TARGET - DUBLIN
SITE SAFETY AND HEALTH PLAN

CLIENT: Target

SITE NAME: Target Store T-328

PROJECT/TASK ID#: 38903

ADDRESS: 7600 Amador Valley Blvd.
Dublin, California

DATE: September 10, 1990

PLAN EXPIRATION DATE: Dec. 10, 1990

PROJECT MANAGER:	Jenni Carter Name	Signature	Date
IH REVIEW:	J. Hatfield/L. Wade Name	for John Hatfield Signature	9/12/90 Date
REHSC:	Rene Ricks/ Roxanne Morocco Name	Rene Ricks Signature	9/11/90 Date
FIELD SUPERVISOR/ SITE SAFETY OFFICER	Martin Bermudez Name	M. Bermudez Signature	9/13/90 Date
SUBCONTRACTOR(S):	Decon Environmental Services, Inc. Name	Signature	Date

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DISCLAIMER

This Site Safety and Health Plan has been written for the use of McLaren and its employees. It may also be used as a guidance document by properly trained and experienced McLaren subcontractors. However, McLaren does not guarantee the health or safety of any person entering this site.

Due to the potentially hazardous nature of this site and the activity occurring thereon, it is not possible to discover, evaluate, and provide protection for all possible hazards which may be encountered. Strict adherence to the health and safety guidelines set forth herein will reduce, but not eliminate, the potential for injury at this site. The health and safety guidelines in this plan were prepared specifically for this site and should not be used on any other site without prior research by trained health and safety specialists.

McLaren claims no responsibility for this use by others. The Plan is written for the specific site conditions, purpose, dates, and personnel specified and must be amended if these conditions change.

TABLE OF CONTENTS

TABLE OF CONTENTS
(Continued)

LIST OF TABLES

LIST OF FIGURES

LIST OF ATTACHMENTS

1.0 GENERAL PROJECT AND PERSONNEL INFORMATION

1.1 Introduction and Project Identification

This plan has been prepared in conformance with the California Department of Health Services Toxic Substances Control Division Site Safety Plan Guidance Document (8/88) and 29 CFR 1910.120. It addresses all those activities associated with the scope of work stated below and will be implemented by the Site Safety Officer (SSO) during site work. Compliance with this Site Safety and Health Plan (SSHP) is required of all persons and third parties who enter this site. Assistance in implementing this plan can be obtained from the Site Safety Officer and Project Manager, and/or the Regional Environmental Health and Safety Coordinator (REHSC). The content of this SSHP may change or undergo revision based upon additional information made available to health and safety (H&S) personnel, monitoring results or changes in the technical scope of work. Any changes proposed must be reviewed by H&S staff and are subject to approval by the REHSC and Project Manager.

SITE NAME: Target Store T-328 TASK NO.: 38903

SCHEDULED DATES OF SITE WORK: September 10-30, 1990

SCOPE OF WORK: Removal of four 10,000 gallon underground gasoline storage tanks and possible removal of petroleum-contaminated soils.

1.2 Key McLaren Personnel

The McLaren personnel designated as the project manager and Site Safety Officer are as indicated with telephone numbers:

Project Manager	Jenni Carter	(415) 521-5200
Site Safety Officer	Martin Bermudez	(415) 521-5200
Regional Health and Safety Coordinator	Rene Ricks	(415) 521-5200

See Table 1-1 and Section 1.4 for a complete list of personnel, their responsibilities, and training requirements.

1.3 Key Phone Numbers

The following briefly lists key phone numbers for emergency and non-emergency contacts. A more complete list is provided in Attachment 7.

Local Fire/Police Dept.	Emergency Services	911
Valley Memorial Hospital	Local Hospital	(415) 447-7000
HAZMAT	National Response Center	(800) 424-8802
U.C. San Francisco Med Ctr	Poison Control Center	(800) 523-2222
Ellis Wallenberg III	Regional Manager	(415) 521-5200
Martin Bermudez	Field Supervisor	(415) 521-5200
Phil Byers	Client Contact	(612) 335-5206
Jerry Winkelman	Site Contact	(415) 829-8900
Decon Environmental Services, Inc.	Subcontractor	(415) 732-6444

TABLE 1-1

PERSONNEL, QUALIFICATIONS, AND RESPONSIBILITIES

TITLE	GENERAL DESCRIPTION	SPECIFIC RESPONSIBILITIES	REQUIRED TRAINING
Project Manager Jenni Carter	Reports to upper-level management. Has authority to direct response operations. Assumes total control over site activities.	• Prepares and organizes the background review of the job at hand, the Work Plan, the Site Safety Plan, and the field team. • Obtains permission for site access and coordinates activities with appropriate officials. • Ensures that the work plan is completed and on schedule. • Briefs the field teams on their specific assignments. • Uses the Site Safety and Health Officer to ensure that safety and health requirements are met. • Prepares the final report and support files on the response activities. • Serves as the liaison with public officials.	• 40-hr. Hazardous Wastes Training including 8-hr supervisor update (29 CFR 1910.120)
Site Safety Officer/ Alternate Site Safety Officer Martin Bermudez / Rick Swanson	Advises the Project Team Leader on all aspects of health and safety on-site. Recommends stopping work if any operation threatens worker or public health or safety.	• Coordinates safety and health program activities with the Scientific Advisor. • Monitors the work parties for signs of stress, such as cold exposure, heat stress and fatigue. • Monitors on-site hazards and conditions. • Participates in preparation of and implements the Site Safety Plan. • Ensures that protective clothing and equipment are properly stored and maintained. • Knows emergency procedures, evacuation routes, and the telephone numbers of the ambulance, local hospital, poison control center, fire department, and police department. • Notifies, when necessary, local public emergency officials. • Coordinates emergency medical care.	• 40-hr Hazardous Wastes Training including 8-hr update (29 CFR 1910.120) • Respirator use training • Medical surveillance participant
Public Information Officer Jenni Carter	Reports to upper-level management and Project Manager.	• Release information to the news media and the public concerning site activities.	Not applicable

TABLE 1-1
(Continued)

PERSONNEL, QUALIFICATIONS, AND RESPONSIBILITIES

TITLE	GENERAL DESCRIPTION	SPECIFIC RESPONSIBILITIES	REQUIRED TRAINING
Security Officer Martin Bermudez	Advises Field Operations Leader. Manages site security.	• Controls entry and exit at the Access Control Points.	• 40-hr Hazardous Wastes Training including 8-hr. update (29 CFR 1910.120) • Respirator use training • Medical surveillance participant
Field Supervisor Martin Bermudez	Responsible for field team operations and safety. Reports to Project Manager.	• Manages field operations. • Executes the Work Plan and schedule. • Enforces safety procedures. • Coordinates with the Site Safety Officer in determining protection level. • Enforces site control. • Documents field activities and sample collection. • Serves as liaison with public officials.	• 40-hr Hazardous Wastes Training including 8-hr. update (29 CFR 1910.120) • Respirator use training • Medical surveillance participant
Team Members Martin Bermudez/ Decon employees	Report to Field Team Leader. Contains at least two people. For drilling purposes Team Members consist of a McLaren geologist, a drilling foreman and helpers.	•Safely completes the on-site tasks required to fulfill the Work Plan •Complies with Site Safety Plan. •Notifies the Site Safety Officer or supervisor of unsafe conditions	• 40-hr Hazardous Wastes Training including 8-hr. update (29 CFR 1910.120) • Respirator use training • Medical surveillance participant

1.4 Additional Authorized Site Personnel

Personnel authorized to enter the Target Dublin site while operations are being conducted must be approved by the REHSC. Authorization will involve completion of appropriate training courses and medical examination requirements as required by OSHA 29 CFR 1910.120 and/or other applicable regulations and review and sign-off of this SSHP. All personnel must utilize the buddy system or trained escort, and check in with the Field Supervisor at the Command Post.

Additional McLaren or Subcontractor Personnel Authorized to Perform Work On-site (not previously listed in Section 1.2):

Name	Training	REHSC Initials
1. _____	40-hr. 29 CFR 1910.120/8-hr. update	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____

2.0 SITE INFORMATION

2.1 Site Description:

The project site is a retail gasoline station, which was abandoned by its last operators and is owned by Target Stores. The station is located in Dublin, California in a light commercial area with moderate local traffic on Amador Valley Blvd. The canopy covering the pump islands will be dismantled prior to McLaren/Hart's work.

2.2 Site Map(s):

See Attachment 1 for site maps and general directions to the site.

