Dee Cramer, Inc. Safety Policy

Thanks for being part of the Dee Cramer Family.

In 2017 Dee Cramer is celebrating our 80th year in business. One of the foundations that has allowed to be successful and prosper over this time is our people. This is embodied in our tagline ***Dedicated People Delivering Quality.*** The most important part of that is **PEOPLE.**

No job is so important that it can't be done in a safe and healthy manner. While being productive and efficient has also been a foundation of our success, it is not acceptable to perform work in an unsafe manner that risks injury to you or any of your co-workers.

We are committed to providing resources to insure that safe working practices are utilized by everyone every day. These resources will include effective toolbox talks, proactive training and education, ongoing early identification of hazardous conditions, proper tools (with proper training) and PPE bags and communication of hazards or conditions that need to be addressed based on the changing conditions of each job. In addition, in 2017 Dee Cramer will be initiating a new safety orientation video for new employees. Because Dee Cramer is a family business, it is important to us that each member of the Dee Cramer Family return home to their family every night in good health.

Our goal is zero. Zero injuries and incidents. This is being accomplished within our industry with companies that have more hours than we perform and certainly can be accomplished by us with the quality people that we have in place to perform our work.

The goal is not outside our reach.

However, it starts with you.

Matthew D. Cramer, President

Jamie Roark, Safety & Risk Manager

Purpose

The purpose of this program is to define the requirements for safely operating an aerial lift device.

Scope

This policy shall cover all aerial lift devices used on Dee Cramer, Inc. property or jobsites.

Key Responsibilities

Supervisors

- Shall ensure that all aerial devices are properly operated by competent personnel.
- Shall ensure pre-use inspections are performed prior to equipment use.

Employees

- Shall follow all aspects of this program.

Procedure for Safe Operational Use

- Elevated platforms/aerial lifts may not be “field modified” for uses other than those intended by the manufacturer.
- Pre-use inspections are to be documented, not just visual, including the work area to be used. Lift controls shall be inspected and tested each day prior to use to determine that such controls are in safe working conditions. Inspections and tests shall be made at the beginning of each shift during which the equipment is to be used to determine that the brakes and operating systems are in proper working condition. Additional inspections shall be made and documented in accordance with the manufacturer’s requirements.
- Only authorized, competent persons shall operate an elevated platform/aerial lift. All employees who operate an aerial lift device shall be trained in the safe operation of the specific device they will operate. Competency is established by a written and documented operational practical exam administered by a qualified instructor. Each exam series is only for the specific model being used.
- Boom and basket load limits specified by the manufacturer shall not be exceeded and if equipped with outriggers they shall always be deployed on stable, level ground.
- Aerial lifts shall have a working back-up alarm audible above the surrounding noise level or the vehicle is backed up only when an observer (spotter) signals that it is safe to do so.
- The minimum clearance between electrical lines and any part of the equipment (i.e. crane or load) shall be 10 feet for lines rated 50 kV or below.
- Employees shall always stand firmly on the floor of the basket, and shall not sit or climb on the edge of the basket or use planks, ladders, or other devices for a work position.
- Dee Cramer, Inc. requires the operator/user to be competent in fall protection. An approved fall restraint system shall be worn when working from an aerial lift when required by the manufacturer and/or the job owner, Scissor lifts may be exempt from fall protections. The fall restraint system must be attached to the boom or basket. An approved fall restraint system shall be attached to the boom or basket when

working from an aerial lift and it is not permitted to be attached to adjacent poles or structures.

- All employees who operate an aerial lift device shall be trained in the safe operation of the specific device they will operate. Training must conform to local and federal requirements and be documented.

Purpose

The purpose of this program is to provide basic precautions and protections for employees to avoid exposure to asbestos containing material (ACM) or presumed asbestos containing material (PACM).

Scope

This program applies to all Dee Cramer, Inc. employees. When work is performed on a nonowned or operated site, the operator's program shall take precedence, however, this document covers Dee Cramer, Inc. employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Key Responsibilities

Managers/Supervisors

- Ensure owners or operators are notified of PACM.
- Prohibit Dee Cramer, Inc. employees from working until material in question is confirmed as non-asbestos or abated.
- Ensure proper employee training is completed.
- Ensure that all requirements of this program are understood and followed by those working under his/her direction.
- Perform duties of the Competent Person for asbestos work.

All Employees

All employees are required to act in strict compliance with the requirements of this program and delay or discontinue work if there is ever an unresolved concern regarding exposure to asbestos.

Procedure

Hazard Assessment

Dee Cramer, Inc. shall cause an assessment to be made in writing of the exposure or likelihood of exposure of a worker to the inhalation or ingestion of asbestos. In causing the assessment to be made, Dee Cramer, Inc. shall consider and take into account such matters as the methods and procedures used or to be used in the processing, mining, use, handling, or storage of asbestos; the extent and potential extent of the exposure of a worker to the inhalation or ingestion of asbestos; and the measures and procedures necessary to control such exposure by means of engineering controls, work practices and hygiene practices, and facilities.

Potential exposure to asbestos is assessed by Dee Cramer, Inc. to ensure exposure does not exceed occupational exposure limits. The potential for worker exposure to asbestos will be identified during the hazard assessment. COMPANY must take all necessary measures and procedures by means of engineering controls, work practices, and hygiene practices and facilities to ensure that the time-weighted average exposure of a worker to any of the forms of airborne asbestos, individually or collectively, is reduced to ensure that a worker's exposure to asbestos is kept as low as reasonably achievable and in any case employees must not be exposed to airborne concentrations

of asbestos in excess of 0.1 fibers per cubic centimeter of air (.1 f/cc) [over an 8 hour time period for Alberta operations]. Atmospheric testing results should be assessed before a worker is exposed.

Health Effects

Dee Cramer, Inc. will ensure that workers who are likely to be employed in an asbestos process or are likely to be exposed to asbestos dust are warned that the inhalation of asbestos may cause pneumoconiosis, lung cancer or mesothelioma and the risk of injury to health cause by the inhalation of asbestos is increased by smoking.

General

Dee Cramer, Inc. shall in consultation with the committee, develop an asbestos control plan that protects the health and safety of all workers in the event of the dispersal of asbestos dust into the atmosphere at a place of employment or worksite. A plan developed must be in writing and include emergency procedures to be used in case of an uncontrolled release of asbestos including the means to protect exposed workers, the methods to confine and control the release of asbestos and the decontamination procedures to be used, the asbestos processes that workers may undertake, the training of workers in any asbestos process the workers may be required or permitted to undertake, the methods to control the release of asbestos dust, the PPE workers may be required to use, decontamination procedure and the inspection and maintenance schedule for all asbestos-containing materials.

Client owned and/or operated equipment and facilities, where surfacing material or insulation is present, must be confirmed non-asbestos before Dee Cramer, Inc. employees disturbs that material. Where surfacing material or insulation cannot be confirmed non-asbestos, the client or owner must test, and where necessary abate, the material before Dee Cramer, Inc. employees are permitted to work.

Dee Cramer, Inc. must post signs at the boundaries of the restricted/designated work area indicating asbestos work is in progress, the hazards, and the precautions required for entering the work area and employees will abide warning signs and labels and will not disturb the Asbestos Containing Material.

Training

Workers are provided training on the hazards of asbestos and safe work procedures. Dee Cramer, Inc. must ensure all employees that are exposed to airborne concentrations undergo training applicable to the authority having jurisdiction. This includes site supervisors/superintendents who oversee other contractors performing this function to minimize the worker's exposure.

A certificate of training shall be provided and maintained.

Asbestos Exposure Control Program and Procedures

This section includes measures to be used to prevent the uncontrolled release of asbestos and the procedures to be followed if there is an uncontrolled release.

Where workers have access to asbestos-containing materials Dee Cramer, Inc. shall ensure that the asbestos containing materials are clearly and conspicuously labeled with a placard as asbestos. A map or plan that is readily available to the workers must be available showing location of any asbestos-containing material.

If a worker is or may be exposed to potentially harmful levels of asbestos, Dee Cramer, Inc. must develop and implement an exposure control plan. To ensure adequate coordination of the overall plan, Dee Cramer, Inc. must ensure that it is administered by a properly trained person.

The qualified person must be an occupational health and safety professional with experience in the practice of occupational hygiene as it relates to asbestos management.

The asbestos procedures must address containment of asbestos operations where applicable, control of the release of asbestos fiber, provision, use and maintenance of appropriate personal protective equipment and clothing, means for the decontamination of workers, and removal of asbestos waste and clean-up of asbestos waste material. The procedures must provide a worker with task-specific work direction that addresses both hazards and necessary controls.

Asbestos exposure controls are designed to eliminate or minimize an employee's exposure to airborne asbestos fibers through the use of work practices and engineering controls. If the TWA and/or excursion limit is exceeded, a site specific written Asbestos Exposure Control Program to reduce employee exposure shall be implemented containing means of engineering & work practice controls & the use of respiratory protection.

Prior to initiating any asbestos work the Competent Person must perform an asbestos exposure assessment. Subsequent to the exposure assessment, the engineering controls and work practices to be employed shall be identified.

Prior to commencement of work, the affected employees shall be briefed on the engineering controls and work practices designed to reduce/maintain the exposure below TWA for the asbestos work. This briefing shall be documented and maintained with the job documentation. Where engineering controls are not feasible work practices such as exhaust systems for hand tools, wet methods, clean-up procedures & PPE shall be used.

Wet methods will be employed for all asbestos work as a means to minimize potential airborne exposure wherever possible. ACM shall be wetted from the initiation of the maintenance or renovation operation and wetting agents shall be used continually throughout the work period to ensure that any dry ACM exposed in the course of the work is wet and remains wet until final disposal. Wetting agents, usually a surfactant (dish soap), are generally prepared by mixing 1 to 3 ounces of wetting agent to 5 gallons of water.

Where exhaust ventilation equipment used to contain asbestos dust Dee Cramer, Inc. shall ensure that the equipment is equipped with a HEPA filter, inspected regularly for defects, maintained and certified by a competent person at least once each year as being able to function safety and effectively.

Control measures to prevent worker exposure to asbestos and procedures to be followed in the event of an uncontrolled release of asbestos it will be preloaded on a site specific basis. The program must include site specific measures to be used to prevent the uncontrolled release of asbestos and the procedures to be followed if there is an uncontrolled release.

Restricted & Designated Areas

Where an asbestos process is undertaken, Dee Cramer, Inc. shall ensure that the area is effectively isolated or otherwise enclosed to prevent the escape of asbestos dust to any other part of the place of employment and that a warning notice is conspicuously displayed indicating that asbestos work is in progress.

Workers involved in asbestos abatement must complete an asbestos certification course. Dee Cramer, Inc. must ensure that a worker who enters a restricted area that is designated as a restricted area due to the presence of asbestos has successfully completed a course of instruction approved by a Director of Occupational Hygiene, and has in the worker's possession the original valid certificate of completion of the course issued to the worker.

All employees who perform work in regulated areas will be covered by this procedure. Employees who perform housekeeping activities during and after construction activities are also covered by this procedure.

Personnel Air Monitoring

Monitoring shall occur to ensure that no employee is exposed to an airborne concentration of asbestos in excess of 1.0 fiber per cubic centimeter of air (1 f/cc) in 30 minutes.

An independent/third party air sampling person shall perform all required air sampling during contractor asbestos work and provide the results to the Dee Cramer, Inc. Competent Person. Note: Air sampling is not required for glove bag activities that are covered under a Negative Exposure Initial Assessment.

The air quality is to be determined from breathing zone air samples. The samples shall be representative of the 8-hour TWA and 30-minute short-term exposure. Measurements are required for documentation.

Affected employees and/or their designated representatives are to be provided the opportunity to observe asbestos exposure monitoring.

Where the asbestos exposure assessment (in the absence of quantitative personnel monitoring results) does not present objective, convincing data that indicates the ACM to be handled will not (under the worst circumstances) release airborne fibers, personnel air monitoring shall be performed to quantify exposure.

If personnel monitoring is considered necessary during the asbestos exposure assessment, in an effort to verify exposures would be maintained below the PEL/excursion limit, respiratory protection shall be utilized until such time that sufficient sampling results verify that respiratory protection is not required.

The Dee Cramer, Inc. Safety Manager is to be consulted for advice and assistance in performing personnel air sampling activities.

The number of samples necessary to be considered "representative" is dependent upon many factors and must be determined in consultation with the Dee Cramer, Inc. Safety Manager, certified Industrial Hygienist consultant, or a third party air sampling professional.

Affected employees will be notified of monitoring results, which represent the employee's exposure, as soon as possible following receipt of the monitoring results.

Employees shall be notified in writing either individually or by posting at a centrally located place that is accessible to affected employees.

Once representative sampling indicates that exposure levels for that particular activity are consistently below the established permissible limit and/or excursion limit, the requirement for respiratory protection may be waived.

It is imperative that accurate personnel air sampling records are maintained in order to justify any relaxation of respiratory protection requirements.

Results of air sampling data must be maintained in the asbestos job documentation.

Medical Surveillance Program

Workers exposed to asbestos are provided health assessments. The person with custody of the health assessment record must ensure that no person, other than the worker or health professional who conducts the health assessment, has access to the exposed worker's health assessment unless the record is in a form that does not identify the worker, or the worker gives written permission for access by another person. Dee Cramer, Inc. must ensure that a worker undergoes a health assessment not more than 30 calendar days after the worker becomes an exposed worker, and every two years after the first health assessment. Exposed workers may refuse to undergo part or all of a health assessment by giving Dee Cramer, Inc. a written statement refusing it. Dee Cramer, Inc. must pay the cost of the health assessment and ensure that, if it is reasonably practicable, a health assessment is performed during normal work hours.

Respiratory Protection and Personal Protective Equipment

The use of approved respirators shall be at no cost to the employee and will be used in conjunction with work practice controls, work operations, to reduce exposure and in emergencies. Workers who may be exposed to asbestos dust during abatement activities must wear protective clothing. Dee Cramer, Inc. must provide workers in a restricted area with protective clothing that protects other clothing worn by the worker from asbestos contamination, ensure that workers' street clothing is not contaminated by asbestos, and ensure that a worker does not leave a restricted area until the worker has been decontaminated.

Dee Cramer, Inc. ensure each worker who may be exposed is provided with and use an approved respiratory protective device that is appropriate to the level of risk of the asbestos process and approved protective clothing that when worn, will exclude asbestos dust. All protective clothing is disposed of as asbestos waste after use or is kept, maintained and cleaned in a safe manner each time it is used.

Other PPE will include:

- All persons within a restricted/designated work area wear protective clothing which is made of material resistant to penetration by asbestos fibers, fits snugly at the neck, wrists and ankles and as necessary to protect against the risk, covers the head and feet as well as the body.
- Protective coveralls, Gloves, Head coverings / Foot coverings, Vented goggles / Face Shields.
- And others based on the hazard.

Before a worker removes protective clothing and equipment, Dee Cramer, Inc. must ensure that the worker cleans

this gear with a damp cloth or a vacuum cleaner equipped with a HEPA-filtered exhaust and ensure that a worker removes protective clothing and equipment before leaving the restricted/designated work area.

Waste Disposal

If a building is to be demolished, Dee Cramer, Inc. must ensure that materials with the potential to release asbestos fibers are removed first. Areas where asbestos abatement activities are in progress are isolated so other areas are not contained. If a building is being altered or renovated, materials in the area of the alterations or renovations that could release asbestos fibers are encapsulated, enclosed or removed.

Asbestos containing materials removed during abatement activities are adequately contained and labeled. Dee Cramer, Inc. must ensure that asbestos waste is stored, transported, and disposed of in sealed containers that are impervious to asbestos and asbestos and asbestos waste. Dee Cramer, Inc. must ensure that a container of an asbestos product and asbestos waste is clearly labeled. To identify the contents as an asbestos product and carcinogenic, and to warn handlers that dust from the contents should not be inhaled.

Bags or containers shall be imprinted and clearly labeled with the following asbestos hazard warning and address:

DANGER - CONTAINS ASBESTOS FIBERS -
AVOID CREATING DUST - CANCER AND LUNG DISEASE HAZARD
Dee Cramer – 4221 E. Baldwin Road, Holly, MI 48442

Asbestos waste or dust produced in a place of employment is cleaned away promptly and at least once each day, by vacuum cleaning equipment equipped with a HEPA filter to prevent the escape of asbestos dust into the air or where vacuum cleaning is not practicable, by wet methods.

Change in Process

Where a change is made in a process involving asbestos, or in the methods and procedures in the mining, use, handling or storage of asbestos and the change could result in a significant difference in the exposure of a worker to the inhalation or ingestion of asbestos, COMPANY shall cause a further assessment to be made.

Record Keeping

All records relating to any asbestos activity shall be maintained by Dee Cramer, Inc. permanently.

The records of the exposures of each worker to airborne asbestos at the workplace to be maintained as provided by the asbestos control program shall identify the worker, including the worker's date of birth, the worker's jobs or occupations at the workplace, the results of monitoring for exposure to airborne asbestos in his or her work area, and the use by the worker of respiratory equipment and its type.

Bloodborne Pathogens Plan

Dee Cramer Inc

Completed by: Valerie Bradley
Completed Date: 12/28/2012

Exposure Control Plan (ECP) for Bloodborne Pathogens

Purpose

Dee Cramer Inc is committed to providing a safe and healthful work environment for our entire staff. In pursuit of this endeavor, the following exposure control plan (ECP) is provided to eliminate or minimize occupational exposure to bloodborne pathogens in accordance with OSHA standard 29 CFR 1910.1030, "Occupational Exposure to Bloodborne Pathogens."

The ECP is a key document to assist our firm in implementing and ensuring compliance with the standard, thereby protecting our employees. This ECP includes:

- Determination of employee exposure;
- Implementation of various methods of exposure control, including:
  - Universal precautions,
  - Engineering and work practice controls,
  - Personal protective equipment, and
  - Housekeeping
- Hepatitis B vaccination;
- Post-exposure evaluation and follow-up;
- Communication of hazards to employees and training;
- Recordkeeping; and
- Procedures for evaluating circumstances surrounding an exposure incident.

The methods of implementation of these elements of the standard are discussed in the subsequent pages of this ECP.

Administrative Duties

Valerie Bradley, Safety Director is responsible for the implementation of the ECP. Valerie Bradley, Safety Director will maintain, review, and update the ECP at least annually, and whenever necessary to include new or modified tasks and procedures. Contact location/phone number: 4221 E. Baldwin Road, Holly MI 48442 810 579 5000 Safety Director.

Those employees who are determined to have occupational exposure to blood or other potentially infectious materials (OPIM) must comply with the procedures and work practices outlined in this ECP.

Safety Director and/or Warehouse Manager will maintain and provide all necessary personal protective equipment (PPE), engineering controls (e.g., sharps containers), labels, and red bags as required by the standard. Safety Director and/or Warehouse Manager will ensure that adequate supplies of the aforementioned equipment are available in the appropriate sizes. Contact location/phone number: 4221 E Baldwin Road, Holly MI 48442 810 579 5000 Safety Director.

Safety Director will be responsible for ensuring that all medical actions required are performed and that appropriate employee health and OSHA records are maintained. Contact location/phone number: 4221 E Baldwin Road., Holly MI 48442 810 579 5000 Safety Director.

Outside source which will be provided by Dee Cramer Inc will be responsible for training, documentation of training, and making the written ECP available to employees, OSHA, and NIOSH representatives. Contact location/phone number: 810 579 5000 Safety Director.

Employee Exposure Determination

The following is a list of job classifications in which some employees at our establishment have occupational exposure. Included is a list of tasks and procedures, or groups of closely related tasks and procedures, in which occupational exposure may occur for these individuals:

Sheet Metal Mechanic Journeyman

Part-time, temporary, contract, and per diem employees are covered by the standard. How the provisions of the standard will be met for these employees is described in this ECP, if applicable.

Methods of Implementation and Control

Universal Precautions

All employees will utilize universal precautions.

Exposure Control Plan

Employees covered by the bloodborne pathogens standard receive an explanation of this ECP during their initial training session. It will also be reviewed in their annual refresher training. All employees have an opportunity to review this plan at any time during their work shifts by contacting Valerie Bradley, Safety Director. If requested, we will provide an employee with a copy of the ECP free of charge and within 15 days of the request.

Valerie Bradley, Safety Director is responsible for reviewing and updating the ECP annually or more frequently if necessary to reflect any new or modified tasks and procedures that affect occupational exposure and to reflect new or revised employee positions with occupational exposure.

The review and update of such plans must also:

· Reflect changes in technology that eliminate or reduce exposure to bloodborne pathogens; and

· Document annually consideration and implementation of appropriate commercially available and effective safer medical devices designed to eliminate or minimize occupational exposure. Outside source provided by Dee Cramer Inc documents all devices considered.

The following table lists the safer devices Outside source provided by Dee Cramer Inc has identified as candidates in our last annual review, which took place Verification provided upon request:

Device:	Methods used to evaluate device:	Decision whether or not to implement:	Justification for decision:

If the company should ever encounter such work determination will be decided at that time solicits input from non-managerial employees responsible for direct patient care in the identification, evaluation, and selection of effective engineering and work practice controls. Only those employees responsible for direct patient care who are potentially exposed to injuries from contaminated sharps need be contacted. Our solicitation method involves the following: Periodic conversations, problem solving groups, safety audits, and inspections.. (enter your answer) documents all solicitation in the ECP.

The following table lists the engineering and work practice controls identified during solicitation in our last annual review, which took place Verification provided upon request:

Engineering or work practice control:	Employee solicited:	Decision whether or not to implement:

Engineering and Work Practice Controls

Engineering and work practice controls will be used to prevent or minimize exposure to bloodborne pathogens. The specific engineering controls and work practice controls used are listed below:

N/A at this time

Sharps disposal containers are inspected and maintained or replaced by Onsite will be provided on request every To Be Determined on jobsite or whenever necessary to prevent overfilling.

This facility identifies the need for changes in engineering control and work practices through: OSHA requirements, employee interviews. We evaluate the need for new procedures or new products by: employee and supervision input, committee involvement.. The following staff are involved in this process: Safety Director, supervisor, lead foreman.

Safety Director and/or Operations Manager will ensure effective implementation of these recommendations.

Personal Protective Equipment (PPE)

PPE is provided to each of our employees at no cost. Training is provided by Outside source which will be provided by Dee Cramer Inc in the use of the appropriate PPE for the tasks or procedures employees will perform.

The types of PPE available to employees are as follows: There will be available hand washing facilities on site and posted for employees knowledge prior to working specific jobsite. If no hand washing facility is available than there will be antiseptic solutions readily available for all employees

.

PPE is located Warehouse manager will provide upon request from field foreman or project manager and may be obtained through Safety Director and/or Warehouse Manager.

Each employee using PPE must observe the following precautions:

Wash hands immediately or as soom as feasible afte removal of gloves or other PPE. Remove PPE after it becomes contaminated and before leaving the work area. Never reuse PPE after contamination.

The procedure for handling used PPE is as follows: Sanitation & Cleaning Recommendation along with proper ppe if blood or infectious material is found

- Wear the proper ppe; gloves, eye protection, recommended by supervisor
-Use cleangin products appropriate to your workplace and according to the supplier'srecommendation to ensure proper cleaning.
-Always clean and wash surfaces areas thoroughly before disinfecting them,
-Use germicides or diluted bleaches (e.g. sodium hypochlorite) to disinfect areas as required.
-Wash hands thoroughly with warm water and soap, after removing gloves.
-Report to your supervisor all spills, accidents, incidents etc.

DO NOT: eat, drink, or smoke while using bleaches, cleaning agents, disinfecting agents or the chemcial products.

DO NOT: leave open containers of bleaches, paints and solvents in the washrooms or other areas used by other employees not involved in above tasks..

Housekeeping

Regulated waste is placed in containers that are closable, constructed to contain all contents and prevent leakage, appropriately labeled or color-coded (see Labels section), and closed prior to removal to prevent spillage or protrusion of contents during handling.

The procedure for handling sharps disposal containers is: Will be determined on job specific.

The procedure for handling other regulated waste is: To be determined by job specific.

Contaminated sharps are discarded immediately or as soon as possible in containers that are closable, puncture-resistant, leakproof on sides and bottoms, and labeled or color-coded appropriately. Sharps disposal containers are available at To be determined by job specific.

Bins and pails (e.g., wash or emesis basins) are cleaned and decontaminated as soon as feasible after visible contamination.

Broken glassware that may be contaminated is picked up using mechanical means, such as a brush and dust pan.

Labels

The following labeling method(s) is used in this facility:

Equipment to be labeled:	Label type (size, color, etc.):

To be determined job speicifc will ensure warning labels are affixed or red bags are used as required if regulated waste or contaminated equipment is brought into the facility. Employees are to notify Supervisor, foreman, project manager if they

discover regulated waste containers, refrigerators containing blood or OPIM, contaminated equipment, etc., without proper labels.

Hepatitis B Vaccination

Local Health Clinic will provide training to employees on hepatitis B vaccinations, addressing the safety, benefits, efficacy, methods of administration, and availability.

The hepatitis B vaccination series is available at no cost after training and within 10 days of initial assignment to employees identified in the exposure determination section of this plan. Vaccination is encouraged unless:

1. Documentation exists that the employee has previously received the series,

2. Antibody testing reveals that the employee is immune, or

3. Medical evaluation shows that vaccination is contraindicated.

However, if an employee chooses to decline vaccination, the employee must sign a declination form. Employees who decline may request and obtain the vaccination at a later date at no cost. Documentation of refusal of the vaccination is kept at Main office of Dee Cramer.

Vaccination will be provided by Local Health Care Clinic at nearest available office.

Following hepatitis B vaccinations, the health care professional's Written Opinion will be limited to whether the employee requires the hepatitis vaccine, and whether the vaccine was administered.

Post-exposure Evaluation and Follow-Up

Should an exposure incident occur, contact Safety Director who will inturn notify health care clinic at the following telephone number Will be posted at job site.

An immediately available confidential medical evaluation and follow-up will be

conducted by According to 29 CFR 1910.1030 - post exposure follow up must be done by or under the supervision of a licensed physician or healthcare professional.. Following the initial first aid (clean the wound, flush eyes or other mucous membranes, etc.), the following activities will be performed:

determined by the local occupational health clinic

Administration of Post-Exposure Evaluation and Follow-up

Safety Director ensures that health care professional(s) responsible for employee's hepatitis B vaccination and post-exposure evaluation and follow-up are given a copy of OSHA's bloodborne pathogens standard.

Safety Director ensures that the health care professional evaluating an employee after an exposure incident receives the following:

information will be given by the Safety Director along with a description of the emplyee's job duties relevant to the exposure incident

Doctor @ health care facility provides the employee with a copy of the evaluating health care professional's written opinion within 15 days after completion of the evaluation.

Procedures for Evaluating the Circumstances Surrounding an Exposure Incident

Safety Director, Owners, Contractors etc will review the circumstances of all exposure incidents to determine:

Engineering controls in use at the time, work proactives floowed, description of the device being used,ppe was being worn properly, location of the incident, procedures being performed when the incident occurred, and employee's training.

If it is determined that revisions need to be made, Valerie Bradley, Safety Director will ensure that appropriate changes are made to this ECP. Changes include: evaluations, and exposure detrmination.

Employee Training

Each employee who has occupational exposure to bloodborne pathogens receives training conducted by Outside source which will be provided by Dee Cramer Inc. Our instructor(s) has the following qualifications: professional certified doctors and health professionals.

Each employee who has occupational exposure to bloodborne pathogens receives training on the epidemiology, symptoms, and transmission of bloodborne pathogen diseases. In addition, the training program covers, at a minimum, the following elements:

Through training administrators; copy and explanation of the standard, explanation of our ECP and where a copy can be found, along with methods to recognize, the use and limitations of methods, ppe required

Training materials for this facility are available at jobsites.

Recordkeeping

Training Records

Training records are completed for each employee upon completion of training. These documents will be kept for at least three years at main office of Dee Cramer Inc.

The training records include:

(enter your answer)

Employee training records are provided upon request to the employee or the employee's authorized representative within 15 working days. Such requests should be addressed to Outside source which will be provided by Dee Cramer Inc.

Medical Records

Medical records are maintained for each employee with occupational exposure in accordance with 29 CFR 1910.1020, "Access to Employee Exposure and Medical Records."

Safety Director is responsible for maintenance of the required medical records. These confidential records are kept at 4221 E Baldwin Road., Holly MI 48442 810 579 5000 Safety Director for at least the duration of employment plus 30 years.

Employee medical records are provided upon request of the employee or to anyone having written consent of the employee within 15 working days. Such requests should be sent to Safety Director.

OSHA Recordkeeping

An exposure incident is evaluated to determine if the case meets OSHA's Recordkeeping Requirements (29 CFR 1904). This determination and the recording activities are done by Safety Director.

Hepatitis B Vaccine Declination (Mandatory)

I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to myself. However, I decline hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

Signed: _____ *(employee signature)*

Date: _____

Purpose

The purpose of this program is to ensure the safety of all employees and contractors working for Dee Cramer, Inc. and to comply with all regulations and host clients that pertain to confined spaces.

Scope

This program covers all employees and other workers that may be involved in confined space entry. When work is performed on a non-owned or operated site, the operator's program shall take precedence. This document covers Dee Cramer, Inc. employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Definitions

Acceptable entry conditions - the conditions that must exist in a confined space to allow entry and to ensure that employees involved with a confined space entry can safely enter into and work within the space.

Attendant - an individual stationed outside one or more Confined spaces who monitors the authorized Entrants and who performs all Attendant's duties assigned in the Dee Cramer, Inc. Confined Spaces Program. Attendants must have sufficiently completed and fully understands the Confined Space training and is approved by the HSE Manager to work in a confined space as an Attendant.

Authorized Entrant - an individual who is authorized by Dee Cramer, Inc. to enter a confined space. Entrants must have sufficiently completed and fully understands the Confined Space training and is approved by the HSE Manager to work in a confined space as an Authorized Entrant.

Blanking or Blinding - the absolute closure of a pipe, line, or duct by the fastening of a solid plate (such as a spectacle blind or a skillet blind) that completely covers the bore and that is capable of withstanding the maximum pressure of the pipe, line, or duct with no leakage beyond the plate.

Confined Space

- A space that is large enough and so configured that an employee can bodily enter and perform assigned work;
- Has limited or restricted means for entry or exit (for example, tanks, vessels, coolers, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry); and
- Is not designed for continuous occupancy.

Double block and bleed - the closure of a line, duct, or pipe by closing and locking or tagging two in-line valves and by opening and locking or tagging a drain or vent valve in the line between the two closed valves.

Emergency - any occurrence (including any failure of hazard control or monitoring equipment) or an event internal or external to the confined space that could endanger Entrants.

Engulfment - the surrounding and effective capture of a person by a liquid or finely divided (flowable) solid substance that can be aspirated to cause death by filling or plugging the respiratory system or that can exert enough force on the body to cause death by strangulation, constriction, or crushing.

Entry - the action by which a person passes through an opening into a confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the Entrant's body breaks the plane of an opening into the space.

Entry permit – means the written or printed document that is provided by Dee Cramer, Inc. to allow and control entry into a confined space that contains the information specified in this program.

Entry Supervisor - the person responsible for determining if acceptable entry conditions are present at a confined space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as required by this section.

- Entry Supervisors must have sufficiently completed and fully understands the Confined Space training and is approved by the HSE Manager to work in a confined space.
- An Entry Supervisor also may serve as an Attendant or as an authorized Entrant, as long as that person is trained and equipped as required by this section for each role he or she fills. Also, the duties of Entry Supervisor may be passed from one individual to another during the course of an entry operation.
- The Entry Supervisor is responsible to test and monitor the atmosphere conditions.

Hazardous atmosphere - an atmosphere that may expose employees to the risk of death, incapacitation, and impairment of ability to self-rescue (that is, escape unaided from a confined space), injury, or acute illness from one or more of the following causes:

- Flammable gas, vapor, or mist in excess of 10 percent of its lower flammable limit (LFL), (0% is normal).
- Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent, (20.9 % is normal).
- Any other atmospheric condition that is immediately dangerous to life or health. (Ex.-H2S 10%, 0% is normal).
- Note: For air contaminants for which OSHA has not determined a dose or permissible exposure limit, other sources of information, such as Material Safety Data Sheets that comply with the Hazard Communication Standard, published information, and internal documents can provide guidance in establishing acceptable atmospheric conditions.

Hot work permit - the written authorization to perform operations (for example, riveting, welding, cutting, burning, and heating) capable of providing a source of ignition.

Immediately dangerous to life or health (IDLH) - any condition that poses an immediate or delayed threat to life or that would cause irreversible adverse health effects or that would interfere with an individual's ability to escape unaided from a confined space.

- Note: Some materials -- hydrogen fluoride gas and cadmium vapor, for example -- may produce immediate transient effects that, even if severe, may pass without medical attention, but are followed by sudden, possibly fatal collapse 12-72 hours after exposure. The victim "feels normal" from recovery from

transient effects until collapse. Such materials in hazardous quantities are considered to be "immediately dangerous to life or health".

Inerting - the displacement of the atmosphere in a permit space by a non-combustible gas (such as nitrogen) to such an extent that the resulting atmosphere is non-combustible. This procedure produces an IDLH oxygen deficient atmosphere.

Isolation - the process by which a confined space is removed from service and completely protected against the release of energy and material into the space by such means as: blanking or blinding; misaligning or removing sections of lines, pipes, or ducts; a double block and bleed system; lockout or tagout of all sources of energy; or blocking or disconnecting all mechanical linkages.

Line Breaking - the intentional opening of a pipe, line, or duct that is or has been carrying flammable, corrosive, or toxic material, an inert gas, or any fluid at a volume, pressure, or temperature capable of causing injury.

Non-Permit Confined Space - A confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.

Oxygen deficient atmosphere - an atmosphere containing less than 19.5 percent oxygen by volume.

Oxygen enriched atmosphere - an atmosphere containing more than 23.5 percent oxygen by volume.

Permit-Required Confined Space - a confined space that has one or more of the following characteristics:

- Contains or has a potential to contain a hazardous atmosphere.
- Contains a material that has the potential for engulfing an Entrant.
- Has an internal configuration such that an Entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section.
- Contains any other recognized serious safety or health hazard.

Permit system - the employer's written procedure for preparing and issuing permits for entry and for returning the confined space to service following termination of entry.

Prohibited condition - any condition in a confined space that is not allowed by the permit during the period when entry is authorized.

Rescue service - the personnel designated to rescue employees from Permit-Required Confined Spaces.

Retrieval system - the equipment (including a retrieval line, chest or full-body harness, wristlets, if appropriate, and a lifting device or anchor) used for non-entry rescue of persons from confined spaces.

Testing - the process by which the hazards that may confront Entrants of a confined space are identified and evaluated. Testing includes specifying the tests that are to be performed in the permit space.

Responsibilities

Managers/Supervisor

- Shall ensure that all employees have been trained and fully understand the requirements of this program.
- Shall provide the necessary equipment to comply with these requirements and ensure that all employees are trained on its use.
- Shall ensure that all confined space assessments have been conducted and documented.
- Shall ensure that provisions and procedures are in place for the protection of employees from external hazards including but not limited to pedestrians, vehicles and other barriers and by use of the pre-entry checklist verifying that conditions in the permit space are acceptable for entry during its duration.
- Shall ensure that all Permit-Required Confined Spaces permits are posted.
- Shall ensure an annual review of the program including all entry permits issued that during that annual period.
- Shall ensure that confined spaces are identified properly as either a Non-Permit Confined Space or a Permit-Required Confined Space.
- Shall ensure that all confined spaces that have been identified as “no entry” have signs that state, “DANGER- DO NOT ENTER”.
- Shall ensure signs have been posted at all Permit-Required Confined Space areas that state, “DANGER – PERMIT ENTRY CONFINED SPACE” along with the proper warning word such as “ASPHYXIANT, FLAMMABILITY or TOXIC HAZARD”
- Shall file all permits at the area offices for review. Permits shall be kept on file for one year.

Affected Employee

- Shall attend Confined Space Entry training commensurate with their duties and when duties change as required.
- Shall comply with all aspects of this program.
- Authorized Entrants, Attendants and Entry Supervisors may be any COMPANY employee that is authorized by management to work in a confined space setting and that has been trained and is proficient in the understanding of program requirements.

Authorized Entry Supervisor Duties

- Shall have a tailgate safety meeting, with all workers to be involved in the confined space entry and review the job to be performed and what safety concerns may be present.
- Shall confirm that all isolation, Lock/out and Tag/outs have been completed prior to entry into a confined space.
- Shall ensure that the requirements of this program are followed and maintained.
- Shall test all atmosphere conditions prior to entry and shall complete and maintain the confined space permit form, and have it accessible for review on the job site at all times.
- Shall notify COMPANY supervisor of entry into a confined space, and notify the supervisor of any changes that may occur, during an entry.
- If the confined space poses a hazard that cannot be eliminated, the Entry Supervisor must arrange for a rescue services.

- If the confined space poses no hazards to the Entrants, the Entry Supervisor can reclassify the confined space to a Non-Permit Confined Space.
- A stand-by rescue team is not required to be on site for Non-Permit Confined Space entries.

Authorized Attendant Duties

- Knows the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure.
- Is aware of possible behavioral effects of hazard exposure in authorized Entrants.
- Continuously maintains communication and an accurate count of authorized Entrants in the confined space and ensures that the means used to identify authorized Entrants, and accurately identifies who is in the confined space.
- Remains outside the confined space during entry operations until relieved by another Attendant.
- If more than one confined space is to be monitored by a single attendant, the program must include the means & procedures that will be used in order to enable the attendant to respond to emergencies in one or more permit spaces that he/she is monitoring without distraction from all responsibilities.
- Attendants may enter a confined space to attempt a rescue, if they have been trained and equipped for rescue operations as required and only when they have been relieved by another authorized Attendant.
- Monitors activities inside and outside the confined space to determine if it is safe for Entrants to remain in the space and orders the authorized Entrants to evacuate the confined space immediately under any of the following conditions:
    - If the Attendant detects a prohibited condition;
    - If the Attendant detects the behavioral effects of hazard exposure in an authorized Entrant;
    - If the Attendant detects a situation outside the space that could endanger the authorized Entrants;
    - If the Attendant cannot effectively and safely perform all the duties required.
- Summon rescue and other emergency services as soon as the Attendant determines that authorized Entrants may need assistance to escape from confined space hazards.
- Takes the following actions when unauthorized persons approach or enter a confined space while entry is underway:
    - Warn the unauthorized persons that they must stay away from the confined space;
    - Advise the unauthorized persons to exit the confined space immediately, if they have entered the space;
    - Inform the authorized Entrants and the Entry Supervisor if unauthorized persons have entered the confined space.
- Performs no duties that might interfere with the Attendant's primary duty to monitor and protect the authorized Entrants.
- Authorized Attendants shall not monitor more than one confined space at a time.

