SITE HEALTH AND SAFETY PLAN (*HASP*)

Office: Houston, TX
Site Name: Chemical Environmental Services (CES) (CES-HOU)
Client: US EPA Region 6
Work Location: Houston, TX
WO#: 20406.012.

9856255

SITE HEALTH AND SAFETY PLAN (HASP)

Prepared by: Vanessa Trevino	**W.O. Number: 20406.012.001.0747.01**	**Date:** 7/24/12

Project Identification Removal Action
Office: Houston, TX
Site Name: CES-HOU facility
Client: USEPA Region 6
Work Location Address: 4904 Griggs Rd, Houston, TX;

Site History: CES was a waste management company based out of Houston, Texas.The CES facility is currently abandoned and includes several tanker trailers among other containers (e.g., vessels, vats, etc.) of unknown material situated throughout the facility. A leaking tanker truck has been reported. The site was reported to the NRC for a reported discharge of unknown oil into the stormdrains and drainage ditches after heavy rains.

Scope of Work: Weston Solutions, Inc. (WESTON®) has been tasked by USEPA Region 6 under the EPA Region 6 Superfund Technical Assessment and Response Team (START-3) contract to provide technical assistance and documentation during the removal and disposal by the Emergency and Rapid Response Services (ERRS) contractor of wastes currently contained in a quantity of on-site drums, totes and other containers inside the facility in Houston, Texas. Other site activities will include routine air monitoring, air sampling as required and waste sampling as required.

Regulatory Status:

Site regulatory status:

CERCLA/SARA Agency	**RCRA**	**Other Federal**
☒ U.S. EPA	☒ U.S. EPA	☐ DOE
☒ State	☒ State	☐ USACE
☐ NPL Site	**NRC**	☐ Air Force
☐ OSHA	☐ 10 CFR 20	☐ _____

Hazard Communication (Req'd See Attachment D)
☒ 1910 ☐ 1926 ☒ State

Safety Officer Manual (Required to be On-Site)
Based on the Hazard Assessment and Regulatory Status, determine the Standard HASP(s) applicable to this project. Indicate below which Standard HASP will be used and append the appropriate pages of this form along with the Standard Plan.

☐ Stack Test ☐ _____
☐ Air Emissions ☐ _____
☐ Asbestos ☐ _____
☐ Industrial Hygiene ☐ _____
☒ Remediation ☐ _____

Review and Approval Documentation:

Approved by SCPC EHS Officer
Sam Cheek (Name (Print)) — Signature — Date: 8/6/2014

Approved by: Project Manager
Jeffrey Criner (Name (Print)) — Signature — Date: _____

Project start date: 8/2/2014 End date: TBD	This site HASP **must** be **reissued/reapproved** for any activities conducted after: Date: 2/4/2015	Amendment date(s) 1.	By:

PLEASE INCLUDE A SITE FIGURE INDICATING EXCLUSION ZONE, CRZ, Support Zone. Hand drawn with dates is ok.

Hazard Assessment and Equipment Selection:

In accordance with WESTON's Personal Protective Equipment Program and 29 CFR 1910.132, at the site prior to personnel beginning work, the FSO and/or the Site Manager have evaluated conditions and verified that the personal protective equipment selection outlined within this HASP is appropriate for the hazards known or expected to exist. (Refer to CEHS Program Manual Section 5, Personal Protection Program, for guidance.)

☒ **FSO** Ben Latham _____ Date: _____
Name Signature

☒ **Site Manager** **Tom Walzer** _____ Date: _____
Name Signature

☒ **Project Environmental Compliance Officer** **Tom Walzer** Date: _____
Name

☒ **Dangerous Goods Shipping Advisor** **Danny Newman** Date: _____
Name

Vehicle Use Assessment and Selection

Driving is one of the most hazardous and frequent activities for WESTON Employees. The most appropriate type vehicle(s) authorized for use on this project is/are:

1. F-150 crew cab or equivalent
2. SUV
3. 4-door sedan
4.

The following Project Team Member's qualifications and experience in driving these types of vehicles was evaluated and found to be acceptable (indicate vehicle type(s) number next to employee name).

1. Tom Walzer – 1-3
2. Jessica Quintanilla – 3 - new employee
3. Daniel Tighe – 1-3
4. Greg Balhoff – 1-3
5. Ben Latham- 1-3
6. Larry Howard- 1-3
7. Buck Wright -1-3
8. Vanessa Trevino 1-3
9.
10.

The project site was evaluated and a **Traffic Control Plan** ☐ is required ☒ is not required.

If required, the **Traffic Control Plan** can be found in Attachment H.

TABLE OF CONTENTS

Section	Page
1. PERSONNEL ON SITE INFORMATION	1-1
2. HEALTH AND SAFETY EVALUATION	2-1
3. SITE SECURITY	3-1
4. TASK BY TASK ASSESSMENT	4-1
5. MONITORING PROGRAM	5-3
6. HOSPITAL INFORMATION	6-2
7. DECONTAMINATION PLAN	7-1
8. TRAINING AND BRIEFING TOPICS/SIGN OFF SHEET	8-1

ATTACHMENTS

ATTACHMENT A	Chemical Contaminants Data Sheets
ATTACHMENT B	Material Safety Data Sheets
ATTACHMENT C	Safety Procedures/Field Operating Procedures (FLD Ops)
ATTACHMENT D	Hazard Communication Program
ATTACHMENT E	Air Sampling Data Sheets
ATTACHMENT F	Incident Reporting
ATTACHMENT G	Traffic Control Plan
ATTACHMENT H	Environmental Health & Safety Inspection Checklist
ATTACHMENT I	Hazard Checklist (Single Page)
ATTACHMENT J	Audit and Other Forms

1. PERSONNEL ON SITE INFORMATION

1.1 WESTON REPRESENTATIVES

Organization/Branch	Name/Title	Address	Telephone
WESTON	Tom Walzer / Project Team Leader	5599 San Felipe Ste 700 Houston, TX 77056	713-705-1467
WESTON	Jessica Quintanilla	5599 San Felipe Ste 700 Houston, TX 77056	210-885-8509
WESTON	Larry Howard	Baton Rouge, LA	
WESTON	Daniel Tighe	5599 San Felipe Ste 700 Houston, TX 77056	713-397-1550
WESTON	Greg Balhoff	5599 San Felipe Ste 700 Houston, TX 77056	832-549-6802
WESTON	Sean Gavlas	3900 Dallas Parkway ste 175 Plano TX 75093	609-433-8434
WESTON	Ben Latham FSO	**3900 Dallas Parkway ste 175 Plano TX 75093**	972-213-6618

Roles and Responsibilities:

WESTON onsite representatives – to inventory and sample drums, tanks, totes, and tankers present on-site. To perform perimeter air sampling in residential areas.

1.2 WESTON SUBCONTRACTORS

Organization/Branch	Name/Title	Address	Telephone
None during field activities. Analytical laboratory only (TBD)			

Roles and Responsibilities:

SITE-SPECIFIC HEALTH AND SAFETY PERSONNEL

The Site Field Safety Officer(s) (FSO) for activities to be conducted at this site are: Ben Latham

The FSO has total responsibility for ensuring that the provisions of this Site HASP are adequate and implemented in the field.

Changing field conditions may require decisions to be made concerning adequate protection programs. Therefore, the personnel assigned as FSOs are experienced and meet the additional training requirements specified by OSHA in 29 CFR 1910.120.

Qualifications:
40hr HAZWOPER training, 8hr site safety supervisor training, environmental compliance training, dangerous good shipping training, HAZCOM training, air monitoring and sampling training, and significant experience in similar projects.

Designated alternates include: Tom Walzer

1.3 SITE PERSONNEL AND CERTIFICATION STATUS

1.3.1 WESTON Employee Certification

Name: Tom Walzer **Title: Project Team Leader/FSO** **Task(s): All** **Certification Level or Description:** SHSC Level C ☒Medical Current ☒Training Current ☒Fit Test Current (Qual.) ☐Fit Test Current (Quant.)	**Name: Jessica Quintanilla** **Title: training** **Task(s): All** **Certification Level or Description:** none ☒Medical Current ☒Training Current ☒Fit Test Current (Qual.) ☐Fit Test Current (Quant.)
Name: Daniel Tighe **Title: Scientist** **Task(s): All** **Certification Level or Description:** none ☒Medical Current ☒Training Current ☒Fit Test Current (Qual.) ☐Fit Test Current (Quant.)	**Name: Greg Balhoff** **Title: Scientist** **Task(s): All** **Certification Level or Description:** ☒Medical Current ☒Training Current ☒Fit Test Current (Qual.) ☐Fit Test Current (Quant.)
Name: Sean Gavlas **Title: Scientist** **Task(s): All** **Certification Level or Description: none** ☒Medical Current ☒Training Current ☐Fit Test Current (Qual.) ☐Fit Test Current (Quant.)	**Name: Larry Howard** **Title: Scientist** **Task(s): All** **Certification Level or Description:** ☐Medical Current ☐Training Current ☐Fit Test Current (Qual.) ☐Fit Test Current (Quant.)
Name: Ben Latham **Title: FSO** **Task(s): All** **Certification Level or Description:** SHSC Level C ☒Medical Current ☒Training Current ☒Fit Test Current (Qual.) ☐Fit Test Current (Quant.)	

TRAINING CURRENT - Training: All personnel, including visitors, entering the exclusion or contamination reduction zones must have certifications of completion of training in accordance with OSHA 29 CFR 1910.120 and 29 CFR 1926.65.

FIT TEST CURRENT - Respirator Fit Testing: All persons, including visitors, entering any area requiring the use or potential use of any tight-fitting respirator must have had, as a minimum, a qualitative fit test, administered in accordance with OSHA 29 CFR 1910.134 or ANSI, within the last 12 months. If site conditions require the use of a full-face, tight-fitting, air-purifying respirator for protection from asbestos or lead, employees must have had a quantitative fit test, administered according to OSHA 29 CFR 1910.1001 or 1025/1926, within the last 12 months.

MEDICAL CURRENT - Medical Monitoring Requirements: All personnel, including visitors, entering the exclusion or contamination reduction zones must be certified as medically fit to work and to wear a respirator, if appropriate, in accordance with 29 CFR 1926/1910, or 29 CFR 1910.120.

The Site Field Safety Officer is responsible for verifying all certifications and fit tests are applicable and current. FSO certification is a WESTON training program to certify the officer has the experience and technical knowledge to act as the field manager.

All personnel who will be present at the site will be fit-tested before entering the site and will be capable of upgrading to Level C and/or Level B PPE at any time.

2. HEALTH AND SAFETY EVALUATION

2.1 HEALTH AND SAFETY EVALUATION

2.1.1 Task Hazard Assessment

Background Review: ☐ Complete ☒ Partial If partial why? **Additional information will be collected**

Activities Covered Under This Plan:

No.	Task/Subtask	Description	Schedule
1	Mobilization	Transport all equipment and materials to the project and establish site control zones	**August 2 2014**
2	Site Investigation	Collect photographic evidence and Inventory of containers on-site	August 2014
3	Sample Collection	Collection of samples from drums, tanks, totes and tankers present on-site and HazCat.	August 2014
4	Air Monitoring	Conduct monitoring to document impact, if any, to the support zone and surrounding properties	August 2014 - Demob

SCHEDULE:

Types of Hazards: Numbers refer to one of the following hazard evaluation forms. Complete hazard evaluation forms for each appropriate hazard class.

Physiochemical 1

- ☒ Flammable
- ☒ Explosive
- ☒ Corrosive
- ☒ Reactive
- ☐ O_2 Rich
- ☐ O_2 Deficient

Chemically Toxic 1

- ☒ Inhalation
- ☒ Ingestion
- ☒ Contact
- ☒ Absorption
- ☒ Carcinogen
- ☐ Mutagen
- ☐ Teratogen
- ☒ OSHA 1910.1000 Substance (Air Contaminants)
- ☒ OSHA Specific Hazard Substance Standard (Refer to following page for listing)

Radiation 3

Ionizing:

- ☐ Internal exposure
- ☐ External exposure

Non-ionizing:

- ☒ UV
- ☐ IR
- ☐ RF
- ☐ MicroW
- ☐ Laser

Biological 2

- ☐ Etiological Agent
- ☒ Other (plant, insect, animal)

Physical Hazards 4

- ☐ Construction Activities

Source/Location of Contaminants and Hazardous Substances:

Directly Related to Tasks

- ☒ Air
- ☒ Other Surface
- ☒ Groundwater
- ☒ Soil
- ☐ Surface Water
- ☐ Sanitary Wastewater

Indirectly Related to Tasks — Nearby Process(es) That Could Affect Team Members:

- ☒ Client Facility/WESTON Work Location
- ☒ Nearby Non-Client Facility

Describe: **Working in a residential area**

- ☒ Have activities (task[s]) been coordinated with facility

HEALTH AND SAFETY EVALUATION

2.1.2 Chemical Hazards of Concern

☐ **N/A**

Chemical Contaminants of Concern

Attach data sheets from an acceptable source such as NIOSH pocket guide, condensed chemical dictionary, ACGIH TLV booklet, etc. List chemicals and concentrations below and locate data sheets in Attachment A of this HASP.

☐ **N/A**

Identify hazardous materials used or on-site and attach Material Safety Data Sheets (MSDSs) for all reagent type chemicals, solutions, or other identified materials that in normal use in performing tasks related to this project could produce hazardous substances. Ensure that all subcontractors and other parties working nearby are informed of the presence of these chemicals and the location of the MSDSs. Obtain from subcontractors and other parties, lists of the hazardous materials they use or have on-site and identify location of the MSDSs here. List chemicals and quantities below and locate MSDSs in Attachment B of this HASP.

Chemical Name	Concentration	Chemical Name	Quantity
Unknowns		Calibration gases	
H2S	**Unknown**	liquinox	
VOCs	**Unknown**	ABC fire extinguisher	

OSHA-SPECIFIC HAZARDOUS SUBSTANCES

☐ 1910.1001 Asbestos	☐ 1910.1002 Coal tar pitch volatiles	☐ 1910.1003 4-Nitrobiphenyl, etc.	☐ 1910.1004 alpha-Naphthylamine
☐ 1910.1005 [Reserved]	☐ 1910.1006 Methyl chloromethyl ether	☐ 1910.1007 3,3'-Dichlorobenzidine (and its salts)	☐ 1910.1008 bis-Chloromethyl ether
☐ 1910.1009 beta-Naphthylamine	☐ 1910.1010 Benzidine	☐ 1910.1011 4-Aminodiphenyl	☐ 1910.1012 Ethyleneimine
☐ 1910.1013 beta-Propiolactone	☐ 1910.1014 2-Acetylaminofluorene	☐ 1910.1015 4-Dimethylaminoazobenzene	☐ 1910.1016 N-Nitrosodimethylamine
☐ 1910.1017 Vinyl chloride	☐ 1910.1018 Inorganic arsenic	☐ 1910.1025 Lead (Att. FLD# 46)	☐ 1910.1026 Chromium VI (att. FLD 53)
☐ 1910.1027 Cadmium (Att. 50 FLD)	☒ 1910.1028 Benzene (Att. FLD# 54 or 61)	☐ 1910.1029 Coke oven emissions	☐ 1910.1043 Cotton dust
☐ 1910.1044 1,2-Dibromo-3-chloropropane	☐ 1910.1045 Acrylonitrile	☐ 1910.1047 Ethylene oxide	☐ 1910.1048 Formaldehyde
☐ 1910.1050 Methylenedianiline	☐ 1910.1051 1,3 Butadiene	☐ 1910.1052 Methylene chloride	☐ 1926.60 Methylenedianiline
☐ 1926.62 Lead	☐ 1926.1101 Asbestos (Att. FLD 52)	☐ 1926.1127 Cadmium	

HEALTH AND SAFETY EVALUATION

2.1.3 Biological Hazards of Concern

☒ **Poisonous Plants** (FLD 43-D)

Location/Task No(s) **All**

Source: ☐ Known ☒ Suspect

Route of Exposure: ☐ Inhalation ☐ Ingestion ☒ Contact ☐ Direct Penetration

CONFIRM IN THE FIELD!!