2.3 Background Information:

Initial Site Entry: Performed on September 5, 1990.

Information Obtained:

The station appeared to be in good condition. Alameda County Environmental Health Department and Dougherty Fire Department records contain no record of unauthorized fuel releases from any on-site underground storage tanks. Soil contaminants that could be present if any spills or leaks occurred are listed in Table 2-1.

4.0 TASK-SPECIFIC SAFETY AND HEALTH RISK ANALYSIS

4.1 Hazard Analysis

Potential exposure pathways, chemical hazards, and physical hazards are all involved in an analysis of risk. See Table 4-1 for a risk analysis of each of the tasks to be performed. Overall, the physical and chemical hazards are as summarized below:

Physical hazards are associated with:

- The use of heavy equipment (moveable parts, potential for contact with utilities, noise, etc.)
- The process of tank removal (explosivity, slips, trips, falls, etc.)
- Traffic hazards (Note: Access to the gasoline station from Donahue Road will be barred via barricades to control traffic and public access.)

Chemical hazards are associated with:

- The potential for inhaling fuel vapors from contaminated soil and tank fuel.
- The potential for dermal exposure from contaminated soil and tank fuel.

The overall hazard is MODERATE/LOW.

4.2 Chemical Hazards

Chemical contaminants listed in Table 2-2 may or may not present health hazards to field personnel. The concentration of the contaminant, extent of area contaminated, and the likelihood of exposure all must be considered. An assessment of the chemicals of concern, including exposure limits, odor thresholds, volatility, and health effects, is presented in Table 4-2.

TABLE 4.1
RISK ANALYSIS OF JOB TASKS

TASKS SCHEDULED[a]	MEDIA OF CONCERN	POTENTIAL EXPOSURE PATHWAYS[b]	PHYSICAL HAZARDS[c]	CHEMICAL HAZARDS/ POTENTIAL CHEMICALS OF CONCERN
1. Utility clearance	Utilities	None	U	For Tasks: Diesel fuel, gasoline (naphtha), benzene, toluene, xylene, ethylbenzene
2. Evacuate fuel	Tank contents	Inh (V); Dermal	S,E,T	
3. Inert tanks	Tank contents	Inh (V); Dermal	E,T	
4. Excavate underground tanks	Tank contents, soil	Inh (V); Dermal	U,H,S,E,O,T	
5. Remove tanks	Tank contents, soil	Inh (V); Dermal	H,S,E,O,T	
6. Collect soil samples	Soil,	Inh (V); Dermal	H,S	
7. Further excavate	Soil	Inh (V); Dermal	H,S,O,T	
8. Package/contain wastes	Tank contents, soil	Inh (V); Dermal	S,T	
9. Backfill excavation	Soil	None	H,S,O,T	

[a] See Section 3.2 for a complete description of job tasks

[b] EXPOSURE PATHWAY:

Inh = Inhalation
(P) = Particulate Inhalation
(V) = Vapor Inhalation
Derm = Dermal

[c] PHYSICAL HAZARDS:

U = Utilities
H = Heavy Machines
S = General Safety: slip, trip, fall
N = Noise
O = Overhead Hazards
E = Explosivity
T = Traffic

Table 4.2

ASSESSMENT OF CHEMICALS OF CONCERN

Chemical Name (or class)	PEL/TLV[1]	Other Pertinent Limits[2] (Specify)	Odor Threshold[3] (if any)	Volatility[4]	Acute Health Effects	Chronic Health Effects	Carcinogen
1. Diesel/Fuel oil	-	-	Unknown	Moderate	Lightheadedness; drowsiness; coma; eyes and nose irritant	Unknown	No
2. Naphtha (main constituent of gasoline)	100/-ppm	-	<1 ppm	High	Lightheadedness; drowsiness; coma; eyes and nose irritant	Respiratory damage; CNS effects	No
3. Benzene	1/10 ppm	Ceiling=50 ppm	12 ppm*	High	Eye or skin irritant; narcotic; anesthetic	Bone marrow & blood cell damage (leukemia)	Yes
4. Xylene	100/100 ppm	STEL=150 ppm	1 ppm	High	Respiratory irritant; blurred vision; dizziness nausea; collapse, coma	CNS effects; liver and kidney damage; dermatitis	No
5. Toluene	100/100 ppm	STEL=150 ppm	3 ppm	High	Skin & eye irritant; CNS effects; fatigue	CNS effects; liver and kidney damage; dermatitis	No
6. Ethylbenzene	100/100 ppm	STEL=125 ppm	2 ppm	High	Eye, skin, & mucous membrane irritant; dizziness, ataxia	CNS effects; liver and kidney damage	No

SEE NEXT PAGE FOR FOOTNOTES

1 OSHA Permissible Exposure Limit (PEL)/American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV). Both values represent time-weighted average concentrations for an 8-hr. workday.

2 Other Pertinent Limits:
Ceiling = OSHA's maximum exposure concentration for which an employee shall not be exposed during any period without respiratory protection.
STEL = ACGIH or OSHA 15-minute Short-term Exposure Limit

3 Asterisk (*) indicates that odor is an unacceptable warning property. The odor threshold is too high in comparison to the PEL and TLV limits.

4 Ranked on basis of vapor pressure (VP) and Henry's Constant (HC), which defines partitioning between the water phase and the gas phase.

High = Highly Volatile:	VP > 10mmHg; HC > 10^{-3}/mole
Moderate = Moderately Volatile:	VP between 10^{-3} and 10mmHg; HC between 10^{-5} and 10^{-3} atm-m^3/mole
Slight = Slightly Volatile:	VP between 10^{-5} and 10^{-3} mmHg; HC between 10^{-7} and 10^{-5} atm-m^3/mole
Non-Vol = Non-Volatile:	VP < 10^{-5} mmHg; HC <10^{-7} atm-m^3/mole

4.3 Non-Chemical Hazards

The following checklist notes non-chemical hazards identified for at least one of the described job tasks outlined in Section 3.2:

	No	Yes	Which Tasks?
Electrical hazard		X	
Overhead power lines		X	Excavation
Underground cable/ power lines	X		
Water line		X	Excavation
Gas lines			
Equipment hazards		X	
Drilling	X		
Excavation		X	Tank and soil removal
Machinery		X	Tank and soil removal
Heat exposure	X		
Cold exposure	X		
Oxygen deficiency	X		
Confined spaces	X		
Noise	X		
Ionizing	X		
Non-ionizing radiation			
Lasers			
Infrared			
Ultraviolet			
Fire	X		
Biologic	X		
Safety		X	Excavation
Holes/ditches		X	Excavation
Steep grades		X	Excavation
Slippery surfaces	X		
Uneven terrain		X	Excavation
Unstable surfaces	X		
Elevated work surfaces	X		
Explosive Atmosphere		X	Tank removal
Shoring/Scaffolding		X	Possible if excavation exceeds 5 feet
Other: Traffic		X	All tasks

5.0 SITE HEALTH AND SAFETY STANDARD OPERATING PROCEDURES

5.1 Applicable Maps:

Site Map(s) -- See Attachment 1
Utilities Map -- See Attachment 3
Hospital Route Map -- See Attachment 4

5.2 Site Security and Exclusion Zones

- Work Area Access:
  Fence
- Work Area Security:
  McLaren/Hart site security officer
- Work Site Definition:
  Area: (1) within a 30-ft. radius of an active backhoe or other type of heavy equipment plus additional areas within barricades, cones and/or caution tape; or (2) within a 10-ft. radius of a hand augering location if drilling/ boring equipment is *not* co-located.
- Work Site Perimeter Identification Method:
  Barricades and/or caution tape and fencing
- On-site Command Post:
  McLaren/Hart truck cab
- Site Work Zone Requirements:

  Exclusion Zone: work site as described above
  Contamination Reduction Zone: outside work site zone
  Support Zone: McLaren/Hart truck cab

- Communication:

  - Contact of off-site office personnel by on-site personnel:
    by phone or 2-way radio
  - Contact of on-site personnel by off-site office personnel:
    by 2-way radio or pager

- Confined Space Entry? No * Task: N/A

  * If yes, employ buddy system such that one person acts as a standby employee and does not enter the confined space. Always use monitoring equipment prior to and during entry and consult REHSC prior to entry for specific instructions and entry permit. (McLaren Health and Safety Policies Section 14). Do not place power generators within the confined space. Maintain close contact with REHSC during CSE activity for guidance.

