AVRON Corp.

GENERAL CONTRACTORS – CONSTRUCTION MANAGERS

New York

"CONSTRUCTION THAT EXCEEDS EXCELLENCE!"

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HASP

(HEALTH AND SAFETY PROCEDURES)

Project Address:
Prepared By:
Date: 00/00/ 2022

CONTRACT NUMEBR:
OWNER:

PRESENTED TO:

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1. **INTRODUCTION:**

This Site Safety Program is designed to address potential occupational safety and health hazards identified by AVRON Corp. during pre-project planning. This document, in addition to Federal, State, and Local safety and health requirements must be included within each subcontractor training program and initial site safety orientation. It is intended that this document will provide requirements for subcontractors and information for workers regarding anticipated hazard exposure and the steps required to avoid hazards. AVRON Corp. acknowledges that all contingencies cannot be identified in advance and this plan may be modified dependent upon identification of additional hazards. Environmental requirements are also addressed by this Site Safety Program.

No permit shall be issued for the demolition of a Major Building until a Demolition Plan has been approved by the Department of Buildings.

No permit shall be issued for the construction of a Major Building until a Site Safety Plan has been approved by the Department of Buildings.

2. **EMERGENCY ACTION PLAN**

a. Copies of sign-in sheets for the daily job huddles (see form) from contractors and subs will be submitted to the Site Safety Manager / Superintendent by 9:00 AM every day. This duty must be performed by the competent person of that trade. Failure to submit the sign-in sheets by 9:00 AM will result in immediate removal of the competent person from the jobsite.

b. All emergencies at this job site will be reported immediately to the Site Safety Manager / Superintendent. AVRON will immediately report any emergency to the Client Representative. Each subcontractor shall post an EMERGENCY NOTIFICATION PLAN in every trailer and shall train their employees on this plan.

c. The Site Safety Manager / Superintendent will immediately notify the Department of Buildings if he/she discovers any of the following conditions:
   i. A person is operating a crane, derrick or hoisting equipment on the site without a permit and refuses to desist from operating the equipment.
   ii. A crane is being operated by an unlicensed operator and such unlicensed operator refuses to desist from operating the crane.

iii. No flag person is present during crane operations where required.
iv. Sidewalk sheds required by the approved Site Safety Plan are not in place during construction or demolition activity.
v. Permits have not been issued for the sidewalk shed.
vi. The designer and/or supplier of sidewalk sheds has not certified that the sheds have been erected in accordance wit the approved plans, or
vii. There has been an incident involving the public, or private or public property

d. Prior to mobilization at the site, AVRON will contact the local fire department, police department, emergency response representative (rescue squad or independent ambulance service, Building Manager and AVRON Corporate Safety Director for the purpose of hosting a meeting to determine emergency response capabilities, special notification procedures (if any), and best response route scenario. The AVRON CORP. project staff will provide a detailed description of anticipated, potential hazards and a tour of the projected work area.

e. Emergencies are defined as follows:
   i. Any observed or reported illness and/or injury to a worker, visitor, vendor, or public at large.
   ii. Any damage to property or equipment.
   iii. Any automobile, vehicle or construction equipment accident.
   iv. Any altercation, harassment, incident of workplace violence and or threat of violence.
   v. Any terrorist threat, action or suspicious activity.
   vi. Any spill or release of a hazardous material to the ground, atmosphere, water or sewer system.
   vii. Any fire or explosion.

f. Reporting: The first responsibility of any individual witnessing an emergency situation is to immediately report the situation so that emergency response systems can be initiated.
   i. Remain calm.
   ii. In the event of fire, explosion or toxic release, pull the fire alarm panel first! Where a Fire Alarm Panel is not provided utilize air horns.
   iii. Contact the AVRON CORP. Field Office.
   iv. Give your name.
   v. Provide your exact location on the site.
   vi. State the nature of the emergency
   vii. Keep the communication line open.
   viii. Follow instructions as they are provided.
   ix. Remain where you are, if possible, until assistance arrives.
   x. If evacuation is necessary, assist in evacuating others in the surrounding area.
   xi. Dispatch someone to the nearest access route to provide directions to emergency responders.
   xii. AVRON CORP. will immediately notify building security and the designated Client Representative.

g. Illness/Injury: All individuals claiming illnesses and/or injuries sustained at this site must be transported to the nearest emergency medical facility.
   i. Minor first aid type injuries, i.e., foreign body in eyes, scrapes, abrasions, minor contusions (without profuse bleeding) will be treated onsite unless additional medical attention is required.

   ii. All illness and/or injury involving traumatic amputation, severe bleeding, head injury, loss of consciousness, loss of mobility, crushing injury, chest pain, loss of breath, fall from height, or electrocution will be transported by emergency response ambulance only to the nearest trauma center or hospital emergency room.

   iii. Employers are advised that a return-to-work slip, signed by the treating physician will be required before any individual will be allowed to return to full duty or temporary alternate duty (TAD). A slip indicating an anticipated or forecasted date of return to work is not acceptable.

   iv. If an employee refuses medical attention, the following shall occur.
      1. The employee shall provide a written signed statement as to why they are refusing medical attention.
      2. The employer will restrict access of the employee to the construction site until the employee has been seen by an approved medical doctor and released to "full-duty" or TAD work status for the specific injury received while working on this project.
      3. The Site Safety Manager / Superintendent will be contacted immediately and advised that the employee has declined medical treatment.

h. Fire, Release of Flammable, Combustible or Other Toxic Materials: All workers at this site are cautioned that their first responsibility in the event of a fire or release of flammable, combustible or other toxic material is to summon emergency assistance and assist in evacuating the area. Fire fighting efforts are restricted to incipient stage fires only. This restriction applies regardless of a worker's position and/or affiliation with civilian fire companies, volunteer fire fighters and/or hazardous materials response teams. Worker's at this site are not considered members of a fire brigade unless specifically trained by their employer and designated as fire brigade members in accordance with OSHA standards and approved by the AVRON Corporate Safety Director.
   i. REMAIN CALM!
   ii. In the event of fire, pull the fire alarm first! Where an active fire alarm is not available locate the nearest Air Horn and sound the horn THREE TIMES to initiate an evacuation.
   iii. Immediately contact the Site Safety Manager / Superintendent
   iv. Provide the nature of the emergency (fire, spill, release, explosion) and the material involved.

v. Advise of any injuries.
vi. Evacuate all surrounding individuals and yourself
vii. Proceed to emergency response route and provide directions to the emergency responders.
viii. Remain available to answer questions for the emergency responders and accident investigation team.
ix. In the event of a building fire, or release, the Site Safety Manager / Superintendent will provide a copy of the site MSDS sheets to the emergency responders, identifying (if possible) the exact material(s) involved or potentially involved and the quantities.

i. Accounting for Personnel, Emergency Evacuation and Form up Area: All subcontractors shall maintain a sign-in list of all employees, visitors and vendors on site. This list will become critical in the event of a fire, explosion or other catastrophe within the facility.
   i. In the event that a fire alarm is sounded, or the building must be evacuated for any reason, all workers will evacuate the building by the nearest available exit and report to the muster area. This area will be identified by AVRON CORP. Project Staff on the Emergency Evacuation maps that will be posted throughout the site.
   ii. A representative of each subcontractor shall report to the location with the daily attendance roster and conduct an immediate roll call of employees.
   iii. The results of the roll call will be provided to the Site Safety Manager / Superintendent along with the last known location of any worker discovered missing. If a worker returns after the roll call is taken and AVRON CORP. has been notified of their absence, the Subcontractor representative shall immediately notify AVRON CORP. of their return.
   iv. Workers will remain in the muster area unless specifically directed by emergency responders to vacate the area.
   v. No worker will be released from the site without express permission of the Site Safety Manager / Superintendent.
   vi. The Site Safety Manager will provide the results of the roll call to the on-scene commander for the emergency response team and will also supply a copy of the indexed MSDS sheets for the site.
   vii. No one will be permitted to return to the building until the situation has been deemed safe by the emergency response team on-scene incident commander, the Building Manager and the Site Safety Manager / Superintendent.

j. Severe Weather: The Site Safety Manager / Superintendent shall monitor weather reports and radio for any severe weather warning or advisory that may pose hazard for the scheduled work. In the event that such a warning is received, the Site Safety Manager / Superintendent shall immediately advise the subcontractors of the warning or advisory. Dependent upon condition, courses of action could involve the following:

i. All work will cease immediately, and workers will immediately engage in securing all loose construction materials, window openings, roof openings, etc.
ii. All exterior work will cease, and materials will be secured or removed to prevent hazards presented by wind blow material. All building penetrations will be immediately covered.
iii. All workers will be moved to an interior section of the building that will not expose them to the hazards of shattered glass and/or collapse.
iv. All workers may be released once the area is secured.

3. **SUBCONTRACTOR/SUB-TIER RESPONSIBILITIES**:
This document does not, in any way, release the subcontractor (all tiers) from the responsibility of providing properly trained and qualified employees in accordance with all Federal, State and Local Safety and Health Standards. It does not, in any way, release the subcontractor from the responsibility to ensure that all work is performed in accordance with Federal, State, Local, and client established safety standards and codes. Subcontractors are reminded that it is their responsibility to provide employees with a workplace free of recognized hazards. All workers at this site are reminded of their responsibility to work safely and report all accidents, incidents and potential safety hazards immediately to their immediate and then to the site safety Manager / Superintendent. The safety of workers, client employees and the general public will not be compromised for production or any other reason.

The following documents must be submitted prior to mobilizing any subcontractor personnel or equipment at this site. There are no exceptions to these requirements. NO WORK WILL BE PERFORMED UNTIL ALL DOCUMENTS ARE SUBMITTED TO AVRON CORP!

a. Current company health and safety policies and procedures:
    i. A detailed demolition plan including assessment of building stability during demolition; fall protection plan; floor weight capability versus intended load and disposal of demolition spoils plan as required.
    ii. A detailed Lead / Asbestos Abatement Removal plan meeting all requirements set forth by all regulatory agencies applicable (OSHA, ICR, EPA, DOL, etc) as required.
    iii. A detailed Steel Erection Plan including all fall protection requirements as required.
    iv. Site specific fall protection plans for all elevated work, roof work; leading edge work; controlled access work (i.e., decking); and/or work at any unprotected elevation 6’ or more above the surface as required.
    v. Proof of scaffold fall protection hazard assessment and scaffold tagging system to be used as required.
    vi. Hazard Communication Program.
    vii. Respiratory Protection Program
    viii. Indexed Set of Material Safety Data Sheets for material on site only. MSDS’s must be submitted at least 72 hours prior to the introduction of any hazardous material to this site. Submitted MSDS’s must be legible.

ix. Substance Abuse Program.
x. Identification of competent person(s).

b. Submit all documentation to the Site Safety Manager / Superintendent during the project:
   i. Job huddle and the attendance sheet (9AM daily)
   ii. Changes in designated competent persons or safety personnel (Immediate)
   iii. All Worker certifications/training (i.e., Hilti, OSHA, Operators License, etc.) to be provided to AVRON CORP.
   iv. MSDS's for any material being introduced to the site. (72 hours in advance of arrival)
   v. Safety inspections as required
   vi. Toolbox Safety Topics. (Each Thursday)
   vii. OSHA Form 301 for any work-related injury/illness or applicable Form. (Immediate)
   viii. A completed accident report and investigation for any accident, incident or near miss occurring on this project. (Immediate)
   ix. Documentation of task specific safety training, i.e., confined space entry, use of atmospheric detection equipment, lead awareness training, operation of aerial and scissors lifts, forklift operation, etc. (Before employee starts work)
   x. All special licenses (i.e., welders license, Hilti license, riggers license, operator's license, fire watch, etc) - Prior to employee starting work.
   xi. Copy of current annual crane inspection report. (Prior to crane arrival)
   xii. Certification of hydraulic jacks, cranes, heavy equipment, lift beams, lifting jigs, rigging and crane assisted personnel lift devices. (Prior to use)
   xiii. Federal and State mandated postings, i.e., labor law, insurance, and applicable OSHA notices will be provided by the subcontractor and posted in an area frequented by their employees.
   xiv. Task Hazard Analysis (THA) will be required for all high-risk activities

c. Job Huddle/Safety Meeting
   i. On a daily basis each foreman/competent person will have a job huddle prior to commencing work. The job huddle sign in sheet will be delivered to the FJSC Field Office before 9AM each day. The daily job huddle includes safety topics discussed that day.
   ii. Every week each foreman/competent person from every trade is required to attend the Site Safety Manager's safety meeting where each week's toolbox talks will be distributed. This meeting takes place every Tuesday at 9:30 a.m.
   iii. Each foreman will then hold a toolbox talk for the employees he supervises that week.
   iv. The completed Job toolbox attendance forms will be filled out and returned to the safety office every Thursday by 3:00 p.m.
   v. Each foreman will hold a weekly No Smoking Toolbox Talk, with signed documentation by all workers present.

Subcontractors must notify and request approval from AVRON CORP. prior to any sub-tier contractor use at this site. Sub-tier subcontractors will not be utilized unless specifically approved by AVRON CORP.

a. Sub-tier subcontractors must be pre-qualified by the subcontractor prior to award.
b. Subcontractors are responsible for the safety performance of their sub-tier. Any violations, citations, fines or fees resulting from the lack of safety compliance by the sub-tier and their employees will be the responsibility of the subcontractor.
c. A qualified and competent site safety representative of the subcontractor will be present at the job site at all times while work is being performed by the sub-tier. Competent Person Form to be submitted to Site Safety Manager / Superintendent prior to mobilization on site.
d. Documents required of the subcontractor are required of the sub-tier.
e. Insurance certificates, policy endorsements and levels of insurance required by this subcontract are also required of the sub-tier prior to mobilization at the job site.
f. Subcontractors will provide employees that are appropriately trained in the recognition and avoidance of hazards in the workplace; qualified to perform the work; qualified and authorized to use tools and equipment necessary for the performance of their work. Documentation of training or employer statement of qualification and authorization is required and will be provided to AVRON CORP.
g. Subcontractors and sub-tiers will be responsible for documenting the names of each employee on site each day, providing that manpower listing to the AVRON CORP. Site Safety Manager and the AVRON CORP. Project Team, and in the event of an emergency, conduct an attendance count and report any missing person to the AVRON CORP. Site Safety Manager and Emergency Responders.
h. Subcontractors utilizing mono-lingual workers who cannot communicate or read English will provide interpreters to communicate safety requirements and instructions.
i. AVRON CORP. will not supply safety equipment to subcontractors. Subcontractors are responsible in accordance with existing labor agreements and OSHA standards, for providing their employees with personnel protective equipment and training their employees in the safe wear, use, care and inspection of all safety equipment.

4. **STANDARDS OF CONDUCT**: As an integral member of AVRON CORP., you are expected to accept certain responsibilities, adhere to acceptable business principles in matter of personal conduct, and exhibit a high degree of personal integrity at all times. This not only involves respect for the rights and feelings of others but also demands that you refrain from any behavior that might be harmful to you, your co-worker, and/or AVRON CORP. This includes conduct that might be viewed unfavorably by current or potential clients or by the public at large or that is in contravention to any policies in this handbook.

   At all times, your conduct that reflects on AVRON CORP. is encouraged to observe the highest standards of professionalism. If your performance, work habits, overall attitude, conduct, or demeanor becomes unsatisfactory in the judgment of this company, based on

violations either of the above or of any other AVRON CORP. policies, rules, or regulations, or otherwise fails to meet company's expectations, you may be subject to disciplinary action, up to and including termination.