Team Member(s) Allergic: ☐ Yes ☒ No

Immunization required: ☐ Yes ☒ No

☒ **Insects** (FLD 43-B)

Location/Task No(s) **All**

Source: ☐ Known ☒ Suspect

Route of Exposure: ☐ Inhalation ☐ Ingestion ☐ Contact ☒ Direct Penetration

CONFIRM IN THE FIELD

Team Member(s) Allergic: ☐ Yes ☒ No

Immunization required: ☐ Yes ☒ No

☒ **Snakes, Reptiles** (FLD 43-A)

Location/Task No(s) **All**

Source: ☐ Known ☒ Suspect

Route of Exposure: ☐ Inhalation ☐ Ingestion ☐ Contact ☒ Direct Penetration

Team Member(s) Allergic: ☐ Yes ☒ No

Immunization required: ☐ Yes ☒ No

☒ **Animals** (FLD 43-A)

Location/Task No(s) **All**

Source: ☐ Known ☒ Suspect

Route of Exposure: ☐ Inhalation ☐ Ingestion ☐ Contact ☒ Direct Penetration

Team Member(s) Allergic: ☐ Yes ☒ No

Immunization required: ☐ Yes ☒ No

FLD 43 — WESTON Biohazard Field Operating Procedures: Att. OP ☐

☐ **Sewage**

Location/Task No.(s):

Source: ☐ Known ☐ Suspect

Route of Exposure: ☐ Inhalation ☐ Ingestion ☐ Contact ☐ Direct Penetration

Team Member(s) Allergic: ☐ Yes ☐ No

Immunization required: ☐ Yes ☐ No

Tetanus Vaccination within Past 10 yrs: ☐ Yes ☐ No

☐ **Etiologic Agents** (FLD –C)**(List)**

Location/Task No.(s):

Source: ☐ Known ☐ Suspect

Route of Exposure: ☐ Inhalation ☐ Ingestion ☐ Contact ☐ Direct Penetration

Team Member(s) Allergic: ☐ Yes ☐ No

Immunization required: ☐ Yes ☐ No

FLD 43-C — Mold and Fungus. Att. OP ☐

FLD 44 — WESTON Bloodborne Pathogens Exposure Control Plan – First Aid Procedures: Att. OP ☒

FLD 45 — WESTON Bloodborne Pathogens Exposure Control Plan – Working with Infectious Waste: Att. OP ☐

HEALTH AND SAFETY EVALUATION

2.1.4 Radiation Hazards of Concern

NONIONIZING RADIATION

Task No.	Type of Nonionizing Radiation	Source On-Site	TLV/PEL	Wavelength Range	Control Measures	Monitoring Instrument
All	Ultraviolet	Solar			Appropriate clothing/ sunscreen	None
	Infrared	N/A				
	Radio Frequency	N/A				
	Microwave	N/A				
	Laser	N/A				

HEALTH AND SAFETY EVALUATION

2.1.5 Physical Hazards of Concern

Physical Hazard Condition	Physical Hazard	Attach OP	WESTON OP Titles
Loud noise	Hearing loss/disruption of communication	☒	Section 7.0 - ECH&S Program Manual Occupational Noise & HC Program
Inclement weather	Rain/humidity/cold/ice/snow/lightning	☒	FLD02 - Inclement Weather
Steam heat stress	Burns/displaced oxygen/wet working surfaces	☐	FLD03 - Hot Process - Steam
Heat stress	Burns/hot surfaces/low pressure steam	☐	FLD04 - Hot Process - LT3
Ambient heat stress	Heat rash/cramps/exhaustion/heat stroke	☒	FLD05 - Heat Stress Prevention/Monitoring
Cold stress	Hypothermia/frostbite	☐	FLD06 - Cold Stress
Cold/wet	Trench/paddy/immersion foot/edema	☐	FLD02 - Inclement Weather
Confined spaces	Falls/burns/drowning/engulfment/electrocution	☐	FLD08 - Confined Space Entry
Industrial Trucks	Fork Lift Truck Safety	☐	FLD09 – Powered Industrial Trucks
Improper lifting	Back strain/abdomen/arm/leg muscle/joint injury	☒	FLD10 - Manual Lifting/Handling Heavy Objects
Uneven surfaces	Vehicle accidents/slips/trips/falls	☒	FLD11 - Rough Terrain
Poor housekeeping	Slips/trips/falls/punctures/cuts/fires	☒	FLD12 - Housekeeping
Structural integrity	Crushing/overhead hazards/compromised floors	☐	FLD13 - Structural Integrity
Improper cylinder. handling	Mechanical injury/fire/explosion/suffocation	☐	FLD16 - Pressure Systems - Compressed Gases
Water hazards	Poor visibility/entanglement/drowning/cold stress	☐	FLD17 - Diving
Water hazards	Drowning/heat/cold stress/hypothermia/falls	☐	FLD18 - Operation and Use of Boats
Water hazards	Drowning/frostbite/hypothermia/falls/electrocution	☐	FLD19 - Working Over Water
Vehicle hazards	Struck by vehicle/collision	☒	FLD20 - Traffic
Explosions	Explosion/fire/thermal burns	☐	FLD21 - Explosives
Moving mechanical parts	Crushing/pinch points/overhead hazards/electrocution	☐	FLD22 – Earth Moving Equipment
Moving mech. parts	Overhead hazards/electrocution	☐	FLD23 – Cranes, Rigging, and Slings
Working at elevation	Overhead hazards/falls/electrocution	☐	FLD24 - Aerial Lifts/Man lifts
Working at elevation	Overhead hazards/falls/electrocution	☐	FLD25 - Working at Elevation
Working at elevation	Overhead hazards/falls/electrocution/slips	☐	FLD26 - Ladders
Working at elevation	Slips/trips/falls/overhead hazards	☐	FLD27 - Scaffolding
Trench cave-in	Crushing/falling/overhead hazards/suffocation	☐	FLD28 - Excavating/Trenching
Physiochemical	Explosions/fires from oxidizing, flam./corr. material	☒	FLD30 - Hazardous Materials Use/Storage
Physiochemical	Fire and explosion	☒	FLD31 - Fire Prevention/Response Plan Required
Physiochemical	Fire	☒	FLD32 - Fire Extinguishers Required
Structural integrity	Overhead/electrocution/slips/trips/falls/fire	☐	FLD33 - Demolition
Electrical	Electrocution/shock/thermal burns	☐	FLD34 - Utilities
Electrical	Electrocution/shock/thermal burns	☒	FLD35 - Electrical Safety
Burns/fires	Heat stress/fires/burns	☐	FLD36 - Welding/Cutting/Brazing/Radiography
Impact/thermal	Thermal burns/high pressure impaction/heat stress	☐	FLD37 - Pressure Washers/Sand Blasting
Impaction/electrical	Smashing body parts/pinching/cuts/electrocution	☒	FLD38 - Hand and Power Tools
Poor visibility	Slips/trips/falls	☐	FLD39 - Illumination
Fire/explosion	Burns/impaction	☐	FLD40 - Storage Tank Removal/Decommissioning
Communications	Disruption of communications	☒	FLD41 - Std. Hand/Emergency Signals
Energy/release	Unexpected release of energy	☒	FLD42 - Lockout/Tag-out
Biological Hazards	Biological Hazards at site	☒	FLD43 - Biological Hazards
Animals	Animals	☒	FLD43A - Animals
Insects	Stinging and Biting Insects	☒	FLD43B - Stinging and Biting Insects
Molds/Fungi	Molds and Fungi	☐	FLD43C - Molds and Fungi
Hazardous Plants	Hazardous Plants	☒	FLD43D - Hazardous Plants
Etiologic Agents	Etiologic Agents	☐	FLD43E - Etiologic Agents

2.1.5 Physical Hazards of Concern (Continued)			
Physical Hazard Condition	**Physical Hazard**	**Attach OP**	**WESTON OP Titles**
Biological Hazards/BBP	Biological Hazards/BBP at site/First Aid Providers	☒	FLD44 - Biological Hazards – Bloodborne Pathogens Exposure Control Plan – First Aid Providers
Infectious Waste	Infectious Waste at site/BBP/ at site/Infectious Waste	☐	FLD45 – Biological Hazards – Bloodborne Pathogens Exposure Control Plan – Work With Infectious Waste
Lead Contaminated sites	Lead poisoning	☐	FLD46 - Control of Exposure to Lead
Puncture/cuts	Cuts/ dismemberment/gouges	☐	FLD47 - Clearing, Grubbing and Logging Operations
Not applicable	Not applicable	☒	FLD48 – Federal, State, Local Regulatory Agency Inspections
Not applicable	Exposure to hazardous materials/waste	☒	FLD49 – Safe Storage of Samples
Cadmium	Exposure Control	☐	FLD50 – Cadmium Exposure Control Plan
Process Safety Procedure	Safety Procedure	☐	FLD51 – Process Safety Procedure
Asbestos	Asbestos Exposure	☐	FLD52 – Asbestos Exposure Control Plan
Hexavalent Chromium	Exposure Control Plan	☐	FLD53 – Hexavalent Chromium Exposure Control Plan
Benzene	Exposure Control Plan	☒	FLD54 - Benzene Exposure Control Plan
Hydrofluoric acid	Working with HF	☐	FLD55 – Working with Hydrofluoric Acid
Moving drill rig parts	Crushing/pinch points/overhead hazards/electrocution	☐	FLD56 – Drilling Safety
Vehicles/driving	Accidents,/fatigue/cell phone use	☒	FLD 57 – Motor Vehicle Safety
Improper material handling	Back injury/crushing from load shifts/equipment/tools	☒	FLD 58 – Drum Handling Operations
COC decontamination	COCs/slip,trip, and falls/waste generation/environmental compliance/PPE	☒	FLD59 - Decontamination
Drilling hazards	Electrocution/overhead hazards/pinch points	☐	Environmental Remediation Drilling Safety Guideline - 2005
Fatigue	Long work hours	☒	FLD60 – Employee Duty Schedule
Benzene/Gasoline	Benzene exposure	☐	FLD61 – Gasoline Contaminant Exposure
Cardiac Arrest	Accident/Heart Attack	☐	FLD62 – 2009 Automatic External Defibrillator (AED) Program Guidelines
Ionizing Radiation	Ioninaing Radiation	☐	FLD63 – Using Handheld X-Ray Fluorescence (XRF) Analyzers
Working Alone	Isolated Working Conditions	☐	FLD64 – Employees Working Alone

3. SITE SECURITY

3.1 SITE SECURITY ASSESSMENT FORM

DESCRIPTION	
Site Name and Location: CES-HOUSTON	**Employees and Subcontractors on Site:** WESTON, and USEPA
Type of Work: Site investigation, waste sampling, air monitoring, and removal of contents of on-site containers.	
Projected Start Date: 8/2/2014	**Projected Completion Date: TBD**
SURROUNDING AREA ***(urban/suburban/rural; residential/commercial/industrial; traffic volume, population density, etc.)***	
Industrial/Residential	
THREAT INDICATORS ***(apparent social, economic, political, ethnic, criminal, gang related, and other risk factors)***	
Area is known to have some hostile persons.	
COUNTERMEASURES ***(Current and projected risk mitigation factors)***	
Security Systems (Reference Site Security Checklist): Site is a fenced facility. Site boundaries are fenced. Zones will be established and will be clearly marked with cones or tape, and signage, and personnel will be present at all times to prevent unauthorized traffic.	
Security Procedures (Reference Site Security Checklist): Buddy system will be used, cell phones will be kept on your person when possible	
Closest police station location and contact information: Houston PD – 911	
Other relevant observations or information to factor into the Site Security Plan:	
OVERALL SECURITY ASSESSMENT ***(Submit "Medium" and "High" risk assessments to Corporate Security for review)***	
Risk Level: ☒ **Low** ☐ **Medium** ☐ **High**	**Date: 8/4/2014**
Site Safety Officer: Ben Latham	**PC Safety Manager: Sam Cheek**
USE ATTACHMENTS FOR ADDITIONAL COMMENTS, MAPS AND DIAGRAMS	

4. TASK BY TASK ASSESSMENT

4.1 TASK-BY-TASK RISK ASSESSMENT

4.1.1 Task 1 Description

TASK 1 : Mobilization/ Demob: Prior to intrusive work, WESTON will mobilize to the site to set up work zones and decontamination areas. Work zones (including the exclusion zone, contamination reduction zone and support zone) will be set up. The support zone will be set up upwind of the impacted area. Site wind socks and wind direction indicators will be identified or set up in the work area.

EQUIPMENT REQUIRED/USED

Hard hat	**Log book**	**First aid kit**	**TVA**
Reflective safety vest	**Ear plugs**	**5-gas meter**	
	Fire Extinguisher	**Ultra-Rae PID**	
		Mini-Rae PID	
Steel toe boots	**Camera**	**Personal H_2S**	
Boot covers	**PID**	**monitors**	
Nitrile gloves			
Safety glasses	**BBP kit**	**Eyewash**	

POTENTIAL HAZARDS/RISKS

Chemical

☒ Hazard Present Risk Level: ☐ H ☐ M ☒ L

What justifies risk level? Chemical hazards should not pose a significant risk during this activity.
Action levels and associated PPE should protect against identified chemical hazards. Primary COC is **H_2S and Unknown chemicals . See Section 5.3 Action Levels for air monitoring action levels and PPE response actions.**

Physical

☒ Hazard Present Risk Level: ☐ H ☒ M ☐ L

What justifies risk level?
Any facility traffic rules (i.e.,speed limit, no cell phone use while driving, yield to heavy equipment, etc.) and signs will be followed. Good house-keeping procedures shall be used to mitigate physical hazards and prevent slips, trips, falls. Proper lifting techniques will be used. Heat stress and dehydration hazards will be minimized using established work/ rest regimine and mandatory water breaks.

Biological

☒ Hazard Present Risk Level: ☐ H ☐ M ☒ L

What justifies risk level?
Exposure to biological hazards will be at a minimum in the area. Bug repellent shall be worn to minimize exposure to insects. Snake leggings will be worn in vegetation and any area suspicious of being a snake-habitat. Animals (stray dogs) could be present in the residential areas.

RADIOLOGICAL

☒ Hazard Present Risk Level: ☐ H ☐ M ☒ L

What justifies risk level?
Exposure to UV rays of the sun can be reduced by proper clothing or sunblock. Any exposed skin will receive several coatings of sunblock to reduce UV exposure.

LEVELS OF PROTECTION/JUSTIFICATION

Modified Level D for this task. Level C will be required if Action Levels are exceeded. See section 5.3 for Action Level details.

SAFETY PROCEDURES REQUIRED AND/OR FIELD OPS UTILIZED

All work will be performed in accordance with the provisions of this HASP, OSHA guidelines, and WESTON Standard Operating Procedures.

TASK-BY-TASK RISK ASSESSMENT

4.1.2 Task 2 Description

TASK 2: Site Investigation: Inventory of drums, tanks, totes, and tankers on-site. Monitor for LEL, O_2, H_2S, and VOC.

EQUIPMENT REQUIRED/USED

Hard hat	**Log book**	**First aid kit**	**APR/ PAPR or SCBA**
Reflective safety vest	**Ear plugs**	**5-gas meter**	**Tyvek**
	Fire extinguisher	**Ultra-Rae PID**	
		Mini-Rae PID	
Steel toe boots	**Camera**	**Personal H_2S monitors**	**Cresol & benzene draeger tubes**
Boot covers	**PID**		
Nitrile gloves		**TVA-1000**	
Safety glasses/ goggles	**BBP kit**	**Eye wash**	

POTENTIAL HAZARDS/RISKS

Chemical

☒ Hazard Present Risk Level: ☐ H ☒ M ☐ L

What justifies risk level? Personnel will be in closer proximity to storage containers during this task.
Action levels and associated PPE should protect against identified chemical hazards. Primary COC are **H_2S and Unknown Chemicals. See Section 5.3 Action Levels for air monitoring action levels and PPE response actions.**

Physical

☒ Hazard Present Risk Level: ☐ H ☒ M ☐ L

What justifies risk level?
Heat stress, dehydration, slip/trip/falls are the biggest hazards. **Work will be conducted in Level D PPE unless action levels require differently**. A proper work rest program should be established and increased fluid intake. Good house keeping procedures shall be used to mitigate physical hazards and prevent slips, trips and falls. Other hazards could include weather, noise, hand injury from tools or machinery.

Biological

☒ Hazard Present Risk Level: ☐ H ☐ M ☒ L

What justifies risk level?
Exposure to biological hazards will be at a minimum in the area. Bug repellent shall be worn to minimize exposure to insects. Snake leggings will be worn in vegetation and any area suspicious of being a snake-habitat.

RADIOLOGICAL

☒ Hazard Present Risk Level: ☐ H ☐ M ☒ L

What justifies risk level?
Exposure to UV rays of the sun can be reduced by proper clothing or sunblock. Any exposed skin will receive several coatings of sunblock to reduce UV exposure.

LEVELS OF PROTECTION/JUSTIFICATION

Potential for Level C as the minimum PPE for this task or Level B will be required if Action Levels are exceeded. See section 5.3 for Action Level details. Personal **H_2S monitor.**

SAFETY PROCEDURES REQUIRED AND/OR FIELD OPS UTILIZED

All work will be performed in accordance with the provisions of this HASP, OSHA guidelines, and WESTON Standard Operating Procedures.

TASK-BY-TASK RISK ASSESSMENT (Continued)

4.1.3 Task 3 Description

TASK 3: Sample Collection: collection of samples from drums, tanks, totes, and tankers and submit the samples to a laboratory for analysis. Sample collection will utilize a cherry picker/boom to access the top of a storage tank.

EQUIPMENT REQUIRED/USED

Hard hat	**Log book**	**First aid kit**	**APR/ PAPR/ SCBA**
Flame retardant	**Ear plugs**	**5-gas meter**	**Fire extinguisher**
Clothing	**Safety goggles**	**Ultra-Rae PID**	**Medical Monitoring Kit**
Reflective safety vest		**Mini-Rae PID**	
Steel toe boots	**Camera**	**Personal H_2S monitors**	**Tyvek/ Saranex**
Boot covers	**PID**		
Nitrile gloves			
Safety glasses	**BBP kit**		

POTENTIAL HAZARDS/RISKS

Chemical

☒ Hazard Present Risk Level: ☒ H ☒ M ☐ L

What justifies risk level? Potential for exposure to chemicals

Action levels and associated PPE should protect against identified chemical hazards. Primary COC are **H_2S and Unknown Chemicals.See Section 5.3 Action Levels for air monitoring action levels and PPE response actions. WESTON will be opening tank trucks to collect samples.**

Physical

☒ Hazard Present Risk Level: ☒ H ☐ M ☐ L

What justifies risk level?

Contents of the tanks may have pressurized the tank or crystals may have formed in the material present. Heat stress, dehydration, slip/trip/falls are the biggest hazards. Sampling will be conducted in Level B PPE and collected from utitlizing a boom to access the top of the tanks. Medical Monitring will be conducted to monitor heat stress. A proper work rest program should be established. Good house keeping procedures shall be used to mitigate physical hazards and prevent slips, trips and falls. Perimeter oversight personnel will be in modified Level D PPE with the potential to upgrade based on Action Levels.

