

Applied GeoSystems

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May 14, 1990
AGS 69013-3WA
0508SSRY

Mr. Scott Seery
Alameda County Department of Environmental Health
80 Swan Way
Room 200
Oakland, California 94621

Subject: Addendum to Work Plan 69013-3W, dated April 1, 1990, for ARCO
Station No. 2152, 22141 Center Street, Castro Valley, California.

Mr. Seery:

This addendum to the above mentioned Work Plan addresses items 1 through 6 listed in your letter dated May 3, 1990, requesting additions and clarifications.

1) SITE SAFETY PLAN

Field work performed at the site by Applied GeoSystems on behalf of ARCO Products Company will be conducted in accordance with Applied GeoSystems Site Safety Plan No. 69013-3S, dated May 8, 1990. This plan describes the safety requirements for work planned at the site. The Site Safety Plan is applicable to personnel of Applied GeoSystems and to its subcontractors. Applied GeoSystems personnel and subcontractors of Applied GeoSystems scheduled to work at the site will be briefed on the contents of the Site Safety Plan before work begins. A copy of the Site Safety Plan will be available at the site for reference by appropriate parties during work. The Staff Geologist of Applied GeoSystems will act as the Site Safety Officer. A copy of Site Safety Plan 69013-3S is included with this Addendum.

2) PROPOSED VADOSE ZONE WELLS

The two vadose zone wells (VEW-1 and VEW-2) will be used to evaluate the levels of extractable hydrocarbon vapor in the soil and to collect operational data to evaluate the efficiency and practicality of vapor extraction as a soil remediation alternative. The well screens will be placed in the borings through the areas where unacceptable levels of hydrocarbon vapor have been detected in the soil during drilling of the borings. Hydrocarbon vapor will be measured during drilling using an organic vapor meter (OVM). OVM measurements will be collected from soil samples and drill cuttings. The screened/gravel packed portion of the wells will be constructed in native soil.

3) GROUND-WATER MONITORING AND VADOSE WELL SCHEMATIC CONSTRUCTION DIAGRAMS

Typical construction details for ground-water monitoring and vadose wells are presented in Plates 1 and 2.

4) FIELD SAMPLE QA/QC PROTOCOL

Field blanks will be collected during ground-water sampling procedures in the following manner:

Two 40-milliliter VOA containers will be properly labeled. A cleaned Teflon bailer will be filled approximately 3/4 full with distilled water. The water will be slowly decanted from the bailer into the two prepared VOA containers. The sample will be acidified below pH 2 with hydrochloric acid. The containers will then be placed in iced storage and delivered with a Chain of Custody form to a California certified laboratory. The blanks will be analyzed if laboratory analyses of ground water samples show detectable concentrations of TPHg and or BTEX.

5) SOIL BORING ABANDONMENT PROCEDURES

All exploratory soil borings drilled on site will be backfilled to the ground surface with neat cement grout composed of one sack of Portland Type I/II cement (94 lbs.) to five gallons of clean water. Borings deeper than 30 feet will be sealed through means of a tremie pipe lowered to within three feet of the bottom of the boring. The tremie pipe shall remain in place in the sealing material until placement is complete.

6) STORAGE AND DISPOSAL OF FORMATION WATER AND DRILL CUTTINGS

Formation water generated from well development and purging will be temporarily stored onsite in labeled Department of Transportation (DOT) 17E liquid waste drums. Proper disposal of wastewater will be the responsibility of ARCO Products Company.

Drill cuttings will be stockpiled onsite placed on top of and covered by plastic sheets. Drill cuttings will be characterized by laboratory analyzing composite soil samples. Composite soil samples will be collected by excavating approximately 1 foot into the soil at four locations to be sampled and measuring the organic vapor concentration with an organic vapor meter (OVM) at the bottom of each excavation. Two soil samples will be collected from the excavation with the highest organic vapor reading and two soil samples will be collected from the excavation with the second highest organic vapor reading. The samples will be collected by driving a hand-held sampler with a clean brass sleeve into the bottom of the excavation. Each sample will be quickly sealed with aluminum foil, plastic caps, and airtight tape. The samples will then be labeled and placed in iced storage for transport to a California certified laboratory for analysis. Each set of samples will be composited in the laboratory and analyzed for total petroleum hydrocarbons (TPH_g) by EPA Method 5030/8015 and for BTEX by EPA Method 8020. Chain-of-custody protocol will be observed throughout the handling of the samples. Proper disposal of drill cuttings will be the responsibility of ARCO Products Company.

Addendum to Work Plan 69013-3W
ARCO Station 2152, Castro Valley, California

May 14, 1990
AGS 69013-3W

Please call if you have questions regarding this addendum.