Authorized Entrant Duties

- Knows the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure;

- Uses appropriate personal protective equipment properly, e.g., face and eye protection, and other forms of barrier protection such as gloves aprons, coveralls, and breathing equipment;
- Is aware of possible behavioral effects of hazard exposure in authorized Entrants;
- Shall witness and verify calibrated air monitoring data and if approved, sign off, before entry is made.
- Is entitled to request additional monitoring at any time.
- Maintain communication with the Attendants to enable the Attendant to monitor the Entrants status as well as to alert the Entrant to evacuate if needed; and
- Exit from confined spaces as soon as possible when ordered by an Attendant or Entry Supervisor, when the Entrant recognizes the warning signs or symptoms of an exposure exists, or when a prohibited condition exists, or when an alarm is activated.

Provisions and Procedures for Protection of Workers During Entry Into Confined Spaces

Non-Permit Confined Space Entry

If testing of the confined space atmosphere is within acceptable limits without the use of forced air ventilation and the space is properly isolated, the space can be entered by following the requirements for Level I confined space entry.

- Entrants and/or their representative shall be given the opportunity to observe and participate in the air monitoring process.
- Entrants shall review and sign the confined space permit.

Employees may enter and work in the confined space as long as LEL, O2, and toxicity hazards remain at safe levels.

- Complete the Dee Cramer, Inc. Confined Space Entry Permit to document that there are no confined space hazards. Make this certification available to all personnel entering the space.
- A trained Attendant must always be outside the confined space. The Attendant must monitor the authorized Entrants for the duration of the entry operation.

Exception: The Attendant requirements for Level I confined space entry may be exempted, if the job assessment is performed and has determined that there are no inherent dangers to allow single person entry.

- This provision is intended to permit field operations to enter crankcases, shallow valve boxes, cellars, excavations, etc. without an Attendant being present and all other aspects of the entry permit complied with.
- When there are changes in the use and configuration of a confined space that might increase the hazards to the Entrants (e.g., using epoxy coating on a tank floor, welding, painting, etc.), re-evaluate the space. If necessary, reclassify the space as a Permit-Required Confined Space.
- Continuously monitor the confined space atmosphere to ensure that it is still safe.
- The space must not contain a hazardous atmosphere while personnel are inside.
- If a hazardous atmosphere is detected during an entry, personnel must immediately evacuate the space.
- Re-evaluate the space to determine how the hazardous atmosphere developed.
- The Entry Supervisor shall cancel the entry permit.
- Take action to protect personnel before any subsequent activity to re-enter the space takes place.
- Reissue the Dee Cramer, Inc. Confined Space Entry Permit before allowing Entrants to re-enter the space.

- If necessary, reclassify the space as a Permit-Required Confined Space.
- Ensure that vehicle or other equipment exhaust does not enter the space.

Permit-Required Confined Space Entry

If the space is properly isolated and results of air monitoring are above acceptable parameters without local exhaust ventilation in operation, classify the entry as a Permit-Required Confined Space.

- Complete the COMPANY Confined Space Entry Permit before proceeding with work in a Permit-Required Confined Space.
- Entrants and/or their representative shall be given the opportunity to observe and participate in the air monitoring process.
- Entrants shall review and sign the confined space permit.
- At least one trained Attendant must always be outside the Permit-Required Confined Space.
- The Attendant must monitor the authorized Entrants for the duration of the entry operation.
- Only authorized Entrants may enter a Permit-Required Confined Space.
- All Entrants must sign in and out on the entry permit when entering and leaving a Permit-Required Confined Space.
- The back of the permit or a sign-in sheet must be used for this purpose.
- Post signs and barricades outside all Permit-Required Confined Spaces to notify personnel that a confined space entry is in progress and unauthorized entry is prohibited.
- Conditions must be continuously monitored where Entrants are working to determine that acceptable conditions are maintained during entry.
- If a hazardous atmosphere is detected during an entry, personnel must immediately evacuate the space.
    - The Entry Supervisor shall cancel the entry permit.
    - Re-evaluate the space to determine how the hazardous atmosphere developed.
    - Take action to protect personnel before any subsequent activity to re-enter the space takes place.
    - Re-issue the Dee Cramer, Inc. Confined Space Entry Permit before allowing Entrants to re-enter the space.
    - Employees or their representatives are entitled to request additional monitoring at any time.
- The permit must be terminated when the entry operations are complete or when permit conditions change (i.e., hazardous air monitoring results are noted, unsafe behaviors are observed, etc.).
- The minimum rescue equipment required for Permit-Required Confined Space entry is covered in the Rescue & Emergency section of this program.
- Permit-Required Confined Space entry operations will be reviewed when COMPANY believes that the requirements of this confined space program may not adequately protect personnel.
- If deficiencies are found in the program, the program will be revised and personnel will be trained in the new revisions before subsequent entries are authorized.

Pre-Job Planning and Space Preparation

The Entry Supervisor must determine that the confined space is properly isolated by blinding, disconnecting, and/or by following local Lockout/Tagout procedures.

The Entry Supervisor must discuss with all Entrants the hazards of the space, communication methods and emergency procedures during the confined space entry.

Eliminate any condition making it unsafe to open the equipment to atmosphere.

Promptly guard the opening to prevent an accidental fall through the opening and to protect each employee working in the space from foreign objects entering the space.

If applicable, wash, steam, ventilate or degas the confined space to properly free it of possible contaminants. Vent vapors to a safe location.

Do not allow unauthorized personnel to enter a confined space. Barricade and/or guard all confined spaces to prevent entry of unauthorized Entrants.

If performing hot work in the confined space, precautions must be taken consistent with the Dee Cramer, Inc. Hot Work Permit procedure.

Ensure that vehicle or other equipment exhaust does not enter the space.

Pre-Entry Safety Meeting
The Entry Supervisor must declare when the confined space is ready for entry.

The Entry Supervisor shall hold a pre-entry safety meeting to discuss all requirements and procedures with all authorized Entrant(s) and Attendant(s) involved with the entry. He/she will discuss other concerns such as previous contents, vessel coating, PPE required etc., during this meeting.

The Entry Supervisor must coordinate entry operations when employees of more than one company are working simultaneously in the confined space. This coordination is necessary so that one company's work does not endanger the employees of another company.

Equipment
Check all work equipment to ensure that it has the proper safety features and is approved for the locations where it will be used. The Entry Supervisor shall ensure that all equipment is properly maintained in a safe condition and that Entrants use the equipment properly.

The following equipment must be considered and may be required when entering a confined space:

- Atmospheric Testing and Monitoring Equipment.
- Barriers, Shields, and Signs – Post signs and barricades outside all Permit-Required Confined Spaces to notify personnel that a confined space entry is in progress and unauthorized entry is prohibited. Any signs used must state "Danger – Permit Entry Confined Space" along with the proper warning word such as "Asphyxiant, Flammability or Toxic Hazard". All barricades must be capable of preventing a person from inadvertently walking into or kicking an object into the space.
- Communications Equipment – Only use intrinsically safe equipment in areas where a hazardous atmosphere may exist. Use a communication system that will keep the Attendant in constant, direct

communication with the Entrant(s) working in the confined space. Also, use a communication system that allows the Attendant to summon help from rescue or emergency service.

- Entry and Exit Equipment – (For example: ladders may be needed for safe entry and exit).
- Lighting Equipment – Needed for safe entry, work within the space and exit. Lighting equipment used in the confined space must be certified safe for the location.
- Portable electric lighting used in wet and/or other conductive locations (drums, tanks, vessels) must be operated at 12 volts or less. 120 volt lights may be used if protected by a ground-fault circuit interrupter.
- Personal Protective Equipment – Ensure that personnel wear the required personal protective equipment. For respiratory protection requirements, refer to the Respiratory Protection Program.
- Rescue and Emergency Equipment – Except if provided by outside rescue services.
- The Attendants must also have an approved first aid kit.
- Vacuum Trucks – When used, trucks must be properly grounded or bonded to prevent static sparks.
- Ventilating Equipment – Local exhaust air movers used to obtain acceptable atmospheric entry conditions (e.g., Copus air movers).
- Other – Any other equipment necessary for safe entry into and rescue from permit required confined spaces.

Air Monitoring

- Before an employee enters the space, the internal atmosphere shall be tested, with a calibrated direct-reading instrument, for oxygen content, for flammable gases and vapors, and for potential toxic air contaminants, in that order. Monitoring of the space must inform the entrants of the potential hazards and results and they must participate in the permit review and signing.
- Air shall be periodically test while continuous ventilation is applied.
- Any employee, who enters the space, or that employee's authorized representative, shall be provided an opportunity to observe the pre-entry testing required by this paragraph.
- Employees or their representatives are entitled to request additional air monitoring at any time.

Ventilation

Continuous forced air ventilation must be used and tested as follows:

- An employee may not enter the space until the forced air ventilation has eliminated any hazardous atmosphere;
- The forced air ventilation shall be so directed as to ventilate the immediate areas where an employee is or will be present within the space and shall continue until all employees have left the space;
- The air supply for the forced air ventilation shall be from a clean source and may not increase the hazards in the space.
- The atmosphere within the space shall be periodically tested as necessary to ensure that the continuous forced air ventilation is preventing the accumulation of a hazardous atmosphere. Any employee, who enters the space, or that employee's authorized representative, shall be provided with an opportunity to observe the periodic testing and may request additional monitoring at any time.
- If a hazardous atmosphere is detected during entry each employee shall leave the space immediately and the space shall be evaluated to determine how the hazardous atmosphere developed; and measures shall be implemented to protect employees from the hazardous atmosphere before any subsequent entry takes place.

Multiple Employer Procedure

In order not to endanger the employees of any other employer, the Entry Supervisor shall:

- Verify that all contractor employees have been trained in confined space and that all contractor employees fully understand the COMPANY procedures pertaining to Confined Space.
- Inform the contractor that the workplace contains permit spaces and that permit space entry is allowed only through compliance with a permit space program meeting the requirements of this section.
- Apprise the contractor of the elements, including the hazards identified and the employees experience with the space, that make the space in question a permit space.
- Inform the contractor of any precautions or procedures that COMPANY has implemented for the protection of employees in or near permit spaces where contractor personnel will be working.
- Coordinate entry operations with the contractor, when both COMPANY personnel and contractor personnel will be working in or near confined spaces.
- Debrief the contractor at the conclusion of the entry operations regarding the permit space program followed and regarding any hazards confronted or created in confined spaces during entry operations.
- In addition to complying with the confined space requirements that apply to all employees; each contractor, who is retained to perform permit space entry operations, shall:
    - Obtain any available information regarding confined space hazards and entry operations from the COMPANY Entry Supervisor.
    - Coordinate entry operations with the Dee Cramer, Inc. Entry Supervisor, when both Dee Cramer, Inc. personnel and contractor personnel will be working in or near permit spaces.
    - Inform Dee Cramer, Inc. of the confined space program that the contractor will follow and of any hazards confronted or created in the confined space, either through a debriefing or during the entry operation.

Issuance/Reviewing of Permit

Only when all pre-entry requirements are satisfied, the Entry Supervisor shall issue a completed and signed confined space permit. The confined space permit is valid for one shift.

In the event of any unauthorized entry, employee complaints, a hazard not covered by the permit, the occurrence of an injury or near miss the entry permit shall be cancelled and a review shall be conducted to provide employee protection and for revising the program prior to authorizing subsequent entries.

An annual review of this program, using the cancelled permits retained within 1 year after each entry shall be conducted by the HSE Manager to revise the program as necessary, to ensure that employees are protected. If no confined space entries were performed during a 12 month period, no review is necessary.

Termination and Closing or Cancelling of Permits

The Entry Supervisor shall terminate the confined space permit, at the end of the job operation, at the end of the shift or when the Entry Supervisor or Attendant determine that conditions in or near the confined space have changed and is hazardous to the Entrants.

The Entry Supervisor shall, at the conclusion of entry operation, close out the permit and provide the safety department the original copy of the Confined Space Permit.

Procedures for Summoning Rescue Services, Rescuing Entrants, First Aid and Unauthorized Personnel During Rescues

Rescue service must be on-site for immediately dangerous to life and health (IDLH) conditions while work is being performed. Rescue services must be either:

- Provided by the host facility,
- Provided by an outside service which is given an opportunity to examine the entry site, practice rescue and decline as appropriate, or
- Provided by Dee Cramer, Inc. or the job owner by selecting a rescue team that is equipped and trained to perform the needed rescue services.
- The Attendant shall order the other Entrants not to move the injured nor allow untrained or unauthorized workers into the space that are not trained to handle a confined space rescue.
- Safety Data Sheet's for substances that an injured Entrant was exposed to must be provided to the medical facility treating the injured worker.

Permit-Required Confined Space Rescue

- When the Attendant becomes aware of the need for rescue, the Attendant shall immediately summon the onsite rescue team by the agreed upon communication method, verbally, radio or cell phone, without leaving the vicinity of the confined space.
- The Attendant shall prevent unauthorized personnel from attempting a rescue.
- After the rescue team has been notified, the Attendant shall alert the Entry Supervisor of the emergency via the same communication methods.
- The preferred means of providing rescue service is through the use of a qualified outside rescue service vendor (client host). The outside rescue service vendor must be:
    - Informed of the hazards that they may confront during a rescue;
    - Provided access to the Permit-Required Confined Space to examine the entry site, practice rescue, and decline as appropriate.
    - Access to the space allows the rescue service and local supervision to jointly develop appropriate rescue plans.
    - If the host operator is designated to provide rescue services for COMPANY, the agreement of services must be included in contract for the job.
- If COMPANY employees are to perform Permit-Required Confined Space rescues, they must be:
    - Provided and trained in the use of the proper personal protective equipment necessary to make the rescue;
    - Provided PPE at no cost
    - Trained to perform the assigned duties;
    - Required to practice making rescues at least once every 12 months;
    - Trained in basic first aid and CPR.
    - A minimum of one member of the rescue team must hold a current certification in first aid and CPR.

Non-entry Rescue

- To facilitate non-entry rescue, an Entrant must be attached to a retrieval system whenever he/she enters a Permit-Required Confined Space with a vertical depth of more than 5 feet.
- The retrieval equipment is not required if it will increase the overall risk of the entry, e.g., creating an entanglement hazard, or will not contribute to the rescue of the Entrant.
- Each Entrant shall use a full body harness equipped with a "D" ring located between the shoulders or above the head.
- Wristlets may be used instead of the full body harness, if the use of the full body harness is not feasible or creates a greater hazard *and* that using wristlets is the safest and most effective alternative.
- The retrieval line must be attached to the "D" ring and the other end of the retrieval line attached to a retrieval device or fixed point located outside the space so that rescue can begin as soon as the rescuer becomes aware that rescue is necessary.

Training

Training shall be provided so that all employees whose work is regulated by this program acquire the understanding, knowledge, and skills necessary for the safe performance of the duties assigned to them.

Training shall be provided to each affected employee, before the employee is first assigned duties under this program, if a new hazard has been created or special deviations have occurred and before there is a change in assigned duties.

The employee shall be retrained:

- Whenever there is a change in confined space operations that presents a hazard about which an employee has not previously been trained.
- Whenever the supervisor has reason to believe either that there are deviations from the permit space entry procedures required by this section or that there are inadequacies in the employee's knowledge or use of these procedures.

The training shall establish employee proficiency in the duties required by this program and shall introduce new or revised procedures, as necessary.

The supervisor shall certify that the training required by this program has been accomplished.

- The certification shall contain each employee's name, the signatures or initials of the trainers, and the dates of training.
- The certification shall be available for inspection by employees, their authorized representatives, management, clients and the safety department.

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Safety Disciplinary Policy

Employees found to be in violation of any Dee Cramer, Inc. safety policies are subject to disciplinary actions. The extent of the disciplinary actions will be based on two separate types of violations, Minor and Major.

Minor: If an employee engages in conduct which is unlikely to result in a serious on-the-job injury or illness or death, but is conduct which is in violation of Company rules, the following discipline will occur:

First Occasion:	Verbal Warning (must be documented as verbal in personnel record)
Second Occasion:	Written Warning
Third Occasion:	Further Disciplinary Actions Up To And Including Termination

Major: If an employee engages in conduct which could result in a serious on-the-job injury or illness or death, and that conduct is contrary to Company rules or is unsafe whether or not in violation of a specific Company rule, the following discipline will occur:

First Occasion:	Written Warning And Actions Up To And Including Termination by severity
Second Occasion:	Termination

Depending on the severity of the violation, Dee Cramer, Inc. holds the exclusive right to terminate any employee immediately, without regard for this disciplinary policy.

Any employee who is terminated due to safety violations for the first time **may** be eligible to become employed by Dee Cramer after a period of 12 full calendar months. Any employee who is terminated by Dee Cramer, Inc. on a second occasion will not be able to be employed by Dee Cramer at any future time.

Purpose

The purpose of this program is to provide procedures and guidelines to eliminate all injuries resulting from possible malfunctions, improper grounding and/or defective electrical tools. This program applies to all sites, employees and contractors and shall be used on owned premises and all job sites.

Definitions

Competent Person - one 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.

Ground Fault Circuit Interrupter - a device for the protection of personnel that functions to de-energize a circuit or portion thereof within an established period of time when a current to ground exceeds some predetermined value that is less than that required to operate the overcurrent protective device of the supply circuit.

Responsibilities

Supervisors are designated as competent persons for the Assured Equipment Grounding Conductor Program and are responsible for program execution. One or more competent persons must be designated (as defined in 1926.32(f) to implement and execute the program.

Employees are responsible for following the requirements of this program, to perform visual inspections and to take defective equipment out of service.

Procedures and Guidelines to Eliminate Injuries from Possible Malfunctions, Improper Grounding and/or Defective Electrical Tools

The following procedures and guidelines are designed to eliminate all injuries resulting from possible malfunctions, improper ground and/or defective tools.

Assured Grounding Site Program Requirement
An assured grounding conductor program must be implemented on all Dee Cramer sites covering all cord sets, receptacles which are not part of the building or structure & equipment connected by cord and plug which are available for use or used by employees.

Ground Fault Circuit Interrupters
All 120-volt, single-phase 15 and 20 ampere receptacle outlets on construction or maintenance sites, which are not part of the permanent wiring of the building or structure and which are in use by employees, shall have approved ground fault circuit interrupters for personnel protection.

- All hand portable electric tools and extension cords shall use a GFCI.
- Additionally, approved GFCI's shall be used for 240-Volt circuits in the same service as described above.
- The GFCI must be the first device plugged into a permanent receptacle.
- The GFCI must be tested before each use by depressing the test button on the GFCI.

Assured Equipment Grounding Conductor Program

The Assured Equipment Grounding Conductor Program (AEGCP) shall cover all cord sets, receptacles not a part of the permanent wiring of a structure and equipment connected by cord and plug on all construction and maintenance sites.

This written description of the program shall be made available for inspection and copying by MIOSHA and any affected employee.

Restrictions for Use of Equipment that Does Not Meet Requirements

Restrictions for the use of equipment that does not meet requirements or if is found to be defective shall be applied and enforced. Any equipment which has not met the requirements of this program shall not be available or permitted to be used by Dee Cramer. Damaged items shall not be used until repaired. If the equipment is not fit for purpose it shall be removed from service, red tagged and returned to the warehouse for repair/replacement.

How Often Inspection of Cords and Equipment are to be Made

Daily Visual inspections – The following shall be visually inspected before each day's use for external defects (such as deformed or missing pins or insulation damage) and for indication of possible internal damage:

- Cord sets;
- Attachment caps;
- Plug and receptacle of cord sets;
- Any equipment connected by cord and plug (with the exception of cord sets and receptacles which are fixed and not exposed to damage) such as deformed or missing plug, and
- Insulation damage
- Damaged items shall not be used until repaired or shall be discarded.
- Damaged items shall be tagged "DO NOT USE", removed from service until repaired and tested.

How and When Tests are Performed and What Records are Maintained

All equipment grounding conductors shall be tested for continuity and shall be electrically continuous.

Each receptacle and attachment cap or plug shall be tested for correct attachment of the equipment grounding conductors. The equipment grounding conductor shall be connected to its proper terminal.

When tests are performed:

- Before each use.
- Before equipment is returned to service following any repairs.
- Before equipment is used such as when a cord has been run over.
- At intervals, not to exceed 3 months.

Tests performed as required by this program shall be recorded as to the identity of each receptacle, cord set and cord and plug connected equipment that passed the test and shall indicate the last date tested or interval for which is was tested. This record shall be kept by means of logs, color coding or other effective means and shall be

maintained until replaced by a more current record. These records shall be made available at the job site for inspection by the Assistant Secretary and any affected employees.

All tested cord sets and cord and plug-connected equipment shall be marked, one or both ends, with colored tape to denote the quarter that the tests were performed. Only the colored tape for the current quarter should be showing, all other colors should be removed. The below color code chart that must be followed for marking.

Quarter #	Month	Color of Tape to Apply to Cords
1	Jan - Mar	White
2	Apr - Jun	Green
3	Jul – Sept	Red
4	Oct - Dec	Orange

How to test:

GFCI Cord/Pigtail –

For the daily tests - press the test button on the Pigtail. It should trip the GFCI, not the circuit in the building. Press the reset button to re-energize.

For quarterly tests - Plug GFCI Tester into the pigtail. Make sure the correct lights on the tester light up per the diagram on the tester. Then press the test button on the tester, it should trip the circuit on the GFCI pigtail only. Press the reset button to re-energize.

Extension Cord – Plug GFCI Tester into the end of the extension cord. Plug the cord into a power source. Confirm the correct lights on the tester are lit per the diagram. *DO NOT PUSH THE TEST BUTTON, it could trip the breaker.*

Tools with Ground –

Clip one end of the Continuity tester onto the ground of the plug. Touch the other end of the tester to any metal part of the body on the tool. The tester should light if the ground is good. Next step, is to test the other two prongs on the cord across to the body. There should not be any lights on the tester.

Tools without Ground –

Clip one end of the Continuity Tester onto one of the prongs of the tool or charger. Touch the other end to any metal part of the body or charger. There should not be any lights on the tester. Now test the other prong.

GFCI Test Kit Contents:

(1) GFCI Tester
(1) Continuity Tester
(1) White Tape
(1) Green Tape
(1) Red Tape
(1) Orange Tape
(1) Assured Grounding Program Booklet
(1) Storage Box

GCFI Tester

Continuity Tester

Purpose

The purpose of this program is to establish and implement written procedures for compliance to inform personnel of the potential exposure to electrical hazards in operations and to provide guidelines for to use when dealing with those operations.

Dee Cramer, Inc. must ensure that all electrical equipment shall be installed and guarded so that adequate provision is made for the safety of persons and property and for the protection of the electrical equipment from mechanical or other injury to which it is liable to be exposed.

Scope

This program is applicable to all employees. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Dee Cramer, Inc. employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Key Responsibilities

Managers and Supervisors

- For ensuring to implement and enforce the electrical safety program and to ensure that workers must be informed of the potential electrical hazards before being permitted to do work in proximity to energized electrical conductors or equipment.
- To ensure all electrical installations, equipment, apparatus and appliances shall be in conformity with the requirements of the local, provincial and national regulatory codes.
- To ensure only approved electrical equipment is used by workers and that the electrical equipment is:
    - Approved for the intended use and location of the electrical equipment;
    - Maintained in proper working condition and capable of safe operation; and
    - Tested in accordance with the manufacturer’s recommendations

Employees

- Following the requirements in the electrical safety program.

Procedure

During COMPANY work there are times when overhead or buried lines may be present. Dee Cramer, Inc. staff will use hazard identification and assessment methods to document hazards and corrective actions needed to eliminate employee exposure to potential electrical hazards.

Qualifications of Electrical Workers

Electrical work may only be performed by competent/qualified workers. No worker shall connect, maintain, or modify electrical equipment or installations unless the worker is an certified electrician. A worker who does not meet the requirements may insert an attachment plug cap on the cord of electrical equipment or an electrical tool into, or remove it from, a convenience receptacle.

Dee Cramer, Inc. shall ensure that the qualified electrician performing electrical work de energizes, isolates and locks out and connects to ground electrical equipment on which work is to be done in a lawfully required manner, removes any potential stored power and does not re-energize the equipment until the work has been completed and all persons in the immediate vicinity are in a safe location.

PPE and Tools

Personal protective equipment must be worn for protection from electrical shock and/or arc flash. A worker shall use mats, shields or other protective devices or equipment, including personal protective equipment, adequate to protect the worker from electrical shock and burn.

Only non-conductive tools and equipment may be used while performing electrical work. Tools and other equipment that are capable of conducting electricity and endangering the safety of any worker shall not be used in such proximity to any live electrical installation or equipment that they might make electrical contact with the live conductor.

Safe Work Practices to Prevent Electric Shock

Safe work practices shall be employed to prevent electric shock or other injuries resulting from either direct or indirect electrical contacts when work is performed near or on equipment or circuits which are or may be energized. Additional practices include:

- Only nonconductive hardhats are allowed for use where there is a potential for injury from electric shock or burns due to contact with energized parts.
- Work shall not be done on an energized electrical conductor or equipment that has a voltage of more than 750 volts unless 2 or more authorized personnel are present while the work is being performed.
- COMPANY must ensure that the path to ground from circuits, equipment, or conductor enclosures shall be permanent and continuous, shall have ample ampacity to conduct safely and currents liable to be imposed on it, and shall have impedance sufficiently low to limit the voltage above ground and to facilitate the operation of the over current devices in the circuit.
- Equipment with defective electrical components is immediately removed from service. Defective electrical equipment and tools that may pose a hazard shall be immediately disconnected, removed from service and tagged as being defective.
- COMPANY shall ensure that all operating electrical equipment is kept in safe and proper working condition. Electrical equipment maintained for emergency service will be periodically inspected and tested by qualified personnel as necessary to ensure its fitness for service.
- Infrequently used electrical equipment maintained for future service shall be thoroughly inspected by qualified personnel before use in order to determine its fitness for service.
- All wire joints or connections are to be fitted with an approved cap or other approved cover, enclosed in an approved box or where the wire joints or connections are not permanently installed be protected from damage by another approved means and all dead, abandoned or disused electrical conductors or equipment are removed from the work area or disconnected and secured to prevent inadvertent energization.

- Only CSA approved electrical equipment and devices used in electrical installations within the jurisdiction of the local regulatory requirements shall be approved and shall be of a kind or type and rating approved for the specific purpose for which it is to be employed.

Electrical Fire Safety

- Dee Cramer, Inc. shall ensure that electrical installations shall be made so that the probability of spread of fire through fire stopped partitions, floors, hollow spaces, firewalls or fire partitions, vertical shafts, or ventilating or air-conditioning duct is reduced to a minimum. Where a fire separation is pierced by a raceway or cable, any openings around the raceway or cable shall be properly closed or sealed in compliance with the National Building Code of Canada.
- Dee Cramer, Inc. shall ensure that a fire extinguisher approved for Class C fires is readily available to workers working on or near energized high voltage electrical equipment.
- Dee Cramer, Inc. will ensure that in locations where explosive or flammable materials or gases are present, special precautions shall be observed including that repairs or alterations shall not be made on any live equipment and fits or seals in enclosures shall be maintained in their original safe condition.

Signage, Markings and Warnings

Warning techniques will be used to protect employees from injury by electrical equipment. These include:

- Safety signs or tags will be used when necessary to warn employees about electrical hazards.
- Electrical equipment such as switchboards, panel boards, industrial control panels, meter socket enclosures and motor control centres that are installed in other than dwelling units and are likely to require examination, adjustment, servicing or maintenance while energized shall be field marked to warn persons of potential electric shock and arc flash hazards. The markings shall be located so that it is clearly visible to persons before examination, adjustment, servicing, or maintenance of the equipment.
- Barricades, along with safety signs or tags, will be used where necessary to prevent or limit employee access to work areas exposing employees to exposed energized equipment. The barricades should not be conductive if the potential for electrical contact exists.
- Where signs and barricades do not provide sufficient warning and protection from electrical hazards, an attendant must be stationed to warn and protect employees.
- Electrical control panels have their covers permanently marked: DANGER" "HIGH VOLTAGE" and must have an approved rubber mat in front of the panel.
- Notices reading "DANGER" "HIGH VOLTAGE" shall be placed in prominent positions in proximity to energized electrical equipment, operating at over 750 volts, which may be accessible to workers.
- Access to electrical control rooms and enclosures is restricted. The entrance to a room or similar enclosure containing exposed live electrical parts shall have a conspicuous sign, warning of the danger, and forbidding entry by unauthorized persons.
- All electrical panel switches must be legibly marked to indicate what they control. The markings must be durable to withstand the service environment.
- For electrical powered equipment in the shop: air compressors, fans, etc., controls must also be labelled unless the location of the switch makes it obvious what the control switch operates.

Working With and/or Near Exposed Energized and De-Energized Parts

The following applies to work on exposed energized and de-energized parts and/or near enough to them to expose the employee to any electrical hazard they present.

Lockout/Tagout

Lockout Tagout is used before performing electrical work. The power supply to electrical installations, equipment, or conductors shall be disconnected, locked out of service, and tagged before any work is done, and while it is being done, on or near live exposed parts of the installations, equipment, or conductors. Lockout Tagout requirements do not apply if it is not practical to disconnect electrical installations, equipment, or conductors from the power supply before working on, or near, live exposed parts of the installations, equipment, or conductors. The worker shall use rubber gloves, mats, shields, and other protective equipment and procedures adequate to ensure protection from electrical shock and burns while performing the work on live exposed parts.

See Dee Cramer, Inc. Lockout/Tagout Program.

Dee Cramer, Inc. facilities will have the necessary equipment to Lockout and Tagout breakers.

If more than one worker is involved in Lockout/Tagout the worker who disconnected and locked out the power supply will communicate the purpose and status of the disconnecting and locking out.

If a tag is used as a means of communication, the tag:

- Shall be made of non-conducting material;
- Shall be secured to prevent its inadvertent removal;
- Shall be placed in a conspicuous location;
- Shall state the reason the switch is disconnected and locked out;
- Shall show the name of the worker who disconnected and locked out the switch; and
- Shall show the date on which the switch was disconnected and locked out.

Guarding

- Work shall not be done in or around an area or structure in proximity to energized electrical conductors or equipment which are normally isolated by position or elevation, unless the electrical connections, conductors or equipment are provided with cabinets or guards which will effectively prevent contact by a worker, or by equipment being used or handled.
- Bare live parts shall be guarded against accidental contact by means of approved cabinets or other forms of approved enclosures except where local codes exempts and cabinets or guards shall meet the specifications of an authority acceptable to regulatory authorities.
- All switches, receptacles, luminaries and junction boxes shall be fitted with a cover that is approved for the intended use and location of the cover.

Egress

- Dee Cramer, Inc. shall ensure that passageways and working space around electrical equipment shall not be used for storage and shall be kept clear of obstruction and be arranged to give authorized persons ready access to all parts requiring attention.

- A minimum working space of 1 meter with secure footing shall be provided and maintained about electrical equipment such as switchboards, panel boards, control panels, and motor control centres that are enclosed in metal, except that working space is not required behind such equipment where there are no renewable parts such as fuses or switches on the back and where all connections are accessible form locations other than the back.
- Each room containing electrical equipment and each working space around equipment shall have suitable means of egress (walk areas, corridors, doors, etc.), which shall be kept clear of all obstructions.
- Access to electrical equipment must be kept free of obstruction and allow easy access to all parts which may require maintenance.
- Special care will be taken to ensure hazardous or flammable material must not be stored or placed close to or in dangerous proximity to any electrical equipment.
- For outdoor installations, arc producing electrical equipment shall not be installed within 1 meter from the discharge of a combustible gas relief device or vent.

Hazardous Locations

Hazardous locations will be classified as listed below:

- Class I: Locations in which flammable gases or vapours are or may be present in the air in quantities sufficient to produce explosive gas atmospheres.
- Class II: Locations in which there is a presence of combustible dusts or electrically conductive dusts.
- Class III: Locations in which there is a presence of easily ignitable fibres but in which such fibres are not likely to be in quantities sufficient to produce ignitable mixtures.

Where ever reasonably practicable no electrical equipment or devices shall be used or installed within hazardous locations unless the equipment is essential to the process being carried on therein.

Dee Cramer will ensure the use or installation of electrical devices be essential within a hazardous location, only electrical equipment rated and approved for use by local regulatory code with the specific gas, vapour, mist or dust hazard which may be present within the hazardous location shall be used.

Service equipment, panel boards, switchboards, and similar electrical equipment shall, where practicable, be located in rooms or sections of the building in which hazardous conditions do not exist.

Electrical equipment shall be adequately ventilated to prevent the development around electrical equipment of ambient air temperatures in excess of those normally permissible for such equipment.

Adequate illumination shall be provided to allow for safe operation and maintenance of electrical equipment. Employees may not enter spaces containing exposed energized parts unless illumination is provided that enables the employees to work safely.

Use of Portable Electric Equipment

- Portable equipment must not be handled in any way that would cause damage. Electrical cords cannot be used for raising or lowering equipment or be fastened by staples or otherwise hung in a manner which could cause damage to the outer insulation.

- Portable electrical equipment used outdoors or in damp locations is equipped with ground fault circuit interrupters (GFCI). When used outdoors or in wet locations, portable electrical tools shall be protected by a ground fault circuit interrupter installed at the receptacle or on the circuit at the panel.
- Extension cords and cords on equipment must be visually inspected before use or at the beginning of each shift to determine if the damage (loose parts, deformed or missing pins, damage to the outer cover or insulation, or pinched/crushed outer jacket) exists. A visual inspection is not required if equipment/cords remain connected and are not exposed to damage. All defective or damaged cords and equipment must be removed from service immediately until repaired and tested if they might expose an employee to injury.
- Cord-connected electrical equipment and tools must be adequately grounded. Cord-connected electrical equipment and tools shall have a casing that is adequately grounded. This does not apply to cord-connected electrical equipment or tools that are adequately double-insulated and whose insulated casing shows no evidence of cracks or defects, and/or a portable electrical generator in which the equipment is not exposed to an external electric power source if the casings of portable electrical tools connected to the generator are bonded to a non-current-carrying part of the generator).
- Only equipment and codes approved for use in wet locations may be used on job locations covered with water or conductive liquids or where employees are likely to contact conductive liquids.
- Employee's hands must be dry when plugging or unplugging energized equipment. Also, if energized plugs or receptacles are wet or could otherwise provide a conducting path, only insulating protective equipment may be used for handling the connection devices.
- When a portable luminaire is used, COMPANY shall ensure that the electrical extension cord and fittings are approved for the intended use and location of the extension cord and fittings and are properly maintained and the electrical extension cord is not used to supply power to any equipment other than the portable luminaire unless the cord meets the proper requirements.

Working Under Overhead Lines & Clearance Distances

The lines shall be deenergized and grounded or other protective measures shall be provided before work is started.

When Dee Cramer, Inc. personnel are working in an elevated position near overhead lines or have equipment elevated, the person and the longest conductive object he/she may contact cannot come closer to any unguarded, energized overhead line than specified below:

- For voltages to ground 50kV or below – minimum 10 ft. Clearance
- For voltages to ground over 50kV – minimum 10 ft. clearance plus 4 inches for every 10kV over 50kV.

NOTE: For voltages encountered with overhead power lines, objects which do not have an insulating rating for the voltage involved are considered conductive.

Any vehicle or mechanical equipment capable of having structure parts elevated near energized overhead line of 50kV or less must be operated so that a clearance of 10 ft. is maintained. If the voltage is greater than 50kV, the clearance must be increased 4 inches for every 10kV. The following conditions may warrant these clearance requirements:

- If the vehicle is in transit with its structure lowered, the clearance from 50kV or less overhead lines may be reduced to 4 feet. If the voltage is greater than 50kV, the clearance must be increased 4 inches for every 10kV.

If adequately rated insulating barriers are installed to prevent contact with the lines and are not part of or an attachment to the vehicles or its raised structure, the clearance may be reduced to a distance within the designed working dimensions of the insulating barrier.

Emergency Procedures

The following emergency procedures shall be required as training to be completed and are to be followed if a person comes in contact with exposed energized electrical equipment and that contact may affect his or her safety or health:

When Closing Contacts at Electrical Control Panels

- If personnel must touch anything on an electrical control panel, first check it with a voltage tester (contact or non-contact). If not available, tap it with the back of your hand. (Prevents hand from grabbing)
- Before operating switches or breakers ensure all protective panels are closed and properly fastened.
- To disconnect the electrical power from the equipment, always shut the control switch off first, before shutting the main switch off.
- To connect the electrical power, always ensure all control switches are off before engaging the master switch.
- When operating the control or master switch, never stand in front of the electrical panel. Always stand off to the side of the panel to operate the switch. Never look at the control panel. Should the panel explode, your eyes or body must not be in a direct line with the explosion.

Contact with Normal Electrical Current

- Don't touch the victim unless the power is off.
- Unplug the equipment or turn the power off at the main control area.
- If you can't turn off the power, use a dry wooden board or broom handle to separate the victim from the power source.
- Call for emergency medical assistance.
- If the victim is not breathing, perform mouth-to-mouth resuscitation, if trained.
- If the victim is conscious, keep them calm. Lay them on their back. Elevate their feet. Cover them with a blanket.

Contact with High Voltage Line

- Don't try to separate the victim from the power source.
- Don't touch the victim unless you are absolutely certain the victim is not in contact with electrical wire.
- Call for emergency help and medical assistance.

Electrical Fire

- Unplug the burning or smoking appliance.
- Get everyone out at once.
- If the fire is small, use a CO2 or dry powder fire extinguisher. Never put water on an electrical fire.

- Call for emergency assistance or the fire department. Tell the dispatcher your name, address, and that you have an electrical fire.

Training Requirements for Unqualified Persons

All Dee Cramer, Inc. personnel shall be trained annually in the requirements of this program and general electrical safety safe work procedures. Specific elements include:

- Employees who face a risk of electric shock but who are not qualified persons shall be trained and familiar with electrically related safety practices.
- Employees shall be trained in safety related work practices that pertain to their respective job assignments.
- Training shall include clearance distances based on voltage (See Overhead Power Lines).
- Training shall also include emergency response for electrical contact.

All training must be documented and kept on file.

Purpose

Each Dee Cramer, Inc. location shall have a written Emergency Action Plan, appropriate to the hazards of the workplace, in order to respond to an emergency that may require rescue or evacuation.

Each Emergency Action Plan shall be prepared to reflect all known probable emergency conditions which may arise from within the workplace and from adjacent workplaces, the minimum of which will include fire or other emergencies.

The emergency action plan must be available to all employees to review. An emergency action plan must be in writing, kept in the workplace and available to employees for review. However, if a site has 10 or fewer employees the plan may be orally to employees.

Emergency Response Planning, Issuing and Annual Review Guidelines

Emergency Procedures shall be issued and discussed with all new/transferred personnel upon arrival for assignment.