Biological

☒ Hazard Present Risk Level: ☐ H ☐ M ☒ L

What justifies risk level?

Exposure to biological hazards will be at a minimum in the area. Bug repellent shall be worn to minimize exposure to insects. Snake leggings will be worn in vegetation and any area suspicious of being a snake-habitat.

RADIOLOGICAL

☒ Hazard Present Risk Level: ☐ H ☐ M ☒ L

What justifies risk level?

Exposure to UV rays of the sun can be reduced by proper clothing or sunblock. Any exposed skin will receive several coatings of sunblock to reduce UV exposure.

LEVELS OF PROTECTION/JUSTIFICATION

Assumed Level B PPE will be required for personnel conducting sampling activities. Level D PPE with air monitoring equipment. Upgrade PPE per Section 5.2 of this HASP. Nitrile gloves will be added to Level D. Personal H_2S monitor.

SAFETY PROCEDURES REQUIRED AND/OR FIELD OPS UTILIZED

Fall Awareness training, Training on operation of the boom equipment Medical monitoring will be conducted to prevent Heat Stress. Sympotons of heat stress will be review during the daily safety briefing. A break area will be provided.

TASK-BY-TASK RISK ASSESSMENT (Continued)

4.1.4 Task 4 Description

TASK 4: Perimeter Monitoring: Conduct air monitoring in the support zone to document impact, if any, to the surrounding population. Monitor wind direction to determine if locations need to be adjusted during the day.

EQUIPMENT REQUIRED/USED

Hard hat	**Log book**	**First aid kit**
Reflective safety vest	**Ear plugs**	**5-gas meter**
	Safety goggles	**Ultra-Rae PID**
		Mini-Rae PID
Steel toe boots	**Camera**	**Personal H_2S monitors**
Nitrile gloves	**PID**	
Safety glasses	**BBP kit**	

POTENTIAL HAZARDS/RISKS

Chemical

☒ Hazard Present Risk Level: ☐ H ☐ M ☒ L

What justifies risk level?

Action levels and associated PPE should protect against identified chemical hazards. Primary COC are **H_2S and Unknown Chemicals. See Section 5.3 Action Levels for air monitoring action levels and PPE response actions. Approach alarming fixed point monitoring stations from upwind or crosswind with personal monitors for H_2S, VOC, Cl, LEL, CO, O_2**

Physical

☒ Hazard Present Risk Level: ☐ H ☒ M ☐ L

What justifies risk level?

Good house keeping procedures shall be used to mitigate physical hazards and prevent slips, trips and falls. Heat stress and dehydration will be minimized by observing work/ rest regimine and required water breaks. Situational awareness to changing weather conditions, trip hazards, and prime snake habitat will help minimize the exposure to these risks.

Biological

☒ Hazard Present Risk Level: ☐ H ☐ M ☒ L

What justifies risk level?

Exposure to biological hazards will be at a minimum in the area. Bug repellent shall be worn to minimize exposure to insects. Snake leggings will be worn in vegetation and any area suspicious of being a snake-habitat.

RADIOLOGICAL

☒ Hazard Present Risk Level: ☐ H ☐ M ☒ L

What justifies risk level?

Exposure to UV rays of the sun can be reduced by proper clothing or sunblock. Any exposed skin will receive several coatings of sunblock to reduce UV exposure.

LEVELS OF PROTECTION/JUSTIFICATION

Level D PPE shall be worn for this task unless action levels are exceeded. Personnel will approach from upwind or crosswind locations. Personnel will have personal monitoring conducted at all times.

SAFETY PROCEDURES REQUIRED AND/OR FIELD OPS UTILIZED

4.2 PERSONNEL PROTECTION PLAN

Engineering Controls
Describe Engineering Controls used as part of Personnel Protection Plan:

Task(s)	
All	Wind direction. Approach all hazards from upwind. Openings and valves will be closed with proper lids, covers, valves, etc. to prevent vapor migration.

Administrative Controls
Describe Administrative Controls used as part of Personnel Protection Plan:

Task(s)	
All	Regulated zones delineation, Security fencing around facility, site air monitoring for Benzene, Site H&S meeting will be held at the beginning of each day to discuss H&S issues.
All	All WESTON personnel and subcontractors will be required to read and sign company specific HASPs.
All	Only persons with appropriate training will be allowed within the exclusion zones.
All	Site personnel are 40-Hour HAZWOPER trained pursuant to Title 29 CFR 1910.120
All	HAZWOPER Supervisor will be present during all work. Medical Monitoring will be conducted to insure personnel are not overcome by the heat

Personal Protective Equipment
Action Levels for Changing Levels of Protection. Refer to Site Air Monitoring Program—Action Levels. Define Action Levels for up or down grade for each task:

Task(s)	
All	Proper PPE shall be utilized. Refer to Site Air Monitoring Program – Action Levels for details. Aniticipate up to Level B PPE. H_2S requires Level B PPE.

Description of Levels of Protection

Level D		Level D Modified	
Task(s): NA		**Task(s**): All	
☐ Head		☒ Head	Hard hat
☒ Eye and Face	Safety glasses	☒ Eye and Face	Safety glasses, safety goggles
☐ Hearing		☒ Hearing	Ear plugs
☐ Arms and Legs Only		☒ Arms and Legs Only	snake chaps
☒ Appropriate Work Uniform	Long Pants	☒ Whole Body	reflective safety vests
☐ Hand – Gloves		☐ Apron	
☒ Foot - Safety Boots		☒ Hand - Gloves	Use of gloves to be determined by site supervisor and documented in daily JSA.
☐ Fall Protection		☒ Gloves	Leather
☐ Flotation		☒ Gloves	Nitrile
☐ Other		☒ Foot - Safety Boots	Steel toe boots
		☒ Over Boots	Yellow rubber or equivalent

4.3 DESCRIPTION OF LEVELS OF PROTECTION

Level C		Level B	
Task(s): All		**Task(s):** All	
☒ Head	Hard hat	☒ Head	Hard hat
☒ Eye and Face	Full face respirator mask	☒ Eye and Face	Full face SCBA mask
☒ Hearing	Ear plugs	☒ Hearing	Ear plugs
☐ Arms and Legs Only		☐ Arms and Legs Only	
☒ Whole Body		☒ Whole Body	Saranex suit with flame retardant clothing
☐ Apron	Tyvek	☐ Apron	
☒ Hand – Gloves	As necessary	☒ Hand – Gloves	As necessary
☒ Gloves	Leather	☒ Gloves	Leather
☒ Gloves	Nitrile	☒ Gloves	Nitrile
☒ Foot - Safety Boots	Steel toe boots	☒ Foot - Safety Boots	Steel toe boots
☒ Outer Boots	Cover booties	☒ Outer Boots	Cover booties
☐ Boots (Other)		☐ Boots (Other)	
☐ Half Face		☐ SAR - Airline	
☐ Cart./Canister		☒ SCBA	Tight fitting mask with escape bottle
☒ Full Face	APR	☐ Comb. Airline/SCBA	
☒ Cart./Canister	GME-P100 or GMC-P100	☐ Cascade System	
☒ PAPR	PAPR	☐ Compressor	
☐ Cart./Canister		☐ Fall Protection	
☐ Type C		☐ Flotation	
☐ Fall Protection		☐ Other	
☐ Flotation			
☐ Other			

4.4 Underground Utilities

A One Call utility locate will be completed prior to any intrusive work.

TICKET #: _____

5. MONITORING PROGRAM

5.1 SITE OR PROJECT HAZARD MONITORING PROGRAM

5.1.1 Air Monitoring Instruments

Instrument Selection and Initial Check Record
Reporting Format: ☒ DEDICATED Field Notebook ☒ Field Data Sheets* ☒ Air Monitoring Log ☐ Trip Report ☐ Other

Instrument	Task No.(s)	Number Required	Number Received	Checked Upon Receipt	Comment	Initials
☐ **RAD**				☐		
☐ GM (Pancake)				☐		
☐ NaI (Micro R)				☐		
☐ ZnS (Alpha Scintillator)				☐		
☐ Other _____				☐		
☒ **PID**				☐		
☐ MiniRAE	All	1 total		☐		
☒ MultiRAE (LEL/O_2/H_2S/CO/VOC)	All	1		☐		
☐ TVA 1000 (PID/FID)				☐		
☒ Other UltraRAE (benzene)	All	1		☐		
☐ **FID**						
☒ TVA 1000 (FID/PID)				☐		
☐ Other _____				☐		
☐ **PDR 1000 (Particulate)**				☐		
☒ **Single Gas Meter (SGM)**				☐		
Specify Chemical: Cl, H_2S	All	All on-site		☐		
☒ **Personal Sampling Pump**				☐		
Specify Media: Cl, H_2S				☐		
☐ Bio-Aerosol Monitor				☐		
☒ Tubes/type: Benzene (Draeger tubes)	All	1				
☒ Tubes/type: Cresol						
☐ Tubes/type: _____						
☐ Tubes/type: _____						

All calibrations, bump tests, and results readings performed and obtained during the project will be recorded in either the field log book, on the field data sheets, or both.

5.1 SITE OR PROJECT HAZARD MONITORING PROGRAM

5.1.1 Air Monitoring Instruments Calibration Record

Instrument, Mfg., Model, Equip. ID No.	Date	Time	Calib. Material	Calib. Method Mfg.'s	Other	Initial Setting and Reading	Final Setting and Reading	Calibrator's Initials

5.2 SITE AIR MONITORING PROGRAM

Action Levels

These Action Levels, if not defined by regulation, are some percent (usually 50%) of the applicable PEL/TLV/REL. That number must also be adjusted to account for instrument response factors.

	Tasks	Action Level		Action
☒ **Explosive atmosphere**	All	Ambient Air Concentration	Confined Space/Hot Work Areas Concentration	
		<5% LEL	0% LEL	Work may continue. Consider toxicity potential.
		5% to 10% LEL	>0% LEL	STOP WORK. A High Risk form must be completed and signed off by the authorizing managers.
		>25% LEL	>10% LEL	Work must stop. Ventilate area before returning.
☒ **Oxygen**	All	Ambient Air Concentration	Confined Space Concentration	
		<19.5% O_2	<20% O_2	Leave area. Re-enter only with self-contained breathing apparatus.
		19.5% to 23% O_2	20% to 22% O_2	Work may continue. Investigate changes from 21%.
		>23% O_2	>22% O_2	Work must stop. Ventilate area before returning.
☐ **Radiation**		< 3 times background		Continue work.
		3 times background to < 1 mR/hour		Radiation above background levels (normally 0.01-0.02 mR/hr) signifies possible radiation source(s) present. Continue investigation with caution. Perform thorough monitoring. Consult with a Health Physicist.
		> 1 mrem/hour		Potential radiation hazard. Evacuate site. Continue investigation only upon the advice of Health Physicist.
☒ **Organic gases and vapors**	All	**0 – 0.5 ppm benzene/voc = 0.9 PID units**		**Work may proceed in Modified Level D if benzene is ruled out by sampling**
		0.5 – 10.0 ppm VOCs		**Level D if benzene and cresol is ruled out by sampling**
		< 150 ppm VOCs		**Level C if benzene and cresol is ruled out by sampling PPE required.**
		>150 ppm VOCs		**Level B PPE**
	All	**H_2S > 10 ppm**		**Level B PPE (APR cartridge is escape only)**
☒ **Inorganic gases, vapors, and particulates**	ALL	Breathing Zone – 2.5 mg/m^3		Implement enginnering controls to lower nuisance dust ior upgrade to Level C if above 2.5 mg/m^3

5.3 ACTION LEVELS

If unadulterated benzene is the contaminant and the total reading with a FID or PID(10.6 lamp calibrated to Isobutylene) is:

- 0 – 0.5 unit = Level D
- 0.5 – 5 units = Level C, with qualitative fit-test
- 5 units or greater = Level B, or Level C with a quantitative fit-test resulting in a protection factor adequate for the maximum measured concentration of the contaminant.

Readings must be continuous and documented at 30- minute intervals (or more frequently) during periods of employee exposure. During container-opening operations, or other tasks where benzene exposure could be high, readings must be documented at 15-minute intervals. All action level monitoring is to be conducted at breathing zone locations.

For Level C operations, a full face air-purifying respirator with organic vapor cartridges must be used. Cartridges must be changed at end of service life not to exceed 4-hour periods. Cartridges must be marked with the date and time upon unsealing to ensure that replacement occurs as required.

The presence of Benzene must be ruled out utilizing chemical specific sampling tubes.

Cresol PEL = 5 ppm
Cresol REL = 2.5 ppm
Action Level = 2.5 ppm
RAE correction factor = 0.50
PID response = 5 ppm – upgrade to Level C PPE

The presence of Cresol must be ruled out utilizing chemical specific sampling tubes

H2S – PEL = 10 ppm
RAE PID does not respond well, correction factor = 3.3
Use H2S specific monitor
WESTON AL = 5 ppm and will be monitoried for with a chemically specific sensor
IDLH = 100 ppm

6. HOSPITAL INFORMATION

6.1 CONTINGENCIES

6.1.1 Emergency Contacts and Phone Numbers

Agency	Contact	Phone Number
WorkCare WESTON Medical Director WorkCare WESTON Program Administrator	**Dr. Peter Greaney** **Heather Lind**	**From 6 am to 4:30 pm Pacific Time** call 800-455-6155 and dial 0 for the Operator or ext. 475 for Heather Lind to request the on-call clinician.
After-Business Hours Contact (In Case of Emergency Only)		**4:31 p.m. – 5:59 a.m. Pacific Time, all day Saturday, Sunday, and Holidays** call 800-455-6155 Dial 3 to reach the after-hours answering service. Request that the service connect you with the on-call clinician or the on-call clinician will return your call within 30 minutes.
WESTON Health & Safety	**James Davis**	**334.319.0380 (cell)**
WESTON SCPC H&S	**Sam Cheek**	**469-374-7785/972-977-1579 (cell)**
WESTON Health & Safety Local Safety Officer	**Ben Latham**	**972-213-6618**
Fire Department	**Houston FD**	**911**
Police Department	**Houston PD**	**911**
WESTON PM Cell Phone	**Jeff Criner**	**713-985-6627 (cell: 713-444-4410)**
Client Site Phone		
Site Telephone		
Nearest Telephone		
Poison Control		**(800) 222-1222**

Local Medical Emergency Facility(s)

Name of Hospital: **Houston Methodist Hospital**		
Address: **6550 Fannin St Houston TX 77030**		Phone No.: 713-441-2245
Name of Contact:		Phone No.: 911
Type of Service: ☐ Physical trauma only ☐ Chemical exposure only ☒ Physical trauma and chemical exposure ☒ Available 24 hours CONFIRM	**Route to Hospital:** **(See Attached)**	**Travel time from site:** 12 min **Distance to hospital:** 4mi **Name/no. of 24-hr ambulance service:** 911

–.

6.1.2 Hospital Map

6.1 CONTINGENCIES

6.1.3 Response Plans

Medical - General	First Aid Kit: ☒ Yes ☐ No Blood Borne Pathogens Kit: ☒ Yes ☐ No	**Type** Standard 20-man and infection control kit	**Location** In Vehicle	Special First-Aid Procedures: Cyanides on-site ☐ Yes ☒ No If yes, contact LMF. Do they have antidote kit? ☐ Yes ☐ No
Provide first aid, if trained; assess and determine need for further medical assistance. Transport or arrange for transport after appropriate decontamination. All WESTON personnel on-site are first aid/CPR/BBP-trained.	Eyewash required ☒ Yes ☐ No	**Type**	**Location** In Support Zone	**HF** on-site ☐ Yes ☒ No If yes, need neutralizing ointment for first-aid kit. Contact LMF.
	Shower required ☐ Yes ☒ No	**Type**	**Location**	

Plan for Response to Spill/Release		**Plan for Response to Fire/Explosion**		**Fire Extinguishers**
In the event of a spill or release, ensure safety, assess situation, and perform containment and control measures, as appropriate. ½œ@re safety, assess situation, and perform containment and control measures as appropriate:	a. Cleanup per MSDSs if small; or sound alarm, call for assistance, notify Emergency Coordinator b. Evacuate to pre-determined safe place c. Account for personnel d. Determine if team can respond safely e. Mobilize per Site Spill Response Plan	In the event of a fire or explosion, ensure personal safety, assess situation, and perform containment and control measures, as appropriate:	a. Sound alarm and call for assistance, notify Emergency Coordinator b. Evacuate to predetermined safe place c. Account for personnel d. Use fire extinguisher only if safe and trained in its use e. Stand by to inform emergency responders of materials and conditions	Type/Location ABC/Vehicle / / / / / /
Description of Spill Response Gear	Location	Description (Other Fire Response Equipment)		Location

Plan to Respond to Security Problems
Site Security onsite 24/ 7. Personnel will establish rally points ICE.

7. DECONTAMINATION PLAN

7.1 GENERAL DECONTAMINATION PLAN

Personnel Decontamination

Consistent with the levels of protection required, step-by-step procedures for personnel decontamination for each level of protection are attached.

ALL decontamination will be “dry” unless site condition warrant the use of a wet decon.

Levels of Protection Required for Decontamination Personnel

The levels of protection required for personnel assisting with decontamination will be:

☐ Level B ☐ Level C ☒ Level D

Modifications include:

Tyvek or chemical resistant coveralls, nitrile gloves
LEVELS OF PROTECTION WILL BE DETERMINED BY AIR MONITORING.

