

640SERBSF10,636

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SITE HEALTH AND SAFETY PLAN

Union Oil Company, SE Terminal

Greensboro, Guilford County, North Carolina

NCD 000 609 974

June 1991

CERCLA

TDD No.: F4-9105-21

Site Name: Union Oil Company SE Terminal

SSI/LSI SITE SAFETY PLAN

Site Name: Union Oil Company SE Terminal

Contact: Charlie Wells

Address: 6801 West Market Street
Greensboro, North Carolina

Phone No.: (919) 299-2611

Other Contacts:

Purpose of Site Visit: Screening Site Inspection

Proposed Date of Work: June 10, 1991

Proposed Site Investigation Team:

NUS Personnel

Responsibilities:

Alvin Williams
Ron Young
Larry Grier
Scott Singleton

Team Leader
Health & Safety Officer
Team Member
Team Member

Other:

Purpose:

Plan Prepared by: Roger Franklin

Approvals:

Regional Health & Safety Manager:

Paul Morison

(5/30/91)

Regional Manager:

W. G. Herbert

(5/30/91)

TDD No.: F4-9105-21

Site Name: Union Oil Company SE
Terminal

Background Information

● Site Status: Active Inactive Unknown

● Site Description (be specific, include topography, structures, etc.) and history of site: The Union Oil company, S.E. Terminal, is located at 6801 West market Street in Greensboro, North Carolina. The area surrounding the facility is characterized as industrial. The facility is bordered to the north by railroad tracks parallel to W. market Street, and the remaining perimeter by adjacent petroleum storage tank facilities. The nearest residences are located north of the facility along West Market Street. The residences are contained within a trailer park consisting of seven mobile homes. Potable water is supplied to the homes from one private well located within the trailer park.

The Union Oil Company, S.E. Terminal began operations in 1929. Ownership of the facility has changed three times since 1980. Gulf Oil purchased the facility in 1980 and maintained ownership until 1985. In 1985, the facility was purchased by Standard Oil of Ohio. Prior to 1989, Standard Oil sold the facility to its current owner, British Petroleum Oil.

The facility contains four storage tanks with a capacity of 185,000 barrels. These tanks are used to store bulk oil received from Colonial Pipelines. The oil is then distributed using railroad tank cars and tanker trucks.

Reportedly, onsite disposal of tank sludges occurred from 1924 to 1980. The facility maintains an underground storage tank for American Petroleum Institute Separation (API) sludge. Wastes generated at the facility include API separation sludge, slop oil solids, and leaded tank bottoms. The tank bottoms are considered hazardous based on analysis for ignitability characteristics. The tank bottoms are cleaned and placed in drums for storage on site by Troy C. Griffin Oil, Inc. of Jefferson, Georgia.

● Monitoring used on previous site work or previous sampling data (known hazardous substances):
"If "unknown" or "none" or "not applicable", please state.

Unknown

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Site Name: Union Oil Company SE Terminal

Hazard Evaluation

Waste Types: Liquid Solid Sludge Vapor

Characteristics: Toxic Ignitable Radioactive

Volatile Corrosive Reactive

Unknown Other

Task: Collection of surface and subsurface soil samples

Low Medium High

Identification of Hazards: Possible inhalation and/or dermal contact with contaminant-laden materials

Task: _____

Low Medium High

Identification of Hazards: _____

Task: _____

Low Medium High

Identification of Hazards: _____

Hazard Assessment:

The principal concern regarding worker safety, aside from the possible physical hazards, is the possibility of exposure to volatile organic compounds or contaminant - laden materials while advancing boreholes. The overall hazard is expected to be low providing normal precautions are taken to avoid inhalation or direct contact exposure to potentially contaminated media. Level B. is required if readings on the OVA or HNU above background are detected in the breathing zone and airborne contaminant is not identified. Level C is required when advancing onsite boreholes in potentially dusty conditions or when airborne contaminant is known. No respiratory protection is required for offsite or background sampling.

OVERALL HAZARD: Serious Moderate

Low Unknown

Hazardous/Toxic Known or Suspected Materials	Concentration	Media	Toxic and Pharmacologic Effects	(OSHA)PELS (NIOSH) IDLH	Reactivity, Stability, Flammability	I.P. and Applicable Monitoring Instruments, Probe?
Ethyl Benzene	unknown	soil/ groundwater	Irritates eyes, mucous membranes; headaches; dermatitis; narcosis, coma	PEL - 100 ppm IDLH = 2,000 ppm	RWSO	IP = 8.76 eV HNu, OVA
Lead	unknown	soil/ groundwater	Affects GI tract, central nervous, kidneys, blood, gingival tissue. Symptoms include: lassitude, insomnia, pallor, abdominal pain, anemia, and tremors	PEL = 0.05 mg/m ³ IDLH = N/A	RWSO	N/A
Tetraethyl Lead	unknown	soil/	Symptoms include: insomnia, lassitude, anxiety, tremors, hyperreflexia, pallor, nausea; affects CNS, CVS, Kidneys, eyes.	PEL = 0.075mg/m ³ IDLH = 40 mg/m ³	RWSO	IP = 11.1 eV HNu, OVA
Tetramethyl Lead	unknown	soil/	Affects CNS, CVS, kidneys. Symptoms include: insomnia, restlessness, anxiety, hypo- tension, nausea, convulsions, coma.	TWA - 0.075mg/m ³ IDLH - 40 mg/m ³	RWSO	IP = 9.3 eV HNu, OVA
Benzene	Est. 20 ug/kg	soil/sediment	Suspected carcinogen, irritant to eyes, nose, respiratory sys. nausea, abdominal pain.	PEL = 1 ppm TWA = 10 ppm	RWSO	IP = 9.25

- References:**
1. OSHA 3112, Air Contaminants - PEL's, 1989
 2. NIOSH 85-114, Pocket Guide to Chemical Hazards
 3. ACGIH, TLVs, 1988-89
 4. MERCK INDEX, 10th Edition
 5. OSHA 29 CFR 1910

Key: I.P. = ionization potential
N/A = not applicable
N.A. = value not assigned by OSHA, NIOSH, ACGIH
RWSO = reacts with strong oxidizers

(MINIMUM) REQUIRED LEVEL(S) OF PROTECTION:

