

APPENDIX S
HAZARD
COMMUNICATION
PROGRAM

HAZARD COMMUNICATION PROGRAM

1. Purpose

The purpose of this hazard communication program is to inform *all* employees on site of known chemical hazards that may exist in the workplace.

2. Application

This program applies to chemicals known to be present in the workplace in such a manner that employees may be exposed under normal conditions, non-routine tasks, or foreseeable emergencies.

This hazard communication program relies on Material Safety Data Sheets (MSDS) from suppliers for purposes of hazard determination.

3. Program Summary

The major elements of this program are as follows:

- a) Labels and other forms of warning
- b) Material Safety Data Sheets (MSDS) from suppliers
- c) Employee information and training
- d) List of hazardous chemicals known to be present in the workplace
- e) Methods for informing employees of hazards of non-routine tasks

4. Labels and Other Forms of Warning

Each container of hazardous chemicals shall be labeled, tagged, or otherwise marked with:

- a) The identity of the hazardous chemicals (or chemicals), and,
- b) Appropriate hazard warnings

Labels and other forms of warning shall be legible and in English, and shall be prominently displayed or readily available in the work area during each shift.

5. Material Safety Data Sheet

A material safety data sheet (MSDS) shall be kept for each hazardous chemical known to be present in the workplace.

Material safety data sheets are kept in the *on-site office* and are readily accessible by employees during each work shift.

The *superintendent and trade foreman* are responsible for maintaining the MSDS in a complete and up-to-date manner, as well as coordinator of the program.

Contractors and Subcontractors are responsible for the maintenance of their own Chemical Inventory Logs and retentions of MSDS sheets on-site. Contractors and Subcontractors are responsible to regularly submit MSDS Inventory logs to EW Howell.

6. Training & Information

1. Employees shall be trained according to a written hazard-communication training plan that is part of the company's overall hazard communication program.
2. Training shall extend to non-routine tasks, as necessary, and to foreseeable emergencies.
3. When contractor employees are required to work on our site, the contractor employee shall be advised of the provisions of our company's hazard communication program. Contractor employees shall be provided ready access to the MSDS and list of hazardous materials.

7. Revisions

This program shall be amended as changes in work operations, new materials or processes, or new information dictate.

HAZARD COMMUNICATION TRAINING PROGRAM

1. Initial Assignment Information and Training

- a) The *trade foreman* shall train new employees in hazard communication and protection procedures as part of their general orientation before the new employees begin work.
- b) The *trade foreman* is responsible for training affected employees whenever new hazardous chemicals are introduced into the workplace. This responsibility extends to provide additional training, as required, for existing employees reassigned into new positions.

2. Curriculum

- a) All employees shall be provided with the following information:
 - 1) Employees shall be informed that *all contractors are* required by law to have a chemical hazard communication program.
 - 2) Employees shall be informed of the details of *their employers* chemical hazard communication program including:
 - The location and ready availability of a list of all hazardous chemicals used by the company
 - A list of all hazardous chemicals known to be present in the work area is kept at the *site office* and is available for review by employees during each work shift
 - The location and ready availability of Material Safety Data Sheets (MSDS) for hazardous chemicals used within the company
 - Specific operations or tasks in the employees' work area that use hazardous chemicals
- b) All employees shall receive training as follows:
 - 1) Employees shall be trained in methods and observations to detect the presence of hazardous chemicals.
 - 2) Employees shall be trained regarding the specific physical and health hazards of known hazardous chemicals in the employees' work area.
 - 3) Employees shall be trained in protective measures including the use of personal protective equipment and protective measures implemented by *their employer*, including work procedures.
 - 4) Employees shall be trained in understanding, interpreting and using hazard information provided on labels and in MSDS.

3. Training Program Completion

All employees are required to successfully complete the hazard-communications training program. Employees are required to follow safe and healthy work practices as a condition of employment.

4. Non-Routine Tasks

Training for hazard protection during non-routine tasks is the responsibility of the trade foreman and shall be provided as needed.

5. Foreseeable Emergencies

Training for hazard protection during foreseeable emergencies (such as fires, floods, spills) shall be provided to all affected employees as part of their general safety training.

The MSDS and list of hazardous materials shall be available to contractor employees as well.

REFERENCES:

29 CFR 1910.1200 – Hazard Communications

APPENDIX T
LIFTING –
HOISTING &
RIGGING

HOWELL

Job Name: _____ Subcontractor: _____

Crane Operator: _____ N.Y.S. Operator's License #: _____

Superintendent: _____

Print: _____

Signature: _____

Date of Lift: _____ / _____ / _____

BNL Pre-Lift Meeting

- Crane Operators License. (photo copy or all info)
- Daily Crane Checklist (dated & Signed)
- Daily Riggers Checklist (dated & Signed)
- Pre-Lift meeting prior to lift
- Are all permits in place
- BNL crane inspection
- Crane Layout with sequencing
- Ground Conditions (no voids or vaults)
- Are there any backswing concerns (light poles, cars, building)
- Are there any power lines present next to or where boom can hit
- Is area where material being lifted occupied? If Yes relocate workers
- Will traffic measurers need to be taken? (cones, barricades, signs, sidewalks, police)
- Will flaggers be needed if so certifications are needed
- Do we know the weights of material to be lifted? (heaviest item to be hoisted)
- Are wind conditions under 25 mph? _____
- Tag lines will be used
- Communications with receiver of material. Radio Hand signals Two signallers
- Competent person for lift (fill out form)
- Has all rigging been inspected by BNL and Rigger prior to lift ?
- Has all personal been instructed to stay clear of from under loads
- Sign in sheet (print & sign)

E.W. Howell Co., LLC
245 Newtown Road
Suite 600
Plainview, New York 11803

DAILY RIGGERS CHECK LIST

Job Name: _____

Crane Operator: _____ N.Y.S. Operator's License #: _____

Operators Qualifications (call office to confirm) _____

Print: _____

Signature: _____

Date of Lift: ____ / ____ / ____

I. Description of item being lifted

- A. What is the weight of the item being lifted including the related rigging? _____
B. Is this an estimate or exact weight? _____
C. Who estimated or determined the exact weight? _____

II. Hoisting equipment to be used

A. Crane type: _____ Capacity: _____

B. Rigging to be used: _____

C. Name of designated rigger: _____

III. Inspection of hoisting equipment

A. Person checking equipment to be lifted: _____
Date Inspected: ____ / ____ / ____

B. Person checking Rigging equipment to be used: _____
Date Inspected: ____ / ____ / ____

IV. Making the lift

A. What personnel or property will be affected by the lift? _____
Comments: _____

B. What hazards will material be lifted over? _____
Comments: _____

C. Environmental conditions appropriate for lift? Wind, lighting, etc.

Yes ___ No ___ Comments: _____

Operator's Daily Checklist

Forklift Serial Number: _____

Operator: _____

Hour Meter Reading: _____ **Date:** ____ / ____ / ____

✓	Visual Check
	Tires are inflated and free of excessive wear or damage. Nuts are tight.
	Forks and mast are not bent, worn, or cracked.
	Load back rest extension is in place and not bent, cracked, or loose.
	Overhead guard is in place and not bent, cracked, or loose.
	Attachments (if equipped) operate OK and are not damaged.
	Forklift body is free of excessive lint, grease, or oil.
	Engine oil is full and free of leaks.
	Hydraulic oil is full and free of leaks.
	Radiator is full and free of leaks.
	Fuel level is OK and free of leaks.
	Battery connections are tight.
	Covers over battery and other hazardous parts are in place and secure.
	Load rating plate is present and readable.
	Warning decals and operators' manual are present and readable.
	Seat belt or restraint is accessible and not damaged, oily, or dirty.
	Engine runs smooth and quiet without leaks or sparks from the exhaust.
	Horn works.
	Turn signal (if equipped) operates smoothly.
	Lights (head, tail, and warning) work and are aimed correctly.
	Gauges and instruments are working.
	Lift and lower operates smoothly without excess drift.
	Tilt operates smoothly without excessive drift or "chatter".
	Control levers are labeled, not loose or binding and freely return to neutral.
	Steering is smooth and responsive, free of excessive play.
	Brakes work and function smoothly without grabbing. No fluid leaks.
	Parking brake will hold the forklift on an incline.
	Backup alarm (if equipped) works.