Disposition of Decontamination Wastes

Provide a description of waste disposition including identification of storage area, hauler, and final disposal site, if applicable

Disposable equipment will be used where possible and will be disposed of in plastic trash bags.

All generated wastes will be accumulated; after the project is complete waste will be properly disposed of.

Equipment Decontamination

ALL decontamination will be “dry” unless site condition warrant

Sampling Equipment Decontamination

Sampling equipment will be decontaminated in accordance with the following procedure:

Non-disposable equipment will be decontaminated using a non-phosphate detergent and rinsed clean with water. Decontamination water will be disposed in accordance with other potentially contaminated water by transferring to drums for subsequent disposal.

7.2 LEVEL D DECONTAMINATION PLAN

Check indicated functions or add steps, as necessary:

Function	Description of Process, Solution, and Container
☒ Segregated equipment drop	Drop on visqueen
☐ Boot cover and glove wash	
☐ Boot cover and glove rinse	
☐ Tape removal - outer glove and boot	
☒ Boot cover removal	Dispose of in trash bags
☒ Outer glove removal	Dispose of in trash bags
HOTLINE	
☐ Suit/safety boot wash	
☐ Suit/boot/glove rinse	
☐ Safety boot removal	
☐ Suit removal	
☐ Inner glove wash	
☐ Inner glove rinse	
☐ Inner glove removal	
☐ Inner clothing removal	
CONTAMINATION REDUCTION ZONE (CRZ)/SAFE ZONE BOUNDARY	
☒ Field wash	Wash hands and face before hand-to-mouth contact.
☐ Redress	

Disposal Plan, End of Day:

All waste PPE will be double-bagged in plastic trash bags and stored on site. Dispose of IDW wastes including all PPE and disposable sampling equipment in an appropriate drum or dumpster in compliance with all applicable regulations.

Disposal Plan, End of Week:

Same as daily disposal plan.

Disposal Plan, End of Project:

Same as daily disposal plan.

7.3 LEVEL C DECONTAMINATION PLAN

Check indicated functions or add steps, as necessary:

Function	Description of Process, Solution, and Container
☒ Segregated equipment drop	Drop on visqueen
☒ Boot cover and glove wash	In plastic kiddie pool
☒ Boot cover and glove rinse	In plastic kiddie pool
☒ Tape removal - outer glove and boot	Dispose of in trash bags
☒ Boot cover removal	Dispose of in trash bags
☒ Outer glove removal	Dispose of in trash bags
HOTLINE	
☒ Suit/safety boot wash	In plastic kiddie pool
☒ Suit/boot/glove rinse	In plastic kiddie pool
☒ Safety boot removal	Drop on visqueen
☒ Suit removal	In plastic kiddie pool
☒ Inner glove wash	In plastic kiddie pool
☒ Inner glove rinse	In plastic kiddie pool
☒ Facepiece removal	
☒ Inner glove removal	Dispose of in trash bags
☐ Inner clothing removal	
CONTAMINATION REDUCTION ZONE (CRZ)/SAFE ZONE BOUNDARY	
☒ Field wash	Wash hands and face before hand-to-mouth contact.
☐ Redress	

Disposal Plan, End of Day:

All waste PPE will be double-bagged in plastic trash bags and stored on site. Dispose of IDW wastes including all PPE, water, and disposable sampling equipment in an appropriate drum or dumpster in compliance with all applicable regulations.

Disposal Plan, End of Week:

Same as daily disposal plan.

Disposal Plan, End of Project:

Same as daily disposal plan.

7.4 LEVEL B DECONTAMINATION PLAN

Check indicated functions or add steps, as necessary:

Function	Description of Process, Solution, and Container
☒ Segregated equipment drop	Drop on visqueen
☒ Boot cover and glove wash	In plastic kiddie pool
☒ Boot cover and glove rinse	In plastic kiddie pool
☒ Tape removal - outer glove and boot	Dispose of in trash bags
☒ Boot cover removal	Dispose of in trash bags
☒ Outer glove removal	Dispose of in trash bags
HOTLINE	
☒ Suit/safety boot wash	In plastic kiddie pool
☒ Suit/SCBA/boot/glove rinse	In plastic kiddie pool
☒ Safety boot removal	Drop on visqueen
☒ Remove SCBA backpack without disconnecting	
☒ Splash suit removal	Drop on visqueen
☒ Inner glove wash	In plastic kiddie pool
☒ Inner glove rinse	In plastic kiddie pool
☒ SCBA disconnect and facepiece removal	
☒ Inner glove removal	Dispose of in trash bags
☐ Inner clothing removal	
CONTAMINATION REDUCTION ZONE (CRZ)/SAFE ZONE BOUNDARY	
☒ Field wash	Wash hands and face before hand-to-mouth contact.
☐ Redress	

Disposal Plan, End of Day:

All waste PPE will be double-bagged in plastic trash bags and stored on site. Dispose of IDW wastes including all PPE, water, and disposable sampling equipment in an appropriate drum or dumpster in compliance with all applicable regulations.

Disposal Plan, End of Week:

Same as daily disposal plan.

Disposal Plan, End of Project:

Same as daily disposal plan.

8. TRAINING AND BRIEFING TOPICS/SIGN OFF SHEET

8.1 TRAINING AND BRIEFING TOPICS

The following items will be covered at the site-specific training meeting, daily or periodically.

☒ Site characterization and analysis, Sec. 3.0, 29 CFR 1910.120 l	☐ Level A
☒ Physical hazards	☒ Level B
☒ Chemical hazards	☒ Level C
☒ Animal bites, stings, and poisonous plants	☒ Level D
☐ Etiologic (infectious) agents	☒ Monitoring, 29 CFR 1910.120 (h)
☒ Site control, 29 CFR 1910.120 d	☒ Decontamination, 29 CFR 1910.120 (k)
☒ Engineering controls and work practices, 29 CFR 1910.120 (g)	☒ Emergency response, 29 CFR 1910.120 (l)
☐ Heavy machinery	☐ Elements of an emergency response, 29 CFR 1910.120 (l)
☐ Forklift	☐ Procedures for handling site emergency incidents, 29 CFR 1910.120 (l)
☐ Backhoe	☐ Off-site emergency response, 29 CFR 1910.120 (l)
☒ Equipment	☒ Handling drums and containers, 29 CFR 1910.120 (j)
☒ Tools	☒ Opening drums and containers
☐ Ladder, 29 CFR 1910.27 (d)/29 CFR 1926	☒ Electrical material handling equipment
☒ Overhead and underground utilities	☐ Radioactive waste
☐ Scaffolds	☐ Shock-sensitive waste
☐ Structural integrity	☐ Laboratory waste packs
☐ Unguarded openings - wall, floor, ceilings	☐ Sampling drums and containers
☐ Pressurized air cylinders	☐ Shipping and transport, 49 CFR 172.101, IATA
☒ Personal protective equipment, 29 CFR 1910.120 (g); 29 CFR 1910.134	☐ Tank and vault procedures
☒ Respiratory protection, 29 CFR 1910.120 (g); ANSI Z88.2	☐ Illumination, 29 CFR 1910.120 (m)
☐ Working over water FLD-19 ☐	☒ Sanitation, 29 CFR 1910.120 (n)
☐ Boating safety FLD-18	☒ Proper lifting techniques
☒ ☐ Heat Stress / Cold Stress	☒ Emergency evacuation muster sites.

8.2 HEALTH AND SAFETY PLAN APPROVAL/SIGNOFF FORM

Site Name: CES-Houston	**WO#:**
Address: Houston, TX	
I understand, agree to, and will conform with the information set forth in this Health and Safety Plan (and attachments) and discussed in the personnel health and safety briefing(s).	

Name	Signature	Date

BEHAVIOR-BASED SAFETY (BBS) – Pledge

I Accept and Understand 100% Safe Work Is an Achievable Goal

- ★ I will work to develop strong connections and team with my co-workers to establish a culture of working safely 100% of the time.
- ★ I will actively care about all Weston employees, our families, team contractors and clients.
- ★ I will help to keep our projects safe and will meet and exceed compliance requirements.
- ★ I will understand and comply with the Health and Safety Plan, Accident Prevention Plan, and Environmental Compliance Plan for each field project. They guide my actions.
- ★ I will stop any work that presents an imminent hazard to people or the environment or is not adequately addressed in the Health and Safety Plan, Accident Prevention Plan, or Environmental Compliance Plan.
- ★ I will identify changing conditions to address safety implications. No surprises!
- ★ I will identify unsafe working conditions and be proactive in correcting them.
- ★ I will coach and mentor and will accept coaching from others to encourage safe work behaviors.
- ★ I am empowered to share lessons-learned and foster continuous improvement.

I will Learn where I can get Assistance

- ★ I will develop high quality relationships with my Division Environmental, Health, and Safety (EHS) Manager; Profit Center Safety Officer; and Field Safety Officer.
- ★ I will learn how and when to contact our Environmental Advisors.
- ★ I will get to know our Corporate EHS staff and become familiar with the Corporate EHS Portal Site.

I will Report All Incidents

- ★ If a safety incident occurs, even if there is no injury or damage but there could have been, I will report the incident immediately.
- ★ I will conduct safety reviews of all incidents with my supervisor, if requested. The review will focus on cause and lessons-learned so that we can be proactive in preventing it from happening again.

Employee Name (print)	Employee Number
Employee Signature	Date

ATTACHMENT A
CHEMICAL CONTAMINANTS DATA SHEETS

Centers for Disease Control and Prevention
CDC 24/7: Saving Lives. Protecting People. Saving Money through Prevention.

Search the Pocket Guide

SEARCH

Enter search terms separated by spaces.

o-Cresol

Synonyms & Trade Names ortho-Cresol, 2-Cresol, o-Cresylic acid, 1-Hydroxy-2-methylbenzene, 2-Hydroxytoluene, 2-Methyl phenol

CAS No. 95-48-7	**RTECS No.** GO6300000	**DOT ID & Guide** 2076 153
Formula $CH_3C_6H_4OH$	**Conversion** 1ppm = 4.43 mg/m³	**IDLH** 250 ppm See: cresol
Exposure Limits **NIOSH REL** : TWA 2.3 ppm (10 mg/m³) **OSHA PEL** : TWA 5 ppm (22 mg/m³) [skin]		**Measurement Methods** **NIOSH** 2546 ; **OSHA** 32 See: NMAM or OSHA Methods

Physical Description White crystals with a sweet, tarry odor. [Note: A liquid above 88°F.]

MW: 108.2	**BP:** 376°F	MLT: 88°F	**Sol:** 2%	VP(77°F): 0.29 mmHg	**IP:** 8.93 eV
Sp.Gr: 1.05	**FLP:** 178°F	**UEL:** ?	LEL(300°F): 1.4%		

Combustible Solid Class IIIA Combustible Liquid: Fl.P. at or above 140°F and below 200°F.

Incompatibilities & Reactivities Strong oxidizers, acids

Exposure Routes inhalation, skin absorption, ingestion, skin and/or eye contact

Symptoms irritation eyes, skin, mucous membrane; central nervous system effects: confusion, depression, resp failure; dyspnea (breathing difficulty), irreg rapid resp, weak pulse; eye, skin burns; dermatitis; lung, liver, kidney, pancreas damage

Target Organs Eyes, skin, respiratory system, central nervous system, liver, kidneys, pancreas, cardiovascular system

Personal Protection/Sanitation (See protection codes) **Skin:** Prevent skin contact **Eyes:** Prevent eye contact	**First Aid** (See procedures) **Eye:** Irrigate immediately **Skin:** Soap wash immediately

Wash skin: When contaminated **Remove:** When wet or contaminated **Change:** Daily **Provide:** Eyewash, Quick drench	**Breathing:** Respiratory support **Swallow:** Medical attention immediately

Respirator Recommendations

NIOSH

Up to 23 ppm:
(APF = 10) Any air-purifying half-mask respirator with organic vapor cartridge(s) in combination with an N95, R95, or P95 filter. The following filters may also be used: N99, R99, P99, N100, R100, P100.
Click here for information on selection of N, R, or P filters.
(APF = 10) Any supplied-air respirator

Up to 57.5 ppm:
(APF = 25) Any supplied-air respirator operated in a continuous-flow mode
(APF = 25) Any powered, air-purifying respirator with an organic vapor cartridge in combination with a high-efficiency particulate filter.

Up to 115 ppm:
(APF = 50) Any air-purifying full-facepiece respirator equipped with organic vapor cartridge (s) in combination with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.
(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister having an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.
(APF = 50) Any powered, air-purifying respirator with a tight-fitting facepiece and organic vapor cartridge(s) in combination with a high-efficiency particulate filter*
(APF = 50) Any supplied-air respirator that has a tight-fitting facepiece and is operated in a continuous-flow mode*
(APF = 50) Any self-contained breathing apparatus with a full facepiece
(APF = 50) Any supplied-air respirator with a full facepiece

Up to 250 ppm:
(APF = 2000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

Emergency or planned entry into unknown concentrations or IDLH conditions:

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:
(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister having an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.
Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection

See also: INTRODUCTION See ICSC CARD: 0030

Page last reviewed: April 4, 2011
Page last updated: November 18, 2010
Content source: National Institute for Occupational Safety and Health (NIOSH) Education and Information Division

Centers for Disease Control and Prevention 1600 Clifton Rd. Atlanta, GA 30333, USA
800-CDC-INFO (800-232-4636) TTY: (888) 232-6348, New Hours of Operation 8am-8pm ET/Monday-Friday
Closed Holidays - cdcinfo@cdc.gov

NIOSH The National Institute for Occupational Safety and Health

CDC

NIOSH Publication No. 2005-151:

NIOSH Pocket Guide to Chemical Hazards

Benzene

CAS 71-43-2

C_6H_6

RTECS CY14C

Synonyms & Trade Names
Benzol, Phenyl hydride

DOT ID & Gu
1114 / 130

Exposure Limits

NIOSH REL: Ca TWA 0.1 ppm ST 1 ppm See Appendix A

OSHA PEL: [1910.1028] TWA 1 ppm ST 5 ppm See Appendix F

IDLH Ca [500 ppm] See: 71432

Conversion 1 ppm = 3.19 mg/m^3

Physical Description
Colorless to light-yellow liquid with an aromatic odor. [Note: A solid below 42°F.]

MW: 78.1	BP: 176°F	FRZ: 42°F	Sol: 0.07%
VP: 75 mmHg	IP: 9.24 eV		Sp.Gr: 0.88
Fl.P: 12°F	UEL: 7.8%	LEL: 1.2%	

Class IB Flammable Liquid: Fl.P. below 73°F and BP at or above 100°F.

Incompatibilities & Reactivities
Strong oxidizers, many fluorides & perchlorates, nitric acid

Measurement Methods
NIOSH 1500, 1501, 3700, 3800; OSHA 12, 1005
See: NMAM or OSHA Methods

Personal Protection & Sanitation (See protection)
Skin: Prevent skin contact
Eyes: Prevent eye contact
Wash skin: When contaminated
Remove: When wet (flammable)
Change: No recommendation
Provide: Eyewash, Quick drench

First Aid (See procedures)
Eye: Irrigate immediately
Skin: Soap wash immediately
Breathing: Respiratory support
Swallow: Medical attention immediately

Respirator Recommendations (See Appendix E) NIOSH
At concentrations above the NIOSH REL, or where there is no REL, at any detectable concentration:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand o pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positi mode in combination with an auxiliary self-contained positive-pressure breathing apparatus
Escape:
(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor appropriate escape-type, self-contained breathing apparatus
Important additional information about respirator selection

Exposure Routes inhalation, skin absorption, ingestion, skin and/or eye contact

Symptoms Irritation eyes, skin, nose, respiratory system; dizziness; headache, nausea, staggered gait; anorexia, lass (weakness, exhaustion); dermatitis; bone marrow depression; [potential occupational carcinogen]

Target Organs Eyes, skin, respiratory system, blood, central nervous system, bone marrow

Cancer Site [leukemia]

See also: INTRODUCTION See ICSC CARD: 0015 See MEDICAL TESTS: 0022

Centers for Disease Control and Prevention
CDC 24/7: Saving Lives. Protecting People. Saving Money through Prevention.

Search the Pocket Guide

SEARCH

Enter search terms separated by spaces.

Hydrogen sulfide

Synonyms & Trade Names Hydrosulfuric acid, Sewer gas, Sulfuretted hydrogen

CAS No. 7783-06-4	**RTECS No.** MX1225000	**DOT ID & Guide** 1053 117
Formula H_2S	**Conversion** 1 ppm = 1.40 mg/m3	**IDLH** 100 ppm See: 7783064
Exposure Limits **NIOSH REL** : C 10 ppm (15 mg/m3) [10-minute] **OSHA PEL** †: C 20 ppm 50 ppm [10-minute maximum peak]		**Measurement Methods** **NIOSH** 6013 ; **OSHA** ID141 See: NMAM or OSHA Methods

Physical Description Colorless gas with a strong odor of rotten eggs. [Note: Sense of smell becomes rapidly fatigued & can NOT be relied upon to warn of the continuous presence of H_2S. Shipped as a liquefied compressed gas.]