Task	Name	Respiratory	Clothing ¹	Gloves ²	Boots ³	Other; Modifications
Team Leader	Alvin Williams	D	T	S	R	
SSO	Ron Young	D	T	S	R	
SMO						
<u>Samplers</u>	Larry Grier	D	T	S	R	
	Scott Singleton	D	T	S	R	

Other

Decon

- | | | |
|---|---|---|
| <u>1</u> | <u>2</u> | <u>3</u> |
| Tyvek = T
Polyethylene Tyvek = PT
Field = F | Surgical = S
Playtex = P
Latex = L
Butyl = B
Nitrile = Ni
Neoprene = N | Rubber = R (Steel Toe)
Leather Field = F (Steel Toe)
Latex Boot Cover = L |

Project Manager, Contact facility safety office and answer the following:

If this is an active facility, are the following OSHA safety items required for each person entering the site:

- A. Safety Glasses? Yes B. Hard Hat? * C. Steel Toed Safety Shoes? Yes D. Hearing Protection? No

* To be determined on site

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Proposed On-site Activities: (yes or no)

Surface Soil Sampling? <u>Yes</u>	Subsurface Soil Sampling? <u>Yes</u>
Surface Water Sampling? <u>No</u>	Groundwater Sampling? <u>No</u>
Sediment Sampling? <u>No</u>	Sampling from boat? <u>No</u>
Geophysical Screening? <u>No</u>	Field Analytical Support (FASP)? <u>No</u>

Monitoring Equipment:

<input checked="" type="checkbox"/> HNU	<input checked="" type="checkbox"/> TLD Badge
<input checked="" type="checkbox"/> OVA	<input checked="" type="checkbox"/> Radiation Monitor 4
<input type="checkbox"/> Photovac	<input type="checkbox"/> Explosimeter
<input type="checkbox"/> Draeger Tube & Pump	<input type="checkbox"/> O ₂ meter
<input type="checkbox"/> Victoreen Radiation Detector	<input checked="" type="checkbox"/> Mini-Guard
<input type="checkbox"/> Radon meter	<input type="checkbox"/> Other:

Monitoring Methods:

1. CONDUCT INITIAL SITE SURVEILLANCE. Record background readings and sample location conditions. Monitor with HNu or OVA, Radiation Monitor 4, and Mini-Guard as a minimum.
2. CONDUCT SAMPLING ACTIVITIES. Continually monitor breathing zone with HNu or OVA as a minimum. If methane gas is a safety concern, particularly at landfills, monitor with the Mini-Guard or LEL/O₂ meter during power augering also.

Monitoring Equipment Calibration:

- HNu - daily, prior to use each morning
Calibration dates are recorded in the project logbook.
- OVA- daily, prior to use each morning
Calibration dates are recorded in the project logbook.
- Monitor 4
A battery check and a response check were made prior to leaving the FIT office and will be made immediately prior to instrument use in the field. This field procedure will be documented in the log book.
- Mini-Guard - per operator's manual specifications
- Other

Equipment Failure:

1. If instrument fails to operate after calibrating, tag the instrument with description of malfunction.
2. If all air monitoring instruments fail to operate, Project Manager or SSO has cause to discontinue activities and immediately telephone Phil Blackwell, FIT Office Manager for further instructions.

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Decontamination and Disposal:

Personnel Decontamination Procedure: (X) initial level to be utilized.

- Level A - Segregated equipment drop, boot cover and glove wash, boot cover and glove rinse, tape removal, boot cover removal, outer glove removal, suit and hard hat removal, SCBA backpack removal, inner glove wash, inner glove removal, inner clothing removal, field wash redress.
- Level B - Segregated equipment drop, boot cover and glove wash, boot cover and glove rinse, tape removal, boot cover removal, outer glove removal, SCBA backpack removal, suit and hard hat removal, inner glove removal, inner clothing removal, field wash, redress.
- Level C - Segregated equipment drop, boot cover and glove wash, boot cover and glove rinse, tape removal, boot cover removal, outer glove removal, suit/safety boot wash, suit/safety boot rinse (Canister or Mask Change), safety boot removal, splash suit removal, inner glove removal, inner clothing removal, field wash, redress.
- Level D - Segregated equipment drop, boot wash and rinse, glove disposal, eye protection.

Modifications (specify): N/A

Equipment Decontamination: Per EPA Region IV Protocols

Disposal Procedure for Investigation Derived Materials: Onsite disposal

IONIZING RADIATION: Normal background 0.01 to 0.02 mR/hr

If less than 2 mR/hr, continue investigation with caution.

If greater than 2 mR/hr, evacuate site.

*Note: Background 10-20 CPM on mini-alert

SITE OPERATING PROCEDURES/SAFETY GUIDELINES

NOTE: These are general guidelines for safe operations on areas of sites that are potentially contaminated.

1. Never work alone in an isolated area of a site.
2. Maintain line-of-sight during activities that could involve potentially hazardous substances.
3. Practice contamination avoidance. Never sit down or kneel, never lay equipment on the ground, avoid obvious sources of contamination such as puddles, and avoid unnecessary contact with on-site objects.
4. Approved safety glasses must be worn during sample collection, operating sampling equipment, drilling, and deconning. Safety glasses must be worn when safety rules by the site owner require it.
5. Hard hats must be worn on site when overhead hazards are present and when safety rules by the site owner require it.
6. No eating, drinking, or smoking on areas of sites that are suspected of being contaminated..
7. In the event PPE is ripped or torn, work shall stop and PPE shall be removed and replaced as soon as possible.
8. Be alert to any unusual changes in your own condition; never ignore warning signs. Notify Health and Safety Coordinator as to suspected exposures or accidents.
9. A vehicle will be readily available for emergency use. All FIT personnel going on site shall be familiar with the most direct route to the nearest hospital.
10. In the event of direct skin contact, the affected area shall be washed immediately with soap and water.
11. Copies of the health and safety plan shall be readily accessible at the command post.
12. Note wind direction. Personnel shall remain upwind whenever possible during on-site activities.
13. Never climb over or under refuse or obstacles so as to endanger yourself or others. Use safety harness/safety lines when sampling lagoons, stream beds, and ravines with steep banks.
14. Hands and face should be thoroughly washed before eating, drinking, etc.
15. Any substantial modifications to this safety plan that could affect health and safety MUST be approved by the RHSM or designee.

