
FINAL
Site-Specific Safety and Health Plan

**Mowing of Areas for Access to Groundwater Monitoring Wells,
Obtaining Water Level Elevations and Well Maintenance**

**Former Plum Brook Ordnance Works (PBOW)
Sandusky, Ohio**

**Contract DACW69-D-00-0021
Work Order 19**

Prepared for:

**Department of the Army
Huntington District, Corps of Engineers
Huntington, WV**

Prepared by:

**WasteTron Inc.
Rt. 2 Box 33-B
Poca, WV 25159
(304) 755-8448
(304) 755-1099 FAX**

April 2002

Ruth Porter SSHP Preparer	 Signature	4/8/02 Date (FINAL Prepared)
-------------------------------------	--	--

200-1e

07.04_0008

G05OH001826_07.04_0008_a

FINAL
Site-Specific Safety and Health Plan

**Mowing of Areas for Access to Groundwater Monitoring Wells,
Obtaining Water Level Elevations and Well Maintenance**

Former Plum Brook Ordnance Works (PBOW)
Sandusky, Ohio

Contract DACW69-D-00-0021
Work Order 19

TABLE OF CONTENTS

<u>Section</u>	<u>Page No.</u>
1.0 Introduction	1
1.1 Purpose	1
1.2 Visitors	1
1.3 Safety Policy Enforcement	2
2.0 Project Description	2
2.1 Site History	2
2.2 Purpose	2
2.3 Project Objectives	3
2.3.1 Mowing	3
2.3.2 Maintenance of Monitoring Wells	3
2.3.3 Gauging of Monitoring Well Water Elevations	3
3.0 Hazard/Risk Analysis	4
3.1 Activity Hazard Analysis	4
3.2 Chemical Hazards	4
3.2.1 2,4,6-Trinitrotoluene (TNT)	5
3.2.2 Dinitrotoluene	6
3.2.3 Pentaerythritol Tetranitrate (PETN)	8
3.2.4 Gasoline	10
3.2.5 Diesel Fuel #2	11
3.2.6 Hydrogen Sulfide	13
3.2.7 Lead	14
3.3 Physical Hazards	16
3.3.1 Walking and Working Surfaces	16
3.3.2 Lifting Techniques	17

TABLE OF CONTENTS
(Continued)

<u>Section</u>	<u>Page No.</u>
3.3.3 Inclement Weather Conditions	17
3.3.3.1 Cold Stress	17
3.3.3.2 Heat Stress	18
3.3.4 Harmful Plants, Animals, and Insects	19
3.3.5 Mowing Hazards	19
3.4 Accident Prevention	20
4.0 Contractor Project Organization and Training	21
4.1 Project Organization	21
4.2 Training	22
4.2.1 Site Specific Training	22
4.2.2 Safety Meetings	22
4.2.3 CPR and First Aid	23
5.0 Safety Procedures/PPE Program	23
5.1 Personal Protective Equipment (PPE)	23
5.2 Field Safety Equipment	23
5.3 Exposure Monitoring	23
5.4 Medical Surveillance Program	23
5.5 Standard Orders for Work Zone	24
5.6 Illumination	24
5.7 Sanitation	24
6.0 Site Control Measures	24
6.1 Buddy System	24
6.2 Site Communication Plan	25
7.0 Decontamination Plan	25
7.1 Personnel Hygiene and Decontamination	25
7.2 Equipment Decontamination	25
8.0 Emergency Response and Contingency Plan	26
8.1 Pre-Emergency Planning	26
8.2 Personnel Roles and Lines of Authority	26
8.3 Emergency Recognition	26
8.4 Evacuation Procedures	26
8.5 Emergency Contacts	27

TABLE OF CONTENTS
(Continued)

<u>Section</u>	<u>Page No.</u>
8.6 First Aid Response	27
8.7 Fire or Explosion	28
8.8 Accident Reporting	28
8.8.1 Investigation and Reporting	28
8.8.2 Supervisors Responsibility	28
8.9 Emergency Equipment	27
9.0 Record Keeping	29
10.0 References	29
APPENDIX A	Activity Hazard Analysis
APPENDIX B	Training Certificates
APPENDIX C	PPE Checklist, Misc. Forms
APPENDIX D	Medical Data Sheet/Medical Monitoring
APPENDIX E	Hospital Location Map
APPENDIX F	WasteTron Inc. General Safety Policy
APPENDIX G	QC Documentation

Definitions and Acronyms

ACGIH	American Conference of Government Industrial Hygienists
AEC	Atomic Energy Commission
ANSI	American National Standards Institute
CFR	Code of Federal Register
DNT	Dinitrotoluene
DoD	Department of Defense
EPA	United States Environmental Protection Agency
GSA	General Service Administration
ICI	International Consultants Incorporated
IDLH	Immediately Dangerous to Life and Health
NASA	National Aeronautical and Space Administration
NRC	Nuclear Regulatory Commission
OSHA	Occupational Safety & Health Administration
PETN	Pentaerythritol Tetranitrate
PEL	Permissible Exposure Limit
PBRF	Plum Brook Reactor Facility
PBOW	Plum Brook Ordnance Works
POC	Point of Contact – technical point of contact for the U.S. Army Corps
PPE	Personal Protective Equipment
QA	Quality Assurance
QC	Quality Control

QA & QC	Quality Assurance/Quality Control
SSHO	Site Safety and Health Officer
SSHP	Site-Specific Safety and Health Plan
STEL	Short Term Exposure Limit
TLV	Threshold Limit Value
TNT	Trinitrotoluene
TWA	Time Weighted Average
USACE	United States Army Corps of Engineers

DRAFT
Site-Specific Safety and Health Plan

**Mowing of Areas for Access to Groundwater Monitoring Wells,
Obtaining Water Level Elevations and Well Maintenance**

**Former Plum Brook Ordnance Works (PBOW)
Sandusky, Ohio**

**Contract DACW69-D-00-0021
Work Order 19**

1.0 INTRODUCTION

1.1 Purpose

The purpose of this site-specific health and safety plan (SSHP) is to establish mandatory safety practices and procedures for all work conducted for the United States Army Corps of Engineers (USACE). Applicability extends to all employees, subcontractors, and visitors. This plan assigns responsibilities and establishes standard operating procedures for field personnel working on this project. During development of this plan, consideration was given to safety standards as defined by the Occupational Safety and Health Administration (OSHA), the National Institute for Occupational Safety and Health (NIOSH), and the United States Army Corps of Engineers (USACE) Manual (EM 385-1-1, most current revision).

1.2 Visitors

WasteTron and the USACE point of contact listed in Section 4.1 of this plan are not considered visitors, they are considered project personnel whom have the necessary safety training to enter a potentially contaminated area. Additionally, personnel from International Consultants Incorporated (ICI) whose training certificates are included in Appendix B are not considered visitors. All others will be considered visitors to the site. All visitors entering the work area at the site will be required to sign in with the site safety and health officer (SSHO) or the Project Manager and review this site specific safety and health plan. Appendix C contains a copy of the visitor log form to be used on-site. Visitors that do not meet the training requirements of 29 CFR 1910.120 and EM 385-1-1, Section 28 may not enter into the work area. Additionally, all personnel entering the site shall be required to be briefed in accordance with requirements as indicated in EM 385-1-1 Section 28.A.03.b. In the event that a visitor does not adhere to the provisions of this plan, that person will be asked to leave the work area.

1.3 Safety Policy Enforcement

Field personnel are required to familiarize themselves with this plan so that they may adhere to its safety provisions. The provisions of this site-specific safety policy will be enforced. Failure to comply will be grounds for disciplinary action for employees, and non-compliant visitors will be required to leave the work zone. A copy of WasteTron's general safety policies is included in Appendix F. WasteTron will utilize the services of International Consultants Incorporated (ICI) to perform monitoring well maintenance and gauging of monitoring well elevations. The WasteTron Project Manager has overall responsibility for the project. The WasteTron Project Manager or his designee will oversee all site work, including being present when ICI is on-site performing work.

2.0 PROJECT DESCRIPTION

2.1 Site History

The former Plum Brook Ordnance Works (PBOW) site is located approximately four (4) miles south of Sandusky, Ohio, near Lake Erie. Nitroaromatic explosives previously produced at the site included trinitrotoluene (TNT), dinitrotoluene (DNT), and pentolite. The plant operated for approximately four years. Possession of the property was transferred to the Ordnance Department in 1946 and then to the War Assets Department and in 1949 to the General Service Administration (GSA). The National Aeronautical and Space Administration (NASA) acquired the property in 1963 and is presently maintaining and utilizing approximately 6,500 of the original 9,009 acres. In 1956, an agreement was made to lease 500 acres of the north portion of the site to construct and operate the Plum Brook Reactor Facility (PBRF). NASA operated the PBRF from 1963 until 1973 under a license agreement with the Atomic Energy Commission (AEC). NASA currently has a license agreement with the Nuclear Regulatory Commission (NRC) for the safe protective storage of the PBRF. NASA acquired an additional 6,000 acres of the former PBOW on March 15, 1963 for the purpose of conducting various aerospace research activities. NASA continues to use the site today.

2.2 Purpose

The United States Army is currently conducting studies of the environmental impact of suspected hazardous waste sites at properties previously owned by the U.S. Department of Defense (DoD). Between 1997 and 1999, International Consultants was contracted to conduct a Site-Wide Groundwater Investigation at PBOW. Approximately 95 groundwater monitoring wells have been installed during past investigations. These wells are located within the sixteen (16) areas currently under investigation.

2.3 Project Objectives

The project objectives under this Scope of Work (SOW) include mowing of areas for access to groundwater monitoring wells, obtaining water level elevations of the monitoring wells, and well maintenance activities at the former Plum Brook Ordnance Works.

2.3.1 Mowing

The PBOW site contains 95 groundwater monitoring wells. This contract requires that the areas surrounding the wells must be mowed three times during the 2002 year. The mowing is tentatively scheduled for May, August, and November 2002. WasteTron personnel shall perform the mowing activities. In keeping with past efforts, an approximate 10-foot radius around each well shall be mowed to an approximate height of at least four inches. Additionally, a ten foot wide path from the nearest cleared road to the well. All wells are to be cleared with hand tools (weed trimmers), and portable weed cutters (i.e. 30" walk behind brush hog type mowers). All mowing shall be completed prior to November 30, 2002. All field activities shall be coordinated with the USACE prior to mobilization.

WasteTron shall utilize existing access paths, roads, gates, and shall limit mowing activities to the areas specified by the USACE. WasteTron shall mow around all guardrail gates that are used for access into the mowing sites. No existing hedgerows, brush, or other vegetation that restricts vehicular traffic shall be cleared, mowed or driven over. Such barriers are to be left undisturbed since they act to control public access. WasteTron shall exercise extreme caution at all areas of the site. Concrete rubble, miscellaneous debris, possible open manholes, exposed tank cradles, hidden stumps, and other physical hazards are present throughout the mowing area. WasteTron shall take care not to damage any existing warning signs within the various areas under investigation.

2.3.2 Maintenance of Monitoring Wells

All wells may require some level of maintenance effort. These activities may involve painting the well numbers on the wells, purchasing and replacing caps, loosening hinges, purchasing and placing locks on the wells, and so forth. Past contracting efforts entailed that 85 of the 95 wells have their numbers stenciled on the casings with weather resistant black paint or black vinyl lettering with each letter or number at least two inches high. Therefore, the remaining ten wells will need numbering. Any maintenance efforts shall be performed during the mowing efforts that are tentatively scheduled for May, August, and November 2002. WasteTron will utilize the services of ICI to perform the monitoring well maintenance.

2.3.3 Gauging of Monitoring Well Water Elevations

WasteTron will utilize the services of ICI to perform the monitoring well water elevation measurements. ICI shall obtain the water elevations from each of the 95 wells located at the site. The elevation shall be measured from top of riser (most wells have a black tic mark inside the polyvinyl chloride piping for reading purposes). Information collected and submitted by ICI to WasteTron shall be as follows:

- Monitoring well number
- Water elevation in feet to the nearest tenth

The data shall be compiled in MS Excel and provided to WasteTron on a virus-free CD ROM.

3.0 HAZARD/RISK ANALYSIS

3.1 Activity Hazard Analysis

Appendix A summarizes field activities from mowing that may create or contribute to a hazard and the actions that can be taken to eliminate or minimize each of those hazards.

3.2 Chemical Hazards

Based upon previous analytical data from the site, the primary chemical hazard associated with this investigation is exposure to nitroaromatic compounds and fuels (gasoline, diesel) that will be used for mowing equipment. Specific compounds of concern are gasoline, diesel, trinitrotoluene (TNT), dinitrotoluene (DNT), hydrogen sulfide, and pentolite. Pentolite is a mix of TNT with pentaerythritol tetranitrate (PETN). During the water level monitoring activities, there is a potential for exposure to hydrogen sulfide. Additionally, lead is a concern throughout the site. Overall, exposure to chemicals at the site is expected to be very low due to the relatively non-intrusive nature of the project. Exposure itself to a chemical is not necessarily hazardous. The degree of hazard is a function of the chemical compound's toxicity or action on the body, the rate or intensity of exposure, the duration or time of exposure, and the susceptibility of the person. Therefore, it should be noted that the symptoms a worker may exhibit when exposed to a particular chemical might vary significantly. The extent of contamination and possible concentration range of contaminants that may be encountered is not completely known. All personnel entering the site must be briefed by the SSHO prior to entry to the site. The briefing shall include information concerning the site hazardous and egress from the site in case of an emergency. All personnel entering the site must meet the medical surveillance requirements specified under 29 CFR 1910.120. The following standard safety precautions shall be adhered to for this project.

- Keep work areas clean & well ventilated.
- Clean up spills quickly and carefully.
- Personnel in the work zone shall not eat, drink, smoke or apply cosmetics.
- Only personnel meeting the training requirements of 29 CFR 1910.120 may perform this work. Personnel shall wear PPE as listed in Section 5.1.
- Any unnecessary contact with potentially contaminated substances shall be avoided.
- No horseplay.
- No matches or lighters shall be used in the work zone.
- During activities that present a risk to personnel, the buddy system as described in Section 6.1 will be implemented.

3.2.1 2,4,6-Trinitrotoluene (TNT)

TNT presents danger from the formation of methemoglobinemia, which is the oxidation and inactivation of hemoglobin in the blood. Some of the chemical and physical properties of trinitrotoluene (TNT) are as follows:

- TNT has a molecular weight of 227.1 g/mol.
- TNT is a colorless to pale yellow, odorless solid.
- TNT has a boiling point (it explodes) of 464 °F.
- TNT has a vapor pressure of 0.053 mm Hg at 68 °F.
- TNT has a solubility of 0.013 grams per 100 grams of water.
- TNT is a Class A explosive. Rapid heating may cause an explosion.
- TNT may affect the ability of blood to carry oxygen.
- TNT is incompatible with strong oxidizers, ammonia, strong alkalies, and combustible materials.

Specific routes of exposure are:

- Skin absorption
- Eye contact
- Ingestion
- Inhalation

Symptoms a worker may exhibit when exposed to TNT include, but are not limited to the following:

- Skin irritation
- Irritation to the eyes, throat, and nose
- Jaundice (skin, hair, and nails)
- Cyanosis
- Sneezing
- Coughing
- Sore throat
- Muscular pain
- Weakness
- Drowsiness
- Shortness of breath
- Heart irregularities
- Unconsciousness
- Cataracts

The target organs affected are:

- Skin
- Eyes

- Respiratory system
- Blood
- Cardiovascular system
- Liver
- Kidneys
- Central nervous system

Emergency First Aid procedures are:

Eye Contact

- Wash eyes immediately with large amounts of water, lifting the lower and upper eye lids occasionally.
- Get medical attention immediately.
- Contact lenses should not be worn when working with this chemical.

Skin Absorption

- Promptly wash contaminated skin using soap or a mild detergent and water.
- If TNT has penetrated through clothing, remove the clothing immediately and wash the skin with soap and water.
- Get medical attention immediately.

Inhalation

- Immediately move exposed person to fresh air.
- If breathing has stopped, perform artificial respiration.
- Keep the affected person warm and at rest.
- Get medical attention immediately.

Ingestion

- If conscious, give affected person large quantities of water immediately. Induce vomiting after water consumption for conscious persons. (*Do not induce vomiting if affected person loses consciousness.*)
- Get medical attention immediately.