Safety Violation Form

A Safety violation form is to be completed each time an employee violates a corporate safety rule. This form must be forwarded to the main office and added to the employee's personnel file.

Project: _____

Workers Name: _____ Employer: _____

Date of Violation: _____

Notice: First Second Final

Description of Violation:

Correction Action To be Taken To Prevent A Reoccurrence:

Disciplinary Action Taken:

Nothing in this Policy prohibits the immediate dismissal of removal from The jobsite of any employee whose conduct constitutes a Violation of project safety rules, which could cause danger to himself/ herself, other employee(s), property, or equipment. As an employee working at this construction site, I understand the nature of my safety violation and the proper corrective action necessary to eliminate the hazard.

Employee Signature: _____ Date: _____

This form completed by: _____ Title: _____
(Print Name)

_____ Date: _____
(Signature)



APPENDIX U
CRITICAL
LIFT
FORM

CRITICAL LIFT EVALUATION FORM (CLEF)

- CRITICAL LIFT
- PRE-ENGINEERED LIFT

PERSON REQUESTING THE LIFT

PRINT NAME _____ DEPT/DIV. _____ DATE _____

PERSON IN CHARGE (PIC)

Print Name _____
PIC must be present during the entire CRITICAL LIFT and be QUALIFIED to resolve any question or problems that might arise during the lifting operation.

DETERMINING FACTOR FOR CRITICAL LIFT

- ___ Load is greater than 85% of mobile crane rated capacity, or greater than 90% of rated fixed crane capacity (excluding proof tests of 100 to 125% rated capacity) , or greater than 50 tons.
- ___ Two or more cranes/booms are required or special hoisting/rigging equipment will be used.
- ___ Potential for release of radioactive/hazardous materials due to collision, or upset of load.
- ___ Damage that would result in more than 3 weeks or 30% delay to schedule, or monetary value damages of \$250,000 or greater.

OPERATING EQUIPMENT (mobile crane)

Type of Crane _____ Manufacturer _____
 Model No. _____ Serial No. _____
 Manufacturer Restriction for WIND SPEED _____ (no lifts at wind speeds of 25 mph or greater)
 Crane Equipped with Anemometer (Y/N) _____ (If not, use BNL Weather Station.)
 Copies of Latest Annual Inspection _____ Latest Calibration Date of Instruments _____
 Operator Licensed for Equipment _____ Expiration Date _____

OPERATING EQUIPMENT (overhead cranes)

Type of Crane _____ Manufacturer _____
 Capacity _____ Latest Calibration Date of Instruments _____
 Date of Latest Annual Inspection _____ Operator's SAC Expiration Date _____

DESCRIPTION OF ITEMS TO BE LIFTED

(Continued next page)

HOW WEIGHT OF OBJECT OBTAINED

- A. Certified Weight Scale _____ Ticket # _____
- B. Calculated independently by more than one source:
 - 1. Source _____ Weight _____
 - 2. Source _____ Weight _____
- C. If lift is an existing item (being removed or demolished), the weight must be recalculated, taking into account all modifications, including internal, as well as an allowance for scale, sediment, sludge, and insulation. Calculation worksheets shall be included in the Lift Plan and have a PE stamp or be signed off by a qualified person. **Note:** When weights are calculated, a 10% tolerance margin shall be added. This value may be increased at the discretion of the Lifting Safety Committee.
- D. Shipping Manifests Weight _____ Manufacturer Data Weight _____

CENTER OF GRAVITY (CG)

CG will be marked onto load, and a drawing included showing how it was determined.

25.0 DESCRIPTION & WEIGHT OF ALL RIGGING EQUIPMENT & CRANE ATTACHMENTS

Type	Rated Capacity	Weight
Slings (type):		
Shackles		
Lifting rings/ eyebolts		
Rigging hooks		
Load block/jib		
Spreader bars/below the hook lifting devices NOTE: Must comply with ASME B30.20 Standard for Design, Testing, and Appropriate Markings. 200% test documentation for below the hook rigging: _____		

WEIGHT OF OBJECT, RIGGING EQUIPMENT, & CRANE ATTACHMENTS

Source _____ Total Weight _____

(Continued next page)

EQUIPMENT AND LIFT RELATIONSHIP

- A. Maximum Operating Radius: _____
- B. Planned Operating Radius: _____
- C. Allowable load at maximum lift radius anticipated (from Load Chart): _____
- D. Ratio of Lift to Allowable Load: _____
- E. Clearance between Boom & Lift: _____
- F. Clearance to Surrounding Facilities/Utilities: _____
- G. Clear Path for Load Movement: _____

STABILITY OF GROUND AREA

- A. Soil Bearing Capacity: _____ Source: _____
- B. Mats Required: _____ Size & Number: _____
- C. Underground Utilities Location: _____
- D. Ratio of Soil Bearing Capacity to Actual: _____

LIFTING OPERATION

A detailed drawing, to scale, MUST be included showing the Set-up Area, Lifting Area, Load Placement Area, and Sling Attachment Points w/sling angle reduction factor. A documented Critical Lift Plan or Pre-engineered Lift Procedure, as applicable, shall be included.

26.0 INSPECTION OF CONTRACTORS EQUIPMENT

All contractors' Lifting and Rigging Equipment must be inspected before being brought onto the BNL Site by BSA Hoisting & Rigging Inspector. Contact: John Hynan: (631) 344-5456

27.0 LIFT APPROVAL SIGNATURES

- Professional Engineer/ Qualified Person: _____
- Person in Charge (PIC) (Critical Lift): _____
- Operator of Equipment (Critical Lift): _____
- Responsible Manager or Designee: _____
- Lifting Safety Committee Recommendation: Approve: _____ Disapprove: _____
- LSC Committee Chair: _____

FINAL APPROVAL SIGNATURE

NSLS-II Conventional Facilities, Division Director _____

28.0 PRE-LIFT MEETING

Date: _____ Time: _____ Location: _____

29.0 LIST OF ALL ATTACHMENTS

**APPENDIX V
ENERGIZED
ELECTRICAL
WORK PERMIT**

Department Code **ENERGIZED ELECTRICAL WORK PERMIT** Permit # _____ Procedure # _____

Job/Work Order Number _____

PART I: TO BE COMPLETED BY THE REQUESTER:

(1) Description of circuit/equipment/job location:

(2) Description of work to be done:

(3) Justification of why the circuit/equipment cannot be de-energized or the work deferred until the next scheduled outage:

Start Date: _____ Expire Date: _____

Requester/Title: _____ Date _____

PART II: TO BE COMPLETED BY THE ELECTRICALLY QUALIFIED PERSONS DOING THE WORK:

(1) Detailed job description procedure to be used in performing the above detailed work including hazards, conditions, mechanical, environmental, space obstructions, other voltages:

(2) Description of the Safe Work Practices: LOTO _____ Two Workers _____
Safety Watch _____ Notify affected workers _____
Reason not to LOTO _____
Restart Checks Required: _____

(3)

Flash Hazard (-1 to 4)	Shock Hazard (max V)	Working Distance
Flash Boundry	Limited Approach	Glove Class, minimum
Incident Energy (cal/cm2)	Restricted Approach	
	Prohibited Approach	

(4) Protective Equipment Natural Fiber Clothing Safety Glasses/Goggles Ear Plugs Leather Shoes FR Clothing Face Shield Leather Gloves Voltage-rated Shoes Voltage-rated Tools Balaclava Hood Voltage-rated Gloves Hard Hat Category III Meter 2 Layer Switching Hood Flashsuit Other _Other _____

(5) Means employed to restrict the access of unqualified persons from the work area: _____

(6)

Authorized Workers	Life #	Authorized Workers	Life #
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

PART III: APPROVAL(S) TO PERFORM THE WORK WHILE ELECTRICALLY ENERGIZED:

NSLS-II ESH Manager (or designee) Date _____ Electrically Knowledgeable Person/ Engineer Date _____

Independent Reviewer (Range D only) Date _____

PART IV: WORK

Evidence of completion of Job Briefing including discussion of any job-related hazards:

PART V: POST WORK-FEEDBACK _____ (Worker Initials)

NSLS-II ESH Manager _____ Close-out Date _____

Return to: NSLS-II ESH Manager

Department Code **ENERGIZED ELECTRICAL WORK PERMIT** Permit # _____ Procedure # _____

Job/Work Order Number _____

PART I: TO BE COMPLETED BY THE REQUESTER:

(1) Description of circuit/equipment/job location:

(2) Description of work to be done:

(3) Justification of why the circuit/equipment cannot be de-energized or the work deferred until the next scheduled outage:

Start Date: _____ Expire Date: _____

Requester/Title: _____ Date _____

PART II: TO BE COMPLETED BY THE ELECTRICALLY QUALIFIED PERSONS DOING THE WORK:

(1) Detailed job description procedure to be used in performing the above detailed work including hazards, conditions, mechanical, environmental, space obstructions, other voltages:

(2) Description of the Safe Work Practices: LOTO _____ Two Workers _____
Safety Watch _____ Notify affected workers _____
Reason not to LOTO _____
Restart Checks Required: _____

(3)

Flash Hazard (-1 to 4)	Shock Hazard (max V)		Working Distance	
Flash Boundry		Limited Approach		Glove Class, minimum
Incident Energy (cal/cm2)		Restricted Approach		
		Prohibited Approach		

(4) Protective Equipment Natural Fiber Clothing Safety Glasses/Goggles Ear Plugs Leather Shoes FR Clothing Face Shield Leather Gloves Voltage-rated Shoes Voltage-rated Tools Balaclava Hood Voltage-rated Gloves Hard Hat Category III Meter 2 Layer Switching Hood Flashsuit Other _Other _____

(5) Means employed to restrict the access of unqualified persons from the work area: _____

(6)

Authorized Workers	Life #	Authorized Workers	Life #
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

PART III: APPROVAL(S) TO PERFORM THE WORK WHILE ELECTRICALLY ENERGIZED:

NSLS-II ESH Manager (or designee) Date _____ Electrically Knowledgeable Person/ Engineer Date _____

Independent Reviewer (Range D only) Date _____

PART IV: WORK

Evidence of completion of Job Briefing including discussion of any job-related hazards:

PART V: POST WORK FEEDBACK _____ (Worker Initials)

NSLS-II ESH Manager _____ Close-out Date _____

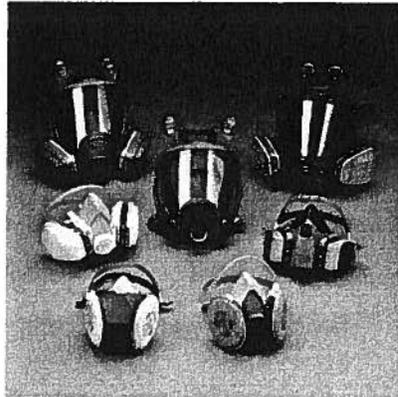
Return to: NSLS-II ESH Manager

APPENDIX W
RESPIRATORY
PROGRAM

Respiratory Protection Procedure Policy

10/18/2010

NLSL-II LOB's



GENERAL: EW Howell Construction Company shall ensure that respiratory hazards within our sites are evaluated, and that information concerning these hazards is transmitted to all employees. This standard practice instruction is intended to address comprehensively the issues of evaluating the potential respiratory hazards, communicating information concerning these hazards, and establishing appropriate engineering, work practice, or respiratory protective measures for employees. This policy includes respiratory hazards not otherwise covered by OSHA under a different standard such as lead or asbestos.

Respiratory Protection Procedure Policy

Table of Contents to the Respiratory Protection Program and Responsibilities

1. Written Program.
2. Employer and Employee Responsibility.
3. Policy Statement.
4. Respiratory Selection Policy.
5. Use of Respirators.
6. Inspection, Maintenance, & Care of Respirators.
7. Training Program.
8. Respirator Decision Logic.
9. Respirator Fit Testing.
10. Respirator Inspection Record.
11. Worksite Specific Respiratory Plan

1. Written Program. EW Howell Construction Company shall review and evaluate this Standard Practice Instruction governing the selection and use of respirators on an annual basis, or when changes occur to 29 CFR 1910.134, that prompt revision of this document, or when facility operational changes occur that require a revision of this document. Effective implementation of this program requires support from all levels of management within EW Howell Construction Company . This written program shall be communicated to all personnel that are affected by it. It encompasses the total workplace, regardless of number of workers employed or the number of work shifts. It is designed to establish clear goals and objectives.

2. Employer and Employee Responsibility.

2.1. Employer's Responsibility.

- 2.1.1 Respirators, training, and medical evaluations shall be provided by EW Howell subcontractors at no cost to their employees participating in this program when necessary to protect employee health.
- 2.1.2 The respirator provided shall be suitable for the intended use.
- 2.1.3 EW Howell Construction Company shall be responsible for establishing and maintaining a respiratory program whenever respirators are used. A program administrator shall be appointed to oversee the program. The program administrator for EW Howell Construction Company is the Safety Director.
- 2.1.4 EW Howell Construction Company shall conduct routine evaluations to ensure the written program is being followed. EW Howell subcontractors shall consult with employees during the evaluations and address any employee concerns that are brought up. Topics to be considered during the evaluation shall consist of: respirator fit, selection, maintenance, interference with job performance, discomfort, if the employee has confidence in respirator effectiveness, etc.
- 2.1.5 EW Howell Construction Company shall review any request by an employee expressing a desire to wear a respirator during certain operations that do not require respiratory protection on a case by case basis. If the use of respiratory protection in a specific case will not jeopardize the health or safety of the employee, EW Howell subcontractors will provide the respirator, medical evaluation, and appropriate training for its use.