5.3 Personal Protective Equipment (PPE) Requirements

All tasks require level D protection unless direct reading instruments and/or colorimetric tubes indicate otherwise. See Table 5-1 for specifics.

Table 5-1

PERSONAL PROTECTIVE EQUIPMENT (PPE) REQUIREMENTS

	TASKS[a]	PPE[b] SUIT	GLOVES	FEET	HEAD	EYE	EAR	RESPIRATOR	LEVEL OF[c] PROTECTION	LEVEL IF[c] UPGRADE	ADDITIONAL[b] PPE FOR UPGRADE	MONITORING[d] EQUIPMENT
1	Utility Clearance	Std	-	steel	(HH)	safety	-	-	D	-	-	-
2	Evacuate fuel	Std/ PE Tyvek*	Work/NS*	steel	HH	safety	-	-	D	C	OV	PID/LEL/CT
3	Inert tanks	Std/ PE Tyvek*	Work/NS*	steel	HH	safety	-	-	D	C	OV	PID/LEL/CT
4	Excavate tanks	Std/ PE Tyvek*	Work/NS*	steel	HH	safety	-	-	D	C	OV	PID/LEL/CT
5	Remove tanks	Std/ PE Tyvek*	Work/NS*	steel	HH	safety	-	-	D	C	OV	PID/LEL/CT
6	Collect soil samples	Std/Tyvek*	NS	steel	HH	safety	-	-	D	C	OV	PID/LEL/CT
7	Further excavate	Std/ PE Tyvek*	Work/NS*	steel	HH	safety	-	-	D	C	OV	PID/LEL/CT
8	Package/contain wastes	Std/ PE Tyvek	NS	steel+	HH	safety	-	-	D	C	OV	PID/LEL/CT
9	Backfill excavation	Std/Tyvek*	work/NS*	steel	HH	safety	-	-	D	C	OV	PID/LEL/CT

Note: Protective equipment assigned in this table may be upgraded or downgraded at any time by the site industrial hygienist, REHSC, or qualified safety officer based upon site conditions and air monitoring results.

[a] See Section 3.2 for complete identification of tasks. See Sec. 2.5 for a description of operable units (OU-1 and OU-2).

[b] **PERSONAL PROTECTIVE EQUIPMENT (PPE):**

Note: If upgrade is necessary per monitoring action levels stated in Table 5-4, all discretionary suit and glove PPE become mandatory.

Std = Standard work clothes
Tyvek = DuPont spun polyethylene suit (usually white)
Tyvek* = Wear if contact with low-moisture contaminated soils is anticipated or encountered
PE Tyvek = Polyethylene-coated Tyvek (usually yellow)
PE Tyvek* = Wear if contact with wet soil or tank contents is anticipated or encountered
NS = Nitrile-Solvex gloves or neoprene-laytex gloves
NS* = Wear if contact with wet soil or tank contents is anticipated or encountered
Steel = Steel-toed boots
Steel+ = Steel-toed plus (+) PVC (polyvinyl chloride) booties or the use of Neoprene or Butyl Rubber boots
HH = Hard Hat

SEE THE FOLLOWING PAGE FOR CONTINUATION OF FOOTNOTES.

(HH) = Wear hard hat if near heavy equipment and if overhead hazards are present.
Safety = Safety glasses or goggles
HEPA = High Efficiency Particulate Air filtering cartridges on air-purifying respirator
OV = organic vapor cartridges on air purifying respirator
OV + HEPA = Organic vapor/HEPA combination cartridges

[c] **LEVELS OF PROTECTION:**

Level A - Self-contained breathing apparatus (SCBA), totally encapsulating suit, two-way radio communications
Level B - SCBA or supplied air respirator (SAR) with an escape bottle, chemically resistant PPE, two-way radio communications
Level C - Full or half-face air-purifying respirator (APR), chemically resistant clothing
Level D - No respiratory protection. Coveralls, safety glasses, hard hat, steel-toed boots, and gloves specified under Level C are required if contact with hazardous materials is probable

[d] **MONITORING EQUIPMENT:**

PID = photoionization detector (e.g. HNu, TIP) (see Table 5-4).
LEL = Combustible gas meter (lower explosive limit = LEL)
CT = Specific colorimetric tube (see Table 5-4).

5.4 Monitoring Equipment Requirements

Monitoring is to be conducted by the Site Safety Officer or his/her designee. The results shall be interpreted by the Site Safety Officer together with the Regional Environmental Health and Safety Coordinator (REHSC). Monitoring results and calibration logs (Attachments 5 and 6) are to be completed and sent to the REHSC to be filed with the Site Safety and Health Plan.

Monitoring is designed to assess exposure to employees during site activities and to determine if Personal Protective Equipment (PPE) is required and/or adequate to assure protection. Because investigation and remediation activities at hazardous waste sites are of an inconsistent nature, it is not possible to assign a practicing monitoring protocol which excludes or is not directly dependent upon professional judgement to determine when monitoring is required to assess exposure.

Thus, the following generic protocol must be followed at a minimum and should be modified to be more conservative (e.g. require more monitoring) if deemed necessary by the Site Security Officer (SSO) or Regional Environmental Health and Safety Coordinator (REHSC). Under no conditions will the required monitoring frequency decrease.

At a minimum, exposures to suspected chemicals of contamination, as defined in this plan, should be monitored before, during, and after each task/activity. Additional characterization monitoring shall begin immediately if the operation destabilizes, the environment changes, or the potential for exposure is otherwise affected. Monitoring should continue on a continuous basis until the operation is stable and the SSO or REHSC feels that the monitoring is sufficient to adequately assess and characterize exposure during that operation. Upon task/environmental/activity stabilization, periodic monitoring, is required to verify the initial exposure assessment to all chemicals.

When the project/task is complete and site exodus is planned, final characterization monitoring must be again performed to determine if controls are required during times when the site is abandoned.

Equipment calibration and use requirements are specified in Sections 5.5 and 5.6.

5.5 Equipment Calibration Requirements

The following summarizes calibration requirements for the equipment specified for at least some of the specified job tasks. See Section 5.4 for task-specific monitoring protocols.

Instrument*	Calibration Frequency
Direct Reading Instruments	Beginning of workday
PID	
LEL/O_2	
Colorimetric Tubes	Test pump prior to each day's use
Benzene	

* Not all job tasks may require monitoring. See Table 5-2 for specific protocols.

5.6 Monitoring Protocols

Task-specific instrument monitoring protocols and contaminant action levels are outlined in Table 5-2. The use of action levels and the basis for the selection of monitoring equipment is as explained below:

Action levels determine:

(1) the field team's selection of personal protective equipment, and
(2) the field team's ability to remain and work within the exclusion (work) zone.

The selection of the specified monitoring equipment is based on:

(1) the nature of the contaminants;
(2) the concentrations of the contaminants;
(3) the likelihood of the contaminants entering the air in significant levels;
(4) the probable duration of exposure; and
(5) the relative sensitivity of the monitoring equipment to the specific contaminants.

Protocol Summary:

All job tasks excluding the initial utility clearance require monitoring with a PID instrument and a combustible gas meter ("LEL") prior to and during execution of the tasks. If a PID reading of 20 ppm is measured in the breathing zone, a respirator will be donned and benzene will be measured using a colorimetric (Draeger) tube. If a breathing zone level of 200 ppm is detected with the PID, work will cease and the REHSC will be consulted. Note: Human entry into the excavation is explicitly disallowed without further controls and protocols, which are beyond this plan. The current scope calls for soil sample collection via a backhoe.

TABLE 5-2 MONITORING PROTOCOLS AND CONTAMINANT ACTION LEVELS

Contaminant/ Atmospheric Condition	Monitoring Equipment	Monitoring Protocol	Action Level Concentrations: Monitored Level for[a] for Mandatory Respirator Use	Action Level Concentrations: Monitored Level[b] for Mandatory Work Stoppages
Organic Vapors	PID	All tasks except utility clearance:[a] Prior to and during task	20 ppm	200 ppm
Combustible Gases	Combustible Gas (LEL) + oxygen Meter	All tasks except utility clearance: Prior to and during task	N/A	20% LEL/<19.5% O_2
Benzene	Draeger tube	If PID reading > 10 ppm: Prior to and during task	0.5 ppm	1 ppm

N/A = Not applicable

a Monitoring performed at operator's breathing zone. Monitor at the source first; if the source concentration is near or above the action level concentration, monitor in the breathing zone (approximately one foot from the operator's face).

b Call the Regional Environmental Health and Safety Coordinator for consultation.