3.2.2 Dinitrotoluene (DNT)

Dinitrotoluene presents danger from the formation of methemoglobinemia, which is the oxidation and inactivation of hemoglobin in the blood. Dinitrotoluene has been shown to be a carcinogen and neoplastigens in laboratory experiments with animals. Some of the chemical and physical properties of DNT are as follows:

- DNT has a molecular weight of 182.2 g/mol.
- DNT is an orange-yellow crystalline solid.

- DNT has a boiling point of 572 °F.
- DNT has a vapor pressure of 1 mm Hg at 68 °F.
- DNT has a solubility of 0.03 grams per 100 grams of water.
- DNT is incompatible with strong oxidizers, caustics, and metals such as tin and zinc.

Specific routes of exposure are:

- Skin absorption
- Eye contact
- Ingestion
- Inhalation

Symptoms a worker may exhibit when exposed to DNT include, but are not limited to the following:

- Skin irritation
- Cyanosis
- Irritability
- Drowsiness
- Nausea
- Rapid pulse
- Headache
- Shortness of breath
- Heart irregularities
- Weakness
- Dizziness
- Unconsciousness

The target organs affected are:

- Skin
- Blood
- Cardiovascular system
- Liver
- Reproductive system

Emergency First Aid procedures are:

Eye Contact

- Wash eyes immediately with large amounts of water, lifting the lower and upper eye lids occasionally.
- Get medical attention immediately.
- Contact lenses should not be worn when working with this chemical.

Skin Absorption

- Promptly wash contaminated skin using soap or a mild detergent and water.
- If DNT has penetrated through clothing, remove the clothing immediately and wash the skin with soap and water.
- Get medical attention immediately.

Inhalation

- Immediately move exposed person to fresh air.
- If breathing has stopped, perform artificial respiration.
- Keep the affected person warm and at rest.
- Get medical attention immediately.

Ingestion

- If conscious, give affected person large quantities of water immediately. Induce vomiting after water consumption for conscious persons. (*Do not induce vomiting if affected person loses consciousness.*)
- Get medical attention immediately.

3.2.3 Pentaerythritol Tetranitrate (PETN)

Pentaerythritol Tetranitrate presents danger from the formation of methemoglobinemia, which is the oxidation and inactivation of hemoglobin in the blood. Pentaerythritol Tetranitrate has been shown to be a tetratogen in laboratory experiments with animals. Some of the chemical and physical properties of PETN are as follows:

- PETN has a molecular weight of 316.17 g/mol.
- PETN is a white crystalline solid.
- PETN has a melting point of 138-140 °F and explodes at 205-215 °F.
- PETN is incompatible with strong oxidizers and organic acids.

Specific routes of exposure are:

- Skin absorption
- Eye contact
- Ingestion
- Inhalation

Symptoms a worker may exhibit when exposed to PETN include, but are not limited to the following:

- Decrease in blood pressure
- Skin irritation

- Cyanosis
- Irritability
- Drowsiness
- Nausea
- Sweating
- Headache
- Shortness of breath
- Weakness
- Dizziness
- Unconsciousness

The target organs affected are:

- Skin
- Blood
- Cardiovascular system

Emergency First Aid procedures are:

Eye Contact

- Wash eyes immediately with large amounts of water, lifting the lower and upper eye lids occasionally.
- Get medical attention immediately.
- Contact lenses should not be worn when working with this chemical.

Skin Absorption

- Promptly wash contaminated skin using soap or a mild detergent and water.
- If PETN has penetrated through clothing, remove the clothing immediately and wash the skin with soap and water.
- Get medical attention immediately.

Inhalation

- Immediately move exposed person to fresh air.
- If breathing has stopped, perform artificial respiration.
- Keep the affected person warm and at rest.
- Get medical attention immediately.

Ingestion

- DO NOT induce vomiting. Transport immediately to a medical facility.

3.2.4 Gasoline

Gasoline will be used to power the mowing equipment. Some of the chemical and physical properties of gasoline are as follows:

- Gasoline has an approximate molecular weight of 72.
- Gasoline is a clear liquid with a characteristic odor.
- Gasoline has a boiling point of 102 °F and a closed cup flash point of -45 °F.
- Gasoline has a vapor pressure of 37-300 mm @ 68 °F.
- Gasoline has an upper explosive limit (UEL) of 7.6% by volume at room temperature.
- Gasoline has a lower explosive limit (LEL) of 1.4% by volume at room temperature.
- Gasoline is incompatible and/or reactive with strong oxidizers.

Specific routes of exposure to gasoline is:

- Inhalation
- Dermal absorption
- Ingestion

Symptoms a worker may exhibit when exposed to gasoline include, but are not limited to the following:

- Eye and skin irritation
- Mucous membrane irritation
- Headache
- Fatigue
- Blurred vision
- Disorientation
- Dizziness
- Slurred speech
- Confusion
- Convulsions

The target organs affected by gasoline are:

- Eyes
- Skin
- Respiratory system
- Central nervous system
- Kidneys
- Liver

A PEL of 300 parts per million (ppm) and a short term exposure limit (STEL) of 500 ppm will be acceptable exposure limits that will be adhered to for this project.

Emergency First Aid procedures are:

Eye Contact

- Wash eyes immediately with large amounts of water, lifting the lower and upper eyelids occasionally.
- Seek medical attention immediately.

Skin Absorption

- Promptly wash contaminated skin using soap or a mild detergent and water.
- Seek medical attention immediately.

Inhalation

- Immediately move exposed person to fresh air.
- If breathing has stopped, perform artificial respiration.
- Keep the affected person warm and at rest.
- Seek medical attention immediately.

Ingestion

- Seek medical attention immediately.

3.2.5 Diesel Fuel (#2)

Diesel fuel will be used to power the mowing equipment. Some of the chemical and physical properties of #2 diesel fuel are as follows:

- Diesel fuel is a clear to light amber liquid with a petroleum oil odor.
- Diesel fuel has a flash point greater than 125 °F.
- Diesel fuel has a lower explosive limit (LEL) of 0.7% and an upper explosive limit (UEL) of 7.0%.
- Diesel fuel has a vapor density greater than the vapor density of air.
- Diesel fuel is incompatible and/or reactive with strong oxidizers, oxygen rich air, and hypochlorites.

The specific routes of exposure for diesel fuel are:

- Inhalation
- Skin absorption
- Skin and/or eye contact
- Ingestion

Symptoms a worker may exhibit when exposed to diesel include, but are not limited to the following:

- Eye and skin irritation
- Headache
- Nausea
- Weakness
- Fatigue
- Dermatitis
- Dizziness
- Drowsiness
- Diarrhea (if ingested)
- Chemical pneumonitis (if inhaled)

The target organs affected by fuel oil are:

- Eyes
- Skin
- Gastrointestinal tract
- Respiratory tract

Diesel fuel is highly flammable and is a moderate explosion hazard when exposed to heat or flame. No OSHA permissible exposure limits (PELs) have been established for diesel fuel. No American Conference of Government Industrial Hygienists (ACGIH) threshold limit values (TLV) have been established for diesel fuel.

Emergency First Aid procedures are:

Eye Contact

- Wash eyes immediately with large amounts of water, lifting the lower and upper eye lids occasionally.
- Seek medical attention immediately.
- Contact lenses should not be worn when working with this chemical.

Skin Absorption

- Promptly wash contaminated skin using soap or a mild detergent and water.
- If petroleum products have penetrated through clothing, remove the clothing immediately and wash the skin with soap and water.
- Seek medical attention immediately.

Inhalation

- Immediately move exposed person to fresh air.
- If breathing has stopped, perform artificial respiration.
- Keep the affected person warm and at rest.
- Seek medical attention immediately.

Ingestion

- Seek medical attention immediately.

3.2.6 Hydrogen Sulfide

Hydrogen sulfide is a highly toxic gas. Some of the chemical and physical properties of hydrogen sulfide are as follows:

- Hydrogen sulfide has a molecular weight of 34.08.
- Hydrogen sulfide is a colorless, flammable gas with an offensive odor. The odor is frequently characterized as smelling like rotten eggs. (*NOTE: The sense of smell becomes rapidly deadened and can not be relied upon to warn of the continuous presence of hydrogen sulfide*).
- Hydrogen sulfide has a boiling point of -77°F.
- Hydrogen sulfide has an upper explosive limit (UEL) of 44% and a lower explosive limit (LEL) of 4.0%.
- Hydrogen sulfide is heavier than air and may accumulate in low areas and may travel a considerable distance to an ignition source.
- Hydrogen sulfide is a poison. Exposures of 800-1000 ppm may be fatal in 30 minutes, and higher concentrations can be instantly fatal.
- Hydrogen sulfide is an irritant. Low concentrations of 20-150 ppm causes irritation to the eyes and slightly higher concentrations may cause irritation to the upper respiratory tract.
- Hydrogen sulfide is an asphyxiant. Hydrogen sulfide in very high amounts can paralyze the respiratory system.
- Hydrogen sulfide is a very dangerous fire hazard when exposed to heat, flame, or oxidizers. Also, it is a moderate explosion hazard when exposed to heat or flame.

Specific routes of exposure to hydrogen sulfide is:

- Inhalation
- Absorption through eyes and mucous membrane

Symptoms a worker may exhibit when exposed to hydrogen sulfide include, but are not limited to the following:

- Eye irritation
- Conjunctivitis

- Photophobia
- Corneal bullae
- Mucous membrane irritation
- Upper respiratory irritation
- Rhinitis
- Bronchitis
- Pulmonary edema
- Headache
- Dizziness
- Confusion
- Depression (when exposed to small concentrations)
- Excitement (when exposed to large concentrations)
- Irritability
- Gastrointestinal disturbances
- Staggering gait
- Diarrhea
- Dysuria
- Paralysis of the respiratory system
- Coma
- Death

The target organs affected by hydrogen sulfide are:

- Eyes
- Respiratory system
- Central nervous system

OSHA has set an acceptable ceiling concentration limit of 20 ppm and a 10-minute peak concentration of 50 ppm, if no other exposure to hydrogen sulfide has occurred. The IDLH value for hydrogen sulfide is 100 ppm.

Emergency First Aid procedures are:

- Flush contaminated eyes with large amounts of water for at least 15 minutes and seek medical attention. (*Note: The wearing of contact lenses by personnel is strictly prohibited when the potential exists for hydrogen sulfide exposure.*)
- Obtain medical attention immediately for inhalation exposure.

3.2.7 Lead

Some of the chemical and physical properties of lead are as follows:

- Lead has a molecular weight of 207.2 and a molecular formula of Pb.
- Lead is a heavy, gray solid, which is ductile and soft.
- Lead begins to melt 621 °F.
- Lead is incompatible and/or reactive with strong oxidizers, hydrogen peroxide and acids.

Specific routes of exposure to lead is:

- Inhalation
- Ingestion
- Skin contact

Symptoms a worker may exhibit when exposed to lead include, but are not limited to the following:

- Eye irritation
- Insomnia
- Nausea
- Malnutrition
- Constipation
- Colic
- Anemia
- Tremors
- Abdominal pain
- Hypotension
- Paralysis of wrist and/or ankles
- Pallor
- Gingival lead line
- Encephalopathy

The target organs affected by lead are:

- Eyes
- Gastrointestinal tract
- Central nervous system
- Kidneys
- Blood
- Gingival tissue

Lead can cause diseases of the central and peripheral nervous system, the kidney and the blood. The OSHA PEL is 0.050 milligrams per cubic meter (mg/m^3) or $50 \text{ ug}/\text{m}^3$.

Emergency First Aid procedures are:

Eye Contact

- Wash eyes immediately with large amounts of water, lifting the lower and upper eye lids occasionally.
- Seek medical attention immediately.
- Contact lenses should not be worn when working with this chemical.

Skin Absorption

- Promptly wash contaminated skin using soap or a mild detergent and water.
- If petroleum products have penetrated through clothing, remove the clothing immediately and wash the skin with soap and water.
- Seek medical attention immediately.

Inhalation

- Immediately move exposed person to fresh air.
- If breathing has stopped, perform artificial respiration.
- Keep the affected person warm and at rest.
- Seek medical attention immediately.

Ingestion

- Seek medical attention immediately.

3.3 Physical Hazards

Field activities performed during the project present inherent dangers from physical hazards such as falls, inclement weather, strains from lifting activities, cold/heat stress, and cuts. Employee training and experience in the use of field equipment and their awareness of potential hazards will reduce risk. In cases where the situation is found to be a potential danger, field workers will cease operations until site entry can be made safely.

3.3.1 Walking and Working Surfaces

Due to the location (forested area) of this project, the walking and working surfaces present inherent dangers. Personnel performing sampling will be working in areas of uneven terrain that may be densely vegetated, which present a hazard from slips, trips, and falls. Additionally, the presence of concrete rubble, miscellaneous debris, possible open manholes, exposed tank cradles, and hidden stumps present throughout the area presents walking hazards. Furthermore, the possibility of inclement weather (such as rain and snow) will present obvious walking and working surface hazards. Personnel will adhere to the following safety rules concerning walking and working surfaces:

- Personnel shall wear steel-toed boots.
- Personnel shall ensure that equipment not in use will be put in a place where it will not create a tripping hazard.
- Personnel shall be alert to tripping hazards from vines and other vegetation when performing field activities.
- Personnel shall not climb over debris.
- Personnel shall perform a walk through of an area prior to performing work in the area in order to locate potential tripping hazards.

3.3.2 Lifting Techniques

Lifting and moving equipment improperly can place a great deal of stress on the back, possibly resulting in severe injury. Lifting objects is inherent in performing field investigations and in mowing operations; therefore, it is important to use good lifting techniques. Proper lifting techniques shall be covered in the personnel's 8-hour HAZWOPER refresher class and then prior to beginning work, personnel shall review the rules below for proper lifting.

- Personnel shall utilize a mechanical device to lift very heavy objects.
- If a load is heavy or bulky, seek help.
- Remember to lift with your legs and keep your back straight.
- Keep the load as close to your body as you can.
- Do not jerk the load. Lift slowly and carefully.
- Make sure the area you will be carrying the load through is clear of obstacles.
- Do not twist or turn your spine when lifting or carrying the load.
- Be sure to have a good grip on your load at all times.
- Be careful when lowering your load (seek help, if necessary).

3.3.3 Inclement Weather Conditions

Work shall not be scheduled when inclement weather (heavy rains, strong winds, tornado, floods, extreme temperatures, and so forth) is predicted that could cause or contribute to an accident or exposure incident. If a change in the weather poses a health or environmental threat, the site shall be secured, and work shall cease. Extremes in temperature can pose serious physical hazards to personnel. Personnel shall be aware of appropriate steps that can be taken to minimize the effects of temperature extremes.

3.3.3.1 Cold Stress

Personnel who work outdoors during winter months are subject to cold stress. Exposure to extreme cold can result in severe injury or even death. Areas of the body that are most susceptible to the effects of cold stress are the fingers, toes, nose, and ears. The cold stress management requirements as outlined in Section 6 of the EM 385-1-1 Safety and Health Requirement Manual will be followed. Precautions a worker may take to prevent injury from the cold includes, but is not limited to the following:

- Extremities shall be protected from extreme cold by protective clothing.
- The work area shall be shielded or employees shall be given an outer windbreak garment when the wind chill is a factor during field operations.
- Outer garments must provide ventilation to prevent wetting of inner clothing by sweat.
- Employees who are prone to getting their clothing wet shall be issued an outer protective garment that is water repellent.

The weather conditions shall be monitored and work halted if the temperature drops to levels that present a danger to worker safety.

3.3.3.2 Heat Stress

Heat stress may occur when protective clothing decreases natural body ventilation and/or when working in areas having elevated temperatures. The heat stress work/rest standards as outlined in the heat stress section of the 1996 ACGIH Threshold Limit Values (TLV) & Biological Exposure Indices (BEI) Handbook, and Section 6 of the EM 385-1-1 Safety and Health Requirement Manual will be followed.

Heat stress is any series of conditions where the body is under stress from overheating. It can include heat cramps, heat exhaustion, heat rash, or heat stroke. The victim often overlooks the signs of heat stress. The employee may at first be confused or unable to concentrate. Heat stress can produce bodily symptoms, which may include profuse sweating, dizziness, cessation of sweating, and collapse. Refer to the following table for common forms of heat stress.