Emergency Action Plans shall be established, implemented, reviewed, maintained and updated annually in conjunction with:

- Client emergency services department requirements.
- Dee Cramer, Inc.safety staff and management.
- The requirement to ensure the plan is up to date to reflect current circumstances at the workplace.

The plan is to be reviewed before the job and when conditions warrant and should be used for routine and non-routine emergencies as well as changes in operation, and products or services which warrant new emergencies situations.

Reviewing the Emergency Action Plan with Employees
A review of the emergency action plan should occur with employees:

- When the plan is developed or the employee is assigned initially to a job.
- When the employee's responsibilities under the plan change.
- When the plan is changed.

Procedures for Emergency Evacuation Planning

The emergency action plan must include procedures for emergency evacuation. An emergency action plan must include at a minimum procedures for emergency evacuation, including type of evacuation and exit route assignments.

The individual site evacuation procedure shall be appropriate to the risk must be developed and implemented to:

- Notify staff, including the first aid attendant, of the nature and location of the emergency,
- Evacuate employees safely and procedures to account for all employees after evacuation,

- Check and confirm the safe evacuation of all employees,
- Notify the fire department or other emergency responders, and
- Notify adjacent workplaces or residences which may be affected if the risk of exposure to a substance extends beyond the workplace. Notification of the public must be in conformity with the requirements of other jurisdictions, including provincial and municipal agencies.

List of Potential Emergencies

The emergency action plan must include procedures for reporting a fire or other emergency. An emergency action plan must include at a minimum procedures for reporting a fire or other emergency.

Each location shall conduct a risk assessment for hazards posed by potential hazardous substances from accidental release, fie or other such emergencies that could cause an evacuation or rescue and list the potential emergencies for Dee Cramer, Inc. operations. Procedures for each of these potential emergencies shall be contained within the Emergency Action Plan. Examples include:

- Fire
- Gas Leaks/Chemical Spills
- Bomb Threats
- Medical Emergencies
- Explosion
- Workplace Violence

Guidance Procedures for Potential Emergencies

Fire

- Warn others in the immediate area. Notify the appropriate emergency response personnel by phone or radio and pull the nearest fire alarm if present.
- If nearby staff have been trained, and it is safe to do so, fight the fire using a portable fire extinguisher. Remember, if in doubt get out.
- Evacuate the premises via the nearest exit and proceed to the nearest Emergency Assembly Area.
- Re-enter only after the Emergency Coordinator has given an ALL CLEAR.

Gas Leaks/Chemical Spills - Upon smelling or noticing a gas leak or unusual vapors, or a chemical spill:

- Pull fire alarm (if present) or sound warning and evacuate the premises via the nearest exit
- Proceed to the Emergency Assembly Area
- Contact local emergency response personnel by phone or radio
- Re-enter only after the Emergency Coordinator has given an ALL CLEAR.

If employees are required to control a release of a hazardous substance, to perform cleanup of a spill, or to carry out testing before re-entry, Dee Cramer, Inc. shall provide:

- Adequate written safe work procedures and documented training.
- Appropriate personal protective equipment which is readily available to employees and is adequately maintained, and

- Material or equipment necessary for the control and disposal of the hazardous substance.

Bomb Threats

- If a threat is received by phone, mail or other means, get as much information as possible.
- If the threat is received by phone, try to keep the person on the line for as long as possible. Do not hang up the phone, even after the call has been terminated.
- Contact local emergency response personnel by phone or radio.
- If a suspicious device is identified, evacuate the immediate area and notify local emergency response personnel.

Medical Emergencies

- Call for assistance by phone or radio. Give the exact location and details of the medical emergency.
- If qualified, provide basic first aid, and keep the person comfortable. Do not move the person. Do not leave him/her unattended.
- Arrange for emergency medical transportation based on the medical planning portion of the site's Emergency Action Plan.

Explosions

- Get down on the floor, take shelter under tables or desks, and protect your face and head against flying glass and debris.
- Once it is safe to do so, evacuate the premises via the nearest exit and proceed to the nearest Emergency Assembly Area.
- Re-enter only after the Emergency Coordinator has given an ALL CLEAR.

Workplace Violence

- Notify security immediately by phone or radio and report the occurrence.
- Do NOT attempt to physically intervene. Protect yourself first at all costs.

Emergency Response Equipment

Listing of Types of Emergency Equipment

Each site Emergency Action Plan shall identify, list the locations of and provide operational procedures for types of emergency equipment. For off-site locations, available emergency equipment should be identified and reviewed with workers prior to commencing work activities. Examples include:

- Living areas with an audible alarm and a fire hose cabinet.
- Emergency lighting, exit doors, dampers and fire stop flaps.
- First aid kits located throughout the facility and in vehicles.
- Portable fire extinguishers being located throughout the facility and clearly marked.
- Only authorized and trained personnel will operate emergency equipment.

Inspection & Maintenance Records

Maintenance records must be kept, including but not limited to the name of manufacturer, the type of equipment,

the date put into service, when and for what purpose the equipment has been used, the date of the last inspection and name of the inspecting person, any damage suffered, and the date and nature of any of maintenance on emergency response equipment.

Ropes and associated equipment must be inspected visually and physically by qualified employees after each use for rescue, evacuation or training purposes.

The Dee Cramer, Inc. designated representative will perform and maintain the Dee Cramer, Inc. Emergency Inspection Checklist Form on a monthly basis. The checklist shall be maintained for retention in active files for two years and in on site archives for seven years.

Media Response Plan

Dee Cramer, Inc. employees must not be interviewed by anyone unless the Legal Department has given prior approval. In most cases the Legal Department will have an attorney present for such interviews.

Note: If after Dee Cramer, Inc. personnel have received approval for an interview from the Legal Department and another party's attorney appears unannounced, you should politely adjourn the interview until the Dee Cramer, Inc. Legal Department can be contacted. Personnel must not give any work related interviews, affidavits, written or recorded statements, or depositions without the express approval from the Dee Cramer, Inc. Legal Department.

In the case of interviews of Dee Cramer, Inc. employees by non-attorneys, (law enforcement, government officials, media, etc.) you must inform the Legal Department before the interview. If the interview is taped or videotaped, you must request a copy of the tape. If the interview is reduced to writing, you must ask for a copy of any notes or statements taken. This procedure is to avoid information being misrepresented.

All media requests should be referred to the Dee Cramer, Inc. Chief Operating Officer. Unless requested to do so by the Legal Department, other company personnel are not to give interviews or make statements to the media. Management prefers that families of personnel involved in an incident receive initial notification from a Dee Cramer, Inc. representative and not the media.

Training

Dee Cramer, Inc. shall ensure training for Emergency Action Plan is delivered, documented and prepares the staff and facility for emergency conditions. Dee Cramer, Inc. will designate and train employees to assist in a safe and orderly evacuation of other employees. Requirements include:

- All employees must be given adequate instruction in the fire prevention and emergency evacuation procedures applicable to their workplace.
- The designated site representative shall provide the Emergency Action Plan orientation to all new/transferred personnel before they begin work.
- All personnel shall receive a review/update orientation at least annually, or whenever any new/revised information is to be provided.
- The Emergency Action Plan Orientation Check List shall be completed after orientation and the record maintained in the individual's training records.

- Dee Cramer, Inc. management shall ensure that contractors/consultants working in areas under the supervision of Dee Cramer, Inc. also receive the Emergency Action Plan orientation upon arrival to the area.
- Employees expected to perform duties under the Emergency Action Plan will be trained prior to assuming their roles. This will include simulated rescue or evacuation exercises and regular retraining, appropriate to the type of rescue or evacuation being provided, and training records must be kept.
- A list of trained staff responders shall be posted and maintained indicating their name, response function, their work location and what type of equipment they have been trained for.

Location and Use of Emergency Facilities

Dee Cramer, Inc. shall ensure each Emergency Action Plan lists the location and how to use emergency facilities for each work site. For off-site locations, outside services that can provide assistance in the event of an emergency should be identified and reviewed with workers prior to commencing work activities. A list shall be posted in a conspicuous area showing local emergency facilities and how to contact. Examples include:

- Client Emergency Response Department (Initial Responder for All Emergencies If Applicable)
- Local Police, Local Hospital, Poison Center (Poison Response) 1-800-332-1414, etc.

Fire Protection & Response

Dee Cramer, Inc. shall ensure each Emergency Action Plan provides fire protection and response planning within each site Emergency Action Plan and is utilized during all phases of work. As a minimum, all shall include the following:

Protection

- Smoking is not permitted except in designated 'SMOKING" areas.
- Facilities shall be designed and maintained in accordance with local fire code and regulations.
- Portable fire extinguishers shall be stationed, inspected and maintained in accordance with local fire code and regulations. Dee Cramer, Inc. personnel shall be trained in their use.
- Flammable and combustible liquids shall be properly stored.
- Employees shall report all fire safety issues to their immediate supervisor.
- Facilities shall be inspected by use of the Dee Cramer, Inc. Emergency Inspection Checklist

Response

In the event of a fire**,** personnel working in facility will adhere to the following procedure for their work area:

- Warn others in the immediate area. Notify the appropriate emergency response personnel by phone or radio and pull the nearest fire alarm if present.
- If nearby staff have been trained, and it is safe to do so, fight the fire using a portable fire extinguisher. Remember, if in doubt get out.
- Evacuate the premises via the nearest exit and proceed to the nearest Emergency Assembly Area.
- Re-enter only after the Emergency Coordinator has given an ALL CLEAR.

Roads are designated as fire lanes. Vehicles can stop there for unloading, but no parking will be allowed.

Alarm & Emergency Communication

Each Emergency Action Plan for Dee Cramer, Inc. shall contain methods to address alarms and communications in case of an emergency. For off-site locations, the method of emergency notification should be identified and reviewed with workers prior to commencing work activities.

Alarm System

A system must be in place to alert employees. The alarm system shall be distinctive and recognizable as a signal to evacuate the work area or perform actions designated under the emergency action plan. For sites with 10 or fewer employees in a particular workplace, direct voice communication is an acceptable procedure for sounding the alarm provided all employees can hear the alarm. Each Emergency Response plan will describe how to activate an alarm and what to do after either activating or hearing an alarm.

Personnel responding to any alarm shall avoid complacency. Every alarm should be treated as an actual incident until proven otherwise. Treating and responding to alarms as a routine happening can result in injuries, fatalities and destruction of property.

Communications

Dee Cramer, Inc. responders and security use telephones, cell phones and radios in conjunction with emergency response.

Rescue and Evacuation Procedures

Procedures for Rescue and Medical Services

Each site Emergency Action Plan shall address who performs recue services when required. It is the position of Dee Cramer, Inc. that all rescue and medical duties are performed by client emergency responders or local governmental responders when on their location. For off-site locations, evacuation procedures and methods of rescue shall be identified and reviewed with workers prior to commencing work activities.

At least one member of a rescue team must be a first aid attendant trained to immobilize an injured employee.

Effective communications must be maintained between the employees engaged in rescue or evacuation and support persons.

Procedure for Evacuation

Preparation for Evacuation

Each site Emergency Action Plan shall contain a procedure for evacuation if required.

The Dee Cramer, Inc. designated Emergency Coordinator will maintain an active list of all Dee Cramer, Inc. and contract emergency responders.

Critical Plant Operations Personnel

Staff designated to remain in the facility to shut down or supervise critical operations or equipment will be specifically trained and authorized by management to perform their duties before any evacuation may occur.

Evacuation Drills

Evacuation drills shall be conducted at least annually. Before conducting an evacuation drill a pre-drill assessment of the evacuation routes and assembly points shall be conducted. The pre-drill assessment is intended to verify that all egress components (stairs, doors, etc.) are in proper order and that occupants can use them safely.

Coordination Within a Facility

Emergency training and drills should also be coordinated within a Dee Cramer, Inc. facility so that key staff are involved in the planning process and are aware of their responsibilities in an emergency as well as during the drill.

Facility management also needs to be informed of the potential for the interruption in productivity and business operations. Alternatives for the continuity of critical operations need to be considered.

Procedures to Account for All Employees After Evacuation

The emergency action plan must include procedures to account for all employees after the evacuation. An emergency action plan must include at a minimum procedures to account for all employees after evacuation. Each muster or assembly point will have a blank roster for evacuees to enter their name. All completed rosters will be gathered and checked against a master list of employees assigned or checked in at the facility to verify all employees are accounted for.

Emergency Evacuation Notification and Routes

In the event of an emergency occurring within or affecting the work site, the Emergency Coordinator makes the following decisions and ensures the appropriate key steps are taken:

- Advise all personnel of the emergency.
- Activate the emergency notification sequence to alert the appropriate responders and initiate emergency notification within the building.
- Evacuate all persons to the identified assembly area and account for everyone including visitors and clients.

All personnel will proceed to the primary safe area immediately located at the identified emergency assembly area for their location.

A copy of escape routes shall be posted in all offices, at all alarm stations and at all exits.

Sweep Check by Dee Cramer, Inc. Designated Responders

- Dee Cramer, Inc. trained responders will establish a pattern that will permit covering the area in the shortest time, with a minimum of backtracking.
- When the evacuation alarm rings, stop work immediately, and conduct a sweep of the area. Ask everyone to leave the premises immediately and proceed to the identified emergency assembly area for their location.
- If you encounter smoke or flame, leave that section immediately, finish your sweep and evacuate the building by activating fire alarm pull stations. Remember, if in doubt get out.

- If anyone refuses to leave, note their name and location, and advise the client emergency services personnel.
- Meet the client emergency services personnel and advise them of your sweep or an area of smoke or flame that you were unable to check. Assist with head count and evacuation if required.
- Ensure that everyone stays at the emergency assembly area until the Emergency Coordinator has given an all clear to re-enter the building.
- In the event of inclement weather, the client will make arrangements to have buses either as temporary shelter or to transport personnel to another location.

Evacuation or Drill Evaluation

Following an evacuation or drill a response review shall be conducted and documented by the Dee Cramer, Inc. Emergency Coordinator and lessons learned share with the appropriate responders and staff using the Dee Cramer, Inc. Evacuation Report.

Emergency Response Program Management

Contact information will be provided to employees who need additional information pertaining to the plan or to their respective duties. The Dee Cramer, Inc. site manager may be contacted by employees who need more information about the plan or an explanation of their duties under the plan.

For the purpose of this Emergency Action Plan guidance the Emergency Coordinator will be designated by the Dee Cramer, Inc. site manager. His/her alternate will be the Dee Cramer, Inc. Site Safety Supervisor or otherwise designated by the site manager.

Employees performing rescue or evacuation must wear personal protective clothing and equipment appropriate to the hazards likely to be encountered.

Duties

Dee Cramer, Inc. Emergency Coordinator

The Dee Cramer, Inc. Emergency Coordinator ensures that:

- Evacuation drills are conducted on an annual basis.
- Inspections of facilities are performed monthly.
- All necessary repairs of components for evacuation paths are completed.
- Plans for the modification of any part of an evacuation path are reviewed.
- An up to date list of Fire Wardens is maintained.
- Radios and reflective vests and other response equipment are available.

During an evacuation or evacuation exercise, the Dee Cramer, Inc. Emergency Coordinator:

- Coordinates activities in accordance with either local authorities or the client Security and ERT as required.
- Coordinates Fire Wardens and informs them the nature of the emergency via handheld radios.

Following an evacuation or evacuation exercise, the Dee Cramer, Inc. Emergency Coordinator:

- Notifies Fire Wardens that it is safe to re-enter the building.

- Prepares a report following an evacuation (actual or drill).
- Reports to management for follow up or corrective actions.

Dee Cramer, Inc. Site Safety Supervisor

- Assist the Dee Cramer, Inc. Emergency Coordinator when requested.

Fire Wardens

- Be equipped with radios and reflective vests. The equipment is to be handed into the Dee Cramer, Inc. Emergency Coordinator and reissued to the next oncoming Fire Warden for the designated area.
- Be familiar with exits and muster stations for their responsible area.
- Direct residents safely out of the building to the designated muster station or to an alternate location.
- Sweep their effected area, ensuring that the alarms are properly functioning and that residents evacuate safely.
- In order to account for all employees after evacuation the fire wardens or designated personnel shall complete a head count and reconcile the evacuees with the attendance or daily housing report at the assigned muster station or alternate location.
- Radio unaccounted for personnel to Security.
- Notify personnel that they may re-enter the building when permission has been given by the appropriate authorities.

Residents, Contractors & Visitors

- All employees, users, contractors and visitors will follow the instructions of the Fire Wardens, Security, ERT, Safety Personnel, managers and supervisors when asked to evacuate the building.
- Know the two safest and most direct evacuation routes from their work area(s).
- Know the designated evacuation assembly point for the building.

Dee Cramer, Inc. Emergency Inspection Checklist

Department:	Location:	Date of Inspection:
Inspected by:	Title:	Ext:

This form is to be used monthly.

	N/A	Yes	No
EGRESS			
Is every means of egress arranged and clearly marked, so that the way to safety is unmistakable at all times?			
Are exits signs lit?			
Are there sufficient exits for the prompt escape of all employees in case of fire or other emergencies?			
Are doors that aren't exits that could be mistaken as one, clearly marked "Not an Exit"?			
Do exit doors swing out?			
Are means of egress at least 28 inches at any point and adequate width for the number of people?			
Are egresses kept clear of obstructions and materials at all times?			
Is there proper lighting for emergency exiting? (i.e. during a power failure)			
Are at least two exits by separate ways of travel available for each occupant?			
Is the minimum width of any exit way no less than 28 inches?			
Are furnishings and decorations so placed that they will not obstruct the exits, the access thereto, or the egress there from, or the visibility thereof?			
Are explosive and highly flammable furnishings or decorations prohibited?			
EMERGENCIES/EVACUATION			
Are evacuation maps posted in readily accessible places?			
Do employees know where their muster point is located?			
Do employees know area hazards, the nearest exit and alternate routes of escape?			
Do employees know the preferred means of reporting emergencies?			
Do employees know the site emergency number(s)?			
Is the site emergency number posted on or by the phone?			
Do employees know what signal indicates evacuation?			

This form is to be used monthly.

	N/A	Yes	No
Can all personnel perceive the employee alarm?			
Do employees with special assistance needs been addressed?			
Employees questioned know where the emergency shut off is for the natural gas			
FIRE PROTECTION			
Are fire hydrants accessible?			
Are fire hydrants inspected yearly and records maintained to show the date?			
Are control and operating valves locked open or electronically supervised?			
Are fire hoses maintained and periodically tested?			
Are combustible materials kept away from ignition sources?			
Are standpipe and hose system components visually inspected quarterly?			
Is the accumulation of flammable and combustible materials controlled so they do not contribute to fire emergency?			
All product, supplies, merchandise etc. not piled within 18” of Sprinkler heads			
No Combustibles within three feet of Hot Water Tank, Space Heaters and/or Electrical panels			
All Compressed Gas Cylinders tied or chained to eliminate tipping			
DETECTION AND ALARM SYSTEMS			
Are detection systems installed and maintained?			
Are all trouble alarms and fire signals investigated?			
Do detection/alarm systems shut down or reverse HVAC systems for smoke control?			
Do detection/alarm systems close smoke or fire doors?			
Do detection/alarm systems activate local alarms?			
Are alarm and PA systems periodically tested?			
PORTABLE FIRE EXTINGUISHERS			
Does everyone know where the nearest fire extinguisher is stored?			
Has the area fire extinguisher been maintenance tested within the last year and tagged to show the date?			
Are fire extinguishers accessible and the proper type for the fire hazard?			
Are employees trained in how to use fire extinguishers?			
Is there a fire extinguisher mounted within 75 ft. of any point in an area?			

This form is to be used monthly.

	N/A	Yes	No
Are the extinguishers clean and well cared for?			
Is the seal and lock pin in place?			
Clear access to extinguishers? Not blocked			
Is the extinguisher location plainly marked, so as to be visible at a distance?			
Is the extinguisher class marked on the extinguisher?			
FIRST AID / MEDICAL SUPPLIES			
Are first aid supplies stocked, clean, accessible and sanitary?			
Are there eye/body wash facilities near injurious corrosive materials?			
Is a person or persons adequately trained to render first aid available in the near proximity to the workplace?			
Are AEDs present and operators trained?			
Condition of First Aid Kits Acceptable			
Are employees/subcontractors familiar with the incident/accident reporting process?			
Do employees/subcontractors know where accident/incident forms are located?			

Date of last inspection of sprinkler system (required yearly) _____

Comment/Actions:

Dee Cramer, Inc. Evacuation Report

This form is to be used to record all emergency evacuations (including drills).

Building Details

Building Name _____ Number of Floors (including ground) _____

Designated Muster Station _____ Person Completing Form _____

Evacuation Details

Evacuation Date/Time: _____/_____ Evacuation Drill Yes ☐ No ☐

Trigger for Evacuation: Fire Alarm Activated ___ Drill ___ ERT ___ Security ___

Emergency Situation: _____

_____

Condition: Staff Only ____ All Occupants ____ After Hours ____ Unoccupied ___ Weather _____

Number of Evacuees _____ Elapsed Time to Evacuate _____ minutes

Evacuation was orderly with no panic		Yes ☐	No ☐
Mobility-impaired persons present (sight, hearing, physical, etc.)?		Yes ☐	No ☐
The majority of evacuees went to the mustering points?		Yes ☐	No ☐
Were the building occupants notified of this drill?	Not a drill ☐	Yes ☐	No ☐

Emergency Control Organization

Emergency Coordinator _____ Deputy Emergency Coordinator _____

Emergency Coordinators were stationed at the proper emergency control point?	Yes ☐	No ☐
All Fire Wardens reported to the Emergency Coordinator?	Yes ☐	No ☐
If not, who did not report in? _____		
All Fire Wardens were identifiable (vests, hard hats, flash lights)?	Yes ☐	No ☐
Control of external building exits achieved?	Yes ☐	No ☐
Did the Fire Wardens perform their duties correctly?	Yes ☐	No ☐
Evacuation maps and emergency procedures posters are up-to-date?	Yes ☐	No ☐

Building Fire & Emergency Equipment

Was the evacuation signal audible throughout the building?	Yes ☐	No ☐

Automatic closing fire doors closed when the fire alarm activated?	Yes ☐	No ☐
Card access doors automatically released when the fire alarm activated?	Yes ☐	No ☐
Fire doors and emergency exits unobstructed?	Yes ☐	No ☐

Emergency Response Members

Client: Maintenance ☐ Security ☐ Dee Cramer, Inc. Emergency Coordinator ☐ HSE ☐

Emergency Response Team Fire Brigade ☐ Ambulance ☐ Police ☐ Other: _____

Dee Cramer, Inc. Action Sheet

Issue(s)	Action(s) Required	By Who	By When	Sign Off/Date

Records

- Keep the original in your Emergency Response folder and monitor to ensure all action items completed as soon as possible. Report delays to senior management.
- Copies shall be distributed in accordance with the Dee Cramer, Inc. Site Emergency Action Plan.

Emergency Action Plan Orientation Check List

Employee Name _____ Department _____

Hire/Transfer Date _____ Orientation Date _____

[ ] Emergency Procedures

[ ] Evacuation route(s) from assigned work area

[ ] Evacuation from an unfamiliar area

[ ] Location of Emergency Assembly Areas

[ ] Receiving and following instructions during an emergency

[ ] ALL CLEAR and re-entry procedure

[ ] Reporting hazards and/or substandard conditions

[ ] Advising anyone who may require assistance during an emergency evacuation

[ ] Location of Emergency Equipment (i.e. Fire Extinguishers, etc.)

Employee Signature: _____

Orientation Conducted by: _____

Job Position/Title: _____

Sample Emergency Action Plan Core Requirements

POTENTIAL EMERGENCIES **(BASED ON HAZARD ASSESSMENT)**	The following are identified potential emergencies: • Fire • List others	
EMERGENCY PROCEDURES	In the event of a fire occurring within or affecting the work site, the Emergency Coordinator (or deputy) makes the following decisions and ensures the appropriate key steps are taken: • advise all personnel • pull the fire alarm to alert the nearest fire station and initiate all fire alarms within the building • evacuate all persons to a safe point in the assembly area and account for everyone including visitors and clients	
LOCATION OF EMERGENCY EQUIPMENT	Emergency equipment is located at: • Fire Alarm – List • Fire Extinguisher – List • Fire Hose – List	
WORKERS TRAINED IN THE USE OF EMERGENCY EQUIPMENT	(1) _____ (2) _____ (3) _____ (4) _____	
EMERGENCY RESPONSE TRAINING REQUIREMENTS	Type of Training • Use of fire extinguishers • Practice fire drills	Frequency • Orientation and annually • At the call of site management
LOCATION AND USE OF EMERGENCY FACILITIES	The nearest emergency services are located at: • List facilities	

FIRE PROTECTION REQUIREMENTS	• List all site fire protection requirements.
ALARM AND EMERGENCY COMMUNICATION REQUIREMENTS	• Pulling the fire alarm automatically alerts the fire department and initiates an alarm within the building • The fire alarm signal is (describe sound and pattern)
FIRST AID	First aid supplies are located at: • List First Aiders are: • List all names Transportation for ill or injured workers is by (describe). The contact number or radio channel is (describe).
PROCEDURES FOR RESCUE AND EVACUATION	In case of fire: • Advise all personnel • Pull the fire alarm • Evacuate all persons to a safe point in the staff parking lot and account for everyone including visitors and clients • Assist ill or injured workers to evacuate the building • Provide first aid to injured workers if required • Call emergency response personnel to arrange for transportation of ill or injured workers to the nearest health care facility if required.
DESIGNATED RESCUE AND EVACUATION WORKERS	The following workers are trained in rescue and evacuation (or describe client rescue organization): (1)_____ (2)_____ (3)_____ (4) _____
Completed on: _____ Signed: _____	

Purpose

The purpose of this program is to provide fall protection procedures to prevent injury to employees while performing work assignments at elevated levels.

Qualifications of the Person or Position That Prepares Plans

Any changes to this Fall Protection Program must be approved by the Safety Manager, who is designated the Qualified Person to prepare plans for specified work sites. This is based on training received in fall protection planning and has demonstrated skills and knowledge in the preparation of fall programs, plans and the hazards involved.

Scope

Applies to all Dee Cramer, Inc. employees who have work assignments at work levels that exceed 6 feet in height where guardrails or nets are not utilized. This includes work near and around excavations. Guardrails, safety nets, or personal fall arrest systems shall be used where feasible. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Dee Cramer, Inc. employees and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Definitions

"Anchorage" means a secure point of attachment for lifelines, lanyards or deceleration devices.

"Body belt (safety belt)" means a strap with means both for securing it about the waist and for attaching it to a lanyard, lifeline, or deceleration device.

"Body harness" means straps which may be secured about the employee in a manner that will distribute the fall arrest forces over at least the thighs, pelvis, waist, chest and shoulders with means for attaching it to other components of a personal fall arrest system.

"Buckle" means any device for holding the body belt or body harness closed around the employee's body.

"Carabineer" - see Snaphook

"Connector" means a device which is used to couple (connect) parts of the personal fall arrest system and positioning device systems together. It may be an independent component of the system, such as a carabineer, or it may be an integral component of part of the system (such as a buckle or D-ring sewn into a body belt or body harness, or a snap-hook spliced or sewn to a lanyard or self-retracting lanyard).

"Deceleration device" means any mechanism, such as a rope grab, rip-stitch lanyard, specially-woven lanyard, tearing or deforming lanyards, automatic self-retracting lifelines/lanyards, etc., which serves to dissipate a substantial amount of energy during a fall arrest, or otherwise limit the energy imposed on an employee during fall arrest.

"Deceleration distance" means the additional vertical distance a falling employee travels, excluding lifeline elongation and free fall distance, before stopping, from the point at which the deceleration device begins to operate. It is measured as the distance between the location of an employee's body belt or body harness attachment point at the moment of activation (at the onset of fall arrest forces) of the deceleration device during a fall, and the location of that attachment point after the employee comes to a full stop.

"Equivalent" means alternative designs, materials, or methods to protect against a hazard which the employer can demonstrate will provide an equal or greater degree of safety for employees than the methods, materials or designs specified in the standard.

"Failure" means load refusal, breakage, or separation of component parts. Load refusal is the point where the ultimate strength is exceeded.

"Free fall" means the act of falling before a personal fall arrest system begins to apply force to arrest the fall.

"Free fall distance" means the vertical displacement of the fall arrest attachment point on the employee's body belt or body harness between onset of the fall and just before the system begins to apply force to arrest the fall. This distance excludes deceleration distance, and lifeline/lanyard elongation, but includes any deceleration device slide distance or self-retracting lifeline/lanyard extension before they operate and fall arrest forces occur.

"Guardrail system" means a barrier erected to prevent employees from falling to lower levels.

"Infeasible" means that it is impossible to perform the inspection work using a conventional fall protection system (i.e., guardrail system, safety net system, or personal fall arrest system) or that it is technologically impossible to use any one of these systems to provide fall protection.

"Lanyard" means a flexible line of rope, wire rope, or strap which generally has a connector at each end for connecting the body belt or body harness to a deceleration device, lifeline, or anchorage.

"Leading edge" means the edge of a floor, roof, or formwork for a floor or other walking/working surface (such as the deck) which changes location as additional floor, roof, decking, or formwork sections are placed, formed, or constructed. A leading edge is considered to be an "unprotected side and edge" during periods when it is not actively and continuously under construction.

"Lifeline" means a component consisting of a flexible line for connection to an anchorage at one end to hang vertically (vertical lifeline), or for connection to anchorages at both ends to stretch horizontally (horizontal lifeline), and which serves as a means for connecting other components of a personal fall arrest system to the anchorage.

"Lower levels" means those areas or surfaces to which an employee can fall. Such areas or surfaces include, but are not limited to, ground levels, floors, platforms, ramps, runways, excavations, pits, tanks, material, water, equipment, structures, or portions thereof.

"Personal fall arrest system" means a system used to arrest an employee in a fall from a working level. It consists of an anchorage, connectors, a body belt or body harness and may include a lanyard, deceleration device, lifeline, or suitable combinations of these.

"Positioning device system" means a body belt or body harness system rigged to allow an employee to be supported on an elevated vertical surface, such as a wall, and work with both hands free while leaning.

"Rope grab" means a deceleration device which travels on a lifeline and automatically, by friction, engages the lifeline and locks so as to arrest the fall of an employee. A rope grab usually employs the principle of inertial locking, cam/level locking, or both.

"Safety Nets...Safety nets shall be provided when workplaces are higher than 25 feet above ground or water surfaces or other surfaces where the use of ladders, scaffolds, catch platforms, temporary floors, safety lines or safety belts are impractical.

> Nets shall extend 8 feet beyond the edge of the work surface where employees are exposed and shall be installed as close under the work surface as practical but in no case more than 25 feet below the work surface. Nets shall be positioned in a manner to prevent the user from coming into contact with below surfaces or structures. Proper clearance positioning of nets shall be determined by impact load testing. Work procedures shall not begin until nets are in place and have been properly tested.
>
> New nets shall meet accepted performance standards of 17,500 foot pounds minimum impact resistance as determined and certified by the manufacturers and shall bear a label of proof test. Edge ropes shall provide a minimum breaking strength of 5000 pounds.

"Self-retracting lifeline/lanyard" means a deceleration device containing a drum-wound line which can be slowly extracted from, or retracted onto, the drum under slight tension during normal employee movement, and which, after onset of a fall, automatically locks the drum and arrests the fall.

"Snaphook" means a connector comprised of a hook-shaped member with a normally closed keeper, or similar arrangement, which may be opened to permit the hook to receive an object and, when released, automatically closes to retain the object. Snaphooks are generally one of two types: (1) The locking type with a self-closing, self-locking keeper which remains closed and locked until unlocked and pressed open for connection or disconnection; or (2) The non-locking type with a self-closing keeper which remains closed until pressed open for connection or disconnection. As of January 1, 1998, the use of a non-locking snaphook as part of personal fall arrest systems and positioning device systems is prohibited.

"Unprotected sides and edges" means any side or edge (except at entrances to points of access) of a walking/working surface, e.g., floor, roof, ramp, or runway where there is no wall or guardrail system at least 39 inches (1.0 m) high.

"Walking/working surface" means any surface, whether horizontal or vertical on which an employee walks or works, including, but not limited to, floors, roofs, ramps, bridges, runways, formwork and concrete reinforcing steel but not including ladders, vehicles, or trailers, on which employees must be located in order to perform their job duties.

"Work area" means that portion of a walking/working surface where job duties are being performed.

Drawing of Components

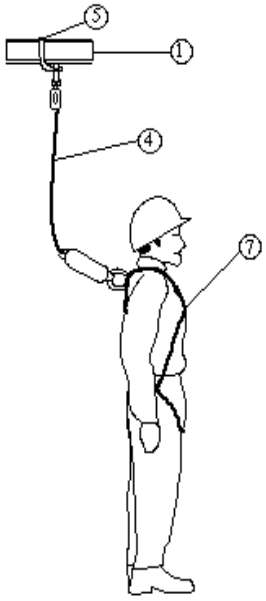


Figure A

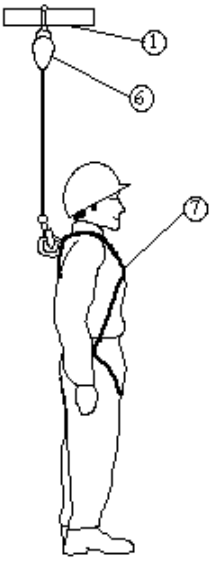


Figure B

1. Tie-off Point
2. Lifeline
3. Rope Grab
4. Shock Absorbing Lanyard
5. Cross-Arm Strap
6. Retractable Lifeline
7. Full-Body Harness
8. Restraining Belt
9. RestrainingLanyard
10. Carabineer

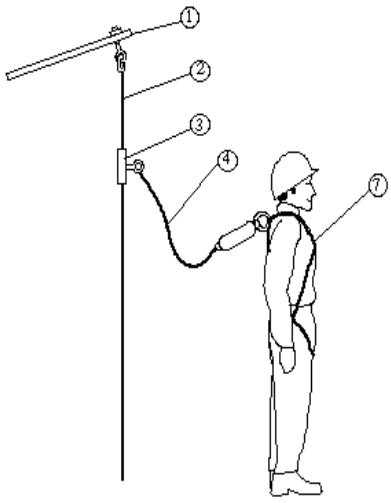


Figure C

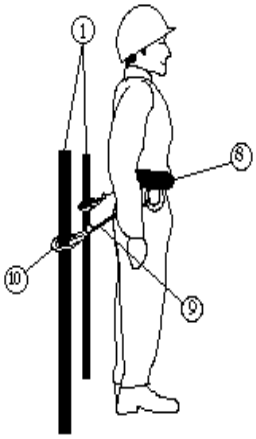


Figure D

Responsibilities

Superintendents & Foremen
It is the responsibility of the local Superintendents/Foremen (designated competent person) to implement this Fall Protection Program. Continual observational safety checks of work operations and the enforcement of the safety policy and procedures shall be regularly enforced. All jobs shall be pre-planned prior to the start of work.

Superintendents & Foremen
The Superintendents/Foremen shall ensure that all persons assigned to work at elevated levels, exceeding 6 feet in height or more above lower level and where guardrails or nets are not utilized, be protected by personal fall protection equipment.

- Superintendents/Foremen shall make exposure determinations and shall discuss with their employees the extent to which scaffolds, ladders or vehicle mounted work platforms can be used.
- Ensure that fall protection equipment is available and in safe working condition.
- Provide for emergency rescue in the event of a fall. Pre-plan the job to ensure that employees have been properly trained in the use, limitations, inspections and rescue procedures and that training records are on file.

Employees
Employees shall ensure they have and use the fall protection equipment as required by this program and:

- Understand the potential hazards of working at elevated levels as well as gaining access to and from the work location.
- Understand the use and limitations of such equipment.
- Pre-plan the job with his/her supervisor to agree that the job can be done safely.
- Inspect such equipment before each use and to report defective equipment immediately to their supervisor.

Guidelines for Equipment, Use, Inspection and Purchasing

When Fall Protection Must be Provided for Employees
Fall protection is required whenever employees are potentially exposed to falls from heights of six feet or greater to lower levels or if applicable jurisdictions require a lower height requirement. This includes work near and around excavations. Use of guard rails, safety net, or personal fall arrest systems should be used when the standard methods of protection are not feasible or a greater hazard would be created.

Purchasing of Fall Protection Equipment
Fall protection equipment purchased will meet the requirements of applicable ANSI, ASTM or applicable standards/requirements of the jurisdiction where work is being performed.

Use of Fall Protection Standards

Fall protection must be provided to employees working at heights that exceed applicable regulatory thresholds.

Fall protection is required whenever employees are potentially exposed to falls from heights that exceed applicable regulatory thresholds. Guard rails, safety nets or personal or fall arrest systems should be used. Some applicable regulatory thresholds may include:

- Protection for wall openings and holes. Every wall opening from which there is a drop of more than 4 feet shall be guarded.
- Unprotected sides and edges. Each employee on a walking/working surface (horizontal and vertical surface) with an unprotected side or edge which is 6 feet (1.8 m) or more above a lower level shall be protected from falling by the use of guardrail systems, safety net systems, or personal fall arrest systems.
- Guardrails shall be provided at locations where employees are exposed to floor or wall openings or waterside edges, including bridges or gangway-like structures leading to pilings or vessel mooring or berthing installations, which present a hazard of falling more than 4 feet (1.22 m) or into the water.
- When employees are exposed to unguarded edges of decks, platforms, flats, and similar flat surfaces, more than 5 feet above a solid surface, the edges shall be guarded by adequate guardrails.
- Each employee engaged in a steel erection activity who is on a walking/working surface with an unprotected side or edge more than 15 feet (4.6 m) above a lower level shall be protected from fall hazards by guardrail systems, safety net systems, personal fall arrest systems, positioning device systems or fall restraint systems.

The following are minimum standards for Dee Cramer, Inc. employee personal fall protection systems:

- When purchasing equipment and raw materials for use in fall protection systems, applicable standards/requirement should be met.
- All D-rings must be a minimum of 2¼ inches (inside diameter).
- All snap hooks shall not allow pressure to be applied to the gate in the opening direction.
- No pelican hooks on lanyards should be used as a primary connection.
- Connectors shall be drop forged, pressed or formed steel, or made of equivalent materials.
- Connectors shall have a corrosion-resistant finish, and all surfaces and edges shall be smooth to prevent damage to interfacing parts of the system.
- D-rings and snap hooks shall have a minimum tensile strength of 5,000 pounds.
- D-rings and snap hooks shall be proof-tested to a minimum tensile load of 3,600 pounds without cracking, breaking, or taking permanent deformation.
- Snap hooks shall be sized to be compatible with the member to which they are connected to prevent unintentional disengagement of the snap hook. Only a locking type snap hook designed and used to prevent disengagement of the snap hook by the contact of the snap hook keeper by the connected member shall be used.
- Horizontal lifelines shall be designed, installed, and used, under the supervision of a qualified person, as part of a complete personal fall arrest system, which maintains a safety factor of at least two.
- Lanyards and vertical lifelines shall have a minimum breaking strength of 5,000 pounds. Where vertical lifelines are used, each employee shall be attached to a separate lifeline.
- Lifelines shall be protected against being cut or abraded.