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Confined Space Entry

No attempt will be made to enter abandoned buildings, manholes, tanks, or any other confined areas.

Other:

Medical Surveillance

No site specific medical surveillance is required for this task.

Medical surveillance will be as follows:

Heat stress

Health and Safety Officer will monitor the crew for these symptoms.

Signs and Symptoms of Heat Stress

- Heat rash may result from continuous exposure to heat or humid air.
- Heat cramps are caused by heavy sweating with inadequate electrolyte replacement. Signs and symptoms include:
 - muscle spasms
 - pain in the hands, feet, and abdomen
- Heat exhaustion occurs from increased stress on various body organs including inadequate blood circulation due to cardiovascular insufficiency or dehydration. Signs and symptoms include:
 - pale, cool, moist skin
 - heavy sweating
 - dizziness
 - nausea
 - fainting
- Heat stroke is the most serious form of heat stress. Temperature regulation falls and the body temperature rises to critical levels. Immediate action must be taken to cool the body before serious injury and death occur. Competent medical help must be obtained. Signs and symptoms are:
 - red, hot, usually dry skin
 - lack of or reduced perspiration
 - nausea
 - dizziness and confusion
 - strong, rapid pulse
 - coma

Personnel Monitoring

Personnel monitoring will include only the use of the TLD badge. No further personnel monitoring is required.

Personnel monitoring will consist of:

INSERT "COMPLETE" PERSONNEL TRAINING SHEET HERE
FROM COMPUTER #4

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EMERGENCY SITUATIONS

Air Releases or Fire/Explosion:

In the event of an unexpected air release or fire/explosion, on-site personnel will travel at a right angle to the upwind direction. The Site Safety Officer (SSO) will then account for all personnel and notify the proper emergency agencies.

In the event the SSO is unavailable, the Project Manager will assume these responsibilities.

Emergency Site Control:

In the event of an emergency, the SSO will discourage any unauthorized personnel from entering the site. If necessary, the SSO will contact the proper authorities.

Personnel Injury:

If on-site personnel require emergency medical treatment, the following steps will be taken:

- 1) Evaluate the nature of the injury.
- 2) Decontaminate to the extent possible prior to administration of first aid or movement to emergency facilities.

First Aid Procedures:

Skin Contact: Remove contaminated clothing. Wash immediately with water. Use soap if available.

Inhalation: Remove from contaminated atmosphere. Artificial respiration, if necessary. Transport to hospital.

Ingestion: Never induce vomiting on an unconscious person. Also, never induce vomiting when acids, alkalis, or petroleum products are suspected. Contact the poison control center.

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Communication Procedures: N/A except for levels A or B.

 (Horn blast, siren, etc.) is the emergency signal to indicate that all personnel should leave the Exclusion Zone.

The following standard hand signals will be used in case of failure of radio communications:

Hand gripping throat ----- Out of air, can't breathe

Grip partner's wrist or ----- Leave area immediately
both hands around waist

Hands on top of head ----- Need assistance

Thumbs up ----- OK, I am all right, I understand

Thumbs down ----- No, negative

The following will be used on an "as-needed" basis:

Channel 1 has been designated as the radio frequency for personnel in the Exclusion Zone. All other on-site communications will use channel 1 .

Telephone communication to the Command Post should be established as soon as practicable. The phone number is _____.

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EMERGENCY INFORMATION:

LOCAL RESOURCES:

Ambulance (Name): Guilford County Ambulance & Rescue	Phone 911
** Hospital (Name): Humana Hospital - Greensboro	Phone (919) 373-8555
Nearest Trauma Center: Moses H. Cone Mem. Hosp. (Grnsbro.)	Phone (919) 379-3900
Police (Local or State): Guilford County Police Dept.	Phone 911
Fire Dept. (Name & Volunteer?): Guilford Co. Fire Dept.	Phone 911
Nearest Phone: To be determined upon arrival by PM or SSO, and each team member advised.	

** Hospital directions must be on hospital route map.

OFFICE RESOURCES:

Region IV FIT Office	(404) 938-7710
EPA-RPO - Al Hanke (Work)	(404) 347-5065
FIT Manager - Phil Blackwell (Home)	(404) 292-4766
Assistant FIT Managers:	
Roger Franklin (Home)	(404) 997-9681
Greg Schank (Home)	(404) 447-0485
Bob Donaghue (Home)	(404) 498-1124
Safety:	
Phil Blackwell (Home)	(404) 292-4766
Paul Moisan (Home)	(404) 378-4705
Zone - Paul Clay (Office)	(703) 522-8802

EMERGENCY CONTACTS: (Medical and Health)

- o (NUS Consulting Physicians - University of Pittsburgh)
Dr. Hodgson

24 Hour Number 412-648-3240

Refer to page 14 for details on the "Emergency Physician Access Plan."
- o Elmer Burd (NUS Zone Health and Safety Manager)

Office 412-788-1080
- o Regional Health Maintenance Program
Occupational Medicine Associates (404) 455-7008
- o Poison Information Center (404) 588-4400

Emergency Physician Access Plan

NUS Corporation, Superfund Division

December, 1986

A. MONDAY THROUGH FRIDAY, 9:00 A.M. - 5:00 P.M.

Dial the (412) 648-3240 number. When answered state that:

- (1) you are calling from NUS Corporation;
- (2) this is an emergency call.

Program Staff will be alerted how to contact the physician designated to provide emergency coverage on that day. Collect calls will be accepted.

B. EVENINGS, WEEK-ENDS & HOLIDAYS:

Dial the (412) 648-3240 number. An operator from the answering service will answer the telephone. Do the following:

- (1) tell the operator that you are calling from NUS Corporation
- (2) tell the operator that this is an emergency call
- (3) give her your name
- (4) give her the telephone number where the physician is to call. Be certain that she has written the correct number (area code and seven digits)
- (5) if you do not receive a call back within 15 minutes, place a second call to (412) 648-3240

Collect calls will be accepted.

C. SITUATIONS WHERE EMPLOYEE REQUIRES IMMEDIATE TRANSPORT TO A HOSPITAL:

If the situation is life-threatening, i.e., cardiac arrest or person not breathing, call the emergency medical services system and transport the person to the nearest hospital with advanced life support capabilities.