Heat Stress

Condition	Signs/Symptoms	First Aid
Heat cramps	Heavy sweating Painful muscle spasms	Sport drink intake (Gatorade) Rest in cool environment Salt water intake (0.5% solution)
Heat Syncope	Brief fainting Blurred vision	Water intake Lie down in cool environment
Dehydration	Fatigue and reduced movement	Fluid and salted food intake
Heat Exhaustion	Pale and clammy skin, possible fainting, weakness, fatigue, nausea, dizziness, heavy sweating, blurred vision, body temperature slightly elevated	Lie down in cool environment, water intake, loosen clothing
Heat Stroke	Skin hot and dry, red face, high body temperature, unconsciousness, collapse, convulsions, confusion or erratic behavior	Immediate total cooling Transport to hospital

The following precautions will be taken to prevent injury from heat stress:

- The work schedule will be adjusted, if possible, to schedule heavy work during the cooler part of the day.
- The work will be paced to include adequate rest periods. Five to fifteen minute rest periods will be scheduled hourly or every 2 hours depending upon the workload, temperature, and relative humidity. The frequency and time of rest periods will be increased, if the SSSHO believes that it is necessary to protect the workers' safety.
- Drinking water and ice will be provided in the clean zone. Personnel will be encouraged to drink plenty of water.
- The weather conditions shall be monitored and work halted if the temperature (including humidity) rises to levels that present a danger to worker safety.

3.3.4 Harmful Plants, Animals, and Insects

Personnel working in the field must be aware of the physical hazards posed by coming into contact with harmful plants, animals, and insects. Of the potential exposures to poisonous plants, field personnel are likely to be most affected by exposure to poison ivy and poison oak, which are very common in this area. Both of these plants have greenish white flowers with berries that grow in clusters. The leaves are composed of three (3) leaflets each. These plants can cause a severe rash, which is characterized by redness, blisters, swelling, intense burning, and itching. If these plants are to be removed from the work area, personnel shall wear appropriate PPE to prevent dermal exposure.

Copperheads and rattlesnakes are the predominant poisonous species of snakes in this area. Rattlesnakes have horny sheaths towards the end of the tail, which make a rattling sound. Copperheads are brown in color with a V-shaped head characteristic of poisonous snakes. Bees, mosquitoes, and ticks are the predominant insects that will be of concern. Insect repellants can be used since volatile organic compound (VOC) sampling is not to be performed. Personnel that have known allergies shall report this to the Project Manager and SSHO. These personnel need to keep medicine available to counteract their specific allergy.

The following steps shall be considered in preventing exposure to these hazards.

- Field personnel are required to wear PPE at all times while performing work in heavily vegetated areas. This should be helpful in limiting skin exposure to plants and insects.
- Insect repellants may be used to reduce potential contact with insects.
- A 16-unit first aid kit shall be available at the site and shall contain a variety of ointments for skin afflictions.
- When practical, poisonous plants (such as poison ivy) shall be removed or destroyed.
- Water and soap shall be provided on-site for personnel to wash affected skin areas.
- Personnel shall report all known allergies to plants, insects, and medications to the Project Manager or SSHO prior to work.

3.3.5 Mowing Hazards

The following precautions shall be taken to prevent injuries associated with the grass mowing activities.

- Perform a pre-site walk through and pick up any items that might be thrown by the mowing equipment.
- Do not allow site visitors or the general public to operate any mowing equipment.
- Stop mowing operations if bystanders approach within one hundred feet of the mower/tractor.
- When mowing near roadways, make sure that the mowing equipment is operated such that any flying objects from the mower blades will be directed back away from where people are.
- Before starting any mowing equipment make sure that bystanders are a safe distance away. For a weed trimming equipment, push lawn mower, and a riding lawn mower a distance of 25 feet should be sufficient. At least 100 feet should be considered a safe distance when starting a tractor.

- Perform a check of all mowing equipment daily prior to use. The pre-operation check should be performed in accordance with the manufacturers recommendations.
- Never allow passengers on a riding lawn mower or tractor/brush hog.
- Do not operate a lawn mower, weed trimmer, or tractor/brush hog with bystanders nearby.
- Ensure that all guards and shields provided by the manufacturer are in place prior to beginning work. Do not remove any safety devices that were provided by the manufacturer.
- Never modify the equipment in any way.
- Ensure that all guards and shields are installed and inspected in accordance with the manufacturers recommendations. (Missing guards or shields are to be replaced immediately).
- Do not operate brush hog cutter in a raised position.
- Never place hands, feet, any other body part, or clothing, under the mower or near moving parts of the mower while the engine is running. Ensure that all motion has stopped prior to checking moving parts.
- Ensure that blades are in good condition and can swing freely.
- Perform routine maintenance of mowing equipment prior to beginning work to ensure that all nuts, bolts and other fasteners are properly tightened.
- For riding lawn mowers and tractors, place all controls in neutral, stop engine, set brake, remove ignition key, and wait for all removing parts to stop before servicing, adjusting, repairing, or unplugging.
- Prior to mowing, check for entangled material in all rotating parts and remove as appropriate.
- Loose and frayed clothing, loose long hair, and dangling jewelry shall not be worn while working with any mowing equipment.
- Personnel should wear gloves and use care when performing fueling operations.
- Do not fuel any mowing equipment when the equipment is hot. Let mowing equipment cool prior to refueling.
- Do not store fuel in the open sun. Store fuel in a protected area away from heat sources and away from the public.
- Remove mowing equipment and fuels from access by the public when these items are not in use or intended for immediate usage.
- Do not operate the power take off (PTO) of a tractor/brush hog at speeds faster than the speed recommended by the manufacturer.
- For tractors, always wear the seat belt provided as part of the roll over protection system (ROPS).
- Do not remove ROPS system from the tractor and do not modify the ROPS.
- If a ROPS component becomes damaged, replace it immediately and do not attempt repairs.
- Do not drive the tractor close to the edges of ditches or banks, which may break under the weight of the tractor, especially when the ground is loose or wet.
- Always slow the tractor prior to turning. Turning at a high speed may tip the tractor over.
- Personnel shall wear personal protective equipment as specified in Section 5.1 of this plan.

3.4 Accident Prevention

WasteTron Inc. is committed to ensuring the safety of its employees, contractors, and visitors. The company believes that occupational injuries and illnesses can be prevented, that exposures to

hazardous materials, and hazardous work situations can be controlled, and that prevention of injuries and illnesses is equal in importance to production, quality, cost, and morale. For this reason, WasteTron Inc. has established a Safety & Health Plan complete with annual refresher training, monthly safety meetings, and "tailgate" safety meetings prior to each job. Before each new phase of a job, a safety meeting is to be held to review the activity hazard analysis for that specific job. The Activity Hazard Analysis for this project can be found in Appendix A. The hazard analysis provides a description of potential hazards and the actions to be taken to eliminate or minimize each of these hazards.

4.0 CONTRACTOR PROJECT ORGANIZATION AND TRAINING

4.1 Project Organization

The collection of quality data and the completion of any given project are strongly affected by the project organization. A project that is properly organized with personnel responsibilities

well-delineated results in a successful project conclusion. A listing of functional areas and qualified personnel are given for this project.

- A. Government Technical POC** -- This is the technical point of contact (POC) representing the USACE who will serve as a liaison between the USACE and the contractor.

<u>USACE POC</u>	<u>Phone Number</u>
Lisa Humphreys	(304) 529-5953
Cell phone number	(304) 617-1461

- B. Contractor's Project Manager** -- provides technical insight and will have overall responsibility for this project. Gary Cooper will serve as Project Manager and Quality Control Officer for this project. If Mr. Cooper is not on-site, Rodney Roberts will serve as QC Officer.

<u>WasteTron Inc. Project Manager</u>	<u>Phone Number</u>
Gary Cooper	(304) 755-8448
Cell phone number	(304) 437-8225

- C. Site Safety and Health Officer (SSHO)** – This person is responsible for safety on-site. The Project Manager, or Rodney Roberts, will serve as the SSHO for this project.

- D. Field Personnel** – These personnel are responsible for assisting the Project Manager in completing the tasks required under this contract. One or more of the following personnel will perform work on-site and may be appointed by the Project Manager to oversee work performed by ICI on-site.

<u>WasteTron Field Personnel</u>	<u>Phone Number</u>
Rodney Roberts	304-755-8448
Chester Porter	
Lynn Moles	
George Linville	

- E. **International Consultants Incorporated (ICI)**—Personnel from ICI will be responsible for the monitoring well elevation measurements and well maintenance activities. The following person is the contact at ICI.

<u>ICI personnel</u>		<u>Phone Number</u>
Helen Owens	Extension 121	(937) 252-0341

4.2 Training

All field personnel performing work on this project have received forty-hour HAZWOPER training and the associated 8-hour refresher training annually. Additionally, all field personnel have actual field experience gained under the direct guidance of a trained and experienced supervisor. All field personnel meet the training requirements as cited in 29 CFR 1910.120. At least two personnel on-site have received first aid and CPR training. Appendix B contains copies of all training certifications and dates of refresher training for employees that may work on this project.

4.2.1 Site Specific Training

All field personnel shall receive training and guidance concerning the provisions of this SSHP. Training will specifically address the activities, procedures, monitoring, equipment, and hazard analysis for site operations. This training will allow personnel to ask questions, clarify misunderstandings, and reinforce their previous safety and health training.

4.2.2 Safety Meetings

The Project Manager/ SSHO shall brief field personnel prior to daily field operations, and on an as needed basis. The Project Manager/SSHO shall hold daily “tailgate” safety meetings. Before each new phase of a job, a safety meeting is to be held to review the activity hazard analysis for that specific job. Additional briefings will be performed when work practices change, if site conditions change, or if a deficiency has been found. The SSHO/Project Manager conducting the meeting shall record the following information on a Daily Safety Meeting form. A copy of this is located in Appendix C. This form, to be filled out daily and signed by the SSHO/Project Manager, will include the following:

- Personnel attending the safety meeting shall be recorded.
- The date of the safety meeting shall be recorded.
- The SSHO/Project Manager shall list the topics discussed in the safety meeting.
- The SSHO/Project Manager shall discuss work conditions and task expected to be completed that day.
- The Project Manager/SSHO shall record notes and comments concerning the safety meeting.
- The Project Manager/SSHO shall record any safety-related incidents noticed by field personnel.

4.2.3 CPR and First Aid

WasteTron Inc. field personnel have received first aid and CPR training. Appendix B contains copies of certificates for WasteTron field personnel whom have received first aid and CPR training. Field personnel will be scheduled in such a manner that, at a minimum, two employees with CPR and first aid certifications will be on-site at all times.

5.0 SAFETY PROCEDURES/PPE PROGRAM

5.1 Personal Protective Equipment (PPE)

Personnel will wear protective equipment meeting appropriate American National Standards Institute (ANSI) standards when their activities involve known or suspected contaminated materials. Level D PPE will be used for all site activities. Based upon the project activities, it is not anticipated that an upgrade of PPE will be necessary.

Level D PPE will consist of:

- Steel toe safety shoes
- Safety glasses with side shields
- Chemical resistant gloves when checking monitoring well elevations and leather gloves are optional for well maintenance and mowing activities
- Hard hat
- Sleeved shirt and long trousers

Appendix C contains a sample PPE inspection form. These inspection forms will be included in the daily safety inspection logs.

5.2 Safety Equipment

At a minimum, a waterproof 16-unit first aid kit shall be available on-site in the work zone. There shall be at minimum two fire extinguishers, a portable eyewash station, and personnel decontamination materials located on-site. The Project Manager or his designee will perform a daily check to assure that the safety equipment is present and in good working condition. Appendix C contains a copy of the safety equipment checklist to be used.

5.3 Exposure Monitoring

WasteTron does not anticipate a need to perform personnel exposure monitoring for this project.

5.4 Medical Surveillance Program

WasteTron field personnel undergo annual medical surveillance examinations and random drug testing. Pursuant to EM 385-1-1, personnel will have in their possession or otherwise available on-site, documentation concerning their current medical status. Appendix D contains a brief medical data sheet that all WasteTron personnel working on-site will complete. A description of the employee medical monitoring program is located in Appendix D.

5.5 Standard Orders for Work Zone

Level D PPE will be utilized for all field activities. General safety procedures to be followed by all field personnel are:

- All workers and visitors entering the exclusion zone shall sign that they have read and will comply with the SSHP.
- All site workers and visitors shall follow the contents of this SSHP.
- All visitors to the site must sign in with the Project Manager/SSHO.
- Personnel will not be allowed to work on-site during periods of inclement weather that would endanger their lives.
- Personnel in the work zone shall not eat, drink, smoke, or apply cosmetics.
- Only personnel meeting the training requirements of 29 CFR 1910.120 may enter into the exclusion zone. Personnel shall adhere to the PPE requirements as listed in Section 5.1.
- Any unnecessary contact with potentially contaminated substances shall be avoided.
- No horseplay.
- No matches or lighters shall be used in the work zone.
- During activities that present a risk to personnel, the buddy system as described in section 6.1 will be implemented.

5.6 Illumination

Work will be performed during daylight hours only.

5.7 Sanitation

Potable water will be carried on-site. Water, soap, and towels will be available on-site for personnel decontamination.

6.0 SITE CONTROL MEASURES

Site control is an essential component in the implementation of the site-specific health and safety program. This section defines the procedures for maintaining site control.

6.1 Buddy System

When conditions present a risk to personnel, the implementation of the buddy system is mandatory. A buddy system requires that at least two people work as a team; each looking out for the other. People utilizing the buddy system are required to use the same level of PPE. Those activities requiring the use of the buddy system are as follows:

- Site reconnaissance – requires minimum of two people keeping each other in a line of sight.
- Mowing activities- requires a minimum of two people keeping each other in a line of sight.
- Monitoring well activities- requires a minimum of two people keeping each other in a line of sight.

6.2 Site Communication Plan

Successful communications between field personnel and support personnel is essential. The following hand signals shall be used during field activities at the site.

<u>Signal</u>	<u>Definition</u>
Hands clutching throat	Out of air/cannot breath
Hands on top of head	Need assistance
Thumbs up	OK/I am all right/ I understand
Thumbs down	No/Negative
Arms waving upright	Send backup support
Grip partners wrist	Exit area immediately

In the event of an emergency, the signal for personnel to evacuate will be by sounding three blasts on a vehicle horn. If this occurs, personnel shall stop work immediately, evacuate the site and report to a predetermined offsite location so that all personnel may be accounted for. All personnel shall proceed with their buddy to a safe distance from the work area. Personnel will remain in the predetermined safe meeting area until the Project Manager provides them with further instructions. Appendix E contains and a map showing the route to the nearest hospital and general routes of evacuation from the area.

7.0 DECONTAMINATION PLAN

7.1 Personal Hygiene And Decontamination

Decontamination will consist of exercising good hygiene practices because no sampling will be performed under this work order. Soap and water shall be provided in the event personnel come into contact with gasoline, diesel, and motor oil used for the mowing devices. Additionally, personnel should wash with soap and water if they come into contact the groundwater at the site or potentially contaminated soil at the site.

Personnel shall practice good personal hygiene at all times. Field workers are required to wash their hands prior to eating, drinking, or smoking after engaging in field mowing/clearing operations and activities associated with the monitoring wells. Field workers are required to wash their hands following any exposure to contaminated soils, groundwater, equipment, or other materials.

7.2 Equipment Decontamination

Equipment used during the mowing and clean up operation shall be limited to clipboards, cameras, weed removal tools, and mowing tractors. Equipment decontamination should not be necessary during the mowing and clearing operations since direct contact with contamination is not anticipated during this work.

Equipment used during the well level monitoring and maintenance will include a water level detector. The level measurement tape will be rinsed with distilled water and wiped dry with a paper towel after each use.

8.0 EMERGENCY RESPONSE AND CONTINGENCY PLAN

This section describes contingencies and emergency planning procedures to be implemented at the site. The provisions of this emergency response plan will be reviewed with all field personnel prior to beginning work at the site.

8.1 Pre-Emergency Planning

Field personnel will be briefed concerning emergency response procedures, contingency plans, lines of authority as well as their role in the plan. The plan will be reviewed and revised, if necessary, on a regular basis by the Project Manager. This will ensure that the plan is adequate and consistent with site conditions.

8.2 Personnel Roles and Lines of Authority

The Project Manager has the primary responsibility for responding to and correcting emergency situations. This includes taking appropriate measures to ensure the safety of site personnel, visitors, and the public. Possible actions may involve stopping operations and evacuating personnel from the site. The Project Manager is additionally responsible for ensuring that corrective measures have been implemented, appropriate authorities notified, and follow-up reports have been completed and filed with appropriate agencies. All personnel are responsible for reporting potential safety hazards and shall assist the Project Manager within the scope of their training and knowledge. A SSHO may be on-site or called on to the site to assist the Project Manager in dealing with personnel safety issues and/or emergency situations, which exceed the training and/or knowledge of the Project Manager.