MW: 34.1	**BP:** -77°F	**FRZ:** -122°F	**Sol:** 0.4%	**VP:** 17.6 atm	**IP:** 10.46 eV
	FLP: NA (Gas)	**UEL:** 44.0%	**LEL:** 4.0%	**RGasD:** 1.19	

Flammable Gas

Incompatibilities & Reactivities Strong oxidizers, strong nitric acid, metals

Exposure Routes inhalation, skin and/or eye contact

Symptoms irritation eyes, respiratory system; apnea, coma, convulsions; conjunctivitis, eye pain, lacrimation (discharge of tears), photophobia (abnormal visual intolerance to light), corneal vesiculation; dizziness, headache, lassitude (weakness, exhaustion), irritability, insomnia; gastrointestinal disturbance; liquid: frostbite

Target Organs Eyes, respiratory system, central nervous system

Personal Protection/Sanitation (See protection codes) **Skin:** Frostbite **Eyes:** Frostbite	**First Aid** (See procedures) **Eye:** Frostbite **Skin:** Frostbite

Wash skin: No recommendation **Remove:** When wet (flammable) **Change:** No recommendation **Provide:** Frostbite wash	**Breathing:** Respiratory support

Respirator Recommendations

NIOSH

Up to 100 ppm:
(APF = 25) Any powered, air-purifying respirator with cartridge(s) providing protection against the compound of concern
(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted canister providing protection against the compound of concern
(APF = 10) Any supplied-air respirator*
(APF = 50) Any self-contained breathing apparatus with a full facepiece

Emergency or planned entry into unknown concentrations or IDLH conditions:

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:
(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted canister providing protection against the compound of concern
Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection

See also: INTRODUCTION See ICSC CARD: 0165

Page last reviewed: April 4, 2011
Page last updated: November 18, 2010
Content source: National Institute for Occupational Safety and Health (NIOSH) Education and Information Division

Centers for Disease Control and Prevention 1600 Clifton Rd. Atlanta, GA 30333, USA
800-CDC-INFO (800-232-4636) TTY: (888) 232-6348, New Hours of Operation 8am-8pm ET/Monday-Friday
Closed Holidays - cdcinfo@cdc.gov

ATTACHMENT B
MATERIAL SAFETY DATA SHEETS

(ATTACH MSDSs)

MINE SAFETY APPLIANCES CO -- CALIBRATION CHECK GAS, AIR, ZERO, 801050 -- 6630-00N063336

========== Product Identification ==========

Product ID:CALIBRATION CHECK GAS, AIR, ZERO, 801050
MSDS Date:03/01/1993
FSC:6630
NIIN:00N063336
MSDS Number: BYWTP
=== Responsible Party ===
Company Name:MINE SAFETY APPLIANCES CO
Box:426
City:PITTSBURG
State:PA
ZIP:15230
Country:US
Info Phone Num:412-967-3000
Emergency Phone Num:412-967-3000
CAGE:8F723
=== Contractor Identification ===
Company Name:MINE SAFETY APPLIANCES CO
Address:121 GAMMA DR
Box:426
City:PITTSBURGH
State:PA
ZIP:15230-0426
Country:US
Phone:724-733-9270
CAGE:8F723

========== Composition/Information on Ingredients ==========

Ingred Name:OXYGEN; SOL IN H*2O: 3.2 CM3/100 ML (25C)
CAS:7782-44-7
RTECS #:RS2060000
Fraction by Wt: 20.8%
OSHA PEL:N/K
ACGIH TLV:N/K

Ingred Name:NITROGEN; SOL IN H*2O: 2.3 CM3/100 ML (0C)
CAS:7727-37-9
RTECS #:QW9700000
Fraction by Wt: BALANCE
OSHA PEL:N/K
ACGIH TLV:ASPHYXIANT

Ingred Name:VP: GAS UNDER PRESSURE, 1000 PSIG @ 70F APPROX 100 LITERS GAS @ ATM PRESSURE. NOTE: THC < 1 PPM MEETS VEHICLE (ING 4)
RTECS #:9999999ZZ

Ingred Name:ING 3: EMISSION ZERO AIR SPECIFICATIONS CO 1 PPM MAX; NO 0.1 PPM MAX.
RTECS #:9999999ZZ

========== Hazards Identification ==========

LD50 LC50 Mixture:NONE SPECIFIED BY MANUFACTURER.
Routes of Entry: Inhalation:YES Skin:NO Ingestion:NO

Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:ACUTE/CHRONIC: NONE.
Explanation of Carcinogenicity:NOT RELEVANT.
Effects of Overexposure:SEE HEALTH HAZARDS.
Medical Cond Aggravated by Exposure:NOT APPLICABLE.

========== First Aid Measures ==========

First Aid:EYES: FLUSH WITH POTABLE WATER FOR AT LEAST 15 MINUTES. SEE MD . SKIN: FLUSH WITH COPIOUS AMOUNTS OF WATER. SEE MD . INHALATION: REMOVE TO FRESH AIR. SUPPORT BREATHING (GIVE OXYGEN OR ARTI FICIAL RESPIRATION) . INGESTION: CALL MD IMMEDIATELY .

========== Fire Fighting Measures ==========

Extinguishing Media:THIS CALIBRATION GAS MIXTURE IS NOT FLAMMABLE. USE MEDIA SUITABLE FOR SURROUNDING FIRE .
Fire Fighting Procedures:WEAR NIOSH/MSHA APPROVED SCBA & FULL PROTECTIVE EQUIPMENT .
Unusual Fire/Explosion Hazard:GAS UNDER PRESSURE, 1000 PSIG AT 70F. DO NOT EXCEED 120F.

========== Accidental Release Measures ==========

Spill Release Procedures:NONE.
Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

========== Handling and Storage ==========

Handling and Storage Precautions:STORE IN A COOL, DRY, WELL-VENTILATED AREA. DO NOT EXCEED 120F.
Other Precautions:NONE SPECIFIED BY MANUFACTURER.

========== Exposure Controls/Personal Protection ==========

Respiratory Protection:USE NIOSH/MSHA APPROVED RESPIRATOR APPROPRIATE FOR EXPOSURE OF CONCERN .
Ventilation:NONE.
Protective Gloves:IMPERVIOUS GLOVES .
Eye Protection:ANSI APPRVD CHEM WORKERS GOGGS .
Other Protective Equipment:EMERGENCY EYEWASH & DELUGE SHOWER MEETING ANSI DESIGN CRITERIA .
Work Hygienic Practices:FOLLOW THE CALIBRATION PROCEDURE DETAILED IN THE MSA INSTRUCTION MANUAL PROVIDED W/THE INSTRUMENT UNDER CALIBRATION.
Supplemental Safety and Health
NONE SPECIFIED BY MANUFACTURER.

========== Physical/Chemical Properties ==========

Vapor Pres:ING 3
Vapor Density:-1
Solubility in Water:SEE INGREDIENTS
Appearance and Odor:COLORLESS, ODORLESS GAS

========== Stability and Reactivity Data ==========

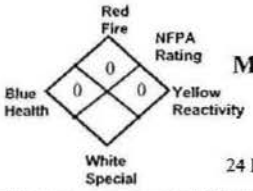
Stability Indicator/Materials to Avoid:YES
NONE.
Stability Condition to Avoid:NONE.

Hazardous Decomposition Products:NONE SPECIFIED BY MANUFACTURER.

========== Disposal Considerations ==========

Waste Disposal Methods:DO NOT PUNCTURE OR INCINERATE CYLINDER. BEFORE DISCARDING CYLINDER, SLOWLY RELEASE CONTENTS TO A SAFE EXHAUST. DISPOSE OF IN ACCORDANCE W/LOCAL, STATE & FEDERAL REGULATIONS .

Disclaimer (provided with this information by the compiling agencies): This information is formulated for use by elements of the Department of Defense. The United States of America in no manner whatsoever, expressly or implied, warrants this information to be accurate and disclaims all liability for its use. Any person utilizing this document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.



Liqui-Nox ®

MATERIAL SAFETY DATA SHEET

Alconox, Inc.
30 Glenn Street
White Plains, NY 10603
24 Hour Emergency Number – Chem-Tel (800) 255-3924

I. IDENTIFICATION

Product Name (as appears on label)	LIQUI-NOX
CAS Registry Number:	Not Applicable
Effective Date:	January 1, 2001
Chemical Family:	Anionic Liquid Detergent
Manufacturer Catalog Numbers for sizes	1232, 1201, 1215 and 1255

II. HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

There are no hazardous ingredients in LIQUI-NOX™ as defined by the OSHA Standard and Hazardous Substance List 29 CFR 1910 Subpart Z.

III. PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point (F):	214°F
Vapor Pressure (mm Hg):	No Data
Vapor Density (AIR=1):	No Data
Specific Gravity (Water=1):	1.075
Melting Point:	Not Applicable
Evaporation Rate (Butyl Acetate=1):	Slower
Solubility in Water:	Completely soluble in all proportions.
Appearance:	Yellow liquid, nearly odorless
pH:	8.5 (1%)

IV. FIRE AND EXPLOSION DATA

Flash Point:	None (Cleveland Open Cup)
Flammable Limits:	LEL: No Data UEL: No Data
Extinguishing Media:	Water, dry chemical, CO_2, foam
Special Fire fighting Procedures:	Self-contained positive pressure breathing apparatus and protective clothing should be worn when fighting fires involving chemicals.
Unusual Fire and Explosion Hazards:	None

V. REACTIVITY DATA

Stability:	Stable
Conditions To Avoid:	None
Incompatibility (Materials To Avoid):	Oxidizing agents.
Hazardous Decomposition or Byproducts:	May release SO_2 on burning

VI. HEALTH HAZARD DATA

Route(s) of Entry:	Inhalation? No Skin? Yes Ingestion? Yes
Health Hazards (Acute and Chronic):	Skin contact may prove locally irritating, causing drying and/or chapping. Ingestion may cause discomfort and/or diarrhea.
Carcinogenicity:	NTP? No IARC Monographs? No OSHA Regulated? No
Signs and Symptoms of Exposure:	Prolonged skin contact may cause drying and/or chapping.
Medical Conditions Generally Aggravated by Exposure:	Not established. Unnecessary exposure to this product or any industrial chemical should be avoided.
Emergency and First Aid Procedures:	Eyes: Immediately flush eyes with water for at least 15 minutes. Call a physician. Skin: Flush with plenty of water. Ingestion: Drink large quantities of water or milk. Do not induce vomiting. If vomiting occurs administer fluids. See a physician for discomfort.

VII. PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be Taken if Material is Released or Spilled:	Material foams profusely. For small spills recover as much as possible with absorbent material and flush remainder to sewer. Material is biodegradable.
Waste Disposal Method:	Small quantities may be disposed of in sewer. Large quantities should be disposed of in accordance with local ordinances for detergent products.
Precautions to be Taken in Storing and Handling:	No special precautions in storing. Use protective equipment when handling undiluted material.
Other Precautions:	No special requirements other than the good industrial hygiene and safety practices employed with any industrial chemical.

VIII. CONTROL MEASURES

Respiratory Protection (Specify Type):	Not Required
Ventilation:	Local Exhaust-Normal Special-Not Required Mechanical-Not Required Other-Not Required
Protective Gloves:	Impervious gloves are recommended.
Eye Protection:	Goggles and/or splash shields are recommended.
Other Protective Clothing or Equipment:	Not required
Work/Hygienic Practices:	No special practices required

THE INFORMATION HEREIN IS GIVEN IN GOOD FAITH BUT NO WARRANTY IS EXPRESSED OR IMPLIED.

ATTACHMENT C

SAFETY PROCEDURES/FIELD OPERATING PROCEDURES (FLD OPS)

ATTACHMENT D
HAZARD COMMUNICATION PROGRAM

SITE-SPECIFIC HAZARD COMMUNICATION PROGRAM

Location-Specific Hazard Communication Program/Checklist

To ensure an understanding of and compliance with the Hazard Communication Standard, WESTON will use this checklist/document (or similar document) in conjunction with the WESTON Written Hazard Communication Program as a means of meeting site- or location-specific requirements.

While responsibility for activities within this document reference the WESTON Safety Officer (SO), it is the responsibility of all personnel to effect compliance. Responsibilities under various conditions can be found within the WESTON Written Hazard Communication Program.

To ensure that information about the dangers of all hazardous chemicals used by WESTON is known by all affected employees, the following Hazard Communication Program has been established. All affected personnel will participate in the Hazard Communication Program. This written program, as well as WESTON's Corporate Hazard Communication Program, will be available for review by any employee, employee representative, representative of OSHA, NIOSH, or any affected employer/employee on a multi-employer site.

- ☐ Site or other location name/address: CES-Houston
- ☐ Site/Project/Location Manager: Jeff Criner
- ☐ Site/Location Safety Officer: Ben Latham
- ☐ List of chemicals compiled, format: ☒ HASP ☐ Other: _____
- ☐ Location of MSDS files: HASP
- ☐ Training conducted by: Name: _____ Date: _____
- ☐ Indicate format of training documentation: ☒ Field Log: ☐ Other: Daily H&S Breifing
- ☐ Client briefing conducted regarding hazard communication: _____
- ☐ If multi-employer site (client, subcontractor, agency, etc.), indicate name of affected companies:

  _____
- ☐ Other employer(s) notified of chemicals, labeling, and MSDS information: _____
- ☐ Has WESTON been notified of other employer's or client's hazard communication program(s), as necessary? ☐ Yes ☐ No

List of Hazardous Chemicals

A list of known hazardous chemicals used by WESTON personnel must be prepared and attached to this document or placed in a centrally identified location with the MSDSs. Further information on each chemical may be obtained by reviewing the appropriate MSDS. The list will be arranged to enable cross-reference with the MSDS file and the label on the container. The SO or Location Manager is responsible for ensuring the chemical listing remains up-to-date.

Container Labeling

The WESTON SO will verify that all containers received from the chemical manufacturer, importer, or distributor for use on-site are clearly labeled.

The SO is responsible for ensuring that labels are placed where required and for comparing MSDSs and other information with label information to ensure correctness.

Material Safety Data Sheets (MSDSs)

The SO is responsible for establishing and monitoring WESTON's MSDS program for the location. The SO will ensure that procedures are developed to obtain the necessary MSDSs and will review incoming MSDSs for new or significant health and safety information. He/she will see that any new information is passed on to the affected employees. If an MSDS is not received at the time of initial shipment, the SO will call the manufacturer and have an MSDS delivered for that product in accordance with the requirements of WESTON's Written Hazard Communication Program.

A log for, and copies of, MSDSs for all hazardous chemicals in use will be kept in the MSDS folder at a location known to all site workers. MSDSs will be readily available to all employees during each work shift. If an MSDS is not available, immediately contact the WESTON SO or the designated alternate. When a revised MSDS is received, the SO will immediately replace the old MSDS.

Employee Training and Information

The SO is responsible for the WESTON site-specific personnel training program. The SO will ensure that all program elements specified below are supplied to all affected employees.

At the time of initial assignment for employees to the work site, or whenever a new hazard is introduced into the work area, employees will attend a health and safety meeting or briefing that includes the information indicated below.

- Hazardous chemicals present at the work site.
- Physical and health risks of the hazardous chemicals.
- The signs and symptoms of overexposure.
- Procedures to follow if employees are overexposed to hazardous chemicals.
- Location of the MSDS file and Written Hazard Communication Program.
- How to determine the presence or release of hazardous chemicals in the employee's work area.
- How to read labels and review MSDSs to obtain hazard information.
- Steps WESTON has taken to reduce or prevent exposure to hazardous chemicals.
- How to reduce or prevent exposure to hazardous chemicals through the use of controls procedures, work practices, and personal protective equipment.
- Hazardous, nonroutine tasks to be performed (if any).
- Chemicals within unlabeled piping (if any).

Hazardous Nonroutine Tasks

When employees are required to perform hazardous nonroutine tasks, the affected employee(s) will be given information by the SO about the hazardous chemicals he or she may use during such activity. This information will include specific chemical hazards, protective and safety measures the employee can use, and steps WESTON is using to reduce the hazards. These steps include, but are not limited to, ventilation, respirators, presence of another employee, and emergency procedures.

Chemicals in Unlabeled Pipes

Work activities may be performed by employees in areas where chemicals are transferred through unlabeled pipes. Prior to starting work in these areas, the employee will contact the SO, at which time information as to the chemical(s) in the pipes, potential hazards of the chemicals or the process involved, and the safety precautions that should be taken will be determined and presented.

Multi-Employer Work Sites

It is the responsibility of the SO to provide other employers with information about hazardous chemicals imported by WESTON to which their employees may be exposed, along with suggested safety precautions. It is also the responsibility of the SO and the Site Manager to obtain information about hazardous chemicals used by other employers to which WESTON employees may be exposed. WESTON's chemical listing will be made available to other employers, as requested. MSDSs will be available for viewing, as necessary.

The location, format, and/or procedures for accessing MSDS information must be relayed to affected employees.