After obtaining assistance as stated above, call the (412) 648-3240 number and follow the procedures in A or B as appropriate.

From site, turn right (east) onto U.S. 421 (West Market Street) and travel approximately 7 miles. Turn left (north) onto Westover Terrace and travel approximately 1/4 miles before turning left (west) onto Green Valley Road. Hospital will be approximately 1/2 mile on right.



NUS CORPORATION - FIT 4
EMPLOYEE TRAINING REPORT

EMPLY NUM	LAST NAME	FIRST NAME	MASK				ULTRA							HRS	RCRA
			FIT TEST	SIZE	SUPER FUND	CPR	FIRST AID	TWIN SCBA	FIELD INSTR	PHYS EXAM	PA/SI TRAIN	QA TRAIN	QA UPDATE		
5891	ADAMS	MARK	04/90	M	03/88	01/91	12/88	06/89	06/89	03/91	07/88	03/88	07/90		
6021	AMBURN	MEHELLE	NA/		NA/	01/91	01/91	NA/	NA/	NA/	NA/	NA/	NA/	NA/	
	O ANDERSON	SIBEL	NA/		NA/	NA/	NA/	NA/	NA/	NA/	NA/	NA/	NA/	NA/	NA/
5583	BATES	JUDY	NA/		NA	NA/	NA	NA	NA	NA	NA/	NA/	NA/		
5725	BAUCOM	TARA	NA/		NA	01/91	01/91	NA	NA	NA	NA/	NA/	NA/		
6738	BENFIELD	THOMAS	08/90	S	07/90	01/91	01/91	11/90	01/91	07/90		07/90			
6437	BITTINGER	BROOKE	11/90	S	12/89			11/90	11/90	11/90	11/89	12/89			
4345	BLACKWELL	PHIL	01/91	M	12/81	01/91	01/91	06/89	01/91	09/89	07/88	12/81	07/88		
6739	BOLLING	JANE	08/90	S	07/90	01/91	03/90	07/90	01/91	07/90		07/90			
6447	BONNARD	SUZANNE	11/90	S	12/89	01/91	01/90	11/90	11/90	12/90	12/89	12/89			
	O BRAMBLE	SANDRA													
4935	BROCK	BELINDA	11/90	S	01/87	01/91	04/88	11/90	01/91	05/90	07/88	01/87	06/90		
4594	BROWN	AGUSTIN	01/91	M	02/84	01/91	01/91	07/88	07/88	05/91	07/88	02/84	07/88		
5811	CARTER	JANICE	NA/		NA	NA/	NA/	NA	NA	NA	NA	NA/	NA/	NA/	
6750	CEPPOS	DAVID	11/90	M	07/90	01/91	01/91	11/90	11/90	06/90		07/90			
6597	CHASTAIN	JAMES	06/90	M	06/90	01/91	01/91	06/90	01/91	05/91					
6163	CLARK	ELFREN	01/91	M	05/89	01/91	01/90	06/89	01/91	05/90	/	02/89	06/90		
5993	CONWAY	LORI	01/91	M	07/88	01/91	01/90	06/89	01/91	06/90	07/88	07/88	06/90		
5678	CORBIN	ERIC	11/90	M	04/87	01/91	01/91	11/90	01/91	04/91	07/88	04/87	07/88	05/89	
6395	DELAINE	SIMONIA	11/90	S	10/89	01/91	01/90	11/90	01/91	10/90	10/89	10/89			
4994	DONAGHUE	BOB	11/90	M	01/85	01/91	01/91	11/90	11/90	05/90	07/88	01/85	07/88	05/89	
6348	DOUGLAS	ALLEN	01/91	M	08/89	01/91	01/90	08/89	11/90	08/90	08/89	09/89	06/90		
5588	DUPONT	JOAN			05/87	01/91	01/91	11/90	01/91	03/91	07/88	05/87	06/90	03/89	
6096	DURREN	SHERRY	01/91	S	11/88	01/91	12/88	06/89	11/90	11/90	11/88	11/88	06/90	02/89	
6521	EDWARDS	LEONARD	/		/	/	/	/	/	02/90	/	/	/	/	/
5023	EDWARDS	PAULINE	NA/		NA	NA/	NA/	NA	NA	NA	NA	NA/	NA/	NA/	
6404	FINE	STEPHANY	11/90	S	10/89	01/91	01/90	11/90	11/90	10/90	10/89	10/89			
6334	FLOYD	WENDY	11/90	S	08/89	01/91	01/90	11/90	11/90	08/90	07/89	08/89	06/90		
4363	FRANKLIN	ROGER			05/80	01/91	01/91	11/90	11/90	02/90	07/88	05/80	06/90		
4482	FRITSCH	PRISCILLA	11/90	S	03/83	01/91	01/91	11/90	11/90	07/90	07/88	03/83	06/90		
6238	GORDON	MAUREEN	01/91	A	04/89	01/91	01/90	11/90	11/90	04/90		04/89	07/90	05/89	
5679	GRIER	LARRY	02/91	M	05/87	01/91	01/91	11/90	11/90	03/91	07/88	05/87	06/90		
6126	GURLEY	CYNTHIA	11/90	M	01/89	01/91	12/88	11/90	01/91	05/91	06/89	01/89	07/90	01/89	