- Self-retracting lifelines and lanyards which automatically limit free fall distance to 2 feet or less shall be capable of sustaining a minimum tensile load of 3,000 pounds applied to the device with the lifeline or lanyard in the fully extended position.
- Self-retracting lifelines and lanyards which do not limit free fall distance to 2 feet or less, rip stitch lanyards, and tearing and deforming lanyards shall be capable of sustaining a minimum tensile load of 5,000 pounds applied to the device with the lifeline or lanyard in the fully extended position.
- Anchorages used for attachment of personal fall arrest equipment shall be independent of any anchorage being used to support or suspend platforms and capable of supporting at least 5,000 pounds per employee attached, or shall be designed, installed, and used as part of a complete personal fall arrest system which maintains a safety factor of at least two and under the supervision of a qualified person.
- Systems used by an employee having a combined person and tool weight in excess of 310 pounds shall be modified to provide proper protection for such heavier loads.
- The attachment point of the body harness shall be located in the center of the wearer's back near shoulder level, or above the wearer's head, except when climbing.
- Body harnesses and components shall be used only for employee protection and not to hoist materials.
- Personal fall arrest systems and components subjected to impact loading shall be immediately removed from service and shall not be used again for employee protection until inspected and determined by a competent person to be undamaged and suitable for reuse.
- Provide for prompt rescue of employees in the event of a fall or assure that employees are able to rescue themselves.
- Personal fall arrest systems shall be inspected prior to each use for wear, damage and other deterioration, and defective components shall be removed from service.
- Personal fall arrest systems shall not be attached to guardrail systems, nor shall they be attached to hoists unless prior approval is obtained from a competent person.
- If and when a personal fall arrest system is used at hoist areas, it shall be rigged to allow the movement of the employee only as far as the edge of the walking/working surface.

Stopping a Fall

The arresting force on an employee stopped by a fall shall be limited to a maximum arresting force of 1,800 pounds when wearing a body harness.

The fall arrest system shall be rigged such that an employee can neither free fall more than 6 feet, nor contact any lower level.

The fall arrest system shall bring an employee to a complete stop and limit maximum deceleration distance an employee travels to 3.5 feet.

The fall arrest system shall have sufficient strength to withstand twice the potential impact energy of an employee free falling a distance of 6 feet, or the free fall distance permitted by the system, whichever is less.

Protection From Falling Objects

When employees are required to work in the near vicinity of others working with materials, tools, or equipment at elevated levels, Barricades around the immediate area of the overhead work shall be erected to prohibit employees from entering the barricaded area.

Employees performing work at elevated levels shall keep tools, materials, and equipment away from the edge to keep potential objects from falling over the side. Where practical, tools, etc. shall be secured with rope, wire, etc. to keep them from falling.

Portable Ladders
Three point climbing is required while ascending/descending ladders. While on ladders, both hands and one foot, or both feet and one hand shall always be in contact with the ladder.

Tools required to perform a task shall be transported by a mechanical carrier such as a tag line, suspended bucket or tool belt.

- Tools shall not be carried by hand while climbing.
- Hands must be free to grip the ladder.
- Tools shall not be carried in clothing pockets.
- Tools shall be pulled up to the job site only after reaching the area of work.

When work is to be performed from straight/extension ladders, fall protection shall be utilized when heights exceed 6 feet.

Straight ladders shall be tied off at the top to prevent them from moving. A second person shall steady the ladder at the base while it is being tied off at the top by another employee. Do not tie off fall protection equipment to the ladder.

Storage
A dedicated storage area shall be provided for the storage of fall protection equipment and all components. The storage area shall keep the equipment clean, dry, and free from oils, chemicals, paints, and excessive heat.

Inspections
Fall protection equipment including all harnesses and lanyards must be inspected prior to each use and annually and the inspection documented.

All personal harnesses, attachment devices and lanyards, after any activation, will be immediately discarded. Self-retracting lifelines, if activated, will be tagged out and sent for inspection by the manufacturer.

Elevated Personnel Platforms
Work performed, regardless of the nature of the work, from personnel platforms raised by forklifts, cranes, scissor lifts, etc., shall require the use of a full body harness and shall be connected to the platform.

Prompt Rescue of an Employee in the Event of a Fall
COMPANY shall provide for prompt rescue of employees in the event of a fall or shall assure the employees are able to rescue themselves.

The pre-planning stage prior to the beginning of each elevated work assignment shall be evaluated by the supervisor to provide rescue of employees involved in a fall.

Fall Protection Plan

The fall protection plan shall be prepared by a qualified supervisor and developed specifically for the site where the leading edge work is being performed. The plan must be in writing and readily available to all workers on location.

The plan must include:

- the fall hazards at the work site;
- the fall protection system to be used at the work site;
- the anchors to be used during the work;
- that clearance distances below the work area, if applicable, have been confirmed as sufficient to prevent a worker from striking the ground or an object or level below the work area;
- the procedures used to assemble, maintain, inspect, use and disassemble the fall protection system, where applicable; and
- the rescue procedures to be used if a worker falls and is suspended by a personal fall arrest system or safety net and needs to be rescued.

Controlled Access Zones

When used to control access to areas where leading edge or other operations are taking place the controlled access zone shall be defined by a control line or by any other means that restricts access.

When control lines are used, they shall be erected not less than 6 feet (1.8 m) nor more than 25 feet (7.7 m) from the unprotected or leading edge.

The control line shall extend along the entire length of the unprotected or leading edge and shall be approximately parallel to the unprotected or leading edge.

The control line shall be connected on each side to a guardrail system or wall.

- Control lines shall consist of ropes, wires, tapes, or equivalent materials.
- Each line shall be flagged or otherwise clearly marked at not more than 6-foot (1.8 m) intervals with high-visibility material.
- Each line shall be rigged and supported in such a way that its lowest point (including sag) is not less than 39 inches (1 m) from the walking/working surface and its highest point is not more than 45 inches (1.3 m).
- Each line shall have a minimum breaking strength of 200 pounds.

Only employees engaged in the related work shall be permitted in the controlled access zone.

Safety Monitoring System

When the use of conventional fall protection equipment is deemed infeasible or the use of this equipment creates a greater hazard a Fall Protection Plan which includes a safety monitoring system shall be implemented by the supervisor.

Supervisors shall designate a competent person to monitor the safety of other employees. The competent person shall be assigned to:

- Recognize fall hazards;
- Warn employees if they are unaware of fall hazard or are acting in an unsafe manner;
- Be on the same working surface and in visual contact of working employees;
- Stay close enough for verbal communication; and
- Not have other assignments that would take his/her attention from the monitoring function.

Incident Investigations
Dee Cramer, Inc. shall conduct accident investigations in the event of a fall, near miss or other serious incident.

Accident investigations shall be conducted to evaluate the fall protection plan for potential updates to practices, procedures or training in order to prevent reoccurrence.

Changes to the fall protection program shall be implemented if deemed appropriate from incident corrective actions.

Training

Employees receive training pertaining to the recognition and elimination of fall hazards. A training program shall be provided for each employee who might be exposed to fall hazards. Training shall enable each employee to recognize the hazards of falling and shall train each employee in the procedures to follow to minimize these hazards.

The employee will be trained in the use and operation of fall arrest systems, inspections and maintenance procedures.

Retraining – Retraining shall be provided when the following are noted:

- Deficiencies in training,
- Workplace changes
- Fall protection systems or equipment changes that render previous training obsolete.

All training is documented. Written certification records must be maintained showing the following:

- Who was trained
- When and dates of training
- Signature of person providing training
- Date COMPANY determined training was deemed adequate.

Training records shall be retained in the corporate office.

Purpose

The purpose of this program is to provide fire safety planning regarding fire, explosion, combustible materials and appropriate planning and procedures required to minimize risk.

Scope

This program applies to all Dee Cramer, Inc. workers and all Dee Cramer, Inc. locations.

Responsibilities

The safety manager is responsible for developing procedures for the design of fire safety plans and procedures at each Dee Cramer, Inc. work site. The site manager is responsible for implementing the requirements and training at his or her location. The supervisors are responsible for enforcing the provisions of this section of the safety manual. All workers are responsible for following these provisions.

Responsibilities

Safety Manager
Develops local first aid plans or procedures for all worksites in accordance with this procedure and ensures workers are aware of the requirements of the fire and explosion prevention program plans or procedures.

Worksite Project Manager
Responsible for the implementation and maintenance of the fire and explosion prevention program for their facility and ensuring all assets are made available for compliance with the procedure.

Employees
All workers are responsible for following these provisions and attending specified training.

Procedure on Fire Prevention and Combustible & Flammable Liquids Storage/Handling

Assessment for Fire and Explosion Hazards
A site specific assessment for fire and explosions shall be developed for each project. The COMPANY Safety Manager will perform a written assessment review.

Fire Safety Plan
Dee Cramer, Inc. will factor the following into the hazard assessment and development of the site specific fire safety plan and shall:

- Take all reasonably practicable steps to prevent the outbreak of fire at a place of employment and to provide effective means to protect workers from any fire that may occur;
- Develop and implement a written fire safety plan that provides for the safety of all workers in the event of a fire. A plan developed must include:

- the emergency procedures to be used in case of fire, including: sounding the fire alarm, notifying the fire department and evacuating endangered workers, with special provisions for workers with disabilities;
- the quantities, locations and storage methods of all flammable substances present at the place of employment;
- the designation of persons to carry out the fire safety plan and the duties of the designated persons;
- the training of designated persons and workers in their responsibilities for fire safety;
- the holding of fire drills at least once during each 12-month period; and
- the control of fire hazards.

- Suitable procedures are developed and implemented to prevent the ignition of flammable liquids or explosive dusts that are present at a worksite;
- All sources or potential sources of ignition are eliminated or controlled where an explosive atmosphere exists or is likely to exist; and
- Static charge accumulations during transfer of flammable liquids or explosive substances from one container to another are prevented by electrically bonding the containers or otherwise designed to control the presence of static electricity.

Other Planning Requirements

No worker shall enter a workplace where a flammable or explosive substance is present in the atmosphere at a level that is more than 10% of the lower explosive limit of that substance.

Only if in a life-threatening emergency exposure of emergency response workers is permitted above 10% of the LEL provided that only the minimum number of those qualified and properly trained and equipped workers necessary to correct the unsafe condition are exposed to the hazard and every possible effort is made to control the hazard while this is being done.

Good housekeeping and preventative maintenance on all equipment shall be maintained to prevent fire hazards from occurring.

Smoking must be confined to areas specifically designated by Dee Cramer, Inc. management. Smoking is not permitted while around any active/functioning hydrocarbon clean-up/vacuuming equipment, around compressed gas cylinder storage locations or at any Dee Cramer, Inc. or client designated “No Smoking” areas.

Oily/greasy rags, paper waste and other flammable trash will be removed and disposed of in covered metal containers or appropriately marked safety cans, or in over-pack spill containers, whenever these sources are generated, for the prevention of spontaneous combustion.

Matches or cigarette lighters should not be taken into any area where an explosive atmosphere may be present.

Fire Potential and Response Procedures

All leaks of flammable liquids will be reported immediately and repaired if practicable. If immediate repair is not possible, all spark-producing operations within the vicinity of the leak or spill will be stopped and adequate warning signs or barricade tape will be posted until the hazard is controlled or eliminated.

If a worker's clothing is contaminated with a flammable or combustible liquid, the worker must avoid any activity where a spark or open flame may be created or exists, remove the clothing at the earliest possible time and ensure that the clothing is decontaminated before it is used again. If a worker's skin is contaminated with a flammable or combustible liquid, the worker must wash the skin at the earliest possible time.

All fires at a Dee Cramer, Inc. worksite shall be reported to supervisory personnel immediately. A written incident report will be filed by the immediate supervisor in charge of that area once the fire has been addressed.

Fire Extinguishing Theory

Fire is a chemical reaction that occurs when a fuel rapidly unites with oxygen in the presence of a heat source, and a flame is produced. Four elements are necessary to produce and support a fire:

- Fuel source (solid - liquid - gas)
- Heat source (a type of energy)
- Oxygen source (gas for ignition and flame support)
- Chemical chain reaction (occurs when fuel, heat & oxygen are united in the proper proportions to create a fire).

If any one of these four elements is eliminated, the fire will go out. There are four ways that a fire can be extinguished:

- Isolate, contain, separate, cover, or remove the fuel source.
- Remove the heat source by applying a cooling agent which absorbs the heat. Water is the most common cooling agent used to remove the heat from the reaction.
- Separate the oxygen from other essentials that make a fire by smothering the fire with a wet blanket, throwing soil or sand on it, or covering it with a chemical foam or water fog.
- Stop the chemical reaction by applying certain chemical substances that break up this chain reaction, such as sodium bicarbonate (baking soda) or potassium bicarbonate ("purple K") or sodium monophosphate (ABC dry chemical). Application of these chemicals will result in a reduction of the combustion rate and the fire can be extinguished.

Fire Classifications

There are 3 basic fire classification types present within Dee Cramer, Inc. operations and most host-facility job-sites. A specific class of fire extinguishers may be required based on the type of situation. The classifications are:

CLASS "A"

Fires that involve paper, wood, cardboard, textiles, etc. Foam or water-based liquids are used to extinguish this type of fire.

CLASS "B"

Fires that involve flammable liquid such as gasoline, diesel, grease, oil, paint, solvents, etc., dry chemicals, carbon dioxide or water in a spray-fog form are used to extinguish this type of fire.

CLASS "C"

Fires involving electrical equipment. Dry chemical or carbon dioxide is used to extinguish this type of fire.

Warning: Never use water to extinguish this type of fire due to the potential for electrical shock hazards.

Incipient Stage – Portable Firefighting Procedure

If personnel discover a fire in its early incipient (small) stage, initiate the following procedure if on Dee Cramer, Inc. locations: (if servicing a host-facility client, observes that client's contractor requirements concerning fire prevention.)

- Remain calm
- Report the fire to appropriate supervisory personnel
- If personnel believe the fire can be controlled through the use of a fire extinguisher and personnel are properly trained in the use of a fire extinguisher, seek out and remove the closest fire extinguisher from its securing location in the area of occurrence and put out the fire.

Miscellaneous

- Garbage that may constitute a fire hazard is stored in covered receptacles. Where garbage may constitute a fire hazard is present Dee Cramer, Inc. shall provide covered receptacles for the garbage that are suitable to the nature of the hazard.
- A person must not enter or work at a work area if more than 20 percent of the lower explosive limit of a flammable or explosive substance is present in the atmosphere. Atmospheric testing results will be assessed before a worker is exposed.
- Hydrocarbon resistant gloves will be worn to prevent skin absorption by the hands.

Control Measures for Internal Combustion Engines in Hazardous Locations

- Dee Cramer, Inc. must ensure that an internal combustion engine in a hazardous location has a combustion air intake and exhaust discharge that are equipped with a flame arresting device or located outside the hazardous location. Dee Cramer, Inc. must ensure that all the surfaces of an internal combustion engine that are exposed to the atmosphere in a hazardous location are at a temperature lower than the temperature that would ignite a flammable substance present in the hazardous location or shielded or blanketed in such a way as to prevent any flammable substance present in the hazardous location from contacting the surface.
- Whenever possible, internal combustion engines should be located outside the hazardous location.
- Internal combustion engines in a hazardous location should not be running if possible.
- No worker shall undertake any servicing or maintenance of a vehicle while a flammable liquid or gas or an explosive substance is loaded into or unloaded from the vehicle or is present in the vehicle in any place other than the fuel tank.
- Any driver who operates a vehicle that contains a flammable liquid or gas or an explosive substance shall ensure that the engine of the vehicle is shut off during the connection or disconnection of the lines for the loading or unloading of the flammable liquid, gas or explosive substance.

Safe Storage and Handling of Compressed Gas Cylinders

Dee Cramer, Inc. must ensure that:

- Compressed or liquefied gas containers are used, handled, stored, and transported in accordance with the manufacturer's specifications.

- A cylinder of compressed flammable gas is not stored in the same room as a cylinder of compressed oxygen, unless the storage arrangements are in accordance with MIOSHA and/or NFPA regulations.
- Compressed or liquefied gas cylinders, piping, and fittings are protected from damage during handling, filling, transportation and storage.
- Compressed or liquefied gas cylinders are equipped with a valve protection cap if manufactured with a means of attachment.
- Oxygen cylinders or valves, regulators, or other fittings of the oxygen using apparatus or oxygen distributing system are kept free of oil and grease.

All compressed gas cylinders will be stored in their appropriately marked secured (chained) locations and capped when not in use. If in use, all hook-up hoses and equipment used for hot-work purposes will be inspected prior to use. Defective equipment found shall not be used, but instead, tagged out of service or repaired before being used again.

Oxygen is never to be used as a substitute for compressed air in pneumatic tools, to create pressure, for ventilating purposes or to blow out a pipeline.

All regulators and its flexible connecting hose are to be tested immediately after connections to a gas cylinder to ensure that there is no leak of the gas supply. If a leak of the gas supply develops during gas welding or an allied process, the supply of gas is immediately shut off by the worker performing the welding or allied process and the work is not resumed until the lead is repaired.

Storage compartments for compressed and liquefied gas cylinders must meet local legislative requirements.

All storage cylinders for compressed gas shall be secured in an upright position.

The control valve of a storage cylinder for compressed gas, other than a cylinder connected to a regulator, supply line or hose, shall be covered by a protective cap that is secured in its proper position.

A spent storage cylinder shall not be stored inside a building.

No storage cylinder for propane shall be placed closer than 10 feet to a source of ignition or fire.

Flammable Liquids and Substances Storage and Transport

Flammable liquids such as various fuels or solvents will be transported in appropriately marked safety cans with their contents identified. No glass container use will be allowed. Only containers approved shall be used to store flammable substances.

The use of gasoline as a cleaning agent on COMPANY property is strictly forbidden. Only low flash point liquids are permissible for use in cleaning parts and machinery. Also no worker shall use gasoline to start a fire or use gasoline or replenish a tank on a heating device with a flammable or combustible liquid while the device is in operation or is hot enough to ignite the liquid.

All materials combustible and flammable liquids contaminated by flammable liquids are to be stored in receptacles that meet national standards. All shall be non-combustible and have close-fitting metal covers, are labeled “flammable” and are located at least 3 feet away from other flammable materials.

When a flammable gas or a flammable liquid is handled, used or stored, all sources of ignition must be eliminated or adequately controlled including open flame, spark-producing mechanical equipment, welding and cutting processes, smoking, static discharge and any electrical equipment or installation that is not approved for hazardous locations, as specified by local regulatory requirements and national codes..

Metallic or conductive containers used to transfer flammable liquids must be electrically bonded to each other or electrically grounded while their contents are being transferred from one container to the other.

Hot Work

Dee Cramer, Inc. must develop and implement safe work procedures for fire and explosive hazards in the workplace, including hot work if hot work is performed in the workplace additionally, where a flammable substance is or is intended to be handled, used, stored, produced or disposed of at any Dee Cramer, Inc. location the Safety Manager shall develop written procedures to ensure the health and safety of workers who handle, use, store, produce or dispose of a flammable substance that may spontaneously ignite or ignite when in combination with any other substance or perform hot work where there is a risk of fire.

Our site specific procedures are to ensure that hot work is not begun until a hot work permit is issued which must include the nature of the hazard, the type and frequency of atmospheric testing required, the safe work procedures and precautionary measures to be taken, and the protective equipment required.

Dee Cramer, Inc. requires where a flammable substance is or may be present no hot work is to be permitted or performed until suitable tests have been conducted that indicate whether the atmosphere contains a flammable substance in a quantity sufficient to create an explosive atmosphere or risk of fire. We will confirm that the work may be safely be performed through suitable work steps, tests taken at intervals appropriate to the work being performed and record the results and procedures developed and implemented to ensure continuous safe performance of the work.

Any container or piping that contains or has contained a flammable substance shall be purged using an effective method to remove the flammable substance from the container or piping before any hot work is begun on that container or piping. COMPANY does not require nor permit any welding or cutting of metal that has been cleaned with a flammable or combustible liquid until the metal has thoroughly dried.

No hot tapping will occur until the Safety Manager develops a hot tap plan specific to the type or class of hot tap work being performed. There will be no exceptions to this requirement.

Welding Restrictions

All welding or allied process equipment is erected, installed, assembled, started, operated, used, handled, stored, stopped, inspected, serviced, tested, cleaned, adjusted, carried, maintained, repaired and dismantled in accordance with the manufacturer's specifications. Additionally, the area surrounding the operation is inspected and all combustible, flammable or explosive material, dust, gas or vapor is removed or alternate methods of rendering the area safe are implemented.

If a welding or allied process if performed above an area where a worker may be present the supervisor shall ensure that adequate means are taken to protect a worker below the operation from sparks debris and other falling hazards.

An operator of an electric welding machine must not leave the machine unattended without removing the electrode.

All appropriate welding and ground leads are used to fasten the electric supply cable securely.

Use of Fire Extinguishers

Fire extinguishing equipment is readily available. Each work site shall be provided with readily accessible fire extinguishers adequately marked locations at a project.

Every worker who may be required to use fire extinguishing equipment shall be trained in its use.

Dee Cramer, Inc. will ensure that portable fire extinguishers are selected, located, inspected, maintained and tested so the health and safety of workers at the place of employment is protected.

Fire extinguishers that have been partially or completely used will be removed from service and replaced by similar equipment that has been inspected and authorized for service. Spent containers will temporarily be placed at either any work site trailer or each individual main office location.

Every fire extinguisher shall be inspected for defects or deterioration at least once a month by a competent worker who shall record the date of the inspection on the tag attached to it.

All portable fire extinguishers shall also be checked annually by a competent fire extinguisher supplier.

Portable fire extinguishers are to be selected, located, inspected, maintained and tested so that the health and safety of workers at the place of employment is protected. Dee Cramer, Inc. shall ensure that portable fire extinguishers are placed not more than 25 feet away from each industrial open-flame portable heating device, tar pot or asphalt kettle that is in use and each welding or cutting operation that is in progress.

All fire extinguishers shall be maintained as follows:

- Fully charged and in operable condition
- Clean and free of defects
- Readily accessible at all times

In the event of a fire, one trained worker will get the nearest fire extinguisher and use it to attempt to put the fire out. All other workers in the immediate area will prepare to evacuate if needed. All other workers in the building need to be advised that a fire is in progress.

The worker attempting to extinguish the fire will break the safety seal on the handle and pull the pin. He will then aim his extinguisher at the base of the fire and discharge it with a sweeping motion from side to side; continuing until the fire is out or the extinguisher is emptied.

Remember that a standard fire extinguisher will be emptied in about 10 to 15 seconds. If the fire is not out when the extinguisher has been completely discharged, the workers must evacuate the area.

Training

Employees are provided training on the fire safety plan. Dee Cramer, Inc. shall ensure that:

- Designated persons and workers who have been assigned fire safety duties are adequately trained in, and implement, the fire safety plan;
- The fire safety plan is posted in a conspicuous place for reference by workers; and
- A fire drill is held at least once during each 12-month period.

Dee Cramer, Inc. shall also provide training for:

- Where Dee Cramer, Inc. has provided portable fire extinguishers for employees use in the workplace it also shall provide an educational program to familiarize employees with the general principles of fire extinguisher use and the hazards involved in incipient stage firefighting.
- The safe work procedures for fire, flammable substances and explosive hazards in the workplace including hot work and how to implement the procedures developed.

Retraining

Retraining shall re-establish worker proficiency and introduce new or revised control methods and procedures, as necessary. Retraining shall be provided for all authorized and affected workers whenever there is:

- An annual basis or
- A change in job assignment or
- Dee Cramer, Inc. has reason to believe that there are deviations from or inadequacies in the worker's knowledge or use of fire extinguishers or fire prevention procedures.

Training Documentation

- All training will be documented and each worker's understanding will be subject to a "hands-on" test.
- Documentation will consist of; as a minimum, the worker's name, the trainer's name, the date of the training, and an outline of training provided.
- All training records will be maintained in the worker's safety file.
- All fire extinguisher inspection and maintenance records will be maintained by Dee Cramer, Inc. management for the serviceable life of this equipment.

Purpose

The purpose of this program is to establish the minimum first aid supplies, equipment and actions to properly respond to injuries.

Scope

This program is applicable to all Dee Cramer, Inc. employees while engaged in work at Dee Cramer, Inc. facilities and/or facilities operated by others.

Responsibilities

- It is the responsibility of the site manager to ensure that first aid kits are provided and maintained.
- All employees are responsible for using first aid materials in a safe and responsible manner.
- The HSE Manager is responsible for corresponding with the Red Cross or an equivalent to keep employee training levels current.

Planning

The site manager will:

- Ensure that a minimum of one employee, with a valid certificate, shall be present to render first aid at all times work is being performed if medical assistance is not available within 3-4 minutes.
- Ensure that provisions shall have been made prior to commencement of a project for prompt medical attention, including transportation, in case of serious injury.
- Ensure adequate first aid supplies and equipment are easily accessible when required.
- Ensure that in areas where 911 is not available, the telephone numbers of the physicians, hospitals, or ambulances to be used shall be conspicuously posted.

Medical Response Availability

- First aid and medical facilities will be made available and in the absence of facilities that someone trained to render first aid will be provided on the job site.
- All minor first aid is to be self-rendered. Because of the risks presented by certain bloodborne pathogens, no one is allowed to tend the minor injuries of another.
- In the absence of an infirmary, clinic, hospital, or physician, that is reasonably accessible in terms of time and distance to the worksite, which is available for the treatment of injured employees, a person who has a valid certificate in first-aid shall be available at the worksite to render first aid. A valid certificate in first-aid training must be obtained that can be verified by documentary evidence.
- Employees authorized to render first aid will always observe universal precautions. (Universal Precautions means that the aid giver treats all bodily fluids as if they were contaminated).
- If 911 is not available refer to the list of posted phone numbers for prearranged medical response providers. All Dee Cramer, Inc. authorized first responders shall have a cell phone as a means of communications; otherwise hand held radios or telephones shall be used as a means of communication.

Availability of First Aid Supplies

First aid supplies shall be easily accessible when required. Always follow the manufacturer's instructions when using the materials in the first aid kit. All Dee Cramer, Inc. first aid kits contain appropriate items determined to be adequate for the environment in which they are used and if on a construction site are stored in a weather proof container with individual contents sealed from the manufacturer for each type of item.

Dee Cramer, Inc. is responsible to ensure the availability of adequate first aid supplies and to periodically reassess the availability for supplies and to adjust its inventories. First Aid kits are to be inspected:

- On the first working day of each week to verify that they are fully stocked and that no expiration dates have been exceeded, and
- Before being sent out to each job, and
- Replace any items that have exceeded their expiration dates or that have been depleted.

Where the eyes or body of any person may be exposed to injurious corrosive materials, a safety shower and/or eye wash (suitable facilities) or other suitable facilities shall be provided within the work area. Ensure expiration dates are checked and water used in storage devices is sanitized.

An assessment of the material or materials used shall be performed to determine the type flushing/drenching equipment required. At client job sites, portable or temporary stations must be established prior to the use of corrosive materials.

Preparing for Emergency Transportation to the Nearest Health Care Facility in the Event of an Injury or Illness

- Before workers are sent to a work site, Dee Cramer, Inc. must ensure that arrangements are in place to transport injured or ill workers from the work site to the nearest health care facility.
- Dee Cramer, Inc. must ensure that an ambulance service is readily available to the work site when travel conditions are normal. If an ambulance service is not readily available to the work site, or if travel conditions are not normal, Dee Cramer, Inc. must ensure that other transportation is available that is suitable, considering the distance to be travelled and the types of acute illnesses or injuries that may occur at the work site, protects occupants from the weather, has systems that allow the occupants to communicate with the health care facility to which the injured or ill worker is being taken, and can accommodate a stretcher and an accompanying person if required to.
- Based on the first responder's assessment of the injuries involved, decide whether the injured requires to be taken directly to a hospital's emergency room, occupational medicine provider or administer first aid on location.
- This should include one driver of the vehicle to transport the injured person as well as an individual to provide first aid assistance if required based on the injury.

Training

Volunteers or selected employees are trained by locally approved organization for CPR and first aid. Each of these trained and certified employees are equipped with protective gloves and other required paraphernalia per local or federal requirements.

Purpose

The purpose of this program is to establish requirements for the safe operation and use of forklifts.

Scope

This program applies to all Dee Cramer, Inc. employees who operate a forklift in the scope of their job duties and assignments. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Dee Cramer, Inc. employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

NOTE: All employees are required to be trained and certified prior to operating each specific type of forklift equipment. Dee Cramer, Inc. shall certify all authorized employees regarding competency on all types of equipment.

Definitions

Authorized Employee – A person, at least 18 years of age and who has completed the Dee Cramer, Inc's required safety training for the safe operations of forklifts.

Forklift (Powered Industrial Truck) – Any mechanical device used for the movement of supplies, material or finished a product that is powered by an electric motor or an internal combustion engine.

Key Responsibilities

Manager/Supervisor

- Shall ensure that each powered forklift operator is competent to operate a forklift safely, as demonstrated by the successful completion of the training and evaluation program.
- Shall ensure that all forklifts are inspected before each shift and all repairs are made before the forklift is operated.

Employees

- Shall be current on applicable training.
- Operate forklift in accordance to the forklift standards and manufacture requirements.
- Inspect forklift at the start of shift, and remove from service if defects are found until they are corrected.
- Operate forklift in a safe manner.

Procedure

General

All approved forklifts shall have a manufactures identification plate attached showing all specifications of the forklift and that the forklift is accepted by a nationally recognized testing laboratory.

Modifications and additions, that affect capacity and safe operation, shall not be performed without manufacturer's prior written approval. Capacity, operation, and maintenance instruction plates, tags, or decals shall be changed reflect the modification or addition.

If the forklift is equipped with front-end attachments other than factory installed attachments, the supervisor shall ensure that the forklift is marked to identify the attachments and show the approximate weight of the forklift and attachment combination at maximum elevation with load laterally centered.

The operator shall see that all nameplates and markings are in place and are maintained in a legible condition.

All forklifts shall be equipped with safety seat belts. All forklifts shall be equipped with a horn, backup alarm, beacon light, headlights and taillight.

Safety Guards
Forklifts shall be fitted with an overhead rollover cage, as per manufactures specifications.

If the type of load presents a hazard to the operator, the forklift shall be equipped with a vertical load backrest extension, as per manufactures specifications.

Operations
General

- All operators shall wear a safety seat belt when operating a forklift.
- Forklifts shall not be driven up to anyone standing in front of a bench or other fixed object.
- No person shall be allowed to stand or pass under the elevated portion of any forklift, whether loaded or empty.
- Unauthorized personnel shall not be permitted to operate forklifts.
- No riders or passengers are permitted.
- It is prohibited for arms or legs to be placed between the uprights of the mast or outside the running lines of the forklift.
- When a forklift is left unattended, load engaging means shall be fully lowered, controls shall be neutralized, power shall be shut off, and brakes set.
- Wheels shall be blocked if the forklift is parked on an incline.
- A forklift is unattended when the operator is 25 ft. or more away from the vehicle, which remains in view, or whenever the operator leaves the forklift and it is not in view.
- When the operator of a forklift is dismounted and within 25 ft. of the forklift still in view, the load engaging means shall be fully lowered, controls neutralized, and the brakes set to prevent movement.
- A safe distance shall be maintained from the edge of ramps or platforms while on any elevated dock, or platform or freight car.
- Forklifts shall not be used for opening or closing freight doors.
- Brakes shall be set and wheel blocks shall be in place to prevent movement of trucks, trailers, or railroad cars while loading or unloading.
- Fixed jacks may be necessary to support a semi-trailer during loading or unloading when the trailer is not coupled to a tractor.

- The flooring of trucks, trailers, and railroad cars shall be checked for breaks and weakness before they are driven onto.
- There shall be sufficient headroom under overhead installations, lights, pipes, sprinkler system, etc.
- An overhead guard (cages) shall be used as protection against falling objects.
- An overhead guard is intended to offer protection from the impact of small packages, boxes, bagged material, etc., representative of the job application, but not to withstand the impact of a falling capacity load.
- Fire aisles, access to stairways, and fire equipment shall be kept clear.

Traveling

- The operator shall slow down and sound the horn at cross isles and other locations where vision is obstructed.
- If the load being carried obstructs forward view, the operator shall be required to travel with the load trailing.
- The operator shall be required to look in the direction of, and keep a clear view of the path of travel.
- Grades shall be ascended or descended slowly.
- When ascending or descending grades in excess of 10 percent, loaded forklifts shall be driven with the load upgrade.
- On all grades the load and load engaging means shall be tilted back if applicable, and raised only as far as necessary to clear the road surface.
- Under all travel conditions the forklift shall be operated at a speed that will permit it to be brought to a stop in a safe manner.
- Stunt driving and horseplay are prohibited.
- The operator shall slow down for wet and slippery floors.
- Dock board or bridge plates shall be properly secured before they are driven over.
- Dock board or bridge plates shall be driven over carefully and slowly and their rated capacity never exceeded.
- While negotiating turns, speed shall be reduced to a safe level by means of turning the hand steering wheel in a smooth, sweeping motion.
- Except when maneuvering at a very low speed, the hand steering wheel shall be turned at a moderate, even rate.

Loading

- Only stable or safely arranged loads shall be handled.
- Caution shall be exercised when handling off-center loads, which cannot be centered.
- Only loads within the rated capacity of the forklift shall be handled.
- Forklifts equipped with attachments shall be operated as partially loaded forklifts when not handling a load.
- A load engaging means shall be placed under the load as far as possible; the mast shall be carefully tilted backward to stabilize the load.
- Extreme care shall be used when tilting the load forward or backward, particularly when high tiering.
- Tilting forward with load engaging means elevated shall be prohibited except to pick up a load.

- An elevated load shall not be tilted forward except when the load is in a deposit position over a rack or stack.
- When stacking or tiering, only enough backward tilt to stabilize the load shall be used.

Operation of the Truck

- If at any time a forklift is found to be in need of repair, defective, or in any way unsafe, the forklift shall be taken out of service until it has been restored to safe operating condition.
- Fuel tanks shall not be filled while the engine is running.
- Spillage of oil or fuel shall be carefully washed away or completely evaporated and the fuel tank cap replaced before restarting engine.
- When fueling with Liquefied Petroleum Gas (LPG), precautions and handling requirements set forth in the "Safe Handling of LPG" program shall be followed.
- No forklift shall be operated with a leak in the fuel system.
- Open flames shall not be used for checking electrolyte level in storage batteries or gasoline level in fuel tanks.
- Operator must verify trailer chocks, supports, and dock plates are secured prior to loading/unloading.

Operator Qualification

- Only trained and certified operators, including supervisors, are allowed to operate the device (this includes refresher training requirements).
- The trainer shall certify in writing that each operator has been trained and evaluated as required.
- The certification shall include the name of the operator, the date of the training, the date of the evaluation and the identity of the person(s) performing the training and/or evaluation.

Maintenance and Inspection of Forklifts

- Forklifts shall be inspected prior to each shift by the operator before being placed in service, and shall not be placed in service if the inspection shows any condition adversely affecting the safety of the forklift. Operators must insure vehicle is safe prior to operating.
- Inspection shall be made at least daily – prior to each shift. (visual – non documented) Inspection items shall be posted on each forklift. Operators must insure the vehicle is safe prior to operating.
- Only authorized personnel shall perform maintenance, and make repairs.
- Those repairs to the fuel and ignition systems of forklifts, which involve fire hazards, shall be conducted only in locations designated for such repairs.
- Forklifts in need of repairs to the electrical system shall have the battery disconnected prior to such repairs.
- Only parts equivalent with those used in the original design shall replace all parts of any forklift requiring replacement parts.
- Forklifts shall not be altered so that the relative positions of the various parts are different from what they were when originally received from the manufacturer, nor shall they be altered either by the addition of extra parts not provided by the manufacturer or by the elimination of any parts.
- Additional counter weighting of fork trucks shall not be done unless approved by the truck manufacturer.
- Where forklifts are used on a round-the-clock basis, they shall be inspected before each shift.

- Defects when found shall be immediately reported to the supervisor, and corrected before operating the forklift.
- When the temperature of any part of any forklift is found to be in excess of its normal operating temperature, thus creating a hazardous condition, the forklift shall be removed from service and not returned to service until the cause for such overheating has been eliminated.
- Forklifts shall be kept in a clean condition, free of lint, excess oil, and grease.
- Noncombustible agents, where at all possible, shall be used for cleaning trucks.
- Low flash point (below 100 degrees F.) solvents shall not be used.
- High flash point (at or above 100 degrees F.) solvents may be used if precautions regarding toxicity, ventilation, and fire hazard are mitigated with the agent or solvent used.

Training

Training shall consist of a combination of formal instruction (e.g., lecture, discussion, interactive computer learning, video tape, and written material), practical training (demonstrations performed by the trainer and practical exercises performed by the trainee) and operator evaluation of the operator's performance in the workplace.

All operator training and evaluation shall be conducted by authorized persons who have the knowledge, documented training, and experience to train powered industrial truck operators and evaluate their competence.

Each operator is required to be re-evaluated every three years.

Training shall include the following topics, except in topics for locations where they are not applicable to safe operation of the truck due to type of equipment or facility conditions.

1. Operating instructions, warnings, and precautions for the types of truck the operator will be authorized to operate,
2. Differences between the truck and the automobile,
3. Truck controls and instrumentation: where they are located, what they do, and how they work,
4. Engine or motor operation,
5. Steering and maneuvering,
6. Visibility (including restrictions due to loading),
7. Fork and attachment adaptation, operation, and use limitations,
8. Vehicle capacity,
9. Vehicle stability,
10. Any vehicle inspection and maintenance that the operator will be required to perform,
11. Refueling and/or charging and recharging of batteries,
12. Operating limitations,
13. Any other operating instructions, warnings, or precautions listed in the operator's manual for the types of vehicle that the employee is being trained to operate,
14. Surface conditions where the vehicle will be operated,
15. Composition of loads to be carried and load stability,
16. Load manipulation, stacking, and unstacking,
17. Pedestrian traffic in areas where the vehicle will be operated,

18. Narrow aisles and other restricted places where the vehicle will be operated,
19. Hazardous (classified) locations where the vehicle will be operated,
20. Ramps and other sloped surfaces that could affect the vehicle's stability,
21. Closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust,
22. Other unique or potentially hazardous environmental conditions in the workplace that could affect safe operation, and
23. The requirements of CFR 1910.178 (Powered Industrial Trucks).