AVRON CORP., and the law, expressly prohibits any form of harassment based on race, color, religion, gender, national origin, ethnicity, age, sexual preference, or disability. AVRON CORP. is firmly committed to promoting a work environment free from harassment, including sexual harassment, of any employee. As a result, any form of harassment is subject to immediate removal from the jobsite.

5. **OUTSIDE AGENCIES**: If an outside agency (OSHA, DEP, EPA, etc.) arrives on the site for an unscheduled inspection the following protocol should be followed:
    a. Ask the inspectors to wait until the following representatives are present:
        i. AVRON CORP. Project Superintendent
        ii. Site Safety Manager

6. **DISCIPLINARY PROCEDURES**
    a. COMPLIANCE/ENFORCEMENT: Enforcement of safety and health requirements is the responsibility of the employer. AVRON CORP. may require the removal of any worker for failure to comply with safe work practices. If subcontractors fail to comply and/or enforce compliance with safe work practices, the subcontractor may be removed from the site with no penalty to AVRON CORP. or the client. All fines or fees issued by the client, building owner or regulatory agency, including time and material charges for AVRON CORP. personnel, legal services or consultants, resulting from the negligence of a subcontractor at any tier, will be back charged to the subcontractor.

    b. DISCIPLINARY ACTION (Individuals): AVRON CORP. fully expects the Subcontractor Project Management Personnel and the Site Safety Manager to enforce the following disciplinary actions. In the event, however, that the subcontractor fails to notice or comply, AVRON CORP. reserves the right to direct removal. The following disciplinary actions will be taken for violations of safety procedures:
        vi. Minor Violation of Site Safety Program: First violation, written warning. Second Violation, permanent removal from site. (e.g., Hearing Protection, safety glasses)
        vii. Major Violation of Site Safety Program: Immediate and permanent removal from site. (e.g., Imminent danger situations/life threatening, Smoking)
        viii. Violation of the Harassment Policy: Immediate and permanent removal from site.
    c. DISCIPLINARY ACTION (Subcontractors and Sub-tiers):
        i. Failure to comply with the safety requirements of this plan may result in removal from the site.
        ii. Repeated failure of employees to comply with the safety requirements of this plan will result in the removal of the subcontractor from this site.

7. **SAFETY STAFF DUTIES:**
    a. The Site Safety Manager must be on the job site full-time whenever work is in progress. When work warrants it, or multiple shifts are in progress more than one safety representative may be required. All site safety staff will be familiar with and adhere to guidelines set forth in this document. Site Safety Representatives will be licensed/certified by the Department of Buildings as a Site Safety Manager.
    b. The Site Safety Manager shall:
        i. Be authorized to take any and all action necessary to eliminate, isolate, or otherwise abate safety and health hazards.
        ii. Authorized to direct work to abate safety and health hazards and require the removal of subcontractor employees and sub-tier employees from the site, including stopping work until such hazards are abated.
        iii. Provide site specific safety orientation to all employees, sub contractors and visitors. ALL individuals onsite are required to go through orientation regardless of stature.
        iv. Verify all certifications of individual workers based on task assigned. ALL workers require, at a minimum, OSHA 10-hour certification renewed every five (5) years.
        v. Provide/attend safety training and safety meetings as required by this plan or requested by the Safety Manager.
        vi. Determine that operators of specific equipment are qualified by training and/or experience to operate such equipment.
        vii. Post the name, address of nearest ambulance, medical, fire and police departments.
        viii. Make inspections on a periodic basis throughout the day to ensure that all machines, tools and procedures are in a safe operating condition.
        ix. Prepare a daily inspection report.
        x. Determine that all necessary permits are completed, and conditions are being followed.
        xi. Identify weekly Toolbox Talk topics based on any trends noted.
        xii. Coordinate coverage by a licensed/certified Site Safety Manager in the event of absence. File with the Department of Buildings for replacement if absence extends longer than two (2) weeks.
    c. The Site Safety Manager/Project Superintendent can be contacted at the following numbers:
        i. See Emergency Notification Plan for contact information.
        ii. In the event a subcontractor, subcontractor employee or client representative believes that safety concerns are not being properly addressed by AVRON CORP. on-site safety personnel.

8. **ACCIDENT INVESTIGATION**: All accidents, incidents and near misses must be reported to the immediate supervisor who will be responsible for reporting the incident to AVRON CORP. Site Safety Manager. The Site Safety Manager will immediately notify the Senior Project Superintendent and Corporate Safety Director. All accidents and incidents must be investigated. Accident investigation is critical in order to ascertain the cause of the incident

and to determine if the condition or the act that caused the accident still exists and prevent a reoccurrence.

a. Investigating the cause of the accident will enable the Project Team to determine what actions or existing conditions caused the accident or near miss to occur and to develop recommendations to prevent a reoccurrence. All efforts shall be made to abate the condition and implement correctives measures.
b. If an accident results in a fatality or the hospitalization of three (3) or more individuals, OSHA must be notified within eight (8) hours of the incident. The AVRON Corporate Safety Director shall make this notification.
c. An Accident/Incident Report must be submitted to AVRON CORP. Site Safety Manager, regardless of the severity of the incident. All accidents or incidents must to be reported to:
    i. AVRON CORP. Senior Project Superintendent
    ii. AVRON CORP. Site Safety Manager
    iii. AVRON CORP. Corporate Safety Director
    iv. AVRON CORP. Senior Project Manager
    v. AVRON CORP. Project Executive

    For additional information see Emergency Notification.
d. Significant incidents (hospitalization, fire, reportable spills) will be immediately reported out. All OSHA recordable incidents will have a Root Cause Analysis report completed by AVRON Corp. The Root Cause Analysis will contain recommendations to prevent similar incidents. These recommendations will be implemented by AVRON Corp. Site safety Manager and Senior Superintendent.

9. **COMPETENT PERSON DESIGNATION**:

a. It is the responsibility of each contractor and their sub tiers to appoint an individual(s) as competent person(s) who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

b. A minimum of two competent person(s) per company is required to be put on file prior to commencement of work onsite.

c. Each contractor will provide the Site Safety Manager / Superintendent prior to work being done the attached COMPETENT PERSON form.

d. These forms will be kept on file in the Site Safety trailer.

e. In the event that a competent person is not on site on any given day that the Trade is working, failure to notify of a substitute in advance will result in disciplinary action against said subcontractor.

10. **EMPLOYEE ORIENTATION:**

Subcontractors must schedule orientation at least 48 hours in advance through the AVRON CORP. Site Safety personnel. AVRON CORP. safety staff will hold new employee orientation classes at 7AM daily; exceptions to time will be made as needed. In the event that any person is onsite for touring purposes (non-work) a chaperoned walk-thru can be scheduled in advance at the availability of AVRON CORP. All employees are to be site oriented prior to commencement of work. All new employees will be trained and oriented by a member of the AVRON CORP. Project Safety staff prior to starting work. The "New Employee Safety Orientation Checklist" shall be used by the Safety Staff as a guide for items that must be reviewed. The checklist must be signed by the employee and the AVRON CORP. Safety staff after the orientation is complete. A copy of this form will be retained in the project site safety file. Each employee will be given a hardhat sticker or badge to easily identify employees that have been oriented. Disciplinary actions will be taken if orientation sticker or badge does not correspond with the worker observed. Any worker intentionally not attending orientation before commencement of work will be removed from the site – no exceptions.

AVRON CORP. will keep a record of all orientated personnel onsite in an electronic database on site.

11. **RECORDKEEPING**

Records must be maintained and kept up to date by the Superintendent and/or the Site Safety Manager at the jobsite and/or AVRON CORP. office. These records must be available for review at all times. At a minimum the following records must be maintained:

- SSM Daily Inspection Logs
- Supervisor's Investigation and Record of Incident
- OSHA Logs as required
- Hazard Communication Compliance Plan
- Material Safety Data Sheets
- OSHA Posters Explaining Employee Rights
- Accident Reports & Forms – Medical Records
- Emergency Phone Number Contact List
- Daily Job Huddles
- Record of Employee Certifications

12. **HAZARD COMMUNICATIONS**: The United States Department of Labor announced in the February 16, 1989, edition of the Federal Register that the Occupational Safety and Health Administration (OSHA) would begin enforcing the Hazard Communication Standard (HCS) effective March 17, 1989.

The HCS is a "Right to know" law. What this means is that you, the employee, have a right to know about the dangers and health hazards associated with the chemical used on the construction site. The Standard requires all employers to educate and

inform all employees about the hazardous chemicals they are exposed to on the worksite and the methods necessary to protect themselves.

Four Components of the Standard

The HCS, as stipulated in section 1910.1200 of the Code of Federal Regulations, is comprised of four (4) basic areas that must be complied with by the contractor.

1. The program must be written.

2. A Chemical Inventory and Material Safety Data Sheets (MSDS) of all chemicals used on the site must be made available to employees and OSHA officials.

3. All containers and pipes must be properly labeled.

4. Employees must be trained in aspects of the HCS program.

The following pages of this Hazard Communication program manual will explain and describe to the employee all the aspects of the standard. The manual should be used in two ways:

1. To inform the employee of the contractor's responsibilities and obligations pursuant to the Standard.

2. To inform the employee about hazards encountered on the jobsite and how to take precautionary methods against them.

The Written Program: An Overview

The purpose of the Hazard Communication Program is to document how to provide for the education and safety of the employees on site.

In addition to the requirement that the HCS program be written, the program must also contain the following three components:

1. Chemical Inventory and MSDS file.
2. Labeling
3. Employee Training

Each of these components of the program will now be described in detail.

Chemical Inventory and Material Safety Data Sheets (a.k.a. MSDS)

One of the requirements of the HCS is that employers must make available to all employee's information and data regarding all the chemicals found on the site.

The following is necessary, and must be kept onsite:

1. A Chemical Inventory List indicating all chemicals that can be found on the site.
2. A Material Safety Data Sheet (MSDS) for each chemical used on the site.

Instruction on How to Use the Chemical Inventory List

The Chemical Inventory List is to be used basically in two ways:

1. To locate an MSDS for a particular chemical in the MSDS file.
2. To document many various chemicals that are used on a construction site.

Listed below you will find the specific instructions:

Chemical Name: This is the name give to the product by the manufacturer and/or distributor. The chemical name should be the first name that you look up when researching a chemical because it will be the name most likely present on the label of the container. Sometimes a chemical name may not be given; therefore, a product must be researched using the Trade Name.

Trade Name: This is the name given to the product by the trade that uses it. Trades may have their own name for a product for various reasons. If the chemical name cannot be obtained or is not listed, you should look for the trade name.

Trade: This is the name of the trade that uses the corresponding chemical(s). If you are working in the same area as another trade and you would like to know about the chemicals that are being used, you can look up the trade and see what hazards you may be exposed to.

MSDS Number: This is the reference number that should be used to locate any specific Material Safety Data Sheet. For example, if you wish to research the hazards associated with acetylene you would first look up the MSDS Number that corresponds with the acetylene and then cross-reference it to the MSDS file.

The Chemical Inventory List will be indexed in three ways:

1. Date
2. Chemical Name
3. Contractor Name

This cross-indexing of the Chemical Inventory List will facilitate the process of researching any particular chemical.

Material Safety Data Sheets (MSDS)

The Material Safety Data Sheet (MSDS) is a document which describes the physical and chemical properties of products, their physical and health hazards and precautions for safe handling and use.

Manufacturing, importers, distributors, and suppliers are required to provide the buyer an MSDS for each of their hazardous chemicals. Contractors are required to maintain a file of MSDS's for all hazardous chemicals used on the construction site. According to OSHA, you will be able to determine the hazards associated with any chemical by referring to the corresponding MSDS as well as the label on the container. The HCS specifies the information required on each data sheet, and all information must be written in English.

An MSDS must precede or accompany the initial shipment but does not have to be physically attached to it.

OSHA does not prescribe the format of the MSDS but does require that certain information must be contained on it. Regardless of the MSDS format, the OSHA standard requires certain information to be supplied. The following is a section-by-section explanation of the type of MSDS information required by the OSHA standard (29 CFR 1910.1200 (g)):

Chemical Identity

If the chemical is a single substance, it should have the chemical, trade, and common name(s).

The chemical identity on the MSDS should be cross referenced to an identifier found on the label.

Hazardous Ingredients

If the hazardous chemical is a mixture which has been tested as a whole to determine its hazards, the chemical and common names of the ingredients that are associated with the hazards, and the common name of the mixture itself must be listed.

If the chemical is a mixture which has not been tested as a whole (most probable since very few mixtures are tested), all ingredients that are not carcinogens, but are health or physical hazards and comprise 1 percent or more of the mixture, must be listed.

Carcinogens (e.g., OSHA list, IARC Monographs, NTP list) must be listed if they are present in the mixture at levels of 0.1 percent or greater.

Physical and Chemical Characteristics

The physical and chemical characteristics of the hazardous substance reflect the properties of the compound. These include such items as boiling and freezing points,

density, vapor pressure, specific gravity, solubility, volatility, and the product's general appearance and odor.

Physical Hazards

The compound's potential for fire and explosion must be described. This section explains the fire hazards of how the product could ignite and explode. Most MSDS's also provide information on recommended extinguishing agents and fire fighting.

This section also presents information about other chemicals and substances with which the chemical is incompatible, or with which it reacts. Information on decomposition products such as carbon monoxide is included.

Health Hazards

The health hazards of the chemical together with signs and symptoms of exposure must be listed. In addition, any medical conditions which are generally associated with exposure to the compound can aggravate, must be included. The specific types of health hazards defined in the standard include carcinogenicity, corrosives, toxicity, irritants, sensitizes, mutagenicity, teratogenicity, and target organ effects, such as liver, kidneys, nervous system, and blood, lung, mucous membranes, reproductive, skin and eye effects.

The route of the entry section describes the primary pathway by which the chemical enters the body. These are three principal routes of entry: inhalation, absorption through the skin, and ingestion.

This section of the MSDS supplies the OSHA Permissible Exposure Level (PEL, the ACGIH Threshold Limit Value (TLV), as well as other exposure levels used or recommended by the chemical manufacturer.

If the compound is listed as a carcinogen by OSHA, NTP or IARC, it must be so indicated on the MSDS.

Special Precautions, Spills, Leaks, and Cleanup Procedures

The standard requires the preparer to describe applicable precautions for safe handling and use which are known. These include recommended industrial hygiene practices, precautions to be taken during repair and maintenance of equipment, and procedures for cleaning up spills and leaks. Some companies also use this section to include useful information not specifically required by the standard, such as EPA waste disposal methods and State and Local requirements.

Control Measures

The standard requires the preparer of the MSDS to list generally applicable control measures. These include engineering controls, safe handling procedures, and personal

protective equipment. Information on the use of goggles, gloves, body suits, respirators, face shields is often included.

Emergency and First Aid Procedures

This part of the MSDS deals with actions that should be taken in the event of accidental overexposure. Different procedures are usually given to deal with inhalation, ingestion, skin or eye exposure.

Responsible Party

The standard requires that MSDS preparation date or the date of the last change be provided. In addition, the name, address, and telephone number of the chemical manufacturer, importer, or other responsible party preparing or distributing the MSDS must be included.