Respiratory Protection Procedure Policy

Responsibilities and Policy Statements

2.2. Employee's Responsibility.

- 2.2.1. The employee shall use the respiratory protection in accordance with instructions and training received.
- 2.2.2. The employee shall guard against damage to the respirator, and immediately replace suspect respirators.
- 2.2.3. The employee shall report any trouble with or malfunction of the respirator to his/her supervisor.

3. Policy Statement. and Respirator Selection

- 3.1. **Engineering Controls.** To control and/or minimize the threat of occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors, the primary objective of this program shall be to prevent atmospheric contamination. This shall be accomplished as far as feasible by accepted engineering control measures (for example, enclosure or confinement of the operation, general and local ventilation, and substitution of less toxic materials). When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators shall be used.
- 3.2. **Respirators.** Respirators shall be provided by EW Howell subcontractors when such equipment is necessary to protect the health of the employee.
 - 3.2.1. Provide the respirators which are applicable and suitable for the purpose intended.
 - 3.2.2. Select respirators from a sufficient number of respirator models and sizes to assure that the respirator is acceptable to, and correctly fits, the user.
 - 3.2.3. Be responsible for the establishment and maintenance of a written respiratory protective program which shall include the requirements outlined in 29 CFR 1910.134.
- 3.3. The employee shall use the provided respiratory protection in accordance with instructions and training received.
- 3.4. Respirators shall be selected on the basis of the hazards to which the worker is exposed.
- 3.5. The user shall be instructed and trained in the proper use of respirators and their limitations.

Respiratory Protection Procedure Policy

Policy Statements and Selections

- 3.6. Respirators shall be regularly cleaned and disinfected. Those used by more than one worker shall be thoroughly cleaned and disinfected after each use.
 - 3.7. Respirators shall be stored in a convenient, clean, and sanitary location.
 - 3.8. Respirators used routinely shall be inspected during cleaning. Worn or deteriorated parts shall be replaced. Respirators for emergency use such as self-contained devices shall be thoroughly inspected at least once a month and after each use.
 - 3.9. Appropriate surveillance of work area conditions and degree of employee exposure or stress shall be maintained.
 - 3.10. There shall be regular inspections and evaluations to determine the continued effectiveness of the program.
 - 3.11. Employees shall not be assigned to tasks requiring the use of respirators unless it has been determined that they are physically able to perform the work and use the equipment. A physician shall determine what health and physical conditions are pertinent. The respirator user's medical status shall be reviewed on an annual basis. OSHA says "periodically".
 - 3.12. All filter cartridges and canisters shall be labeled with the appropriate NIOSH approval label that has been certified under the new NIOSH 42 CFR Part 84. This label is not to be removed, obscured, or defaced while in service. The respirator furnished shall provide adequate respiratory protection against the particular hazard for which it is designed.
- 4. Respiratory Selection Policy.** Selection of respirators shall be made according to the specific hazard involved (29 CFR 1910.1000) and shall be selected in accordance with the manufacturer's instructions or other related requirements (OSHA or ANSI standards, NIOSH, etc.).
- 4.1. **Air Quality.** Compressed air, compressed oxygen, liquid air, and liquid oxygen used for respiration shall be of high purity.
 - 4.1.1. Oxygen shall meet the requirements of the United States Pharmacopoeia for medical or breathing oxygen.
 - 4.1.2. Breathing air shall meet at least the requirements of the specification for Grade D breathing air as described in Compressed Gas Association Commodity Specifications G-7.1-1966.

- 4.1.3. Compressed oxygen shall not be used in supplied-air respirators or in open circuit self-contained breathing apparatus' that have previously used compressed air.

Respiratory Protection Procedure Policy

Selections and Use

- 4.1.4. Oxygen must never be used with airline respirators. Breathing air may be supplied to respirators from cylinders or air compressors.

- 4.1.4.1 Cylinders shall be tested and maintained as prescribed in the Shipping Container Specification Regulations of the Department of Transportation (49 CFR Part 178).

- 4.2. **Supplied Air.** Compressors purchased by Subcontractors for supplying air shall be equipped with the necessary safety and standby devices. A breathing-air type compressor shall be used. The type compressor used shall be constructed and situated so as to avoid entry of contaminated air into the system and suitable in-line air purifying absorbent beds and filters installed to further assure breathing air quality. A receiver of sufficient capacity to enable the respirator wearer to escape from a contaminated atmosphere in the event of compressor failure, and alarms to indicate compressor failure and overheating shall be installed in the system. If an oil-lubricated compressor is used, it shall have a high-temperature or carbon monoxide alarm, or both. If only a high-temperature alarm is installed in the system, the air from the compressor shall be frequently tested for carbon monoxide to ensure that levels are below the exposure limit for carbon monoxide.

- 4.2.1. Air-line couplings used shall be incompatible with outlets for other gas systems to prevent inadvertent servicing of air-line respirators with non-respirable gases or oxygen.

- 4.2.2. Breathing gas containers shall be properly marked and stored in accordance with 29 CFR 1910.101.

5. Use of Respirators.

- 5.1. This document shall specify standard procedures for respirator use. These shall include all information and guidance necessary for their proper selection, use, and care. Possible emergency and routine uses of respirators shall be where possible anticipated and planned for.
- 5.2. The correct respirator shall be specified for each job. The respirator type shall be specified in the work procedures by the project safety engineer, who supervises the respiratory protective program. The individual issuing them shall be adequately instructed to ensure that the correct respirator is issued.
- 5.3. **Dangerous Atmospheres.** Written procedures and/or checklists for specific routine tasks/jobs shall be prepared covering safe use of respirators in dangerous atmospheres that might be encountered in normal operations or in emergencies. Personnel shall be made familiar with these procedures and the available respirators.

- 5.3.1. In areas where the wearer, with failure of the respirator, could be overcome by a toxic or oxygen-deficient atmosphere, at least one additional person shall be present. Communications (visual, voice, or signal line) shall be maintained between both or all individuals present. Planning shall be such that one individual shall be unaffected by any likely incident and have the proper rescue equipment to be able to assist the other(s) in case of an emergency.

Respiratory Protection Procedure Policy

Use

- 5.3.2. When a self-contained breathing apparatus (SCBA) or hose masks with blowers are used in atmospheres immediately dangerous to life or health (IDLH), standby personnel must be present with suitable rescue equipment.
- 5.3.3. Employees using air line respirators in atmospheres that are IDLH shall be equipped with safety harnesses and safety lines for lifting or removing persons from hazardous atmospheres or other and equivalent provisions for the rescue of persons from hazardous atmospheres shall be used. Standby personnel with suitable SCBA shall be at the nearest fresh air base for emergency rescue.
- 5.4. **Respirator Training.** For safe use of any respirator, it is essential that our employees be properly instructed in its selection, use, and maintenance. Both supervisors and workers shall be so instructed by the safety engineer. Training shall provide employees the opportunity to handle the respirator, have it fitted properly, test its face-piece seal, wear it in normal air for a long familiarity period, and finally, to wear it in a test atmosphere.
- 5.5. **Fit instructions.** Every respirator wearer shall receive fitting instructions including demonstrations and practice in how the respirator should be worn, how to adjust it, and how to determine if it fits properly. Respirators shall not be worn when conditions prevent a good face seal. Such conditions may be a growth of beard, sideburns, a skull cap that projects under the face piece, or temple pieces on glasses. Also, the absence of one or both dentures can seriously affect the fit of a face piece.
- 5.6. **Fit Evaluation (Wearer).** The facepiece's fit shall be checked by the wearer each time he/she puts on the respirator. This shall be done in accordance with the manufacturer's facepiece fitting instructions.
- 5.7. **Fit Evaluation (EW Howell Subcontractors).** Periodic checks of employees while wearing respirators shall be accomplished by the safety engineer to assure proper protection. This shall be done in accordance with the manufacturer's facepiece fitting instructions.
- 5.8. **Hair/Apparel.** If hair growth or apparel interfere with a satisfactory fit, then they shall be altered or removed so as to eliminate interference and allow a satisfactory fit. If a satisfactory fit is still not attained, the employee must use a positive-pressure respirator such as a powered air-purifying respirator, a supplied air respirator, or a self-contained breathing apparatus.
- 5.9. **Corrective Vision Requirements (Full-Face Respirators).** Full-face respirators having provisions for optical inserts shall be reviewed for use by EW Howell subcontractors. These inserts when used shall be used according to the manufacturer's specification. When employees must wear optical inserts as part of the facepiece, the facepiece and lenses shall be fitted by qualified individuals to provide good vision, comfort, and a gas-tight seal. Subcontractors shall provide corrective lenses for respirators based on optometry recommendations from an optometrist.