ATTACHMENT E
AIR SAMPLING DATA SHEETS

SITE AIR MONITORING PROGRAM

Field Data Sheets

Location:

% LEL	% O_2	PID (units)	FID (units)	Aerosol Monitor (mg/m^3)	GM: Shield Probe/ Thin Window		NaI (uR/hr)	ZnS (cpm)
					mR/hr	cpm		
Monitox (ppm)				**Detector Tube(s)**				
Sound Levels (dBA)		**Illumination**	**pH**	**Other**	**Other**	**Other**	**Other**	**Other**

Location:

% LEL	% O_2	PID (units)	FID (units)	Aerosol Monitor (mg/m^3)	GM: Shield Probe/ Thin Window		NaI (uR/hr)	ZnS (cpm)
					mR/hr	cpm		
Monitox (ppm)				**Detector Tube(s)**				
Sound Levels (dBA)		**Illumination**	**pH**	**Other**	**Other**	**Other**	**Other**	**Other**

AIR MONITORING/SAMPLING DATA LOG

Client:	**W.O. No.:**	**Sample No.:**
Address:	**Sampled By:**	**Date:**

Employee and Location Information

Employee Name:	**Employee No.:**	**Job Title**:

Respirator ☐ APR ☐ ½ Mask ☐ Full Face ☐ PAPR ☐ ½ Mask ☐ Full Face ☐ Hood ☐ SAR ☐ ½ Mask ☐ Full Face ☐ Hood ☐ SCBA	**Manufacturer:**	**Cartridge Type:**

PPE: ☐ Hard Hat ☐ HPD ☐ Gloves ☐ Safety Shoes ☐ Coveralls ☐ Other:

Sampling Data

Sampling Type: ☐ Personal ☐ TWA ☐ STEL ☐ Area ☐ Source ☐ Full Shift ☐ Partial Shift ☐ Grab	**Media:**	**Pump Type/Serial No.:** /
Calibrator/Serial No.: /	**Pre-Calibration:** 1. 2. 3. **avg-pre:**	**Post-Calibration:** 1. 2. 3. **avg-post**:

Start Time:	**Restart Time:**	**Restart Time:**	**Avg. Flowrate:**	**% Change:**
1st Stop Time:	**2nd Stop Time:**	**3rd Stop Time:**	**Total Time:**	**Volume:**

Multiple Samples for this TWA: ☐ Yes ☐ No	**Multiple Chemical Exposures:** ☐ Yes ☐ No	**Exposure Time:** ☐ Normal ☐ Worst Case

Sampling Conditions

Weather Conditions:
Temp: R.H: B.P.: Other:

Engineering Controls:

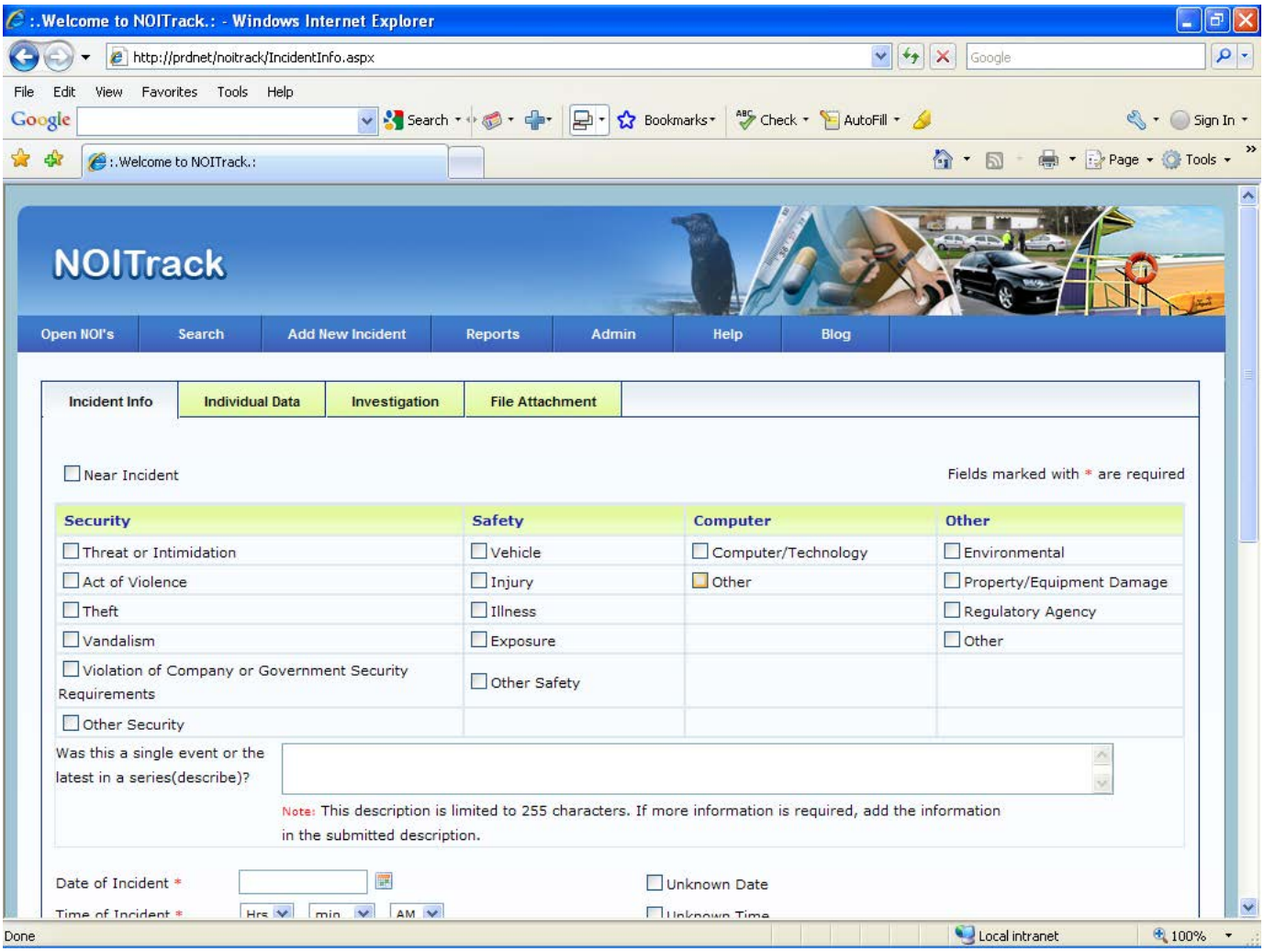
Substances Evaluated

Substance	Result	Substance	Result	Substance	Result

Observations and Comments

QA by: _____ **Date:** _____

ATTACHMENT F
INCIDENT REPORTING



Please go to NOITrack using the following link to complete incident reporting. If you are in the field and do not have access to NOITrack, please contact someone in your office to do the reporting for you.

http://prdnet/noitrack/IncidentInfo.aspx

Questions can be directed to Susan Hipp-Ludwick at 610.701.3046.

ATTACHMENT G
TRAFFIC CONTROL PLAN

ATTACHMENT H
ENVIRONMENTAL HEALTH & SAFETY INSPECTION CHECKLIST

ENVIRONMENTAL HEALTH AND SAFETY INSPECTION CHECKLIST

Project Name: _____

Inspector: _____

Submit to: _____

Date: _____

THE WESTON SITE APPEARANCE

YES	NO		COMMENT
☐	☐	Is the site secured to prevent inadvertent, unnecessary, or unauthorized access? Are gates closed and locked at any time that the access point is not occupied or visible to site workers?	
☐	☐	Are access points posted with signs to indicate client and end-user client name, WESTON's name and logo, names of other contractors and sub-contractors, project name and location, and appropriate safety messages?	
☐	☐	Are required postings in place (e.g., Labor Poster, Emergency Phone Numbers, Site Map, etc.)?	
☐	☐	Are site trailers tied down per local code and provided with stairs that have a landing platform with guard and stair railings?	
☐	☐	Is a Site Safety file system established in the office to maintain records required by applicable safety regulations	
☐	☐	Is the Health and Safety Plan (HASP) or Accident Prevention Plan (APP) amended as scope of work changes, hazards are discovered or eliminated or if risk change?	
☐	☐	Is the Site Safety Plan and the Safety Officers Field Manual on site?	
☐	☐	Is new employee indoctrination provided?	
☐	☐	Have site Rules been provided, discussed and signed off on by all employees	
☐	☐	Incident Reporting procedure explained to all?	
☐	☐	Is site management trained in the WESTON (and client as applicable) Incident Reporting system?	
☐	☐	Are NOI and Supplemental Report forms and OSHA 300 Log available on site?	
☐	☐	Is Site Management aware of the Case Management and Incident Investigation Procedures?	
☐	☐	Is there a list of preferred provider medical facilities available?	
☐	☐	Has the "Inspection By A Regulatory Agency" procedure been reviewed by all site management?	
☐	☐	Will Competent Persons be required because of activities to be performed, equipment to be used or hazards to be encountered?	

POLICIES

YES	NO		COMMENT
☐	☐	Each individual employee is aware that he or she responsible for complying with applicable safety requirements, wearing prescribed safety equipment and preventing avoidable accidents.	
☐	☐	Do employees understand that they will wear clothing suitable for existing weather and work conditions and the minimum work uniform will include long pants, sleeved work shirts, protective footwear, hard hat, and safety glasses unless otherwise specified via the HASP.	
☐	☐	Are employees provided safety and health training to enable them to perform their work safely? Is all training documented to indicate the date of the session, topics covered, and names of participants?	
☐	☐	Safety meetings are conducted daily. The purpose of the meetings are to review past activities, review pertinent tailgate safety topics and establish safe working procedures for anticipated hazards encountered during the day.	
☐	☐	Training has been provided to all personnel regarding handling of emergency situations that may arise from the activity or use of equipment on the project.	
☐	☐	Employees/contractors are informed and understand that they may not be under the influence of alcohol, narcotics, intoxicants, or similar mind-altering substances at any time. Employees found under the influence of or consuming such substances will be immediately removed from the job site.	
☐	☐	Site workers and operators of any equipment or vehicles are able to read and understand the signs, signals, and operating instructions of their use.	
☐	☐	Have contractors performing work provided copies of relevant documentation (such as medical fit-for-duty, training certificates, fit-tests, etc.) prior to initiation of the project?	

SANITATION
29 CFR 1926 Subparts C, D. EM 385-1-1, Section 2

YES	NO		COMMENT
☐	☐	Is an adequate supply of drinking water provided? Is potable/drinking water labeled as such? Are there sufficient drinking cups provided?	
☐	☐	Are there a sufficient number of toilets?	
☐	☐	Are washing facilities readily available and appropriate for the cleaning needs?	
☐	☐	Are washing facilities kept sanitary with adequate cleansing and drying materials?	
☐	☐	Waste is secured so as not to attract rodents, insects, or other vermin?	
☐	☐	Is an effective housekeeping program established and implemented?	

ACCIDENT PREVENTION SIGNS, TAGS, LABELS, SIGNALS, AND PIPING SYSTEM IDENTIFICATION
29 CFR 1926 Subpart G. EM 385-1-1, Section 8

YES	NO		COMMENT
☐	☐	Are signs, tags, and labels provided to give adequate warning and caution of hazards and instruction/directions to workers and the public?	
☐	☐	Are all employees informed as to the meaning of the various signs, tags, and labels used in the workplace and what special precautions are required?	
☐	☐	Are construction areas posted with legible traffic signs at points of hazard?	
☐	☐	Are signs required to be seen at night lighted or reflectorized?	
☐	☐	Tags contain a signal word (“danger” or “caution”) and a major message to indicate the specific hazardous condition or the instruction to be communicated to the employee. Tags follow requirements as outlined in 29 CFR 1926.200.	

MEDICAL SERVICES AND FIRST AID
29 CFR 1926 Subparts C, D. EM 385-1-1, Section 3

YES	NO		COMMENT
☐	☐	Is a local medical emergency facility (LMEF) identified in the HASP or APP?	
☐	☐	Has the LMEF been visited to verify the directions and establish contacts?	
☐	☐	Has site management reviewed WESTON’s incident management procedures?	
☐	☐	Have clinics and specialists that will help WESTON manage injuries and illnesses been identified?	
☐	☐	Is there at least two (2) people certified in First Aid and CPR?	
☐	☐	Are first aid kits available at the command post and appropriate remote locations?	
☐	☐	Are first Aid Kits and Eyewash/Safety Showers inspected weekly?	
☐	☐	Are 15 minute eyewash/safety showers in place if required?	

FIRE PREVENTION AND PROTECTION
29 CFR 1926 Subpart F. EM 385-1-1, Section 9

YES	NO		COMMENT
☐	☐	Is an Emergency Response and Contingency Plan in place?	
☐	☐	Are emergency phone numbers posted?	
☐	☐	Are fire extinguishers selected and provided based on the types of materials and potential fire classes in each area?	
☐	☐	Are fire extinguishers provided in each administrative and storage trailer, within 50 ft but no closer than 25 ft of any fuel or flammable liquids storage, on welding and cutting equipment, on mechanical equipment?	
☐	☐	Are fire extinguishers checked daily and inspected monthly?	
☐	☐	Do site personnel know the location of fire extinguishers and how to use them?	
☐	☐	Are flammable and combustible liquids stored in approved containers?	
☐	☐	Safety cans are used for dispensing flammable or combustible liquids in 5 gallon or less volumes.	
☐	☐	Are flammable and combustible liquids stored in flammable storage cabinets or appropriate storage areas?	
☐	☐	Are flammable materials separated from oxidizers by at least 20 feet (or 5 foot tall, ½ -hour rated fire wall) when in storage?	
☐	☐	Are fuel storage tanks double walled or placed in a lined berm?	
☐	☐	Spills are cleaned up immediately and wastes are disposed of properly.	
☐	☐	Combustible scrap, debris, and waste material (oily rags) are stored in closed metal containers and disposed of promptly.	
☐	☐	Vehicle fueling tanks are grounded and bonding between the tank and vehicle being fueled is provided?	
☐	☐	LPG is stored, handled, and used according to OSHA regulations 29 CFR 1926.	
☐	☐	LPG cylinders are not stored indoors.	
☐	☐	Is a hot work permit program in place? See WESTON FLD-36	
☐	☐	Is smoking limited to specific areas, prohibited in flammable storage areas and are signs posted to this effect?	

HAZARDOUS SUBSTANCES, AGENTS, AND ENVIRONMENTS
29 CFR 1926 Subparts D, Z. EM 385-1-1, Sections 6, 28

YES	NO		COMMENT
☐	☐	Are operations, materials and equipment evaluated to determine the presence of hazardous contaminants or if hazardous agents could be released in the work environment?	
☐	☐	Are MSDS for substances made available at the work-site when any hazardous substance is procured, used, or stored?	
☐	☐	Are all containers and piping containing hazardous substances labeled appropriately?	
☐	☐	Is there an inventory of hazardous substances?	
☐	☐	Is there a site Specific Hazard Communication Program?	
☐	☐	Spill kits appropriate for the hazardous materials present are on site and their location is known to spill responders.	
☐	☐	Is disposal of excess hazardous chemicals performed according to WESTON's guidelines and RCRA regulations?	
☐	☐	Before initiation of activities where there is an identified asbestos or lead hazard, is there a written plan detailing compliance with OSHA and EPA asbestos or lead abatement requirements? Does the plan comply with state and local authority, and USACE requirements, as applicable?	
☐	☐	Are personnel trained and provided with protection against hazards from animals, poisonous plants, and insects?	

PERSONAL PROTECTIVE AND SAFETY EQUIPMENT, RESPIRATORY AND FALL PROTECTION
29 CFR 1926 Subparts D, E, M. EM 385-1-1, Section 5

YES	NO		COMMENT
☐	☐	Do employees understand that the minimum PPE is hard hat, safety glasses with side shields and safety shoes or boots and that long pants and a sleeved shirt are required?	
☐	☐	Has the SSHC reviewed the PPE requirements in the HASP against actual site conditions and certified that the PPE is appropriate? (see Field Manual, PPE Program)	
☐	☐	PPE is inspected, tested and maintained in serviceable and sanitary condition as recommended by the manufacturer. Is defective or damaged equipment taken out of service and repaired or replaced?	
☐	☐	Are workers trained in the use of the PPE required?	
☐	☐	Are personnel exposed to vehicular or equipment traffic, including signal persons, spotters or inspectors required to vests or apparel marked with a reflective or high visibility material?	
☐	☐	Is there a noise hazard? If yes, hearing protection will be required.	
☐	☐	Is there a splash or splatter hazard? Face shields or goggles will be required.	
☐	☐	Will personnel be working in or over water? Personnel Floatation devices will be required.	
☐	☐	Is there a welding hazard? Welding helmet and leathers will be required. Is there a cutting torch hazard? Goggles and protective clothing will be required.	
☐	☐	Is each person on a walking/working surface with an unprotected side or edge which is 6 feet (1.8 m) or more above a lower level protected from falling by the use of guardrail systems, safety net systems or personal fall arrest systems? See WESTON FLD 25 (Note General Industry standard is four feet).	
☐	☐	Guardrail systems are used as primary protection whenever feasible. Guardrail construction meets criteria in 29 CFR 1926.502(b).	
☐	☐	Personal fall arrest systems (PFAS) are inspected and appropriate for use.	
☐	☐	Ropes and straps (webbing) used in lanyards, lifelines, and strength components of body belts and body harnesses are from synthetic fibers.	
☐	☐	Safety nets and safety net installations are constructed, tested and used according to 29 CFR 1926.502.c	
☐	☐	Is respirator use required? See WESTON Respiratory Protection Program	
☐	☐	Persons using respiratory protection have been successfully medically cleared, trained, and fit tested.	
☐	☐	Respirators are used according to the manufacturer's instructions, regulatory requirements, selection criteria, and health and safety plan provisions.	
☐	☐	For Level C operations with organic vapor contamination, is the cartridge change-out schedule documented?	
☐	☐	Is breathing certified as Grade D, or better, and certification available on-site?	