Mandatory refresher training shall be provided when unsafe operations are observed, after an incident, if operating a different vehicle type, changes in conditions or any time Dee Cramer, Inc. feels an operator requires refresher training.

General Waste Management

Dee Cramer Inc

Completed by: Valerie Bradley
Completed Date: 03/01/2013

Waste Management

The management of waste generated by our work site crews and work processes is a primary consideration in the planning of safe and profitable projects, for our company as well as for our customers. Project wastes include excess sheet metal, siding and other scrap associated with fabrication and installation of HVAC duct work. The disposal of paper and plastic trash from material packaging and other sources is to be planned for as well.

Environmental Impact Avoidance:

In order to minimize potential impact to the environment, the proper handling, organization and storage as well as disposal of waste and scrap materials must be planned for and in place prior to mobilization on the job site and beginning construction.

Handling of waste and scrap means knowing how to safely contain, label, bag or otherwise contain or transport identified waste/scrap. Organization of wastes mean to ensure they are effectively separated or segregated by type, class or other criteria, to avoid inappropriate mixing of material. Storage of waste means temporary or permanent containment of collected, separated waste/scrap for further processing, recycling or final disposal.

It is the responsibility of your foreman to show each employee the proper method(s) to dispose of identified wastes. This will include proper PPE, collection containers or receptacles and instructions for separating, organizing and storage/disposal of all scrap/waste material. Project managers and site construction foremen and supervisors are to ensure that waste and scrap are properly organized and that proper containers for various waste stream elements are in place and available for the use of our work crews. Always check first with the customer and/or their representative when planning for waste/trash disposal. Often, waste or scrap must be stored before final removal or disposal.

Ask if facilities and services for waste storage or disposal are provided by the customer, and if so where and what instructions apply. Chemical, liquid and similar wastes may be under specific customer requirements for handling, storage and/or disposal.

Understand the Waste Stream:

Make sure all crew members understand each component of waste stream generation and the role they play in ensuring no adverse environmental impact. When off-loaded material is unpackaged, waste or trash is usually generated. When materials are cut, trimmed, sized or otherwise modified to fit the job requirements, waste or trash is usually generated. Care must be taken to contain any excess

chemicals or excess liquids, such as when fueling power equipment or tools. Waste handling will often involve the use of specific, or special personal protective equipment, outside of the PPE we use to protect from our regular sheet metal construction tasks. Foremen must make sure that any waste requiring gloves, boots, suits, etc., are readily available for our crews.

It is our site supervisor's responsibility to make sure that all crew members can identify and define all components of waste, trash or scrap either present, or likely to be present on the job site where they are or will be working. And that they are in complete understanding of the process steps to take to effectively segregate or manage each stream component.

Don't forget recycling opportunities:

Efficient, effective handling of waste, trash or scrap may also include specific recycling bins boxes or other containers or processes. Special attention may be required to train site crew in specific recycling steps for some material.

This safety guideline is intended to provide safety information to all Dee Cramer Inc., employees regarding hand safety and that adequate measures can be taken to limit exposures to hand and finger injuries through controls in the workplace. NOTE: DCI employees are required to wear proper gloves when performing any work that could create a hand or finger injury unless working on, near or with rotating equipment as spelled out in the following policy. Any employee observed working with inadequate hand protection will be disciplined to their unsafe behavior pursuant to the Dee Cramer Disciplinary Policy.

I. GENERAL

All DCI employees shall take reasonable precautions against task specific hazards to prevent hand and finger injuries. The selection of gloves for protection against lacerations, burns, scrapes, punctures or chemical exposures shall be approved by the Safety & Risk Manager.

II. WORK PRACTICES

Dee Cramer Inc., employees shall wear appropriate hand and finger protection, while working in the field or in the shops, at all times while working unless they are working on, around or with rotating equipment or machinery or when the gloves present a potentially more significant hazard (ie operating a roller in the shop). See attached glove selection chart for information on task appropriate gloves.

III. HEALTH HAZARDS

Cuts, lacerations, abrasions, burns, chemical exposures, electricity, heat and cold can all have detrimental effects on the hands and fingers. While there are short term effects that are readily apparent, there are also potential long term effects that can be much more damaging.

Short term effects

Bleeding, soreness at the site, swelling, itching.

Long term effects

Scarring, infection, possible loss of use of finer(s) and/or hand, temperature sensitivities, constant pain due to nerve involvement.

IV. METHODS OF COMPLIANCE

To the extent feasible, DCI will implement engineering and work practice controls to reduce employee exposure to workplace injury and/or illness. When the hazard is not able to be mitigated through engineering and/or administrative controls MIOSHA Construction Standard Part 6, Personal Protective Equipment (PPE) requires that employees use PPE to protect themselves from the hazards that could cause a workplace injury and/or illness. To the extent possible Dee Cramer will continue to do this, however, based on the material that we work with on a daily basis it has become evident that we need to provide a higher level of protection to our employees with regards to their hands and fingers. The chart below provides guidance on the glove selection criteria.

GLOVE SELECTION GUIDE

HAZARD	DEGREE OF HAZARD	PROTECTIVE MATERIAL
General Duty		Nylon shell with polyurethane coating over palm and fingers
Cuts, Lacerations, Abrasions	Severe	Minimum cut resistance rating of 4
Cuts, Lacerations, Abrasions	Less Severe	Minimum cut resistance rating of 2
Chemicals	All	Task specific material based on the SDS of the chemical(s) being used. To be determined per the task/chemical
Heat	Up to 212 F	Leather
Electricity		Rubber insulating gloves tested to appropriate voltage
Spiral Manufacturing	Severe	Leather double palmed work glove
Spiral Manufacturing	Less Severe	Leather work glove

Purpose

The purpose of this program is to ensure that the hazards of all chemicals and substances are evaluated and the information concerning their hazards is communicated to employees, including emergency response organizations, state and federal agencies, other employers and contractors, as necessary. This hazard information will be communicated, and displayed in accordance with this Hazard Communication Program.

Dee Cramer, Inc. is firmly committed to providing each of its employees a safe and healthy work environment. It is recognized that workers may use chemicals or substances that have potentially hazardous properties. When using these substances, workers must be aware of the identity, toxicity or hazardous properties of a chemical or substance, since an informed employee is more likely to be a safe employee. To this end, Dee Cramer, Inc. has established a written Hazard Communication Program.

Scope

This program is applicable to all Dee Cramer, Inc. employees who may be exposed to hazardous chemicals. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Dee Cramer, Inc. employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Definitions

- Chemical - any element, chemical compound, or mixture of elements and/or compounds.
- Chemical Inventory List - a list of chemicals used at this facility, or by personnel that report to this facility.
- Electronic Access – using electronic media (telephone, fax, internet, etc.) to obtain Material Safety Data Sheets or health information.
- Facility - an establishment at one geographical location containing one or more work areas.
- Hazardous chemical - any chemical that is a physical hazard, a health hazard, or has a Permissible Exposure Limit established for it.
- Hazardous substance - see hazardous chemical.
- Hazard Communication Program Coordinator - the person who has overall responsibility at a facility for that facility's Hazard Communication Program.
- Health hazard - a substance for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic adverse health effects may occur in exposed employees.
- IDLH - immediately dangerous to life and health.
- Immediate Use - the chemical will be under the control of and used only by the person who transfers it from a labeled container and only within the work shift in which it is transferred.
- Jobsite - an area remote from a Dee Cramer, Inc. facility where hazardous chemicals are stored or used and employees are present for the purpose of Dee Cramer, Inc. business.
- (PEL) Permissible Exposure Limit - the maximum eight-hour time weighted average of any airborne contaminant to which an employee may be exposed.
- Readily available - when an employee has access during the course of his/her normal work shift.

- (SDS) Safety Data Sheet - a written or printed document containing chemical hazard and safe handling information, prepared in accordance with regulations.
- Substance - see Chemical.
- (TLV) Threshold Limit Value - the airborne concentration of a substance that represents conditions under which it is believed that nearly all normal workers may be repeatedly exposed day after day without adverse effect.
- Work area - a room or defined space in a facility where hazardous chemicals are stored or used and where one or more employees are present.
- Workplace - see Facility.
- Workplace Chemical List - see Facility Chemical List.

Responsibilities

A written hazard communication program shall be developed, implemented and maintained at each Dee Cramer, Inc. that describes how labels and other forms of warning, material safety data sheets and employee information will be met.

The Safety Manager is responsible for developing and implementing the Hazard Communications Program. Managers are responsible for maintaining Safety Data Sheets and the Chemical Inventory List for their locations. The Safety Manager reviews the SDS files and Chemical Inventory List at each location at least annually to ensure that they are complete and up to date.

Employees are responsible for following the requirements in the Hazard Communication Program, to use proper personal protective equipment, to report containers without labels immediately and to not deface any label.

Any employee who transfers any material from one container to another is responsible for labeling the new container with all required information.

All employees are responsible for learning the requirements of this section and for applying them to their daily work routine.

Requirements

Introduction

This Hazard Communication Program spells out how Dee Cramer, Inc. will inventory chemicals stored and used, obtain and use material safety data sheets, maintain labels on chemical substances, and train employees about the hazards of chemicals they are likely to encounter on the job.

Preparation of this program indicates our continuing commitment to safety among our employees in all of our locations.

- Each facility is expected to follow this program and maintain its work areas in accordance with these requirements.
- Employees, their designated representatives, and government officials must be provided copies of this program upon request.

- In addition to the program, other information required as part of our hazard communication effort is available to workers upon request.
- Asking to see this information is an employee's right.
- Using this information is part of our shared commitment to a safe, healthy workplace.

List of Hazardous Chemicals

Dee Cramer, Inc. maintains a listing of all known hazardous chemicals known to be present or used at each job site by using the identity that is referenced on the appropriate safety data sheet (SDS). This identity is often a common name, such as the product or trade name (i.e., Lime-A-Way).

The Chemical Inventory List is updated as necessary and at least annually by the Hazard Communication Program Coordinator or their designee.

The facility Chemical Inventory List must be available for review upon request.

Safety Data Sheets

Chemical manufacturers are responsible for developing SDSs. Dee Cramer, Inc. shall have a SDS for each chemical used with the exception of consumer products. SDSs must be obtained for each required chemical from the chemical manufacturer, supplier or vendor. The purchasing of any potentially hazardous chemical products from any supplier that does not provide an appropriate Safety Data Sheet in a timely fashion is prohibited.

SDSs shall be maintained and readily accessible through SDS Binderworks at www.sdsbinderworks.com. SDSs can be requested from the Safety Manager, Warehouse Manager, all Superintendents and all Foremen at any time and must be made available upon request.

Safety Data Sheets are filed alphabetically, by material classification, in SDS Binderworks, an electronic system for maintaining SDSs. A Chemical Inventory List is provided in SDS Binderworks as well, listing all SDS' contained therein. This inventory serves as the index of the SDS'.

The Material Safety Data Sheet must be kept in the MSDS library for as long as the chemical is used by the facility.

Electronic access (telephone, fax, internet, etc.) may be used to acquire and maintain MSDS libraries and archives.

The Manager is responsible for seeing that the Chemical Inventory List inventory is maintained, is current and is complete. He/she will review the inventory at least annually. When a hazardous material has been permanently removed from the work place, its SDS is to be removed from the SDS site and Chemical Inventory List. A file copy is to be maintained in a "dead file".

SDS' for hazardous materials to which Dee Cramer, Inc. employees have been exposed must be maintained after the employee leaves the employment of Dee Cramer, Inc.

Before any non-routine task is performed, employees will be advised of methods and special precautions, PPE and the hazards associated with chemicals and the hazards associated with chemicals contained in unlabeled pipes in

their work areas. In the unlikely event that such tasks are required, the Manager will provide SDS for involved chemical.

Employees have the right to request SDS on any chemical and it must be provided without any issues.

Labels, Labeling and Warnings:
The Manager will ensure that all hazardous chemicals used or stored in the facility are properly labeled.

- Damaged labels or labels with incomplete information shall be reported immediately.
- Damaged labels on incoming containers of chemicals shall not be removed.
- New labels shall be provided as needed so that all containers are properly labeled.
- Only containers into which an employee transfers a chemical for their own immediate use will not require labeling.
- Employees who are unsure of the contents of any container, vessel or piping must contact their supervisor for information regarding the substance including:
    - The name of the substance
    - The hazards related to the substance
    - The safety precautions required for working with the substance.

Labels, tags or markings on containers shall list as a minimum:

- Identity of hazardous chemical.
- Name and address of the chemical manufacturer, importer or other responsible party.
- Words, pictures, symbols or combinations thereof may be used.
- The trade name of the product as listed on the Safety Data Sheet.
- Appropriate hazard warnings to help employees protect themselves from the hazards of the substance.
- Labels shall be legible, in English. However, for non-English speaking employees, information shall be presented in their language as well.
- Dee Cramer, Inc. or employees shall not remove or deface labels on incoming containers of hazardous chemicals.

All containers must be labeled. When an employee transfers the contents of one container to another, he must label the new container with all required information. This information can be obtained from the labeling of the original container or from the material's SDS. Any container of a potentially hazardous material that will not be emptied during one shift must be labeled, without exception.

Personnel in the Shipping and Receiving Departments are responsible for proper labeling of all containers shipped by Dee Cramer, Inc. and for the inspection of all incoming materials to ensure correct labeling. Chemicals received from vendors that are not properly labeled must be rejected.

Training
Employees shall be provided with effective information and training on hazardous chemicals in their work area at the time of their initial assignment, and whenever a new physical or health hazard the employees have not previously been trained about is introduced into their work area. Information and training may be designed to

cover categories of hazards (e.g., flammability, carcinogenicity) or specific chemicals. Chemical-specific information must always be available through labels and safety data sheets.

Additional training will be provided whenever a new chemical hazard is introduced into the work area. To reinforce the importance of handling chemicals properly when performing new or non-routine tasks supervisors will conduct supplementary training as needed.

Formal training will be conducted by facility employees or individuals who are knowledgeable in the Hazard Communication program.

The Manager shall ensure records of employee training are maintained.

When an outside contractor, such as a pest control worker or a carpenter enters a Dee Cramer, Inc. site to perform a service for the company, he must first present SDS' for any and all hazardous chemicals he will use. These SDS' will be treated as above with the same training requirements. The Manager will be responsible for contacting each contractor before work is started to gather and disseminate any information concerning chemical hazards the contractor is bringing into the work place.

The Hazard Communication Program documented training shall, as a minimum, include:

- Requirements, details and rights of the employee as contained in the Hazard Communication regulation
- Operations and work areas where hazardous chemicals are present.
- Location of the written Hazard Communication Program, SDSs and the Chemical Inventory List.
- How to access SDS' or SDS information.
- How to read and an explanation of labels and Safety Data Sheets for pertinent hazard information and how employees can obtain and use the appropriate hazard information.
- Methods and observations that may be used to detect the presence or release of hazardous chemicals by use of monitoring devices, visual appearance or odor.
- The physical & health hazards of chemicals in the work area.
- Protection measures to be utilized to prevent exposure.
- Appropriate work practices.
- Emergency procedures.
- Proper PPE to be used.

Multi-Employer Job Sites/Multi-Work Site

Multi-Work Sites
Where employees must travel between work places during a work shift, the written HAZCOM Program shall be kept at a primary job site. If there is no primary job site, then the program shall be sent with employees.

The program shall be made available, upon request, to employees, their designated representatives, the Assistant Secretary and the Director in accordance with requirements of 29 CFR 1910.1020(e).

Multi-Employer Job Sites
A pre-job briefing shall be conducted with the contractor prior to the initiation of work on the site.

- During this pre-job briefing, contractors shall notify Dee Cramer, Inc. and present current copies of Safety Data Sheets and label information for every hazardous substance brought on-site.
- Dee Cramer, Inc. shall notify and provide required SDS and label information for all hazardous materials the contractor may encounter on the job.
- The facilities labeling system and any precautionary measures to be taken by contractor during normal conditions and emergencies shall be addressed.
- By providing such information to other employers, Dee Cramer, Inc. does not assume any obligations that other employers have for the safety of their employees.
- In this regard, other employers working on Dee Cramer, Inc. property or for Dee Cramer, Inc. on client's property remain fully responsible for developing and implementing their own compliant hazard communication programs.

Purpose

The purpose of this program is to have effective procedures for reporting and evaluating/investigating incidents and non-conformances in order to prevent further occurrences.

Responsibilities

Individual responsibilities for reporting and investigation must be pre-determined and assigned prior to incidents.

Dee Cramer, Inc. Safety Manager

Ensures investigations are conducted and assists in identifying corrective actions.

Site Manager and Supervisors

- Investigates (or assists in) incident investigations
- Corrects non-conformances
- Accompany injured employees to the medical provider for initial treatment.

Employees

Employees must report incidents immediately after they occur. When an employee is involved in a work related incident or is aware of a condition that may cause one the employee must report the incident as soon as possible to Dee Cramer, Inc.. Incidents include any near miss, injury, job related illness, spill or damage to any property to their immediate supervisor. If their immediate supervisor is not available the employee is then to immediately notify the project manager. Employees who could be first responders will be trained and qualified in first aid techniques to control the degree of loss during the immediate post-incident phase.

Procedure

After immediate rescue or response, actions to prevent further loss will occur if the scene is safe. For example, maintenance personnel should be summoned to assess integrity of buildings and equipment, engineering personnel to evaluate the need for bracing of structures, and special equipment/response requirements such as safe rendering of hazardous materials or explosives employed.

Investigations of Incidents, Near Misses & Non-conformances
Investigation is an important part of an effective safety program in that it determines the root cause and corrective actions necessary to prevent similar incidents or non-conformances.

The following must be reported to the employee's supervisor immediately. If that person is not available then the Dee Cramer, Inc. Safety Manager shall be immediately notified for:

- Near miss incidents with the potential to harm people, the environment or assets
- Work related injuries or illnesses; Property damage including vehicle incidents
- Hazardous chemical spillage, loss of containment and contamination
- Non-conformance to safety or environmental rules, policies or standards

The supervisor shall make the necessary notifications and begin the incident investigation process.

In the case of a major injury or incident the scene of the event should be closed off and kept "as is" at the time of the incident. This is vital for effective incident investigation.

All incidents are investigated promptly. When Dee Cramer, Inc. has been notified of a work related incident it shall appoint qualified personnel to complete an investigation of the incident. The investigation should take place as soon as possible after the incident while the facts are still fresh within the minds of those involved (i.e. witnesses). Take the opportunity to talk to all of those involved before they become unavailable or memory fades. An incident investigation must be thorough and concerned only with cause and prevention and must be separate from administrative disciplinary action.

Equipment

Equipment shall be made available and may include some or all of the following items; writing equipment such as pens/paper, measurement equipment such as tape measures and rulers, cameras, small tools, audio recorder, PPE, flags, equipment manuals, etc. The Safety Manager shall have an incident investigation kit prepared in advance.

Incident Reporting Matrix

The Incident Reporting Matrix identifies, based on type of incident, who within corporate management shall be verbally notified and when. It also specifies which type of report from the field shall be completed based on the type of incident.

Reporting of the incident must occur in a specified manner based on site specific requirements and the reporting sequence shall be posted.

EXTERNAL INCIDENT NOTIFICATION MATRIX

TYPE OF INCIDENT	WHO TO NOTIFY VERBALLY	WHEN	INCIDENT REPORT FORM
Minor First Aid	Owner Client	24 hrs	Yes
Injury Above Minor First Aid	911 / Site Medical Response / Owner Client	ASAP	Yes
As Required Injury Reporting	Local Regulatory / Owner Client	Within 24 hrs	Yes
Fire / Explosion	911 / Site Fire Response / Owner Client	ASAP	Yes
Reportable Spill	Site Environmental / Owner Client	Within 24 hrs	Yes
Property/Vehicle Damage	Owner Client	Within 24 hrs	Yes

INTERNAL INCIDENT NOTIFICATION MATRIX

TYPE OF INCIDENT	WHO TO NOTIFY VERBALLY	WHEN	INCIDENT REPORT FORM
Minor First Aid	Supervisor then Safety Manager	ASAP	Yes
Injury Above Minor First Aid	Supervisor then Safety Manager	ASAP	Yes
As Required Injury Reporting	Safety Manager then President then V.P.	ASAP	Yes
Fire / Explosion	Safety Manager	ASAP	Yes
Reportable Spill	Safety Manager	ASAP	Yes
Property/Vehicle Damage	CFO then Safety Manager	ASAP	ASAP

Incident Review Team and Incident Investigation Report
Contributing factors and/or root causes are identified and documented. The written incident investigation report shall include an explanation of the contributing factors or root causes of the incident that were identified during the investigation.

All incidents shall be investigated and the extent of such investigation shall reflect the seriousness of the incident utilizing a root cause analysis process or other similar method determined by the Dee Cramer, Inc. Safety Manager. They will form an Incident Review Team that participates in the determination of the final root cause investigative incident report. The team consists of representatives of management or other designees as assigned by the Dee Cramer, Inc. Safety Manager.

Initial identification of evidence immediately following the incident could include a listing of people, equipment, and materials involved and a recording of environmental factors such as weather, illumination, temperature, noise, ventilation, etc.

Evidence such as people, positions of equipment, parts, and papers must be preserved, secured and collected through notes, photographs, witness statements, flagging, and impoundment of documents and equipment. All shall be dated.

Witness interviews and statements must be collected. Locating witnesses, ensuring unbiased testimony, obtaining appropriate interview locations, and use of trained interviewers should be detailed. The need for follow-up interviews should also be addressed. All items shall be dated.

The final incident investigation report consists of findings with critical factors, evidence, corrective actions, responsible parties, and timelines for corrective action completion.

Results of incident investigations are communicated to employees via the Incident Notice form.

Field Incident Report Form
Incident investigations are documented. After the investigation of the incident Dee Cramer, Inc. shall prepare a written report including the description of the incident, any evidence collected during the investigation, an explanation of the causes of the incident and corrective actions required or recommended. Written incident reports will be prepared via the Field Incident Report Form and a detailed narrative statement concerning the events. The format of the narrative report may include an introduction, methodology, summary of the incident, Incident Review Team member names, narrative of the event, findings and recommendations. Photographs, witness statements, drawings, etc. should be included.

The supervisor completes the Dee Cramer, Inc. Field Incident Report and takes the below steps when beginning an incident investigation.

- Provide emergency assistance, as needed and qualified for
- Secure the area as quickly as possible to retain area in the same condition at the time of the incident
- Notify management by phone according to the Incident Notification Matrix
- Identify potential witnesses
- Use investigation tools, as needed (camera, drawings, video, etc.)

- Tag out for evidence any equipment that was involved
- Interview witnesses (including the effected employee) and obtain written, signed statements and e-mail or fax to the Dee Cramer, Inc. Safety Manager
- Prepare Dee Cramer, Inc. Field Incident Report, sign the form, e-mail or fax it to the Dee Cramer, Inc. Safety Manager
- Implement any immediate corrective actions needed

Incident Notice Form

Lessons learned will be reviewed and communicated via the Incident Notice Form. Changes to processes must be placed into effect to prevent reoccurrence or similar events.

In order to communicate incident information and lessons learned from incidents the Dee Cramer, Inc. Safety Manager shall send the Incident Notice to all work sites. The form shall be posted on employee bulletin boards and shall be discussed in weekly safety meetings until all employees at the job site have been informed of the incident.

Corrective Actions

Corrective actions are identified and implemented to prevent a recurrence of the incident.

The written incident investigation report shall include any immediate corrective actions that were taken as well as any long term actions that are required to prevent the recurrence of the incident. Individuals will be assigned responsibilities relative to the corrective actions, and these actions will be tracked to closure.

Site Managers are held accountable for closing corrective actions. Corrective actions for safety improvement input are posted at each site and tracked by the Dee Cramer, Inc. Safety Manager to ensure timely follow up and completion.
Corrective actions are also used as needed for revisions to site specific safety plans and the Dee Cramer, Inc. Safety and Health Management System.

Injury Classifications

Injuries shall be classified per the following:

First Aid – Dressing on a minor cut, removal of a splinter, typically treatment for household type injuries.

Lost Work Day Case (LWDC) – An injury that results in an employee being unfit to perform any work on any day after the occurrence of an occupational injury.

Number of Lost or Restricted Work Days – The number of days, other than the day of occupational injury and the day of return, missed from scheduled work due to being unfit for work or medically restricted to the point that the essential functions of a position cannot be worked.

Occupational Injury – An injury which results from a work related activity.

Occupational Illness – Any abnormal condition or disorder caused by exposure to environmental factors while performing work that resulted in medical treatment by a physician for a skin disorder, respiratory condition,

poisoning, hearing loss or other disease (frostbite, heatstroke, sunstroke, welding flash, diseases caused by parasites, etc.). Do not include minor treatments (first aid) for illnesses.

Recordable Medical Case (RMC) – An occupational injury more severe than first aid that requires advanced treatment (such as fractures, more than one stitch, prescription medication of more than one dose, unconsciousness, removal of foreign body embedded in eye (not flushing), admission to a hospital for more than observation purposes) and yet results in no lost work time beyond the day of injury.

Restricted Work Day Case (RWDC) – An occupational injury which results in a person being unfit for essential functions of the regular job on any day after the injury but where there is no time lost beyond the day of injury. An example would include an injured associate is kept at work but not performing within the essential functions of their regular job.

Work or Work Related Activity – All incidents that occur in work related activities during work hours, field visits, etc. are reportable and are to be included if the occupational injury or illness is more serious than requiring simple first aid. Incidents occurring during off hours and incidents while in transit to or from locations that are not considered an employee's primary work are not reportable.

The following are examples of incidents that will not be considered as recordable:

- The injury or illness involves signs or symptoms that surface at work but result solely from a non-work-related event or exposure that occurs outside the work environment.
- The injury or illness results solely from voluntary participation in a wellness program or in flu shot, exercise class, racquetball, or baseball.
- The injury or illness is solely the result of an employee eating, drinking, or preparing food or drink for personal consumption (whether bought on the employer's premises or brought in). The injury or illness is solely the result of an employee doing personal tasks (unrelated to their employment) at the establishment outside of the employee's assigned working hours.
- The illness is the common cold or flu (Note: contagious diseases such as tuberculosis, brucellosis, hepatitis A, or plague are considered work-related if the employee is infected at work).

Training

Investigation team members are provided training on investigation techniques. Members of the incident investigation or review team shall be qualified and competent individuals. Dee Cramer, Inc. shall provide training on the investigation techniques used during an incident investigation. Training shall occur prior to responsibilities to response or investigation duties are assigned. Training frequency will be based on the specific are of responsibility but shall not exceed once every two years. Training requirements relative to incident investigation and reporting shall include:

- Awareness
- First Responder Responsibilities
- The Initial Investigation at the Accident Scene
- Managing the Accident Investigation
- Collecting Data

- Analyzing Data
- Developing Conclusions and Judgments of Need
- Reporting the Results

Purpose

The purpose of the program is to prescribe rules and establish minimum requirements for the construction, care, and use of the common types of ladders.

All ladders that are purchased and placed into service; or, any ladders that are engineered, manufactured and installed on any Dee Cramer, Inc. equipment shall follow the requirements set forth by this program.

Scope

This program is applicable to all employees who may utilize ladders. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Dee Cramer, Inc. employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Key Responsibilities

Managers and Supervisors

- Managers and supervisors are responsible for ensuring that all employees, and/or contractors have been trained in the use and inspection of ladders in accordance to the manufactures guidelines.
- Managers and supervisors are responsible for ensuring that all employees and contractors are aware that if an inspection discovers a defect, the ladder shall not be used and taken out of service.

Employees

- Employees shall inspect ladders prior, during and at the completion of each use to ensure the condition of the ladder and the safety of its occupants.
- Employees are responsible for following this program and reporting any damage or repairs that may be needed to their supervisor.

Procedure

Ladders should not be used if a safer means of accessing an elevated work area is available. Dee Cramer, Inc. shall ensure that workers do not use a ladder to enter or leave an elevated or sub-level work area if the area has another safe and recognizable way to enter or leave it.

If work cannot be done from a ladder without hazard to a worker, a work platform must be provided. A worker must not carry up or down a ladder, heavy or bulky objects or any other objects which may make ascent or descent unsafe.

Inspection, Care and Safe Work Practices of Ladders

Ladders shall have the correct load capacity for the task and not be loaded beyond the maximum intended load for which they were built nor in excess of the manufacturer's rated capacity. Weight includes the combined weight of the climber and his tools/equipment. Ladders are rated as the following:

- I (holds 250 lbs)
- I-A (holds 300 lbs)
- II (holds 225 lbs)
- III (holds 200 lbs)

Inspection

Ladders shall be inspected by a competent person for visible defects on a periodic basis and after any occurrence that could affect their safe use. Monthly formal inspections shall be documented. The following requirements apply:

- A ladder must be inspected before use on each shift, and after any modification and any condition that might endanger workers must be remedied before the equipment is used.
- Ladder rungs, cleats and steps shall be parallel, level and uniformly spaced.
- If an extension ladder is used by a worker is must be equipped with locks that securely hold the sections of the ladder in the extended position.
- No ladder shall be lashed to another ladder to increase its length.
- A stepladder shall have legs that are securely held in position by metal braces or an equivalent rigid support.
- A manufactured portable ladder must be marked for the grade of material used to construct the ladder and the use for which the ladder is constructed.
- Portable single or extension ladders shall be equipped with a non-slip type base or shall be held, tied or otherwise secured to prevent slipping.
- A ladder found to be broken or defective may not be used until it has been repaired and restored to its original design specifications. Any ladder that has developed defects shall be withdrawn from service for repair or destruction and tagged or marked as "Dangerous, Do Not Use."
- If a ladder is tipped over, it shall be inspected by a competent person for side rail dents or bends, or excessively dented rungs; check all rung to side rail connections; check hardware connections; check rivets for shears.
- Ladders with loose, broken or missing rungs, split side rails or other hazard producing defects shall not be used. Improvised repairs shall not be made.
- All wood parts shall be free from sharp edges and splinters; sound and free from accepted visual inspection from shake, or other irregularities. Wooden ladders must not be painted.

Care

- Ladders shall be maintained in good condition at all times, the joint between the steps and side rails shall be tight, all hardware and fittings securely attached, and the movable parts shall operate freely without binding or undue play.
- Metal bearings of locks, wheels, pulleys, etc., shall be frequently lubricated.
- Frayed or badly worn rope shall be replaced. Safety feet and other auxiliary equipment shall be kept in good condition to ensure proper performance.
- Rungs shall be kept free of grease and oil.
- Ladders shall be stored in a well-ventilated area in a manner to prevent sagging and warping.

Safe Work Practices

- Ladders shall be used only for the intended purpose for which they were designed.
- Ladders used when servicing energized electrical equipment must be non-conductive. COMPANY shall ensure that a ladder used during the servicing of energized or potentially energized electrical equipment is made of non- conductive material. Metal ladders or wire reinforced wooden ladders shall not be used in proximity to energized electrical equipment.
- The ladder shall be secured at the top or held by another person at the base to prevent movement.
- Portable ladders in use are secured against movement and placed on a stable base. A worker must ensure that a portable ladder is secured against movement and placed on a base that is stable.
- Incline of Portable Ladders - Portable ladders are placed against the top support at a minimum 4:1 incline. A worker must ensure that the base of an inclined portable ladder is no further from the base of the wall or structure than one quarter of the distance between the base of the ladder and the place where the ladder contacts the wall.
- Ladders shall not be placed on boxes, barrels, or other unstable bases to obtain additional height.
- Ladders shall not be used in a horizontal position as platforms, runways or scaffolds.
- Ladders shall not be used by more than one worker at a time.
- The upper supports of ladders used to access elevated work areas must extend a minimum of one meter above the elevated surface. A worker must ensure that the side rails of a portable ladder extend at least 3 feet above a platform, landing or parapet if the ladder is used as a means of access to the platform, landing or parapet.
- Ladders shall not be placed in front of doors opening toward the ladder unless the door is blocked open, locked, or guarded.
- If a ladder is used in a high traffic area, barricades shall be placed to avoid accidental displacement due to collisions.
- Performing work from the top two rungs of a portable ladder is prohibited. A worker must not perform work from either of the top two rungs, steps, or cleats of a portable ladder unless the manufacturer's specifications allow the worker to do so.
- The employee shall maintain a three (3)-point grip on the ladder at all times and carry tools/equipment on a belt or hoist up. Do not carry anything in the hands that could cause injury in case of fall.
- The employee shall face the ladder while ascending or descending.
- The bracing on the back legs of stepladders is designed solely for increasing stability and not for climbing.
- The ladder shall not be moved while occupied.

Training

All employees will be trained for this ladder safety program contents prior to using a ladder.

LEAD SAFETY AND LEAD AWARENESS TRAINING

Dee Cramer Inc.

Completed by: Valerie Bradley
Completed Date: 01/01/2013

SOLDERING AND LEAD EXPOSURE

Background: When absorbed into the body in certain doses, lead is a toxic substance. Lead can be absorbed by inhalation (breathing) and ingestion (eating). Lead is not absorbed through the skin. Inhalation of airborne lead is generally the most significant source of occupational lead absorption. Lead can be absorbed through the digestive system if it is swallowed. Inhaled lead dust or particles or ingested lead is circulated by the blood throughout the body, and stored in various organs and body tissues. Some lead is quickly filtered out of the body and excreted, other remains in the blood and other tissues. Excess lead stored in body tissues can slowly cause irreversible damage, first to individual cells, then to organs and whole body systems.

Short-term Acute Over-Exposure to Lead

Lead is a potent, systemic poison which serves no known useful function once absorbed by your body. Taken in large enough doses, lead can kill in a matter of days. Lead adversely affects numerous body systems, and causes forms of health impairment and disease which arise after periods of exposure as short as a few days. Children are especially sensitive to the effects of lead and experience health effects at much lower exposure levels than adults.

Long-term Chronic Over-Exposure to Lead

Chronic or long-term over exposure to lead may result in severe damage to blood-forming, nervous, urinary and reproductive systems. Common symptoms of chronic over-exposure to lead include loss of appetite, metallic taste in the mouth, anxiety, constipation, nausea, excessive tiredness, muscle and joint pain or soreness, numbness, dizziness, hyperactivity, and colic. Severe forms of over-exposure include damage to the central nervous system, kidney disease, and impaired male and female reproductive systems. The best way to prevent all forms of lead-related health impairments and diseases, short- and long-term, is to maintain low levels of lead in the blood.

Training: Must –

1. Include review of Appendices A & B of the Lead Standard (1910.1025)
2. Occur initially for any employee at time of hire, during orientation or before initial assignment to work areas where lead is suspected. Annual refresher training thereafter.
3. Cover the specific nature of expected tasks or operations that could result in exposure above the action level.
4. All training is to be documented in writing and kept secured but available to appropriate employees through the Safety Office.

Lead Exposure in Sheet Metal Work

Certain activities performed in sheet metal work emit lead or may occur where lead is present and may result in exposure to lead above permissible levels:

- Soldering lead on lead, preparatory work and assistance (our primary exposure)
- Industrial exposure to operations with lead dust exp. (e.g. Our work in battery plants)

Action Level:

The Action Level is any employee exposure, without regard to the use of respirators, to an airborne concentration of lead of 30 micrograms per cubic meter of air (30 ug/m^3) averaged over an 8-hour day. The action level initiates several requirements of the lead standard, including exposure monitoring, medical surveillance, training and education.

Permissible Exposure Level (PEL):

The PEL is the maximum allowable exposure to lead of fifty micrograms per cubic meter of air (50 ug/m^3) averaged over an 8-hour day. All efforts must be made to prevent any employee exposure to lead at concentrations greater than fifty micrograms per cubic meter of air over an 8-hour period. Any length of exposure above the PEL will require the use of respirators to supplement other engineering or work practice controls, including work rotation (reduction of total hours of exposure per day).

Exposure Monitoring:

Exposure monitoring is atmospheric monitoring of breathing air for the presence of lead. Full shift personal air monitoring sampling services, representative of our worker's regular, daily exposure to lead, will be provided by our company through available industrial hygiene services of Michigan MIOSHA, our worker's compensation insurance carrier or other services. For initial air monitoring results above the action level, atmospheric monitoring at a minimum will occur every six months; for exposures above the PEL, every three months. Monitoring continues until two consecutive results are below the action level. Results, in writing, are sent to our company and reviewed with all affected employees within fifteen days. Corrective actions, to reduce exposure to or below the PEL if needed, will be communicated at the same time.

Medical Surveillance:

Under the supervision of a physician or other licensed healthcare professional (PLHCP), regular medical exams will be available at no cost and at a reasonable time and place for all employees per the following:

- Employees who are or may be occupationally exposed to lead at or above the action level (AL) for 30 or more days a year.
- Prior to first-time assignment to an area in which airborne concentrations of lead are at or above the Action Level.
- If worker has demonstrated difficulty in breathing during a respirator fit test or during use of the respirator.
- Or, who are experiencing signs or symptoms of the adverse health effects associated with lead exposure.
- Or, who are exposed in an emergency.

The program includes biological monitoring (blood lead and ZPP level sampling and analysis), as well as medical examinations. Blood sampling and monitoring will be conducted every 6 months until two consecutive blood samples & analysis are acceptable. Sampling and monitoring will be performed at least monthly during the medical removal (from exposure) period. Any employee with elevated blood levels will be temporarily removed. Employees will be notified in writing within five days when lead levels are not acceptable.

A written medical opinion from the PLHCP will be obtained for each medical examination performed on each employee and a copy provided to the examined employee. Administration of the medical surveillance program is through the safety office.

Site Specific Compliance Program

Main Fabrication Plant, Field OPS

1. As a work practice control all solder operations will be performed outside of any shop production or field construction facility as possible. An area (s) will be located and prepared for soldering operations to take place (regulated work areas). Warning signs will be posted in any work area where the PEL is exceeded. EMPLOYEES MUST ABIDE BY ALL WARNING SIGNS, LABELS, ASSESSMENT REPORTS AND NEVER DISTRUB ANY LEAD CONTAINING MATERIAL. Respirator use will be required during the installation or implementation of engineering or work practice controls, where such controls are insufficient and during emergencies.
2. Soldering that will take place inside of a building or facility, including in or near occupied work areas or inside of any confined space, must use local exhausting equipment, as engineering controls, to safely remove fumes, gases and vapors, and to prevent circulation of same to occupied areas within the facility. Portable or installed fans or other air movement systems are not to be used.
    a) Additional air monitoring of soldering operations is to take place to verify if, with the use of local exhaust controls, exposures to lead are at or below permissible levels.
    b) The soldering work area should be detached from other work areas or be cordoned off with safety cones or stanchions with Red Danger tape. Employees other than those working with lead, as well as equipment, tools and material are not to enter this work area while lead work is being performed and prior to clean-up of the site.
3. A clipboard or other information system will be kept at or near the solder area, used to record the day and length of time of each employee's soldering work.

This information will be used to track days of soldering exposure per 12-month periods.