Respiratory Protection Procedure Policy

Use and Maintenance

- 5.9.1. **Conventional eye glasses.** Conventional eye glasses shall not be used with full-face respirators. A proper seal cannot be established if the temple bars of eye glasses extend through the sealing edge of the full facepiece.
- 5.9.2. **Contact lenses.** Contact lenses shall not be used with full-face respirators. Wearing of contact lenses in contaminated atmospheres with a respirator shall not be allowed.
- 5.9.3. **Corrective spectacles or goggles.** If corrective spectacles or goggles are required, they shall be worn so as not to affect the fit of the facepiece. Proper selection of equipment shall minimize or avoid this problem.

6. **Inspection, Maintenance, and Care of Respiratory Equipment.** Equipment shall be properly maintained to retain its original state of effectiveness.

6.1. Respirator inspection shall include but is not limited to the following:

- 6.1.1. A check of the tightness of connections.
- 6.1.2. Condition of the facepiece, headbands, valves, connecting tube, and canisters.
- 6.1.3. Inspection of the rubber or elastomeric parts for pliability and signs of deterioration. Stretching and manipulating rubber or elastomeric parts with a massaging action shall keep them pliable and flexible and prevent them from taking a set during storage.

6.2. Specific procedures for disassembly, cleaning, and maintenance of respirators used by EW Howell subcontractors shall be done according to the manufacturer's written instructions.

6.3. **Random Inspections.** Respiratory protection is no better than the respirator in use, even though it may be worn conscientiously. Frequent random inspections shall be conducted to assure that respirators are properly selected, used, cleaned, and maintained. The respirator manufacturer's inspection criteria shall be used as the basis for the inspections. The following personnel are qualified to perform respirator inspections.

<u>Qualified Inspectors</u>	<u>Duty Title</u>	<u>Date Qualified</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Inspection records shall be maintained in the field office.

6.4. **Emergency Use Respirators.** All respirators shall be inspected routinely before and after each use. A respirator that is not routinely used but is kept ready for emergency use shall be inspected after each use and at least **monthly** to assure that it is in satisfactory working condition. The respirator

manufacturer's inspection criteria shall be used as the basis for the inspections. A record shall be kept of inspection dates and findings for respirators maintained for emergency use. Respirators maintained for emergency use shall be cleaned and disinfected after each use.

Respiratory Protection Procedure Policy

Use and Maintenance

- 6.5. **Routine Use Respirators.** All routine use respirators shall be inspected before and after each use. The manufacturer's inspection criteria shall be used as the basis for the inspection. Routinely used respirators shall be collected, cleaned, and disinfected as frequently as necessary to insure that proper protection is provided for the wearer.
- 6.6. **SCBA Inspections.** SCBAs shall be inspected monthly. Air and oxygen cylinders shall be fully charged according to the manufacturer's instructions. It shall be determined that the regulator and warning devices function properly.
- 6.7. **Replacement Or Repairs.** Replacement or repairs shall be done only by the manufacturers' representative with parts designed for the respirator. No attempt shall be made to replace components or to make adjustments or repairs beyond the manufacturer's recommendations. Reducing or admission valves or regulators shall be returned to the manufacturer or to a trained technician for adjustment or repair.
- 6.8. **Storage Requirements.** After inspection, cleaning, and necessary repair, respiratory protection equipment shall be carefully stored to protect against dust, sunlight, heat, extreme cold, excessive moisture, or damaging chemicals. Respirators shall be packed or stored so that the facepiece and exhalation valve shall rest in a normal position and function shall not be impaired by the elastomer setting in an abnormal position.
 - 6.8.1. **Emergency Use Respirators.** Respirators placed at stations and work areas for emergency use shall be immediately accessible at all times and shall be stored in compartments built for the purpose. These compartments shall be clearly marked. Instructions for proper storage of emergency respirators, such as gas masks and SCBA, can be found in "use and care" instructions typically mounted inside the carrying case lid.
 - 6.8.2. **Routine Use Respirators.** Routinely used respirators, such as dust respirators, may be placed in plastic bags. Respirators having removable cartridges with imbedded compounds that could evaporate into a sealed bag shall be removed so as not to permeate into the rubber parts of the respirator. Respirators shall not be stored in such places as lockers or tool boxes unless they are in carrying cases or cartons.
- 6.9. **Identification Of Chemical Cartridges.** The primary means of identifying a chemical cartridge is by means of its label. The secondary means is by color code. All cartridges purchased or used by EW Howell Subcontractors shall be properly labeled and/or colored coded in accordance with 29 CFR 1910.134 before they are placed into service. The labels and colors shall be properly maintained at all times until disposal. Cartridges having labels and colors not identifiable shall be properly disposed of. To determine the type of cartridge:

Respiratory Protection Procedure Policy

Use and Maintenance

6.9.1. Determine the following from the cartridge:

- 6.9.1.1. **Type Of Canister.** Canister used for "X" contaminant or Type N Gas Mask Canister.
- 6.9.1.2. **Name of atmospheric contaminant.** "For respiratory protection in atmospheres containing not more than "X" percent by volume of "X".
- 6.9.1.3. **Radionuclides.** Canisters having a special high efficiency filter for protection against radionuclides and other highly toxic particulates shall have a label with a statement of the type and degree of protection afforded by the filter. The label shall be affixed to the neck end of, or to the gray stripe which is around and near the top of, the canister. The degree of protection shall be marked as the percent of penetration of the canister by a 0.3 micron-diameter dioctyl phthalate (DOP) smoke at a flow rate of 85 liters per minute.
- 6.9.1.4. **Oxygen Warning.** Employees must be fully aware of the label warning that states that cartridge respirators shall be used only in atmospheres containing sufficient oxygen to support life (at least 16 percent by volume), since cartridges are only designed to neutralize or remove contaminants from the air.
- 6.9.1.5. **Color Coding.** Each cartridge is painted a distinctive color or combination of colors as indicated in Table I-1. All colors used are such that they are clearly identifiable by the user and clearly distinguishable from one another. The color coating offers a high degree of resistance to chipping, scaling, peeling, blistering, fading, and the effects of the ordinary atmospheres to which they may be exposed under normal conditions of storage and use.