MACHINERY AND MECHANIZED EQUIPMENT
29 CFR 1926 Subparts N, O. EM 385-1-1, Sections 16, 17, 18

YES	NO		COMMENT
☐	☐	Are inspections of machinery by a competent person established?	
☐	☐	Is equipment inspected daily before its next use?	
☐	☐	Equipment inspection reports are reviewed, followed-up on negative findings and records of inspections are maintained?	
☐	☐	Machinery or equipment found to be unsafe is taken out of service until the unsafe condition has been corrected.	
☐	☐	Is there a preventive maintenance program established?	
☐	☐	Are operators of equipment qualified and authorized to operate?	
☐	☐	Is all self-propelled construction and industrial equipment equipped with a reverse signal alarm?	
☐	☐	Are seats or equal protection provided for each person required to ride on equipment. Are seatbelts installed and worn on motor vehicles, as appropriate.	
☐	☐	All equipment with windshields is equipped with powered wipers. If fogging or frosting is possible, operable defogging or defrosting devices are required.	
☐	☐	Internal combustion engines are not operated in enclosed areas unless adequate ventilation is made. Air monitoring is conducted to assure safe working conditions.	
☐	☐	Is each bulldozer, scraper, dragline, crane, motor grader, front-end loader, mechanical shovel, backhoe, or similar equipment equipped with at least one dry chemical or carbon dioxide fire extinguisher with a minimum rating of 5-B:C?	
☐	☐	Will cranes or other lifting devices be used? If so, are the following documents available on site: 1) a copy of the operating manual, 2) load rating chart, 3) log book, 4) a copy of the last annual inspection and 5) the initial on-site inspection?	
☐	☐	Do operators have certificates of training to operate the type of crane(s) to be used?	
☐	☐	Is a signal person provided when the point of operation is not in full view of the vehicle, machine, or equipment operator? When manual (hand) signals are used, is only one person designated to give signals to the operator?	
☐	☐	Signal persons back one vehicle at a time. While under the control of a signal person, drivers do not back or maneuver until directed. Drivers stop if contact with the signal person is lost.	
☐	☐	Is a critical lift plan prepared by a competent person whenever: a lift is not routine, or a lift exceeds 75% of a crane's capacity, a lift results in the load being out of the operator's line of sight, or a lift involves more than one crane, a man basket is used, or the operator believes there is a need for a critical lift plan.	
☐	☐	Fork Lifts (Powered Industrial Trucks) - Will forklifts be used on site?	
☐	☐	All forklifts meet the requirements of design, construction, stability, inspection, testing, maintenance, and operation as indicated in ANSI/ASME B56.1 Safety Standards for Low Lift and High Lift Trucks.	
☐	☐	Do forklift operators have certificates of training?	
☐	☐	Are pile driving operations conducted according to EM 385-1-1, Section 16.L?	
☐	☐	Is drilling equipment operated, inspected, and maintained as specified in the manufacturer's operating manual? Is a copy of the manual available at the work-site? See also the Drilling Safety Guide in the Safety Officers Field Manual.	
☐	☐	Are flag persons provided when operations or equipment on or near a highway expose workers to traffic hazards? Do flag persons and persons working in proximity to a road wear high visibility vests? Are persons exposed to highway vehicle traffic protected by signs in all directions warning of the presence of the flag persons and the work? Do signs and distances from the work zone conform to federal and local regulations?	

MOTOR VEHICLES
29 CFR 1926 Subpart O. EM 385-1-1, Section 18

YES	NO		COMMENT
☐	☐	Motor vehicle operators have a valid permit, license, or certification of ability for the equipment being operated.	
☐	☐	Inspection, maintenance, and repair is according to manufacturer's requirements by qualified persons.	
☐	☐	Vehicles are inspected on a scheduled maintenance program.	
☐	☐	Vehicles not in safe operating condition are removed from service until defects are corrected.	
☐	☐	Glass in windshields, windows, and doors is safety glass. Any cracked or broken glass is replaced.	
☐	☐	Seatbelts are installed and worn.	
☐	☐	The number of passengers in passenger-type vehicles does not exceed the number which can be seated.	
☐	☐	Trucks used to transport personnel have securely anchored seating, a rear endgate, and a guardrail.	
☐	☐	No person is permitted to ride with arms or legs outside of a vehicle body; in a standing position on the body; on running boards; seated on side fenders, cabs, cab shields, rear of the truck or on the load.	
☐	☐	ATV operators possess a valid state driver's license, have completed an ATV training course prior to operation of the vehicle, and wear appropriate protective equipment such as helmets, boots, and gloves.	

EXCAVATING AND TRENCHING
29 CFR 1926 Subpart P. EM 385-1-1, Section 25

YES	NO		COMMENT
☐	☐	Has the known or estimated location of utility installations such as sewer, telephone, fuel, electric, water lines, or any other underground installations that may be expected to be encountered during excavation been determined before excavation? Have utility locations been verified by designated state services according to state regulations? Has the client provided clearance where state jurisdiction doesn't apply?	
☐	☐	Have overhead utilities in excavation areas been identified and either de-energized, shielded or barricaded so excavating equipment will not come within 10 feet?	
☐	☐	Are inspections of the excavation, the adjacent areas, and protective systems made daily and as necessary by a competent person?	
☐	☐	Are Protective systems in place as prescribed by the competent person?	
☐	☐	Is material removed from excavations managed so it will not overwhelm the protective systems?	
☐	☐	Are barriers provided between excavations and walkways?	
☐	☐	Are excavations by roadways barricaded to warn vehicles of presence or to prevent them from falling in?	
☐	☐	Is there a means of exit from the excavation every 25 feet?	
☐	☐	Is air monitoring required? If yes, Is it performed?	

CONFINED SPACES
29 CFR 1910 Subpart J. EM 385-1-1, Section 6

YES	NO		COMMENT
☐	☐	Is there a Confined Space Entry Program in place?	
☐	☐	Are the confined Spaces identified and labeled?	
☐	☐	Will the Confined Spaces be entered?	
☐	☐	Is appropriate entry documentation used and on-file?	

ELECTRICAL
29 CFR 1926 Subpart K. EM 385-1-1, Section 11

YES	NO		COMMENT
☐	☐	Are electrical installations made according to the National Electrical Code and applicable local codes?	
☐	☐	Qualified electricians make all connections and perform all work within 10 feet of live electric equipment.	
☐	☐	Location of underground, overhead, under floor, behind wall electrical lines is known and communicated. Lines are documented by qualified person as de-energized where necessary.	
☐	☐	Workers understand they must not work near live parts of electric circuits, unless they are qualified as required by OSHA or are protected by de-energizing and grounding the parts, guarding the parts by insulation, or other effective means?	
☐	☐	Employees who regularly work on or around energized electrical equipment or lines are instructed in the cardiopulmonary resuscitation (CPR) methods.	
☐	☐	Workers are prohibited from working alone on energized lines or equipment over 600 volts.	
☐	☐	Are Ground-fault circuit interrupters (GFCI's) or is ground fault circuit protection provided to protect employees from ground-fault hazards for all 115 – 120 Volt, 15 and 20 amp receptacle outlets which are not a part of the permanent wiring of a building or structure at construction sites?	
☐	☐	Circuit breakers are labeled.	
☐	☐	Circuit breaker and all cabinets with exposed electric conductors are kept tightly closed.	
☐	☐	Unused openings (including conduit knockouts) in electrical enclosures and fittings are closed with appropriate covers, plugs, or plates.	
☐	☐	Sufficient access and working space is provided and maintained about all electrical equipment to permit ready and safe operations and maintenance.	
☐	☐	Motors are located within sight of their controllers or controller disconnecting means are capable of being locked in the pen position or is a separate disconnecting means installed in the circuit within sight of the motor.	
☐	☐	Are visual inspections of extension cords and cord-and plug-connected equipment conducted daily? Is equipment found damaged or defective tagged and removed from service, and not used until repaired?	
☐	☐	Wet Areas - Is portable lighting used in wet or conductive locations, such as tanks or boilers operated at no more than 12 volts and protected by GFCIs.	
☐	☐	Are electrical installations in hazardous areas to NEC?	
☐	☐	Metal ladders and tools including tape measures or fabric with metal thread are prohibited where contact with energized electrically parts is possible.	
☐	☐	All extension cords are the three-wire type, designed and rated for hard or extra hard usage?	
☐	☐	Worn or frayed electrical cords or cables are taken out of service. Fastening with staples, hanging from nails or suspending extension cords by wire is prohibited.	
☐	☐	Electric wire/flexible cord passing through work areas is protected from damage such as foot traffic, vehicles, sharp corners, projections and pinching? Flexible cords and cables passing through holes are protected by bushings or fittings?	
☐	☐	Before an employee or contractor performs any service or maintenance on a system where the unexpected energizing, start up, or release of kinetic or stored energy could occur and cause injury or damage, the system is to be isolated. Only authorized persons may apply and remove lockouts and tags.	
☐	☐	Contractors planning to use hazardous energy control procedures submit their hazardous energy control plan to the WESTON site safety officer or designee before implementing lockout/tagout procedures.	
☐	☐	There is a site specific hazardous energy control plan that clearly and specifically outlines the scope, purpose, authorization, rules and techniques to be used for the control of hazardous energy.	
☐	☐	Workers possess the knowledge and skills required for the safe application, usage, and removal of energy controls.	

WELDING AND CUTTING
29 CFR 1926 Subpart J. EM 385-1-1, Section 10

YES	NO		COMMENT
☐	☐	Prior to performing welding, cutting or any other heat or spark producing activity, an assessment of the area is made by a competent person to identify combustible materials and potential sources of flammable atmospheres.	
☐	☐	Welders, cutters and their supervisors are trained in the safe operation of their equipment, safe welding and cutting practices, hot work permit requirements, and fire protection.	
☐	☐	Welding and cutting equipment is inspected daily before use. Unsafe equipment is taken out of use, replaced, or repaired.	
☐	☐	Workers and the public are shielded from welding rays, flashes, sparks, molten metal, and slag.	
☐	☐	Employees performing welding, cutting, or heating are protected by PPE appropriate for the hazards (e.g., respiratory, vision and skin protection).	
☐	☐	Compatible fire extinguishing equipment is provided in the immediate vicinity of welding or cutting operations.	
☐	☐	Drums, tanks, or other containers and equipment which have contained hazardous materials shall be thoroughly cleaned before welding or cutting. Cleaning shall be performed in accordance with NFPA 327, Cleaning or Safeguarding Small Tanks and Containers, ANSI/AWS F4.1, Recommended Safe Practices for the Preparation for Welding and Cutting of Containers That Have Held Hazardous Substances, and applicable health and safety plan requirements.	

HAND AND POWER TOOL SAFETY
29 CFR 1926 Subpart I. EM 385-1-1, Section 13

YES	NO		COMMENT
☐	☐	Power tools are from a manufacturer listed by a nationally recognized testing laboratory for the specific application for which they are to be used.	
☐	☐	Hand & power tools are inspected, maintained, tested, and determined to be in safe operating condition before use.	
☐	☐	Tools found to be unsafe are not used, tagged and repaired or destroyed.	
☐	☐	Users of tools are trained in safe use.	
☐	☐	Electrical tools have cords and plug connections in good repair.	
☐	☐	Electrical tools are effectively grounded or approved double insulated.	
☐	☐	Reciprocating, rotating, and moving parts of equipment are guarded if they may be accessed by employees or they otherwise create a hazard.	
☐	☐	Safety clips/retainers are installed and maintained on pneumatic impact tool connections.	
☐	☐	Chain saws have an automatic chain brake or anti-kickback device.	
☐	☐	Pneumatic and hydraulic hoses and fittings are inspected regularly.	
☐	☐	Employees who operate powder actuated tools are trained and carry valid operator's cards.	
☐	☐	Powder activated tools are stored in individual locked containers, when not in use and are not loaded until ready to use.	
☐	☐	Powder actuated tools are inspected for obstructions or defects daily before use.	
☐	☐	Powder actuated tool operators have appropriate PPE.	

RIGGING
29 CFR 1926 Subpart H. EM 385-1-1, Section 15

YES	NO		COMMENT
☐	☐	Rigging equipment is inspected as specified by the manufacturer, by a qualified person, before use on each shift and as necessary to assure that it is safe.	
☐	☐	Defective equipment is removed from service.	
☐	☐	Rigging not in use is removed from the work area, properly stored, and maintained in good condition.	
☐	☐	Wire rope removed from service for defects is cut up or plainly marked as unfit for use as rigging.	
☐	☐	The number of saddle clips used to form eyes in wire rope conforms with Table H-20, are spaced evenly and the saddles are on the live side.	
☐	☐	Chain rigging has a tag clearly indicating load limits, is inspected before initial use, then weekly, and is of alloyed metal.	
☐	☐	Fiber rope rigging is not used if it is frozen or has been subject to acids or excessive heat.	
☐	☐	Slings and their fittings and fastenings are inspected before use on each shift and as needed during use.	
☐	☐	Drums, sheaves, and pulleys on rigging hardware are smooth and free of surface defects that can damage rigging.	

MATERIAL HANDLING, STORAGE, AND DISPOSAL
29 CFR 1926 Subpart H. EM 385-1-1, Section 14

YES	NO		COMMENT
☐	☐	Employees are trained in and use safe lifting techniques.	
☐	☐	Materials are not moved or suspended over workers unless positive precautions have been taken to protect workers.	
☐	☐	Conveyors are constructed, inspected, & maintained by qualified persons according to manufacturer's recommendations.	
☐	☐	All conveyors are to be equipped with emergency stopping devices.	
☐	☐	Hazardous exposed moving machine parts are guarded mechanically, electrically or by location.	
☐	☐	Controls are clearly marked and/or labeled to indicate the function controlled.	
☐	☐	Taglines are used for suspended loads where the movement may be hazardous to persons.	
☐	☐	Material in storage is protected from falling or collapse by effective stacking, blocking, cribbing, etc.	
☐	☐	Walkways and aisles are to be kept clear.	
☐	☐	Materials are not stored on scaffolds or runways in excess of normal placement or in excess of safe load limits.	
☐	☐	Work areas and means of access are maintained safe and orderly.	
☐	☐	Tools, materials, extension cords, hoses or debris do not cause tripping or other hazards.	
☐	☐	Storage and construction sites are kept free from the accumulation of combustible materials.	
☐	☐	Waste materials and rubbish are placed in containers or, if appropriate, in piles. Waste materials are disposed of in accord with applicable local, state, or federal requirements.	

FLOATING PLANT AND MARINE ACTIVITIES
29 CFR 1926 Subpart O. EM 385-1-1 Section 19

YES	NO		COMMENT
☐	☐	Floating plants that are regulated by the USCG have current inspections and certificates.	
☐	☐	Before any floating plant is brought to the job site and placed in service it is inspected and determined to be in safe operating condition	
☐	☐	Periodic inspections are made such that safe operating conditions are maintained. Strict compliance with EM 385-1-1, Section 19 is expected.	
☐	☐	Plans are in place for removing or securing the plant and evacuation of personnel endangered by severe weather and other marine emergencies such as; fire, flooding, man overboard, hazardous materials incidents, etc.	
☐	☐	Means of access are properly secured, guarded, and maintained free of slipping and tripping hazards.	
☐	☐	Dredging operations follow guidelines as established in EM 385-1-1, Section 19.D.	

PRESSURIZED EQUIPMENT AND SYSTEMS
29 CFR 1926 Subparts I, F. EM 385-1-1, Section 20

YES	NO		COMMENT
☐	☐	Pressurized equipment and systems are inspected before being placed into service.	
☐	☐	Pressurized equipment or systems found to be unsafe are tagged “Out of Service-Do Not Use”.	
☐	☐	Systems and equipment are operated, inspected, and maintained by qualified, designated personnel.	
☐	☐	Safe clearance, lockout/tagout procedures are followed as appropriate during maintenance or repair.	
☐	☐	Air hose, pipes, fittings are pressure-rated for the activity. Defective hoses are removed from service.	
☐	☐	Hoses aren’t laid over ladders, steps, scaffolds, or walkways in a manner that creates a tripping hazard.	
☐	☐	The use of compressed air for personal cleaning is prohibited. The use of compressed air for other cleaning is restricted to less than 30 psig.	
☐	☐	Compressed gas cylinders are stored in well-ventilated locations.	
☐	☐	Cylinders in storage are separated from flammable or combustible liquids and from easily ignitable materials by at least 40 feet or by a minimum five feet tall, ½ -hour fire resistive partition.	
☐	☐	Stored cylinders containing oxidizing gases are separated from fuel gas cylinders by at least 20 feet or by a minimum five feet tall, ½ -hour fire resistive partition.	
☐	☐	Cylinder valve caps are in place when cylinders are in storage, in transit, or a regulator is not in place.	
☐	☐	Compressed gas cylinders in service are secured in substantial fixed or portable racks or hand trucks.	
☐	☐	Oxygen cylinders and fittings are kept away from, and free from oil and grease.	
☐	☐	Cylinder Storage areas are posted with the names of the gases in storage and with signs indicating "No Smoking or Open Flame".	
☐	☐	Cylinders are to be stored such that mechanical and corrosion damage is avoided. Cylinders are not to be stored in areas required as an egress path.	
☐	☐	Cylinders may be stored in the open outdoors, however, they must be protected from the ground to prevent corrosion and must be protected from temperatures that may exceed 125 degrees F.	

WORK PLATFORMS/SCAFFOLDS
29 CFR 1926 Subparts L, M, N. EM 385-1-1 Sections 21, 22

YES	NO		COMMENT
☐	☐	Work platforms are erected, used, inspected, tested, maintained and repaired according to manufacturer's requirements.	
☐	☐	Construction, inspection, and disassembly of scaffolds is under the direction of a competent person.	
☐	☐	Workers on scaffolding have been trained by a qualified person.	
☐	☐	Scaffolds are erected on a firm and level surface and are square and plumb.	
☐	☐	Scaffolds are not loaded in excess of rated capacity.	
☐	☐	Working levels of work platforms are fully planked or decked.	
☐	☐	Planks are in good condition and free from obvious defects.	
☐	☐	Fabricated frame scaffolding four times higher than the base width is secured to building/structure according to manufacturer's instruction and/or OSHA requirements.	
☐	☐	Working platforms of scaffolding over ten feet in height have guard rails meeting OSHA specifications. Fall protection is suggested at four feet or greater.	
☐	☐	Scaffolding/work platforms are accessed by means of a properly secured ladder or equivalent. Built on ladders conform to scaffold ladder requirements. Climbing of braces is not allowed.	
☐	☐	Crane supported work platforms are designed and used in accordance with OSHA standards.	
☐	☐	Elevating work platforms are operated, inspected, and maintained according to the equipment operations manual.	
☐	☐	Employees working in aerial lifts remain firmly on the floor of the basket. Employees use fall protection while in an aerial lift basket.	