5.7 Decontamination Procedures

Depending on the specific job task, decontamination may include personnel themselves, sampling equipment, and/or heavy equipment. The following sections summarize general decontamination protocols.

5.7.1 General Decontamination (Decon) Operating Procedures:

Configure Decon Station as appropriate using Figure 5-1 as a layout guide for Level C.

Materials/Equipment Required: See Table 5-3.

- Sampling equipment will be brushed clean and rinsed with distilled water or other appropriate cleaning material.
- Heavy equipment will be high-pressure washed at individual operating unit locations when practical.
- Samples will be dry-wiped prior to packaging.
- Monitoring equipment will be wiped down.
- Vehicles which become contaminated with suspect contaminated soil will be cleaned prior to leaving the site. The wheel wells, tires, sides of vehicles, etc. will be high-pressure washed at a location to be determined by the SSO.
- Spent decon solutions may be required to be drummed and disposed of as hazardous waste and/or solvent solutions may be required to be segregated from water rinses.
- Decontamination shall be performed in a manner that minimizes the amount of waste generated.

5.7.2 Heavy Equipment

Heavy equipment will be decontaminated prior to personnel decontamination. Drillers will steamcleam their augers after use. Hand auger buckets will be washed in TSP solution and rinsed in distilled water. Contaminant systems will be set-up for collection of decon fluids and materials. Berms and wind barriers will be set up if appropriate.

5.7.3 Personnel

Use steps and procedures outlined below and in Table 5-4 as a guideline for personnel decontamination.

- Gross wash and rinse: suit wash (where appropriate);
- Tape removal: (where appropriate);
- Outer glove removal;
- Boot removal;
- Suit removal (where appropriate);
- Respirator/hard hat removal (where appropriate);
- Respirator wash (where appropriate);
- Inner glove wash/rinse/removal;
- Inner clothing removal; and
- Field wash and redress.

5.7.4 Samples and Sampling Equipment

Same configuration, equipment and materials as required for Personnel Decontamination. The same decontamination line will be used.

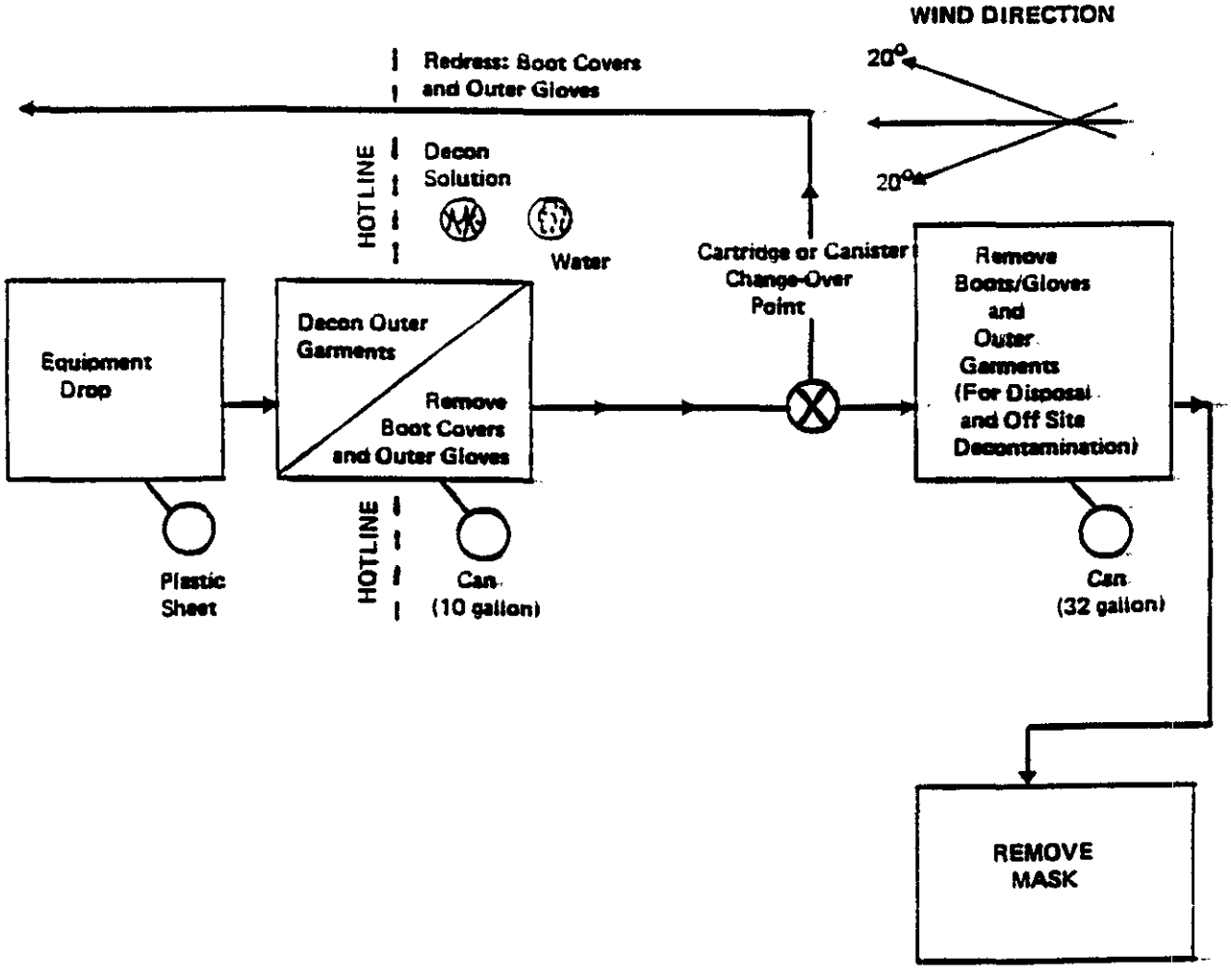


FIGURE 5-1 Minimum Decontamination Layout Level for C Protection

TABLE 5-3

EQUIPMENT NEEDED TO PERFORM MINIMUM
DECONTAMINATION MEASURES FOR LEVELS A, B, AND C

Station 1: Equipment Drop

a. Various Size Containers
b. Plastic Liners
c. Plastic Drop Cloths

Station 2: Outer Garment, Boots, and Gloves Wash and Rinse

a. Containers (20-30 Gallons)
b. Decon Solution
c. Rinse Water
d. 2-3 Long-Handled, Soft-Bristled, Scrub Brushes

Station 3: Outer Boot and Glove Removal

a. Containers (20-30 Gallons)
b. Plastic Liners
c. Bench or Stools

Station 4: Tank Change

a. Air Tanks or Masks and Cartridges Depending Upon Level
b. Tape
c. Boot Covers
d. Gloves

Station 5: Boot, Gloves, and other Garment Removal

a. Containers (20-30 Gallons)
b. Plastic Liners
c. Bench or Stools

Station 6: SCBA Removal

a. Plastic Sheets
b. Basin or Bucket
c. Soap and Towels
d. Bench or Stools

Station 7: Field Wash

a. Water
b. Soap
c. Tables
d. Wash Basin or Bucket

TABLE 5-4

MINIMUM MEASURES FOR LEVEL C DECONTAMINATION OF PERSONNEL

Station 1:	Equipment Drop	1. Deposit equipment used on-site (tools, sampling devices and containers, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths. Segregation at the drop reduces the probability of cross contamination. During hot weather operations. cool down station may be set up within this area.
Station 2:	Outer Garment, Boots, and Gloves Wash and Rinse	2. Scrub outer boots, outer gloves and splash suit with decon solution or detergent water. Rinse off using copious amounts of water.
Station 3:	Outer Boot and Glove Removal	3. Remove outer boots and gloves. Deposit in container with plastic liner.
Station 4:	Canister or Mask Change	4. If worker leaves exclusive zone to change canister (or mask), this is the last step in the decontamination procedure. Worker's air canister is exchanged, new outer gloves and boot covers donned, joints taped, and worker returns to duty.
Station 5:	Boot, Gloves, and Outer Garment Removal	5. Boots, chemical-resistant splash suit, inner gloves removed and deposited in separate containers lined with plastic.
Station 6:	Face Piece Removal	6. Facepiece is removed. Avoid touching face with fingers. Facepiece deposited on plastic sheet.
Station 7:	Field Wash	7. Hands and face are thoroughly washed. Shower as soon as possible.