Trade Secrets (Note: Detailed Information Refer to Appendix D to 1910.1200 Definition Of "Trade Secret")

The Hazard Communication Standard contains provisions which allow a chemical manufacturer, importer, or employer to withhold chemical identity information from the MSDS to protect a "bona fide" trade secret (29 CFR 1910.1200 (i). However, the MSDS still must disclose the properties and hazards of any chemical for which a trade secret claim is made. The standard also prescribes procedures for disclosure of trade secret chemical identities to health professionals who provide occupations health services to exposed employees, or designated representatives. Individuals to whom trade secret information is provided must be able to demonstrate a "need-to-know" the information and the means to maintain its confidentiality.

Employee Access to MSDS's

Copies of MSDS's must be readily accessible to employees during each work shift when they are in their work areas. Employee representatives also have a right to access MSDS's. Under the standard, alternative formats to the MSDS may be used.

The information on an MSDS is extremely technical in nature and should be used as a reference or as a backup to the information contained on a label.

Location of Chemical Inventory List/MSDS File

The MSDS's for all the chemicals used on this site will be located in the AVRON CORP. Field Trailer.

An employee should read the label and/or MSDS for any and all chemicals that he or she will be handling or exposed to. This should include chemicals exposed to those that are being used by an employee of another trade who is working in the same vicinity.

Once you have read the label and MSDS, you should follow all precautionary advice such as the wearing of prescribed personal protection such as respirators and goggles. You should also need any instructions given in case of accidents.

Labeling

The standard requires that all containers of hazardous chemical be properly labeled. Each container must be properly labeled using the following guidelines:

1. The label must identify the hazardous chemical.
2. The label must contain the appropriate hazard warning.
3. The label must contain the name and address of the manufacturer, importer, or other responsible party.
4. Precautions regarding the use of the chemical.

The label must be in English, easily understandable and not defaced. The product label will essentially be a synopsis of the MSDS but should not be considered a substitute for the MSDS. The label will be the employee's immediate source of information, with the MSDS as a backup.

The Rule Is: IT MUST BE PERFECTLY CLEAR TO THE EMPLOYEE WHAT IS IN THE CONTAINER.

If the chemical has to be transferred to a secondary container, the secondary container does not need to be labeled provided the chemical is going to be used immediately. The chemical cannot be left unlabeled through lunch or at the end of the work shift. The secondary container label should have at a minimum the name of the chemical as it appears on the original container.

Pipes must also be labeled, particularly in demolition or renovation projects.

It is the responsibility of the subcontractor to ensure that each container they bring on this site is properly labeled as per the provisions of the standard. The AVRON CORP. Safety Team will conduct periodic inspections of the site in order to make sure that all containers are labeled. Unmarked pipes will be tagged or labeled to identify the contents. Labels will be reviewed to determine if they contain the required information as detailed above. They will also be reviewed to ensure that they contain symbols and terminology that will be understood by the employee. In essence, the label must clearly tell the employee what to do in the event of an emergency and also how to protect himself/herself during normal use.

If it is determined that containers are improperly labeled, the following actions will be taken to bring the site into compliance:

1. Employees and employer will be notified if a label is defaced or removed and advised that they are violating the rules pursuant to the Hazard Communication Standard
2. The manufacturer or supplier will be informed if the label is missing or does not confirm to the standard. Reiterated, the label must contain the four prescribed items of information, in English, and in a manner clearly understandable to the employee. OSHA may also be informed of any violations, depending on severity of the situation
3. Unidentifiable pipes will be labeled or tagged on each floor.

An Overview

The training will cover the following topics:

An overview of the Hazard Communication Requirements.

A review of the chemicals present in the workplace operations.

The location and availability of our written program, the Chemical Inventory List and the MSDS binder.

Methods and observation techniques that may be used to detect the presence or release of hazardous chemicals in the work area.

Physical and health hazards associated with the chemicals used in the workplace.

How to lessen or prevent exposure to hazardous chemicals by using good work practices and personal protective equipment.

Emergency procedures to follow if employees are exposed to hazardous chemicals.

An explanation of our Hazard Communication Program, including how to read labels and MSDS's to obtain appropriate hazard information.

Employees will be trained by their employers to perform non-routine tasks. Prior to starting work on such projects, each affected employee will be informed about hazards to which they may be exposed and appropriate protective measures that should be taken.

Written Hazard Communication Plan:

Each contractor is required to prepare a written hazard communication plan for its site. This also shall be kept in an easily accessible location.

While it can be a simple document, the plan must completely explain the procedures established to ensure that all MSDS's are available, that all label requirements are met,

and employee training meets OSHA requirements. The Plan shall also contain an up-to-date list of all hazardous materials in use by the company.

Employee Training Program

- Description of the hazard communication regulations and the rights of the employees to know about the workplace hazards
- Specific methods for detecting the presence and release of hazardous substances
- What to do in the event of exposure or an emergency
- Health hazards associated with hazardous substances
- Specific measures workers should take to assure adequate protection from hazardous substances, such as appropriate work-site practices, emergency procedures and various forms of personnel protective equipment
- The contractor's written hazard communication program including and explaining how workers can obtain and use the information.

13. **FIRE PROTECTION AND PREVENTION**: Fire prevention and protection procedures are designed to prevent the occurrence of fire at our job sites. Most accidental fires can be prevented if proper safety precautions are initiated. This procedure is intended to address the issues of evaluating and identifying potential fire hazards, cutting and welding operations, Hot Work Permit, firefighting equipment, establishing appropriate procedures, protective measures, and communicating information concerning these hazards to our employees and sub-contractors.

    Workers will be advised during safety orientation regarding the location of fire extinguishers and their operation, as well as the location of alarm boxes or emergency signaling devices. There will be a fire extinguisher located at each entrance to the exit stairwells.

    a. Only approved containers and portable tanks may be used for the storage and handling of flammable and combustible liquids or solid chemicals.
    b. One 20# ABC fire extinguisher will be present for each 2500 square feet of protected building area. The travel distance to the nearest fire extinguisher will not exceed 100'. AVRON CORP. will provide fire extinguishers for the job site. (These fire extinguishers are for building coverage only and not to be used by any subcontractor performing hot work).
    c. Fire fighting equipment will be conspicuously located and identified.
    d. Emergency equipment will not be used for fire watch duty.
    e. Materials will not be stored in front of fire fighting equipment or within 24" of fire sprinkler heads.
    f. All fire fighting equipment must be inspected on a monthly basis.
    g. All offices, shanties, job site trailers, etc. will be equipped with a minimum of one 20# ABC fire extinguisher mounted on ceiling w/ sprinkler head attached.

h. All shanties, offices, break areas, etc. will be constructed as per the requirements of the FDNY rules, regulations and fire code.
i. All chemicals, compressed gas and compressed air shall be stored in the appropriate safety cages provided by the subcontractor. The safety cages shall not be located inside any building and shall be located only in designated areas. All cages will have proper signage.
j. An FDNY Storage Permit for compressed gas cylinders must be obtained and given to the AVRON CORP. Superintendent and/or Site Safety Manager if storing on site.
k. An FDNY Permit must be obtained for temporary use of a fire hydrant.

14. **ENVIRONMENTAL COMPLIANCE**:

a. All subcontractors will ensure that environmental contaminants are not discharged to the ground, water or air and that all hazardous materials and material containers are disposed of in accordance with Section 18 of this Site Safety Program, disposal of hazardous waste requirements and State and Local recycling laws.
b. Fuel tanks are prohibited inside the building. Fuel trucks will be allowed to deliver fuel to heavy equipment. All gas cans must be of the metal type and be properly labeled. Secondary containment is required for gas cans.
c. All spills or discharges will be immediately reported to AVRON CORP. Senior Project Superintendent and Site Safety Manager who will determine appropriate remediation measures.
d. Discovery of any buried hazardous waste or above ground hazardous waste will cause immediate work stoppage until the material is properly identified and disposed of in accordance with applicable Federal, State and/or Local requirements. A Soil Erosion Control Plan will be required from subcontractors if potential for contamination exists.
e. No hazardous waste will be transported from this site without the provision of hazardous waste manifest documents and copies of hazardous waste transport licenses.
f. Strict compliance with Federal State and Local Storm Water Discharge regulations, permits and requirements are mandated.

15. **MAINTENANCE OF SITE AND PROTECTION OF ADJACENT PROPERTY/PUBLIC WAY**:

a. Fire prevention, sanitary, or other facilities that have been provided for the protection of life, health and property shall be continuously maintained and protected unless authorization is obtained from the agency having jurisdiction to temporarily or permanently disconnect such facility.
b. Sanitary facilities will be provided in accordance with the NY Plumbing Code.
c. No street or sidewalk shall be closed either in whole or in part without a permit from the DOT.
d. All areas used by the public shall be maintained free from ice, snow, grease, debris, equipment, materials, projections, tools or other items, substances, or conditions that may constitute a slipping, tripping or other hazard.
e. All notifications to adjacent Building Owners as per NYC DOB requirements.

f. Where a permanent walkway is deemed insufficient a temporary walkway will be provided to ensure safe passage of pedestrians in accordance with BC 3307.2.1.
g. Where a foot bridge is required, installation will be in compliance with BC 3307.2.2.
h. Sidewalk sheds
    i. Will be erected when required by BC 3307.3.1 and installed in accordance with BC 3307.6.
    ii. Designed by an Engineer unless following a standard designed approved by the Dept or the Board of Standards and Appeals.
    iii. Requires permit.
    iv. When required for demolition; the sidewalk shed shall be completed before demolition takes place.
    v. Shall be designed and erected as a heavy-duty sidewalk shed to carry a live load of at least 300lbs per sf.
    vi. Material and debris shall not be stored on sidewalk sheds unless the shed has been so designed.
    vii. The underside of the sidewalk shed shall be lighted at all times by natural or artificial light equivalent to light produced by 200-watt lamps. Vandal proof fixtures to be placed 8' AFF spaced 15' apart.
i. Fences shall be at least eight (8) AFF and constructed of wood or other suitable materials and be installed along the inside edge of the sidewalk.

16. **GENERAL SAFETY RULES**:

a. Lighting and Power: In areas where temporary lighting or permanent lighting cannot be provided to acceptable OSHA limits, subcontractors are responsible for providing additional lighting from floor stand units or flood lights. All temporary lighting must be compliant with the NEC. No laundry drops are permitted from lighting circuits. Temporary and permanent power circuit will be GFCI Protected. Separate Branch Circuits will be provided for lighting and power. The electrical subcontractor will keep a log of all installed GFCI's and perform a weekly documented inspection as to the status of the device. Each subcontractor shall provide GFCI's when their employees plug into temporary and permanent power.
b. Electrical Work: No electrical connection will be made without coordination and identification of circuits by the electrical subcontractor. Live or energized electrical work will not be performed at this site unless discussed with AVRON CORP. Project Management team, AVRON CORP. Site Safety Manager, the building owner, the client and the subcontractors designated representative at an appropriately documented meeting. If live or energized work is required, it must be authorized in writing by a designated representative of the subcontractor performing the work. Minimum personnel protective equipment items are listed in Section 10. Energized work will be performed as a last resort and not as a matter of convenience.
c. Welding Work: Coordination for shut down of local smoke detection systems and sprinkler systems (when brought on-line) must be accomplished with AVRON CORP. Project team. A Hot Work Permit must be coordinated with AVRON

CORP. Site Safety Manager / Superintendent and approved prior to beginning hot work.

i. Where welding is required, a fused disconnect switch for connection to the building electric panel by the electrical subcontractor is required.
ii. All welding machines will be equipped with an OSHA compliant disconnect switch.
iii. All welding and/or burning must be attended by a qualified fire watch. Fire extinguishers must be within close proximity of any hot work operation.
iv. The fire watch must be present at all times during welding/burning and must remain on site for half an hour after the temporary or permanent termination of hot work. This includes coffee breaks, lunch breaks, meetings, shift change, etc.

d. All unsafe conditions, accidents, incidents, near misses, work related injuries or illness must be reported immediately to the immediate supervisor who will report it to the AVRON CORP. Site Safety Manager / Superintendent.
e. The use, possession, or sale of alcohol or illegal drugs is prohibited and will result in immediate and permanent removal from the site.
f. Possession of drug paraphernalia is prohibited.
g. If lead, asbestos or any potentially hazardous materials are suspected during operations, stop work immediately and notify a supervisor.
h. Do not enter barricaded areas and obey all warning and traffic signs.
i. Proper work clothing and personal protective equipment will be worn at all times.
j. Always remove nails from scrap lumber before stacking.
k. Do not stand besides, or under suspended load and never connect fall protection to a suspended load.
l. Workers will remain clear of antenna and microwave transmission equipment at all times.
m. Fighting and/or horseplay are forbidden and will be the cause for immediate removal from the site.
n. All barricades, handrails, or other fall protection and warning devices must be repaired and replaced immediately.
o. Smoking is not permitted on site!!
p. Metal and aluminum ladders (step, extension or single unit) will not be used on this site.
q. All cords to be suspended above to avoid various hazards in high traffic corridor areas (trip hazard, cord damage, etc.)
r. Message clothing, signs, publications, gestures, photographs, etc. that are considered offensive will not be permitted. Anyone making threatening, harassing or discriminatory commentary to employees or co-workers will be immediately removed from the site.
s. Chasing or cutting core or exterior walls for any work is not permitted without prior approval by the Engineer.
t. Any construction operations causing noise, dust, vibration odors or other effects to areas outside of our designated construction space will be mitigated or performed during non-restricted hours. AVRON CORP. will be notified of all such work.

u. Electrical utilities will be locked out in accordance with Lockout Tag Out program approved by AVRON CORP.
v. The electrical subcontractor will perform weekly documented inspections of all circuit breakers on temporary electric and lighting equipped with GFCI's and effect immediate replacement and/or repair.
w. Music, radios and headsets are prohibited.
x. Cameras or video recorders are permitted at the project site only upon notice to AVRON CORP.