Sincerely,
Applied GeoSystems

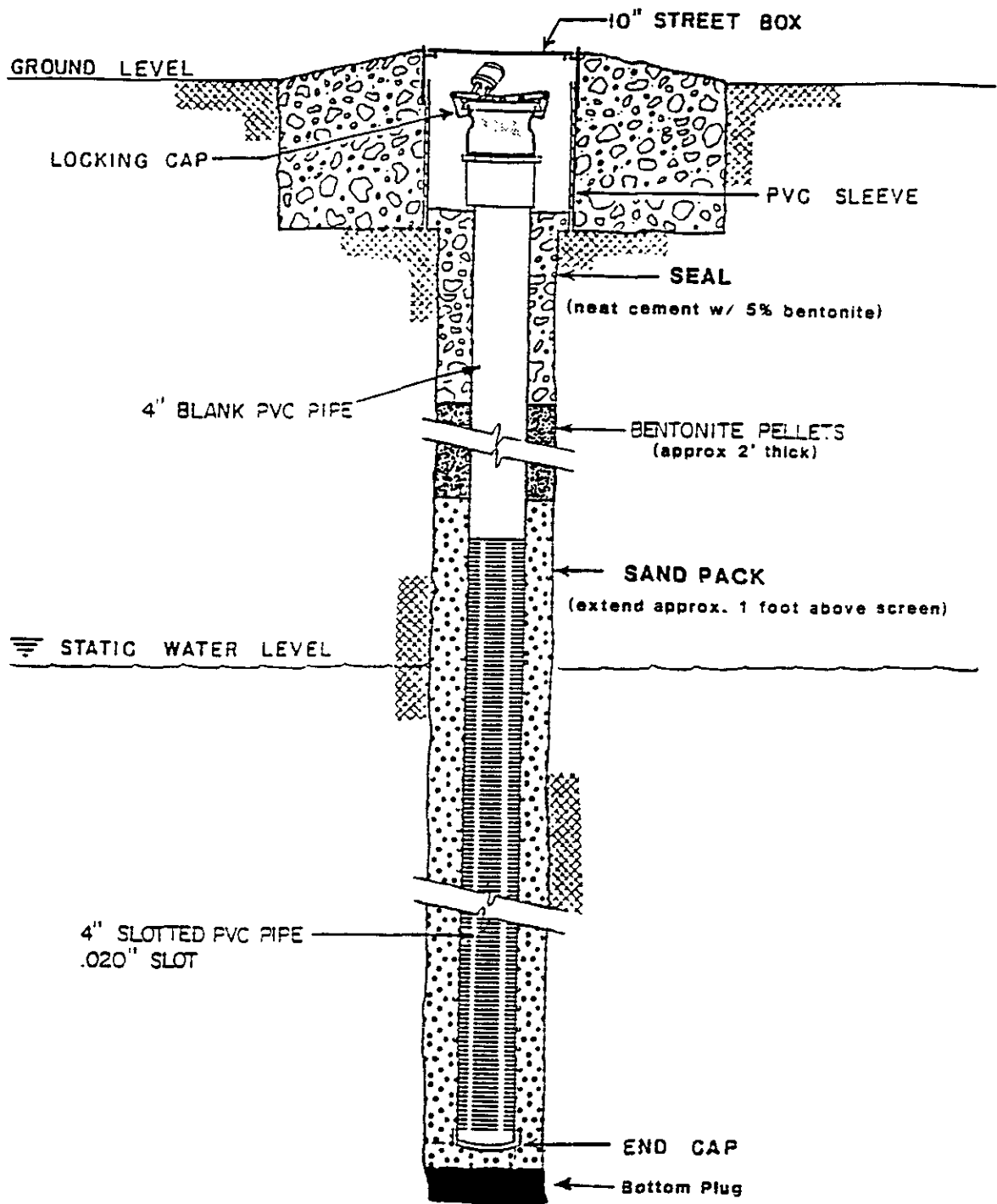


Steve Bittman
Staff Geologist

Enclosure: Site Safety Plan 69013-3S.