5.8 Procedures for Waste Handling of Anticipated Wastes

5.8.1 Waste Generation

Anticipated: Yes _X_ No ____

Types: Liquid _X_ Solid _X_ Sludge ____ Gas ____

Quantity: Expected Volume of each: liquid fuels - 40 gallons
solid (soils): - approx. 90 yd^3

Characteristics

Corrosive ____ Ignitable _X_ Radioactive ____ Volatile _X_

Toxic _X_ Reactive ____ Unknown ____ Carcinogenic _X_

Other (specify) _____

5.8.2 Disposal and/or Treatment Methods Proposed:

This project will _X_ will not ____ generate hazardous wastes. These wastes will be:

____ Stored ____ Treated
_X_ Transported _X_ Manifested in the following manner:

Residual liquids will be transferred and transported by Refinery Services of Patterson, California, EPA I.D. No.: CAD 083166728. Underground fuel tanks will be transported and disposed of by Erickson, Inc. of Richmond, California, EPA I.D. No.: CAD09466392. Contaminated soils will be transported to an appropriate disposal site by DECON Environmental Services of Hayward, California EPA I.D. No.: CAD0982468183.

5.8.3 Transportation

D.O.T. Classification (Anticipated): To be determined

Type(s) of labels required for waste shipment: _____

Packaging requirements for waste material:

Open head 55-gallon drum _____
Closed head 55-gallon drum X
Overpack drum _____
Baker tanks _____
Lined waste bins _____
Other X-lined waste piles stored on-site

TSD Facility to be used:

Name: to be determined

EPA I.D. Number: _____

Waste (Soils) Transporter:

Name: Decon Environmental

EPA I.D. Number: CAD0982468183
State I.D. Number _____

5.9 Site Operating Procedures

5.9.1 Initial Site Operating Procedures

- Locate nearest available telephone. Indicate location on Site Map (Attachment 1).
- Determine wind direction, establish hotline, and set up decontamination facilities. Note wind direction and location of decontamination facilities on site map (Attachment 1).
- Post Site Map (Attachment 1) Confirm and post emergency telephone numbers and route to hospital.
- Designate at least one vehicle for emergency use.
- If toilet facilities are not located within a 5-minute walk from the decontamination facilities, either provide a chemical toilet and hand washing facilities or have a vehicle available (not the emergency vehicle) for transport to nearby facilities.
- Prior to working on-site, an inspection for hazards (i.e. chemicals, spiders, electrical hazards) will be made.
- Conduct or review utility clearance prior to start of work, if appropriate.

5.9.2 Daily Operating Procedures

- Hold daily Tailgate Safety Meetings prior to work start.
- Use monitoring instruments and follow designated action levels specified in Section 5.4 and 5.5 and Table 5-2.
- Use personal protective equipment (ppe) as specified in Section 5.3 and Table 5-1.
- Try to remain upwind of operation.
- Vent wells from an upwind position.

- No work will be conducted without adequate natural light or without appropriate supervision.

- Dust control measures may be needed on roads that cross the exclusion zone.

- Spoils from excavation work should be placed so as not to be in the expected paths of travel.

- Drilling cuttings should be kept shoveled up and drummed, out of the way of workers. Liquids generated during drilling should be contained out of the way to limit the amount of mud created around the rig.

- Care should be taken to limit the extent that a piece of equipment comes into contact with contamination (e.g. on backhoes, limit contact to the arm and bucket).

- A work/rest regime will be initiated when ambient temperatures and protective clothing create a potential heat stress situation.

5.9.3 Personnel Operating Procedures

- Do not walk through areas of obvious or known contamination.

- Do not handle or touch contaminated materials directly.

- Make sure all PPE has no cuts or tears prior to donning.

- Fasten all closures on suits, covering with tape if necessary.

- Particular care should be taken to protect any skin injuries.

- Stay upwind of airborne contaminants.

- Do not carry cigarettes, gum, etc. into contaminated areas.

- Refer to Site H&S Officer for specific concerns for each individual site task. Do not climb over/under drums, or other obstacles and always employ the buddy system.

- Practice contamination avoidance, on- and off-site. Activities should be planned ahead of time.

- Apply immediate first aid to any and all cuts, scratches, abrasions, etc.

- All accidents, no matter how minor, must be reported immediately to the SSO.

- Be alert to your own physical condition. Watch your buddy for signs of fatigue, exposure, etc.

6.0 CONTINGENCY PLAN

The nature of work at contaminated or potentially contaminated work sites makes emergencies a continual possibility. Although emergencies are unlikely and occur infrequently, a contingency plan is required to assure timely and appropriate response actions. The contingency plan is reviewed at Tailgate Safety Meetings. Tailgate Safety Meetings are required in order to fulfill regulatory provisions for employee training and indoctrination on work-place hazards and as a means of minimizing work-place injuries and illnesses. Prior to commencing work on a site, a Tailgate Safety Meeting (see Attachment 8) will be conducted to review site-specific hazards and protocols.

The following sections outline emergency procedures and routes.

6.1 Emergency Procedures

6.1.1 Incident:

Step 1: Get posted emergency phone list (Attachment 7).

Step 2: Send stand-by personnel to notify additional emergency responders and/or company officials.

Step 3: See Emergency Response Flow Chart (Figure 6-1).

6.1.2 Injury:

See Decision Aid for Emergency Decontamination (Figure 6-2).

If an injury occurs, take the following action:

Step 1: Get medical attention for the injured person immediately.

Step 2: Notify the Site Safety Officer and Site Team Leader.

Step 3: Depending on the type and severity of the injury, notify the Corporate Consulting Physician or the occupational physician for the injured person.

Step 4: Notify the injured person's personnel office.

Step 5: Prepare the incident report. The Site Safety Officer is responsible for its preparation and submittal to the Regional Health and Safety Coordinator (REHSC) and Corporate Human Resources (CHR) office within 24 hours.

Step 6: The Site Safety Officer will assume charge during a medical emergency.

6.2 Emergency Routes

See Hospital Route Map - Attachment 4 (TO BE POSTED)