17. **TASK HAZARD ANALYSIS**

a. All subcontractors must prepare and submit a Task Hazard Analysis (THA) or Work Plan to AVRON CORP. Project Team and the Site Safety Manager for all high hazard activities prior to the start of such activities. High hazard activities that require a THA/Work Plan may include the following:
    i. Operations involving the shut-down and start-up of the following:
        1. Fire Alarm System (in occupied facilities)
        2. Fire Protection System (in occupied facilities)
        3. Sprinkler System (in occupied facilities)
        4. Process Piping
        5. Electrical Systems
        6. Hydraulic Systems
    ii. Trenching & Excavations (trenches and excavations greater than 5 feet in depth or that require a shoring system).
    iii. Abatement
    iv. Elevated work activities including work on a roof and scaffolding work.
    v. Rigging by use of a crane.
    vi. Work to be performed on existing equipment.
    vii. Work involving existing piping, vents or drains, piping tie-ins and line breaking.
    viii. Any hazardous painting, floor or wall coating (epoxy paints, electro-static painting, etc.).
    ix. Hot work (welding cutting, brazing) in hazardous areas or near hazardous materials.
    x. Structural Steel Erection
    xi. Skylight Installation
    xii. Confined Space Entry
    xiii. Control of Hazardous Energy and Line Breaking (Lock Out/Tag Out).
    xiv. Work near high voltage electrical lines.
    xv. Any activity which will impede a sidewalk, roadway, adjacent structure or building entrance (in occupied facilities or public areas).
    xvi. Critical Lifts - a lift that meets any one of the four criteria noted below:
        1. Lifts which exceed 75% of the cranes rated capacity or other lifting equipment configuration
        2. Lifts that require the use of more than one crane or in combination with other lifting equipment approved for hoisting or rigging purposes

3. Lifts which are located in an area or areas where conditions present exposures to electrical hazards, underground hazards, overhead piping systems, vessels, operational buildings, etc.
4. Lifts of equipment which are identified as specialized equipment, "one of a kind" which has been designed, engineered and fabricated for a specific process of the owner. This will include equipment specified by the owner such as glass lined reactors, vessels, etc.

xvii. Any other unusual activity which may require review of the tasks involved

b. The Contractor must develop a mitigation plan for the high-risk activity. The Task Hazard Analysis is required for, but not limited to, all of the activities listed above. Procedures regarding work permits, where applicable, should be defined in the Task Hazard Analysis / Work Plan. All attachments (training documents, crane location plans, crane swing radius information, Material Safety Data Sheets, etc.) must be included with the mitigation plan submission.
c. The THA/Work Plan must be submitted to the AVRON CORP. Project Team for review by the Site Safety Manager at a minimum of 10 working days prior to the scheduled operation. (NOTE: If the mitigation plan does not address all hazards, the operation may be delayed).
d. The AVRON CORP. Project Team and Site Safety Manager will review the plan submitted by the contractor and return an initialed copy noting that the THA/Work Plan has been approved to the Contractor. The Contractor must address any comments provided in the review and as necessary, revise and resubmit the Task Hazard Analysis/Work Plan mitigation plan. The review should include the following statement: "Reviewed for general conformance with contract requirements. Contractor is responsible for the means and methods employed in the conduct of these operations and are strictly liable for compliance with all applicable laws, rules, and regulations."
e. The operation may not commence until the Contractor receives a returned initialed copy of the THA / Work Plan and subsequently reviews the plan with its work crew. The Contractor shall supply the AVRON CORP. Site Safety Manager / Superintendent with a final copy of the Task Hazard Analysis inclusive of the review with the trade workers (sign-in sheet) upon completion of the plan review.
f. THA / Work Plan will be developed by Contractor for each high-risk work activity. The required components of a mitigation plan will include, but are not limited to:

i. Project or Site Name
ii. Date of the Operation
iii. Contractor Name and Name of Contractor Representative/Supervisor
iv. Location of Work Activity (specific location of the activity and site location)
v. Description of the Task/Operation/Scope of Work
vi. Description of the Hazards or potential hazards present
vii. Analysis/Actions Required/Mitigation plan for each hazard noted (Safe working procedures, including required personal protective equipment, necessary equipment, training requirements, emergency procedures, etc.)

viii. Attachments (training documents, crane layout, crane inspection data, MSDS, equipment maintenance checklists, work permits, additional information as per regulatory requirements, individual certifications, etc.)
ix. Name of person submitting the THA/Work Plan and date of submission date
x. Name of person reviewing the THA/Work Plan and date of review
xi. Names of crew members that the THA/Work Plan was reviewed with
xii. Date that the THA/Work Plan was reviewed with the crew

g. As necessary, copies of a submitted approved Task Hazard Analysis/Work Plan will be provided to affected subcontractors so that other affected workers can be made aware of areas and times where potential high-risk operations will occur.

h. The AVRON CORP. Site Safety Manager will perform targeted inspections of active high risk work activities on a regular basis, to verify that procedures described in the Contractor's Task Hazard Analysis/Work Plan are being implemented by the Contractor. Failure by the Contractor to abide by the procedures it has outlined will be considered a material breach of the contract and may result in immediate suspension of all work until corrective procedures are adopted.

18. **CONFINED SPACE ENTRY PROGRAM**: The Policy and Procedures for Permit Required Confined Space Entry are mandated for use by all employees. A copy of the program must be maintained at the work location and available to the employees and client for review. A Confined Space Entry Permit must be submitted and approved by the AVRON CORP. Site Safety Manager prior to beginning work. Employees will not be assigned the duties of Confined Space Supervisor, Entrant or Attendant unless they are trained and designated in accordance with the conditions of this program and/or the client approved program. Violations of this Policy and Procedure may result in immediate termination.
    a. DEFINITIONS:
        i. Confined Space: A confined space is a space that is large enough and so configured that an individual can bodily enter and perform assigned work and has limited or restricted means for entry or exit and is not designed for continuous employee occupancy. In example tanks, vessels, silos, storage bins, hoppers, vaults, pits, tank skirts and excavations are considered confined spaces.
        ii. Confined Space Entry: Confined space entry means the action by which a person passes through an opening into a confined space. Entry includes ensuing work activities in the space and is considered to have occurred as soon as any part of the entrant's body breaks the surface plane of the opening into the space.
        iii. Permit-Required Confined Space: A permit required confined space means a confined space that has one or more of the following characteristics.
            1. It contains or has the potential to contain a hazardous atmosphere.
            2. It contains a material that has the potential for engulfing an entrant.

3. It has the internal configuration that could trap an entrant or asphyxiate an entrant by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross section.
4. It contains any other recognized serious safety or health problem.

iv. Permit-Required Confined Space Program: A permit-required confined space program is the company overall program for controlling and protecting employees from permit required confined space hazards and regulating employee entry into permit required confined spaces.

v. Confined Space Entry Permit: Confined space work at this location will require a permit. The permit known as Attachment 9 to this exhibit will be utilized. Initial and periodic atmospheric testing will be performed by AVRON CORP. or their designated representative. Ongoing monitoring of the confined space is the responsibility of the employer of the entrants.

1. The specific identification of the permit space to be entered.
2. The purpose for the entry.
3. The date and the authorized duration of the permit.
4. The names of the authorized entrants and a method of tracking the entrants who are in the confined space or have exited the confined space.
5. The name of the individual assigned to attendant duties for the specific confined space.
6. The name of the individual serving as confined space supervisor.
7. The printed name, signature and date of the confined space entry supervisor issuing the permit and authorizing entry.
8. The hazards of the confined space to be entered.
9. The measures used to isolate the confined space and eliminate or control the permit space hazard prior to entry. (i.e., lockout, tagout, purging, ventilating and flushing the confined space.)
10. The acceptable entry conditions.
11. The results of initial and periodic atmospheric monitoring tests, accompanied by the name or initials of the tester and the time the tests were performed.
12. Specification of rescue services required including the method and equipment required to summon emergency rescue services.
13. Two-way radios or walkie-talkies are required to maintain effective communication between authorized attendant(s), entrant(s) and AVRON CORP.
14. Personnel protective equipment required including emergency retrieval devices, atmospheric monitoring equipment, alarm systems, communications devices.
15. Additional permits issued to allow other work, such as hot work, cold work, etc. within the confined space.
16. A remarks section to communicate any other necessary information regarding the safety and health of the confined space entrant(s) and attendant(s).

vi. Hazardous Atmosphere: A hazardous atmosphere is defined as an atmosphere that may expose the employee to the risk of death, illness, injury and/or impairment to the individual's ability to self rescue.
vii. Oxygen Deficient Atmosphere: An oxygen deficient atmosphere is an atmosphere containing less than 19.5 % oxygen by volume.
viii. Oxygen Enriched Atmosphere: An oxygen enriched atmosphere is defined as an atmosphere above 23.5% oxygen by volume. For the purpose of this program, confined space entry shall not be performed if the oxygen content is above 23.0% by volume.
ix. Entry Supervisor: The person designated by the employer (client or host employer may provide the entry supervisor) to determine if conditions for entry are acceptable; permit issuance; overseeing entry operations and terminating entry if conditions inside or outside the confined space change after permit issuance. The entry supervisor can be changed during the permitted entry period. The change shall be documented on the permit. The entry supervisor may also perform the duties of the attendant or entrant.
x. Attendant: The Attendant is a trained, qualified and designated individual stationed outside of one or more confined spaces. The attendant monitors the authorized entrants and performs all duties assigned in the Confined Space Entry Procedure.
xi. Authorized Entrant: The authorized entrant is an employee who is trained, qualified and authorized by the employer, to enter a permit required confined space.
xii. Host Employer: For the purpose of this program, the host employer is defined as the facility and equipment owner and/or operator.

b. Preparation of Confined Space Prior to Entry: Prior to any entry into confined spaces, the following steps shall be taken:
    i. The confined space must be isolated from all potential sources of hazardous material entry and sources of hazardous energy as follows:
        1. All process and utility lines and equipment leading to or from the confined space shall be blanked/blinded; disconnected in a manner which would prevent material from entering the vessel; double blocked, locked out and bled.
        2. All sources of hazardous energy and all rotating equipment shall be locked out in accordance with the control of hazardous energy program.
        3. The host employer shall clean and purge the confined space of potential hazardous materials.
        4. The confined space entrance cover may be removed when all conditions making it unsafe to remove the cover have been eliminated. Once the confined space entrance cover has been removed, the opening shall be immediately guarded by a railing, temporary cover, or other temporary barrier that will prevent an accidental fall through or non permitted entry into the confined space.

c. Acceptable Atmospheric Conditions For Entry: For the purpose of the confined space entry program and procedure, the following atmospheric conditions shall be met:
    i. Flammable Gas, vapor or mist shall not exceed 10% of the lower flammable limit. (LFL).
    ii. Airborne combustible dust shall not meet or exceed the LFL. This concentration may be approximated as a condition in which the dust obscures vision at a distance of 5 feet or less.
    iii. Atmospheric oxygen concentration shall not be below 19.5% or above 23.0%.
    iv. The atmospheric concentration of any substance for which a dose or a permissible exposure limit (PEL) is published in Subpart G or Subpart Z of 29CFR 1910, which could result in employee exposure in excess of its dose or PEL shall not exist.
    v. Any other atmospheric condition that is immediately dangerous to life or health shall be eliminated prior to authorized entry.
d. Atmospheric Testing: Before any employee enters the confined space, atmospheric testing shall be performed with a calibrated direct reading instrument for the following conditions in the order given:
    i. Oxygen Content
    ii. Flammable Gases and vapors
    iii. Potential toxic air contaminants
    iv. Atmospheric testing must be accomplished in a manner that would detect potential stratification of hazardous atmospheres within the confined space.
e. Atmospheric Monitoring: Continual atmospheric monitoring is required during confined space operations. Only calibrated instruments will be used to conduct air monitoring. CAUTION: Hazardous atmospheres within a confined space can stratify. The monitoring device must be periodically passed through the confined space from top to bottom to ensure accurate detection.
f. Rescue Services and Retrieval Equipment:
    i. Rescue Services: AVRON CORP. Site Safety Manager will notify emergency services. The local Fire Department (911) will be providing emergency services. Employees will not attempt a rescue by entering the confined space unless specifically trained, designated, equipped and authorized in writing by the company president and the employers designated entry supervisor.
    ii. Retrieval Equipment: To facilitate non-entry rescue, retrieval systems or other methods shall be used whenever an authorized entrant enters a permit space, unless the retrieval equipment would increase the overall risk of entry or would not contribute to the rescue of the entrant. The retrieval system shall be in place prior to entry and shall meet the following requirements:
        1. Each authorized entrant shall use a chest or full body harness with a retrieval line attached at the center of the entrant's back near shoulder level, or above the entrant's head.
        2. The other end of the retrieval line shall be attached to a mechanical device or a fixed point outside the permit space in a manner that

would allow immediate non-entry rescue to begin as soon as the rescuer becomes aware that a rescue is necessary. A mechanical device must be available to retrieve personnel from vertical type permit space more than 5 feet deep.

g. Hazardous Material Exposure: Since exposure to hazardous materials inside a confined space is possible, a copy of the Material Safety Data Sheet for materials contained, previously contained, or used within the confined space shall be posted with a copy of the confined space entry permit and available for rescue personnel immediately outside the access point to the confined space.
h. Ventilation: Continuous forced air ventilation shall be installed prior to beginning confined space entry in the following manner:
    i. An employee may not enter the confined space until the forced air ventilation has eliminated any hazardous atmosphere.
    ii. The forced air ventilation shall be directed to ventilate the immediate areas where an employee is or shall be present within the confined space and shall remain in effect until all employees have left the space.
    iii. The air supply for the forced air ventilation shall be from a clean source and may not increase the hazard within the space (i.e., suction source located near diesel exhaust, chemical spills, and atmospheric vented storage drums.)
i. Air Operated Tools and Equipment: All air operated tools and equipment used inside of a confined space shall be connected to a grade D breathing air source.
j. Electrical Tools and Lighting: All electrical tools and lighting used within a confined space shall be connected to a Ground Fault Circuit Interrupter or reduced to 12 volts. All lighting bulbs shall be enclosed in a safety cage.
k. Hot Work: The confined space supervisor shall be familiar with sections of this Site Safety Program regarding the definition of hot work (i.e., electrical tools) A separate permit is required for all hot work within confined spaces.
    i. Torch units shall be shut down and removed when confined space entrants have departed the confined space.
l. Duties: The following section contains the duties of the Entry Supervisor, Confined Space Entry Attendant and Authorized Entrant. Prior to performing any of the duties associated with these designations, individuals shall be trained, qualified and designated by an authorized representative.
m. Entry Supervisor:
    i. The entry supervisor shall know the hazards faced during entry, including information on the mode, signs or symptoms and consequences of exposure.
    ii. An MSDS or other similar written material shall be kept at the work site for any material to which the authorized entrant may be exposed.
    iii. The entry supervisor shall verify that the appropriate entries have been made on the confined space entry permit and all specified tests have been conducted.
    iv. Verifies, by checking, that all procedures and equipment specified by the permit are in place, before signing the permit and allowing entry.
    v. Terminates the entry and cancels the permit if the confined space hazard or conditions outside the confined space pose a hazard to the entrants.

vi. Verifies that rescue services are available and that the communication with rescue service is readily available.
vii. Removes unauthorized individuals who enter or who attempt to enter the confined space.
viii. Reviews the confined space operation at intervals dictated by the hazard and the operation to ensure compliance with this policy.
ix. Determines when responsibility for a permit space entry operation is transferred.
x. Reviews the permit required confined space work, prior to commencement with the attendant, entrants and the client designated representative.
xi. Designates qualified individuals to act as entrants and attendants.
xii. The attendant shall know the hazards that may be faced during entry, including information on the mode, signs, symptoms and consequences of exposure.
xiii. The attendant shall be aware of possible behavioral effects of hazard exposure in authorized entrants.
xiv. The attendant shall maintain an accurate count of authorized entrants in the permit space and ensure that the entrants are properly identified and authorized on the permit.
xv. The attendant shall insure, by head count, that all authorized entrants have departed the confined space prior to closing out the permit or departing the confined space area.
xvi. The attendant shall contact emergency responders (911) if the attendant feels the entrants may need assistance to escape from hazards or may have displayed the effects of the hazards of the confined space.
xvii. The attendant shall prevent unauthorized entry to the confined space.
xviii. The attendant will not attempt a rescue by entry into the confined space. Non-entry rescue attempt only is allowed.
xix. The attendant will not vacate the area for any reason or perform any duty which would prevent or inhibit the ability to communicate with the entrants.
xx. The attendant will evacuate the entrant from the confined space if:
    1. The attendant detects a condition outside (i.e., an alarm, leak etc.) which may endanger the entrants or any alarm condition on continuous monitoring equipment.
    2. The attendant detects a behavioral or symptomatic change in the entrant(s).
    3. The attendant must leave the site or cannot comply with all duties listed in this section.
    4. The attendant cannot effectively communicate with the entrants.
    5. The attendant is advised to vacate the confined space.
    6. The attendant determines that the entrant (s) is (are) not complying with personal protective equipment practices or safe work practices.
xxi. Duties of the Authorized Entrant:
    1. The authorized entrant shall know the hazards that may be faced during entry, including information on the mode, signs or symptoms and consequences of the exposure.