4. All shop and field craftworkers who perform or are likely to perform soldering tasks must at a minimum have completed review and training to this written program.
5. Where respirator use will be required assigned workers:
   a) Must have competed a medical evaluation and received safety office fit-testing and training in respirator purpose, selection, use and limitations plus care/maintenance/disposal of respirators.
   b) Must have completed initial or baseline medical surveillance biological monitoring with blood sampling for lead and zinc protoporphyrin levels.
   c) May be required to participate in additional blood lead tests to periodically monitor accumulated exposure days to lead from soldering operation.
   d) Are offered medical exams (see above).
6. The use of company supplied and approved respiratory masks, gloves, hats, vented goggles, aprons that cover the sleeves and disposable shoe covers (work conditions permitting) are required for all soldering work, shop and field, that is expected or could be at or above the Action Level for lead. These and other required personal protective equipment are supplied at no cost to the employee.
   a) Contaminated PPE are to be left in the work area when leaving for break, lunch, other tasks, end of shift. Employees should wash thoroughly before eating, drinking, smoking and leaving at the end of the day. Upon returning to the work area, workers can continue use of their PPE or obtain replacements.
   b) At no time is lead to be removed from protective clothing or the work area by any means which result in uncontrolled dispersal of lead into the air. (Brushing, use of compressed air, etc.) Wet-wipe of work tables, other surfaces is an acceptable method of clean-up. Clothes and tops and bottoms of work boots/shoes can be vacuumed. (Vacuum w/HEPA filtration required.) Towels, rags, etc. used are to be disposed in appropriate waste containers. Any company provided clothing that can be cleaned will be laundered at least weekly.

c) Remove respirators last; dispose of HEPA filters in appropriate waste containers, rinse respirator with water, dry and store for future use.
d) Disposable aprons, booties and gloves are to be removed by carefully rolling each garment piece to reduce exposure to dust, then disposing of the various garments in appropriate waste containers, gloves last. **Wash hands and face even if contact with lead materials is not suspected.**

7. Work station and tools are to be cleaned at the end of each soldering task.
    a) In addition to HEPA-vacuuming referenced above,
    b) All hand and power tools and equipment that have been exposed to lead dust must be decontaminated prior to leaving the work site. This is to include electric drills, grinders, all other power tools; hammers, snips, pliers, all other hand tools, and all other equipment including welding leads, power extension cords, ladders, rigging equipment, etc. Cleaning procedure is as follow:
        - Use of D-Lead Soap or equivalent, concentrated in spray water bottle, with warm running water over contaminated tool/equipment.
        - Uses of scrubbing pads, in addition to above, to remove contaminate.
        - Electric tools to be immersed in water/soap mixture and scrubbed as necessary.
        - Steam cleaning is an alternative on large or hard to clean or reach equipment.
8. When exposures would be or are above the PEL a lunch room, hygiene, shower, and changing facilities will be provided.
9. When working on mulit-contractor worksites, plans must be in place to protect Dee Cramer, Inc employees from any lead exposures.

This site specific compliance program is to be reviewed and updated as needed annually. Further information on protection around lead can be found in the OSHA Lead Standards, 1926.62 Construction and 1910.1025 General Industry, including Appendices A and B with information on medical surveillance and medical removal protection, all available through the safety office.

Purpose

The purpose of this program is to establish procedures for affixing appropriate lockout/tagout equipment to energy isolating devices and to otherwise disable machines or equipment to prevent unexpected energization, start up or release of stored energy to prevent injury or incident.

Scope

This program covers the servicing and maintenance of machines and equipment where the unexpected energization or start-up of the machine or equipment, or the release of stored energy could cause an incident. This program establishes minimum performance requirements for the control of such hazardous energy. When work is performed on a nonowned or operated site, the operator's program shall take precedence, however, this document covers Dee Cramer, Inc. employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Definitions

Affected employee - An employee whose job requires them to operate or use a machine or equipment on which servicing and maintenance is being performed under lockout/tagout, or whose job requires the employee to work in an area in which such servicing or maintenance is being performed.

Authorized employee - A person that performs lockout/tagout procedures on machines or equipment in order to perform servicing or maintenance on that machine or equipment. An affected employee becomes authorized when that employee's duties include performing servicing or maintenance covered under this program.

Capable of being locked out - An energy isolating device is capable of being locked out if it has a hasp or other means of attachment to which, or through which, a lock can be affixed, or it has a locking mechanism built into it. Other energy isolating devices are capable of being locked out if lockout can be achieved without the need to dismantle, rebuild or replace the energy isolating device or permanently alter its energy control capability.

Energized - Connected to an energy source or containing residual or stored energy.

Energy isolating device - A mechanical device that physically prevents the transmission or release of energy including, but not limited to, the following:

- A manually operated electrical circuit breaker, a disconnect switch, a manually operated switch by which the conductors and no pole can be operated independently, a line valve, a block and any similar device used to block or isolate energy.
- Push buttons, selector switches and other control circuit type devices are not isolating devices.

Energy source - Any source of gas, electrical, mechanical, hydraulic, pneumatic, chemical, thermal or other energy sources.

Hot tap - A procedure used in the repair, maintenance and service activities that involves welding on a piece of equipment (pipelines, vessels or tanks) under pressure, in order to install connections or other appurtenances

Lockout - The placement of a lockout device on an energy isolating device in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

Lockout device - A device that utilizes a positive means, such as either a key or combination type lock, to hold an energy isolating device in the safe position and prevent the energizing of a machine or equipment. Included are blank flanges and bolted slip blinds.

Normal operation - The utilization of a machine or equipment to perform its intended operation.

Servicing and/or maintenance - Workplace activities such as constructing, setting up, adjusting, inspecting, modifying and maintaining and/or servicing machines and equipment, where the employee may be exposed to an unexpected energization or start-up of the equipment or release of a hazardous energy source.

Tagout: - The placement of a tagout device on an energy isolating device, in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

Tagout device - A prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolating device in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until tagout device is removed.

Key Responsibilities

Managers and Supervisors

- Responsible to enforce this plan and to see that all their employees and contractors that are affected by lockout/tagout procedures, have the knowledge and understanding required for safe application, usage, and removal of all energy controls and devices.
- Ensure employees are competent as demonstrated by being qualified, suitably trained and with sufficient experience to safely perform work without supervision or with only a minimal degree of supervision.

Employees

- Employees who are affected by this program are required to attend training on an annual basis.
- Are required to follow the provisions of this program and no employee shall perform work on machinery, equipment or powered mobile equipment to be serviced, repaired, tested, adjusted, or inspected until energy sources are isolated, the machinery, equipment, or powered mobile equipment is tested to verify that it is inoperative, and the worker is satisfied that it is inoperative.

General

Dee Cramer, Inc. shall establish and implement written procedures.

Only an authorized employee or employees performing the servicing or maintenance shall perform lockout or tagout.

If machinery or equipment is shut down for maintenance or to be serviced, repaired, tested, adjusted, cleaned, maintained or adjusted or driving of piles where the work will expose employees to energy sources or contact with moving parts could injure employees, no work may be done until:

- All parts and attachments have come to a complete stop and secured against inadvertent movement.
- Where the work will expose workers to energy sources, the hazard has been effectively controlled
- All hazardous energy at the location at which the work is to be carried out has been isolated by activation of an energy isolating device and the energy isolating device is secured, or the machinery, equipment, or powered mobile equipment has been otherwise rendered inoperative in a manner that will prevent its accidental activation and provides equal or greater protection.
- Energy isolating devices have been applied, locked out and rendered any hazardous condition safe as required by local regulatory requirements.
- The employee(s) is assured that it is inoperative.

When lockout of energy isolating devices is required, the devices must be secured in the safe position using locks in accordance with procedures that are made available to all workers who are required to work on the machinery or equipment.

Power tools may be maintained, repaired, tested or adjusted without applying isolation control if the work doesn't put the employee at risk by isolating the energy source from the power tool, dissipating any residual energy in the power tool and the energy source remains isolated during the activity.

If work is to be done that may endanger a worker Dee Cramer, Inc. shall ensure that the work is done by a worker who is competent to do the work. Workers who may be required to use safety equipment shall be competent in the application, care, use, maintenance, and limitations of that equipment.

Lock Out Tag Out Devices

Once all energy isolating devices have been activated to control hazardous energy each worker involved in work at each location requiring control of hazardous energy secures each energy isolating device with a personal lock.

Lockout Device - If an energy source can be locked out a device that utilizes a lock to hold an energy isolating device in a safe position shall be used.

Locks

- Each site shall have the same type of lock as specified by Dee Cramer, Inc.
- Are made available to all employees who are required to work on the machinery or equipment and shall be provided at the expense of Dee Cramer, Inc..
- Combination locks must not be used for lockout. Each personal lock must be marked or tagged to identify the person applying it.

Keys
COMPANY shall:

- Issue to each employee who is required or permitted to work on a machine a lock that is operable only by that employee's key or a duplicate key,
- Designate an employee to keep the duplicate key,
- Ensure that the duplicate key is accessible only to the designated employee,
- Ensure that the lock used has a unique mark or identification tag on it that identifies the employee to whom the lock is assigned, and
- Ensure that a logbook is kept to record the use of the duplicate key and the reasons for that use each time the duplicate key is used.

Tagout Device – If an energy source cannot be locked out with a lockout device then a tagout device shall be used. Tagout devices is a warning only level of protection and shall be weather and chemical resistant, standardized in color with clear written warning of hazardous energy; i.e. Do Not Operate, Do Not Start, Do Not Energize, etc. Each site shall have the same style of tags specified by Dee Cramer, Inc. Each tag will identify the employee who attached it.

Requirements for Tags
If a tag is used as a means of communication, the tag:

- Shall be made of non-conducting material,
- Shall be secured to prevent its inadvertent removal,
- Shall be placed in a conspicuous location,
- Shall state the reason the switch is disconnected and locked out,
- Shall show the name of the employee who disconnected and locked out the switch, and
- Shall show the date on which the switch was disconnected and locked out.

Unable to Stop Equipment

In the rare case that the manufacturer's specifications require the machinery, equipment or powered mobile equipment to remain operative while it is being serviced, repaired, tested, adjusted, or inspected, or there are no manufacturer's specifications and it is not reasonable practicable to stop or render the machinery, equipment or powered mobile equipment inoperative Dee Cramer, Inc. shall develop and implement written procedures and controls that ensure the machinery, equipment or powered mobile equipment can be serviced, repaired, tested, adjusted or inspected safely only by qualified and authorized to do the work. If it is not practicable to shut down machinery or equipment for maintenance, only the parts which are vital to the process may remain energized and the work must be performed by workers who are qualified to do the work, have been authorized by COMPANY to do the work and have been provided with and follow written safe work procedures.

Either of the cases above requires a written authorization to proceed from senior management due to the increased risk exposure.

No person shall deactivate a lock-out process that does not use a lock and key except the person designated.

Energy Control Procedures

Each manager or supervisor is responsible for developing specific step-by-step shutdown and start up procedures for a particular machine or piece of equipment in their respective area. Any source of gas, electrical, mechanical, hydraulic, pneumatic, chemical, thermal or other energy sources must be identified.

- A machine must be locked out and tagged out prior to performing maintenance activities. The power supply to electrical installations, equipment or conductors shall be disconnected, locked out of service and tagged before any work is done, and while it is being done, on or near live exposed parts of the installations, equipment or conductors.
- A written, step-by-step isolation procedure for shutdown and start up shall be prepared for each type of machine or piece of equipment.
- This procedure shall include:
    - Equipment number if assigned.
    - Equipment location.
    - Potential Energy Source(s) (i.e. steam, electrical, hydraulic, tension, gravity, gas pressure, etc.)
    - Location of isolating controls (i.e. breaker switches, valves, etc.)
    - Quantity of isolating controls
    - Quantity of locks required to isolate the equipment
    - Other hardware required to isolate the equipment (i.e. chains, valve covers, blocks, etc.)
    - List any residual energy required to be dissipated before work begins.

Specific Sequence for Application of Energy Control

1. Notification
Authorized employees must notify all other affected employees of the application and removal of lockout/tagout devices. Notification shall be given before the controls are applied and before they are removed from the machine or equipment.

2. Preparation for Shutdown
Before an authorized or affected employee shuts down a machine or equipment, the authorized employee shall have the knowledge of the type and magnitude of the energy, the hazards of the energy to be controlled, and the method or means (locks) to control the energy sources.

3. Machine or Equipment Shutdown
The machine or equipment shall be shut down using the procedures established for that machine or piece of equipment. The shutdown shall be orderly to avoid any addition hazards to employees as a result of the stoppage.

4. Machine or Equipment Isolation
All energy isolating devices that are needed to control the energy to the machine or equipment shall be physically located and operated in such a manner as to isolate the machine or equipment from the energy source(s).

5. Lockout/Tagout Devices and Application

- Each authorized employee shall have the proper number of locks and devices to be able to independently of each other perform proper lockout/tagout procedures for machines or equipment that they may be working on.
- Lockout or tagout devices shall be affixed to each energy isolating device by authorized employees.
- Each lockout and tagout devices shall include the name of the individual placing the device.
- Lockout devices shall be affixed in a manner to hold the energy isolating devices in a safe or off position.
- Tagout devices shall be affixed in a manner that will clearly indicate that the operation or movement of isolating devices to the safe or off position and prohibiting the operation of the control device.
- Tagout devices used with energy isolating devices with the capability of being locked out shall be fastened at the same point at which the lock would have been attached. If a tag cannot be directly attached to the energy isolation device it shall be located as close as safely as possible to the device in a position that will be immediately obvious to anyone attempting to operate the device.
- Each energy source shall be locked out completely isolating the equipment.
- If more than one employee is involved, the employee who disconnected and locked out the power supply shall communicate the purpose and status of the disconnecting and locking out.
- Isolating machines or equipment shall include, but are not limited to:
  - Pumps, compressors, generators, electric distribution, storage tanks, etc.
  - Each type of equipment, including isolating pipes and pipelines, to be isolated shall have specific documented procedures for isolation, i.e. for compressors: suction, discharge, power, starting, fuel, dumps shall be closed, locked and tagged out properly.
  - For pipes and pipelines see #8.

6. Stored Energy and the Possibility of Reaccumulation

Dee Cramer, Inc. will verify that all potential energy sources are released prior to performing maintenance activities. Before beginning the work, each worker shall determine if energy sources have been properly de-energized and locked out.

7. Isolating Pipes and Pipelines Requirements

If piping, a pipeline or a process system containing a harmful substance under pressure is to be serviced, repaired, tested, adjusted or inspected Dee Cramer, Inc. shall ensure that no worker performs such work on the piping, pipeline, or process system until flow in the piping, pipeline, or process system has been stopped or regulated to a safe level and the location at which the work is to be carried out is isolated and secured.

In order to ensure that harmful substances under pressure are not released Dee Cramer, Inc. will utilize the following methods (with Disconnection/Misalign as the preferred method):

- Blinding - Install full-rated blind(s).
- Disconnection/Misalign - This involves physically removing part of the equipment, or misaligning piping. Isolation devices shall then be attached as close to the energy source as possible and listed on the Energy Isolation Log.
- Double Block and Bleed - This involves three valves: two block valves and a bleed valve in between. For Energy Isolation purposes, all three valves shall be tagged with a “Danger” tag and listed on the Energy Isolation Log. In addition, the two block valves shall be locked.

- Single Block - This involves closing one block valve, then applying locks and tags. Note, this option requires the prior approval of the supervisor.

Note: Control valves shall not be used for energy isolation.
Remote operated valves, designed for positive pressure containment, can be used provided they are disconnected from all Energy Sources and manually closed.

Multiple Groups of Workers

If more than one worker is involved, the worker who disconnected and locked out the power supply shall communicate the purpose and status of the disconnecting and locking out.

- A tailgate meeting shall be conducted to review the written group lockout procedure and other information as required for safe work to continue. The written group lockout procedure must be conspicuously posted at the place where the system is in use.
- An authorized employee will isolate the equipment.
- All employees will then place their locks on the device's group lockout or tagout device after they have verified the procedure.

Release from Lockout/Tagout

When servicing or maintenance is completed or when Lockout / Tagout devices must be temporarily removed, the equipment requires testing and the machine or equipment is ready for testing or to return to normal operating conditions, the following steps shall be taken, in this order:

- Check the machine or equipment and the immediate area surrounding the machine or equipment to ensure that all nonessential items such as tools have been removed and that the machine or equipment components are operationally intact.
- Check the work area to verify that no employee is in danger before an employee removes the securing devices and the machinery, equipment, powered mobile equipment, piping, pipeline or process systems is returned to operation.
- Remove the Lockout/Tagout device
- Energize and proceed with testing
- Deenergize and reapply control methods including Lockout / Tagout devices
- Document the procedure by use of the completed isolation log and provide to supervisor for filing.

Removal of Locks

A person must not remove a personal lock or other securing device unless the person is the worker who installed it. In an emergency, or if the worker who installed a lock or other securing device is not available, a worker designated (supervisor or manager in charge who will be responsible for its removal) by Dee Cramer, Inc. may remove the lock or other securing device in accordance with a procedure that includes verifying that no worker will be in danger due to the removal.

Dee Cramer, Inc. shall ensure that securing devices are not removed until each involved worker is accounted for, any personal locks placed by workers are removed, and the following procedures are implemented to verify that

no worker is in danger before a worker removes the securing devices and the machinery, equipment, powered mobile equipment, piping, pipeline, or process system is returned to operation.

The following procedures shall be followed to allow for the emergency removal of a lock that another person has applied:

- If the key(s) cannot be made available, the employee who requests removal of the lock shall contact their supervisor.
- Every reasonable effort shall be made by the manager or supervisor to contact the authorized employee who applied the lock to obtain the key(s).
- The manager or supervisor shall ensure that the machinery or equipment can be operated safely before removing the lock and no employees will be in danger if it is removed.
- The competent person removing the lock shall document the lock(s) were removed with permission by manager or supervisor.
- All reasonable efforts will be made by supervisor to notify that employee their lock has been removed, and ensuring that the authorized employee is notified at the start of his or her next shift if the employee's personal lock(s) have been removed since the employee's previous shift.
- If the equipment is client owned, the supervisor or employee requesting to remove the lock(s) shall contact the client to get the lock removed. Clients must remove their lock(s).
- NOTE: Dee Cramer, Inc. employees shall not remove any client locks.

Shift or Personnel Changes

In the event shift or personnel changes occur during maintenance and/or repair activities, the designated Dee Cramer, Inc. employee in charge shall take the necessary steps to maintain the continuity of the lockout/tagout protection. This includes maintaining that all provisions in this procedure are adhered to and the transfer of lockout/tagout devices between authorized employees is accomplished in an orderly manner.

Procedures must be implemented for shift or personnel changes, including the orderly transfer of control of locked out energy isolating devices between outgoing and incoming workers.

Contractors

Contractors performing lockout procedures on Dee Cramer, Inc. property shall comply with this procedure. Contractors shall supply their own locks.

Dee Cramer, Inc. shall initially lockout Dee Cramer, Inc. machines and equipment before the contractor will be allowed to apply their own lock in addition to the one assigned to Dee Cramer, Inc..

Annual Audits

Each year the manager or supervisor, or his representative, will perform an inspection of the Lockout Tagout Program in their respective areas to verify the effectiveness of the program. An authorized employee other than the one(s) utilizing the energy control procedure being inspected shall perform the audit and shall verify that:

- Each authorized and/or affected employee has been trained as required.

- Any new equipment added has specific lockout procedures developed and documented.
- Current procedures are adequate for performing complete isolation of equipment and resulting in a zero energy state.
- The annual audit will be certified in writing and a copy of the audit maintained on file at the managers/supervisors office.

Training

Dee Cramer, Inc. shall provide training to ensure that the purpose and function of the energy control program are understood by employees and that the knowledge and skills required for the safe application, usage, and removal of the energy controls are acquired by employees. The training shall include the following:

- The recognition of applicable hazardous energy (lockout/tagout) sources, the type and magnitude of the energy available in the workplace, and the methods and means necessary for energy isolation and control.
- The purpose and use of energy control procedures.
- When tagout systems are used, employees shall also be trained in the following limitations of tags:
    - Tags are essentially warning devices affixed to energy isolating devices, and do not provide the physical restraint on those devices that is provided by a lock.
    - When a tag is attached to an energy isolating means, it is not to be removed without authorization of the authorized person responsible for it, and it is never to be bypassed, ignored, or otherwise defeated.
    - Tags must be legible and understandable by all authorized employees, affected employees, and all other employees whose work operations are or may be in the area, in order to be effective.
    - Tags and their means of attachment must be made of materials which will withstand the environmental conditions encountered in the workplace.
    - Tags must be securely attached to energy isolating devices so that they cannot be inadvertently or accidentally detached during use.
    - Tags may evoke a false sense of security, and their meaning needs to be understood as part of the overall energy control program.

All other employees whose work operations are or may be in an area where energy control procedures may be utilized, shall be instructed about the procedure, and about the prohibition relating to attempts to restart or reenergize machines or equipment which are locked out or tagged out.

Retraining

Retraining shall be conducted whenever a periodic inspection reveals, or whenever Dee Cramer, Inc. has reason to believe that there are deviations from or inadequacies in the employee's knowledge or use of the energy control procedures. The retraining shall re-establish employee proficiency and introduce new or revised control methods and procedures, as necessary.

Training Documentation

Dee Cramer, Inc. shall certify that employee training has been accomplished and is being kept up to date. The certification shall contain each employee's name and dates of training.

ISOLATION LOG

Date of Isolation:

Description of Work:

List of Equipment out of Service:

Necessary Requirements of Clear Isolation:

Authorized Employee Signature: _____

Person Continuing Work Signature: _____

Locks/Tags for GROUP LOCKOUT or Multiple Locks/Tags

Lock # or Tag	Date Installed	Date Removed	Print Name (for Group Lockout)	Signature

(If additional space is needed, please attach an additional page)

ANNUAL AUDIT OF THE CONTROL OF HAZARDOUS ENERGY PROGRAM

I certify that an audit of the Dee Cramer, Inc. Lockout Tagout Program was conducted and that each employee has been trained in the recognition and procedures to lockout equipment they may be required to work on or may be affected by.

I further acknowledge that the current procedure is adequate to safely lockout equipment in this department for servicing and maintenance.

Department: _____

Manager (or representative): _____

Date: _____

Original to file: _____

Dee Cramer, Inc.	Location: **GM Sites**	Procedure N°: **MOC**
Management of Change – Documented Program		Issue date: **1/4/2017**
Authorized by: **Matthew Cramer, President**		Revision N°: **RV0**

1.0 Purpose

The purpose of this documented program is to provide the minimum requirements for Dee Cramer, Inc. Management of Change Documented Program, including the following:

- Hazard Identification & Risk Assessment Process
- Management of Change Process
- Roles and Responsibilities
- Management of Change Review Team
- Change Validation Checklist Implementation
- Training Requirements
- Program Evaluation

2.0 Scope

This procedure applies to Dee Cramer, Inc. and all contractor's working under Dee Cramer, Inc.

3.0 Definitions

Contractor Worker - A person who performs services for GM pursuant to an agreement between GM and the person's employer. A Contractor Worker is not a GM employee and remains subject to the control and employment terms of the Contractor Worker's own employer.

4.0 Roles and Responsibilities [These should be tailored to the individual company]

Jamie Roark - Responsible for the implementation and documentation of the elements of this standard related to site change management procedures.

Jamie Roark - Responsible for identifying and training the Site MOC Review Team in accordance with GM's Management of Change Performance Standard.

Jamie Roark **-** Must be a technical SME (e.g. ME Director or equivalent).

- Responsible for initiating the Change Validation Checklist or equivalent upon worker request.
- Responsible for escalating per Dee Cramer, Inc. process if the change cannot be validated at the site level.

5.0 Requirements

Dee Cramer, Inc. will identify and comply with applicable regulatory requirements related to the Management of Change process on their site.

Dee Cramer, Inc. will have a process in place to conduct a hazard identification and Risk Assessment on people, equipment, and/or process changes and will be documented.

Dee Cramer, Inc. will identify a Contractor SME to review and validate requested changes.

Dee Cramer, Inc. will develop and implement a document to validate requested changes that exceeds or is at the minimum equivalent to GM's Management of Change Validation Checklist.

Dee Cramer, Inc. will document all validations completed by Dee Cramer, Inc. and will make these documents available for review upon request by GM leader who monitors Dee Cramer, Inc.

Dee Cramer, Inc. is responsible to inform the responsible GM leader, who monitors the contractor, of the validated change.

Dee Cramer, Inc. is responsible for implementing a Management of Change Review Team and designate a Champion.

Dee Cramer, Inc. is responsible to submit any event that may be considered or identified as a sentinel event to the responsible GM leader.

Dee Cramer, Inc. is required to attend and participate in GM's site Management of Change Review Team meeting.

Dee Cramer, Inc. is responsible for validation signatures on the contractor document, equivalent to the Change Validation Checklist.

Dee Cramer, Inc. will train their employees on the Management of Change standard.

Dee Cramer, Inc. will forward documentation to the Management of Change Champion at their site verifying the training has been completed.

Dee Cramer, Inc. will maintain records relating to Management of Change activities in accordance with GM's ILM requirements.

Dee Cramer, Inc. will perform an annual program evaluation to determine implementation effectiveness of the Management of Change Performance standard.

Dee Cramer, Inc. self-assessment will be forwarded by Dee Cramer, Inc. to the Management of Change Champion at the site.

6.0 Related documents

- Change Validation Checklist or Equivalent

7.0 References

8.0 Revision History

Revision 1 – Initial Document

NFPA 70E
FOR
Dee Cramer Inc

OBJECTIVE

This program establishes minimum standards to prevent hazardous electrical exposures to personnel and ensure compliance with regulatory requirements applicable to electrical systems. Working on equipment in a de-energized state is **required** unless de-energizing introduces an increased hazard or is infeasible. This program is designed to help ensure that energized electrical is performed safely by qualified electrical workers, who are trained and provided with the appropriate safe work procedures, protective equipment and other controls. The program is intended to protect employees against electrical shock, burns and other potential electrical safety hazards as well as comply with regulatory requirements.

In order to comply with the federal Occupational Safety and Health Administration Standards (OSHA), this written program has been established for Dee Cramer Inc., (hereafter referred to as "the Company"). State plan OSHA requirements may differ.

All company projects and facilities are included and comply with this program. Copies of this written program, including a copy of the OSHA Standard, are available for review by any employee.

Pre-Task Electrical Safety Planning:

A written hazard/risk evaluation is to be included in pre-task planning, addressing incident event severity, frequency, probability and avoidance. The pre-task plan, to be developed prior to work on either de-energized or on or near energized equipment, will further address determine levels of acceptable, safe work practices.

Dee Cramer's supervisor for the job must use the pre-task planning process to inform the customer or their representative of any unique or un-anticipated electrical hazards prior to starting work. Information from the owner regarding additional hazards and appropriate control methods must be incorporated into the job task safety plan. All Cramer employees working on the electrical task must be trained to understand the specific hazards associated with electrical energy, per this written program, and such training must be documented and maintained for the duration of the employee's employment.

ASSIGNMENT OF RESPONSIBILITY

Company Management is responsible for:

- overall support and involvement in the program,
- making safety and health a priority in company operations,
- providing adequate funding for programs, and
- leading by example regarding safety and health issues.

Safety Managers/Coordinators

- Evaluate work being performed and determine compliance with this program.
- Provide or assist in the task of specific training for electrical work qualifications.
- Maintain training recordkeeping.
- Periodically review and update this written program.
- Evaluate the overall effectiveness of the electrical safety program on a periodic basis.
- Ensure that all electrical and arc flash PPE is properly inspected and maintained.

Foremen/Supervisors

- Promote electrical safety awareness to all employees.
- Ensure employees comply with ALL provisions of the electrical safety program.
- Ensure employees receive training appropriate to their assigned electrical tasks and maintain documentation of such training.
- Develop and maintain a listing of all qualified employees under their supervision.
- Ensure employees are provided with and use appropriate protective equipment.
- Notify the Safety Manager of potential hazards requiring assessments, or improvements to the program.

Employees

- Follow the work practices described in this document, including the use of appropriate protective equipment and tools.
- Attend all training required relative to this program.
- Immediately report any concerns related to electrical safety to supervision.
- Properly maintain and inspect all personal protective equipment prior to each use.
- Properly maintain and inspect all electrical safety equipment (insulated hand tools, arc-rated faceshields, etc.).
- Wear all required personal protective equipment – there are no exceptions.
- Inspect the equipment in accordance with manufacturer's guidelines and instructions.
- Report hazardous conditions or other health and safety concerns immediately to their supervisors/foremen/project managers.

PROCEDURES & ELECTRICAL SAFE WORK PRACTICES

Working on De-Energized Equipment

Electrically Safe Condition

The most important principle of electrical safety is to **assume all electric circuits are energized unless each involved worker ensures they are not.** Every circuit and conductor must be tested every time work is done on them. Proper PPE must be worn until the equipment is proven to be de-energized.

- Voltage rated gloves and leather protectors must be worn.
- Safety glasses must be worn.
- The required Arc Flash PPE must also be worn when verifying the de-energized state. All arc flash and electrical PPE can be removed once the enclosure has been verified as "dead."

The National Fire Protection Association (NFPA) lists six steps to ensure conditions for electrically safe work.

1. Identify all sources of power to the equipment.

2. Remove the load current, and then open the disconnecting devices for each power source.

3. Where possible, visually verify that blades of disconnecting devices are fully open or that drawout-type circuit breakers are fully withdrawn.

4. Apply lockout/tagout devices in accordance with a formal, written policy.

5. Test each phase conductor or circuit part with an adequately rated voltage detector to verify that the equipment is de-energized. Test each phase conductor or circuit part both phase-to-phase and phase-to-ground. Check the voltage detector before and after each test to be sure it is working.

6. Properly ground all possible sources of induced voltage and stored electric energy (such as, capacitors) before touching. If conductors or circuit parts that are being de-energized could contact other exposed conductors or circuit parts, apply ground-connecting devices rated for the available fault current.

The process of de-energizing is "live" work and can result in an arc flash due to equipment failure. When de-energizing, follow the procedures described in "Working On or Near Live Equipment."

Lockout/Tagout Program

- Each employee shall be trained in Lockout/Tagout procedures by the Health & Safety Manager.

- **Lockout/tagout application:** Each person who could be exposed to electric energy must be involved in the lockout/tagout process.

- Follow the posted lockout/tagout procedures: 1) Prepare & Notify 2) Shut-Down equipment 3) Isolate Hazardous Energy 4) Apply LOTO Devices 5) Control Stored Energy 6) Verify & Test 7) Begin LOTO work.

- A lock/lockout device with a tag that will be attached to a disconnecting device to prevent the re-energizing of the equipment being worked on without removal of the lock. The lockout device will have a "Danger Do Not Operate" tag with the employee name on the tag. That employee must be the only person who has the key for the lockout device they install, and that employee will be the only person to remove the lock after all work has been completed.

- A tagout device is a tag and a way to attach it that can withstand at least 50 pounds of force. Tagout devices should be used alone only when it is not possible to install a lockout device.

- The tag used in conjunction with a lockout or tagout device must have a label prohibiting unauthorized operation of the disconnecting means or unauthorized removal of the device. It will also be used as a means of identifying the lock holder.

- Electric lockout/tagout procedures should be posted at the machines location.

- **Individual qualified-employee control procedure:** For minor servicing, maintenance, inspection, and so on, on plug-connected equipment, work may be done without attaching lockout/tagout devices if the plug is next to where the employee is working, is always easy to see, and the equipment is never left alone while being serviced.

- **Return to service:** Once work is completed and lockout/tagout devices removed, tests and visual inspection must confirm that all tools, mechanical restraints, electric jumpers, shorts, and grounds have been removed. Only then is it safe to re-energize and return to service. Employees responsible for operating the equipment and needed to safely re-energize it should be out of the danger zone before equipment is re-energized.

- **Temporary release:** If the job requiring lockout/tagout is interrupted for testing or positioning equipment, follow the same steps as in return to service (above).

Working On or Near Energized Equipment – ARC Flash Protection

NOTE: OSHA and NFPA 70E standards require that electrical equipment and systems operating at 50 volts or greater be de-energized before any employee works on or near them. De-energizing must be used as the primary method of worker protection from electrical hazards.

Achieving an Electrically Safe Work Condition:

- all electrical circuit conductors and parts are to be considered Energized or "Live" until: All sources of energy are removed – The disconnecting means is under lockout/tagout – The absence of voltage is verified by an approved voltage testing device, and – Where exposure to energized facilities exists, they are temporarily grounded.

When it can be justified that energized work must be performed, including if de-energizing introduces increased or additional hazard(s) or is infeasible due to equipment design or operation limitation, only qualified individuals are to perform energized work in accordance with this policy.

Note: Unqualified persons are NOT permitted to enter work spaces that are required to be accessible only to Qualified employees. Only qualified employees are to complete tasks such as testing, troubleshooting and voltage measuring within the limited approach boundary.

Examples of Increased or Additional Hazards:

Interruption of life support equipment – Deactivation of emergency alarm systems – Shutdown of hazardous location ventilation equipment

Examples of Infeasibility due to Equipment Design or Operational Limitations:

Diagnostics and testing/troubleshooting – Circuits that form an integral part of a continuous process that would otherwise need to be completely shut down in order to permit work on one circuit or piece of equipment.

Energized Electrical Work Permit (EEW):

If live parts are not placed in an electrically safe work condition, work shall be performed by written permit only.

Exception: Diagnostics, testing, troubleshooting, voltage measuring shall be permitted to be performed without an EEW permit, provided appropriate safe work practices and personal protective equipment is provided and used.

Job Briefing Checklist:

Before starting any job, the employee in charge shall conduct a job briefing with the employees involved. The briefing shall cover such subjects as hazards associated with the job, work procedures involved, special precautions, energy source controls, and personal protective equipment requirements (example included with this written program) Copies of completed checklists are to be maintained as work record and as a pre-task plan for similar checklist projects in the future.

Working on live circuits means actually touching energized parts. Working near live circuits means working close enough to energized parts to pose a risk even though work is on de-energized parts. Common tasks where there may be a need to work on or near live circuits include:

- Taking voltage measurements
- Opening and closing disconnects and breakers
- Racking breakers on and off the bus
- Removing panels and dead fronts
- Opening electric equipment doors for inspection

Precautions

When working on de-energized the parts, but still inside the flash protection boundary for nearby live exposed parts:

- If the parts cannot be de-energized, barriers such as insulated blankets must be used to protect against accidental contact or PPE must be worn.
- Employees shall not reach blindly into areas that might contain exposed live parts.
- Employees shall not enter spaces containing live parts unless illumination is provided that allows the work to be performed safely.
- Conductive articles of jewelry and clothing (such as watchbands, bracelets, rings, key chains, necklaces, metalized aprons, cloth with conductive thread, metal headgear, or metal frame glasses) shall not be worn where they present an electrical contact hazard with exposed live parts.

- Conductive materials, tools, and equipment that are in contact with any part of an employee's body shall be handled in a manner that prevents accidental contact with live parts. Such materials and equipment include, but are not limited to long conductive objects such as ducts, pipes, tubes, conductive hose and rope, metal-lined rules and scales, steel tapes, pulling lines, metal scaffold parts, structural members, and chains.

- When an employee works in a confined space or enclosed spaces (such as a manhole or vault) that contains exposed live parts, the employee shall use protective shields, barriers or insulating materials as necessary to avoid contact with these parts. Doors, hinged panels, and the like shall be secured to prevent them from swinging into employees. Refer to the confined space entry program.

Personal Protective Equipment

Overview:

SSMWI sheet metal workers are not to work on or around any energized system over 480 volts without additional instruction, not covered within this written program and document.

All work on energized systems and equipment greater than 50 volts and at or less than 480 volts will require PPE per NFPA 70E Hazard Category 2 (HC2.

This PPE will be required before opening the access door or removing the panel to any energized unit/equipment, as well as while performing measurements, trouble shooting or other required services.

General Requirements

- Employees working in areas where there are potential electrical hazards must be provided with and use personal protective equipment (PPE) that is appropriate for the specific work to be performed. The electrical tools and protective equipment must be specifically approved, rated, and tested for the levels of voltage of which an employee may be exposed.

- Employees shall wear nonconductive head protection whenever there is a danger of head injury from electric shock or burns due to contact with live parts or from flying objects resulting from an electrical explosion.

- Employees shall wear protective equipment for the eyes whenever there is a danger of injury from electric arcs, flashes, or from flying objects resulting from an electrical explosion.

- Employees shall wear rubber insulating gloves where there is a danger of hand or arm contact with live parts or possible exposure to arc flash burn. Leather 'protector' gloves shall be worn over the rubber insulating gloves.

- Face shields without arc rating shall not be used for electrical work. Safety glasses or goggles must always be worn underneath face shields.

- Additional illumination may be needed when using tinted face shields as protection during electrical work.

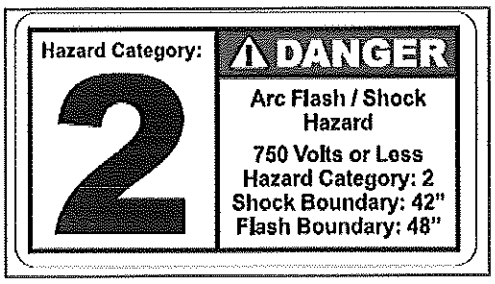
- Electrical Protective Equipment must be selected to meet the criteria established by the American Society of Testing and Materials (ASTM) and by the America National Standards Institute (ANSI).

- Insulating equipment made of materials other than rubber shall provide electrical and mechanical protection at least equal to that of rubber equipment.
- PPE must be maintained in a safe, reliable condition and be inspected for damage before each day's use and immediately following any incident that can reasonably be suspected of having caused damage.
- Employees must use insulated tools and handling equipment that are rated for the voltages to be encountered when working near exposed energized conductors or circuit. Tools and handling equipment should be replaced if the insulating capability is decreased due to damage. Protective gloves must be used when employees are working with exposed electrical parts above fifty (50) volts.
- Fuse handling equipment (insulated for circuit voltage) must be used to remove or install fuses when the fuse terminals are energized. Ropes and hand lines used near exposed energized parts must be non-conductive.
- Protective shields, barriers or insulating materials must be used to protect each employee from shock, burns, or other electrical injuries while that person is working near exposed energized parts that might be accidentally contacted or where dangerous electric heating or arcing might occur.

A. Each of our company's facilities, regardless of their size of function, shall have an electrical arc flash assessment conducted by a qualified NFPA 70E consultant. The arc flash assessment shall be updated whenever significant changes are made to the processes or facility. The hazard assessment will include proper identification and labeling of the hazard categories of all of our electrical enclosures.