cc: Kyle Christie
Arco Products Company

Lester Feldman,
California Regional Water Quality Control Board



TYPICAL DETAIL
MONITORING WELL CONSTRUCTION

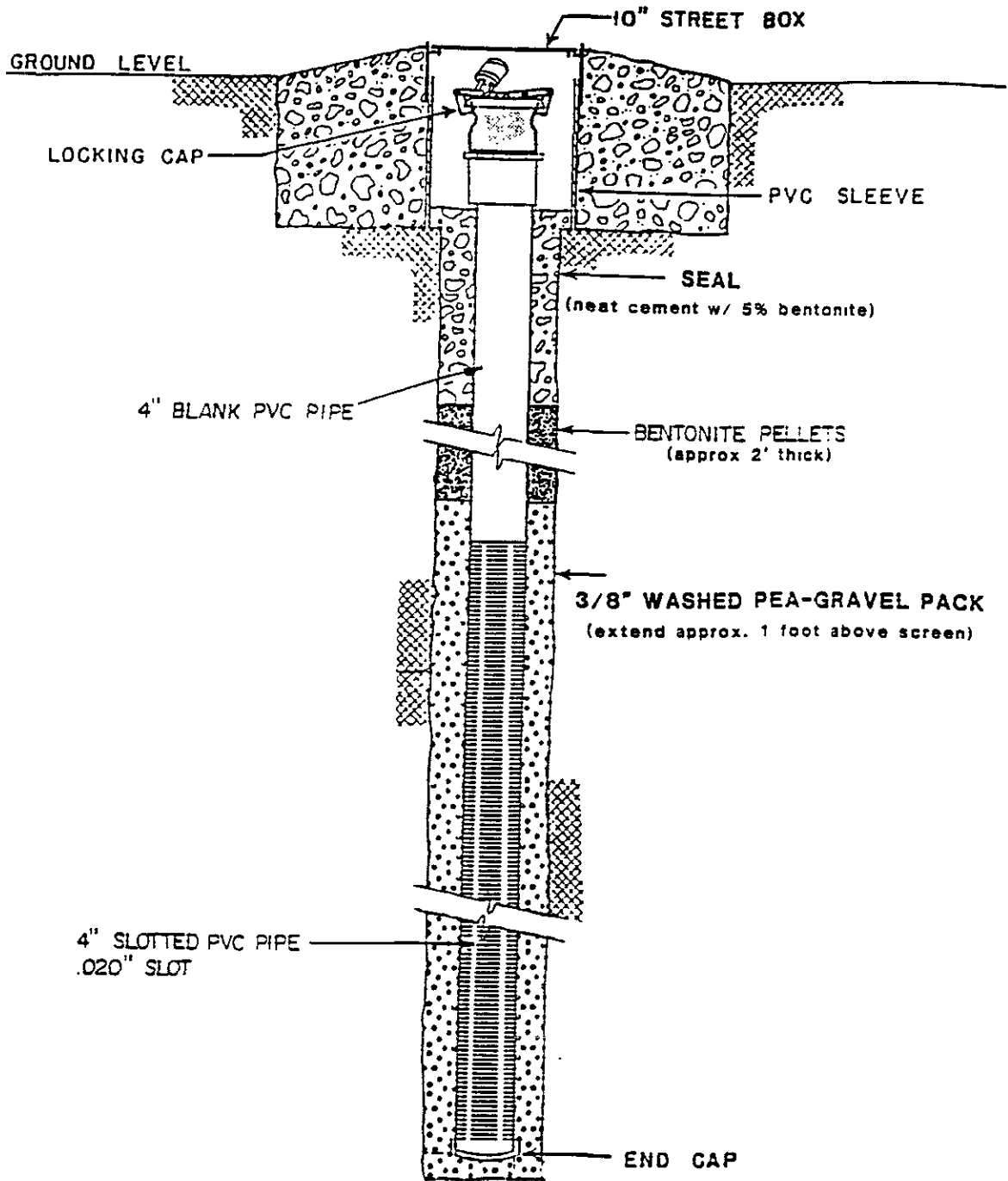


SAMPLE

PLATE

1

PROJECT NO.



TYPICAL DETAIL
 VADOSE WELL CONSTRUCTION



PROJECT NO.

SAMPLE

PLATE

2

SITE SAFETY PLAN
SUBSURFACE ENVIRONMENTAL INVESTIGATION
at the
ARCO Service Station No. 2152
22141 Center Street
Castro Valley, California

INTRODUCTION

This Site Safety Plan describes basic safety requirements for the subsurface environmental investigation. The provisions set forth in this Plan apply to the employees of Applied GeoSystems and its subcontractors working on this phase of the project. The subcontractors may elect to modify these provisions, but only to upgrade or increase the safety requirements, and only with the concurrence of Applied GeoSystems, as designated and accepted in writing.

This Site Safety Plan will address the expected potential hazards that may be encountered on the worksite for this project. Field activities are planned to begin on January 18, 1990, with the duration estimated at approximately 1 week after the start date. If changes in site or working conditions occur as activities progress, addenda to this plan will be provided by Applied GeoSystems.

AUTHORITY FOR SITE SAFETY

The Applied GeoSystems personnel responsible for project safety are the Project Manager and the Staff Geologist or Engineer. The Health and Safety Coordinator is responsible for the overall Applied GeoSystems Health and Safety Program and may choose to audit the site for compliance and take appropriate action to correct deficiencies. The Project Manager is responsible for implementing the provisions of this Plan, for providing a copy of this Plan to the Staff Geologist or Engineer, and for advising the Staff Geologist or Engineer on health and safety matters. The Project Manager and Staff Geologist or Engineer have the authority to audit site activities for compliance with the provisions of this Plan. They may suspend or modify work practices or dismiss subcontractors whose conduct does not meet the requirements specified in this Plan.

The Staff Geologist or Engineer is responsible for communicating the information contained in this Plan to the Applied GeoSystems personnel assigned to the project and to the responsible representative of each subcontractor working for Applied GeoSystems on the project.

The Staff Geologist or Engineer will also act as the Site Safety Officer. As such, the Staff Geologist or Engineer is responsible for addressing the following items:

- o Implementing the Site Safety Plan, Company policy, and procedures
- o Requiring and maintaining adequate safety supplies and equipment inventory onsite
- o Conducting daily safety meetings and advising workers regarding hazards
- o Site control, decontamination, and contamination-reduction procedures
- o Reporting accidents or incidents

The Staff Geologist or Engineer has the authority to suspend work any time he or she finds that the provisions of the Plan are inadequate for worker safety. The Staff Geologist or Engineer will inform the Project Manager and the Health and Safety Coordinator promptly of deficiencies within the Plan or individuals or subcontractors whose conduct is not consistent with the requirements of this Plan.