NUS CORPORATION - FIT 4
EMPLOYEE TRAINING REPORT

EMPLY NUM	LAST NAME	FIRST NAME	MASK				ULTRA							HRS	RCRA TRAIN
			FIT TEST	MASK SIZE	SUPER FUND	CPR	FIRST AID	TWIN SCBA	FIELD INSTR	PHYS EXAM	PA/SI TRAIN	QA TRAIN	QA UPDATE		
4689	ROWAN	MAURICE	11/90	M	08/84	01/91	01/91	11/90	01/91	10/90	07/88	08/84	07/88		
6320	RYLAND	TERRY	11/90	M	07/89	01/91	01/90	11/90	11/90	07/90	07/89	07/89	06/90		
6332	SANDERS	KEN	10/89	S	09/89	01/91		09/89	09/89	07/90	07/89	10/89			
5869	SAWYER	THERESA	04/90	M	01/88	01/91	04/88	07/89	11/90	01/91	07/88	01/88	06/90	03/89	
4872	SCHANK	GREG	01/91	M	08/84	01/91	01/91	07/89	01/91	05/90	07/88	08/84	07/90		
6515	SCHENDEL	JOHN	11/90	M	03/90	01/91	01/91	11/90	11/90	01/91	02/90	02/90			
	O SEAVER	KEVIN	NA/		NA/	NA/	NA/	NA/	NA/	NA/	NA/	NA/	NA/	NA/	NA/
5581	SHELLMAN	GREGORY	11/90	M	02/87	01/91	01/91	11/90	11/90	05/91	07/88	02/87	06/90	05/89	
5289	SIDERS	KATHARINE	11/90	S	11/85	01/91	01/91	11/90	11/90	03/91	07/88	11/85	06/90		
5605	SINGLETON	SCOTT	01/91	M	02/87	01/91	01/91	06/89	01/91	05/90	07/88	02/87	06/90		
5984	SMITH	BEVERLY	NA/		NA	NA/	NA/	NA	NA	NA	NA	NA/	NA/	NA/	
4654	SMITHERMAN	WILLIE	11/90	M	12/83	01/91	04/88	11/90	06/89	05/90	07/88	12/84	06/90	02/89	
6227	SNYDER	VIRGINIA	NA/		NA/	01/91	01/91	NA/	NA/	NA/	NA/	NA/	NA/	NA/	
5572	SPAUGH	ANDREW	01/91	M	02/87	01/91	01/91	06/89	01/91	12/90	07/88	02/87	06/90		
5829	TANNER	TERRY	11/90	M	11/87	01/91	01/91	11/90	11/90	10/90	07/88	11/87	06/90	03/89	
6358	THOMAS	GREGORY	01/91	M	08/89	01/91	01/90	11/90	11/90	08/90	08/89	08/89	06/90		
9897	THOMAS	KIM	NA/		NA/	NA/	NA/	NA/	NA/	NA/	NA/	NA/	NA/	NA/	NA/
6226	TITTLE	WALTER	11/90	M	04/89	01/91	01/90	11/90	11/90	05/91	02/90	04/89	06/90	05/89	
6469	TRIMPE	DALE	11/90	M	01/90	01/91	01/90	11/90	11/90	01/91		01/90			
6534	TSCHUDI	ERIC	02/91	M	03/90			03/90	03/90	05/91		03/90			
6927	TURNER	ROBERT	02/91	M	02/88			03/90	01/91	12/90		02/91			
6456	VASSER	WILLIAM	11/90	S	12/89	01/91	01/90	11/90	11/90	12/90		01/90			
6498	WARD	LISA	11/90	S	02/90	01/91	01/91	11/90	11/90	01/91	02/90	01/90			
	O WHITE	JACQUELIN E													
6132	WILDE	RONALD	11/90	M	01/89	01/91	01/90	11/90	11/90	05/91	02/89	02/89	06/90	01/89	
6362	WILLIAMS	ALVIN	10/89	M	08/89	01/91	01/90	08/89	08/89	08/90	02/90	09/89	02/90		
6048	WILLIAMS	BRYAN	11/90	M	08/88	01/91	12/88	11/90	11/90	05/91	08/88	08/88	06/90	05/89	
5123	WILLIAMS	JIMMIE	NA/		NA	NA/	NA/	NA	NA	NA	NA	NA/	NA/	NA/	
5045	WILLOUGHBY	RAY	01/91	M	07/86	01/91	01/91	06/89	01/91	03/91	07/88	07/86	06/90		
5848	YOUNG	RONALD	01/91	L	12/87	01/91	01/91	07/89	01/91	12/90	07/88	12/87	07/90	05/89	

*** Total ***

NUS CORPORATION - FIT.4
EMPLOYEE TRAINING REPORT

EMPLY NUM	LAST NAME	MASK				ULTRA				HRS	RCRA	
		FIRST NAME	FIT TEST	MASK SIZE	SUPER FUND	CPR	FIRST AID	TWIN SCBA	FIELD INSTR			PHYS EXAM

MASK SIZES:
S-SMALL
M-MEDIUM
L-LARGE
A-SILICON SM
B-SILICON MD
C-SILICON LG

NC Superfund Sect.
Site Health & Safety
Plan

SITE HEALTH AND SAFETY PLAN

A. General Information

Site Name Union Oil Company-SE Terminal ID # NCD 000 609 ⁹⁷⁴ 982 *gan*
Location 6801 W. Market Street, Greensboro,
Guilford County, NC 27409

Proposed Date of Investigation week of June 10, 1991
Date of Briefing June 10, 1991
Date of Debriefing June 15, 1991

Nature of Visit (check one): On-Site Reconnaissance (PA) _____
On-Site Reconnaissance (SI) _____
Site Investigation X

Health Department Official Contacted Lynn Yates for Larry Leach
Date of Contact May 30, 1991

Site Investigation Team: All site personnel have read the Site Health and Safety Plan and are familiar with its provisions.

<u>Personnel</u>	<u>Responsibilities</u>	<u>Signature</u>
Team 1 <u>Harvey Allen</u>	<u>team leader, sampling</u>	<u>Harvey H. Allen</u>

Plan Preparation:
Prepared By: David Lilley, Industrial Hygienist *David B. Lilley*
Reviewed By: Jack Butler, Environmental Engineer *Jack Butler*

Facility Description: Size unknown Buildings yes
Disposal Methods Being Investigated Burial of leaded tank bottoms.
Unusual Features on Site (dike integrity, power lines, terrain, etc.):
none known

History of the Site: The facility is comprised of many aboveground
petroleum storage tanks and buildings. It is believed leaded tank bottoms
may have been buried on-site.

C. HAZARD EVALUATION

The site can be toured in level D protection. Steel toed hiking boots may
be worn while conducting tour on gravel, asphalt, or vegetated soil, steel
toed work boots will be worn while conducting tour on barren soil. Stay
clear of EPA employees while they augur.

D. WORK PLAN INSTRUCTION

Map or Sketch Attached? yes
Perimeter Identified? no
Command Post Identified? no
Zones of Contamination Identified? no

Personal Protective Equipment/Level of Protection: C X D

Modifications _____

Surveillance Equipment:

<u> </u> HNU	<u> </u> Detector Tubes and Pumps
<u> </u> OVA	<u> </u> O2 Meter
<u> </u> Explosimeter	<u> </u> Radiation Monitor

Decontamination Procedures

 Level C Respirator wash, respirator removal, suit wash (if needed),
 suit removal, boot wash, boot removal and glove removal.