8.3 Emergency Recognition

Personnel will be familiar with techniques of hazard recognition from pre-assignment training and site-specific briefings. Emergency situations include, but are not limited to, chemical release, fire, serious injury or illness. Conditions that may lead to such events will be identified and preventive measures will be implemented prior to an emergency occurring. The Project Manager will brief the personnel concerning the hazard assessment associated with this project.

8.4 Evacuation Procedures

In the event of an emergency, the signal for personnel to evacuate will be by sounding blasts on an ATV or other vehicle horn. If this occurs, personnel shall stop work immediately, evacuate the site and report to a predetermined offsite location so that all personnel may be accounted for. Personnel will be expected to proceed with their buddy to a safe distance from the work area. Personnel will remain in the predetermined safe meeting area until the Project Manager provides them with further instructions.

8.5 Emergency Contacts

In the event of a medical emergency, the Project Manager will notify the appropriate emergency organization. The Project Manager will notify the appropriate local, state, and federal agencies in the event of a fire or spill. Emergency contact numbers will be posted at the site. Emergency contact numbers are listed below:

Contact	Organization	Telephone
Police	---	911
Ambulance	---	911
Fire	---	911
Hospital	Perkins Medical Clinic	(419) 625-0606
Poison Control	Poison Control Center	(800) 642-3625
Lisa Humphreys	USACE (cellular phone)	(304) 529-5953 (304) 617-1461
Gary Cooper	WasteTron Inc. (cellular phone)	(304) 755-8448 (304) 437-8225
Robert (Bob) Lallier	NASA POC	416-621-3234

The Perkins Medical Clinic is located at 6015 Milan Road, Sandusky, Ohio. All field personnel shall become familiar with the route to the hospital. Appendix E contains a map showing the location of the hospital and evacuation routes for this area.

8.6 First Aid Response

At least two members of the field crew on-site will have valid first aid and CPR certificates. Each employee attempting to render first aid is performing the service as a Good Samaritan. To minimize contact with body fluids, personnel shall use disposable gloves when rendering first aid and use mouth guards when performing CPR. Pursuant to the requirements of EM 385-1-1 Section 03A.06 the employees designated as responsible for rendering first aid or medical assistance shall be:

- Included in WasteTron's blood-borne pathogen program in accordance with 29 CFR 1910-1030;
- Instructed in the sources, hazards, and avoidance of blood-borne pathogens, and
- Provided, use, and maintain personnel protective equipment (gloves, masks, glasses, and so forth) when appropriate for rendering first aid or other medical assistance to prevent contact with blood or other potentially infectious materials.

WasteTron personnel undergo blood-borne pathogen training as part of their HAZWOPER annual refresher. Additionally, blood-borne pathogen training is provided as part of the First Aid courses completed by WasteTron employees. The Project Manager shall be contacted for all emergencies. Victims of medical emergencies will be transported to the hospital. Upon entering the area to set up for work, field personnel shall familiarize themselves with the route to the hospital and general evacuation routes.

8.7 Fire or Explosion

In the event of a fire or explosion, the local fire department shall be called immediately. The Project Manager will advise the fire chief of the location, nature, and identification of hazardous materials on-site. If the fire is minor and it is safe to do so, site personnel may:

- Use fire-fighting equipment available on-site to control and/or extinguish the fire.
- Remove or isolate flammable or other hazardous materials, which may contribute to the fire.

8.8 Accident Reporting

In the event of an accident, employees are responsible for reporting all injuries or illnesses as soon as possible to the SSHO/Project Manager. The Project Manager/SSHO is responsible for investigating and reporting accident information and maintaining exposure data. The SSHO shall report his findings to management along with a plan to correct whatever deficiency resulted in the accident. Any accident resulting in a serious injury or a fatality must be reported to OSHA within 24 hours and the accident scene shall not be disturbed until it has been released by the investigating authority, except for rescue and emergency measures. The

Project Manager will notify the POC immediately in the event of an accident or incident and they will file form ENG 3394 with the USACE within 2 working days for all reportable accidents. An ENG 3394 will be submitted any time there is an occupational illness/injury resulting in lost work days, a fatality, permanent disability, or 3 or more persons are hospitalized. Also, a copy of ENG Form 3394 will be completed for property damage of \$2,000.00 or more. A copy of form ENG 3394 is located in Appendix C.

8.8.1 Investigation and Reporting

Report all accidents immediately to the Point of Contact. Additionally, the contractor shall thoroughly investigate the accident and submit the findings of the investigation along with appropriate corrective actions to the Point of Contact on ENG Form 3394 as soon as possible but no later than two (2) working days following the accident. Corrective actions will be implemented as soon as is reasonably possible.

8.8.2 Supervisor's Responsibility

For job related injuries which require medical treatment, a supervisor of the injured employee shall accompany the injured employee to the medical treatment facility and explain the employee's regular duties and the availability of "Light Duty" so that the injured employee can return to work as soon as medically possible.

8.9 Emergency Equipment

The Project Manger or SSHO will check emergency equipment daily. The following emergency equipment shall be used on-site:

Equipment

Fire Extinguishers
16-unit first aid kit
Eye wash bottle
Cellular phone

9.0 RECORD KEEPING

Implementation of the provisions of this SSHP shall be documented. The SSHO/Project Manager will be responsible for documenting steps taken to be in full compliance with this plan. The SSHO/Project Manager shall keep the following records:

- Copy of this SSHP
- ENG Form 3394 (USACE Accident Investigation Report Form)
- Records of safety violations and remedial actions taken
- Daily records of all first aid treatments not otherwise reportable shall be maintained
- Maintain records of all exposure and accident experienced incidental to the work; employee exposure, worker's compensation reports and project man hours
- Records of safety meetings
- Visitor register
- PPE checklist
- Other pertinent safety and health related observations or documents

10.0 REFERENCES

The following reference material was used in compiling the information contained in this SSHP.

- Occupational Safety and Health Standards for General Industry, 29 CFR 1910
- Army Corps of Engineers, Safety and Health Requirements Manual, EM 385-1-1, 3 September 1996
- USEPA/Environmental Response Team, Health and Safety Planner (HASP), Version 3.0/4.0
- NIOSH/OSHA/USCG/EPA, "Occupational Safety and Health, Guidance Manual for Hazardous Waste Site Activities", October 1985
- ACGIH, "TLVs and BEIs Handbook", 1996

APPENDIX A

Activity Hazard Analysis

**Mowing of Areas for Access to Groundwater Monitoring Wells
Obtaining Water Level Elevations and Well Maintenance**

**Former Plum Brook Ordnance Works
Sandusky, Ohio**

**DACW69-99-D-00-0021
Work Order 0019**

ACTIVITY HAZARD ANALYSIS

Page 1 of 8 Pages

Activity Title: Mowing

Date: February 27, 2002
Prepared by: Ruth M. Porter

Step No.	Key Steps in Activity	Hazards	Safe Work Procedure	Protective Clothing and Equipment
1	Checking site for debris prior to mowing	<p>Surfaces may be uneven or contain construction debris creating a tripping hazard.</p> <p>Snakes, rodents, dogs, bees and ticks present the hazard of potential bites from poisonous or disease carrying animals.</p>	<p>Be alert and observe terrain while walking to minimize slips and falls.</p> <p>Wear appropriate footwear.</p> <p>Avoid wildlife when possible. In case of animal bite, seek medical attention immediately.</p> <p>Do not attempt to pet or catch animals. In case of animal bite, seek medical attention immediately.</p> <p>Check skin and clothes for ticks.</p> <p>Do not mow over or near areas suspected of containing bee or wasp nests.</p>	<p>Hard hat, steel-toed shoes, safety glasses with side shields, sleeved shirt, long trousers, ear plugs may be appropriate when mowing using a tractor with brush hog attachment</p>
2	Mowing	Heat stress can occur.	<p>Precautions a worker may take to prevent injury from the heat includes, but is not limited to the following:</p> <p>The work schedule will be adjusted, if possible, to schedule heavy work during the cooler part of the day.</p>	

**Mowing of Areas for Access to Groundwater Monitoring Wells
Obtaining Water Level Elevations and Well Maintenance**

**Former Plum Brook Ordnance Works
Sandusky, Ohio**

**DACW69-99-D-00-0021
Work Order 0019**

ACTIVITY HAZARD ANALYSIS

Activity Title: Mowing

Date: February 27, 2002
Prepared by: Ruth M. Porter

Step No.	Key Steps in Activity	Hazards	Safe Work Procedure	Protective Clothing and Equipment
2	Mowing	Injury from the riding/push mowers' or the tractor/brush hog moving or cutting parts	<p>Never modify the equipment in any way.</p> <p>Ensure that all guards and shields are installed and inspected in accordance with the manufacturers recommendations. (Missing guards or shields are to be replaced immediately).</p> <p>Never place hands, feet, any other body part, or clothing, under the mower or near moving parts of the mower while the engine is running. Ensure that all motion has stopped prior to checking moving parts.</p> <p>For riding lawn mowers and tractors, place all controls in neutral, stop engine, set brake, remove ignition key, and wait for all removing parts to stop before servicing, adjusting, repairing, or unplugging.</p> <p>Do not operate brush hog cutter in a raised position.</p> <p>Perform routine maintenance prior to beginning work of mowing equipment to ensure that all nuts, bolts and other fasteners are properly tightened.</p> <p>Ensure that blades are in good condition and can swing freely.</p>	Hard hat, steel-toed shoes, safety glasses with side shields, sleeved shirt, long trousers, ear plugs may be appropriate when mowing using a tractor with brush hog attachment

**Mowing of Areas for Access to Groundwater Monitoring Wells
Obtaining Water Level Elevations and Well Maintenance**

**Former Plum Brook Ordnance Works
Sandusky, Ohio**

**DACW69-99-D-00-0021
Work Order 0019**

ACTIVITY HAZARD ANALYSIS

Page 5 of 8 Pages

Activity Title: Mowing

Date: February 27, 2002

Prepared by: Ruth M. Porter

Step No.	Key Steps in Activity	Hazards	Safe Work Procedure	Protective Clothing and Equipment
2	Mowing	Injury from the runaway or rolling over of a tractor equipped with a brush hog	<p>Prior to beginning mowing, check for entangled material in all rotating parts and remove as appropriate.</p> <p>Loose and frayed clothing, loose long hair, and dangling jewelry shall not be worn while working with any mowing equipment.</p> <p>Start the engine only while in the operator's seat</p> <p>Avoid sharp turns or sudden breaking</p> <p>Always stop the engine and set the brake before getting off of the tractor.</p> <p>Always slow down when driving over rough areas</p> <p>Lock brake pedals together, use warning lights, and use a slow moving vehicle emblem when traveling on the roadway (<i>Limit travel on public roadways to crossing streets to go from one lot to another—While on public roadways follow appropriate driving procedures</i>)</p>	Hard hat, steel-toed shoes, safety glasses with side shields, sleeved shirt, long trousers, ear plugs may be appropriate when mowing using a tractor with brush hog attachment

**Mowing of Areas for Access to Groundwater Monitoring Wells
Obtaining Water Level Elevations and Well Maintenance**

**Former Plum Brook Ordnance Works
Sandusky, Ohio**

**DACW69-99-D-00-0021
Work Order 0019**

ACTIVITY HAZARD ANALYSIS

Page 6 of 8 Pages

Activity Title: Mowing

Date: February 27, 2002

Prepared by: Ruth M. Porter

Step No.	Key Steps in Activity	Hazards	Safe Work Procedure	Protective Clothing and Equipment
2	Mowing	Injury from the runaway or rolling over of a tractor equipped with a brush hog	<p>Do not operate the power take off (PTO) at speeds faster than the speed recommended by the manufacturer</p> <p>Always wear the seat belt provided as part of the roll over protection system (ROPS).</p> <p>Do not remove ROPS system from the tractor.</p> <p>Do not modify the ROPS.</p> <p>If a ROPS component becomes damaged, replace it immediately do not attempt repairs</p> <p>Do not drive the tractor close to the edges of ditches or banks which may break under the weight of the tractor, especially when the ground is loose or wet</p> <p>Always slow the tractor prior to turning. Turning at a high speed may tip the tractor over.</p>	Hard hat, steel-toed shoes, safety glasses with side shields, sleeved shirt, long trousers, ear plugs may be appropriate when mowing using a tractor with brush hog attachment

**Mowing of Areas for Access to Groundwater Monitoring Wells
Obtaining Water Level Elevations and Well Maintenance**

**Former Plum Brook Ordnance Works
Sandusky, Ohio**

**DACW69-99-D-00-0021
Work Order 0019**

ACTIVITY HAZARD ANALYSIS

Activity Title: Mowing

Date: February 27, 2002
Prepared by: Ruth M. Porter

Step No.	Key Steps in Activity	Hazards	Safe Work Procedure	Protective Clothing and Equipment
2	Mowing	Injury from the runaway or rolling over of a tractor equipped with a brush hog	<p>When descending a slope never disengage the clutch or shift to neutral.</p> <p>Always back up steep slopes.</p> <p>Use a push lawn mower or weed trimmer on steep slopes and around poles and pipes.</p>	<p>Hard hat, steel-toed shoes, safety glasses with side shields, sleeved shirt, long trousers, ear plugs may be appropriate when mowing using a tractor with brush hog attachment</p>
3	Servicing of mowing equipment	Potential injury from the use of hand tools that may be used to perform repairs	<p>All hand tools shall be used, inspected, and maintained in accordance with the manufacturer's instructions and recommendations.</p> <p>All hand tools shall be used only for the purpose for which they were designed.</p> <p>All hand tools shall be in good repair and be equipped with all required safety devices. Tools having defects that will impair their strength or render them unsafe shall be removed from service.</p>	

**Mowing of Areas for Access to Groundwater Monitoring Wells
Obtaining Water Level Elevations and Well Maintenance**

Former Plum Brook Ordnance Works
Sandusky, Ohio

DACW69-99-D-00-0021
Work Order 0019

ACTIVITY HAZARD ANALYSIS

Page 1 of 2 Pages

Activity Title: Water Level Elevations and Well Maintenance

Date: April 9, 2002
Prepared by: Ruth M. Porter

Step No.	Key Steps in Activity	Hazards	Safe Work Procedure	Protective Clothing and Equipment
1	Personnel from ICI will be performing water level elevation checks and well maintenance	<p>Surfaces may be uneven or contain construction debris creating a tripping hazard.</p> <p>Snakes, rodents, dogs, bees and ticks present the hazard of potential bites from poisonous or disease carrying animals.</p> <p>Heat stress can occur.</p>	<p>Be alert and observe terrain while walking to minimize slips and falls.</p> <p>Wear appropriate footwear.</p> <p>Avoid wildlife when possible. In case of animal bite, seek medical attention immediately.</p> <p>Do not attempt to pet or catch animals. In case of animal bite, seek medical attention immediately.</p> <p>Check skin and clothes for ticks.</p> <p>Do not mow over or near areas suspected of containing bee or wasp nests.</p> <p>Precautions a worker may take to prevent injury from the heat includes, but is not limited to the following:</p> <p>The work schedule will be adjusted, if possible, to schedule heavy work during the cooler part of the day.</p>	<p>Hard hat, steel-toed shoes, safety glasses with side shields, sleeved shirt, and long trousers.</p>

**Mowing of Areas for Access to Groundwater Monitoring Wells
Obtaining Water Level Elevations and Well Maintenance**

**Former Plum Brook Ordnance Works
Sandusky, Ohio**

**DACW69-99-D-00-0021
Work Order 0019**

ACTIVITY HAZARD ANALYSIS

Page 2 of 2 Pages

Activity Title: Water Level Elevations and Well Maintenance

Date: April 9, 2002
Prepared by: Ruth M. Porter

Step No.	Key Steps in Activity	Hazards	Safe Work Procedure	Protective Clothing and Equipment
1	Personnel from ICI will be performing water level elevation checks and well maintenance	Heat stress can occur. Injuries from lawn mowing equipment (e.g. tractor, weed trimming tools, etc.)	The work will be paced to include adequate rest periods. Five to fifteen minute rest periods will be scheduled hourly or every 2 hours depending upon the workload, temperature, and relative humidity. Personnel performing mowing will be encouraged to drink plenty of water. Work should be halted if the temperature (including humidity factor) rises to levels that present a danger to worker safety. ICI personnel shall not perform well maintenance or well elevation measurement activities while personnel are still performing mowing in close proximity to the well.	Hard hat, steel-toed shoes, safety glasses with side shields, sleeved shirt, and long trousers.