MEDICAL SURVEILLANCE

Applied GeoSystems personnel and subcontractors engaged in project activities must participate in a medical surveillance program and must be cleared by the examining physician(s) to wear respiratory protection devices and protective clothing for working with hazardous materials. The applicable requirements of Title 8, Section 5216, of the California Administrative Code will be observed. The applicable requirements under 29 CFR 1910.120 of the Federal Administrative Code will also be observed.

SAFETY AND ORIENTATION MEETING

Field personnel from Applied GeoSystems and its subcontractors will attend a project-specific training meeting for safety issues and review the project tasks before beginning work. The meeting will be led by the Project Manager or Staff Geologist or Engineer. In addition, fit-testing of respiratory protective devices will be conducted as part of the safety orientation meeting when the use of a respirator may be required.

HAZARD ASSESSMENT

The major contaminants expected to be encountered on the project are gasoline and its hydrocarbon constituents. The anticipated contaminants and their exposure standards are listed in Table 1. It is not anticipated that the potential levels of exposure will reach the permissible exposure limits (PEL) or threshold limit values (TLV). Inhalation and dermal contact are the potential exposure pathways. Protective clothing will be mandatory for field personnel specified in this Plan. In addition, respiratory protective devices are required to be worn by each person onsite or to be within easy reach should irritating odors be detected or irritation of the respiratory tract occur.

TABLE 1
 EXPOSURE LIMITS OF ANTICIPATED CHEMICAL CONTAMINANTS
 ARCO Service Station No. 2152
 22141 Center Street
 Castro Valley, California
 (page 1 of 2)

Contaminant	PEL	EL	ED	CL	TWA	STEL
Benzene ¹ [skin] & [carc]	1*	----	-----	----	10*	5*
Ethylbenzene	100*	----	-----	----	100*	125*
Gasoline ²	300*	----	-----	----	300*	500*
Toluene [skin]	100*	200*	10 min per 8 hours	500*	100*	150*
Xylene (o,m, & p isomers) [skin]	100*	200*	30 min per 8 hrs	300*	100*	150*

See notes on page 2 of 2.

TABLE 1
EXPOSURE LIMITS OF ANTICIPATED CHEMICAL CONTAMINANTS
ARCO Service Station No. 2152
22141 Center Street
Castro Valley, California
(page 2 of 2)

PEL	-	permissible exposure limit: 8 hour, time-weighted average, California Occupational Safety and Health Administration Standard (CAL-OSHA)
EL	-	excursion limit: maximum concentration of an airborne contaminant to which an employee may be exposed without regard to duration provided the 8 hour time-weighted average for PEL is not exceeded (CAL-OSHA)
ED	-	excursion duration: maximum time period permitted for an exposure above the excursion limit but not exceeding the ceiling limit (CAL-OSHA)
CL	-	ceiling limit: maximum concentration of airborne contaminant which employees may be exposed permitted (CAL-OSHA)
TWA	-	time-weighted average: 8 hour, [(same as threshold limit value (TLV)], American Conference of Governmental Industrial Hygienists (ACGIH)
STEL	-	short-term exposure limit: 15 minute time-weighted average (ACGIH)
#	-	milligrams of substance per cubic meter of air (mg/m^3)
*	-	parts of gas or vapor per million parts air
[carc]	-	substance identified as a suspected or confirmed carcinogen
[skin]	-	substance may be absorbed into the bloodstream through the skin, mucous membranes, or eyes
1	-	Federal OSHA benzene limits given for PEL and STEL; STEL has a 50 minute duration limit
2	-	Federal OSHA gasoline limit given for PEL; STEL is the same for FED-OSHA and ACGIH

A brief description of the physical characteristics, incompatibilities, toxic effects, routes of entry, and target organs has been summarized from the NIOSH Pocket Guide to Chemical Hazards for the contaminants anticipated to be encountered. This information is used in onsite safety meetings to alert personnel to the hazards associated with the expected contaminants.

Benzene

Benzene is a colorless, aromatic liquid. Benzene may create an explosion hazard. Benzene is incompatible with strong oxidizers, chlorine, and bromine with iron. Benzene is irritating to the eyes, nose, and respiratory system. Prolonged exposure may result in giddiness, headache, nausea, staggering gait, fatigue, bone marrow depression, or abdominal pain. Routes of entry include inhalation, absorption, ingestion, and skin or eye contact. The target organs are blood, the central nervous system (CNS), skin, bone marrow, eyes, and respiratory system. Benzene is carcinogenic.

Ethylbenzene

Ethylbenzene is a colorless, aromatic liquid. Ethylbenzene may create an explosion hazard. Ethylbenzene is incompatible with strong oxidizers. Ethylbenzene is irritating to the eyes and mucous membranes. Prolonged exposure may result in headache, dermatitis, narcosis, or coma. Routes of entry include inhalation, ingestion, and skin or eye contact. The target organs are the eyes, upper respiratory system, skin, and the CNS.

Toluene

Toluene is a colorless, aromatic liquid. Toluene may create an explosion hazard. Toluene is incompatible with strong oxidizers. Prolonged exposure may result in fatigue, confusion, euphoria, dizziness, headache, dilation of pupils, lacrimation, insomnia, dermatitis, or photophobia. Routes of entry are inhalation, absorption, ingestion, and skin or eye contact. The target organs are the CNS, liver, kidneys, and skin.