 X Level D Boot wash and rinse and boot removal, suit removal, glove
 and goggle removal.

Modifications Dispose of trash properly, on-site if possible.

Work Schedule/Visit Objectives The purpose of this visit is to determine
if the site poses a threat to the public health or environment because of
releases of contaminants to soil, surface water, groundwater, or air.

Sampling will be conducted by EPA personnel.

EMERGENCY PRECAUTIONS

<u>Route of Exposure</u>	<u>First Aid</u>
<u>Eyes</u>	<u>irrigate immediately</u>
<u>Skin</u>	<u>soap and water wash</u>
<u>Inhalation</u>	<u>fresh air and artificial respiration</u>
<u>Ingestion</u>	<u>get medical attention immediately</u>

Location of Nearest Phone: on-site: this is an operational facility

Hospital (Address and Phone Number)

Wesley Long Hospital, 501 N. Elam Avenue, Greensboro, NC 27403

(919) 854-6100 - can handle chemically contaminated patients

Emergency Transportation Systems (Phone Numbers)

Fire 911

Ambulance 911

Rescue Squad 911

Emergency Route to Hospital Take a right onto Route 421 (W. Market) and continue to Green Valley Ave. and turn left. The hospital is about 6 miles from the site.

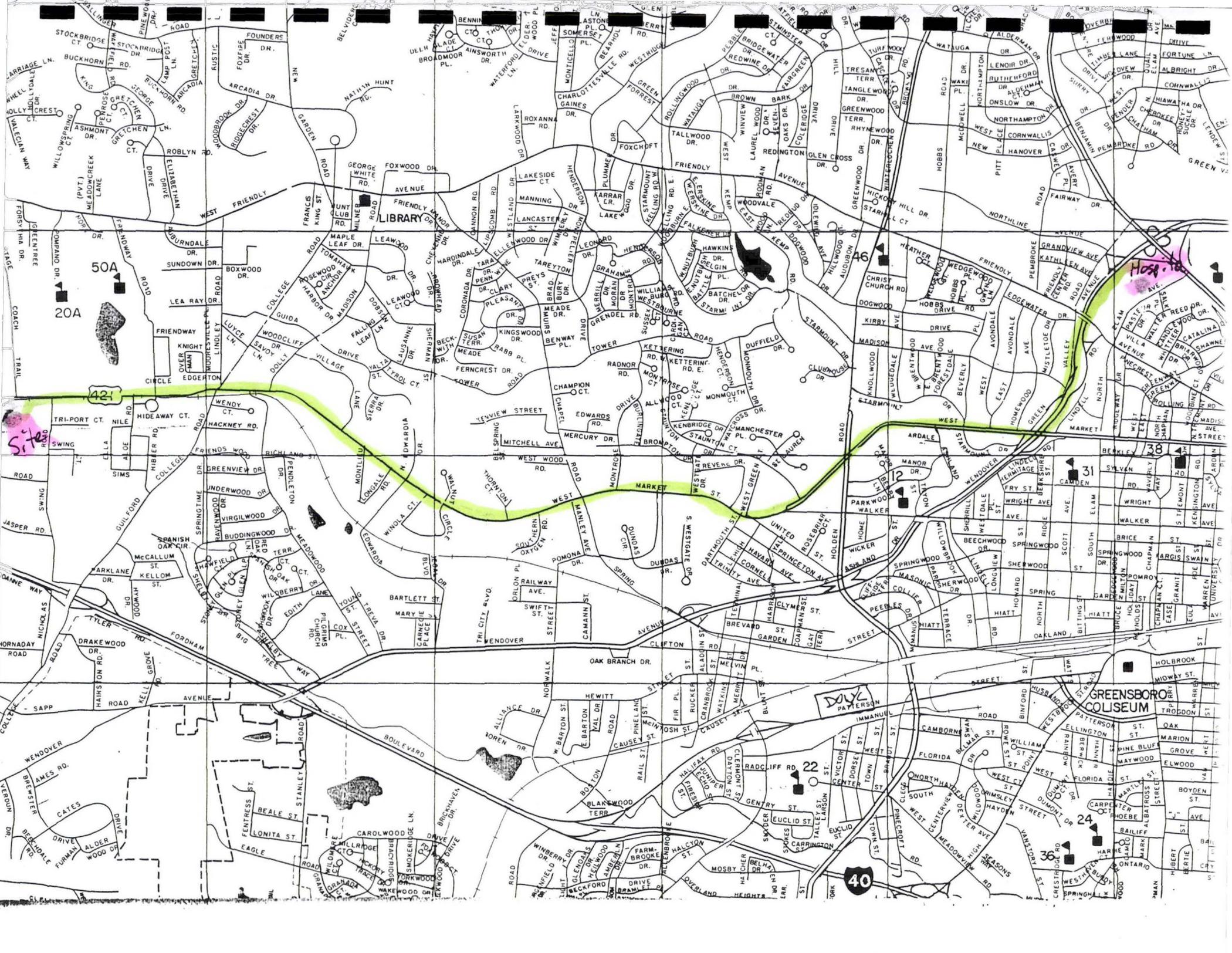
PREVAILING WEATHER CONDITIONS AND FORECAST Milder with a chance of showers, highs in the mid 70s.