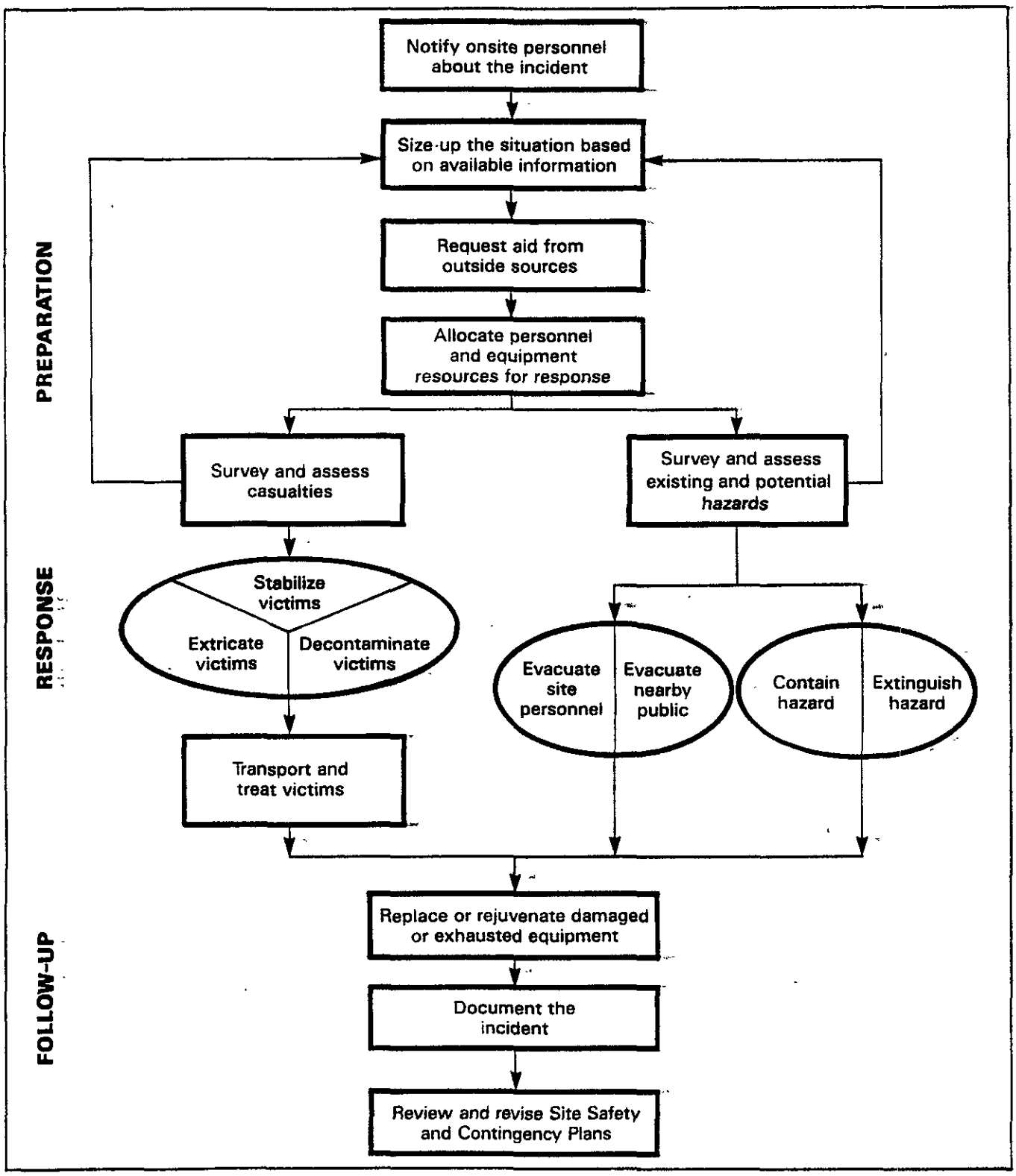


Figure 6-1. Emergency Response Operations.

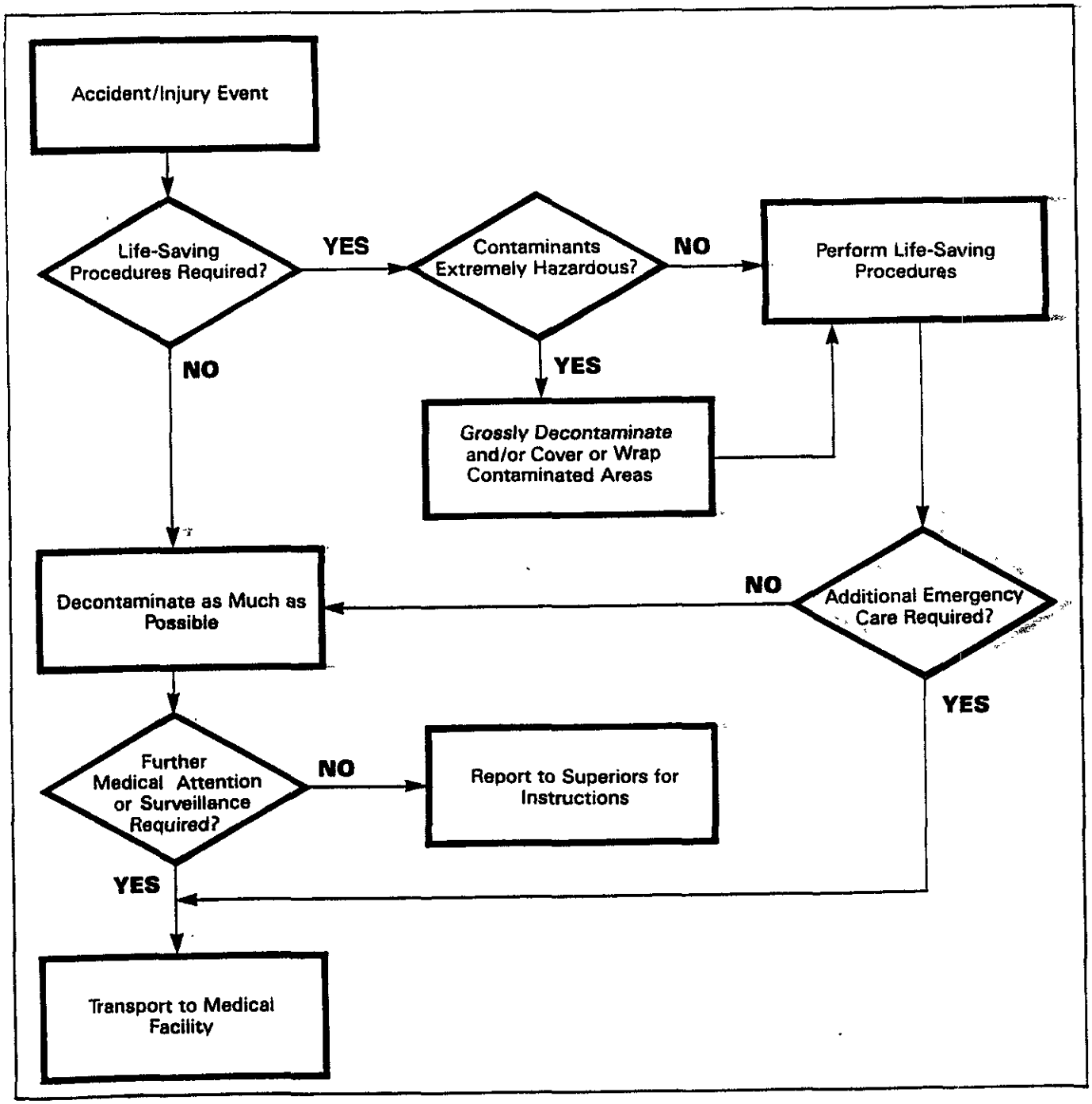


Figure 6-2. Decision Aid for Emergency Decontamination.

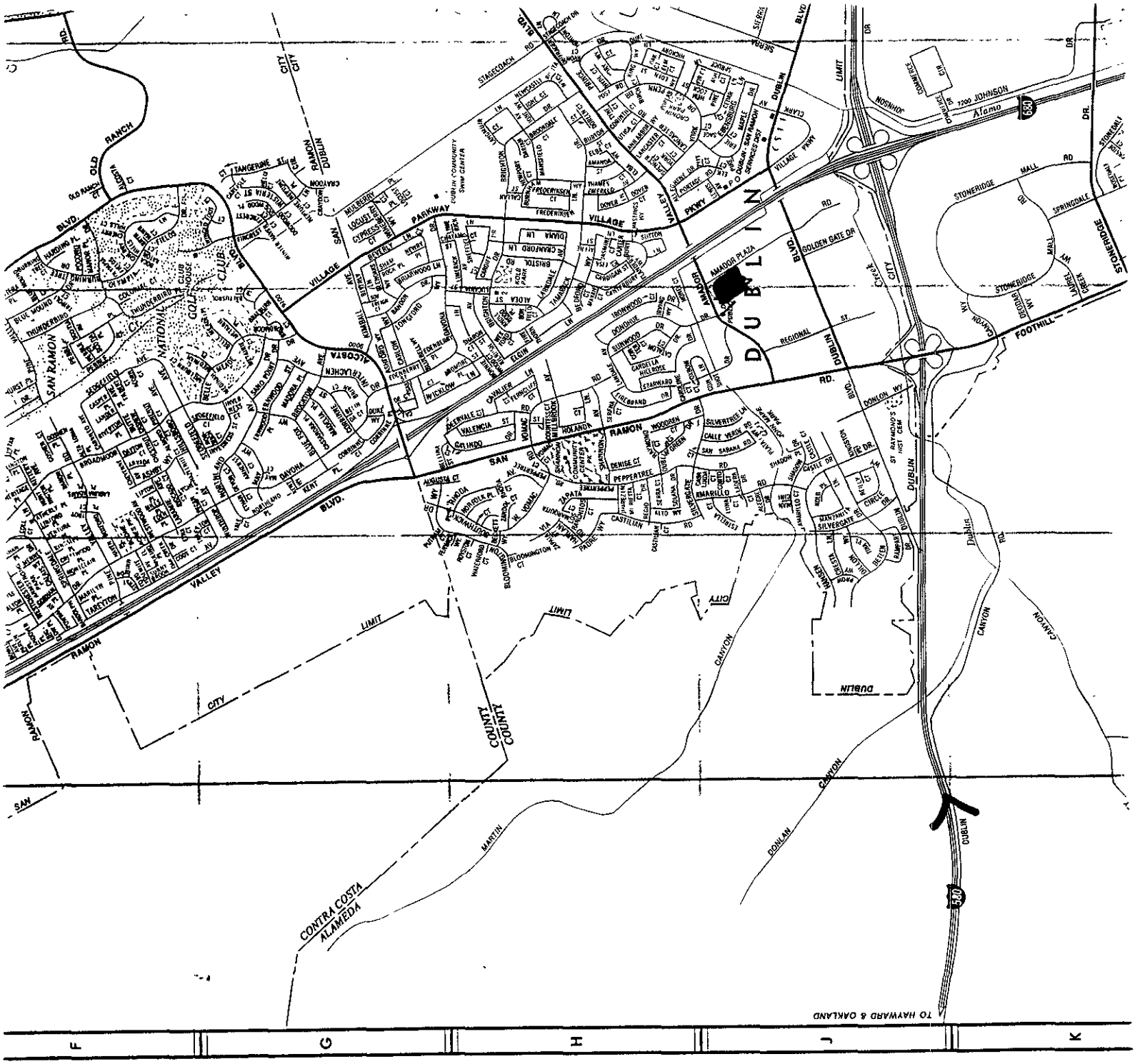
ATTACHMENT 1

SITE MAP(S)

Directions to the Target-Dublin site from Alameda Office:

Hwy 880 south; Hwy 238 east; continue east on Hwy 580; north on Hwy 680; exit on Amador Valley Blvd west.