Respiratory Protection Procedure Policy

Use and Maintenance

TABLE I-1 from 29 CFR 1910.134

<u>ATMOSPHERIC CONTAMINANT(S)</u>	<u>COLOR(S) ASSIGNED</u>
<u>Acid gases</u>	<u>WHITE.</u>
<u>Hydrocyanic acid gas</u>	<u>WHITE with a 1/2 inch GREEN stripe completely around the canister near the bottom.</u>
<u>Chlorine gas</u>	<u>WHITE with a 1/2 inch YELLOW stripe completely around the canister near the bottom.</u>
<u>Organic vapors</u>	<u>BLACK.</u>
<u>Ammonia gas</u>	<u>GREEN.</u>
<u>Acid gases and ammonia gas</u>	<u>GREEN with 1/2 inch WHITE stripe completely around the canister near the bottom.</u>
<u>Carbon monoxide</u>	<u>BLUE.</u>
<u>Acid gases and organic vapors</u>	<u>YELLOW.</u>
<u>Hydrocyanic acid gas and chloropicrin vapor</u>	<u>YELLOW with 1/2 inch BLUE strip completely around the canister near the bottom.</u>
<u>Acid gases, organic vapors, and ammonia gases</u>	<u>BROWN.</u>
<u>Radioactive materials, excepting tritium and noble gases</u>	<u>PURPLE (Magenta).</u>
<u>Particulates (dusts, fumes, mists, fogs, or smokes) in combination with any of the gases or vapors</u>	<u>Canister color for contaminant as designated above, with 1/2 inch GRAY stripe completely around the canister near the top.</u>
<u>All of the above atmospheric contaminants</u>	<u>RED with 1/2 inch GRAY stripe completely around the canister near the top.</u>

NOTE: GRAY is not assigned as the main color for a canister designed to remove acids or vapors.

NOTE: ORANGE is used as a complete body or stripe color to represent gases not included in this table. The user shall need to refer to the canister label to determine the degree of protection the canister shall afford.

Respiratory Protection Procedure Policy

Training Program and Decision Logic

7. **Respiratory Protection Training Program.** EW Howell subcontractors will develop a standardized training format to meet the requirements for a respiratory protection training program.

7.1. Training shall be provided to each affected employee:

7.1.1. Before the employee is first assigned duties that require respiratory protection.

7.1.2. Before there is a change in assigned duties.

7.1.3. Whenever there is a change in operations that present a hazard for which an employee has not previously been trained.

7.1.4. Whenever EW Howell Construction Company has reason to believe that there are deviations from established respiratory procedures required by this instruction or inadequacies in the employee's knowledge or use of these procedures.

7.2. The training shall establish employee proficiency in the duties required by this instruction and shall introduce new or revised procedures, as necessary, for compliance with this instruction or when future revisions occur.

7.3. EW Howell subcontractors shall certify that the training required by this section has been accomplished. The certification shall contain each employee's name, the signatures or initials of the trainers, and the dates of training. The certification shall be available for inspection by employees and their authorized representatives.

8. Respirator Decision Logic.

8.1. **Where a Specific OSHA Standard Exits.** Each task and/or job having the potential for respiratory hazards shall be evaluated to determine worker protection requirements. The specific OSHA standard shall be consulted to determine delineated respiratory requirements. The standards are listed in the "Z" tables to 29 CFR 1910.1000-1101.

8.2. **Where a Specific OSHA Standard Does Not Exit.** The NIOSH respirator decision logic table from "NIOSH Guide to Industrial Respiratory Protection", Publication No. 87-116 (or subsequent versions) shall be used. After all criteria have been identified and evaluated, and after the requirements and restrictions of the respiratory protection program have been met, the class of respirators that shall provide adequate respiratory protection shall be determined.

Respiratory Protection Procedure Policy

Fit Testing

9. **Respirator Fit Testing.** EW Howell subcontractors shall ensure that the respirator issued to the employee exhibits the least possible facepiece leakage and that the respirator is fitted properly. For each employee wearing negative pressure respirators, EW Howell subcontractors shall perform (or have performed) either quantitative or qualitative face fit tests at the time of initial fitting and at least every six months thereafter. The qualitative fit tests may be used only for testing the fit of half mask respirators.
 - 9.1. **Half-Mask Respirators.** EW Howell subcontractors shall perform (or have performed) qualitative fit test protocols in accordance with the specific standard listed in the "Z" tables to 29 CFR 1910.1000- 1910.1052. Where a specific OSHA standard protocol does not exist. The "NIOSH guide to Industrial Respiratory Protection", Publication No. 87-116 (or subsequent versions) shall be used.
 - 9.2. **Minimum Fit Factor.** Employees shall not be permitted to wear a half mask or full facepiece mask if a minimum fit factor of 100 or 1,000, respectively, cannot be obtained.
 - 9.3. **Hair.** Fit testing shall not be conducted if there is any hair growth between the skin and the facepiece sealing surface.
 - 9.4. **Respiratory Difficulty During Tests.** If an employee exhibits difficulty in breathing during the tests, she or he shall be referred to a physician trained in respiratory diseases or pulmonary medicine to determine whether the test subject can wear a respirator while performing her or his duties.
 - 9.5. **Respirator Use Determination.** The test subject shall be given the opportunity to wear the assigned respirator for one week. If the respirator does not provide a satisfactory fit during actual use, the test subject may request another fit test which shall be performed immediately.
 - 9.6. **Respirator Fit Factor Card.** A respirator fit factor card shall be issued to the test subject with the following information, as a minimum:
 - 9.6.1. Name.
 - 9.6.2. Date of fit test.
 - 9.6.3. Protection factors obtained through each manufacturer, model number, and approval number of each respirator tested.
 - 9.6.4. Name and signature of the person that conducted the test.\

Respiratory Protection Procedure Policy

Fit Testing

9.7. **Filter Replacement.** Filters used for qualitative or quantitative fit testing shall be replaced weekly, whenever increased breathing resistance is encountered, or when the test agent has altered the integrity of the filter media. Organic vapor cartridges/canisters shall be replaced daily or sooner if there is any indication of breakthrough by the test agent.

9.8. **Quantitative Fit Test, Re-Test Requirements.** Because the sealing of the respirator may be affected, quantitative fit testing shall be repeated immediately when the test subject has a:

9.8.1. Weight change of 20 pounds or more.

9.8.2. Significant facial scarring in the area of the facepiece seal.

9.8.3. Significant dental changes; i.e., multiple extractions without prosthesis, or acquiring dentures.

9.8.4. Reconstructive or cosmetic surgery.

9.8.5. Any other condition that may interfere with facepiece sealing.

9.9. **Fit Test Recordkeeping Requirements.** A summary of all test results shall be maintained for 3 years. The summary shall as minimum include:

9.9.1. Name of test subject.

9.9.2. Date of testing.

9.9.3. Name of the test conductor.

9.9.4. Fit factors obtained from every respirator tested (indicate manufacturer, model, size and approval number).

9.10. All employees must conform to standard 1910.134 and all appendixes.

Respiratory Protection Procedure Policy

Inspection Record

10. Respirator Inspection Record

1. OWNER (if individually issued): _____
2. TYPE: _____
3. NUMBER: _____
4. DEFECTS FOUND:

Facepiece: _____
Inhalation Valve: _____
Exhalation Valve Assembly: _____
Headbands: _____
Cartridge Holder: _____
Cartridge/Canister: _____
Filter: _____
Harness Assembly: _____
Hose Assembly: _____
Speaking Diaphragm: _____
Gaskets: _____
Connection: _____
Other Defects: _____