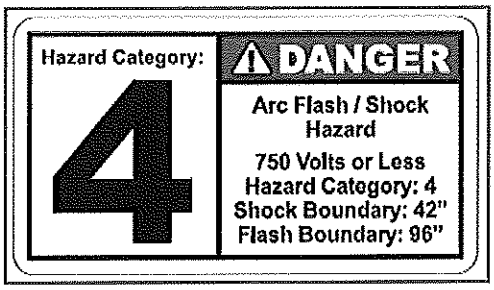
B. Switchboards, disconnects, bussplugs, panel boards, industrial control panels, motor control centers, and all other applicable electrical enclosures in our facilities shall be labeled to indicate the presence of an arc flash and shock hazard. The required labels shall also indicate the hazard category level (which dictates the personal protective equipment) necessary to prevent injuries resulting from these hazards.

The majority (95% +/-) of the electrical enclosures at in our facilities, as well as at our client's locations will be classified as Hazard Category 2 (HC2) under NFPA 70E. These HC2 enclosures are required to be labeled with the following labels:



Common Examples:
- HVAC Control Panels
- Rooftop AC Units
- Breaker Panels
- 480V Disconnects
- 220, 277, 480V Motors

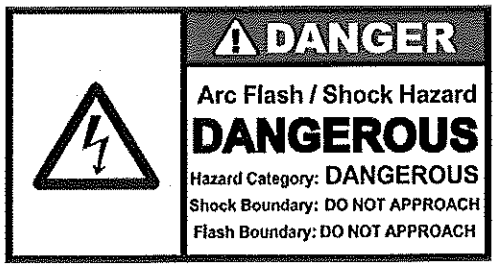
A relatively smaller number (4% +/-) of electrical enclosures that we enter will be classified as Hazard Category 4 (HC4) under NFPA 70E. These HC4 enclosures are required to be labeled with the following labels:



Common Examples:

- Switchgear
- "Draw Out" Racking type Switchgear
- Motor Control Centers (MCCs)
- Step Down Transformers of 112.5 kVA or greater
- Buss Switches of 100A or greater

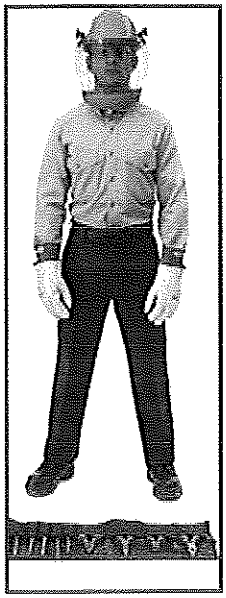
Less than 1% of the electrical enclosures that we have at our locations, and that we will observe in the field, will be classified as Hazard Category DANGEROUS under NFPA 70E. These HC: DANGEROUS enclosures are required to be labeled with the following labels:

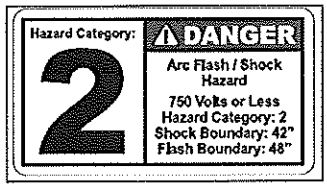


PLEASE NOTE THAT ANY ENCLOSURE MARKED AS HAZARD CATEGORY "DANGEROUS" CANNOT BE ENTERED BY OUR EMPLOYEES. HAZARD CATEGORY DANGEROUS ENCLOSURES CANNOT BE WORKED IN LIVE AND MUST BE CERTIFIED DE-ENERGIZED BY A MEDIUM/HIGH VOLTAGE PROFESSIONAL (I.E. PUBLIC UTIILITY).

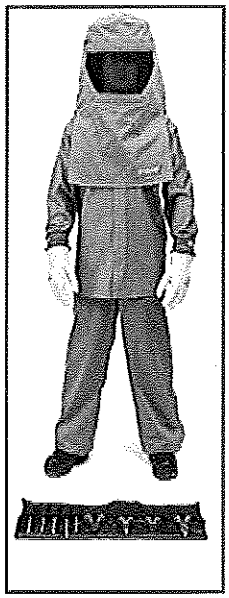
General Requirements for Proper PPE Usage and Maintenance

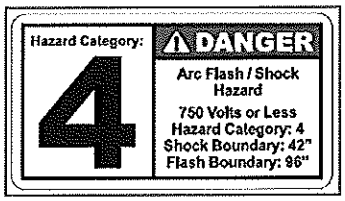
The following Personal Protective Equipment requirements are applicable to the hazard category listed:





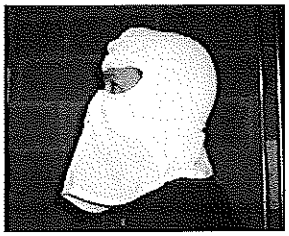
Voltage	**480V or Less**
Clothing	**Flame Resistant (FR) Long Sleeve Shirt and Pants of at least 8 cal/cm^2 ATPV**
Gloves	**Class 00 Rubber Electrical Gloves with Leather Protector Gloves**
Other PPE	**Safety Glasses, Class E-Rated Hardhat with a Face Shield and Chin Cup of at Least 8 cal/cm^2 ATPV, FR Balaclava, Ear Plugs, Leather Shoes**
Tools	**Insulated Tools Only**





Voltage	**480V or Less**
Clothing	**40 cal/ cm^2 ATPV Flame Resistant (FR) Arc Suit, worn over the Flame Resistant (FR) Long Sleeve Shirt and Pants of at least 8 cal/cm^2 ATPV**
Gloves	**Class 00 Rubber Electrical Gloves with Leather Protector Gloves**
Other PPE	**40 cm^2 ATPV Arc Hood, Ear Plugs, Leather Shoes**
Tools	**Insulated Tools Only**

BALACLAVA
A balaclava provided additional head and neck protection which the faceshield and hardhat cannot provide alone. The balaclava must be made of FR fabric and is only worn for Hazard Category 2 tasks. See picture below:



UNDERGARMENTS
All employees will be properly trained on the importance of wearing ONLY 100% cotton undergarments. Synthetic materials, such as poly/cotton blends, Under Armor, etc., pose a serious burn hazard in the event of an arc flash event.

WET WEATHER GEAR
Any clothing or protective wear worn over the FR garments, such as wet weather gear, shall also be made of flame-resistant fabric. Synthetic rain gear, such as traditional nylon rain jackets, ponchos or slickers, pose a serious burn hazard in the event of an arc flash event.

COLD/WINTER WEATHER GEAR
Any clothing or protective wear worn over the FR garments, such as cold weather or winter weather gear (Carhartt jackets, vests, parkas, etc.), shall also be made of flame-resistant fabric.

FR REMINDER
Any garment that an employee wears while performing live electrical tasks are required to be made of FR fabric. The only exception to this is the undergarments which are required to be 100% cotton.

Requirements for Proper PPE Usage and Maintenance

A. Protective equipment must be stored and used in accordance with manufacturer's recommendations. Regular tests and inspections will be required to ensure that any equipment is still fit for purpose and use. Equipment can include but is not limited to voltage-rated gloves, arc-rated hard hats and face shields, safety glasses, hearing protection, safety footwear and flame resistant (FR) clothing.

B. All Flame Resistant Clothing (FRC) shall be laundered and maintained according to the manufacturer's specifications. Employees are not permitted to make alterations to any FR apparel. It is recommended that a uniform company be contacted to discuss the proper care and maintenance/laundering/repair of the FR garments.

C. In addition to the flame resistant clothing, applicable employees will also be provided with insulated hand tools, arc-rated hardhat and faceshield, and electrically-insulated rubber gloves.

D. It is recommended that Class 00 gloves be provided to each qualified person. Class 00 gloves, along with the leather protector gloves, when worn in tandem, provide the necessary protection from electrocution and arc flash energy. Bear in mind that Class 00 gloves only provide voltage protection up to 500V. If exposures of greater than 500V is anticipated, gloves with higher voltage protection shall be required.

E. Electrically-insulated rubber gloves are required to be inspected each day (prior to use) by the qualified employee, and, every six (6) months by a certified third party.

F. Any additional PPE (fall protection, etc.) shall be determined by a hazard assessment of the task.

G. Prior to establishing an electrically safe work condition, all qualified persons within the flash protection boundary of a presumed live component must be suitably protected with personal protective equipment for that specific hazard category. Once an electrically safe work condition has been established and verified, electrical personal protective equipment can be removed.

H. Conductive articles of clothing or jewelry (such as watchbands, bracelets, rings, key chains, pens, necklaces, metalized aprons cloth with conductive thread, metal headgear, metal frame glasses, etc.) shall not be worn where they present an electrical contact hazard with live parts, unless they are rendered non-conductive by covering or wrapping with insulated material.

I. All unqualified personnel shall be kept a safe distance from exposed energized components. Safe distance shall be the longer of the two boundaries (Shock and Flash Protection).

Insulated Tools and Materials

- Only insulated tools and equipment shall be used when exposed to energized parts.
- Insulated tools shall be rated for the voltages on which they are used.
- Insulated tools shall be designed and constructed for the environment to which they are exposed and the manner in which they are used.
- Fuse or fuse holder handling equipment, insulated for the circuit voltage, shall be used to removed or install a fuse if the fuse terminals are energized.
- Ropes and hand-lines used near exposed energized parts shall be nonconductive.

- Portable ladders used for electrical work shall have nonconductive side rails.

Access-Limiting Equipment

- Barricades shall be used in conjunction with safety signs to prevent or limit access to work areas containing live parts. Conductive barricades shall not be used where they might cause an electrical hazard. These barricades are designed to prevent un-qualified and/or unprotected workers from entering the electrical hazard area.

- If signs and barricades do not provide sufficient protection, an attendant will be assigned to warn and protect pedestrians. The primary duty of the attendant shall be to keep an unqualified person out of the work area where an electrical hazard exists. The attendant shall remain in the area as long as there is a potential exposure to electrical hazards.

Mechanical and Electrical Service Technicians, - General Work Plan

Carefully plan each job well before you have to start the work. Mark sure that you have all the proper tools, equipment and permits (if required) Think through the electrical safety program procedures so that you can easily incorporate them into the troubleshooting, maintenance and/or repair processes.

Anticipate unexpected events by thinking through all conceivable possibilities. Remain cognizant of possible unexpected events by giving your undivided attention/concentration to the task.

Never approach a unit with exposed, energized electrical conductors and/or circuit parts closer than 4 feet without following the safe work practices and personal protective equipment requirements described in this section. The 4 foot approach and protection boundary is the greater of the two boundaries established for Qualified Persons for shock and arc flash protection. The 4 foot boundary applies to any conductive objects that you might be carrying as well.

Before opening the access door or removing the panel to any energized unit/equipment, inspect/evaluate it to ensure that you know its voltage capacity. All new HVAC units/equipment are required to be labeled showing the available incident energy or the required level of ppe. If there is no label on equipment/unit, evaluate hazard risk based on the unit voltage and ampacity. Also, ensure that all visible parts appear to be in good condition. (If the unit is pushing more than 480 volts this program does not apply. Before you proceed, obtain and follow an electrical safety program established for units/equipment pushing the higher voltage of the unit you will be servicing.

If possible de-energize equipment before removing panel and re-energize to troubleshoot.

If de-energizing is not practical, evaluate the hazard risk:
High Hazard Situations;
Look for obvious signs of damage to the unit/equipment disconnects (where applicable) and conduit/wiring between services disconnects and the unit/equipment (where applicable).
Look the unit/equipment over carefully for common causes of arc flash such as:
Dust and other impurities that could provide a path for electrical current
Corrosion, which can create impurities on insulation surfaces
High humidity, rain or condensation that could result in water vapor on insulation material which can cause flashover to ground.
The potential for spark discharge caused by accidental tool or spare parts contacting exposed, energized electrical conductors and/or circuit parts
Diagnostic testing when line voltage connections are located in same electrical panels
Unshielded terminal blocks
Capacitors including VFD (drives can be hot several minutes after shut down)
Electrical breaker panels
Checking inside disconnects over 208 volts

Work on incoming power side of equipment
If unsure of risk potential do not proceed – CALL for assistance

If the hazard risk is high, before opening the access door or removing the panel to any energized unit, put on the following personal protective equipment:

a. 8 calorie flame resistant (FR) overalls
b. Ear plugs
c. Safety Glasses
d. Balaclava with Class E hardhat with attached 8 calorie arc rated face shield
e. Class 00 rubber gloves
f. Leather protective gloves (over rubber gloves)

Be sure to use only properly selected/rated voltage testers (multimeters) and ammeters to test electrical circuits. Visually inspect all testing equipment including the leads, cables, power cords, probes and connectors before each use.

If you see any signs of damage do not use the testing equipment. Attach a "Danger-Do Not Use" sign to the equipment and take it out of service immediately. Give it to the warehouse manager as soon as possible.

Use all testing equipment in conformance with the manufacturers' recommendations.

Only use the testing equipment that is provided by the company. Never use light up type testing equipment. Always verify test instruments before and afer an absence of voltage testing.

Before testing voltage on electrical conductors and/or circuit parts test the meter on a known, live source. Then test the electrical conductors and /or circuit parts. Finish by testing the meter again on a known live source. If you detect any inconsistencies or discrepancies with the meter, take it out of service immediately as described above and repeat this process with a properly selected/rated replacement meter.

Use only properly rated insulated tools to conduct troubleshooting as necessary to determine what's wrong with the unit.

As soon as you have identified the problem, stand to one side of the external service disconnect. Shut off the power. Lockout the disconnect supplying the unit when lockout procedures are required. If lockout is necessary, follow the company's lockout procedures as described in this program. (This step does not apply to units/equipment with built in interlocking disconnects).

Test the unit to ensure that the power has been shut off.

Discharge any stored energy such as the current in the capacitors.

Once the unit is "tested dead" and any stored electrical current has been discharged, you may remove your PPE including gloves, hardhat, arc-rated face shield, balaclava, and ear plugs. Also, if necessary due to extreme heat or other conditions, you may remove the flame resistant (FR) clothing. (The above step does not apply to units/equipment with built in interlocking disconnects. If you're working on a unit in high hazard conditions with a built in interlocking disconnect, keep all of your PPE on at all times throughout the troubleshooting and repair/maintenance process)

Complete repairs/maintenance on the unit.

Remove all of your tools and materials from inside the unit.

Close the access door or replace the panel.

Put on all PPE described in step #5

Remove the lockout device if applicable.

Stand to one side of the external service disconnect and start the power (This step does not apply to units/equipment with built in interlocking disconnects).

Ensure that the structural integrity of the unit (enclosure) is in good condition.

If you encounter any unusual first time procedures, write them down and report them to you supervisor. Give the supervisor a copy of your written procedures.

Do NOT allow "Unqualified Person" to come with 10 feet of any unit that is not in an electrically safe work condition. The unit's door or panel must be closed and there must be no exposed energized electrical conductors and /or circuit parts for an unqualified person to approach safely.

SUPERVISORS:

Ensure that all of your technicians have received the proper electrical safety training as described in this program before you allow them to begin work. Ensure that they receive a copy of this program and understand the program's principles, controls and specific electrical safety training requirements. Assess their abilities by testing them on the knowledge they need to protect themselves from electrical hazards.

Participate with each technician in conducting a daily, short term job briefing before servicing any HVAC device to cover anticipated electrical safety hazards, safe work practices and/or personal protective equipment issues as deemed necessary.

Working Space About Electric Equipment

Spaces About Electric Equipment

- Sufficient access and working space shall be provided and maintained about all electric equipment to permit ready and safe operating and maintenance of such equipment. Enclosures that house electric apparatus and are controlled by lock and key shall be considered accessible to qualified persons.

Working Spaces

Nominal Voltage to Ground	Minimum Clear Distance		
	Condition 1	Condition 2	Condition 3
0-150	900mm(3 ft)	900 mm(3 ft)	900mm(3 ft)
151-600	900mm(3 ft)	1m(3-1/2 ft)	1.2 m (4 ft)

Illumination

- Illumination shall be provided for all working spaces about service equipment, switchboards, panel boards, or motor control centers installed indoors. Additional lighting outlets shall not be required where the work space is illuminated by an adjacent light source. In electrical equipment rooms, the illumination shall not be controlled by automatic means only.

Dedicated Equipment Space

- All switchboards, panel boards, distribution boards, and motor control centers shall be located in dedicated spaces and protected from damage. *Exception: Control equipment that by its very nature or because of other rules of the standard must be adjacent to or within sight of the operating machinery shall be permitted in those locations.*

TRAINING

Requirements

Workers near energized, or potentially energized electrical circuitry of fifty (50) volts to ground or greater, shall be trained in energized electrical safe work practices and procedures and retrained as necessary.

Qualified Electrical Worker

Employees must receive training in avoiding the electrical hazards associated with working on or near exposed energized parts prior to performing energized electrical work. Such training will be provided when the employee is initially assigned to the job and refresher training will be provided annually or when conditions change.

The following items are to be included in the training of Qualified Electrical Workers:

- The Lockout/Tagout Training Program including safe work practices required to safely de-energize electrical equipment.
- Universal electrical safety procedures.
- Skills and techniques necessary to distinguish exposed live parts from other parts of electric equipment.
- Skills and techniques necessary to determine the nominal voltage of exposed live parts.
- Selection and use of proper work practices, personal protective equipment, tools, insulating and shielding materials and equipment for working on or near energized parts.
- Recognition of electrical shock and electrical arc flash/blast hazard potentials, how to minimize the risk of arc flash incidents, and the proper care and maintenance of arc flash PPE.

  Our company will have employees trained in recognizing signs and symptoms of electric shock, heart fibrillation, electric burns, and proper first aid protocols for these conditions. They must have the following training:

  - Basic Cardio Pulmonary Resuscitation (CPR/AED)

- Contacting emergency personnel and basic first aid

Retraining

Is to be conducted when the employee is not complying with safety-related work practices or when workplace changes necessitate the use of safety-related work practices that are different from those that the employee would normally use. Required retraining will be performed at intervals not to exceed 3 years.

Documentation of Training and Experience

Our company will document that all required training has been provided. Training sign-in sheets will be part of this documentation. A qualified instructor will be utilized for this training and training certificates will be required from said instructor.

PROGRAM REVIEW

This program will be reviewed at least annually by the Supervisors and the Safety Manager and updated as necessary.

The annual review includes the following:

- Review all electrical practices and procedures to determine compliance with this program.
- Review any updated OSHA, NFPA and/or industry data to help improve the overall program.
- Review all accidents or incidents, and update procedures to minimize the risk of those types of accidents or incidents from occurring.
- Evaluate the efficacy of the procedures specified in this program in the context of work activities, and update as necessary.

EXHIBIT 1 – TERMS AND DEFINITIONS

- **Authorized Lockout/Tagout Employee** - A person who has completed the required hazardous energy control training and is authorized to lockout or tagout a specific machine or equipment to perform service or maintenance. A person must be certified as an Authorized Lockout/Tagout Employee in order to apply a lock or tag to control hazardous energy. All Authorized Lockout/Tagout Employees must be trained in:
    - Electrical Safety/Lockout/Tagout Training
    - Equipment specific procedures in their individual work units
- **Balaclava** – a piece of protective apparel that is made of flame resistant fabric. It is worn over the head to protect the neck, face and head during an arc flash event. It is worn under the hardhat and faceshield.
- **Confined space** - An enclosed space which has limited egress and access, and has an atmospheric hazard (e.g., explosive atmosphere or asphyxiating hazard) and/or other serious safety hazards (e.g., electrical hazard).
- **Damp location** - Partially protected locations subject to moderate degrees of moisture, such as some basements.
- **De-energized electrical work** - Electrical work that is performed on equipment that has been previously energized and is now free from any electrical connection to a source of potential difference and from electrical charges.
- **Disconnecting (or Isolating) switch** - A device designed to close and/or open an electric circuit.
- **Dry location** - Locations not normally subject to dampness or wetness, as in the case of a building under construction.
- **Energized electrical work** - Repair, maintenance, troubleshooting, or testing on electrical circuits, components, or systems while energized (i.e., live). Only Qualified High Voltage Electrical Workers are permitted to work on energized circuitry of 50 volts/25 amps to ground or greater.
- **Energy source** - Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.
- **Exposed electrical parts** - Energized parts that can be inadvertently touched or approached nearer than a safe distance by a person. Parts not suitably guarded, isolated, or insulated. Examples include terminal contacts or lugs, and bare wiring.
- **Ground Fault Circuit Interrupt (GFCI)** - A device whose function is to interrupt the electric circuit to the load when a fault current to ground exceeds a predetermined value that is less than that required to operate the over-current protective device of the supply circuit.
- **Ground** - A conducting connection, whether intentional or accidental, between an electrical circuit or equipment and the earth or to some conducting body that serves in place of the earth.
- **Hazardous Location** - An area in which an airborne flammable dust, vapor or gas may be present and would represent a hazard if a source of ignition were present (see National Fire Protection Association (NFPA) Class I & II and Division 1 & 2).

- **Interlock -** An electrical, mechanical, or key-locked device intended to prevent an undesired sequence of operations.

- **Isolating Switch** - A switch intended for isolating an electric circuit from the source of power. It has no interrupting rating, and is intended to operate only after the circuit has been opened by some other means.

- **Life Safety Equipment** - Equipment that provides critical protection for safety in the event of an emergency or other serious hazard. Life safety equipment, which is electrically energized, should be worked on using Energized Electrical Equipment (EEW) procedures to ensure that the protection provided by the equipment is not lost (e.g., fire alarm and evacuation).

- **Lockout** - The placement of a lock on an energy-isolating device according to procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

- **Lockout / tagout** - A standard that covers the servicing and maintenance of machines and equipment in which the unexpected re-energization of the equipment or release of stored energy could cause injury to employees. It establishes performance requirements for the control of such hazardous energy.

- **Qualified Electrical Worker –** A qualified person trained and knowledgeable of construction and operation of equipment or a specific work method and is trained to recognize and avoid the electrical hazards that might be present with respect to that equipment or work method.

    - Qualified electrical workers shall be familiar with the proper use of the special precautionary techniques, personal protective equipment (PPE), including arc-flash, insulating and shielding materials, and insulated tools and test equipment. A person can be considered qualified with respect to certain equipment and methods but is unqualified for others.

    - An employee who is undergoing on-the-job training and who, in the course of such training, has performed duties safely at his or her level of training and who is under the direct supervision of a qualified person shall be considered to be qualified.

    - Only a Qualified Electrical Worker is allowed to work on energized circuits.

      Note One: Whether a person is considered to be a "qualified" person will depend upon various circumstances in the workplace. It is possible and, in fact, likely for an individual to be considered "qualified" with regard to certain equipment in the workplace, but "unqualified" as to other equipment.

      Note Two: An employee who is undergoing on-the-job training and who, in the course of such training, has demonstrated an ability to perform duties safely at his or her level of training and who is under the direct supervision of a qualified person is considered to be a qualified person for the performance of those duties.

- **Remote-control Circuit** - Any electric circuit that controls any other circuit through a relay or an equivalent device.

- **Service** - The conductors and equipment for delivering energy from the electricity supply system to the wiring system of the premises served.

- **Service Equipment** - The necessary equipment, usually consisting of a circuit breaker or switch and fuses, and their accessories, located near the entrance of supply conductors to the building and intended to constitute the main control and means of cutoff of the supply.

- **Setting Up** - Any work performed to prepare a machine or equipment to perform its normal production operation.

- **Switching Devices** - Devices designed to close and/or open one or more electric circuits. Included in this category are circuit breakers, cutouts, disconnecting (or isolating) switches, disconnecting means, interrupter switches, and oil (filled) cutouts.

- **Tagout** - The placement of a tagout device on an energy-isolating device according to procedure to indicate that the equipment may not be operated until the tagout device is removed.

- **Voltage (of a circuit)** - The greatest root-mean-square (effective) difference of potential between any two conductors of the circuit concerned.

- **Voltage, high** - Circuits with a nominal voltage more than 50 volts.

- **Voltage, low** - Circuits with a nominal voltage less than or equal to 50 volts.

- **Voltage, nominal** - An approximate value assigned to a circuit or system for the purpose of conveniently designating its voltage class, e.g., 120/240, 480/277, and 600.

- **Wet location** - Installations subject to saturation with water or other liquids.

DEFINITIONS (for arc flash safety)

- **Arc blast** - A pressure wave containing gaseous forms of metal created from an electrical current fault. The arc blast may be of sufficient intensity to knock a standing person down or off a ladder. The arc blast may also be of sufficient intensity to produce human injury.

- **Arc flash** - The arc flash may be composed of radiant and convective energy, arc blast vapors, molten metal droplets, sound pressure, shock waves, intense light, and projectiles.

- **ATPV** - Arc Thermal Performance Exposure Value. The minimum incident arc energy in calories per centimeter squared capable of causing the onset of a second-degree burn. ATPV is defined in American Society for Testing of Materials standard F1959/F 1959/M as a test method for flame retardant clothing.

- **Boundary, Flash Protection** - The linear distance in all directions from an exposed energized electrical component that is just far enough away from the source to prevent permanent injury from an arc flash due to a fault current.

- **Boundary, Limited Shock** - The linear distance in all directions from an exposed energized electrical part that defines the safe approach distance for unqualified persons.

- **Break-open threshold energy (EBT)** - Maximum incident energy values that do not cause Flame Resistant (FR) material to break-open, and do not cause second degree burns on skin covered by the FR material.

- **Current limiting devices** - Certain types of fuses or circuit breakers that, when interrupting current within its current-limiting range, will reduce the current in the faulted circuit to a substantially lower magnitude. Properly selected current limiting devices can limit the let-through energy to a level within the rating of downstream circuit components, even in the presence of high available system short-circuit current.

- **Electrically Safe Work Condition** - De-energizing and securing energy sources to ensure employee safety. An electrically safe work condition is established by:
  - *Identifying all sources of the electrical supply*
  - *Opening the disconnecting device for each supply*
  - *Visually inspecting where possible, the disconnecting device to ensure that the switch has opened*
  - *Locking out all disconnecting devices to prevent unexpected re-energization*
  - *Testing the circuit with an adequately rated test device (voltage tester or volt ohmmeter). The performance of the test instrument must be verified before and after each use*
  - *Grounding the phase conductors or components if induced voltage or stored electrical energy is present.*

- **Electrical Systems** - Systems and associated equipment, which provides for the generation, transmission, conversion, distribution and use of electrical power.

- **Fault current** - An electrical current that is following the path of least resistance, either from one phase to another, or to ground. This alternate path may be insufficient to contain the current, resulting in damage from extreme heat, fire, or flying components.

- **High Voltage** - Voltage exceeding 600 Volts A.C. and D.C.

- **Incident energy** - Energy from arc, both radiant and convective, that is actually received per unit area, in calories/cm2

- **Low Voltage** - Voltage less than 600 Volts A.C. and D.C.

- **Qualified Person** - A person with relevant education and experience to enable him or her to avoid dangers which electricity may create, and are authorized and competent to carry out specific work on the electrical distribution system.

- **Senior Qualified Person** - Appointed person who has direct management responsibility for the electrical power distribution system. Must be a Qualified Engineer.

- **Unqualified Person** - Person adequately trained to enable him/her to avoid dangers which electricity may create but are not authorized to work on electrical systems.

- **Voltage Tester** - A device capable of measuring the presence of voltage. These may be either solenoid operated or digital indicating. These units may also incorporate special features, such as the ability to indicate continuity. For the purposes of this procedure it does not include tick-tracers.

- **Volt-Ohm Meter (VOM)** - A metering device capable of measuring continuity, voltage, and current. These units may also incorporate other special features, such as the ability to indicate capacitance and true Root Mean Square (RMS). These devices are also called multimeters.

Purpose

The purpose of this program is to provide a process to minimize employee-hearing loss caused by excessive occupational exposure to noise.

Where a employees occupational noise exposure equals or exceeds 85dBA Dee Cramer, Inc. shall inform employees of the hazards of occupational noise exposure and take all reasonably practicable steps to reduce noise levels in all areas where the employee may be present, required or permitted to work and will minimize the employees' occupational noise exposure to the extent that is reasonably practicable and document the steps taken.

Scope

This program is applicable to all employees who may be present or exposed in areas to noise in excess of 85 decibels. When work is performed on a non-owned or operated site, the client's program shall take precedence and shall be abided by. However, this document covers Dee Cramer, Inc. employees and contractors and shall be used on owned premises, or when a client's program doesn't exist or is less stringent. If Dee Cramer, Inc. has no control over the noise source at a client location we will abide by the client's signage and instruction.

Key Responsibilities

Managers and Supervisors

- Ensure requirements of this program are established and maintained.
- Ensure employees are trained and comply with the requirements of this program.

Employees

- Wear hearing protection when required, attend the training, and cooperate with testing and sampling.

If a noise exposure assessment confirm that employees are exposed to excessive noise at a work site Dee Cramer, Inc. shall have a written procedure to develop and implement a written noise management program that includes policies and procedures.

Noise Management and Hearing Conservation Program

If noise in the workplace exceeds the noise exposure limits and workers are exposed to excess noise Dee Cramer, Inc. shall develop and implement an effective noise control and hearing conservation program and policies. Dee Cramer, Inc. must ensure that the noise management program includes the following:

- a plan to educate workers in the hazards of exposure to excess noise and to train workers in the correct use of control measures and hearing protection;
- the methods and procedures to be used when measuring or monitoring worker exposure to noise;
- the posting of suitable noise hazard warning signs in any work area where the noise level exceeds 85 dBA;
- the methods of engineered noise control to be used;
- the selection, use and maintenance of hearing protection devices to be worn by workers;

- the requirements for audiometric testing and the maintenance of test records;
- an annual review of the policies and procedures to address the effectiveness of the education and training plan, the need for further noise measurement, and the adequacy of noise control measures.

General Requirements

- Dee Cramer, Inc. shall implement a hearing conservation plan developed and appoint a supervisor to oversee the plan.
- All employees, who work in areas where the exposure to noise levels are 85 decibels Lex or greater, must wear hearing protection.
- Where a workers occupational noise exposure equals or exceeds 85dBA, Dee Cramer, Inc. shall inform the worker of the hazards of occupational noise exposure, take all reasonably practicable steps to reduce noise levels in all areas where the worker may be required or permitted to work, minimize the workers' occupational noise exposure to the extent that is reasonably practicable and document the steps taken.

Monitoring Procedures to be Used When Exposure Limits Exceed the Established Level

A noise survey and monitoring program is conducted when exposure limits exceed the established level. When information indicates that employee exposure may equal/exceed the jurisdictional levels, Dee Cramer, Inc. shall implement a monitoring program to identify employees to be included in the hearing conservation program.

For work performed at a client's location Dee Cramer, Inc. must ensure that employees observe posted noise signage and implement controls as needed. Any measurement of sound levels in the workplace that is done in order to determine what protective measures are appropriate shall be done without regard to any use of personal protective equipment.

A clearly visible warning sign shall be posted at every approach to an area in the workplace where the sound level regularly exceeds 85 dBA.

In every area where workers are required or permitted to work and the noise level may frequently exceed 80dBA, COMPANY shall ensure that the noise level is measured in accordance with an approved method. A competent person must evaluate the sources of the noise and recommend corrective actions. The measurements, evaluation and recommendations are to be documented.

To evaluate noise exposure in terms of possible hearing damage, it is necessary to know the overall sound level, the exposure time of the individual in hours per day and the length of time the individual has worked in the area being surveyed. This data shall be supplemented by the following:

- Name of area and location
- Date and time of survey
- Name of person conducting survey
- Description of instrument used, model and serial number
- Environmental conditions
- Description of people exposed

A plot of noise levels must be made for owned facilities. The plot must be filed or posted at the facility. Dee Cramer, Inc. shall evaluate hearing protector attenuation for the specific noise environments. The adequacy of hearing PPE shall be re-evaluated whenever noise exposures increase to the point that the PPE provided may no longer provide adequate protection. Dee Cramer, Inc. shall then provide more effective PPE where necessary.

All sound measuring equipment must be calibrated before and after each survey.

Records of sound measuring equipment calibration and noise level surveys conducted at the place of employment shall be kept at the place of employment as long as Dee Cramer, Inc. operates.

Sound Level Surveys

- All owned facilities that are suspected of having noise levels exceeding 85 decibels must be screened.

Exposure Surveys:

- A representative sampling of employees shall be conducted to determine the exposure to noise over a period of time.
- Noise dosimeters must be capable of integrating all continuous, intermittent and impulsive sound levels from 80 dB to 130 dB and must be calibrated so a dose of 50% corresponds to a time weighted average of 85 dB.

Conditions and Engineering Controls

When employees are required to work in areas in which noise levels exceed the exposure limit for permissible noise exposure Dee Cramer, Inc. shall first take appropriate measures to reduce the noise intensity to approved levels.

Engineering controls are used to reduce noise whenever practicable. Dee Cramer, Inc. shall take all measures reasonably necessary in the circumstances to protect workers from exposure to hazardous sound levels. Dee Cramer, Inc. shall protect workers from exposure to a sound level greater than the limit without requiring them to use and wear personal protective equipment.

Dee Cramer, Inc. shall ensure that all new places of employment are designed and constructed so as to achieve the lowest reasonably practicable noise level, any alteration, renovation or repair to an existing place of employment is made so as to achieve the lowest reasonably practicable noise level, and all new equipment to be used at a place of employment is designed and constructed so as to achieve the lowest reasonably practicable noise level.

The following is a sample list of conditions encountered that require protection for sound levels. Each work site has other conditions based on equipment and work scope:

- Band Saw 104 dBA
- Blower 99 dBA
- Concrete Saw 112 dBA
- Chain Saw 110 dBA
- Compressed Air 92 dBA

- Fire Alarms 95 dBA 17
- Front End Loader 95 dBA
- Miter Saw 109 dBA
- Pneumatic Staking 103 dBA
- Pressure Washer 100 dBA
- Radial Arm Saw 103 dBA
- Sprayer, 1,000 gal. 101 dBA
- Tables Saw 93 dBA
- Wet/Dry Vac 94 dBA

Audiometric Testing

- Dee Cramer, Inc. shall establish and maintain an audiometric testing program by making audiometric testing available to all employees whose exposures equal or exceed jurisdictional levels.
- COMPANY must provide for establishment of a baseline audiogram and recurring testing for each exposed employee.
- Dee Cramer, Inc. will, at its expense, provide the employee who is exposed to noise that exceed noise exposure limits an initial audiometric baseline test as soon as is reasonably practicable but not later than 70 days after the employee is initially exposed to noise levels 85 decibels or greater and a further test at least once every 12 months after the initial baseline test.
- A qualified (authorized by local regulatory requirements) third party shall perform all audiometric testing, evaluation, reporting and retesting. Test results shall be supplied to the employee and if required to regulatory authorities and to others as required by local regulatory requirements.
- Audiometric testing shall be preceded by a period of at least 14 hours during which there is no exposure to workplace sound levels in excess of 80 decibels.
- This requirement may be met by the use of hearing protectors that reduce the employee noise exposure level below 80 decibels.
- An otoscopic exam is required before an audiogram is initiated. A qualified person shall examine the ear canal for any ear infections or canal irregularities that might affect the audiogram or rule out the use of earplugs.

Annual audiograms shall be evaluated as follows:

- Each audiogram shall be compared to the employees' baseline audiogram to ensure the test was valid and to determine if a standard threshold shift has occurred.
- If a standard threshold shift is determined, the employee will be retested within 30 days.
- The retest results will be considered as the annual audiogram.
- Employees shall be informed of their audiometric test results within 30 days of determination.
- If the employee has sustained a standard threshold shift, after retesting, that employee shall be notified and retrained and refitted for appropriate hearing protection and the employee shall be referred for additional medical evaluation if indicated.

Records

Dee Cramer, Inc. must keep records of:

- The annual hearing test results for each worker, which must be kept at the place of employment as long as Dee Cramer, Inc. operates.
- Employee audiograms are considered medical/exposure records and shall be kept and treated as confidential and will not be released to anyone without the written permission of the employee or as otherwise required by law.
- The education and training provided to workers.
- Results of noise exposure measurements taken.

Hearing Protection Equipment

Hearing protectors are used where engineering controls are not practicable to ensure workers are not exposed to noise that exceeds 85 dBA over an 8 hour time period. Dee Cramer, Inc. shall ensure that no worker is exposed to a sound level greater than an equivalent sound exposure level of 85 dBA. Workers shall wear and use personal protective equipment appropriate in the circumstances to protect them from exposure to a sound level greater than the limit.

This applies if engineering controls:

- are not in existence or are not obtainable,
- are not reasonable or not practical to adopt, install, or provide because of the duration or frequency of the exposures or because of the nature of the process, operation, or work;
- are rendered ineffective because of a temporary breakdown of such controls; or
- are ineffective to prevent, control, or limit exposure because of an emergency.

Earmuffs and earplugs shall be made available to the employee in sizes and configurations that will be comfortable to the employee. These hearing protection devices shall be made available to all employees exposed to an 8 hour time-weighted average of 85 db at no cost to employees.

Annual Program Review

Dee Cramer, Inc. shall conduct an annual evaluation of the program to ensure that the provisions of the current written program are being effectively implemented and that it continues to be effective.

Dee Cramer, Inc. shall regularly consult employees required to use hearing protection to assess the employees' views on this program's effectiveness and to identify any problems. Any problems that are identified during this review shall be corrected. Factors to be assessed include, but are not limited to:

- Hearing protection devices (fit, effectiveness, comfort)
- Monitoring of employee hearing test for threshold shifts in order to re-evaluate specific work areas to see if there is any correlation with conditions and test results.
- Effectiveness of and content of training.
- The employee safety committee shall be involved in the annual review.

Training

A training program shall be established for all employees who are exposed to action level noise and to inform employees, on an annual basis, of the effect of noise on hearing; the purpose of hearing protectors, including the advantages, disadvantages and alternatives of various types, including instructions on selection, fitting, maintenance, use and care in accordance with the manufacturer's specifications and the purpose of audiometric testing and an explanation of test procedures.

If occupational noise is between 80-85 dBA COMPANY shall train the employee in the selection, use and maintenance of hearing protection and the requirement to wear it.

Training shall be updated to be consistent with changes in the work process and PPE requirements.

All staff shall have a copy of this program and it shall be posted at the worksite and a copy made available to all employees, their representatives and regulatory agencies.

Pandemic Prepardness Flu Plan

Dee Cramer Inc

Completed by: Valerie Bradley
Completed Date: 01/01/2013

Pandemic Flu Plan

Purpose

Dee Cramer Inc is dedicated to the protection of its employees, facilities, and resources. Also, we are committed to ensuring that our company can continue all aspects of its critical business processes during a flu pandemic and can safely resume normal operations as quickly as possible after a flu pandemic affects our facility. We place a high priority on developing, validating, and, if necessary, implementing our company's Pandemic Flu Plan. If after reading this plan, you find that improvements can be made, please contact the Health Control Committee. We encourage all suggestions because the success of this written plan is important.

Administrative Duties

Valerie Bradley/Safety Director along with outside administrators through workman compensation policy, our Health Control Committee, is responsible for establishing and implementing our written Pandemic Flu Plan. The Health Control Committee has full authority to make necessary decisions to ensure the success of this plan.

