6
3.	Turn LEFT to take the I-580 WEST ramp towards HAYWARD.	0.2
4.	Merge onto I-580 W.	0.2
5.	Take the exit towards 14TH AVENUE/PARK BLVD.	0.3
6.	Turn LEFT onto BEAUMONT AVE.	0.2
7.	Turn RIGHT onto E 31ST ST.	0.1

Full Route



Destination

Yahoo! Maps - Driving Directions

Create My Favorite Locations - Sign In

- Site investigation, remediation
- Hazardous materials & waste management
- Solid waste management
- Groundwater monitoring, mgmt. and protection
- Landfill operations, closure and postclosure
- Hydrology and groundwater modeling
- Environmental impact studies
- Regulatory compliance

22 Second Street, Ste. 310
San Francisco, CA 94105
Tel (415) 495-5295
Fax (415) 536-1835

Email: ogiso@sirius.com

Lic.: A-Haz 706242

- Site investigation, remediation
- Hazardous materials & waste management
- Solid waste management
- Groundwater monitoring, mgmt. and protection
- Landfill operations, closure and postclosure
- Hydrology and groundwater modeling
- Environmental impact studies
- Regulatory compliance

22 Second Street, Ste. 310
San Francisco, CA 94105
Tel (415) 495-5295
Fax (415) 536-1835

Email: ogiso@sirius.com

Lic.: A-Haz 706242