COMMENTS: _____

INSPECTOR'S NAME/TITLE: _____

SIGNATURE: _____

DATE: _____

Respiratory Protection Procedure Policy

Sample Plan

Worksite-Specific Respiratory Plan

Task description:

Atmospheric hazards:

- Oxygen levels: _____ Is this oxygen level deficient?
- Monitoring (List the monitoring frequency and method for each atmospheric hazard):

Controls to be implemented to reduce employee exposure to atmospheric hazards:

- Respirators to be worn (List type, cartridge type if APR, concentration and limits for use):

Authorized employees (list with employee number):

Emergency response:

- Signs and symptoms of overexposure

Respiratory Protection Procedure Policy

Sample Plan

- Evacuation procedures

- First aid and emergency medical procedures

- Reporting procedures

Supervisor

Signature:

Date:

Respirator Administrator

Signature:

Date:

**APPENDIX X
ASSESSMENT
RECORD
KEEPING**

Audit Performed By: _____

Project/Contract Number: _____ Date: _____

INSTRUCTIONS: Mark the appropriate symbol as follows:
 (S) Safe (U) Unsafe (C) Hazard Corrected During Review (N) Not Applicable at Time of Review
 For items marked (U) and (C) identify subcontractor and detail problem in 'Noted Deficiencies' Section.

Subcontractor Names

- | | |
|---------|----------|
| 1 _____ | 5 _____ |
| 2 _____ | 6 _____ |
| 3 _____ | 7 _____ |
| 4 _____ | 8 _____ |
| 9 _____ | 10 _____ |

Life Safety Measure		1	2	3	4	5	6	7	8	9	10
1.10	Exists Clear/Egress Routes Posted										
1.20	Exterior Access Points Provided										
1.30	Fire Alarm/Suppression Active										
1.40	Temp Walls & Signage in Place										
1.50	Fire Exting Unobstructed & Insp.										
1.60	No Smoking In Building										
1.70	Storage/Housekeeping Adequate										
1.80	Fire Drills Done Every 45 days										
1.90	Hot Work Activities										
1.10	Interim Life Safety Measure Est.										

Cranes & Rigging		1	2	3	4	5	6	7	8	9	10
4.60	Daily Inspections Conducted										
4.70	Pwr Line Clearance Approp										
4.80	Fire Ext in Cab of Crane										
4.90	Flagman Identified & Present										
4.10	Lift Plan Completed/on File										
4.11	Load Chart Posted in Cab										
4.12	Loads Properly Secured										
4.13	Means of Communication										
4.14	Operator Appears Competent										
4.15	Operator Manual in Crane										
4.16	Outriggers Ext on Cribbing										
4.17	Rigging Inspected/Rating Tag										
4.18	Hook Safety Latches Used										
4.19	Swing Radius Protected										
4.20	Tag Lines Used Properly										
4.21	Load Weight Verified										

Administration		1	2	3	4	5	6	7	8	9	10
2.10	Construction Mtgs Documented										
2.20	Freq/Regular Safety Inspections										
2.30	Daily PTPs Done By Each Sub										
2.40	MSDS Present & Available										
2.50	OSHA 30 Hr Employee On Site										
2.60	OSHA 300 Log On File										
2.70	Sub Safety Manuals Submitted										
2.80	Weekly Safety Mtgs Conducted										
2.90	ToolBox Talks Submitted Weekly										
2.10	Site Orientations Conducted										
2.11	Federal/State Posters Present										
2.12	Visitor PPE Readily Available										
2.13	Visitor Sign In Readily Available										
2.14	Exit Signs Posted Adequately										

Electrical		1	2	3	4	5	6	7	8	9	10
5.10	Ext Cords in Good Condition										
5.20	Cords Protected From Traffic										
5.30	Electrical Work Protected										
5.40	Energized Parts Protected										
5.50	GFCI's Utilized										
5.60	Lockout/Tagout Procedures										
5.70	Proper Use of temp Elec Boxes										
5.80	Adequate Elec Signage Present										
5.90	Adequate Temp Lighting										

Audit Performed By: _____

Project/Contract Number: _____ Date: _____

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Subcontractor Names

- 1 _____
- 2 _____
- 3 _____
- 4 _____
- 9 _____

- 5 _____
- 6 _____
- 7 _____
- 8 _____
- 10 _____

Confined Space		1	2	3	4	5	6	7	8	9	10
3.10	Atmospheric Conditions Tested										
3.20	Communication/Area Secure										
3.30	Entry Supervisor/Monitor Present										
3.40	Rescue Equip Readily Available										
3.50	Signed Permit Present at Space										
3.60	Reg. Testing of Atmos Conditions										
3.70	Rescue Plan/Emerg #'s Posted										
3.80	Resp Equip used, as Applicable										
3.90	Safety Person/Rescue Equip Avail										
3.10	Training Documentation Provided										
3.11	Adequate Ventilation Provided										

Environmental		1	2	3	4	5	6	7	8	9	10
6.10	Asbestos/Lead Areas Identified										
6.20	Concrete Cut Wet/Vacuumed										
6.30	Hazardous Containers Labeled										
6.40	Haz Material Properly Stored										
6.50	Nuisance Dust Mitigated										
6.60	Spill Containment Adequate										
6.70	SWPP Plan Available										

Cranes & Hoisting Equipment		1	2	3	4	5	6	7	8	9	10
4.10	Annual Inspection Current										
4.20	Anti-Two Block Installed										
4.30	Boom Angle Indicator Provided										
4.40	Training Documentation Provided										
4.50	Crane Supported & Level										

Excavations		1	2	3	4	5	6	7	8	9	10
7.10	Access/Egress Every 25'										
7.20	Competent Person Present										
7.30	Daily Inspections Conducted										
7.40	Excavations >20'-Engineered										
7.50	Perimeter Protected/Barricaded										
7.60	Sloped, Benched or Shored										
7.70	Spoil Placed 2' from Edge of Exc										
7.80	Surface Encumbrances Prot										
7.90	Surface Traffic Exposures Prot										
7.10	Water Removed from Excavation										

Fall Protection		1	2	3	4	5	6	7	8	9	10
8.10	Appropriate Guardrails Provided										
8.20	Fall Protection Utilized at 6'										
8.30	Floor/wall Openings Protected										
8.40	Floor Covers- Secure/Labeled										
8.50	Proper Anchorage Points-5000#										
8.60	Safety Harness and Lanyard Used										
8.70	Stairs/Ramp/Walkway Protected										

Audit Performed By: _____

Project/Contract Number: _____ Date: _____

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Subcontractor Names

- 1 _____
- 2 _____
- 3 _____
- 4 _____
- 9 _____

- 5 _____
- 6 _____
- 7 _____
- 8 _____
- 10 _____

Fire Protection		1	2	3	4	5	6	7	8	9	10
9.10	Emergency Vehicle Access										
9.20	Extinguisher Charged & Inspected										
9.30	Fire Suppression Equip Available										
9.40	Fire Watch Provided										
9.50	Proper Signs In Storage Area										
9.60	Regular Insp/Air Monitoring										
9.70	Rescue Plan/Emerg #'s Posted										
9.80	Resp Equip Provided as Necessary										
9.90	Safety Person/Rescue Equip Avail										
9.10	Training Documentation Provided										
9.11	Adequate Ventilation Provided										