APPENDIX B

Training Certificates

C&K INDUSTRIAL SERVICES, INC.
Certificate of Completion

This certifies that
Gary Cooper
has completed the 40 Hour HAZWOPER
Training Course


Don Hanna, CET.

November 17, 1995
Date of Completion

THIS IS TO CERTIFY THAT

RODNEY ROBERTS

has met the Attendance Requirements and successfully completed the
40-Hour class on Hazardous Waste Operations and Emergency Response
in accordance with OSHA 1910.120, including Level "A" Personal Protective Equipment
and Permit-Required Confined Space Training.

40-Hour HAZWOPER

Presented By:

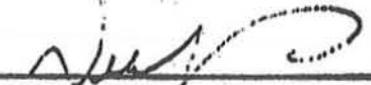
Regulatory Training Center

#WV-ABC-041-8

187 2nd Ave. So. Charleston, WV 25303

(304) 348-1346

FEBRUARY 24, 2000



RTC DIRECTOR

DATE

Hazwoper Training 40 Hour Certificate

Sharp Safety Services, LLC

CHESTER PORTER

Has completed the training requirements specified in OSHA 29 CFR 1910.120
And is hereby awarded this certificate of completion. Correspondence Course

President



Date

AUG 17 2001



THIS IS TO CERTIFY THAT

LYNN MOLES

has met the Attendance Requirements and successfully completed the
40-Hour class on Hazardous Waste Operations and Emergency Response
in accordance with OSHA 1910.120, including Level "A" Personal Protective Equipment
and Permit-Required Confined Space Training.

40-Hour HAZWOPER

Presented By:

Regulatory Training Center

#WV-ABC-041-8

157 2nd Ave. So. Charleston, WV 25303

(304) 348-1346



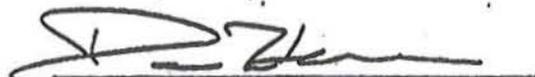
RTC DIRECTOR

FEBRUARY 24, 2000
DATE

C&K INDUSTRIAL SERVICES, INC.

Certificate of Completion

*This certifies that
George Kevin Linville
has successfully completed the
40 Hour HAZWOPER Training Course
in accordance with 29 CFR 1910.120*


Don Hanna, CET

June 25th - 28th, 1996

Date of Completion

8 Hour Hazwoper
Refresher Course

Sharp Safety Services, LLC

RODNEY ROBERTS

Has completed the training requirements specified in OSHA 29 CFR 1910.120
And is hereby awarded this certificate of completion.

President



Date

JAN 25 2002

*8 Hour Hazwoper
Refresher Course*

Sharp Safety Services, LLC

CHESTER PORTER

Has completed the training requirements specified in OSHA 29 CFR 1910.120
And is hereby awarded this certificate of completion.

President



Date

JAN 25 2002

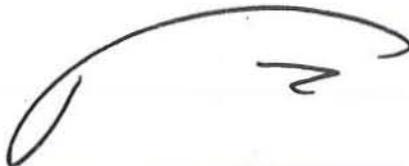
8 Hour Hazwoper
Refresher Course

Sharp Safety Services, LLC

GEORGE LINVILLE

Has completed the training requirements specified in OSHA 29 CFR 1910.120
And is hereby awarded this certificate of completion.

President



Date

JAN 25 2002

8 Hour Hazwoper Refresher Course

Sharp Safety Services, LLC

LYNN MOLES

Has completed the training requirements specified in OSHA 29 CFR 1910.120
And is hereby awarded this certificate of completion.

President



Date

JAN 25 2002

8 Hour Hazwoper
Refresher Course

Sharp Safety Services, LLC

GARY COOPER

Has completed the training requirements specified in OSHA 29 CFR 1910.120
And is hereby awarded this certificate of completion.

President



Date

JAN 25 2002

**American
Red Cross**
We'll be there.



This recognizes that
Bear Slone
has completed the requirements for
Adult CPR
conducted by
Central WV Chapter

Date completed **2-28-02**

The American Red Cross recognizes this certificate
as valid for **1** year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
George Linville
has completed the requirements for
Adult CPR
conducted by
Central WV Chapter

Date completed **3-1-02**

The American Red Cross recognizes this certificate
as valid for **1** year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
Mark Meadows
has completed the requirements for
Adult CPR
conducted by
Central WV Chapter

Date completed **3-1-02**

The American Red Cross recognizes this certificate
as valid for **1** year(s) from completion date.



Together, we can save a life

This recognizes that
Michael Browning
 has completed the requirements for
Standard First Aid
 conducted by
Central WV Chapter
 Date completed **3-12-02**
 The American Red Cross recognizes this certificate
 as valid for **3** year(s) from completion date.



Together, we can save a life

This recognizes that
Michael Browning
 has completed the requirements for
Adult CPR
 conducted by
Central WV Chapter
 Date completed **3-12-02**
 The American Red Cross recognizes this certificate
 as valid for **1** year(s) from completion date.



Together, we can save a life

This recognizes that
LeRoy Halstead
 has completed the requirements for
Standard First Aid
 conducted by
Central WV Chapter
 Date completed **3-12-02**
 The American Red Cross recognizes this certificate
 as valid for **3** year(s) from completion date.



Together, we can save a life

This recognizes that
LeRoy Halstead
 has completed the requirements for
Adult CPR
 conducted by
Centrla WV Chapter
 Date completed **3-12-02**
 The American Red Cross recognizes this certificate
 as valid for **1** year(s) from completion date.



Together, we can save a life

This recognizes that
Edgar Johnson
 has completed the requirements for
Standard First Aid
 conducted by
Central WV chapter
 Date completed **3-12-02**
 The American Red Cross recognizes this certificate
 as valid for **3** year(s) from completion date.



Together, we can save a life

This recognizes that
Edgar Johnson
 has completed the requirements for
Adult CPR
 conducted by
Central WV Chapter
 Date completed **3-12-02**
 The American Red Cross recognizes this certificate
 as valid for **1** year(s) from completion date.



Together, we can save a life

This recognizes that
Billy Stowers
 has completed the requirements for
Standard First Aid
 conducted by
Central WV Chapter
 Date completed **3-12-02**
 The American Red Cross recognizes this certificate
 as valid for **3** year(s) from completion date.



Together, we can save a life

This recognizes that
Billy Stowers
 has completed the requirements for
Adult CPR
 conducted by
Central WV Chapter
 Date completed **3-12-02**
 The American Red Cross recognizes this certificate
 as valid for **1** year(s) from completion date.



Together, we can save a life

This recognizes that
Thomas Adkins
 has completed the requirements for
Standard First Aid
 conducted by
Central WV Chapter
 Date completed **3-12-02**
 The American Red Cross recognizes this certificate
 as valid for **3** year(s) from completion date.



Together, we can save a life

This recognizes that
Thomas Adkins
 has completed the requirements for
Adult CPR
 conducted by
Central WV Chapter
 Date completed **3-12-02**
 The American Red Cross recognizes this certificate
 as valid for **1** year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
Zatto Hager
has completed the requirements for
Adult CPR
conducted by
Central WV Chapter
Date completed **2-28-02**
The American Red Cross recognizes this certificate
as valid for **1** year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
Joe Wheeler
has completed the requirements for
Adult CPR
conducted by
Central WV Chapter
Date completed **3-1-02**
The American Red Cross recognizes this certificate
as valid for **1** year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
Rodney Roberts
has completed the requirements for
Adult CPR
conducted by
Central WV Chapter
Date completed **3-1-02**
The American Red Cross recognizes this certificate
as valid for **1** year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
Laundell Finley
has completed the requirements for
Adult CPR
conducted by
Central WV Chapter
Date completed **3-1-02**
The American Red Cross recognizes this certificate
as valid for **1** year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
David Walker
has completed the requirements for
Adult CPR
conducted by
Central WV Chapter
Date completed **3-1-02**
The American Red Cross recognizes this certificate
as valid for **1** year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
Eldon Hagggar
has completed the requirements for
Adult CPR
conducted by
Central WV Chapter
Date completed **3-12-02**
The American Red Cross recognizes this certificate
as valid for **1** year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
Gene Wheeler
has completed the requirements for
Adult CPR
conducted by
Central WV Chapter
Date completed **3-1-02**
The American Red Cross recognizes this certificate
as valid for **1** year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
Brian Rakes
has completed the requirements for
Adult CPR
conducted by
Central WV Chapter
Date completed **3-12-02**
The American Red Cross recognizes this certificate
as valid for **1** year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
Ray Lutes
has completed the requirements for
Adult CPR
conducted by
Central WV Chapter
Date completed **2-28-02**
The American Red Cross recognizes this certificate
as valid for **1** year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
Jeff Cooper
has completed the requirements for
Adult CPR
conducted by
Central WV Chapter
Date completed **3-1-02**
The American Red Cross recognizes this certificate
as valid for **1** year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
David Adkins
has completed the requirements for
Adult CPR
conducted by
Central WV Chapter
Date completed 3-1-02
The American Red Cross recognizes this certificate
as valid for 1 year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
Gary Cooper
has completed the requirements for
Adult CPR
conducted by
Central WV Chapter
Date completed 3-1-02
The American Red Cross recognizes this certificate
as valid for 1 year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
Lynn Moles
has completed the requirements for
Adult CPR
conducted by
Central WV Chapter
Date completed 3-1-02
The American Red Cross recognizes this certificate
as valid for 1 year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
Rick Boggs
has completed the requirements for
Adult CPR
conducted by
Central WV Chapter
Date completed 2-28-02
The American Red Cross recognizes this certificate
as valid for 1 year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
Noah Bills
has completed the requirements for
Adult CPR
conducted by
Central WV Chapter
Date completed 2-28-02
The American Red Cross recognizes this certificate
as valid for 1 year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
Chester Porter
has completed the requirements for
Adult CPR
conducted by
Central WV Chapter
Date completed 2-28-02
The American Red Cross recognizes this certificate
as valid for 1 year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
Ruth Porter
has completed the requirements for
Adult CPR
conducted by
Central WV Chapter
Date completed 2-28-02
The American Red Cross recognizes this certificate
as valid for 1 year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
Keith Meeks
has completed the requirements for
Adult CPR
conducted by
Central WV Chapter
Date completed 2-28-02
The American Red Cross recognizes this certificate
as valid for 1 year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
Dwayne James
has completed the requirements for
Adult CPR
conducted by
Central WV Chapter
Date completed 2-28-02
The American Red Cross recognizes this certificate
as valid for 1 year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
Gary Henery
has completed the requirements for
Adult CPR
conducted by
Central WV Chapter
Date completed 2-28-02
The American Red Cross recognizes this certificate
as valid for 1 year(s) from completion date.

**American
Red Cross**
We'll be there.



**American
Red Cross**
We'll be there.



This recognizes that

Rick Boggs
has completed the requirements for

Standard First Aid

conducted by
Central WV Chapter

Date completed **2-28-02**

The American Red Cross recognizes this certificate
as valid for **3** year(s) from completion date.

This recognizes that

Noah Bills
has completed the requirements for

Standard First Aid

conducted by
Central WV Chapter

Date completed **2-28-02**

The American Red Cross recognizes this certificate
as valid for **3** year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
Ray Lutes
has completed the requirements for
Standard First Aid
conducted by
Central WV Chapter
Date completed **2-28-02**
The American Red Cross recognizes this certificate
as valid for **3** year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
Chester Porter
has completed the requirements for
Standard First Aid
conducted by
Central WV Chapter
Date completed **2-28-02**
The American Red Cross recognizes this certificate
as valid for **3** year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
Zatto Hager
has completed the requirements for
Standard First Aid
conducted by
Central WV Chapter
Date completed **2-28-02**
The American Red Cross recognizes this certificate
as valid for **3** year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
Ruth Porter
has completed the requirements for
Standard First Aid
conducted by
Central WV Chapter
Date completed **2-28-02**
The American Red Cross recognizes this certificate
as valid for **3** year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
Bear Slone
has completed the requirements for
Standard First Aid
conducted by
Central WV Chapter
Date completed **2-28-02**
The American Red Cross recognizes this certificate
as valid for **3** year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
Keith Meeks
has completed the requirements for
Standard First Aid
conducted by
Central WV Chapter
Date completed **2-28-02**
The American Red Cross recognizes this certificate
as valid for **3** year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
Brian Rakes
has completed the requirements for
Standard First Aid
conducted by
Central WV Chapter
Date completed **3-12-02**
The American Red Cross recognizes this certificate
as valid for **3** year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
Dwayne James
has completed the requirements for
Standard First Aid
conducted by
Central WV Chapter
Date completed **2-28-02**
The American Red Cross recognizes this certificate
as valid for **3** year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
Eldon Haggar
has completed the requirements for
Standard First Aid
conducted by
Central WV Chapter
Date completed **3-12-02**
The American Red Cross recognizes this certificate
as valid for **3** year(s) from completion date.

**American
Red Cross**
We'll be there.



This recognizes that
Gary Henery
has completed the requirements for
Standard First Aid
conducted by
Central WV Chapter
Date completed **2-28-02**
The American Red Cross recognizes this certificate
as valid for **3** year(s) from completion date.

American
Red Cross



This recognizes that
LOWDELL FINLEY
has completed the requirements for
STANDARD FIRST AID

conducted by
POTNAM

Date completed **2-25-2000**

The American Red Cross recognizes this certificate
as valid for **3** years from completion date.

American
Red Cross
We'll be there.



This recognizes that
GEORGE LINDVILL
has completed the requirements for
Community First Aid

conducted by

Putnam Co. CHAPTER

Date completed **03-02-01**

The American Red Cross recognizes this certificate
as valid for **3** year(s) from completion date.

American
Red Cross



This recognizes that
JULIE GLOCKNER
has completed the requirements for
STANDARD FIRST AID

conducted by
POTNAM

Date completed **2-25-2000**

The American Red Cross recognizes this certificate
as valid for **3** years from completion date.

American
Red Cross



This recognizes that
MARK MEADOWS
has completed the requirements for
STANDARD FIRST AID

conducted by
POTNAM

Date completed **2-25-2000**

The American Red Cross recognizes this certificate
as valid for **3** years from completion date.

American
Red Cross
We'll be there.



This recognizes that
SENAH GUSLER
has completed the requirements for
Community First Aid

conducted by

Putnam Co. CHAPTER

Date completed **03-02-01**

The American Red Cross recognizes this certificate
as valid for **3** year(s) from completion date.

American
Red Cross
We'll be there.



This recognizes that
LYNN MOLES
has completed the requirements for
STANDARD FIRST AID

conducted by
POTNAM

Date completed **2-25-2000**

The American Red Cross recognizes this certificate
as valid for **3** year(s) from completion date.

American
Red Cross
We'll be there.



This recognizes that
GREG HAGER
has completed the requirements for
Community First Aid

conducted by

POTNAM Co. CHAPTER

Date completed **03-02-01**

The American Red Cross recognizes this certificate
as valid for **3** year(s) from completion date.

American
Red Cross
We'll be there.



This recognizes that
JAMES NIOSCHINO
has completed the requirements for
Community First Aid

conducted by

POTNAM Co. CHAPTER

Date completed **03-02-01**

The American Red Cross recognizes this certificate
as valid for **3** year(s) from completion date.

HEART SAVER

American Heart Association



Ruth Porter

has participated in an American Heart Association Heartsaver Course.

2/11/99

2/01

Issue Date

Recommended Renewal Date

HEART SAVER

American Heart Association



Matt Smith

has participated in an American Heart Association Heartsaver Course.

2/11/99

2/01

Issue Date

Recommended Renewal Date

in Red Cross



This recognizes that
RODNEY ROBERTS
has completed the requirements for

ADULT CPR

conducted by

PUTNAM Co. CHAPTER

Date completed 03-02-01

The American Red Cross recognizes this certificate as valid for 1 year from completion date.

in Red Cross



This recognizes that
PAUL SALIJA
has completed the requirements for

ADULT CPR

conducted by

PUTNAM Co. CHAPTER

Date completed 03-02-01

The American Red Cross recognizes this certificate as valid for 1 year from completion date.

in Red Cross



This recognizes that
MALCOLM SLONE
has completed the requirements for

ADULT CPR

conducted by

PUTNAM Co. CHAPTER

Date completed 03-02-01

The American Red Cross recognizes this certificate as valid for 1 year from completion date.