Target Store
7600 Amador Valley Blvd.
Dublin, CA



Target Store

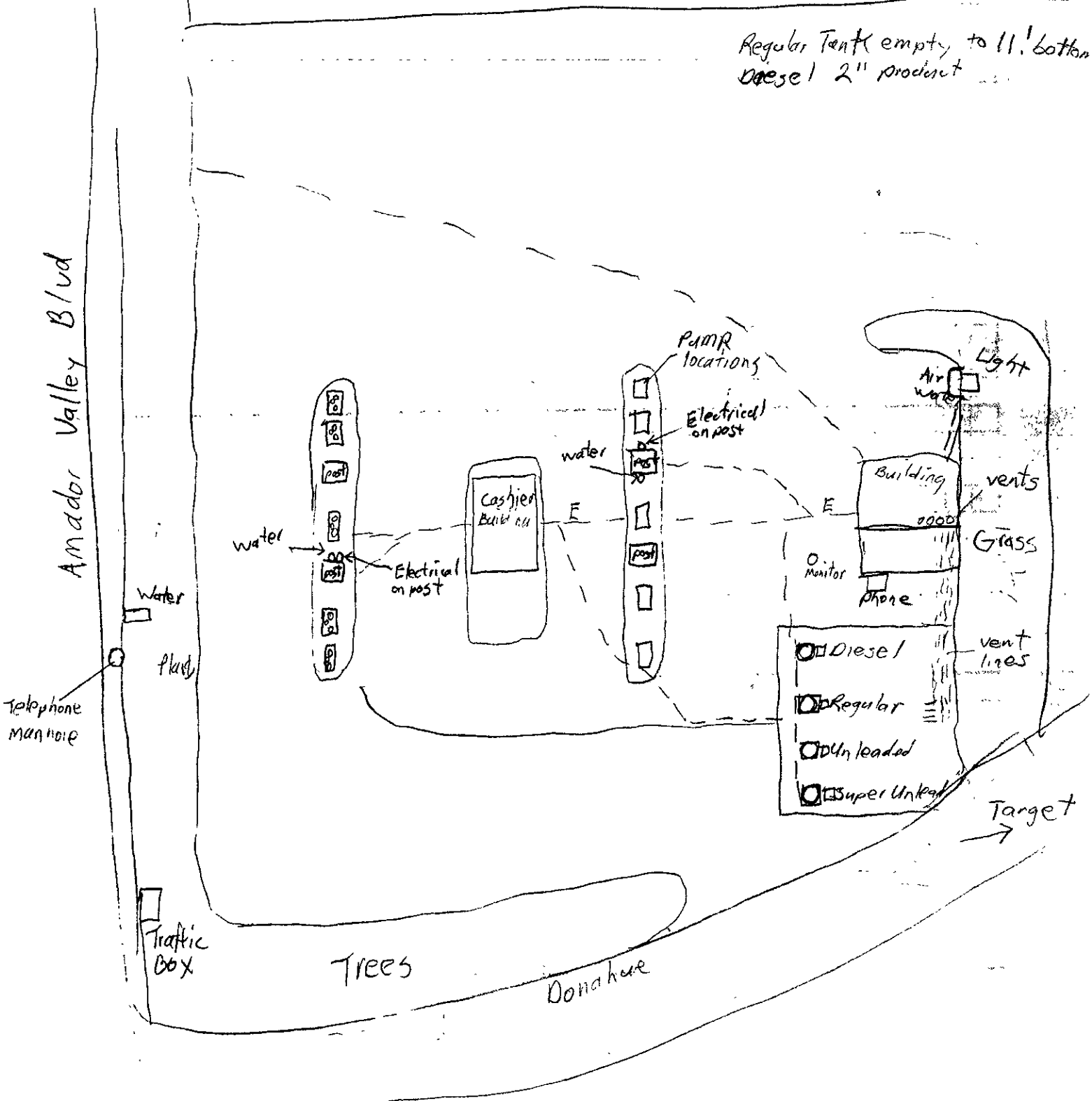
Dublin, Ca.

McLaren
980 Atlantic Avenue,
Suite 100
Alameda, CA 94501
415.521.5200
FAX 415.521.1547

Subject: Dublin Target

By: R. Swanson Date: 9-4-90 Sheet: _____

Copelands Sports



ATTACHMENT 2

UTILITY CLEARANCE CHECKLIST

UTILITY CLEARANCE CHECK

(FILL OUT BEFORE CALLING USA)

Client and Site Name:	Task Number:	Project Start Date:	Clearance Request Date:

Task Descriptions:
(well drilling, trenching,etc.)_____

_____

_____

Project Location: _____

_____

_____

McLaren Project Manager:_____

Drilling / Construction Supervisor:_____

Clearance Engineer (signature and date):	Supervising Engineer Verification (after utility clearance, signature and date):

FACILITY DRAWINGS INSPECTION (INITIALS AND DATE)	FIELD VERIFICATION (INITIALS AND DATE)
Water Main_____	Water Main_____
Sanitary_____	Sanitary_____
Storm_____	Storm_____
Telephone_____	Telephone_____
Electrical_____	Electrical_____
Gas Lines_____	Gas Lines_____
Steam Lines_____	Steam Lines_____
Liquid Fuel_____	Liquid Fuel_____
Compressed Air_____	Compressed Air_____
Overhead Lines_____	Overhead Lines_____

USA Contact Date:_____ USA Ticket Number:_____
(1-800-642-2444)