Xylene Isomers

Xylene is a colorless, aromatic liquid. Xylene may create an explosion hazard. Xylene is incompatible with strong oxidizers. Xylene is irritating to the eyes, nose, and throat. Prolonged exposure may result in dizziness, excitement, drowsiness, staggering gait, corneal vacuolization, vomiting, abdominal pain, or dermatitis. Routes of entry are inhalation, absorption, ingestion, and skin or eye contact. The target organs are the CNS, eyes, gastrointestinal tract, blood, liver, kidneys, and skin.

GENERAL PROJECT SAFETY REQUIREMENTS

Project activities will be conducted in accordance with the following minimum safety requirements:

- o Eating, drinking, and smoking will be restricted to a designated area.
- o Gross decontamination and removal of all personal protective equipment will be performed before leaving the site. Contaminated clothing will be removed and collected in a drum for disposal.
- o Shaking or blowing dust or other materials off potentially contaminated clothing or equipment to remove dust or other materials is not permitted.
- o The Staff Geologist will be responsible for taking steps to protect employees from physical hazards including
 - * Falling objects, such as tools or equipment
 - * Falls from elevations
 - * Tripping over hoses, pipes, tools, or equipment
 - * Slipping on wet or oily surfaces
 - * Insufficient or faulty protective equipment
 - * Insufficient or faulty equipment or tools
- o All personnel will be required to wash hands and faces before eating, drinking, or smoking in the afore mentioned designated areas.

- o Field personnel will be cautioned to inform each other of the nonvisual effects of the presence of toxics, such as
 - * Headaches
 - * Dizziness
 - * Nausea
 - * Blurred vision
 - * Cramps
 - * Irritation of eyes, skin, or respiratory tract
 - * Changes in complexion or skin discoloration
 - * Changes in apparent motor coordination
 - * Changes in personality or demeanor
 - * Excessive salivation or changes in pupillary response
 - * Changes in speech ability or pattern

PROTECTIVE EQUIPMENT REQUIREMENTS

Field personnel and visitors are required to wear the following protective clothing and equipment, as a minimum, while in the work area at the ARCO Service Station No 2152:

- o Hard hat
- o Safety glasses
- o Steel-toed boots

Field personnel engaged in work are required to wear the following equipment:

- o Hard hat
- o Safety glasses
- o Steel-toed chemical resistant boots (rubber, neoprene, or polyvinyl chloride [PVC])
- o Gloves (rubber, neoprene, PVC, or nitrile)

- o Orange or red safety vest (if equipment or motor vehicles are operating onsite or nearby)
- o Standard Tyvek coveralls (when required by Staff Geologist or Engineer)
- o Respirator with organic vapor and acid gas cartridge (if lowest PEL or TLV is exceeded in the breathing zone or Staff Geologist or Engineer decides respirators should be worn)

RESPIRATORY PROTECTION PROGRAM

This section summarizes Applied GeoSystems Respiratory Protection Program. Applied GeoSystems subcontractors must have company medical surveillance and respiratory protection programs including adequate training of their employees. Subcontractors must provide personal protective equipment as required in this Site Safety Plan for their employees. Applied GeoSystems will attempt to verify worker training but does not assume the responsibility of the employer in any way. The following sections outline the Applied GeoSystems Respiratory Protection Program.

Respirators are not issued to employees until the Company physician conducts a complete physical and decides the employee can 1) wear personal protective equipment and 2) wear a respirator. After the physician has issued written approval to Applied GeoSystems, the Health and Safety Coordinator conducts the required training including these basic topics:

- o Applicable OSHA regulations 1910.134 and 1910.120
- o Nature of respiratory hazards to be encountered in the work environment and how to select proper respiratory equipment
- o Use of respirators and proper fitting
- o Functions and limitations of respirators
- o Cleaning, disinfection, inspection, maintenance, and storage of respirators

Functions and Limitations of Respirators

Respirators are not intended for and may not be used in atmospheres which are, or may become, immediately dangerous to life or health (IDLH) or in atmospheres where the identity or concentration of the contaminant(s) is unknown. Respirators may not be used in atmospheres containing less than 19.5 percent oxygen.

Cartridges or canisters for respirators are selected and supplied to employees by the Health and Safety Coordinator or Branch Safety Officer. The failure to choose or use a respirator equipped with cartridges or filters suitable for the contaminant(s) in the atmosphere or likely to be released in the atmosphere may result in the respirator providing little or no protection against the contaminated atmosphere. The Site Safety Plan specifies the contaminant(s) to be encountered and type of cartridge or canister appropriate for personal protection.

Assuming that the respirator is properly fitted, in good condition, free from leaks, and has the proper cartridges for the contaminant(s) present, the length of time the respirator will provide protection also depends on the conditions of use.

The conditions of use include but are not limited to the following:

- o The concentration of contaminant(s) in the atmosphere
- o The temperature and humidity of the ambient atmosphere
- o Any previous use of the cartridges and filters
- o The elapsed time since the removal of the cartridges or filters from their protective packaging
- o The emotional state of the wearer
- o The level of physical activity of the wearer

Cartridges designed and specified to protect the wearer against airborne particles are not appropriate for protection against gases and vapors. Cartridges designed and specified for protection against specific gases and vapors are not appropriate for protection against airborne particles or other gases or vapors beyond the scope of that type of cartridge. Every cartridge is labeled with specific instructions defining the use and limitations of that

particular type of cartridge. If the label is missing or the type of cartridge is inappropriate then it may not be used under any circumstances; it will provide little or no protection to the wearer.