2. Properly use protective equipment and monitoring devices as specified.
3. Establish and maintain open communication with the attendant.
4. Alert the attendant if the entrant detects a prohibited or hazardous condition.
5. Alert the attendant and other entrants if the entrant notices any warning sign or change in behavior or symptom of exposure in any other entrant.
6. The entrant will immediately take action to evacuate the confined space if the entrant:
    a. Is directed to do so by the attendant, entry supervisor or designated client representative
    b. Detects a failure to comply with personal protective equipment requirements
    c. Is unable to maintain effective communication with the attendant
    d. Detects any symptomatic or behavioral changes of other entrants.
    e. Detects any alarm on continuous monitoring equipment.

xxii. Rescue Duties:

1. Attendant must be in communication with AVRON CORP. Site Safety Manager during any confined space entry. Confined Space Entry Supervisor will alert 911 and AVRON CORP. Site Safety Manager in the event of an emergency.
2. The subcontractor will be responsible for the issuance of confined space entry permits and providing Material Safety Data Sheets for hazardous materials previously stored or present in the confined space.

n. Re-Entry after Evacuation: If a confined space is evacuated for any emergency, the permit shall be terminated and a new permit issued prior to resumption of entry.
o. Training: All affected personnel and employees of subcontractors shall be trained in this program and/or the AVRON CORP. approved Permit Required Confined Space Entry Program. Each trained individual shall be identified to AVRON CORP. Site Safety Manager in writing.
p. Confined Space Entry Permit:
    i. Only those workers trained, qualified and designated by their employer will perform Confined Space Entries. A Confined Space Entry Permit must be submitted and approved by the site safety Manager prior to beginning work.
    ii. Each subcontractor's foreman will obtain the Confined Space Entry Permit form from the designated site safety Manager. A copy of the permit is located in the site safety trailer.
    iii. Foreman/Competent person will complete and sign form and ensure that the work is performed as indicated on the permit.
    iv. The completed form will be submitted to the Site Safety Manager and the confined space inspected by the site safety Manager prior to entry.

v. The Confined Space Permit will be posted at the site and returned to the AVRON CORP. safety trailer by the end of the shift.

19. **<u>WELDING/BURNING/CUTTING/GRINDING/OPEN FLAME (HOT WORK)</u>**: Only those workers trained, qualified and designated by their employer will perform "hot work". A Hot Work Permit must be submitted and approved by AVRON CORP. prior to beginning work. An FDNY Certificate of Fitness for Torch Use of Flammable Gases (Cutting & Welding) is required.
    a. Each subcontractor's foreman will obtain the Hot Work Permit form from AVRON CORP.
    b. The competent person will complete and sign the form and ensure that the work is performed as indicated on the permit.
    c. The completed form will be submitted to the Site Safety Manager and the hot work area inspected by the Competent Person prior to commencing hot work.
    d. The Hot Work Permit will be posted at the site and returned to the safety office by Fire Watch once his duties are completed.
    e. If at all possible, a hot work area for welding and burning will be designated.
    f. Workers in the area will be protected from eye injuries caused by flash burns or exposure to UV light by the installation of screens around the welding area.
    g. The area below hot work, which is subject to spark or slag fall, will be barricaded or otherwise protected to prevent entry into the "fall zone."
    h. No hot work will be performed within 35 feet of any flammable or combustible materials. No arc, air arc, open flame, welding or burning will be permitted in any area where the application of flammable paints, epoxies, adhesives, etc. is being accomplished, or where combustible dusts or flammable liquids and/or vapors are present.
    i. If flammable or combustible materials cannot be removed, cleared or otherwise relocated, full spark containment, using approved fire-retardant materials will be required. Fire ratings must appear on the material and a gas test and permit will be required.
    j. A qualified fire watch will be provided for all hot work. The fire watch will be trained in the use of a fire extinguisher and summoning emergency response. The fire watch will remain at the site of hot work for 1 hour after the cessation of work. This includes coffee breaks, lunch and termination of workday.
    k. Emergency fire extinguishers will not be used for fire watch.
    l. Where possible, burning rigs will not be located in the baskets of aerial lifts or scissors lifts.
    m. All exposed rigging (wire rope slings, nylon slings, etc.) will be protected from damage during welding, burning and cutting operations.
    n. <u>Oxyacetylene Torches</u>:
        i. All connections will be clean and free from grease and oil.
        ii. Hoses will not be laid across foot or vehicle traffic areas.
        iii. Special wrenches required to operate cylinder valves will be located near the valve for emergency shut off.
        iv. Check valves and flash arrestors must be installed.

v. Quick closing valves on fuel gas cylinders should not be opened more than one and a half turns.
vi. Valves will be plugged or capped when the cylinder is not in use.
vii. Acetylene cylinders must always be stored, carried and transported in the upright position.

o. Compressed Gas Cylinders.
i. Valve protection caps must be in place when compressed gas cylinders are moved, transported, stored or not in use.
ii. Cylinder valves must be closed when the cylinder is stored, empty or not in use.
iii. Cylinders must be stored and secured in an upright position at all times.
iv. Cylinders will not be secured by the valve and will not be secured to any electrical equipment or conduit.
v. Cylinders must be protected from excess heat and sparks or slag while stored or during use.
vi. Storage of reserve cylinders is not permitted inside the construction area and reserve cylinders may only be stored in designated areas.

p. Storage of Cylinders - All fuel and oxygen cylinders are to be capped, separated and stored at a minimum of 20 feet apart. Compressed gas cylinders will be stored in an approved locked safety cage outside the building. An FDNY compressed gas storage permit is also required.

q. Electric Arc Welders:
i. Electrode holders will not be left unattended.
ii. All welding cables must be insulated completely. Any splicing or repair must have insulation with a resistance equal to or greater than the original insulation. No repairs are permitted within ten feet of the electrode holder.
iii. Insulated boot covers or other suitable protection must be provided to protect terminals where welding cables are connected to the arc welder. Welding lead and ground line connections must be protected with an insulating cover.
iv. All welding machines will be equipped with an OSHA compliant disconnect switch.
v. A fused disconnect switch for connection to the building electrical panel will be provided by a qualified electrical subcontractor.

20. **PERSONAL PROTECTIVE EQUIPMENT**: All PPE will be OSHA, NIOSH, and ANSI compliant. Sub-contractors are responsible for the issuance, maintenance, inspection and training in the proper use of personal protective equipment. If the employee is responsible for providing their own equipment, the employer must inspect the equipment and train the employee in the proper use, care and inspection of equipment. Employees are additionally responsible for inspection prior to each use. Defective equipment will be immediately tagged and identified as defective and removed from the site or rendered inoperable and destroyed. The following personnel protective equipment items are required at this project (see specific THA documentation for higher risk required PPE):

Trade Foremen are required to inspect all PPE prior to usage by workers for adequacy. In the event that the Site Safety Manager observes defective PPE disciplinary action will follow.

a. Safety Head Wear: ANSI compliant Safety Head Wear (hard hats) must be worn Certified non-conductive Safety Head Wear must be utilized for electrical work or where contact with exposed energized circuits may occur. Head Wear must be worn in accordance with OSHA specs and manufacturers design. Head Wear (hard hats) is required at all times in the construction work area. Exception: If no overhead hazards are present and there is no potential of being struck by a falling or flying object, or if welding duties are being performed off hours, "Soft Shell" welding shields or grinding face shields are permitted.
b. Safety Eye Wear: ANSI compliant Safety Eye Wear will be worn as required.
    i. Impact resistant full-face shields and safety eye wear will be used when grinding, using chop saws, tile saws, brick saws, etc.
    ii. Hard hats with full face shields, chaps and hearing protection will be provided for all chain saw and wood chipping activities.
    iii. Face shields, goggles or appropriate welding helmet with proper color density are required for welding and burning operations.
    iv. Chemical resistant full-face shields are required where exposure to chemicals may occur.
    v. Warning signs will be properly placed when lasers are in use.
    vi. Goggles are required for any overhead work.
c. Gloves: Will be worn during the following work activities:
    i. Any work activity involving the cutting of metal materials, including but not limited to, use of tin snips, saw cutting, grinding, etc.
    ii. Any work activity involving the wire pulling through metal clad cables
d. Clothing: The following clothing will be worn at this site:
    i. Long sleeve or ½ sleeve shirts.
    ii. Long pants.
    iii. Chaps will be provided for chain saw work.
    iv. Appropriate chemical, cut or heat resistant gloves where exposure exists.
    v. Chemical resistant clothing where exposure to spill or splash exists.
    vi. Appropriate protective chaps or leathers for welding/burning.
    vii. See Electrical Protective Equipment Section, for clothing requirements during live electrical work.
e. Footwear: Employers are required to establish the appropriate type of footwear based upon an evaluation of employee exposure. At a minimum, durable work shoes must be worn on all AVRON CORP. sites. No canvas or leather sneakers (even if equipped with steel toe) or sandals will be worn. All footwears must be hard sole construction work shoes or boots. All boots or shoes equipped with laces must be laced.
f. Fall Protection: Single body belts will not be used at AVRON CORP. sites. Only four-point harnesses with shock absorbing lanyards will be used. Four-point harnesses with positioning lanyards will also be utilized.
g. Hearing Protection: Hearing protection will be worn in highly noisy areas or while using certain tools, i.e., Hilti guns, chop saws, jack hammers, chain saws, woodchippers etc.

h. Respiratory Protection: Respiratory protection will be used when required by exposure, i.e., exposure to hazards such as asbestos fibers, crystalline silica dust, lead, welding fumes, etc. When respiratory protection is required, the employer will submit evidence of compliance with OSHA Standard 1910.134. This evidence shall include proof of training; fit testing; proof of a respiratory medical clearance evaluation at a minimum.
i. Safety Vests: It is required to wear a high visibility vest when working on traffic control, any work around heavy equipment and any environment in which the employee is exposed to vehicular traffic.
j. Electrical Protective Equipment: It is the intention of AVRON CORP. Construction Co. that no electrical work will be performed live and lock out/ Tag out procedures will be followed. The following personnel protective equipment items, at a minimum, are required:
    i. Protective gloves, rated for appropriate voltage, with current dielectric testing date.
    ii. Protective mats, rated for appropriate voltage, with current dielectric testing date.
    iii. Protective sleeves, rated for appropriate voltage with current dielectric testing date.
    iv. Protective head, eye and face wear with electrical safety rating.
    v. Flame retardant clothing.
    vi. All hot sticks and testing devices must also be properly rated and stamped with the date of the last test and/or calibrations.

No conductive jewelry, i.e., rings, eyeglass frames, bracelets or earrings will be worn during this work.

21. **FALL PROTECTION**: Employers have the duty to provide fall protection for their employees on walking or working surfaces 6’ above lower levels by use of guardrail systems (top rail, mid-rail and toe board), safety net systems or personal fall arrest systems (which includes harnesses, safety lines, retractable lifelines, anchorage points, etc.) One hundred percent fall protection is required at all times on this site.
    a. Roof skylights must be covered by plastic domes that will be anchored to prevent shifting or uplifting during windy conditions. The construction of these boxes will be capable of supporting 2 times any anticipated load and will be marked with signs stating “DANGER – Hole Cover, Do Not Remove.”
    b. Body belts are not permitted at this site. Only four-point suspension harnesses are permitted. If a lanyard is required, it must be of a shock absorbing design or positioning device.
    c. Safety harnesses with lanyards must be worn at all times on aerial lifts. Chains must be closed. Safety harnesses must be secured to an approved tie off point in all aerial lifts.
    d. Safety harnesses must be worn on scissor lifts at all times. When the platform is at a minimum elevation of 6’ above the floor harness and lanyard must be worn and tied off to an approved tie off point.
    e. Workers engaged in leading edge work 6’ above lower levels must be protected by one or more of the systems mentioned above.

f. Workers in hoist areas 6’ or more above the lower surface will be protected from falls by a guardrail system or personal floor arrest system.
g. Floor holes which workers may fall through must be protected by guardrail systems, personal fall arrest systems or the hole must be covered with a material capable of withstanding 2 times the maximum intended load. The cover must be anchored to prevent uplift or shifting and must contain a clearly visible and legible warning stating “DANGER HOLE - DO NOT REMOVE.”
h. Floor holes 2” or more in diameter over which employees may trip or step in must be protected by anchored covers.
i. Floor holes 2” or more in diameter through which objects may fall to a lower level must be protected by covers.
j. Excavations of 6 feet or more in depth must be protected by a guardrail system, fencing or hard barricades.
k. Wells, shafts, pits and similar excavations must be protected by guardrail systems, fences, or hard barricades.
l. Wall openings with inside bottom edge height of 39” and outside edge height of 4’ or greater must be protected by guardrail systems, safety nets, slide guards or personal fall arrest systems.
m. Workers engaged in built-up roofing work on roofs with a ground to eave height of greater than 6’ must be protected by:
    i. A Motion Stopping System using standard railings, scaffolds or platforms with guardrails, safety nets, safety harness systems or in combination.
    ii. A warning line system installed in accordance with OSHA requirements.
    iii. A safety monitoring system specifically developed for this site on roofs of less than 50’ in width where no mechanical equipment is being used.
n. Guardrail systems will include top rail, mid-rail and toe boards. The top rail will be installed between 42 inches and 39 inches and will be capable of withstanding a force of 200 pounds in any direction with a maximum deflection of 3”. Mid rails will be installed at the midpoint between the walking working surface and the top rail. A toe board shall be no less than 4” in height. Workers will not tie off fall arrest devices to handrails. Any worker removing any portion of the guardrail system will immediately replace or otherwise guard the opening until replacement has been completed. Any damage to guardrail systems or any other fall protection device must be immediately reported.
o. Wire rope may be used as a guard rail system. It must be flagged every 6’ with highly visible materials and a minimum of 1/4” diameter with double clamping installed at the connection points.
p. Lumber used for guardrail construction must be sound and will not contain large loose knots, splits or gouges. All nails must be driven in completely and double headed nails are not permitted.
q. Floor and roof hole covers must be secured in place and constructed of material capable of withstanding 2X the weight of any object or employee which may pass over it. It must be marked clearly and legibly with “DANGER - HOLE - DO NOT REMOVE.”

When the need for a Fall Arrest system if required the following must be adhered to:

a. Employers must review and inspect the adequacy and condition of fall arrest systems.
b. Lanyards, vertical lifelines, D-rings and snap hooks must have a 5000# tensile strength and be inspected prior to issue and each use.
c. All lanyard snap hooks will be of the locking type and connected in a manner which will prevent roll-out.
d. Fall arrest or protection equipment will not be used for any purpose other than fall protection and will be used within their designed capacity.
e. Workers using body belts for fall arrest should locate the D-ring in the center of the back. Workers requiring the use of lanyards must be equipped with shock absorbing lanyards.
f. Fall arrest anchorage points must be able to withstand 5000 lbs per employee or designed with a safety factor of 2X the anticipated load.
g. Fall protection systems will be installed, issued and used under the supervision of a competent person.
h. All equipment installed or issued must limit a fall to 4' or less and will be installed and used to preclude swinging into walls, etc. or contacting equipment or material below.
i. Positioning devices must limit a fall to 2' or less.