EQUIPMENT CHECKLIST

<input type="checkbox"/>	Air purifying respirator	<input checked="" type="checkbox"/>	First Aid Kit
<input type="checkbox"/>	Cartridges for respirator	<input checked="" type="checkbox"/>	3 gal. Deionized H2O
<input checked="" type="checkbox"/>	Eye Wash Unit	<input checked="" type="checkbox"/>	Rainsuit
<input type="checkbox"/>	HNU	<input checked="" type="checkbox"/>	Gloves (<u>PE/PVC/nitrile/cloth</u>)
<input type="checkbox"/>	OVA	<input checked="" type="checkbox"/>	Boots/Boot Covers
<input type="checkbox"/>	Explosimeter	<input checked="" type="checkbox"/>	Coveralls (<u>tyvek/saranex</u>)
<input type="checkbox"/>	Radiation Monitor	<input checked="" type="checkbox"/>	Eye Protection
<input checked="" type="checkbox"/>	Decontamination Materials	<input checked="" type="checkbox"/>	Hard Hat

Poison Control Center - State Coordinator
Duke University Medical Center
 Telephone: 1-800-672-1697
 Box 3024
 Durham, NC 27710

ASHEVILLE 704-255-4490	Western NC Poison Control Center Memorial Mission Hosp. 509 Biltmore Ave. 28801	HENDERSONVILLE 704-693-6522 Ext. 555,556	Margaret R. Pardee Memorial Hospital Fleming St., 28739
CHARLOTTE 704-379-5827	Mercy Hospital 2001 Vail Ave, 28207	HICKORY 704-322-6649	Catawba Mem. Hosp. Fairgrove Chur. Rd 28601
DURHAM 1-800-672-1697	Duke Univ. Med. Center Box 3007, 27710	JACKSONVILLE 919-577-2555	Onslow Mem. Hospital Western Blvd. 28540
GREENSBORO 919-379-4105	Moses Cone Hospital 1200 N. Elm St. 27420	WILMINGTON 919-343-7046	New Hanover Mem. Hospital 2131 S. 17th St. 28401



LIBRARY

GREENSBORO COLISEUM

40

50A

20A

42

Site

Host

DOVE PATTERSON

22

24

36

TO BE COMPLETED BY PROJECT MANAGER

PROJECT MANAGER: Harvey Allen PROJECT: Union Oil-SE Term.
INVESTIGATION DATE: week of 6-10-91
RECONNAISSANCE _____ SAMPLING VISIT X

Materials Used (Please insert a number in the blank)

<u>0</u> Air Purifying respirator cartridges	<u>0</u> Gloves (nitrile)
<u>0</u> Eye Wash Units	<u>0</u> Gloves (cloth)
<u>0</u> First Aid Kit	<u>0</u> Boot covers
<u>0</u> Gloves (polyethylene)	<u>0</u> Coveralls (tyvek)
<u>0</u> Gloves (PVC)	<u>0</u> Coveralls (saranex)

Respirator Worn By N/A Approximate Time in Respirator _____

Air Monitoring Data (Include Calibration Reading)

HNU: N/A

OVA: N/A

Explosimeter: N/A

Radiation Meter: N/A

If the maximum personal protective equipment as outlined in the Hazard Evaluation Section was not used, please justify:
No onsite work performed by NCSS personnel.
Sanding

Visitors Present
Charlie Wells, Dave Keasey
Alvin Williams, Ron Young,
Larry Grier, Scott Singleton
Harvey Allen

Organization Represented
Union Oil
NUS Corp.
NUS Corp.
NCSS
Harvey Allen
Signature

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Gasoline

I. PHYSICAL/CHEMICAL PROPERTIES

	Refere
Chemical Formula <u>mixture of C₄ to C₁₂ hydrocarbons</u>	<u>1</u>
Natural Physical State at 25°C <u>liquid</u>	<u>1</u>
Vapor Pressure <u>"evaporates quickley"</u> mm Hg at 20°C	<u>1</u>
Melting Point _____ °F/°C Boiling Point <u>60 - 204</u> °F/°C	<u>1</u>
Flash Point (open or closed cup) <u>-45</u> °C/°F	<u>1</u>
Solubility - H ₂ O <u>insoluble</u>	<u>1</u>
Other <u>absolute alcohol, ether, chloroform,</u>	<u>1</u>
<u>benzene</u>	

Physical Features: (odor, color, etc.) Mobile liquid with a characteristic odor (1)

II. TOXICOLOGICAL DATA

Standards: 300ppm (2) TLV 300ppm (3) PEL _____ IDLH

Routes of Exposure: Inhalation, Ingestion, Skin and/or Eye contact

Acute/Chronic Symptoms: Inhalation causes intense burning in throat and 1 possibly bronchopneumonia. Ingestion causes inebriation, vomiting, sleepiness, fever, confusion, and bluish coloration of the skin.

First Aid: Inhalation: artificial respiration; Ingestion: get medical attention immediately; Eye contact: irrigate immediately; Skin contact: soap and water wash immediately

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Tetraethyl lead

I. PHYSICAL/CHEMICAL PROPERTIES

	Reference
Chemical Formula <u>PB (C2 H5)4</u>	<u>1,2</u>
Natural Physical State at 25°C <u>liquid</u>	<u>1,2</u>
Vapor Pressure <u>0.2</u> mm Hg at 20°C	<u>1,2</u>
Melting Point <u>-137</u> °F/°C Boiling Point <u>about 200</u> °F/°C	<u>2</u>
Flash Point (open or closed cup) <u>200</u> °C/°F	<u>1,2</u>
Solubility - H ₂ O <u>Insoluble</u>	<u>2</u>
Other <u>soluble in benzene, gasoline and</u>	<u>2</u>
<u>petroleum ether</u>	

Physical Features: (odor, color, etc.) colorless liquid may be dyed red, orange, or blue with a slight musty odor. (1)

Decomposes slowly at room temperature IP= 11.1 ev

II. TOXICOLOGICAL DATA

skin

Standards: 0.1 mg/m3 (3) TLV 0.075 mg/m3 (4) PEL 40 mg/m3 (2) IDLH

Routes of Exposure: Inhalation, skin contact, eye contact, ingestion

Acute/Chronic Symptoms: Acute: lassitude, pallor, constipation, abdominal pain, gingival gum line, tremors. Target organs: GI tract, CNS, kidneys, blood. (2)

First Aid: Inhalation: artificial respiration; Ingestion: get medical attention immediately; Eye contact: irrigate immediately; Skin contact: soap and water wash immediately

Chemical Name: Tetraethyl Lead

III. HAZARDOUS CHARACTERISTICS

Reference

A. Combustibility Yes X No _____
Toxic by-products _____

1

B. Flammability LEL ? UEL ?

1

C. Reactivity Hazard _____

D. Corrosivity Hazard yes/no pH: _____

Neutralizing agent: _____

E. Radioactive Hazard	Exposure Rate	
Background yes/ <u>no</u>	_____	_____
Alpha particles yes/ <u>no</u>	_____	_____
Beta particles yes/ <u>no</u>	_____	_____
Gamma radiation yes/ <u>no</u>	_____	_____