HEART SAVER

American Heart Association



John Tuttle

has participated in an American Heart Association Heartsaver Course.

2/11/99

2/01

Issue Date

Recommended Renewal Date

American Red Cross



This recognizes that
GENE WHEELER
has completed the requirements for

ADULT CPR

conducted by

PUTNAM Co. CHAPTER

Date completed 03-02-01

The American Red Cross recognizes this certificate as valid for 1 year from completion date.

HEART SAVER

American Heart Association



Joseph Wheeler

has participated in an American Heart Association Heartsaver Course.

2/11/99

2/01

Issue Date

Recommended Renewal Date

American Red Cross



This recognizes that
DAVID ADKINS
 has completed the requirements for
ADULT CPR
 conducted by
PUTNAM Co. CHAPTER
 Date completed **03-02-01**
 The American Red Cross recognizes this certificate
 as valid for **1** year from completion date.

American Red Cross We'll be there.



This recognizes that
NOAH BULLS
 has completed the requirements for
ADULT CPR
 conducted by
PUTNAM
 Date completed **2-25-2000**
 The American Red Cross recognizes this certificate
 as valid for **ONE** year(s) from completion date.

American Red Cross



This recognizes that
STEVE ARBOGAST
 has completed the requirements for
ADULT CPR
 conducted by
PUTNAM Co. CHAPTER
 Date completed **03-02-01**
 The American Red Cross recognizes this certificate
 as valid for **1** year from completion date.

American Red Cross



This recognizes that
GARY BLAKE
 has completed the requirements for
ADULT CPR
 conducted by
PUTNAM Co. CHAPTER
 Date completed **03-02-01**
 The American Red Cross recognizes this certificate
 as valid for **1** year from completion date.

American Red Cross



This recognizes that
DAVID BEAM
 has completed the requirements for
ADULT CPR
 conducted by
PUTNAM Co. CHAPTER
 Date completed **03-02-01**
 The American Red Cross recognizes this certificate
 as valid for **1** year from completion date.



Chris Burke
 Has participated in an American Heart Association HeartSaver Course.

2/11/99
 Course Date

7/01
 Expiration/Revised Course Date



David Beam
 Has participated in an American Heart Association HeartSaver Course.

2/11/99
 Course Date

7/01
 Expiration/Revised Course Date

American Red Cross



This recognizes that
PAUL CHINUNDET
 has completed the requirements for
ADULT CPR
 conducted by
PUTNAM Co. CHAPTER
 Date completed **03-02-01**
 The American Red Cross recognizes this certificate
 as valid for **1** year from completion date.

American
Red Cross



This recognizes that
D. HEATH ADKINS
has completed the requirements for
STANDARD FIRST AID

conducted by
PITTNAM

Date completed **2-25-2000**

The American Red Cross recognizes this certificate
as valid for **3** years from completion date.

American
Red Cross
We'll be there.



This recognizes that
JAMES COOPER
has completed the requirements for

STANDARD FIRST AID

conducted by

PITTNAM

Date completed **2-25-2000**

The American Red Cross recognizes this certificate
as valid for **3** year(s) from completion date.

American
Red Cross



This recognizes that
STEVE ARBOGAST
has completed the requirements for
STANDARD FIRST AID

conducted by
PITTNAM

Date completed **2-25-2000**

The American Red Cross recognizes this certificate
as valid for **3** years from completion date.

American
Red Cross
We'll be there.



This recognizes that
Jeff Cooper
has completed the requirements for

Community First Aid

conducted by

Putnam Co. Chapter

Date completed **03-02-01**

The American Red Cross recognizes this certificate
as valid for **3** year(s) from completion date.

American
Red Cross
We'll be there.



This recognizes that
DAVID BEAM
has completed the requirements for
Community First Aid

conducted by

PUTNAM CO. CHAPTER

Date completed **03-02-01**

The American Red Cross recognizes this certificate
as valid for **3** year(s) from completion date.

American
Red Cross



This recognizes that
MICHAEL EVANS
has completed the requirements for
STANDARD FIRST AID

conducted by
PITTNAM

Date completed **2-25-2000**

The American Red Cross recognizes this certificate
as valid for **3** years from completion date.

American
Red Cross
We'll be there.



This recognizes that
GARY COOPER
has completed the requirements for
Community First Aid

conducted by

Putnam Co. Chapter

Date completed **03-02-01**

The American Red Cross recognizes this certificate
as valid for **3** year(s) from completion date.

American
Red Cross
We'll be there.



This recognizes that
CHRIS FRITZ
has completed the requirements for
Community First Aid

conducted by

PUTNAM CO. CHAPTER

Date completed **03-02-01**

The American Red Cross recognizes this certificate
as valid for **3** year(s) from completion date.

THE NATIONAL ENVIRONMENTAL TRAINERS

certify that

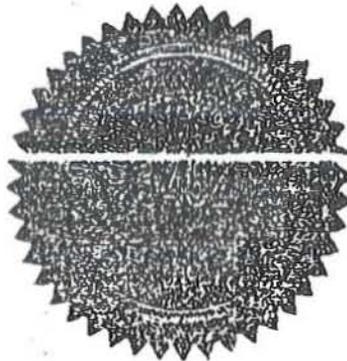
Helen Owens

has satisfactorily passed an exam and completed an 8-hour annual refresher training course entitled
Hazardous Waste Operations and Emergency Response
meeting the requirements identified in Title 29 CFR 1910.120.

This course has been awarded 1.0 Industrial Hygiene CE Points by the American Board of
Industrial Hygiene-Approval Number 13334. This course is also eligible for .66 Continuance of
Certification (COC) points from the Board of Certified Safety Professionals.



October 25, 2001



Signature of Instructor

A handwritten signature in black ink, appearing to read "Clay Bednarz". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Clay Bednarz, MS, CMAA

Certificate of Completion

This certificate was presented to

HELEN J. OWENS

for successful completion of the

40-HOUR HEALTH & SAFETY TRAINING COURSE

In accordance with the

**OSHA Hazardous Waste and Emergency Response Operations Standard
29 CFR 1910.120**

ARRANGED BY _____
Date _____

PROVIDER
Certificate number _____

Samuel C. Shirley

Samuel C. Shirley
President

Manager & Academic Director, Inc.

APPENDIX C

**PPE Checklist
Miscellaneous Forms**

PPE CHECKLIST

All personnel shall perform an inspection of their PPE prior to performing activities on-site. The following items shall be checked.

- ___ Determine that the clothing material is that which has been designated for this project.
- ___ Visually inspect clothing for: Imperfect seams, non-uniform coatings, tears, malfunctioning closures
- ___ Hold up to light and check for pinholes
- ___ Flex product and make observations for cracks or other signs of shelf deterioration
- ___ If the product has been used before, inspect inside and out for signs of chemical attack, discoloration, swelling, or stiffness.
- ___ Visually inspect gloves for imperfect seams, tears, and non-uniform coating
- ___ Pressurize gloves with air; listen for pinhole leaks
- ___ Check hardhat for cracks or other signs of stress
- ___ Check the suspension of your hardhat. Look for loose or torn cradle straps, loose rivets, broken sewing lines or other defects.
- ___ If using earmuffs, check the muffs for cracks, cuts or missing gaskets.
- ___ Check safety glasses for scratches
- ___ Check for cracks or scratches on the facepiece of the respirator
- ___ Check for loss of elasticity or tears in the straps of the respirator
- ___ Check for the general cleanliness of the respirator
- ___ Check for proper fit of the respirator by performing the positive-pressure and negative pressure tests

Daily Safety Meeting

Project: _____

Date: _____

Discussion of work conditions and task expected to be completed today:

Topics to be discussed: (list below)

Task related to Safety Topic: (list below)

Comments from Project Manager or SSHO concerning the meeting:

Notes concerning any safety related incidents that occurred:

Safety Meeting attendance:

I have attended the daily safety meeting. I have been briefed on today's job tasks and fully understand the safety issues associated with each task.

Name (printed)

Signature

Date

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Signature (Project Manager or SSHO) _____

Emergency Equipment List

The Project Manger or SSHO will check emergency equipment daily. The following emergency equipment shall be used on-site:

_____ Fire Extinguisher

_____ 16-unit first aid kit

_____ Eye wash bottle

_____ Cellular phone

4. VERBAL INSTRUCTIONS RECEIVED: *(List any instructions given by Government personnel on construction deficiencies, retesting required, etc., with action to be taken.)*

5. REMARKS: *(Cover any conflicts in plans, specifications or instructions; acceptability of incoming materials; offsite surveillance activities; progress of work, delays, causes and extent thereof; days of no work with reasons for same.)*

6. SAFETY: *(Include any infractions of approved safety plan, safety manual or instructions from Government personnel. Specify corrective actions taken.)*

INSPECTOR

CONTRACTOR'S CERTIFICATION: I certify that the above report is complete and correct and that all material and equipment used, work performed and tests conducted during this reporting period were in strict compliance with the contract plans and specifications except as noted above.

CONTRACTOR'S APPROVED AUTHORIZED REPRESENTATIVE

CONTRACTOR'S QUALITY CONTROL REPORT (QCR) (ER 1180-1-6)		DATE:	REPORT NO.
CONTRACT NUMBER AND NAME OF CONTRACTOR		DESCRIPTION AND LOCATION OF THE WORK:	
WEATHER CLASSIFICATION: CLASS A No interruptions of any kind from weather conditions occurring on this or previous shifts. CLASS B Weather occurred during this shift that caused a complete stoppage of all work. CLASS C Weather occurred during this shift that caused a partial stoppage of work. CLASS D Weather overhead excellent or suitable during shift. Work completely stopped due to results of previous adverse weather. CLASS E Weather overhead excellent or suitable during shift but work partially stopped due to previous adverse manner. OTHER Explain.		CLASSIFICATION: CLASS _____ TEMPERATURE: MAX ___ MIN ___ PRECIPITATION: INCHES _____	
CONTRACTOR/SUBCONTRACTORS AND AREA OF RESPONSIBILITY FOR WORK PERFORMED TODAY: <i>(Attach list of items of equipment either idle or working as appropriate.)</i> a. _____ b. _____ c. _____ d. _____ e. _____ f. _____ g. _____			
1. WORK PERFORMED TODAY: <i>(Indicate location and description of work performed. Refer to work performed by prime and /or subcontractors by letter in Table above.)</i>			
2. TYPE AND RESULTS OF INSPECTION: <i>(Indicate whether: P-Preparatory, I-Initial, or F-Follow-up and include satisfactory work completed or deficiencies with action to be taken.)</i>			
3. TESTS REQUIRED BY PLANS AND/OR SPECIFICATIONS PERFORMED AND RESULTS OF TESTS:			

REPORT NO.	EROC CODE	UNITED STATES ARMY CORPS OF ENGINEERS ACCIDENT INVESTIGATION REPORT <i>(For Use of this Form See Help Menu and USACE Suppl to AR 385-40)</i>			REQUIREMENT CONTROL SYMBOL: CEEC-6-8(R2)
1. ACCIDENT CLASSIFICATION					
PERSONNEL CLASSIFICATION		INJURY/ILLNESS/FATAL	PROPERTY DAMAGE		MOTOR VEHICLE INVOLVED
GOVERNMENT <input type="checkbox"/> CIVILIAN <input type="checkbox"/> MILITARY		<input type="checkbox"/>	<input type="checkbox"/> FIRE INVOLVED <input type="checkbox"/> OTHER		<input type="checkbox"/>
<input type="checkbox"/> CONTRACTOR		<input type="checkbox"/>	<input type="checkbox"/> FIRE INVOLVED <input type="checkbox"/> OTHER		<input type="checkbox"/>
<input type="checkbox"/> PUBLIC		<input type="checkbox"/> FATAL <input type="checkbox"/> OTHER			<input type="checkbox"/>
2. PERSONAL DATA					
a. Name (Last, First, MI)		b. AGE	c. SEX <input type="checkbox"/> MALE <input type="checkbox"/> FEMALE	d. SOCIAL SECURITY NUMBER	
e. GRADE		f. JOB SERIES/TITLE	g. DUTY STATUS AT TIME OF ACCIDENT <input type="checkbox"/> ON DUTY <input type="checkbox"/> TDY <input type="checkbox"/> OFF DUTY	h. EMPLOYMENT STATUS AT TIME OF ACCIDENT <input type="checkbox"/> ARMY ACTIVE <input type="checkbox"/> ARMY RESERVE <input type="checkbox"/> VOLUNTEER <input type="checkbox"/> PERMANENT <input type="checkbox"/> FOREIGN NATIONAL <input type="checkbox"/> SEASONAL <input type="checkbox"/> TEMPORARY <input type="checkbox"/> STUDENT <input type="checkbox"/> OTHER (Specify)	
3. GENERAL INFORMATION					
a. DATE OF ACCIDENT (month/day/year)	b. TIME OF ACCIDENT (Military time)	c. EXACT LOCATION OF ACCIDENT		d. CONTRACTOR'S NAME	
e. CONTRACT NUMBER	f. TYPE OF CONTRACT <input type="checkbox"/> CONSTRUCTION <input type="checkbox"/> SERVICE <input type="checkbox"/> A/E <input type="checkbox"/> DREDGE <input type="checkbox"/> OTHER (Specify)	g. HAZARDOUS/TOXIC WASTE ACTIVITY <input type="checkbox"/> SUPERFUND <input type="checkbox"/> DERP <input type="checkbox"/> IRP <input type="checkbox"/> OTHER (Specify)		(1) PRIME: (2) SUBCONTRACTOR:	
CONSTRUCTION ACTIVITIES ONLY (Fill in line and corresponding code number in box from list - see help menu)					
a. CONSTRUCTION ACTIVITY (CODE)			b. TYPE OF CONSTRUCTION EQUIPMENT (CODE)		
INJURY/ILLNESS INFORMATION (Include name on line and corresponding code number in box for items e, f & g - see help menu)					
a. SEVERITY OF ILLNESS/INJURY (CODE)		b. ESTIMATED DAYS LOST	c. ESTIMATED DAYS HOSPITALIZED	d. ESTIMATED DAYS RESTRICTED DUTY	
e. BODY PART AFFECTED (CODE)		f. TYPE AND SOURCE OF INJURY/ILLNESS			
PRIMARY		TYPE			
SECONDARY		SOURCE			
g. NATURE OF ILLNESS / INJURY (CODE)					
PUBLIC FATALITY (Fill in line and correspondence code number in box - see help menu)					
a. ACTIVITY AT TIME OF ACCIDENT (CODE)		b. PERSONAL FLOATATION DEVICE USED? <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A			
MOTOR VEHICLE ACCIDENT					
a. TYPE OF VEHICLE <input type="checkbox"/> PICKUP/VAN <input type="checkbox"/> AUTOMOBILE <input type="checkbox"/> TRUCK <input type="checkbox"/> OTHER (Specify)		b. TYPE OF COLLISION <input type="checkbox"/> SIDE SWIPE <input type="checkbox"/> HEAD ON <input type="checkbox"/> REAR END <input type="checkbox"/> BROADSIDE <input type="checkbox"/> ROLL OVER <input type="checkbox"/> BACKING <input type="checkbox"/> OTHER (Specify)		c. SEAT BELTS	USED
				(1) FRONT SEAT	NOT USED
				(2) REAR SEAT	NOT AVAILABLE
PROPERTY/MATERIAL INVOLVED					
a. NAME OF ITEM		b. OWNERSHIP		c. \$ AMOUNT OF DAMAGE	
(1)					
(2)					
(3)					
VESSEL/FLOATING PLANT ACCIDENT (Fill in line and correspondence code number in box from list - see help menu)					
a. TYPE OF VESSEL/FLOATING PLANT (CODE)		b. TYPE OF COLLISION/MISHAP (CODE)			
10. ACCIDENT DESCRIPTION (Use additional paper, if necessary)					

See attached page.