Danger Signals Indicating Possible Respirator Failure

If any of the danger signals in the following list are experienced while wearing a respirator, immediately return to a fresh air environment. The cartridges or filters may be inappropriate or used up or abnormal conditions may be creating vapor concentrations which are beyond the limits of the cartridges or filters. Danger is indicated when the individual subject to exposure:

- o Smells or tastes chemicals, or if eyes, nose, or throat become irritated;
- o Has difficulty breathing;
- o Notices that the breathing air becomes uncomfortably warm;
- o Experiences headaches, dizziness, cramps, nausea, or blurred vision;
- o Experiences changes in complexion or skin discoloration;
- o Experiences changes in motor coordination, personality, or demeanor;
- o Experiences changes in speech ability or pattern;
- o Experiences excessive salivation or changes in pupillary response.

Qualitative Respirator Fit Test

Qualitative fit testing of each respirator must be conducted before the respirator may be used to check that a good fit is still obtained. The following steps should be taken in qualitative fit test of the respirator.

1. Don the facepiece with cartridge or filters in place. Pull straps together and equally to avoid distorting the mask.
2. Adjust the facepiece. Do not overtighten it.
3. Negative Pressure Leak Check: Close off both inlet connections with palms of hands, inhale slowly, and hold breath momentarily. No leakage should be detected and the facepiece should be drawn slightly to the face.
4. Positive Pressure Leak Check: Close opening in the exhalation valve guard by placing palm of one hand over face of guard; exhale slowly maintaining slight positive pressure. No leakage should be detected between the face seal and the face.
5. Should any leakage be noted:
 - a) Adjust the headstraps and facepiece slightly; recheck for leakage.
 - b) Check condition of exhalation valve and seat. Check that both inlet gaskets are present and in proper condition.
 - c) In the event the facepiece cannot be adjusted so there is no leakage, **DO NOT ENTER THE AREA REQUIRING PROTECTION**. Due to your particular facial features, a different style or size facepiece may be required to obtain a proper facial fit.

Note: Failure to perform a qualitative fit test of the respirator each time the respirator is donned may result in little or no respiratory protection.

Inspection, Cleaning, and Storage

The respirator should be inspected, cleaned, and properly stored after use each day. The following steps are the basic elements of each procedure:

A. Inspection

1. Examine faceseal for rips, tears, holes, deformation, or stiffness.
2. Examine facepiece plastic center shell for cracks, missing components, or damaged threads.
3. Examine harness for breaks, cuts, frays, tears, and missing or damaged hardware.
4. Examine inhalation and exhalation valves and valve seats for cuts, cracks, or foreign matter which may not allow the valve to close completely. Check that valves are properly installed and are not distorted.
5. Examine cartridges for signs of abuse or damage. Discard damaged items.
6. Any respirator malfunction or deficiencies noted must be reported to the Health and Safety Coordinator or Branch Safety Officer who will issue a new respirator or correct the deficiencies using only approved spare parts from the manufacturer of the specific model in need of repair. Spare parts from any other manufacturer may not be used under any conditions. Instructions in the manual provided by the manufacturer should be followed when the respirator needs repairing or replacing.

B. Cleaning

1. Unthread cartridges or filters.
2. Wash the facepiece after use, with warm water and a mild detergent.
3. Disinfect the facepiece if it was used by another person. The mask should routinely (once per month) be disinfected even if respirator is used solely by one individual. A hypochlorite solution may be used (i.e., 2 tablespoons chlorine bleach per gallon of water for an acceptable solution).

4. After cleaning and air-drying, check that the facepiece is not damaged and that components removed prior to cleaning have been installed properly.

C. Storage

1. Place the respirator in its storage box in a heat-sealed or resealable plastic bag. Store flat, with the facepiece and exhalation valve in an approximately normal position, to prevent the facepiece from taking a permanent "set."
2. Replacement components should be stored in sealed packages in a cool, clean, low-humidity location until ready for use.

The Health and Safety Coordinator or Branch Safety Officer will explain Applied GeoSystems' Respiratory Protection Program to each new employee who must wear a respirator. The employee will be asked whether or not he or she understands the information provided. If the Company physician has cleared the employee for respirator use and the Health and Safety Coordinator or Branch Safety Officer has checked the fit of the respirator then the employee will be issued a respirator. A written record is signed and dated by the employee and Health and Safety Coordinator or Branch Safety Officer and kept in the new employee's Safety Record.

WORK ZONES AND SECURITY MEASURES

The Project Manager will call Underground Services Alert (USA) and the utilities will be marked before any drilling is conducted onsite and the borings will be drilled at safe distances from the utilities. The client will also be advised to have a representative onsite to advise us in selecting locations of borings with respect to utilities or underground structures. Applied GeoSystems assumes no responsibility for utilities not so located. The first 5 feet will be hand augered before any drilling equipment is operated.

Each of the areas where the borings will be drilled will be designated as Exclusion Zones. Only essential personnel will be allowed into an Exclusion Zone. When it is practical and local topography allows, approximately 25 to 75 feet of space surrounding those Exclusion Zones will be designated as Contamination Reduction Zones.