22. **TOOLS AND EQUIPMENT**: Employers are reminded that inspections of tools and equipment are mandated by OSHA. Tools supplied by employees must be inspected by the employer's competent person prior to use and are subjected to periodic inspection by the employer
    a. Tools will be used for the purpose they are designed.
    b. Worn, damaged or defective tools must be immediately tagged and removed from the site.
    c. Only qualified personnel will be assigned to operate tools and equipment.
    d. Any motorized equipment left on the street or in public access ways, such as walkways, shall be appropriately barricaded and lighted at night.
    e. Hand Tools:
        i. Tools will be used for the purpose for which they are designed.
        ii. Tools must be kept in peak condition. Worn or damaged tools are dangerous and will be tagged "Do Not Use" and immediately destroyed or removed from the site.
        iii. Tools will not be forced beyond their designed capability. "Cheaters" will not be used.
    f. Power Tools:
        i. Only qualified personnel will be permitted to use power tools.
        ii. Tools will not be carried, hoisted or secured by the power cord.
        iii. Employers and employees must inspect all power tools prior to use. Loose fittings, damaged parts, frayed or cut electric cords and electrical cords missing the ground plug will be immediately tagged "Do Not Use" and destroyed or removed from the site.
        iv. All guarding devices must be in place and used.

v. Safety clips will be installed on all "Chicago" type pneumatic fittings or quick connect fittings.

g. Powder Actuated Tools:
   i. Only trained and qualified personnel, familiar with load charge and type, will be permitted to use powder actuated tools. Training and qualification documentation to be located on site (Manufacturer Training and Certificate of Fitness E-21 by the FDNY).
   ii. Eye protection must be worn by operators.
   iii. Tools shall remain unloaded until ready for use and loaded tools will not be left unattended.
   iv. Fasteners will not be driven into hard or brittle material or into material they will pass through.
   v. Areas adjacent to fastening work will be surveyed to ensure that the area is clear of persons and that fasteners are not passing through material.

h. Motorized Vehicles:
   i. All motorized vehicles on this job site will be appropriately maintained and capable of passing inspection by Federal or State governing agencies.
   ii. Gasoline and/or diesel-powered equipment will not be utilized within the buildings. Propane powered equipment may be used provided it is properly maintained.
   iii. All construction vehicles and excavation equipment will be equipped with audible back-up alarms and appropriate rollover protection.
   iv. Vehicles will not be refueled in the field without the benefit of drip pans or other spill absorbent materials.
   v. Vehicles placed on concrete surfaces will be equipped with drip diapers and wheel covers.

23. **HOUSEKEEPING**: It is the responsibility of everyone on site to do their part in maintaining a safe and hazard-free environment.

a. ALL CONTRACTORS AND PERSONNEL WORKING ON F. J. AVRON CORP. PROJECTS MUST UNDERSTAND LOCAL & FEDERAL GUIDELINES.

b. FOR WORK IN NEW YORK CITY THE FOLLOWING REGULATIONS MUST BE FOLLOWED; NYC-DOB CHAPTER 33, NYFD CHAPTER 14 OF THE FIRE CODE AND NFPA 241.

General Requirements

a. Aisles, stairways, fire exits, and doorways must be kept clear of materials and debris. Hoses and electrical lines shall be laid out to minimize tripping hazards in walkways, stairways, doorways, etc. Lines shall not interfere with pedestrian or vehicular traffic areas. Do not block fire or rescue equipment locations with stored material.

b. During the course of construction, alteration, or repairs, form and scrap lumber with protruding nails, and all other debris, shall be kept cleared from work areas, passageways, and stairs, in and around buildings or other structures.

c. Shafts shall be maintained and kept clear of debris at all times.

d. All areas shall be maintained free from ice, snow, grease, debris, equipment, materials, projections, tools, or other items, substances, or conditions that may constitute a slipping, tripping, or other hazard.

e. Employee change areas, bathrooms, drinking fountains and water cans must be cleaned and replenished daily.

Material Storage

a. When not being used, materials, equipment and tools that might fall from levels above shall be kept away from edges or openings.

b. Materials must be kept in neat stockpiles and be secured at all times. Flammable and/or combustible material stored in accordance with all applicable Codes and will be separated from all oxidizers and sources of ignition.

c. Oversized materials shall be secured to prevent tipping over.

d. When exterior walls are not in place, stored material shall be kept at least 10 feet back from the perimeter of the building. However, when the floor area is less than 1,000 square feet stored material may be kept not less than 5 feet back from the perimeter of the building.

e. Material may be stored within 2 feet of the edge of a building provided that such material is stored not more than two stories below the stripping operation on concrete structures, or the uppermost concrete floor on steel frame structures. Such material shall be secured against accidental movement. Storage of material on all other floors shall be secured when not being used.

f. No material shall hang over the edge of a building unless banded and braced preparatory to relocation at the end of the workday. Where such material is so banded and braced, it may overhang the floor of the stripping operation by not more than one-third of its length so long as it is relocated on the next workday for concrete operations.

g. Where the rebar lay-down area and carpentry shops are located, material may overhang for relocation until the next workday. No more than two floors shall be designated as a lay-down area or carpentry shop.

Material Disposal

a. Containers shall be provided for the collection and separation of waste, trash, oily and used rags, and other refuse. Containers used for oily, flammable, or hazardous wastes, such as caustics, acids, harmful dusts, etc. shall be equipped with covers. Garbage and other waste shall be disposed of at frequent and regular intervals and in accordance with all State and Local requirements.

b. Debris containers shall be secured when not in use in order to prevent movement. Such containers shall not be placed at the edge of the building at any time, except when being moved from the floor or building.

c. Combustible scrap and debris shall be removed at regular intervals during the course of construction. Safe means shall be provided to facilitate such removal in accordance with all State and Local requirements.

d. Whenever materials are dropped off a building or through an opening within the building a THA process must be completed to make certain of compliance to local standards.

24. **STAIRWAYS AND LADDERS**: A stairway or ladder must be provided at all points of access where there is a change in elevation of 19" or more unless a ramp, runway, sloped embankment or personnel hoist is provided.
    a. Stairways:
        i. Stairways and ladders to office trailers and supply trailers must provide a platform which should extend 20" beyond the swing of the door and be protected by a standard guard rail system.
        ii. Where a building has been constructed to a height greater than 50', or four stories, or where an existing building exceeding 50' in height is altered or demolition at least one temporary lighted stairway shall be provided, unless one or more of the permanent stairways are erected or maintained as the construction/demolition progresses.
        iii. All stairways must be kept clear of debris, cord sets, nails, screws, hoses, slippery conditions or stored material.
        iv. Exit doors shall not be propped open.
        v. Stairways greater than 30" high or having four or more risers must be equipped with a handrail, and mid rail on unprotected sides and edges.
        vi. Handrails must be between 36 inches and 37 inches high and capable of withstanding a 200 lb load in any direction with a minimum deflection.
        vii. A minimum clearance distance of 3" must exist between the rail and the wall or other appurtenances.
        viii. Pan treads, stairs and landings must be filled with wood or other solid materials and must be installed full width and depth if the stairs are to be used for foot traffic.
    b. Ladders:
        i. Only fiberglass and wood ladders are to be used on this project.
        ii. Metal ladders are not permitted on this job site.
        iii. All ladders must be inspected prior to use. Rungs must be clean and free of damage or cracking. Damaged or defective ladders must be tagged, "DANGER DO NOT USE" and immediately removed from the work site or destroyed.
        iv. Ladders used to access the upper floor, platforms or roof must extend 3' above the egress point and be secured at the top. If the ladder cannot be secured and properly extended, an egress grab must be provided on both sides of the ladder.

v. All ladders must be secured at the top to prevent slipping or secured at the base by a fellow worker.
vi. Ladders must be erected with a 4:1 ratio. i.e., for every 4 feet of working height, the base must extend 1 foot from a perpendicular line drawn from the top resting point.
vii. Access and egress points to the ladder will be clear of debris and slippery surface.
viii. Workers will face the climbing surface when climbing or working and will maintain three-point contact with the ladder at all times.
ix. Ladders will not be used in the horizontal position as a platform or scaffold pick.
x. Ladders will be used only for their designed use and within their design capabilities.
xi. Ladders will be immediately removed and stored lying down after the task is completed.

c. Step Ladders:
   i. Step ladders must be used in a fully open position only. They may not be used as a straight ladder or partially open.
   ii. The top platform and top step of a step ladder will not be used.
   iii. No more than one person will be allowed to work from a step ladder unless it is specifically designed to accommodate more than one.

25. **RAMPS AND WALKWAYS**:
   a. Ramps and walkways 5' or more above a lower level must be equipped with a top rail, mid rail and toe board.
   b. Ramps or walkways will not be sloped greater than 1 vertical to 3 horizontals.
   c. If the slope of the ramp or walkway is steeper than 1:8, cleats must be securely fastened to the walkway and spaced no further than 14" apart.
   d. Ramps and walkways will remain clear of slippery surfaces, electrical cord sets, welding leads, debris or stored material. Ramps will be equipped with no-slip coverage (i.e., tape) where deemed necessary by AVRON CORP.
   e. There will be no unprotected sides or edges. Unprotected sides and edges are any side or edge of a stairway (except at entrances to points of access), where there is no stair rail system or wall 36" (.9m) or more in height, and any side or edge or a stairway landing (except at entrance to points of access), or ladder platform where there is no wall or guardrail system 39" (1m) or more in height. If a change of elevation should occur step boxes or steps will be installed with appropriate handrails as needed.

26. **GUARDING AND PROTECTING FLOOR OPENINGS**: - All openings on the floor (including skylights) that create a fall hazard of six feet or more above a lower level shall be protected by covers, personal fall arrest systems or an OSHA standard guard rail system. These protective systems are to remain in place unless a job hazard analysis (JHA) has been submitted, reviewed, and approved by F.J. AVRON CORP. Construction. Any contractor found removing these systems, without submitting a JHA, will be back charged for the time

and material to replace the fall protection that was in place. The individuals who were responsible for the removal of the fall protection systems will be removed from the project.

27. **DEMOLITION OPERATIONS**:

a. Demolition will be performed in compliance with BC 3306.
b. Where a structure to been partially wrecked or weakened by fire, flood, explosion, age or other causes, it shall be shored or braced to the extent necessary to permit orderly demolition without collapse. The necessary measures shall be determined by the contractor subject to the approval by the commissioner.
c. Where mechanical demolition equipment, other than handheld devices, are to be used in the full or partial demolition of the building, documents must be prepared by an Engineer and approved by the Department of Buildings which will, at a minimum, include:
    i. Plans, sections and details showing the scope of demolition inclusive of extent, sequence and means and methods to be utilized
    ii. List and description of all proposed demolition equipment inclusive of calculations showing adequacy of existing structure to support loads as well as any effects of simultaneous loads imposed on existing structures if more than one piece of equipment is to be utilized.
    iii. Bracing and shoring necessary to support all demolition operations and equipment
    iv. Description of compliance with the provision of Section BC 3306.9
d. Before commencement of actuation demolition all glass in windows doors, skylights and fixtures shall be removed
e. In any structure more than twenty-five feet high, any window or other exterior wall opening that is within twenty- feet of a floor opening used for the passage of debris from floor above shall be solidly boarded up or otherwise substantially covered, unless such window or opening is so located at to preclude the possibility of any person being injured by material that may fall from such window or opening.
f. Before demolition is started, the cellar and all floors shall be thoroughly cleaned of combustible materials and debris. All fixtures and equipment that would cause voids in the fill shall be removed. If the cellar is to be filled to grade, the first-floor construction shall be removed, and the existing cellar floor shall be broken up to the extent necessary to provide ground drainage and prevent the accumulation of water.
g. Examination and Procedure - before any materials stored on any floor, existing flooring adjacent to the bearing walls shall be removed and ends of beams in the bearing walls shall be carefully examined ascertain the conditions and the amount of bearing on the bearing wall. If they are found to be in poor condition or to have sufficient bearing, no material shall be deposited on the floor until these beams are shored from the cellar floor through each successive floor. No bearing partition shall be removed from any floor until the floor beams on the floor above have been removed and lowered. All header beams and headers at stair openings and chimneys shall be carefully examined and where required shall be shored from the cellar floor though successive floors. All operations shall be continually inspected as the work progresses to detect any hazards that may develop.

h. Protection of Adjacent Structures
   i. Adjoining Walls:
      1. All beams in party walls shall be cut off close to the walls, stub ends removed without weakening existing masonry and beam pockets cleaned of loose mortar**.** The Owner of the demolished structure shall, at his own expense, bend over all wall anchors at the beam ends in the standing wall and shall brick up all open beam holes with sound brick and cement mortar.
      2. The stability and condition of the remaining walls shall be investigated in all necessary steps taken to protect same. Where the floor beams of the adjacent building bear on the party wall, the person causing the demolition to be made shall ascertain that such beams are anchored into the wall and, where such anchorage is lacking, shall provide anchorage or otherwise brace the standing wall.
      3. Roofing material of adjoining buildings shall be bent over and flashed. All doors or other openings in party walls shall be sealed and weatherproofed. Cornices, where cut, shall be properly sealed. Parapets and any walls that have been disturbed shall be pointed up and made weather tight. All exposed furring, lath and plaster on party walls shall be removed, and any loose wall material shall be firmly anchored or removed and replaced.
      4. All unnecessary chimney breasts, projections and any other debris exposed on party walls shall be removed by the person causing the demolition of the structure and all openings shall be bricked up flushed on the exterior side of party wall. All masonry, which is in poor condition shall be pointed and patched.
   ii. Party Wall Exits **-** No party wall balcony or horizontal fire exit shall be demolished, removed, or obstructed in any manner that would destroy the full effectiveness of such fire exists as means of egress, unless a substitute means of egress has been provided.
   iii. Walls
      1. Demolition of walls and partitions shall proceed in a systematic manner, in all work above each tier of floor beams shall be completed before any of the supporting structural members are disturbed.
      2. Sections of masonry walls shall not be loosened or permitted to fall in such masses as to affect carrying capacity of floors or the stability of structural supports.
      3. No wall, chimney or other structural part shall be left in such condition that it may collapse or be toppled by wind, vibration or any other cause.
      4. No section of wall with the height of more than twenty-two times its thickness shall be permitted to stand without bracing.