11. CAUSAL FACTOR(S) (Read Instruction Before Completing)					
<p>a. (Explain YES answers in item 13)</p> <p>DESIGN: Was design of facility, workplace or equipment a factor? <input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>INSPECTION/MAINTENANCE: Were inspection & maintenance procedures a factor? <input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>PERSON'S PHYSICAL CONDITION: In your opinion, was the physical condition of the person a factor? <input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>OPERATING PROCEDURES: Were operating procedures a factor? <input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>JOB PRACTICES: Were any job safety/health practices not followed when the accident occurred? <input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>HUMAN FACTORS: Did any human factors such as, size or strength of person, etc., contribute to accident? <input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>ENVIRONMENTAL FACTORS: Did heat, cold, dust, sun, glare, etc., contribute to the accident? <input type="checkbox"/> YES <input type="checkbox"/> NO</p>			<p>a. (CONTINUED)</p> <p>CHEMICAL AND PHYSICAL AGENT FACTORS: Did exposure to chemical agents, such as dust, fumes, mists, vapors or physical agents, such as, noise, radiation, etc., contribute to accident? <input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>OFFICE FACTORS: Did office setting such as, lifting office furniture, carrying, stooping, etc., contribute to the accident? <input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>SUPPORT FACTORS: Were inappropriate tools/resources provided to properly perform the activity/task? <input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>PERSONAL PROTECTIVE EQUIPMENT: Did the improper selection, use or maintenance of personal protective equipment contribute to the accident? <input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>DRUGS/ALCOHOL: In your opinion, was drugs or alcohol a factor to the accident? <input type="checkbox"/> YES <input type="checkbox"/> NO</p>		
<p>b. WAS A WRITTEN JOB/ACTIVITY HAZARD ANALYSIS COMPLETED FOR TASK BEING PERFORMED AT TIME OF ACCIDENT?</p> <p style="text-align: center;"><input type="checkbox"/> YES (If yes, attach a copy.) <input type="checkbox"/> NO</p>					

12. TRAINING		
<p>a. WAS PERSON TRAINED TO PERFORM ACTIVITY/TASK?</p> <p style="text-align: center;"><input type="checkbox"/> YES <input type="checkbox"/> NO</p>	<p>b. TYPE OF TRAINING.</p> <p style="text-align: center;"><input type="checkbox"/> CLASSROOM <input type="checkbox"/> ON JOB</p>	<p>c. DATE OF MOST RECENT FORMAL TRAINING.</p> <p style="text-align: center;">(Month) (Day) (Year)</p>

13. FULLY EXPLAIN WHAT ALLOWED OR CAUSED THE ACCIDENT; INCLUDE DIRECT AND INDIRECT CAUSES (See instruction for definition of direct and indirect causes.) (Use additional paper, if necessary)

a. DIRECT CAUSE See attached page.

b. INDIRECT CAUSE(S) See attached page.

14. ACTION(S) TAKEN, ANTICIPATED OR RECOMMENDED TO ELIMINATE CAUSE(S).

DESCRIBE FULLY:

See attached page.

15. DATES FOR ACTIONS IDENTIFIED IN BLOCK 14.					
a. BEGINNING (Month/Day/Year)			b. ANTICIPATED COMPLETION (Month/Day/Year)		
c. SIGNATURE AND TITLE OF SUPERVISOR COMPLETING REPORT		d. DATE (Mo/Da/Yr)	e. ORGANIZATION IDENTIFIER (Div, Br, Sect)	f. OFFICE SYMBOL	
CORPS _____					
CONTRACTOR _____					

16. MANAGEMENT REVIEW (1st)

a. CONCUR b. NON CONCUR c. COMMENTS

SIGNATURE	TITLE	DATE
-----------	-------	------

17. MANAGEMENT REVIEW (2nd - Chief Operations, Construction, Engineering, etc.)

a. CONCUR b. NON CONCUR c. COMMENTS

SIGNATURE	TITLE	DATE
-----------	-------	------

18. SAFETY AND OCCUPATIONAL HEALTH OFFICE REVIEW

a. CONCUR b. NON CONCUR c. ADDITIONAL ACTIONS/COMMENTS

SIGNATURE	TITLE	DATE
-----------	-------	------

19. COMMAND APPROVAL

COMMENTS

COMMANDER SIGNATURE	DATE
---------------------	------

10.

ACCIDENT DESCRIPTION *(Continuation)*

13a.

DIRECT CAUSE *(Continuation)*

b.

INDIRECT CAUSES *(Continuation)*

14. ACTION(S) TAKEN, ANTICIPATED, OR RECOMMENDED TO ELIMINATE CAUSE(S) *(Continuation)*

APPENDIX D

Medical Data Sheet/Medical Monitoring

MEDICAL DATA SHEET

This medical data sheet is to be completed by all on-site personnel and will be kept on-site during field operations. This data sheet shall accompany any personnel who need medical assistance.

Project:

Name: _____

Home Phone: _____

Address: _____

Name and telephone number of Person to notify in case of an Emergency:

Drug or other

Allergies: _____

Do you wear contact lenses: _____ Are you wearing contacts on this job?(if so, notify SSHO) _____

What medications are you presently taking?

Name, Address, and Phone Number of your Personal Physician:

Summary of WasteTron's Medical Monitoring Program

WasteTron Inc. requires employees to submit to routine medical examinations prior to job assignment, annually thereafter, and upon reassignment or termination of employment. WasteTron Inc. will provide information to the examining physician concerning the employee's job duties and anticipated exposures. The contents of the routine medical examination include the following:

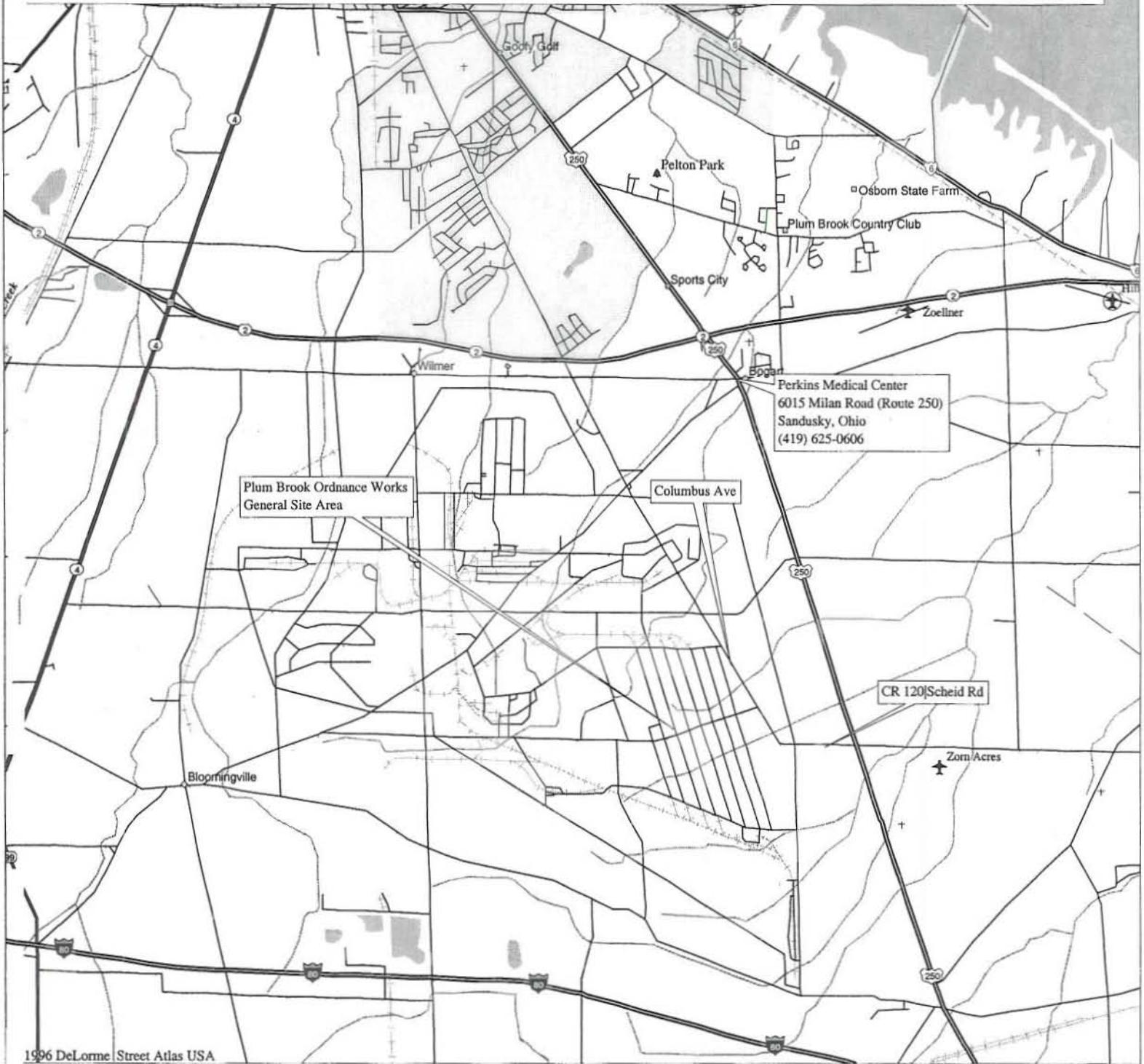
1. Medical and work history
2. Pulmonary function test
3. Chest X-ray
4. Drug screen and breath alcohol
5. Vision screening
6. Stress test for all personnel over thirty (30) years of age is mandatory; it is optional for others.

A physician will examine personnel exposed to hazardous substances above the permissible exposure limits as soon as possible. The examining physician will determine what actions are necessary, including follow-up examinations or consultations.

APPENDIX E

HOSPITAL LOCATION MAP

Plum Brook Ordnance Works



1996 DeLorme Street Atlas USA

Mag 13.00
 Mon Mar 18 13:10 2002
 scale 1:62,500 (at center)

1 Miles

2 KM

- | | |
|----------------------------|-------------------|
| Secondary SR/Road/Hwy Ramp | Point of Interest |
| State Route | Airfield |
| Primary State Route | Park/Reservation |
| Interstate/Limited Access | Locale |
| Toll Highway | Public Airport |
| US Highway | Private Airport |
| Utility/Pipe | Exit |
| Railroad | Cemetery |

APPENDIX F WasteTron's Inc. General Safety Policy

WasteTron Inc.
GENERAL SAFETY POLICY

Reviewed: 1/5/02

Table Of Contents

I.	APPLICATION	1
II.	OVERVIEW	1
III.	COMPANY BELIEFS.....	1
IV.	ENFORCEMENT POLICY	1
V.	GENERAL SAFETY POLICY REQUIREMENTS.....	1
VI.	EMPLOYEE ORIENTATION	1
VII.	GENERAL SAFETY RULES.....	2
VIII.	SUBSTANCE ABUSE.....	3
IX.	WORKSITE SAFETY MANAGEMENT.....	5
X.	FIRE EXTINGUISHER TRAINING	8

WasteTron Inc.

General Safety and Health Procedures

Updated: January 15, 2001

Page: 1

I. APPLICATION

Applies to all WasteTron Inc. personnel and subcontractors.

II. OVERVIEW

The purpose of this program is to ensure understanding of all WasteTron Inc. safety policies. This includes, but is not limited to, OSHA regulations. WasteTron Inc. is committed to ensuring the safety of WasteTron Inc. employees, contractors, and visitors.

III. COMPANY BELIEFS

- A. All occupational injuries and illnesses can be prevented.
- B. All exposures to hazardous materials and hazardous work situations can be controlled.
- C. Prevention of injuries and illnesses is equal in importance to production, quality, cost, and morale.
- D. Management and clients are responsible for providing safe working environments for employees.

IV. ENFORCEMENT POLICY

All WasteTron Inc. safety policies will be strictly enforced. Failure to comply can and will be grounds for disciplinary action.

V. GENERAL SAFETY POLICY REQUIREMENTS

- A. Provide employees with safety training orientation that covers general safety and housekeeping rules, emergency procedures, process hazards, toxicity data, policies, and standards.
- B. Training and orientation shall be documented.
- C. Provide employees with all safety equipment and personal protective equipment (PPE) required to perform services for their clients.

VI. EMPLOYEE ORIENTATION

- A. New employees shall be given safety instructions before performing any work.

WasteTron Inc.

General Safety and Health Procedures

Updated: January 15, 2001

Page: 2

1. There are general safety rules that apply to all employees, regardless of the assignment. Discussing these safety rules at the beginning will serve to impress new employees with importance of safety and our interest in their safety.
 2. Specific safety precautions that apply exclusively to their particular job must be explained along with instructions on how to perform the job. When new employees are taught how to do their job, they should, at the same time, be taught how to do it safely.
- B. When teaching new employees about safety, do not leave the details of safety instructions to chance. Never assume new employees know the details. Ensure they know exactly what you expect. Communicate your standards and audit for results.
1. The following essential safety points will be reviewed with each new employee.
 - a. Injury/illness reporting.
 - b. First aid.
 - c. Personal safety responsibilities.
 - d. Emergency procedures.
 - e. Personal protective equipment rules and use.
 - f. General safety rules.
 - h. Hazard reporting.
 - h. Safety rule violations.
 - i. Health hazards.
 - j. How to report unsafe conditions and practices.

VII. GENERAL SAFETY RULES

- A. Housekeeping rules are as follows.
1. Do not litter.
 2. Pick up trash and deposit in containers.
 3. Place recyclable items in proper containers.
 4. Maintain a neat and orderly workplace. No clutter or junk on desktops or tables.
 5. Immediately wipe up spills from the floors. Barricade if quantities are large.

WasteTron Inc.

General Safety and Health Procedures

Updated: January 15, 2001

Page: 3

- B. Each client location should have established safety rules and procedures to cover complex tasks and usual working conditions. It is the responsibility of each employee to know and follow these rules and procedures.

Typical site specific rules cover the following:

1. Required personal protective equipment (PPE).
2. Work and special use permits.
3. Use of ladders, scaffolds, and fall protection PPE.
4. Excavations.
5. Equipment lockout.
6. Operation of valves and electric switches.
7. Chemical use approvals.
8. Electrical hot work.
9. Emergency/disaster procedures.
10. Confined space entry permits.

Take the time to read site-specific rules and develop an understanding of how they impact your job responsibilities.

VIII. SUBSTANCE ABUSE

A. Purpose

1. This policy establishes guidelines for company action in the event of substance abuse, which negatively impacts an employee's professional performance, jeopardizes the safety of other employees, or otherwise adversely affects the company.
2. It also provides guidelines pertaining to pre-employment physical testing of employment applicants and current employees for the presence of controlled substances.
3. This practice and procedure applies to all WasteTron Inc. employees and contract personnel.

B. Beliefs

1. Substance abuse, both alcohol and chemical abuse, is a growing problem in our society that can impact our workplace.
2. Substance dependence is an illness that can be treated and completely controlled through continued abstinence.

WasteTron Inc.

General Safety and Health Procedures

Updated: January 15, 2001

Page: 4

3. Safety, health, and environmental quality are of primary importance to the company.

C. Definitions

Alcohol - Alcoholic beverages (e.g., beer, wine, liquor).

Legal Drugs to Excess - Prescription medication taken to excess.

Substance Abuse - The possession, use, distribution, or sale of illegal or controlled substances; or use of legal drugs or alcohol to excess.

D. Condition to Employment

1. Use, possession, sale, or distribution of drugs or other controlled substances for nonmedical reasons is prohibited.
2. Individuals may be subject to substance abuse testing upon the request of management.
3. Individuals may be subject to inspection of their person, vehicle, or personal effects while on the company property.
4. Violation of any of these conditions will result in discipline up to and including discharge.

E. Responsibilities

1. Management

- a. Assures compliance with and enforcement of this practice and procedure.
- b. Coordinates all physical testing of applicants and employees and conducting ongoing Substance Abuse Awareness training for WasteTron Inc. employees.
- c. Observes the appearance and conduct of employees.

WasteTron Inc.

General Safety and Health Procedures

Updated: January 15, 2001

Page: 5

- d. Maintains records of unusual observations.
- e. Provide evidence/witness to substantiate allegations.

2. All Employees

- a. Observes the appearance and conduct of fellow employees.
- b. Notifies your supervisor of any unusual behavior or unauthorized/unlawful activity.

F. Requirements

- 1. All candidates for hire are required to submit to the chemical screening process as a condition of employment.
- 2. Failure to submit to or a positive confirmed drug test is grounds for denying employment or continued employment.
- 3. For employees suspended without pay, proof of participation and documented progress in a medically supervised treatment program is required before reinstatement will be considered.

IX. WORKSITE SAFETY MANAGEMENT

A. General Requirements

- 1. An OSHA 200 Log will be maintained and updated to meet OSHA requirements. A copy will be made available to the client.
- 2. It is the responsibility of all WasteTron Inc. personnel, and subcontractors to report unsafe conditions. Personnel will report unsafe conditions to Client Management. Documentation will be sent to WasteTron Inc. Project Management.
- 3. Employee involvement and intervention is mandatory. WasteTron Inc. personnel are encouraged to participate in client safety programs. Project Managers shall inspect worksites for unsafe conditions, practices, and rule violations at least on a monthly basis.