Cones, wooden barricades, or a suitable alternative will be used to deny public access to these Contamination Reduction Zones. The general public will not be allowed close to the work area under any conditions. If for any reason the safety of a member of the public

(e.g., motorist or pedestrian) may be endangered, work will cease until the situation is remedied. Cones and warning signs will be used when necessary to redirect motorists or pedestrians.

EXPOSURE MONITORING PLAN

It is not anticipated that project personnel exposure will exceed the TLVs or PELs of the materials; however, proper personal protective equipment will be worn while working at the site. In addition, the work area will be monitored using a direct-reading combustible gas analyzer or an organic vapor meter to detect the concentration of the volatile hydrocarbons in the ambient atmosphere.

If the lowest TLV or PEL is consistently being exceeded in the breathing zone, then a respirator must be worn. If the concentration exceeds 1,000 parts per million (ppm), the use of a respirator is inappropriate and personnel must withdraw from the site.

POSSIBLE EXPLOSIVE ATMOSPHERES

Gasoline has a flammable range from approximately 1.4 to 7.6 percent in air. One percent in air is equivalent to 10,000 ppm; thus the lower explosive limit (LEL) is 14,000 ppm. Normally explosive levels may be reached in tanks, pits, or other confined spaces. Any area suspected of containing potentially explosive levels of gasoline will be evaluated with an intrinsically safe or explosion-proof combustible gas indicator (CGI). Personnel response will be based on the following action levels from CGI readings:

-	Less than 10 percent of LEL*	then	Continue activities and monitoring
-	10 to 25 percent of LEL	then	Continue monitoring with extreme caution as higher levels are encountered
-	Greater than 25 percent of LEL	then	Explosion hazard. Cease activities and vacate area immediately

* CGI readings in percent of lower explosive limit

If an explosion potential is present onsite beyond 25 percent of the LEL then all Applied GeoSystems' personnel and subcontractors must immediately withdraw from the site. The hazard potential will be evaluated by Applied GeoSystems' management and a plan of action will be assessed.

DECONTAMINATION PROCEDURES

Drilling equipment and personal protective equipment will undergo gross decontamination onsite. This gross decontamination will include washing contaminated equipment with a trisodium phosphate (TSP) solution. Steam-cleaning is an acceptable alternative.

EMERGENCY RESPONSE PROCEDURES

In the event of a fire, explosion, or property damage, the nearest Applied GeoSystems Branch and the Administrative Office will be immediately notified. If necessary, local fire or response agencies will be called.

In the event of an accident resulting in physical injury, first aid will be administered and the injured worker will be transported to the nearest hospital or emergency medical clinic for emergency treatment. A physician's attention is required regardless of the severity of the injury.

Overt Personnel Exposure

If overt personnel exposure occurs during the project, typical responses should include the following:

- | | |
|-------------------------------|---|
| Skin or Eye Contact: | Wash and rinse affected area thoroughly with copious amounts of soap and water, then provide appropriate medical attention. Eyes and skin should be rinsed for a minimum of 15 minutes upon chemical contamination. |
| Inhalation: | Move to fresh air and, if necessary, decontaminate and transport to emergency hospital. |
| Ingestion: | Decontaminate and transport to emergency hospital. |
| Puncture Wound or Laceration: | Decontaminate and transport to emergency hospital. |