5. Where brick or masonry chimneys cannot be safely toppled or dropped, all materials shall be dropped down the inside of such chimneys.
6. All enclosed vertical shafts and stairs shall be maintained and enclosed at all floors except the upper most floor being demolished, and all work on the upper most floor shall be completed before stair and shaft enclosures on the floor below are disturbed. All handrails and banisters shall be left in place until actual demolition of such floors is in progress.

i. Structural Steel and Heavy Timbers:
   i. Steel and heavy timbers construction shall be demolished column length by column length and tier by tier. Any structural member that is being dismembered shall not be supporting any load other than its own weight, and such member shall be chained or lashed in place to prevent any uncontrolled swing or drop.
   ii. Structural members shall not be thrown or dropped from the building but shall be slowly and carefully lowered by hoist equipment with adequate brakes and non-reversing safety devices.

j. Use of Derricks - Where a derrick is used for demolition an investigation of the floor on which the derrick rests shall be made by an engineer or architect to determine its adequacy for the loading to be imposed; strengthening shall be designed and added to limit the imposes stresses. A report summarizing such an investigation and design shall be prepared and kept at the project site.

k. Mechanical Methods of Demolition - The mechanical method of demolition, whereby the wrecking of a building or part thereof is accomplished by smashing the walls or floors with a heavy weight suspended by a cable, or whereby the walls are collapsed by use of a power shovel, tractor, or other mechanical contrivance shall be permitted only upon the issuance of a special permit by the Department of Buildings and in accordance with the following requirements.
   i. The building or structure, or remaining portion thereof, shall not be more than eighty feet in height.
   ii. A safety zone as determined by the commissioner shall be provided around the demolition area. Fences shall be erected around the demolition area to prevent people other than workers from entering such safety zones.
   iii. Unless permitted by the commissioner, the mechanical method of demolition shall not be used for any building, or portion thereof, occupy one or more persons is located within the safety zone.
   iv. Where a swinging weight is used two or more separate cable slings shall be used to attach the ball to a safety or mouse hook and the supporting cable shall be in such length or so restrained that is not possible for the weight to swing against any structure other than the structure being demolished.

v. Where a mechanical demolition operation may involve a street, the requirements of the Department of Transportation shall be met.
vi. Removal and Storage of Material
vii. Physical Removal - debris, bricks and similar material shall be removed by means of chutes, buckets or hoists or through opening in the floors. Openings on any floor shall not aggregate more than twenty-five percent of the area of that floor unless it can be shown to the satisfaction of the commissioner that larger openings shall not impair the stability of that structure.
viii. Every opening used for the removal of debris and every floor except the top or working floor, shall be provided with a tight enclosure from floor to floor, equivalent to that afforded by planking not less than two inches in thickness. As an alternative to building in not more than six stories in height such openings shall be protected by a tight temporary covering equivalent to that afforded by planks not less than two inches in thickness and lay closed. Whenever such coverings have been temporarily removed to permit debris removal, the floor opening shall be protected by standard guard rails or railings. Such covering shall be properly replaced in position upon the ceasing of such work at the end of each workday.
ix. Every opening not used for the removal of debris on any floor shall be solidly planked over.
x. Material shall not be stored on ketch platforms, working platforms, floors, or stairways of any structure except that any one floor of a building to be demolished may be used for the temporary storage of material when such floor can be shown to be of adequate strength to support one- and one-half times the load to be superimposed.
xi. Stored spaces shall not interfere with access to any stairway or passageway, and suitable barricades shall be provided to prevent material from sliding or rebounding into any space accessible to the public. All material shall be safely piled in such storage location in a manner that will not overload any part of the structure or create a hazard.
xii. In building on non-combustible construction, floor slabs to an elevation to any elevation of not more than twenty-five feet above the legally established curb level may be removed to provide temporary storage for debris, provided that: (1) the stored debris is pile with sufficient uniformity to prevent lateral displacement of interior wall or columns; (2) the height of the piled material will not burst the exterior wall do to accumulated pressure; and (3) the operation does not otherwise endanger the stability of the structure.
xiii. Debris stored in the cellar will not be piled above the level of the adjacent exterior grade unless the contractor provides sheet piling, shoring, bracing or such other means necessary to ensure the stability of the wall and to prevent any wall from collapsing due to the pressure of accumulated material.

28. **EXCAVATION**: All excavations at this site will be accomplished in accordance with 29 CFR 1926, Subpart P and BC 3304, Excavations. Prior to commencement of work, the subcontractor is to submit a detailed excavation plan for review and approval.
    a. Adjacent buildings owners, utility companies, DEP, etc. require notification prior to the commencement of excavation activities.
    b. A competent person will be designated by each employer whose employees are required to enter excavations. The designated competent person shall coordinate with the AVRON CORP. Site Safety Manager prior to beginning excavation work.
        i. The designated competent person will have the authority to take any measure necessary, including stopping the work, to ensure the safety of employees working in the excavation.
        ii. The designated competent person will test and identify soil classification and condition and ensure that the trench is benched, sloped or protected by shoring, shielding or trench boxes in accordance with the OSHA standard. All previously excavated soil will carry a mandatory classification of soil type C.
        iii. The designated competent person shall be responsible for maintenance, inspection and adequacy of any shoring, shielding or trench box installation being used to afford protection to his/her employees.
        iv. The designated competent person will hold a daily safety briefing with employees working in the excavation and ensure that only qualified personnel are allowed to enter the excavation.
        v. The designated competent person will be on site at all times while employees of his company are working in the excavation.
        vi. The designated competent person will perform a documented inspection of the excavation before any of his employees enter the excavation, periodically during the shift, at any time there is evidence of potential collapse, after any rainstorm, snowstorm or unusual event.
    c. All excavations will be enclosed with orange construction fence and adequate upright support posts a distance of not less than 6 feet from the edge of the excavation.
    d. Excavations open beyond the normal shift will be provided with warning lights.
    e. Danger signs will be posted on the perimeter fence.
    f. Trench covers will be capable of withstanding 4 times the anticipated load and be appropriately placed to ensure that no hazard is posed to vehicular and/or pedestrian traffic.
    g. Gasoline and/or diesel-powered pumps will be positioned to prevent the entry of exhaust fumes and contaminants from entering the excavation.
    h. Egress ladders will be provided no less than every twenty-five feet.
    i. Excavation “bridges” and ramps will be constructed in accordance with OSHA Standards.
    j. Workers must wear a high visibility vest while working around heavy equipment.
    k. Flagman to be positioned at roadway during any excavation or roadwork.
    l. Excavations will be conducted under the supervision of a designated competent person.

m. The foreman/competent person will contact the Underground Utilities call number 72 hours prior to excavating.
n. Foreman/Competent person will complete a Daily excavation Inspection form and ensure that the work is performed as indicated on the permit and submit to AVRON CORP.

29. **STEEL ERECTION AND DECKING** All steel erection will be accomplished in accordance with OSHA 29 CFR 1926 Subpart R (Effective January 2002), other applicable OSHA Construction Safety and Health Standards, this Site-Specific Safety Plan, State and Local Laws governing safe work practices. Subcontractors shall complete a Task Hazard Analysis for review and approval prior to beginning work.
    a. Steel Erection Components and Design: All steel erection components supplied will be in compliance with OSHA Standard 29 CFR 1926 Subpart R (Effective January 2002) other applicable OSHA Construction Safety and Health Standards, this Site-Specific Safety Plan and Local Laws governing safe work practices and design standards. Structural steel that does not meet the previously sited standards will not be erected.
        i. Site Preparation: The Controlling Contractor will provide a flat, well graded lay-down and shake-out area for the steel erection contractor. The space will be sufficient to accommodate all the space required for lay-down and shake-out of steel and will have perimeter of the building, graded and maintained to provide safe crane and aerial/scissors lift access and set up. The subcontractor/sub-tier responsible for this area to the controlling contractor
        ii. Work Area: The work area will be properly maintained and lit. No work area will be permitted beneath steel erection or within the swing radius of cranes under load with the exception of the connector and rigger.
        iii. Footings and Foundations: Steel will not be set on footings, foundations or masonry walls until they have reached 75% of designed strength or have attained sufficient strength in accordance with specifications. The Controlling Contractor shall provide written proof of tests documenting the attainment of the designed strength.
    b. Columns and Foundation Bolts: All Columns will be four bolt minimum columns. The Controlling Contractor will provide documentation to the steel erection subcontractor that all foundation bolts are installed according to design specifications. In the event that a foundation bolt must be modified or repaired, the "fix" will be determined, in writing, by the structural engineer to the Controlling Contractor. The Controlling Contractor will provide the specified "fix" to the proper subcontractor. All repairs and/or modifications will be inspected by a competent structural engineer for compliance with modification/repair specifications and approval of the modification/repair provided to the Controlling Contractor and affected subcontractor in writing.
    c. Fall Protection: Written fall protection plans will be submitted by the Decking and Steel Erection subcontractors. They will address, at a minimum, the following:
        i. 100% fall protection is required at 6-foot working elevation for all detailers and leading-edge decking work.

ii. Fall protection for connectors is mandatory at a 15-foot working elevation. Fall protection options provided for erectors by OSHA 1926 subpart R are acceptable on this site.
iii. Use of Crane Supported Personnel Platforms must be in accordance with all requirements of 29CFR1936.550 (g).
iv. Perimeter protection must be installed during initial structural assembly and installation points provided.
v. All loose objects aloft must be secured.
vi. Overhead protection is provided from falling objects and swinging loads.
vii. No more than 3000 square feet of unsecured decking can be installed.
viii. Floor and roof penetrations cannot be cut until needed.
ix. Method of providing hole covers and penetration covers immediately.
x. Controlling Contractor pre-inspection and acceptance of fall protection installation prior to departure from site by the steel erection and/or decking subcontractor.

d. Steel Erection Plans: A qualified, authorized, competent and designated representative of the steel erection subcontractor and/or decking subcontractor will submit a detailed site-specific steel erection plan to the Controlling Contractor. This plan will include, at a minimum:
i. Staging of Erection
ii. Employer certification of worker training, names of authorized workers and certification of connector training and designation.
iii. Hoist operations and routes for suspended loads.
iv. Protection plan for prohibiting access to the erection area and swing space of the crane.
v. Requirement for documented annual, monthly, and daily crane inspection by a qualified and designated competent person, which will include the following:
1. Control Mechanisms
2. Drive Mechanisms
3. Safety Devices
4. Air and Hydraulic Lines
5. Hooks and Latches
6. Wire Rope Reeving
7. Electrical Equipment
8. Hydraulic Fluid Levels
9. Tires/Track
10. Ground Conditions
11. Level of Equipment (Initial set up and after each move)
vi. Crane information, including site position, cut sheet, wind load, and load chart.
vii. Copy of Operator/Master Rigger License.
viii. Requirement for documented rigging inspection prior to each shift by a qualified, designated, competent person.
ix. Plans for deactivation of safety latches on hook.

x. Multiple Life Rigging Plan which shall, at a minimum, contain the following requirements:
xi. Crane manufacturers' certification of crane capability for multiple lifting for multiple steel (not multiple times).
    1. Use of a multi-lift rig assembly
    2. Restriction of 5 or less pieces at a time
    3. All pieces to be 7 feet apart
    4. Beams must be stabilized to remain level.
    5. Rigging Capacity must have at least 5 to 1 safety factor.
    6. Members on the multiple lift rigging assembly must be set from the bottom up.
    7. Controlled load lowering used whenever the load is over the connectors.
    8. Training must be provided to all employees engaged in the multi-lift procedure and documentation provided to the Controlling Contractor.

e. Structural Steel Assembly:
    i. All columns must be adequately braced and secured to remain stable as beams are set.
    ii. All structural columns must be secured before bean erection begins.
    iii. A minimum of 4 anchor bolts are required for better stability.
    iv. Long bar joists will be installed per manufacturers requirements for bracing or:
        1. The row of erection bridging nearest the mid-span of the steel joists shall be installed.
        2. Hoisting cables will not be released until the bolted diagonal erection bridging is installed.

f. Walking and Working Surfaces:
    i. Walking and working surfaces will be kept clear of all accumulation of debris.
    ii. No shear studs, anchors, etc. can be installed on the top flanges of steel unless other walking surfaces are provided.
    iii. Metal Buildings: The following, in addition to previously listed items, will apply to the erection of metal buildings.
    iv. Joists & Purlins – Ends must be fully bolted or welded before:
    v. Releasing the hoisting cables

g. Fall Protection:
    i. Purlins and girts may not be used as fall arrest anchorages unless approved by a qualified person
    ii. No one can walk on purlins until all permanent bridging has been installed and fall protection is provided.

30. **HEAVY EQUIPMENT/RIGGING/CRANE/HOISTS**: All heavy lifting, rigging and crane activities will be performed in strict accordance with the rigging subcontractor's Corporate Safety Policy and this Site Safety Program.

a. Any subcontractor using heavy equipment, rigging equipment, cranes or hoists shall complete a Task Hazard Analysis for review and approval prior to beginning work.

Crane Operator Qualifications:

a. Cranes shall be operated only by the following personnel:
    1. Designated operators
    2. Apprentice operators, while under the direct supervision of a designated operator
    3. Maintenance and test personnel, when necessary, in the performance of their duties
b. No one, other than personnel specified above, shall enter a crane cab with the exception of persons such as helpers and supervisors whose duties require them to do so, and then only in the performance of their duties and with the knowledge of the operator or other appointed person.
c. All mobile crane operators must be instructed in and given the opportunity to read and understand the manufacturer's operator's manual for each make and model of crane they will operate. The employee shall also be instructed in the applicable OSHA and ANSI standards. The operator must be licensed by the project to operate the specific make and model assigned.
d. Operators must have a thorough understanding of all safety rules and regulations pertaining to operating the different types of cranes, including "cherry pickers" and boom trucks. Additionally, he/she is responsible for the following:
    - The ability to read and understand the crane's load chart.
    - An understanding of the ANSI crane hand signal chart.
    - How to determine the weight of a load.
    - Basic knowledge of safe crane operation.
    - Basic understanding of safe rigging techniques
e. Operators and/or operator trainees shall meet the following physical qualifications:
    - Have vision of at least 20/30 on a Snellen (eye chart) in one eye and 20/50 in the other with or without glasses.
    - Be able to distinguish red, green, and yellow regardless of position of colors, if color differential is required for operation.
    - Hearing, with or without hearing aid, must be adequate for a specific operation.
    - Have sufficient strength, endurance, agility, coordination, and speed of reaction to meet the demands of equipment operation. Show no evidence of physical defects or emotional instability that could render the operator a hazard to self or others. The existence of any such evidence may be sufficient cause for disqualification. In such cases specialized clinical or medical judgments and tests may be required.
    - Show no evidence that an operator is subject to seizures or loss of physical control; Specialized medical tests may be required to determine these conditions.

- Have good depth perception, field of vision, reaction time, manual dexterity, coordination, and no tendencies to dizziness or similar undesirable characteristics.
- Operator's physical abilities should be reviewed annually.

Mobile Crane Operations:

a. This procedure provides guidance for the protection of personnel operating mobile cranes, personnel working in the area of operation, and pedestrians.

b. Each mobile crane will be inspected by a competent person for mechanical defects upon its arrival, before its use on the project, and monthly thereafter. An Inspection Checklist will be completed and retained in the maintenance records on site. The operator shall perform a daily inspection on all safety features of the crane and document the findings prior to use on each shift.

c. It is recommended that the equipment be load tested only in accordance with the manufacturer's specifications and limitations and American Standards Institute (ANSI) B30.5-1982, Mobile and Locomotive Cranes, 5-2.2.2.

d. No modifications or alterations that affect the capacity or safe operation of the equipment will be made by the project or any individual without the manufacturer's written approval.

e. A copy of the manufacturer's operator's manual for each make and model machine must be in the cab of the crane and the manufacturer's specifications and limitations noted in it will be observed.

f. Where applicable, accessible areas within the swing radius of the rotating superstructure counterweight of a crane will be barricaded to prevent employees from being struck or crushed by the counterweight.

g. The hand signals to be used are those prescribed by the ANSI standard applicable to each crane. Only one (1) individual will assume the signaling duties and no other person shall give signals during the lift, with the exception of a person giving an emergency stop signal. If the operator determines that the signaling designee does not have a working knowledge of standard hand signals, he/she shall stop the lifting operation to ask for a qualified signaler.

h. In the operations and use of any hydraulic crane when both an auxiliary and main hoist lines are reeled, an anti-two blocking warning system is recommended on both auxiliary and main hoist lines.

i. No person will ride the headache ball, the hook, or the load being handled by the crane. All operations involving the use of suspended personnel baskets or platforms shall comply with OSHA and ANSI regulations. The crane shall be equipped with an anti-two blocking device.

j. Only one (1) load will be hoisted at a time. Two or more separately rigged loads will never be hoisted in one lift even if the combined loads are within the rated capacity.

k. No person shall ride on the machine, nor should the machine be used to transport personnel.

l. Traveling with a load (pick and carry) is not recommended as a means of transporting loads from one location to another on the project and should be used only as a last resort. The use of farm wagons, fork trucks, boom trucks, and flat bed trucks should be used to transport these loads rather than "pick and carry" operations.

m. Operators shall not engage in any practice that could divert attention while actually engaged in operating the crane.

n. Regardless of the size or weight of the load to be lifted, the crane's outrigger beams shall be fully extended, and the wheels raised off the ground.

o. Cranes shall not be operated when wind speed exceeds maximum velocities recommended by the manufacturer.

p. Rated load capacities, recommended operating speeds, special hazard warnings, operating notes and special instructions will be posted on all equipment and will be visible to the operator while he/she is at the control station. Illustrations of the hand signals used (attached) in connection with the operation of equipment will be posted at the project site.

q. Operators shall be responsible for those operations under their direct control. Whenever there is reasonable cause to believe that the lift might be dangerous or unsafe, the **operator** shall have the authority to stop and refuse to handle loads until safety has been assured.