Notes:_____

_____

_____

_____

ATTACHMENT 3

MAP IDENTIFYING UTILITIES

ATTACHMENT 4

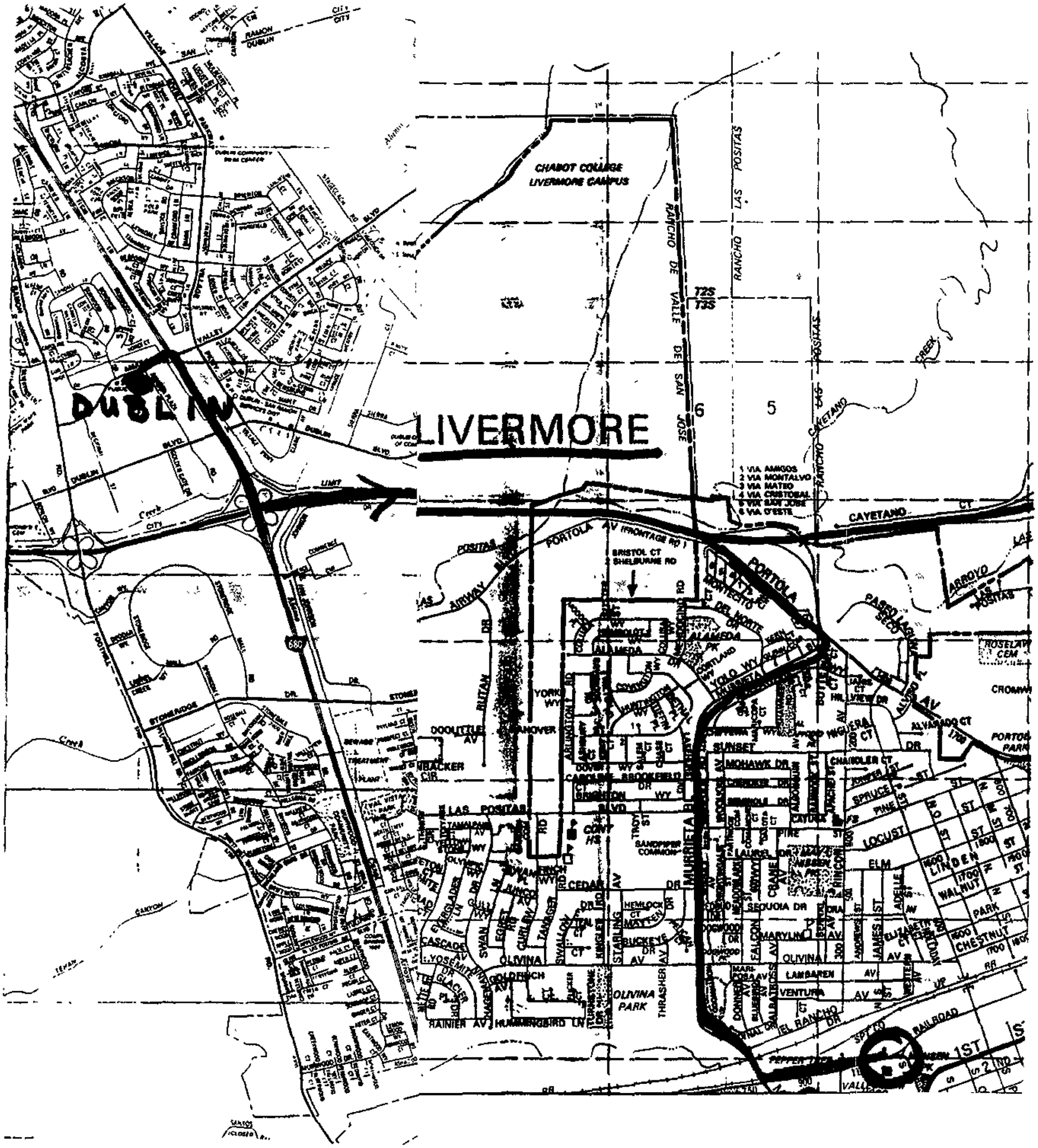
HOSPITAL ROUTE MAP

Directions to the hospital from the job site:

East (right) on Amador Valley Blvd.; south on Hwy 680; east on Hwy 580; exit Portola south; right on Murrieta Blvd; left on Stanley Ave.

Hospital: Valley Memorial Hospital

1111 E. Stanley Blvd., Livermore


DUBLIN
LIVERMORE
CHABOT COLLEGE
LIVERMORE CAMPUS
RANCHO DE VALLE DE SAN JOSE
RANCHO LAS POSITAS
T2S
T3S
6
5
1 VIA AMIGOS
2 VIA MONTALVO
3 VIA MATEO
4 VIA CRISTOBAL
5 VIA SAN JOSE
6 VIA D'ESTE
CAYETANO
PORTOLA AV (FRONTAGE RD)
PORTOLA
BRISTOL CT
SHELBURNE RD
ALAMEDA PK
MURRIETA
HILLVIEW DR
ALVARADO CT
LAS POSITAS
SUNSET
MOHAWK DR
CHANDLER CT
SPRUCE
PINE
LOCUST
ELM
LINDEN
WALNUT
PARK
CHESTNUT
SEQUOIA DR
OLIVINA
LAMBAREN
VENTURA
EL RANCHO DR
OLIVINA PARK
THRASHER
RAINIER AV
HUMMINGBIRD LN
STARLING
CEDAR
SANDPIPER COMMON
HEMLOCK CT
MAYTEN
BUCKEYE
CASCADE
YOSEMITE
GLACIER
GOLDFINCH
SWAN
EGRET
CURLEW
TANAGER
SWALLOW
DOOLITTLE AV
HANOVER
BRIGHTON
BROOKFIELD
STONERIDGE
DR.
CITY LIMIT
680
1ST
2ND
RAILROAD
STANLEY
ARROYO
LAS POSITAS
ROSELAWN CEM
CROMWELL
RUTAN
AIRWAY
Creek
CANYON
SEWAGE TREATMENT PLANT
DUBLIN BLVD
SAN RAMON
VALLEY

ATTACHMENT 5

DIRECT READING REPORT

McLaren

DIRECT READING REPORT

Sheet ___ of ___

Client Name and Site: ______

Project Manager: ______

Task Number: ______

Date: ______

Employee: ______

Title: ______

Weather Conditions/ Observations: ______

Wind Speed: ______ Wind Direction: ______ Temperature: ______

Direct Reading Data

Location:	Task Description (Drilling, Sampling, etc.)	Time	Instrument Type	Substance/ Agent	Concentration	Source: S Breathing Zone: B

Comments: ______

NOTE: Return to **REHSC** Upon Completion of Site Work. Use Additional Forms if Necessary.

ATTACHMENT 6

INSTRUMENT CALIBRATION LOG

McLaren

INSTRUMENT CALIBRATION LOG

Page___of___.

Client Name and Site:	Project Manager:	Task Number:

Calibration Event:

Person Calibrating:	Date:
Instrument Type:	Calibration Gas:
Model:	Calibration Gas Concentration (ppm):
Serial #:	Reading (ppm):
Calibrator Model:	Adjusted Reading (If Necessary)
Comments:	

Person Calibrating:	Date:
Instrument Type:	Calibration Gas:
Model:	Calibration Gas Concentration (ppm):
Serial #:	Reading (ppm):
Calibrator Model:	Adjusted Reading (If Necessary)
Comments:	

Person Calibrating:	Date:
Instrument Type:	Calibration Gas:
Model:	Calibration Gas Concentration (ppm):
Serial #:	Reading (ppm):
Calibrator Model:	Adjusted Reading (If Necessary)
Comments:	

Person Calibrating:	Date:
Instrument Type:	Calibration Gas:
Model:	Calibration Gas Concentration (ppm):
Serial #:	Reading (ppm):
Calibrator Model:	Adjusted Reading (If Necessary)
Comments:	

Person Calibrating:	Date:
Instrument Type:	Calibration Gas:
Model:	Calibration Gas Concentration (ppm):
Serial #:	Reading (ppm):
Calibrator Model:	Adjusted Reading (If Necessary)
Comments:	

Comments:

NOTE: Return to **REHSC** Upon Completion of Site Work.

ATTACHMENT 7

EMERGENCY PERSONNEL AND SERVICES

EMERGENCY PERSONNEL AND SERVICES
(To be Posted)

TITLE	NAME	PHONE NUMBER
EMERGENCY		
Police	Dublin Emergency Service	911 or 462-1212
Fire	Dublin Emergency Service	911 or 881-8181
Local Hospital	Valley Memorial Hospital	(415) 447-7000
Local Ambulance/Rescue	Diablo Ambulance Service	(415) 828-6962
Poison Control Center	U.C. San Francisco Medical Center	(800) 523-2222
Hazardous Waste National Response Center	HAZMAT	(800) 424-8802
PROJECT/BUSINESS		
Regional Environmental Health & Safety Coordinator	Rene Ricks	(415) 521-5200
Regional Occupational Physician	Lewis & Fischman	(415) 451-4840
Project Manager	Jenni Carter	(415) 521-5200
Client Contact	Phil Byers	(612) 335-5206
Site Contact	Jerry Winkelman	(415) 829-8900
Subcontractor	Decon Environmental Services	(415) 732-6444
Regional Manager	Ellis A. Wallenberg III	(415) 521-5200
Site Safety Officer	Martin Bermudez	Office: (415) 521-5200
Alternate Site Safety Officer	Rick Swanson	Office: (415) 521-5200
Corporate Human Resources Dept.	Mary Lynn Hollingsworth/ Paulette Richards	(916) 638-3696

Site Location:
(for directing response teams) Target Store 7600 Amador Valley Blvd., Dublin, CA

ATTACHMENT 8

TAILGATE SAFETY MEETING
FORM

TAILGATE SAFETY MEETING

CLIENT:_____ FACILITY:_____

DATE:_____ TIME:_____ JOB NUMBER:_____

SITE LOCATION:_____

TYPE OF WORK:_____

CHEMICALS USED:_____

_____

SAFETY TOPICS PRESENTED

PROTECTIVE CLOTHING/EQUIPMENT:_____

_____

CHEMICAL HAZARDS:_____

ACTION LEVELS:_____

PHYSICAL HAZARDS:_____

_____

EMERGENCY PROCEDURES:_____

_____

HOSPITAL/CLINIC:_____

PHONE:_____ PARAMEDIC PHONE:_____

SPECIAL EQUIPMENT:_____

OTHER:_____

ATTENDEES

PRINTED NAME:	SIGNATURE:
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

MEETING CONDUCTED BY:_____

SUPERVISOR:_____

h&s1