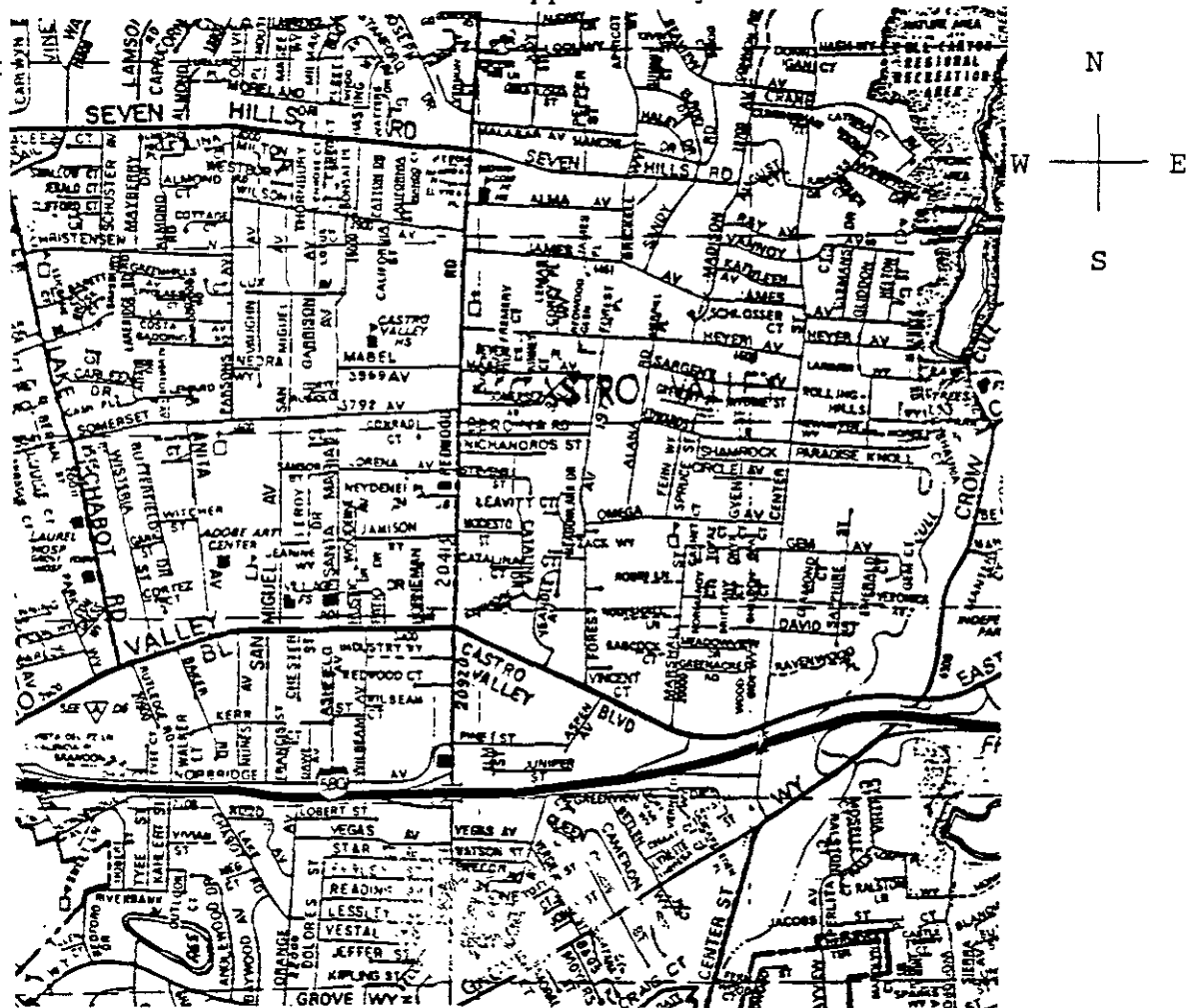
EMERGENCY TELEPHONE NUMBERS

- Fire and Police 911
- Ambulance 911
- Eden Hospital (415) 537-1234

20103 Lake Chabot Road
Castro Valley, California

Directions to Hospital: Go north on Center Street to Castro Valley Boulevard. Go west on Castro Valley Boulevard to Lake Chabot Road. Go north on Lake Chabot Road. Eden Hospital will be on the left. Distance is approximately 4 miles.

Map:



Additional Contingency Telephone Numbers

Castro Valley Fire Department	<u>(415) 670 5880</u>
Poison Control Center	<u>(800) 523-2222</u>
Applied GeoSystems, San Jose Branch	<u>(408) 264-7723</u>
Applied GeoSystems, Administrative Office	<u>(415) 794-3591</u>
CHEMTREC	<u>(800) 424-9300</u>

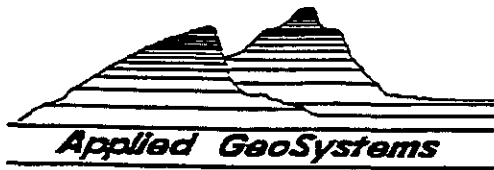
Note: Only call CHEMTREC in an emergency. CHEMTREC stands for Chemical Transportation Emergency Center, a public service of the Chemical Manufacturer's Association. CHEMTREC can usually provide hazard information, warnings, and guidance when given the identification number or the name of the product and the nature of the problem. CHEMTREC can also contact the appropriate experts.

This Site Safety Plan has been reviewed by the following persons:

Project Manager: _____

Health and Safety Coordinator: _____

Amendments or modifications to this Plan may be written on a separate page and attached to this Plan. Any amendments or modifications must be reviewed and approved by the personnel named above.



TRANSMITTAL

3315 Almaden Expressway, Suite 34
 San Jose, California 95118
 (408) 264-7723 FAX (408) 264-2435

TO: MR. SCOTT SEERY
ALAMEDA COUNTY DEPARTMENT OF
ENVIRONMENTAL HEALTH
80 SWAN WAY, ROOM 200
OAKLAND, CA 94621

DATE: 5/15/90
PROJECT NUMBER: 69013-3WA
SUBJECT: ADDENDUM TO WORK PLAN 69013-3W

FROM: STEVE BITTMAN
TITLE: STAFF GEOLOGIST

WE ARE SENDING YOU Attached Under separate cover via _____ the following items:
 Shop drawings Prints Reports Specifications
 Letters Change Orders ADDENDUM

COPIES	DATED	NO.	DESCRIPTION
1	5/14/90	69013-3WA	ADDENDUM TO WORK PLAN 69013-3W, DATED
			APRIL 1, 1990, FOR ARCO STATION NO. 2152,
			22141 CENTER STREET, CASTRO VALLEY, CA.

THESE ARE TRANSMITTED as checked below:

- For review and comment Approved as submitted Resubmit ___ copies for approval
- As requested Approved as noted Submit ___ copies for distribution
- For approval Return for corrections Return ___ corrected prints
- For your files _____

REMARKS: _____

Copies: 1 to AGS project file no. 69013-3W SJ READER'S FILE
ARCHIVE