IV. REFERENCES

1. Pocket Guide to Chemical Hazards, NIOSH, 1987
2. Documentation of the TLV's, ACGIH, 1980
3. Threshold Limit Values and Biological Exposure Indices for 1990-1991
4. 29 CFR 1910.1000

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Arsenic

I. PHYSICAL/CHEMICAL PROPERTIES

	Reference
Chemical Formula <u>As</u>	<u>1</u>
Natural Physical State at 25°C <u>metal</u>	<u>1</u>
Vapor Pressure _____ mm Hg at 20°C	<u>2</u>
Melting Point _____ °F/°C Boiling Point _____ °F/°C	_____
Flash Point (open or closed cup) _____ °C/°F	_____
Solubility - H ₂ O <u>insoluble</u>	_____
Other _____	_____

Physical Features: (odor, color, etc.) grey, metallic (1)

II. TOXICOLOGICAL DATA

Standards: 0.2 mg/m³ (3) TLV 0.5 mg/m³ (4) PEL carcinogen (2) IDLH _____
potential human

Routes of Exposure: Inhalation, skin and or eye absorption, Ingestion (2)

Acute/Chronic Symptoms: Acute: ingestion-irritation of G.I. tract, vomiting diarrhea which can produce shock leading to death: Chronic: exfoliation and pigmentation of skin, herpes, polyneuritis, altered hematopoiesis, degeneration of liver and kidneys (1).

First Aid: Inhalation: artificial respiration; Ingestion: get medical attention immediately; Eye contact: irrigate immediately; Skin contact: soap and water wash immediately

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Benzene

I. PHYSICAL/CHEMICAL PROPERTIES

	Reference
Chemical Formula <u>C6 H6</u>	<u>1,2</u>
Natural Physical State at 25°C <u>liquid</u>	<u>1,2</u>
Vapor Pressure <u>75</u> mm Hg at 20°C	<u>1,2</u>
Melting Point <u>42</u> °F/°C Boiling Point <u>80</u> °F/°C	<u>1,2</u>
Flash Point (open or closed cup) <u>12</u> °C/°F	<u>1,2</u>
Solubility - H ₂ O <u>0.18%</u>	<u>2</u>
Other <u>in alcohol, Acetone Ether</u>	<u>1</u>

Physical Features: (odor, color, etc.) colorless liquid with odor of aromatic hydrocarbons IP = 9.24 eV. Relative response on HNU = 10
Relative Response on OVA = 150%

II. TOXICOLOGICAL DATA

Standards: 10 ppm (3) TLV 10 ppm (4) PEL potential human carcinogen IDLH 2

Routes of Exposure: inhalation, ingestion, skin contact, eye contact

Acute/Chronic Symptoms: Upper respiratory irritation, muscle spasms, slow pulse, irritated eyes and skin burns, suspect human carcinogen. (1)

First Aid: Inhalation: artificial respiration; Ingestion: get medical attention immediately; Eye contact: irrigate immediately; Skin contact: soap and water wash immediately

Chemical Name: Benzene

III. HAZARDOUS CHARACTERISTICS

Reference

A. Combustibility Yes No 2
Toxic by-products not pertinent 5

B. Flammability LEL 1.3% UEL 7.1% 2

C. Reactivity Hazard Strong oxidizer, chlorine 2

D. Corrosivity Hazard yes/no pH: _____

Neutralizing agent: _____

E. Radioactive Hazard	Exposure Rate	
Background <u>yes/no</u>	_____	_____
Alpha particles <u>yes/no</u>	_____	_____
Beta particles <u>yes/no</u>	_____	_____
Gamma radiation <u>yes/no</u>	_____	_____

IV. REFERENCES

(1) Documentation of the TLV's, 4th Edition, 1980
(2) Pocket Guide to Chemical Hazards, NIOSH, 1987
(3) Threshold Limit Values and Biological Indices for
1990-1991, ACGIH.
(4) CFR 1910.1000.
(5) Chemical Hazard Response Information System, US Coast
Guard, 1985.

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Ethyl Benzene

I. PHYSICAL/CHEMICAL PROPERTIES

	Reference
Chemical Formula <u>C8 H10</u>	<u>1,2</u>
Natural Physical State at 25°C <u>liquid</u>	<u>1,2</u>
Vapor Pressure <u>7.1</u> mm Hg at 20°C	<u>2</u>
Melting Point <u>-95</u> °F/°C Boiling Point <u>136</u> °F/°C	<u>1</u>
Flash Point (open or closed cup) <u>59-64</u> °C/°F	<u>1,2</u>
Solubility - H ₂ O <u>0.015%</u>	<u>2</u>
Other <u>miscible with usual organic solvents</u>	<u>1</u>

Physical Features: (odor, color, etc.) colorless, flammable liquid
with an aromatic odor. IP = 8.76 eV Relative Response OVA = 100%

II. TOXICOLOGICAL DATA

Standards: 100 ppm (3) TLV 100 ppm (4) PEL 2000 ppm IDLH 2

Routes of Exposure: Inhalation, Ingestion, Skin/Eye contact

Acute/Chronic Symptoms: Irritation of the eyes and mucus membranes, headache,
skin problems, sleepiness, coma (2)

First Aid: Eyes: irrigate immediately; Skin; water flush promptly; Inhalation;
fresh air, artificial respiration; Ingestion: medical attention immediately.

Chemical Name: Ethyl Benzene

III. HAZARDOUS CHARACTERISTICS

Reference

A. Combustibility Yes No 2
Toxic by-products none known

B. Flammability LEL 1.0% UEL 6.7% 2

C. Reactivity Hazard Strong oxidizers 2

D. Corrosivity Hazard yes/no pH: _____

Neutralizing agent: _____

E. Radioactive Hazard	Exposure Rate	
Background yes/ <u>no</u>	_____	_____
Alpha particles yes/ <u>no</u>	_____	_____
Beta particles yes/ <u>no</u>	_____	_____
Gamma radiation yes/ <u>no</u>	_____	_____

IV. REFERENCES

- (1) The Merck Index, 11th Edition, 1989
- (2) Pocket Guide to Chemical Hazards, NIOSH 1987
- (3) Threshold Limit Values and Biological Exposure Indices
for 1990-91, ACGIH.
- (4) 29 CFR 1910.1000.