WALKING AND WORKING SURFACES AND STAIRS
29 CFR 1926 Subparts L, M, X. EM 385-1-1, Sections 21, 22, 24

YES	NO		COMMENT
☐	☐	Work areas are clean, sanitary, and orderly	
☐	☐	Work surfaces are kept dry or appropriate means are taken to assure the surfaces are slip-resistant	
☐	☐	Accumulations of combustible dust are routinely removed.	
☐	☐	Aisles and passageways are kept clear and marked as appropriate.	
☐	☐	There is safe clearance for walking in aisles where motorized or mechanical handling equipment is operating.	
☐	☐	Materials or equipment is stored in such a way that sharp projections will not interfere with the walkway.	
☐	☐	Changes of direction or elevation are readily identifiable.	
☐	☐	Aisles or walkways that pass near moving or operating machinery, welding operations or similar operations are arranged so employees will not be subjected to potential hazards.	
☐	☐	Standard guardrails are provided wherever aisle or walkway surfaces are elevated more than 30 inches above any adjacent floor or the ground and bridges provided where workers must cross over conveyors and similar hazards.	
☐	☐	There are standard stair rails or handrails on all stairways having four or more risers or with an elevation of 30 or more inches.	
☐	☐	Stairways are at least 22 inches wide. (General Industry Standard)	
☐	☐	Stairs angle no more than 50 and no less than 30 degrees, risers are uniform from top to bottom (plus or minus 1/4 inch) and are provided with a surface that renders them slip resistant.	

☐	☐	Stairway handrails are not less than 36 inches above the leading edge of stair treads and have at least 3 inches of clearance between the handrails and the wall or surface they are mounted on.	
☐	☐	Where doors or gates open directly on a stairway, there is a platform provided so the swing of the door does not reduce the width of the platform to less than 20 inches.	
☐	☐	Where stairs or stairways exit directly into any area where vehicles may be operated, there are adequate barriers and warnings provided to prevent employees stepping into the path of traffic.	
☐	☐	Signs are posted showing the load capacity of elevated storage areas.	
☐	☐	An appropriate means of access and egress is provided for surfaces with 19 or more inches of elevation change.	
		Material on elevated surfaces is minimized, with that necessary for immediate work requriements piled, stacked, or racked in a manner to prevent it from tipping, falling, collapsing, rolling, or spreading.	

FLOOR AND WALL HOLES AND OPENINGS
29 CFR 1926 Subpart M. EM 385-1-1, Section 24

YES	NO		COMMENT
☐	☐	Floor and roof openings that persons can walk into or fall through are guarded by a physical barrier or covered.	
☐	☐	Holes (defined as equal to or greater than 2 inches in least dimension) where person could trip must be covered/protected.	
☐	☐	Unprotected sides and edges on a walking/working surface six feet or more (note four feet in General Industry) are protected by guardrail system, safety net, or Personal Fall Arrest System (PFAS).	
☐	☐	Unused portions of service pits and pits not actually in use are either covered or protected by guardrails or equivalent.	
☐	☐	Coverings for holes or other openings must be constructed of sufficient strength to support any anticipated load, must be secured in place to prevent accidental removal or displacement, and must be marked indicating purpose (e.g., stenciled "Hole" or painted contrasting color to surroundings).	

LADDERS
29 CFR 1926 Subpart X. EM 385-1-1, Section 21

YES	NO		COMMENT
☐	☐	Portable ladders are used for their designed purpose only.	
☐	☐	Portable ladders are examined for defects prior to, and after use.	
☐	☐	Ladders found to be defective are clearly tagged to indicate "DO NOT USE" if repairable, or destroyed immediately if no repair is possible.	
☐	☐	Workers are trained in hazards associated with ladder use and how to inspect ladders.	
☐	☐	Ladders have secure footing provided by a combination of safety feet, top of ladder tie-offs and mud cills or a person holding the ladder to prevent slipping.	
☐	☐	The handrails of a straight ladder used to get from one level to another extend at least 36 inches above the landing.	
☐	☐	Ladders conform to construction criteria of ANSI Standards A-14.1 and A-14.2.	
☐	☐	Wooden ladders are not painted with an opaque covering such that signs of flaws, cracks, or drying are obscured.	
☐	☐	Fixed ladders are constructed and used according to OSHA Standards, 29 CFR 1910.27 and ANSI A-14.3.	
☐	☐	Rungs, cleats or steps, and side rails that may be used for handholds when climbing, offer adequate gripping surface and are free of splinters, slivers or burrs, and substances that could cause slipping.	
☐	☐	Fixed ladders of greater than 24 feet have cages or other approved fall protection devices. (Note General Industry is 20 feet).	
☐	☐	Where fall protection is provided by ladder safety systems (body belts or harnesses, lanyards and braking devices with safety lines or rails), systems meet the requirements of and are used in accordance with WESTON Fall Protection Standard Practices and are compatible with construction of the ladder system.	

DEMOLITION
29 CFR 1926 Subpart T. EM 385-1-1, Section 23

YES	NO		COMMENT
☐	☐	Prior to initiating demolition activities an engineering survey (by a competent person) and a demolition plan (by a competent person) is completed.	
☐	☐	All employees engaged in demolition activities are instructed in the demolition plan.	
☐	☐	It has been determined through the engineering survey and outlined in the plan, if any hazardous materials or conditions (e.g., asbestos, lead, utility connections, etc.) exist. Such hazards are controlled or eliminated before demolition is started.	
☐	☐	Continued inspections, by a competent person, are conducted to ensure safe employee working conditions.	

TREE MAINTENANCE AND REMOVAL
29 CFR 1910 Subpart R. EM 385-1-1, Section 31

YES	NO		COMMENT
☐	☐	Tree maintenance or removal is done is under the direction of a qualified person.	
☐	☐	Tree work, in the vicinity of charged electric lines, is by trained persons qualified to work with electricity and tree work. Appropriate distances are maintained for all workers who are not qualified.	
☐	☐	Equipment is inspected, maintained, repaired, and used in accordance with the manufacturer's directions.	
☐	☐	Prior to felling actions are planned to include clearing of the area to permit safe working conditions and escape.	
☐	☐	Employees must be trained in the safe operation of all equipment.	
☐	☐	All equipment and machinery is inspected and determined safe prior to use.	
☐	☐	Work is performed under requirements of FLD 43.	

BLASTING
29 CFR 1926 Subpart U. EM 385-1-1, Section 29

YES	NO		COMMENT
☐	☐	A blasting safety plan is developed prior to bringing explosives on-site.	
☐	☐	The transportation, handling, storage, and use of explosives, blasting agents, and blasting equipment must be directed and supervised by a person with proven experience and ability in blasting operations. Licensing of person is verified.	
☐	☐	Blasting operations in or adjacent to cofferdams, piers, underwater structures, buildings, structures, or other facilities must be carefully planned with full consideration to potential vibration and damage.	

HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE AND UNDERGROUND STORAGE TANK (UST) ACTIVITIES
29 CFR 1926 Subpart D. EM 385-1-1, Section 28

YES	NO		COMMENT
☐	☐	All construction activities performed with known or potential exposure to hazardous waste are conducted in accordance with Hazardous Waste Operations and Emergency Response requirements.	

CONCRETE and MASONRY CONSTRUCTION
29 CFR 1926 Subpart Q. EM 385-1-1, Section 27

YES	NO		COMMENT
☐	☐	Construction loads are not placed on a concrete or masonry structure or portion of a concrete or masonry structure unless the employer determines, based on information from a person who is qualified in structural design, that the structure or portion of the structure is capable of supporting the loads.	
☐	☐	Employees are not permitted to work above or in positions exposed to protruding reinforcing steel or other impalement hazards unless provisions have been made to control the hazard.	
☐	☐	Sections of concrete conveyances and airlines under pressure are secured with wire rope (or equivalent material) in addition to the regular couplings or connections.	
☐	☐	Structural and reinforcing steel for walls, piers, columns, and similar vertical structures is supported and/or guyed to prevent overturning or collapse	
☐	☐	All form-work, shoring, and bracing is designed, fabricated, erected, supported, braced, and maintained so it will safely support all vertical and lateral loads that may be applied until the loads can be supported by the structure.	
☐	☐	Shoring equipment is inspected prior to erection to determine that it is specified in the shoring design. Any equipment found to be damaged is not used.	
☐	☐	Erected shoring equipment is inspected immediately prior to, during, and immediately after the placement of concrete. Any shoring equipment that is found to be damaged, displaced, or weakened is immediately reinforced or re-shored.	
☐	☐	Shoring, vertical slip forms and jacks conform with requirements of Section 27.B.08-13 of USACE EM 385-1-1.	
☐	☐	Forms and shores (except those on slab or grade and slip forms) are not removed until the individual responsible for forming and/or shoring determines that the concrete has gained sufficient strength to support its weight and all superimposed loads.	
☐	☐	Precast concrete members are adequately supported to prevent overturning or collapse until permanent connections are complete	
☐	☐	No one is permitted under pre-cast concrete members being lifted or tilted into position except employees required for the erection of those members.	
☐	☐	Lift slab operations are planned and designed by a registered engineer or architect.	
☐	☐	Hydraulic jacks used in lift slab construction have a safety device that causes the jacks to support the load in any position if the jack malfunctions	
☐	☐	No one is permitted under the slab during jacking operations.	
☐	☐	A limited access zone is established whenever a masonry wall is being constructed.	
☐	☐	Fall protection is provided to masonry workers exposed to falls of 6 feet or more.	

STEEL ERECTION
29 CFR 1926 Subpart R. EM 385-1-1, Section 27

YES	NO		COMMENT
☐	☐	Impact wrenches have a locking device for retaining the socket. Containers shall be provided for storing or carrying rivets, bolts, and drift pins, and secured against accidental displacement when aloft.	
☐	☐	Structural and reinforcing steel for walls, piers, columns, and similar vertical structures shall be guyed and supported to prevent collapse	
☐	☐	No loading is placed upon steel joists until all bridging is completely and permanently installed.	
☐	☐	Workers are provided fall protection whenever they are exposed to falls of 1.8 m (6 ft) or more (EM 385-1-1).	
☐	☐	Temporary flooring in skeleton steel erection conforms with Section 27.F of USACE 385-1-1	

ROOFING
29 CFR 1926 Subpart M. EM 385-1-1, Sections 21, 22, 24, 27

Yes	No		COMMENT
☐	☐	In the construction, maintenance, repair, and demolition, of roofs, fall protection systems is provided that will prevent personnel from slipping and failing from the roof and prevent personnel on lower levels from being struck by falling objects	
☐	☐	On all roofs greater than 4.8 m (16 ft) in height, a hoisting device, stairways, or progressive platforms are furnished for supplying materials and equipment.	
☐	☐	Roofing materials and accessories that could be moved by the wind, including metal roofing panels, that are on the roof and unattached are secured when wind speeds are greater than, or are anticipated to exceed, 10 mph.	
☐	☐	Level, guarded platforms are provided at the landing area on the roof.	
☐	☐	When their use is permitted, warning line systems comply with USACE Section 27.07 of EM 385-1-1.	
☐	☐	Workers involved in roof-edge materials handling or working in a storage area located on a roof with a slope -/= to four vertical to twelve horizontal and with edges 6 ft or more above lower levels are protected by the use of a guardrail, safety net, or personal fall arrest system along all unprotected roof sides and edges of the area.	

ENVIRONMENTAL COMPLIANCE

Yes	No		Comments
☐	☐	Environmental Compliance and Waste Management Plan on file.	
☐	☐	Waste Determination Made.	
☐	☐	Manifest and/or Shipping Papers prepared and filed.	
☐	☐	Manifest Exception Reports Prepared, as necessary. Procedures to track manifests in place.	
☐	☐	State Annual and EPA Biennial Reporting Information Available.	
☐	☐	RCRA Personnel Training Records on file.	
☐	☐	CAA Permits on file.	
☐	☐	CWA Permits on file.	
☐	☐	RCRA Permits on file.	
☐	☐	State and/or Local Permits on file.	
☐	☐	RCRA Inspections conducted and Documentation on file.	
☐	☐	Transporter and TSD compliance information on file.	
☐	☐	Waste Accumulation Areas Managed Properly.	
☐	☐	Wetlands Areas Identified and Protected.	
☐	☐	Endangered, Threatened, or Special Concern Species or Areas Identified and Protective Methods Determined.	
☐	☐	Run-on and Runoff Concerns Identified and Managed.	
☐	☐	Adjacent Land Areas Protected as Necessary.	
☐	☐	Non-Hazardous Solid Wastes Managed Properly.	

MISCELLANEOUS REGULATORY and POLICY COMPLIANCE

Yes	No		Comments
☐	☐	Personnel Training Records for DOT Materials Handling on file.	
☐	☐	Noise Control Issues Addressed and Managed.	
☐	☐	Site Security Issues Identified and Managed.	
☐	☐	Known Historical, Archeological, and Cultural Resources Identified and Managed.	
☐	☐	WESTON EHS Analysis Checklist In Use.	
☐	☐	Safety Observation and Recognition Program in place.	
☐	☐	Weekly EHS Report Card System in place.	
☐	☐	Federal, State, and Local Required Postings in place.	
☐	☐	Site specific Lockout/Tagout Program is in place.	
☐	☐	Site-specific Confined Space Program is in place.	
☐	☐	Site Safety Officer filing system is in place and up to date.	

ATTACHMENT I
HAZARD CHECKLIST

HAZARD CHECKLIST Site Manager/EHS Officer:
Date:
Location:
Address:

Task Team (name or reference via daily sign-in sheet)

HAZARDS IDENTIFIED (check those applicable)

	Chemical		Biological		Physical		Aerial lifts		Remote Areas
☒	Flammable/combustible	☒	Insects	☒	Noise	☐	Man. Material Handling	☐	Materials handling
☒	Corrosive	☐	Animals	☒	Heat	☐	Demolition	☐	High Pressure Washers
☐	Oxidizer	☐	Plants	☐	Cold	☐	Excavation	☐	Hand and Power Tools
☒	Reactive	☐	Mold/Fungus	☒	Inclement Weather	☐	Pile Driving	☐	Low Illumination
☒	Toxic	☐	Viral/Bacterial	☐	Hot Work	☐	Welding/Cutting/Burn	☐	Drilling & Boring
☒	Inhalation	☐	Density Gauges	☐	Confined Spaces	☐	Hot Surfaces	☐	Striking against/Struck-by
☒	Eyes/Skin	☐	**Radiological**	☒	Stored hazardous Energy	☐	Hot Materials	☐	Caught-in/Caught between
☐	Pesticides	☐	Ultra-Violet	☐	Elevation	☐	Rough Terrain	☐	Pushing/pulling
☒	Carcinogen	☒	Sunlight	☐	Utilities	☐	Compressed Gases	☐	Falls at same level
☐	Asbestos	☐	Infrared	☒	Machinery	☐	Hazardous Mat. Storage	☐	Falls from elevation
☐	Lead	☐	Lasers	☐	Mobile equipment	☐	Diving	☐	Repetitive motion
☐	UXO/OE/ CWM	☐	XRF	☐	Cranes	☐	Operation of Boats	☐	High (>110v) Electricity
☐	Process Safety	☐	Isotopes	☒	Manual Material Handling	☐	Working Over Water	☐	Slippery surface Ice/Snow
☐	Applying Paint/Coatings	☐		☒	Ladders	☐	Traffic	☐	
☐		☐		☐	Scaffolding	☐	Site Security	☐	

REQUIRED PROTECTION (check those applicable)

	Engineering Controls		Administrative Control		PPE				Contingency
☐	Guard Rails	☒	Qualified for task	☐	Air Supplying Respirator	☐	Tyvek coveralls	☐	Emergency Signal Known
☐	Machine Guards	☒	Trained/Certified	☒	Air Purifying Respirator	☐	Coated Coveralls	☐	Eye wash/shower Location
☐	Sound Barriers	☐	Hot Work Permit	☒	SCBA	☐	Welding leathers	☐	First Aid Kit Location
☐	Enclosure	☐	CSE Permit	☒	Hard Hat	☐	CWM	☐	Fire Extinguisher Location
☐	Elevation	☐	Lockout/Tag Out	☒	Ear Plugs	☐	Safety Shoes/Boots	☐	Spill Kit Location
☐	Isolation	☐	Work Permit	☐	Ear Muffs	☐	Rubber Boots	☐	Severe weather shelter
☐	GFCI	☐	Dig Safe Permit	☒	Safety Glasses	☒	Gloves	☐	Evacuation Routes
☒	Assured Ground Program	☐	Contingency Plan	☐	Goggles	☐	Cooling Suits		
☐	Apply Anti-slip/skid Mat	☐	Critical Lift Plans	☐	Chemical Goggles	☐	Ice Vests		
		☐	Equip. Inspection Sheets	☒	Face Shield	☐	Radiant heat Suits		
				☐	Thermal Shield	☐	Fall Arrest		
				☐	Welding Mask	☐	PFD		
				☐	Cutting Glasses	☐	Electrical insulation		

Any Modification to Tasks (list)	Other tasks or activities that may affect my activity	Reasons for any changes indicated above

ATTACHMENT J
AUDIT AND OTHER FORMS