Ladders/Stairs (cont.)		1	2	3	4	5	6	7	8	9	10
13.10	Safe Work Distances From Hazard										
13.11	Slip, Trip, Fall Haz Eliminated										
13.12	Stairs Illuminated Properly										
13.20	Clear of Debris/Material										
13.30	Extension Ladder at 4:1 Pitch										
13.40	Inspected for Defects										
13.50	Job-Built Ladders Built Prop										
13.60	Ladders Properly Secured										
13.70	Stair Landings & Treads Filled										
13.80	Proper Use of Ladders										
13.90	Rails at Stairs & Landings										

Hand & Power Tools		1	2	3	4	5	6	7	8	9	10
10.10	Equip Cords In Good Condition										
10.20	Ground Prong In Place										
10.30	Machine Guards in Place										
10.40	Information Label on Tool										
10.50	Proper Tool Used for the Job										
10.60	Cord Stain Relief Functioning										
10.70	Tool In Good Condition										
10.80	Whip-Checks' used, as Applicable										
10.90	Auto Shut Off/Safety Switches										
10.10	Pwd Actuated Tool Used Properly										
10.11	Pwd Actuated Shots Disp Properly										

Medical/Emergency		1	2	3	4	5	6	7	8	9	10
14.10	First Aid Kit Readily Available										
14.20	First Aid/CPR Trained Person										
14.30	Emergency Numbers Posted										
14.40	Eye Wash Available										
14.50	Directions to Medical Facility										
14.60	Site Emerg/Crisis Mgmt Plan										
14.70	Team Contact Numbers Avail										

Motorized Equipment		1	2	3	4	5	6	7	8	9	10
15.10	Back Up Alarm Functioning										
15.20	Flagman Used, If Applicable										
15.30	Windows Free of Obstructions										
15.40	Horn Functions Properly										
15.50	Operator Appears Competent										
15.60	Seat Belt Used										
15.70	Training Documents Provided										

Audit Performed By: _____

Project/Contract Number: _____ Date: _____

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Subcontractor Names

- | | |
|---------|----------|
| 1 _____ | 5 _____ |
| 2 _____ | 6 _____ |
| 3 _____ | 7 _____ |
| 4 _____ | 8 _____ |
| 9 _____ | 10 _____ |

Hazard Communication		1	2	3	4	5	6	7	8	9	10
11.10	Written Program Provided										
11.20	Training Documentation Provided										
11.30	Haz Materials Inventory List Prov										
11.40	MSDS Submitted										
11.50	Proper Labels on Containers										
11.60	MSDS Attached to Pre-Task Plan										

PPE		1	2	3	4	5	6	7	8	9	10
16.10	Eye Prot Provided/Worn										
16.20	Face Shields, as Applicable										
16.30	Gloves Provided/Worn										
16.40	Hard Hats Provided/Worn										
16.50	Hearing Prot, as Applicable										
16.60	Metatarsal Prot, as Applicable										
16.70	Proper Clothing Worn										
16.80	Rebar Caps Provided										
16.90	Resp Prot used, as Applicable										
16.10	High Visibility Clothing Worn										
16.11	Visitor PPE readily Available										
16.12	Work Boots Provided/Worn										

Housekeeping		1	2	3	4	5	6	7	8	9	10
12.10	Clear Access to Bldg/Site										
12.20	Designated Employee Parking										
12.30	Impalement Protection Prov										
12.40	Proper Material Storage										
12.50	Roadway Around Project Clear										
12.60	Slip, Trip, Fall Hazards Eliminated										
12.70	Trash in Protected Containers										
12.80	Walkways Clear										

Scaffolds		1	2	3	4	5	6	7	8	9	10
17.10	Bracing & Pins in Place										
17.20	Compatible Components Used										
17.30	Competent Person Present										
17.40	Guardrails in Place-Heights>6'										
17.50	Insp Daily by Comp Person										
17.60	Properly Secured to Structure										
17.70	Proper Access to Platforms										
17.80	Proper Loading of Materials										
17.90	Proper Height to Base Ratio										
17.10	Safe Work Dist from Pwr Lines										
17.11	Sills, Plates, Screw-Jacks Used										
17.12	Surface in Safe Condition										
17.13	Wheels Locked, as Applicable										
17.14	Outriggers Used, as Applicable										

Ladders/Stairs		1	2	3	4	5	6	7	8	9	10
13.10	Ladder extends 3' Above landing										

Scissor/Aerial lifts		1	2	3	4	5	6	7	8	9	10
18.10	Equipment Loaded Properly										
18.20	Gate or Chain Secured										
18.30	Harness Used While in Broom Lifts										
18.40	Nothing Used to Increase Height										
18.50	Operating on Flat Surfaces										
18.60	Safe Work Dist from Pwr Lines										
18.70	Surface Free of Holes										

Audit Performed By: _____

Project/Contract Number: _____ Date: _____

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Subcontractor Names

- | | |
|---------|----------|
| 1 _____ | 5 _____ |
| 2 _____ | 6 _____ |
| 3 _____ | 7 _____ |
| 4 _____ | 8 _____ |
| 9 _____ | 10 _____ |

Site Public Protection		1	2	3	4	5	6	7	8	9	10
19.10	Adequate Lighting Provided										
19.20	Barricades Installed Properly										
19.30	Excavation Perimeters Protected										
19.40	Falling Object Protection Provided										
19.50	Perimeter Fences Installed Properly										
19.60	Public Protection Signage Provided										
19.70	Security System in Place										
19.80	Street Closure(s) Identified										
19.90	Traffic Control Plan Completed										

Steel Erection		1	2	3	4	5	6	7	8	9	10
20.10	Proper Anchorage Points-5000#										
20.20	Controlled Decking Zone Used										
20.30	Fall Protection at Heights>6'										
20.40	Anchor Bolt Modification Letter										
20.50	Fall Protection Training Prov										
20.60	Falling Object Protection Prov										
20.70	Multi Lift Procedure Utilized										
20.80	Rigger/Connector Training Prov										
20.90	Site Layout/Sequence Plan Prov										
20.10	75% Concrete Strength Letter										

Welding/Cutting		1	2	3	4	5	6	7	8	9	10
21.10	Bottles Upright/Capped/Secured										
21.20	Fire Ext Charged & Readily Avail										
21.30	Flash Arrestors on Bottles										
21.40	Flash Protection Shields Used										
21.50	Gauges Working Properly										
21.60	Welding Leads in Good Condition										
21.70	Utilization of Appropriate PPE										
21.80	Torch Hoses in Good Condition										
21.90	Welding Operation Ventilated										
21.10	Proper Storage of Cylinders										

Audit Performed By: _____

Project/Contract Number: _____ Date: _____

INSTRUCTIONS: Mark the appropriate symbol as follows:
(S) Safe (U) Unsafe (C) Hazard Corrected During Review (N) Not Applicable at Time of Review
For items marked (U) and (C) identify subcontractor and detail problem in 'Noted Deficiencies' Section.

Subcontractor Names

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| 2 _____ | 6 _____ |
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| 4 _____ | 8 _____ |
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Noted Deficiencies

Item #:	Deficiency Title:	Subcontractor(s):
Description/Correction Recommendation(s):		
Comments:		Target Completion Date:
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Audit Performed By: _____

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