B. Unsafe Conditions

1. Definition

A set of conditions with respect to the workplace and equipment that exists through someone's oversight or carelessness. These conditions may cause occupational injuries or illnesses.

2. Reporting and Handling

- a. When an employee observes a hazard or an unsafe condition, he/she should correct the condition or take appropriate action to eliminate the hazard or unsafe condition.
- b. All reported hazards and unsafe conditions are to be corrected as soon as practical.
- c. All hazards and unsafe conditions with serious potential should be reported immediately.
- d. All employees should accept the responsibility for advising Management of any outstanding hazards reported, hazards of an unusual nature, and hazards that might exist in another part of the workplace.

C. Unsafe Practices

1. Definition

Unsafe practices are failures on the part of individuals to follow specific safety rules and accepted safety practices of the job.

2. Handling

When an unsafe practice is observed, the necessary action to prevent an injury must be taken immediately.

3. General

- a. It will be the responsibility of each area to establish definite times and frequencies to make specific audits for unsafe practices. Job Safety Analysis Audits will be performed at regular intervals and the dates recorded.

WasteTron Inc.

General Safety and Health Procedures

Updated: January 15, 2001

Page: 7

- b. All unsafe practices with serious potential for injury should be reported.

D. SPI - Serious Potential Incident

1. An occurrence which could have resulted in an "Other" Recordable injury/illness or greater.
2. An occurrence which could have resulted in significant equipment or property damage.

E. Unusual Incident

If it is determined that the incident does not meet the criteria of a SPI, but something can be learned and there is application elsewhere, then this incident should be called an Unusual Incident and sent to the specific area(s) where the lesson applies or to site distribution.

F. Communication/Publicity

1. Each employee will be questioned and informed of details of the injury or incident as soon as possible.
2. WasteTron Inc. Management will circulate the final write-up to all employees and other locations as necessary.

G. Allegations to Adverse Reactions

1. Scope

This procedure applies to all WasteTron Inc. employees who allege adverse reactions to chemicals, products, and/or process.

2. Overview

Certain allegations of adverse reactions to chemicals, products, and/or processes must be recorded and records maintained for possible submittal to EPA. The allegations may be made by employees, contractors, neighbors, processors, or consumers of a client's products.

Significant adverse reactions are defined in the regulation as reactions "that may indicate a substantial impairment of normal activities, or long-lasting or irreversible damage to health or the environment." An allegation is

WasteTron Inc.

General Safety and Health Procedures

Updated: January 15, 2001

Page: 8

defined as a statement, made without formal proof or regard for evidence, that a chemical substance or mixture has caused an adverse reaction.

A record will be kept of all such allegations of adverse reactions, in preparation for possible submittal to the Environmental Protection Agency.

3. The procedure for handling allegations of adverse reactions is as follows:
 - a. A form will be used to record each allegation.
 - b. Allegation by WasteTron Inc. employee: Employee's supervisor should discuss the allegation with the employee and complete the form. It may be appropriate to involve client safety and health resources.
 - c. Allegations by others should be referred to the client (ER manager or Environmental, Safety and Health Manager).
 - d. Completed allegation reports will be forwarded to the Client ER Manager for action. A copy will be retained by WasteTron Inc.

X. FIRE EXTINGUISHER TRAINING

A. INTRODUCTION

WasteTron Inc. recognizes that fire is one of the leading causes of accidental death. The intent of this program is to inform employees of what to do in case there is a fire.

B. HOW FIRES START

1. A fire needs four elements to occur:
 - Fuel**
 - Oxygen**
 - Heat/Chemical Reaction**
2. A fuel can be any combustible material; solid, liquid, or gas.
3. The air we breathe contains more than enough oxygen to keep a fire going.
4. Heat/Chemical reaction is the energy source necessary to start a fire.

5. If you take any of these elements away, a fire cannot occur, or if it is already burning it will go out.

C. HOW FIRES ARE CLASSIFIED

There are four classifications of fires; Class A, B, C, and D.

1. **Class A** fires are combustibles or fibrous material such as wood, paper, cloth, rubber, and some plastics.
2. **Class B** fires are flammable or combustible liquids such as gasoline, kerosene, paint, and propane.
3. **Class C** fire deals with energized electrical equipment such as switches, panel boxes, and power tools.
4. **Class D** fires are certain combustible metals such as magnesium, titanium, potassium and sodium. These metals burn at high temperatures and may react violently with water or other chemicals, and must be handled with care.

D. HOW TO EXTINGUISH A FIRE

It is important to know how to extinguish each class of fire.

1. Extinguish a Class A fire by cooling the material below its ignition temperature by using pressurized water, foam or multi-purpose dry chemical extinguishers. **DO NOT USE** carbon dioxide or ordinary dry chemical extinguishers on Class A fires.
2. Extinguish Class B fires by removing oxygen from the flammable liquids. Foam, carbon dioxide, multi purpose dry chemical and halon extinguishers may be used to fight Class B fires.
3. Extinguish electrical equipment fires by using carbon dioxide, multi-purpose dry chemical and halon fire extinguishers. **DO NOT USE** water extinguishers on Class C fires.
4. Use Class D extinguishers to put out combustible metals such as magnesium, potassium, and sodium. Class D extinguishers are dry powder extinguishing agents designated for the material involved.
5. Each fire extinguisher will have a rating on the faceplate. Some

extinguishers are marked with multiple ratings such as AB, BC, and ABC. These extinguishers are capable of putting out more than one class of fire. Take the time to become familiar with the locations and the type of extinguishers in your area. If you see a fire extinguisher that has a missing pin or has not been inspected contact your supervisor.

WasteTron Inc. has multi-purpose (class A, B, or C) type fire extinguishers located in the lab and in the mobile units. The location of each fire extinguisher is clearly marked. All personnel should make it a point to familiarize themselves with the location of each fire extinguisher.

E. HOW TO USE A PORTABLE FIRE EXTINGUISHER

1. If you decide to use a fire extinguisher remember the word **PASS**.

P - Pull the Pin

A - Aim the nozzle at the base of the flame.

S - Squeeze the trigger while holding the extinguisher upright.

S - Sweep the extinguisher from side to side, covering the area of the fire with the extinguishing agent.

OR

2. **TAKE FIRE EXTINGUISHERS THAT HAVE BEEN DISCHARGED DAMAGED OUT OF SERVICE.**

Contact your WasteTron Inc. Management for a replacement.

3. Your personal safety is a top priority in a fire. You should leave the area immediately if:

- your path of escape is threatened
- the extinguisher runs out of agent
- the extinguisher is not effective
- or you no longer can fight the fire safely

4. If you should ever discover a large fire call 911.

APPENDIX G

QC Documentation

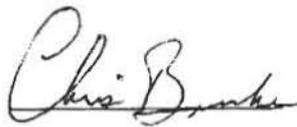
**Quality Assurance Certification
Site-Specific Safety and Health Plan**

**Mowing of Areas for Access to Groundwater Monitoring Wells,
Obtaining Water Level Elevations and Well Maintenance**

**Former Plum Brook Ordnance Works (PBOW)
Sandusky, Ohio**

**Contract DACW69-D-00-0021
Work Order 19**

This document is provided to certify that the members of the internal Independent Quality Control Team (IQCT) have reviewed the Site-Specific Safety and Health Plan in accordance with the Quality Control Plan. All comments resulting from the various reviews have been resolved and/or incorporated.

<u>Assignment</u>	<u>Name</u>	<u>Signature</u>	<u>Date</u>
<u>Senior Review</u>	David Beam		<u>3-5-02</u>
<u>Peer Review</u>	Chris Burke		<u>3-6-02</u>

QUALITY CONTROL REVIEW CHECKLIST

Site-Specific Safety and Health Plan

Mowing of Areas for Access to Groundwater Monitoring Wells, Obtaining Water Level Elevations and Well Maintenance

Former Plum Brook Ordnance Works (PBOW)
Sandusky, Ohio

Contract DACW69-D-00-0021
Work Order 19

The following checklist is provided for QC review of the SSHP for this project. Checklists are provided for guidance and shall not substitute for sound judgement in completion and review of QA/QC procedures.

- | | | |
|------------|--|-------|
| 1. | Introduction | _____ |
| 2. | Project Description | _____ |
| 3. | Hazard/Risk Analysis | _____ |
| 4. | Contractor Project Organization and Training | _____ |
| 5. | Safety Procedures/PPE Program | _____ |
| 6. | Site Control Measures | _____ |
| 7. | Decontamination Plan | _____ |
| 8. | Emergency Response and Contingency Plan | _____ |
| 9. | Record Keeping | _____ |
| 10. | References | _____ |
| Appendix A | Activity Hazard Analysis | _____ |
| Appendix B | Training Certificates | _____ |
| Appendix C | PPE Checklist, Misc. Forms | _____ |
| Appendix D | Medical Data Sheet/Medical Monitoring | _____ |
| Appendix E | Map | _____ |
| Appendix F | WasteTron Inc. General Safety Policy | _____ |
| Appendix G | Subcontractor's SSHP | _____ |
| Appendix H | QC Documentation | _____ |

Comments on Draft Site-Specific Safety and Health Plan
**Mowing of Areas for Access to Groundwater Monitoring
Wells, Obtaining Water Level Elevations and Well
Maintenance**

**Former Plum Brook Ordnance Works (PBOW)
Sandusky, Ohio**

**Contract DACW69-D-00-0021
Work Order 19**

The following comments were provided by the WasteTron Independent Quality Control Team (IQCT). All comments resulting from this review has been resolved and/or incorporated.

General: Please reconcile the use of the terms "on-site" and "on site" in the report. There is inconsistency with the usage of these throughout the report.

Response: Concur, change made

General: How will this plan apply to ICI, which has its own safety plan? Much of the work described in this safety plan pertains to ICI employees. Do the requirements of WasteTron's safety plan apply to ICI? What about the personnel roles and lines of authority? Who is the Project Manager/SSHO when ICI is gauging the wells? Who will conduct safety meetings? Will a WasteTron representative be on-site during well gauging activities? Additionally, do we need to review ICI's safety plan? Please reconcile these issues in this safety plan to insure that all safety procedures and responsibilities for both companies are adequately defined.

Response: Concur, additionally information has been added to Section 1.3 indicating that the WasteTron Project Manager has full responsibility for this project. The WasteTron Project manager will designate or will perform himself, oversight on ICI's work. The Project Manager or his designee will be onsite with ICI during well gauging activities. ICI's SSHP was supplied to WasteTron by the USACE POC. WasteTron was told to use ICI's previously approved SSHP for the work they were to perform. Therefore, it is not necessary for WasteTron to review a document already approved by the USACE.

1. Section 2.1; fifth sentence: Please insert a comma in "6500".

Response: Concur, change made

2. Section 2.2; sixth sentence: Please change "(PBEF)" to "(PBRF)".

Response: Concur, change made

3. Section 2.3.2; third sentence: Consider changing "number" to "numbers" in its first occurrence in the sentence.

Response: Concur, change made

4. Section 2.3.3; second bullet: Please change “tenth” to “hundredth”.

Response: Do Not Concur, The SOW specifies that the readings will be taken to a “Tenth”.

5. Section 3.2.4; first sentence: Will gasoline be used for a generator for pressure washer or for mowing equipment? Please modify as necessary.

Response: Concur change made to show mowing equipment will use gasoline.

6. Section 3.2.6; second bullet: Please insert a period at the end of the parenthesis.

Response: Concur, a period was inserted.

7. Section 3.3.5; fifth bullet; second sentence: Is “weed eater” a trademark name. Consider changing to “weed trimming equipment” or something similar; or to “Wee Eater®”. Also, after “push lawn mower,” please insert the words “and a”. Also, 25 feet might be an insufficient safe distance for these. Consider 50 feet. Please make these changes to the eighth bullet and to the Activity Hazard Analysis Sheets where applicable.

Response: Concur, a weed trimming device replaces weed eater. The distance of 25 feet will not be changed for a riding lawn mower. It is a sufficient distance.

8. Section 3.3.5: Consider adding a bullet to specify wearing PPE; especially safety glasses for trimming and push mowing equipment. I know this is covered under PPE, but this seems appropriate here. Please make this change to the Activity Hazard Analysis Sheets where applicable.

Response: Concur, a bullet was added stating that personnel were to conform to the PPE requirements of Section 5.1.

9. Section 3.3.5; fifteenth bullet; top of page 19: Consider rewording sentence to say: “Perform routine maintenance of mowing equipment prior to beginning work to ensure...”.

Response: Concur, change made

10. Section 3.3.5; eighteenth bullet: Please insert “and” before “dangling jewelry”.

Response: Concur, change made

11. Section 3.3.5; twenty-fourth bullet: Should “sear belt” be “seat belt”. If so, please change.

Response: Concur, change made

11. Section 3.3.5; third to last bullet: Please insert “and” after “immediately”.

Response: Concur change made

12. Section 7.1; second paragraph; second sentence: Please change “operation” to “operations”. Also, should this sentence say “field mowing and cleaning...”? Perhaps “clearing” is meant.

Response: Concur, change made

13. Section 7.2; first paragraph; second sentence: Consider changing “operations” to “operations”.

Response: concur, change made

15. Section 8.3; first sentence: Please insure there are two spaces after this sentence.

Response: concur, change made

**Comments on Draft Site-Specific Safety and Health Plan
Mowing of Areas for Access to Groundwater Monitoring Wells, Obtaining Water
Level Elevations and Well Maintenance**

**Former Plum Brook Ordnance Works (PBOW)
Sandusky, Ohio**

**Contract DACW69-D-00-0021
Work Order 19**

The following comments were provided by the Huntington District of the USACE. All comments resulting from this review has been resolved and/or incorporated.

1. Page 1, Paragraph 1.2. Change "EM 385-101" to EM 385-1-1".

Response: Concur, "EM 385-101" was changed to EM 385-1-1".

2. Page 2, Section 1.3, last sentence. "project" should be capitalized.

Response: Concur, Project was capitalized

3. Page 4, Paragraph 3.2. Should "SSHP" be changed to read "SSHO"?

Response: Concur, SSHP was changed to SSHO

4. Page 4, Paragraph 3.2. Metals (mainly lead) are also of concern throughout the site and may need to be included in the Chemical Hazards narrative. Revise plan as appropriate.

Response: Concur, Lead was added to this section on chemical hazards

5. Page 11, Paragraph 3.2.5, first sentence. Change "of" to "the".

Response: Changed "of" to "the"

6. Page 18, Paragraph 3.3.5, third bullet. Change "with" to "within".

Response: Concur, changed with to "within"

7. Page 20, Paragraph 4.1. Please include cell phone numbers if available.

Response: Concur, cell phone numbers were added.

8. Page 21, Paragraph 4.2.1. In the QCP, the Project Manager and SSHO are listed as one and the same, however, many there are many instances documented throughout the SSHP that list the Project Manager and SSHO as two people (i.e., The SSHO or the Project Manager). The QCP and SSHP should be consistent. Please revise the plan(s) as appropriate.

Response: Concur, the SSHP now clarifies the SSHO and QC duties. Furthermore, it specifies that Rodney Roberts will serve as the SSHO and Quality Control Officer if Gary Cooper is not on-site.

9. Page 24, continuation of Paragraph 6.2. The map showing the route to the hospital is located in Appendix E, not Appendix D.

Response: Concur, the correct appendix is now cited.

10. Page 25, Paragraph 8.5. Please revise Gary Cooper's cell phone number to the most current number possible and include a cell phone number for Lisa Humphreys.

Response: Concur, the most cell phone numbers have been provided.

11. Page 26, continuation of Paragraph 8.5. Same as comment #4.

Response: The comment actually references comment #9, and a change was made in section 8.5 to indicate the right appendix

12. Page 27, continuation of paragraph 8.8. A copy of the ENG Form 3394 is not located in Appendix C.

Response: Concur, ENG FORM 3394 was added

13. General comment. The USACE approved SSHP that was used for the FY01 mowing efforts was supplied to Wastetron so that the new SSHP for FY02 mowing efforts could be easily generated with minimal changes. A separate SSHP is not required for ICI, but rather, the subcontractor would be expected to comply with Wastetron's SSHP. Please revise the SSHP (if necessary) to include information for subcontractor's work (i.e., obtaining water elevations and well maintenance) and then remove the subcontractor's SSHP and any reference to it in the main body of the SSHP.

Response: Concur, this section was removed