Electrical Hazards:

a. A crane will not be operated under any circumstances wherein any part of the crane or load will come within ten (10) feet of energized electrical distribution lines rated 50 KV or below unless:

    1. The lines have been de-energized and are grounded at the point of work.
    2. Insulating barriers that are not part of the equipment have been erected.
    3. For lines rated over 50 KV, the minimum clearance between lines and any part of the machine or load will be ten (10) feet plus 0.4 inches for each kilovolt over 50 KV or twice the length of the line insulator.
    4. All lines will be considered energized unless the person or utility owning the lines indicate in writing that they are not energized and that the lines are grounded at the point of operation.
    5. To ensure that the operator maintains good visibility when working in close proximity to energized lines, a spotter or signal person can be designated to assist the operator in maintaining the ten (10) foot clearance.

Critical Lifts:

A Critical Lift Team (operator, lift authorizer, field supervisor, etc.) shall be designated to develop a written procedure to ensure the safety of personnel, equipment and facilities when a critical lift is to be made at the project site.

A Critical lift is defined as:

- A lift that exceeds 80% of the crane's operating chart.
- The lift is in proximity (closer than 20 feet) to high voltage lines.
- The lift is over occupied buildings or public thoroughfares.
- The lift is over extremely hazardous systems.
- The equipment being lifted has a long lead-time for replacement and if damaged, could cause business interruption.
- When two cranes or combination of equipment and crane will be used to make a lift.

The crane operator shall determine the proper set up of the crane, that proper rigging equipment/attachments have been selected and that the **total weight** of equipment with crane and rigging attachments has been calculated.

Slings:

a. Rigging materials that use nylon slings should only be used if the manufacturer's manual recommends nylon slings to be used. Nylon slings should never be used unless softening mechanisms have been applied to all sharp edges. When working with slings, employees/workers shall ensure they are visually inspected before use and during operations, especially if used under heavy stress. Riggers or other knowledgeable employees/workers shall conduct or assist in the inspection because they are aware of how the slings are used and what makes a sling unserviceable. A damaged or defective sling shall be tagged, and/or otherwise marked and removed from service.
b. Slings shall not be shortened with knots or bolts or other makeshift devices, sling legs that have been kinked must not be used. Slings must not be loaded beyond their rated capacity, or according to the manufacturer's instructions.
c. Suspended loads must be kept clear of all obstructions, tag lines shall be used, and crane operators shall avoid sudden starts and stops when moving suspended loads. Employees/workers shall stand clear of loads about to be lifted and suspended. All shock loading is prohibited.
d. Because cranes, derricks, and hoists rely upon slings to hold their suspended loads, slings are the most commonly used piece of materials-handling apparatus. These procedures shall offer information on the proper selection, care, maintenance, and use of the slings.
e. In ***regular lay rows,*** the wires in the strands are laid in one direction, while the stands in the rope are laid in the opposite direction. The result is that the wire crown runs approximately parallel to the longitudinal axis of the rope. These ropes have good resistance to kinking and twisting and are easy to handle. They are also able to withstand considerable crushing and distortion

31. **SCAFFOLDING**: Documentation of scaffold procedures must be provided prior to the erection or dismantling of any scaffolds to be used on the project site. All scaffolds must be erected, altered, maintained and dismantled under the direct supervision of a competent person. The competent person must be identified, in writing, to the AVRON CORP. Senior

Project Superintendent and the Site Safety Manager. All precautionary measures, including the use of fall protection, must be pre-planned by the competent person. Documentation must be provided to the Senior Project Superintendent stating the results of the review and the name of the competent person conducting the review. No scaffold will be utilized until the competent person has inspected the scaffold and applied the appropriate inspection tag. Any damaged or altered scaffold component must be immediately tagged and removed from the site. Workers assigned to scaffold work will be trained in safe work practice, fall protection and recognition of hazards associated with scaffold work.

a. All subcontractors shall abide by OSHA 1926 Subpart for Supported Scaffolding, as well as BC 3314. A guardrail system is required on all supported scaffolds 6 feet or higher.
b. **As of November 2006, all individuals working on a supported scaffold must receive a 4-Hour training class. All scaffolds higher than 40 feet will require a permit. Scaffold erectors and dismantlers must receive a 32-hour scaffold training class.**
c. All scaffolding must be erected plumb and secure on sound, rigid ground. Base plates are always required, and mud sills may be necessary.
d. The front edge of the scaffold platform(s) will not be more than 14” from the face of the work unless a guardrail system is elected along the front edge or personal fall arrest systems are used. For plastering and lathing operations, the edge may not exceed 18”.
e. Standard guardrails, mid-rails and toe-boards are required on all open sides and edges of scaffolds greater than 6 feet in height.
f. Screen must be installed where tools or materials are stacked above the toe-board and workers are required to pass below the scaffold.
g. A ladder, stair tower, ramp or other similar means of access and egress to scaffold platforms more than 24” above or below a point of access must be provided. Climbing the end frames is prohibited unless the frames are designed with integral ladder frames. (Integral ladder frames have a rung length of at least 8”; uniform rung spacing or no more than 16 3/4” and rest areas must be provided at 35’ intervals.
h. Ladders and stair towers should be positioned such that their bottom step/rung is not more than 24” above the scaffold supporting level.
i. Workers cannot access or egress tubular welded frame scaffolds through or over the cross braces.
j. Scaffold planks may overhang the end supports by no less than 6” and no more than 12” unless cleated or otherwise secured in place.
k. All scaffold platforms must be fully planked between the front uprights and the guardrail supports. Platforms must be decked so that no space between the planks or scaffold supports exceeds 1”.
l. Scaffold platforms and walkways must be at least 18” wide.
m. All planking must be scaffold grade or equivalent and will not be cracked, split or oil soaked.
n. Scaffold platforms must be free of ice, snow, build up of debris or any other hazard which may create a fall hazard.
o. Scaffolds will not be overloaded.

p. Unstable objects, such as spackle buckets, drums, barricade horses, etc. will not be used as scaffold bases.
q. If guardrails are removed to land material or equipment, fall protection must be worn by the exposed workers.
r. The tagging system to be used will be as follows: Green-Complete scaffold per required scaffold safety standards. Yellow-Conditional use-100% fall protection. Red-Scaffold not complete-DO NOT USE

a. Tubular Welded Frame Scaffolds:
   i. Scaffold legs must be set on adjustable bases or plain bases set on mud sills or base plates adequate to support the maximum rated load.
   ii. Panels must be locked together to prevent uplifting.
   iii. Outriggers and platforms below the working walking level shall be fully planked.
   iv. Proper bracing by cross-braces, diagonal braces or both is required.
   v. Vertical tie off is required at the closest horizontal scaffold member to a 4:1 height to minimum base dimension, then repeated every 26 feet (for units wider than 3' base) or 20 feet (for units narrower than 3' base).
   vi. Ties and braces must be installed at the end of each scaffold and at 30' intervals horizontally.
   vii. Scaffold ties must be installed to prevent the scaffold from moving into or away from the structure. This will require the use of tie wire to prevent movement away and a rigid stand-off to prevent inward movement.

b. Mobile Scaffolds:
   viii. The height of mobile scaffolds will not exceed 4 times their minimum base dimension. This does not include "Perry" or "Baker" type scaffolds which require outriggers at heights above one tier.
   ix. Scaffolds must be braced by cross, horizontal and diagonal braces to prevent racking or collapse and to automatically square and align the vertical members.
   x. Platforms must be tightly planked.
   xi. An access ladder must be affixed to the scaffold in a location where its usage will not cause the unit to tip.
   xii. Casters and wheels must be locked to prevent movement when the mobile scaffold is in use.
   xiii. Workers shall not move scaffolds by "pulling themselves along" on the ceiling or wall while working on the scaffolds.

c. Suspension Scaffolds:

   All suspension scaffold support devices, such as outrigger beams, cornice hooks, parapet clamps, and similar devices, shall rest on surfaces capable of supporting at least 4 times the load imposed on them by the scaffold operating at the rated load of the hoist (or at least 1 ½ times the load imposed on them by the scaffold at the stall capacity of the hoist, whichever is greater). Suspension scaffold outrigger beams, when used, shall be made of structural metal or equivalent strength material, and shall be restrained to prevent movement. The inboard ends of suspension scaffold outrigger beams shall be stabilized by bolts or other direct connections to the floor or roof deck, or they shall have their

inboard ends stabilized by counterweights. Counterweights shall be secured by mechanical means to the outrigger beams to prevent displacement. Counterweights shall not be removed from an outrigger beam until the scaffold is disassembled. Tiebacks shall be secured to a structurally sound anchorage on the building or structure.

All individuals working on a suspended scaffold must possess a 16-Hour certificate of completion from a recognized NYC DOB scaffold training course, or be an apprentice in a recognized program, or who holds a challenge examination certificate from a recognized NYC DOB administrator of challenge exams. All workers must have training cards on them at all times, available for inspection. Copies shall also be kept in the field office.

Sound anchorages include structural members, but do not include standpipes, vents, other piping systems, or electrical conduit. Suspension scaffold support devices such as cornice hooks, roof hooks, roof irons, parapet clamps, or similar devices shall be; (1) made of steel, wrought iron, or materials of equivalent strength; (2) supported by bearing blocks; and (3) secured against movement by tiebacks installed at right angles to the face of the building or structure, or opposing angle tiebacks shall be installed and secured to a structurally sound point of anchorage on the building or structure. Sound points of anchorage include structural members, but do not include standpipes, vents, other piping systems, or electrical conduit. Tiebacks shall be equivalent in strength to the hoisting rope.

When winding drum hoists are used on a suspension scaffold, they shall contain not less than four wraps of the suspension rope at the lowest point of scaffold travel.

When other types of hoists are used, the suspension ropes shall be long enough to allow the scaffold to be lowered to the level below without the rope end passing through the hoist, or the rope end shall be configured or provided with means to prevent the end from passing through the hoist.

Ropes shall be inspected for defects each work shift and after every occurrence, which could affect a rope's integrity. Ropes shall be replaced if any of the following conditions exist; (1) any physical damage which impairs the function and strength of the rope, (2) kinks that might impair the tracking or wrapping of rope around the drum(s) or sheave(s), (3) six randomly distributed broken wires in one rope lay or three broken wires in on strand in one rope lay, (4) abrasion, corrosion, scrubbing, flattening or peening causing loss of more than one third of the original diameter of the outside wires, (5) heat damage caused by a torch or any damage caused by contact with electrical wires, and (6) evidence that the secondary brake has been activated during an over speed condition and ha s engaged the suspension rope.

32. **TEMPORARY ELEVATORS -** Whenever, in the course of construction or demolition, the work reaches a height greater than seventy-five feet at least one elevator shall be kept in readiness at all times for Fire Department use.
    a. Hoisting equipment shall meet and be used in accordance with BC 3316 – 3319.
    b. Hoisting equipment to be submitted by a Licensed Professional and approved by the Commissioner.
    c. Permits must be obtained and displayed at conspicuous locations. Copies of the permit application must be available onsite.
    d. Hoisting equipment is to be operated by a Licensed professional who will inspect the hoist daily before and after use.
    e. See also Cranes and Hoist Section 40 for additional guidelines

33. **ELECTRICAL SAFETY**: Only properly trained and qualified electrical workers will be permitted to use electrical closets, panels, switch rooms, etc. AVRON CORP. requires that all AVRON CORP. employees, subcontractors and sub-tier contractors will comply with standards established by OSHA in 29 CFR 1910.147 as well as policies and procedures established by electrical subcontractor and approved by AVRON CORP. prior to commencement of work. Subcontractor to submit LOTO procedures for review and approval prior to start of work.
    a. All electrical lines and equipment shall be considered energized unless otherwise identified.
    b. Energized electrical work will not be permitted unless approved by AVRON CORP. Project Team and the AVRON CORP. Site Safety Manager.
    c. Temporary lighting will be connected in accordance with NEC requirements and will meet candle power requirements prescribed by OSHA. Candle power must be continually evaluated as walls and equipment are installed.
    d. All bulbs installed in temporary lighting shall be protected by an appropriate cage.
    e. Power will not be taken off lighting circuits. Power and lighting will be supplied by separate circuits.
    f. Ground fault circuit interrupters will be installed at the circuit panel, the outlet or between the outlet and electrical cord at all times. Assured grounding programs are not acceptable.
    g. Ground fault circuit interrupters will be checked prior to each use and tested every week.
    h. All power cords and welding leads will be inspected prior to use. Cords which are frayed, worn, spliced or contain exposed wires will not be used. Only approved electrical tape may be used to patch missing insulation. Conductive duct tape will not be used. Damaged cords must be immediately tagged “Do Not Use” and destroyed or removed from site.
    i. All cords shall be of the three-wire type and designed for hard or extra hard usage. Flat extension cords and Romex extension cords are prohibited.
    j. Electrical cord sets and welding leads will be kept clear of walkways and other locations where they may be subject to damage or present a tripping hazard.
    k. All cords and welding leads will be protected from foot and vehicle traffic, sharp corners and edges (i.e., cords exposed to closing doors and windows.)

l. All live electrical installations, such as receptacles, switches, panel boxes, etc. will be protected by a faceplate or cover. Cardboard or sheet rock is not an acceptable cover.
m. All electrical equipment and material will be of an approved type for the service and installation (i.e., hazardous material locations)
n. All plugs, outlets, switches and panel boxes must be installed according to the national electric code. This includes assuring that receptacle boxes are permanently affixed. Romex type NM cable is not used in damp or wet locations, and temporary wiring is located where it will not be subject to damage.
o. Receptacles must be inspected for polarity and continuity of the ground. Receptacles whose polarity is reversed or whose ground is not continuous should be tagged out until repaired.
p. All wire ends will be appropriately capped or taped.
q. Live electrical outlets and switches will not be pulled from the wall and left unprotected.
r. Missing knock outs inside electrical panel boxes or on receptacle boxes and on all other equipment containing live parts must be covered or otherwise protected.

I hereby attest by my signature that I have read and understood these Safety requirements and Site Policies described in this Health & Safety Plan for ENTER PROJECT and I attest that all personnel representing this Company will abide by the contents setforth herein.

I also understand that they may be site specific, amended or modified at any time at the discretion of AVRON Corp.

Company Name:

Project Name: **ENTER PROJECT NAME**

Date:

Signature: _____ _____
Owner **(Print Name)**

Date:

Signature: _____ _____
Project Manager **(Print Name)**

Date:

Signature: _____ _____

Safety Representative **(Print Name)**

CONTRACTOR TO RETURN SIGNED FORM WITHIN 24-HOURS FROM RECEIPT OF THIS DOCUMENT

EMERGENCY NOTIFICATION PLAN
WHO TO CALL IN AN EMERGENCY