Copies of this written plan may be obtained from:

Location/Address:	Contact person:	Telephone number:
4221 E. Baldwin Road-Holly MI 48442	Valerie Bradley	810 579 5000

Critical Business Processes and People

The critical business processes we must keep functioning during a flu pandemic include:

Business process:	Departments/Entities affected:	Names/Titles of critical people within department/ entity:	Names/Titles of backup(s) of each critical person:

In addition to critical business processes and people, we have the following other critical inputs:

Critical input:	Location:	Function during pandemic:

Business Impact Analysis

The business impact analysis determines the effect of mission-critical system failures and employee absenteeism on the viability and operations of critical business processes.

Exposure Determination

The following is a list of all job classifications at our company in which all employees have occupational exposure beyond ordinary co-worker to co-worker transmission:

Job title:	Department/Location:

The following is a list of job classifications in which some employees at our company have occupational exposure beyond ordinary co-worker to co-worker transmission. Included is a list of tasks and procedures, or groups of closely related tasks and procedures, in which occupational exposure may occur for these individuals:

Job title:	Department/Location:	Task/Procedure:

Full-time, part-time, temporary, contract and per diem employees have been considered above.

The following is a list of all job classifications and applicable tasks that have a high level of co-worker to co-worker contact:

Job title:	Department/Location:	Task/Procedure (if applicable):

Scenario Impacts

We have determined that the following scenarios are likely to result in a change in demand for our products and/or services during a pandemic:

Scenario:	Increase or decrease in demand?

We have determined that the following scenarios are likely to result in a decrease in our capabilities to provide our products and/or services during a pandemic:

Scenario:	Capabilities decreased:

Here is our negative business impact analysis for a flu pandemic:

Human, Property, and Business Impacts

Scenario:	Human impact:	Property impact:	Business impact:

Total Impacts, Scenario Probabilities, and Probable Impacts

Scenario:	Total impact:	Scenario probability:	Probable impact:

Travel and Financial Impacts

Scenario:	Travel impact:	Financial impact:

The scenario(s) with the worst total impact is/are: all facts listed above. Factoring in probability with the combined, possible impact, the worst, probable scenario(s) is/are: loss of life. The scenario(s) with the greatest potential impact on business-

related domestic and international travel is/are: time delays. Finally, the scenario(s) with the greatest financial loss is/are: unrecoverable financial loss.

Business Assessment

As a pandemic flu approaches and once it has occurred at our locations or traveler destinations, Operation Manager and/or Safety Director will assess the status and impacts and determine our needs and continuity strategies as follows: Along with communications with our external customers through either verbal, written and/or emails on pandemic flu outbreaks within work scope area (company)

Including a limitation to large crowds and gatherings to prevent additional outbreaks.. Operation Manager and/or Safety Director will brief Company President and Pandemic Committee on the status and our needs and strategies hourly if neccessary

.

Goals and Objectives

Based on our business impact analysis and the latest business assessment (if completed), our immediate goals and objectives for planning for, containing, and recovering from a flu pandemic include:

Goal:	Objective:	Short-term or long-term?

Roles and Responsibilities

To achieve our goals and objectives before, during, and after a flu pandemic, the following people will have the roles and responsibilities listed below:

Individual, team, department, or outside organization/agency:	Backup:	Role and responsibility:

Communication

We must have an effective way to reach those working for our company to inform them of the status of the pandemic flu approaching or affecting our company and their responsibilities during the pandemic. Also, they must have an effective way to reach management to provide input and notify us of any needs or changes in absenteeism rates and health status. Likewise, communicating with our community and customers about our current capabilities, plans, and delays will help to reduce unnecessary tensions and fears.

The audiences we have and the content and methods we use for internal and external communication are as follows:

Audience:	Content:	Method:	Procedure:

Safety Director and/or Operations Manager will officially declare the dates on which our pandemic containment period begins and ends. Employees will be notified of these dates by Company phones provided, lap tops, ipads, - Text or calls.

Training

Information and training is at the heart of pandemic flu planning and containment. Our goal is to ensure employee comprehension and understanding of how employees may be exposed to pandemic flu, what their responsibilities are, and what protective measures they can take. Due to the complexity of a flu pandemic and the continuity and recovery process Outside safety professional on subject trains all those working for our company in the following:

Training topic:	Training format:	Frequency:

In addition, supervisors will ensure that the following cross-training is provided to assure that our company has sufficient coverage for all critical business processes should high absenteeism occur:

Critical task or job:	Primary person(s):	Backup person(s):	Backup received cross-training? (Yes/No)

Inventories, Supplies, and Services

Because our supply chains may become disrupted in a flu pandemic, we will stockpile the following critical supply inventories during the pre-pandemic stage:

Supply item:	Model:	Supplier:	Quantity:

To help obtain supply items during a pandemic, we have identified a list of primary and alternative supply services below:

Supply type:	Critical supply type? (Yes/No)	Primary supplier name, address, and phone/fax:	Alternative supplier(s) name, address, and phone/fax:

Primary and alternative service vendors include:

Service type:	Critical service type? (Yes/No)	Primary service vendor name, address, and phone/fax:	Alternative service vendor(s) name, address, and phone/fax:

Once a pandemic flu outbreak occurs at our company or once supplies and services are affected by a pandemic flu outbreak elsewhere Operation Manager and/or Safety Director will rely on our business assessment and our critical supply and service lists to identify our supply and service needs. Once a supply or service need is identified, Operation Manager and/or Safety Director will notify Operations Manager so that he/she may order it. Should supplies or services become depleted unexpectedly, employees are to notify Operation Manager and/or Safety Director immediately.

We have selected the following alternative site(s), in the event it is needed: Depending on geographic area will determine alternative sites. We estimate that in a worst-case scenario we shall occupy this site for To be determined. Company President, Pandemic Committee, Safety Director shall decide when it may be necessary to move to the alternative site(s).

Air Circulation

To assure optimal air circulation and filtration, (enter your answer) shall ensure (enter your answer).

Vaccination and Antivirals

Outside Safety Professional will provide training to employees in vaccination safety, benefits, efficacy, methods of administration, and availability. We encourage vaccination unless: Doctors recommendations.

Flu Vaccination

A medical nurse will be brought in to administrate vaccinations at no cost to the employee.

Pandemic Flu Vaccination

When the pandemic flu vaccine is available to the public, it will be made available at no cost to our employees after training.

Antivirals

By providing Tamiflu or other antivirals to employee upon their request

Hygiene and Housekeeping

The role of hygiene is key to reducing the spread of pandemic flu. Frequent hand washing with soap and water will be necessary. Alcohol based hand rubs and sanitizing wipes are provided through out the office complex. On work sites the same products will be keep in a clean area for employees to use readly

Periodic routine cleaning/disinfection of surfaces such as desktops, keybords, phones, lunch tables, doorknobs, faucets, handrails, and any other items commonly used shall be performed by; professional cleaning service and/or employees, supversiors, foreman is responsible for general company

housekeeping. Suitable cleaning solutions are listed below:

Cleaning solution:	Recommended for:	Safety precautions:

Operation Manager and/or Safety Director will determine the need for:

Recommendation to wash hands and use good hygiene sense

Because good hygiene and housekeeping practices may lower any potential risk of pandemic flu infection and prevent its spread, we encourage employees to take the following precautions before and during a pandemic flu outbreak:

Wash hands often with antibacterial soap and water often and after coughing and sneezing. Wear gloves if possible.

Personal Protective Equipment

Project Manage, Operation Manage, Safety Director is responsible for ensuring that all necessary protective equipment, including personal protective equipment (PPE), used at this company will be provided without cost to employees. Project Manage, Operation Manage, Safety Director will determine when to provide and require the use of the following protective equipment: Respirators, Gloves, faceshields, protective clothing

Project Manage, Operation Manage, Safety Director will choose protective equipment based on existing exposure levels to pandemic flu.

All protective equipment will be cleaned, laundered, and disposed of by the company at no cost to employees. Project Manage, Operation Manage, Safety Director will determine what procedures and intervals will be necessary for cleaning, disinfecting, inspecting, disposing of, and repairing protective equipment.

Travel and Off-Site Worker Restrictions

To be ready for a flu pandemic, we have determined the positions that involve travel and/or work at off-site locations as follows:

Destination/Location:	Department:	Job title:

Project Managers, Operations Manager tracks travel plans and off-site locations, updates the table of destinations/locations as necessary, and monitors travel advisories for all destinations/locations listed in the table.

If Project Managers, Operations Manager detects a travel advisory for any destination or location listed, then the following procedure is followed:

Dee Cramer Inc., does not travel outsite the US

Medical Surveillance

Supervisor/Project Managers/Safety Director will ensure that:

To ensure but not limited to: Supervisors know the signs and symptoms of pandemic flu and the latest procedures for handling a pontentially infected or infected employee. These procedures aer relayed to all necessary parties.

All employees must abide by the following procedure during the pandemic containment stage:

(enter your answer)

The Health Control Committee will update the above procedure as necessary.

Sick Leave and Time Off

During a "declared" pandemic containment period, employees are eligible for:

Sick pay, available balance of employees PTO

Coordination/Collaboration with Outside Entities

The Health Control Committee will coordinate/collaborate with the following outside entities before and during a flu pandemic:

Outside entity:	Address:	Phone/Fax:	Description of coordination/collaboration:

Post-pandemic Measures

Once it appears that a wave of pandemic flu has passed, operations will return to "normal" in accordance with the following stages:

Stage:	Description:

Safety Director and/or Operations Manager is responsible for determining when it is appropriate to move to each stage. Employees will be notified prior to a shift in stage level, by Company phones provided, lap tops, ipads, - Text or calls.

Recordkeeping

We maintain the following records and documentation:

Record/Document:	Location:	Duration kept:	Who is responsible:

Plan Evaluation

By having the Health Control Committee thoroughly evaluate and, as necessary, revise our plan, we ensure our plan's effectiveness and prevent or eliminate any problems. Plan evaluation involves the following:

If news of a pandemic flu outbreak could occur, exercises and drills will be performed to the necessary personnel on locations, exits based on the criterias needed.

It is important to note that the pandemic flu is predicted to occur in waves over as much as a two-year period. Each wave offers a more deadly virus than the first. Therefore, our company cannot afford to drop its guard once the first wave passes. Our employees too must remain vigilant. After each wave, the Health

Control Committee will evaluate our plan's effectiveness and revise it as necessary.

Purpose

The purpose of the Personal Protective Equipment section is to set forth the procedures for the use, care, and maintenance of personal protective equipment required to be used by employees for the prevention of injuries.

Scope

This program applies to all Dee Cramer, Inc. employees. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Dee Cramer, Inc. employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Key Responsibilities

Safety Manager

- Assists in the selection of appropriate PPE. If a task exposes an employee to hazards which cannot be eliminated through engineering or administrative controls, the Safety Manager assists the supervisor and project manager to identify and select PPE suitable for the specific task performed, conditions present, and frequency and duration of exposure. Employees need to give feedback to the supervisor about the fit, comfort, and suitability of the PPE being selected. Employees are provided reasons for selection of PPE.
- Assists supervisor and site managers in assuring all PPE obtained meets regulatory and this procedure's requirements.
- Performs Worksite Hazard Assessments - The hazard assessment must indicate a determination if hazards are present or are likely to be present, which necessitate the use of PPE. Sources of hazards include, but are not limited to: hazards from impact/motion, high/low temperatures, chemicals, materials, radiation, falling objects, sharp objects, rolling or pinching objects, electrical hazards, and workplace layout. Certifies in writing the tasks evaluated, hazards found and PPE required to protect employees against hazards and ensures exposed employees are made aware of hazards and required PPE before they are assigned to the hazardous task. Certificate shall include certifier's name, signature, dates and identification of assessment documents.

Managers and Supervisors

- Supervisors and managers shall regularly monitor employees for correct use and care of PPE, and obtain follow-up training if required to ensure each employee has adequate skill, knowledge, and ability to use PPE.
- Supervisors and managers shall enforce PPE safety rules following the guidance of the Dee Cramer, Inc. progressive disciplinary procedures and ensure Required PPE Poster is posted properly.

Employees

- Complying with the correct use and care of PPE.
- Reporting changes in exposure to hazardous conditions that might require a follow-up assessment of the task for PPE.

- Reporting and replacing defective or damaged PPE, which shall not be used.
- Wearing of required PPE is a condition of employment.

General

- Protective equipment, including personal protective equipment for eyes, face, head, and extremities, protective clothing, respiratory devices, and protective shields and barriers, shall be provided, used, and maintained in a sanitary and reliable condition whether the PPE is employer issued or employee owned.
- Employee owned equipment is NOT permitted, except for safety toe footwear and prescription safety glasses. Dee Cramer, Inc. is still responsible for the assurance of its adequacy, maintenance and sanitation of those two items.
- All PPE issued shall be at no cost to the employee. All employees will know and follow the procedures outlined in this Program.

Worksite Hazard Assessment

Dee Cramer, Inc. shall assess the workplace to determine if hazards are present, or likely to be present, which necessitate the use of PPE. A written hazard assessment shall be performed. During the hazard assessment a determination if hazards are present or are likely to be present, this necessitates the use of PPE. The following sample hazard sources will be identified:

- High or low temperatures; Chemical exposures (use SDS for guidance)
- Flying particles, molten metal or other eye, face, or skin hazards
- Falling objects or potential for dropping objects; employee falling from a height of 6’ or more
- Sharp objects; Rolling or pinching that could crush the hands or feet;
- Electrical hazards

Where these hazards could cause injury to employees, personal protective equipment must be selected to substantially eliminate the injury potential. Employees will be notified for the selection and reason.

The results of this assessment shall be communicated to each affected employee and kept at the local office.

Selected/identified PPE shall be fitted to each affected employee. Fitting, including proper donning, doffing, clean and maintenance of PPE is addressed in the Training section. Exemptions for use of PPE must be supported by the PPE hazard assessment.

Eye Protection

Employees must use appropriate eye or face protection when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids or chemical gases or vapors. Eye and Face PPE must comply with ANSI Standard Z87.1-2003 (Z87+), *Occupational and Educational Personal Eye and Face Protective Devices.*

Safety Glasses

Safety glasses, with side shields, that meet ANSI Z-87.1-2003 standards with “high Impact lenses” are required to be worn by all employees, subcontractors, and visitors while on Dee Cramer, Inc. property, at all times, as described below:

- At field locations, in shops and warehouses, except in approved, designated, striped safety zones.
- In all yard work zones or by everyone when in the vicinity of loading or unloading equipment, performing mechanic or maintenance work, test stand operations, operating equipment such as forklifts, welding, or any type of work which has the potential to inflict an eye injury.
- In any office, restroom, or any other building while performing any type of work where a potential eye injury may be present.
- Visitors will be provided with visitor glasses. In the absence of approved prescription safety glasses, "Over the glass" type safety glasses or goggles, must be worn over the nonsafety glasses until approved prescription safety glasses are obtained.
- Workers assisting welders must wear absorbent safety glasses that protect the wearer from ultra-violet (UV) and/or infrared rays (IR).
- Dark shaded lens (sunglasses) darker than a # 1 shade is prohibited to be worn indoors unless welding or assisting a welder.
- A doctor must support "exceptions for medical reasons" in writing to exempt safety eyewear requirements.
- Safety glasses are not required:
    - Inside offices.
    - Parking lots when traveling from vehicles to and from office buildings by way of main doors that do not pass through shops.

Goggles

- Chemical splash proof goggles shall be worn when handling or mixing liquid chemicals, solvents, paints, etc., and/or as recommended on the Material Safety Data Sheet of the material being handled.
- Dust proof goggles shall be worn when blowing equipment down with air or while performing other jobs where safety glasses are not adequate to prevent airborne particles from entering the openings around the lenses and side shields.

Face Shields

- Full face shields shall be worn over safety glasses when operating hand held or stationery grinders with abrasive or wire wheels, while chipping paint or concrete or, performing jobs where there is the potential for flying objects striking the face and safety glasses or goggles would not provide adequate protection.

Head Protection

Employees must wear protective helmets when working in areas where there is a potential for injury to the head from employee initiated impact or impact from falling or other moving objects. Helmets must comply with ANSI Standard Z89.1-1997 Class E, *American National Standard for Industrial Head Protection* for Type II head protection or be equally effective.

- Employees must wear protective helmets when working in areas where there is a potential for injury to the head from falling objects.
- Hardhats are to be worn at all field, shop and warehouse locations, or where deemed necessary as per each location's PPE Hazard Assessment.
- Hardhats will not be altered in any way.
- Do not paint or apply unauthorized stickers, name plates, etc.
- Do not drill, cut, bend, or apply heat.

- Do not alter the suspension system.
- Hardhats will be inspected by the employee regularly for cracks, chips, scratches, signs of heat exposure (sun cracks), etc.
- Defective hardhats will be replaced immediately.
- Hardhats shall not be placed in rear windows of vehicles where they will be exposed to the sun or become projectiles during an accident.
- A supply of hardhats must be made available to visitors.
- Dee Cramer, Inc. shall provide hardhats.
- Employees will be trained in the use, care and maintenance of head protection equipment.

Hearing Protection

Hearing protection is required to be worn by all employees, subcontractors, and visitors while in posted "High Noise" areas. Refer to the Dee Cramer, Inc. Hearing Conservation Program for more information.

Warning signs will be posted in areas known or suspected to have noise levels exceeding 85 dBA either constantly or intermittently.

When signs are not posted, employees shall wear hearing protection when noise caused by machinery, tools, etc., prevents normal conversations to be heard clearly.

Rule of thumb: If you have to yell to be heard, hearing protection is required

Types

- Molded Inserts (ear plugs)
- Canal Caps (head band type)
- Muff, either headband or hard hat mounted Earmuffs and earplugs shall be provided to the employee in sizes and configurations that will be comfortable to the employee.

Care and Maintenance

- Inspect hearing protection prior to each use.
- Hearing protection must be kept clean to prevent ear infections.
- Most earplugs used today are disposable and must be discarded when they become dirty, greasy, or cracked.
- Earmuffs that have deteriorated foam inserts, cracked seals or are defective must be replaced.

Fit

- Due to individual differences, not everyone can wear the same type of hearing protection. A variety of styles may have to be tried before one is found to be comfortable and provide adequate protection.
- Employees shall be instructed how to obtain the proper fit.

Hand Protection

Gloves

- Gloves are required to be worn when performing work, which may expose the hands to extreme temperatures, cuts and abrasions, or exposure to chemicals.

- Welding: Welding gloves made of leather or other heat resistant materials shall be worn when performing arc welding or oxy/gas cutting.
- Chemical: Impervious (chemical resistant) gloves shall be worn when handling chemicals that specify gloves as personal protection equipment when handling.
- Refer to the specific chemical's Safety Data Sheet for the correct glove type.
- Persons assigned to working with chemicals, i.e., solvent vats, shall be issued their own individual gloves for hygiene purposes.
- Leather: Leather gloves should be worn when working with sharp materials or when handling rigging equipment.
- Cloth: Cloth gloves should be worn when handling objects or materials, which could cause blisters, splinters, cuts, etc.
- Heat Resistant: Heat resistant gloves shall be worn when handling hot bearings, races, or other materials or objects that have been heated beyond ambient temperatures.
- Insulated: Insulated gloves shall be worn to prevent frostbite in extreme cold climates.
- Glove Inspections
    - Gloves shall be inspected before each use for holes, tears, and worn areas.
    - Chemical gloves shall be periodically air tested for pinholes by twisting the cuff tightly, apply low air pressure to expand the glove, and then submersing in water to check for bubbles.
    - Defective gloves shall be discarded immediately. Exception: machinists are exempted from wearing gloves while working with rotating machinery.

Foot Protection

Safety footwear shall be worn by all employees with regularly assigned duties at field locations, in shops and warehouses.

- Office workers and visitors who enter these areas on an infrequent basis will not be required to wear foot protection provided they stay clear of the work being performed.
- If required to be in the close proximity of the work, the work will be stopped while visiting the area or safety footwear will be worn.
- Shops, Field Locations, Warehouses and Parts Departments: Leather or equivalent boots, either lace up or pull up, shall be worn.
- The boot must provide ankle protection and have soles designed to protect from punctures with defined heels for climbing ladders.
- Metatarsal guards will be worn when duties present a hazard of equipment or material crushing the foot.
- All safety footwear must meet ANSI Z41-1999 standards.
- Client locations may require safety footwear to be worn by everyone; check with the local supervisor for client requirements before visiting field locations.

Fall Protection

Personal fall protection is required when performing certain elevated jobs in excess of six feet. Consult the Dee Cramer, Inc. Fall Protection Program.

Electrical Protection

Consult the Dee Cramer, Inc. Electrical Safety Program.

Monitoring

Supervisors and site managers monitor worksite tasks for changes in, or the introduction of new hazards. If new hazards are discovered, they advise the Safety Manager who then conducts a hazard assessment for appropriate PPE. The Safety Manager monitors the effectiveness of the PPE Procedure and makes recommendations to management to improve the procedure.

Training

Each employee who may need to wear PPE will be properly trained and/or retrained. Training shall include:

- When PPE is necessary.
- What PPE is necessary.
- How to properly don, doff, adjust and wear PPE.
- The limitations of PPE.
- Useful life and disposal of PPE.
- How to clean and maintain PPE in a sanitary and reliable condition.
- Reporting and replacing defective or damaged PPE, which shall NOT be used.

Retraining

Retraining is required when:

- The workplace changes, making the previous training obsolete.
- The type of PPE changes.
- When the employee demonstrates lack of use, improper use, or insufficient skill or understanding in PPE selection, necessity, use and limitations.

Documentation

Training shall be documented and records kept at the local office. The training certification shall include:

- Name of employee(s) trained;
- The dates of training; and
- The certification subject.

Sample PPE Matrix For Dee Cramer, Inc. **Location: ___Insert Location or Work Site___**

D = Depends on situation M = Mandatory - = Not Mandatory unless hazards become present
SUBJECT TO CHANGE BASED ON INDIVIDUAL WORKSITE HAZARD ASSESSMENT **CHANGE ALL AS NEEDED**

CATEGORY	EQUIPMENT	HAZARD	INSPECTION	MAINTENANCE	Job/Task: Field Tech	Housekeeping	Shop Work	Driving	Office	Winter Conditions
Head Protection:										
	Hard Hat (Class G or E Only)	Striking Head or Falling Objects	Each use	Dispose	-	-	D	-	-	-
Eye and Face Protection:										
	Safety Glasses w/shields	Objects Striking Eyes	Each use	Dispose	D	D	M	*	-	M
	Impact Vented Goggles	Small Particles in Eyes	Each use	Dispose	-	-	D	-	-	D
	Chemical Splash Goggles	Chemicals or Oil in Eyes	Each use	Dispose	D	D	D	-	-	-
Hearing Protection:										
	Disposable Earplugs	Damage to Hearing (85 dB)	Each use	Dispose	D	D	D	-	-	-
	Ear Muffs (w/Disposables)	Damage to Hearing (105 dB)	Each use	Dispose	D	D	D	-	-	-
Personal Protective Clothing:										
	Cold Weather Clothing	Cold Temperature	Each use	Clean & Repair	D	D	D	D	-	D
	Rainwear	Wet body	Each use	Dispose	-	-	D	-	-	-
	Protective Sleeves	Biohazardous materials	Each use	Dispose	-	M	-	-	-	-
	Insert more or delete as needed									
	Insert more or delete as needed									
Foot Protection:										
	Slip Resistant Footwear	Injury to Body	Each use	Replace	M	M	M	-	-	-
	Anti-Slip Cleats during Winter	Injury to Body	Each use	Dispose	M	M	M	-	-	M
Hand Protection:										
	Anti-cut Gloves	Cuts	Each use	Dispose	M	D	M	-	-	-
	Vinyl Disposable Gloves	Biohazardous materials	Each use	Dispose	-	M	-	-	-	-
	Heavy Duty Gloves	Injuries to Hands	Each use	Dispose	-	-	M	-	-	-
	Cold weather Gloves	Environmental Exposure	Each use	Dispose	-	-	-	-	-	M
	Rubber Gloves	Hot Water Burns	Each use	Dispose	M	-	-	-	-	-
	Insert more or delete as needed									

PPE Hazard Assessment Certification Form

Name of work place: _____

Work place address: _____

Work area(s): _____

Conducted by Name/Signature: _____

Date of assessment: _____

Job/Task(s): _____

(Use a separate sheet for each job/task or work area)

EYES

Work activities, such as:	Work-related exposure to:	Can hazard be eliminated without the use of PPE?
☐ abrasive blasting ☐ chopping ☐ cutting ☐ drilling ☐ welding ☐ soldering ☐ torch brazing ☐ working outdoors ☐ computer work ☐ punch press operations ☐ other:	☐ airborne dust ☐ dirt ☐ UV ☐ flying particles/objects ☐ blood splashes ☐ hazardous liquid chemicals mists ☐ chemical splashes ☐ molten metal splashes ☐ glare/high intensity lights ☐ laser operations ☐ intense light ☐ hot sparks ☐ other:	Yes ☐ No ☐ If no, use: With: ☐ Safety glasses ☐ Safety goggles ☐ Face shield ☐ Dust-tight goggles ☐ Impact goggles ☐ Welding helmet/shield ☐ Chemical goggles ☐ Chemical splash goggles ☐ Laser goggles ☐ Shading/Filter (#_____) ☐ Welding shield ☐ Other:

FACE

Work activities, such as:	Work-related exposure to:	Can hazard be eliminated without the use of PPE?
☐ cleaning ☐ cooking ☐ siphoning ☐ painting ☐ dip tank operations ☐ metal pouring ☐ other:	☐ hazardous liquid chemicals ☐ extreme heat ☐ extreme cold ☐ potential irritants: ☐ other:	Yes ☐ No ☐ If no, use: ☐ Face shield ☐ Shading/Filter (#_____) ☐ Welding shield ☐ Other:

HEAD		
Work activities, such as: ☐ building maintenance ☐ confined space operations ☐ construction ☐ electrical wiring ☐ walking/working under catwalks ☐ walking/working on catwalks ☐ walking/working under conveyor belts ☐ working with/around conveyor belts ☐ walking/working under crane loads ☐ other:	Work-related exposure to: ☐ beams ☐ pipes ☐ exposed electrical wiring or components ☐ falling objects ☐ fixed object ☐ machine parts ☐ other:	Can hazard be eliminated without the use of PPE? Yes ☐ No ☐ If no, use: ☐ Protective Helmet ☐ Type A (low voltage) ☐ Type B (high voltage) ☐ Type C ☐ Bump cap (not ANSI-approved) ☐ Hair net or soft cap ☐ Other:
HANDS/ARMS		
Work activities, such as: ☐ baking ☐ cooking ☐ grinding ☐ welding ☐ working with glass ☐ using power tools ☐ using computers ☐ working outdoors ☐ using knives ☐ dental and health care services ☐ garbage disposal ☐ computer work ☐ other:	Work-related exposure to: ☐ blood ☐ irritating chemicals ☐ tools or materials that could scrape or cut ☐ extreme heat ☐ extreme cold ☐ animal bites ☐ electric shock ☐ vibration ☐ musculoskeletal disorders ☐ sharps injury ☐ other:	Can hazard be eliminated without the use of PPE? Yes ☐ No ☐ If no, use: ☐ Gloves ☐ Chemical resistance ☐ Liquid/leak resistance ☐ Temperature resistance ☐ Abrasion/cut resistance ☐ Slip resistance ☐ Latex or nitrile ☐ Anti-vibration ☐ Protective sleeves ☐ Ergonomic equipment_____ ☐ Other:

FEET/LEGS		
Work activities, such as: ☐ building maintenance ☐ construction ☐ demolition ☐ food processing ☐ foundry work ☐ working outdoors ☐ logging ☐ plumbing ☐ trenching ☐ use of highly flammable materials ☐ welding ☐ other:	Work-related exposure to: ☐ explosive atmospheres ☐ explosives ☐ exposed electrical wiring or components ☐ heavy equipment ☐ slippery surfaces ☐ impact from objects ☐ pinch points ☐ crushing ☐ slippery/wet surface ☐ sharps injury ☐ blood ☐ chemical splash ☐ chemical penetration ☐ extreme heat/cold ☐ fall ☐ other:	Can hazard be eliminated without the use of PPE? Yes ☐ No ☐ If no, use: ☐ Safety shoes or boots ☐ Toe protection ☐ Electrical protection ☐ Heat/cold protection ☐ Puncture resistance ☐ Chemical resistance ☐ Anti-slip soles ☐ Leggings or chaps ☐ Foot-Leg guards ☐ Other:
BODY/SKIN		
Work activities such as: ☐ baking or frying ☐ battery charging ☐ dip tank operations ☐ fiberglass installation ☐ sawing ☐ other:	Work-related exposure to: ☐ chemical splashes ☐ extreme heat ☐ extreme cold ☐ sharp or rough edges ☐ irritating chemicals ☐ other:	Can hazard be eliminated without the use of PPE? Yes ☐ No ☐ If no, use: ☐ Vest, Jacket ☐ Coveralls, Body suit ☐ Raingear ☐ Apron ☐ Welding leathers ☐ Abrasion/cut resistance ☐ Other: With: ☐ Long sleeves

BODY/WHOLE

Work activities such as:	Work-related exposure to:	Can hazard be eliminated without the use of PPE?
☐ building maintenance	☐ working from heights of 10 feet or more	Yes ☐ No ☐
☐ construction	☐ impact from flying objects	
☐ logging	☐ impact from moving vehicles	If no, use: / With:
☐ computer work	☐ sharps injury	☐ Fall Arrest/Restraint / ☐ Hood
☐ working outdoors	☐ blood	☐ Traffic vest / ☐ Full sleeves
☐ utility work	☐ electrical/static discharge	☐ Static coats/overalls
☐ other:	☐ hot metal	☐ Flame resistant jacket/pants
	☐ musculoskeletal disorders	☐ Insulated jacket
	☐ sparks	☐ Cut resistant sleeves/wristlets
	☐ chemicals	☐ Hoists/lifts
	☐ extreme heat/cold	☐ ergonomic equipment: _____
	☐ elevated walking/working surface	☐ Other:
	☐ working near water	
	☐ injury from slip/trip/fall	
	☐ other:	

LUNGS/RESPIRATORY

Work activities such as:	Work-related exposure to:	Can hazard be eliminated without the use of PPE?
☐ cleaning	☐ dust or particulate	Yes ☐ No ☐
☐ mixing	☐ toxic gas/vapor	
☐ painting	☐ chemical irritants (acids)	If no, use: / With/Type:
☐ fiberglass installation	☐ welding fume	☐ Dust mask
☐ compressed air or gas operations	☐ asbestos	☐ Disposable particulate respirator
☐ confined space work	☐ pesticides	☐ Replaceable filter particulate w/cartridge _____
☐ floor installation	☐ organic vapors	☐ half faced
☐ ceiling repair	☐ oxygen deficient environment	☐ full face
☐ working outdoors	☐ paint spray	☐ PAPR (Air recycle)
☐ other:	☐ extreme heat/cold	☐ PPSA (Air supply)
	☐ other:	

EARS/HEARING				
Work activities such as:		Work-related exposure to:	Can hazard be eliminated without the use of PPE?	
☐ generator	☐ grinding	☐ loud noises	Yes ☐ No ☐	
☐ ventilation fans	☐ machining	☐ loud work environment		
☐ motors	☐ routers	☐ noisy machines/tools	If no, use:	
☐ sanding	☐ sawing	☐ punch or brake presses	☐ ear muffs	
☐ pneumatic equipment	☐ sparks	☐ other:	☐ ear plugs	
☐ punch or brake presses			☐ leather welding hood	
☐ use of conveyors				
☐ other:				

Purpose

It is the intention of Dee Cramer, Inc. to provide a respirator protection program that meets or exceeds all federal standards. Dee Cramer, Inc. will attempt to engineer potential harmful vapors and oxygen deficient atmosphere exposure hazards out of the work environment. If engineering control measures are not feasible or during emergency situations with high exposure then respirators shall be provided which are applicable and suitable for purpose intended.

Respiratory equipment will be provided for employee's use against harmful vapors and oxygen deficient atmospheres. Respirators are to be used when engineering control measures are not feasible or during emergency situations with high exposure. Respirators shall be provided which are applicable and suitable for the purpose intended.

Scope

This program applies to all Dee Cramer, Inc. projects and operations.

Respiratory Program Administrator

Overall responsibility for the respiratory protection program is assigned to the Dee Cramer, Inc. Safety Manager in order to ensure that specific requirements are followed.

The Administrator must be knowledgeable of the complexity of the program, able to conduct evaluations and have the proper training.

This assignment is made, however, with the understanding that individual supervisors will have to implement and enforce major portions of the program. It is understood that the Program Administrator will report performance problems to the appropriate manager for resolution. The person who will have responsibility for administering all the aspects of this program will be the Project Manager or their designee.

The responsibilities of the Program Administrator will include, but are not limited to:

- Conducting an annual written evaluation of the program. The program evaluation should be completed no later than January, 31, of each year.
- Ensuring an adequate supply of respirators, cartridges, and repair/replacement parts. The Program Administrator may delegate this duty but will retain overall responsibility. The person(s) to whom this duty has been delegated is the Project Manager and/or Field Supervisor.
- Identifying hazards and ensuring only NIOSH certified respirators must be selected and provided based on those hazards and factors affecting performance.
- Ensuring that all respirator users have been trained in the use, selection and limitations of the type of respirators they will be using prior to the first time the respirator must be used. While the duty of conducting the training may be delegated, the Program Administrator retains final responsibility for seeing that all employees are appropriately trained.

- Ensuring that all respirator users have been medically evaluated and found fit to use the type of respirators that will be required in their job. The medical evaluation must be completed prior to assigning any employee to a task that requires use of a respirator.
- Ensuring that all respirator users are fit-tested at least annually and more often if other federal requirements apply.
- Ensuring that respirators are individually issued, are cleaned and sanitized on a regular basis, and respirators are stored in a clean and accessible location. This duty may also be delegated but the Program Administrator retains final responsibility for seeing that it is done.
- Ensuring that respirators are selected based on the hazard that will be encountered. This program describes the basic respirators that will be used at this site and the tasks for which they will be required. In special circumstances, the Program Administrator will contact the corporate health and safety staff for guidance in selecting the correct respirator.
- Ensuring that employee exposure is monitored to assure correct respirator type is used. Exposure monitoring may be delegated to others; however, the Program Administrator has final responsibility of monitoring completion and to request assistance when necessary.
- Ensuring surveillance of employees who wear respirators shall leave the area to wash, change cartridges or if they detect break through or resistance.
- Ensuring that the elements of the Respiratory Protection Program for the selection, use, cleaning/maintenance, storage and fit-testing of respirators are followed.
- Ensuring that respirator parts are not exchanged between brands of respirators.
- Ensuring medical evaluations, respirators and required training are provided at no cost to the employee.

Medical Evaluation

General

Dee Cramer, Inc. shall provide a medical evaluation to determine the employee's ability to use a respirator, *before* the employee is fit tested or required to use the respirator in the workplace. Dee Cramer, Inc. may discontinue an employee's medical evaluations when the employee is no longer required to use a respirator.

Medical Evaluation Procedures

Dee Cramer, Inc. shall identify a physician or other licensed health care professional (PLHCP) to perform medical evaluations using a medical questionnaire or an initial medical examination that obtains the same information as the medical questionnaire. The medical evaluation shall obtain the information requested by the Medical Questionnaire in Forms section (or equivalent).

The medical evaluation prior to fit-testing will be confidential, conducted during normal working hours, be at a convenient time and location, be understandable and the employee will be given a chance to discuss the results with the PLHCP.

Supplemental Information for the PLHCP

The following information must be provided to the PLHCP before the PLHCP makes a recommendation concerning an employee's ability to use a respirator:

- The type and weight of the respirator to be used by the employee;

- The duration and frequency of respirator use (including use for rescue and escape);
- The expected physical work effort;
- Additional protective clothing and equipment to be worn; and
- Temperature and humidity extremes that may be encountered.

Dee Cramer, Inc. shall provide the PLHCP with a copy of the Dee Cramer, Inc. Respiratory Protection Program.

Note: When Dee Cramer, Inc. replaces a PLHCP, Dee Cramer, Inc. must ensure that the new PLHCP obtains this information, either by providing the documents directly to the PLHCP or having the documents transferred from the former PLHCP to the new PLHCP. However, OSHA does not expect employers to have employees medically re-evaluated solely because a new PLHCP has been selected.

Medical Determination

In determining the employee's ability to use a respirator, Dee Cramer, Inc. shall obtain a written recommendation regarding the employee's ability to use the respirator from the PLHCP. The recommendation shall provide only the following information:

- Any limitations on respirator use related to the medical condition of the employee, or relating to the workplace conditions in which the respirator will be used, including whether or not the employee is medically able to use the respirator;
- The need, if any, for follow-up medical evaluations; and
- A statement that the PLHCP has provided the employee with a copy of the PLHCP's written recommendation.

All recommendations are to be sent to Dee Cramer, Inc's Safety Manager.

Additional Medical Evaluations

At a minimum, Dee Cramer, Inc. shall provide additional medical evaluations that comply with the requirements of this program if:

- An employee reports medical signs or symptoms that are related to ability to use a respirator;
- A PLHCP, supervisor, or the respirator Program Administrator informs Dee Cramer, Inc. that an employee needs to be re-evaluated;
- Information from the respiratory protection program, including observations made during fit testing and program evaluation, indicates a need for employee re-evaluation; or
- A change occurs in workplace conditions (e.g., physical work effort, protective clothing, and temperature) that may result in a substantial increase in the physiological burden placed on an employee.

Work Site Procedures

Each work site where respirators are required to protect the health of the worker shall have work site procedures that follow the guidelines of this program. Specific procedures may also be required by our client which will be followed. The following areas shall be included:

- Identification of specific hazard requiring respiratory protection

- The selection of the appropriate respiratory protection equipment based on the specific hazard and concentration levels, characteristics, etc. Specific brand and models of respiratory equipment to be used shall be identified in the procedures.
- Verification that each user of respiratory protection is qualified (medical approval, current fit test, annual training and demonstrates competency.

Respirator Selection Criteria

The selection of the respiratory equipment is based on the hazards the employee is exposed to. Dee Cramer, Inc. shall:

- Perform hazard identification,
- Select and provide respirators based on those hazards and factors affecting performance,
- Establish brands and models to be used, and
- Estimate exposures and contaminant information.

Hazard Identification

Due to the many varied work locations Dee Cramer, Inc's identification of respiratory hazards will be contained in the various work site specific safety plans. However, common respiratory hazards that will be encountered include:

- Dust
- Fumes
- Gases
- Chemical particles
- Oxygen Deficiency

Characteristics of Hazardous Operation or Process

- Hot operations: welding, chemical reactions, soldering, melting, melding and burning
- Liquid operations: painting, degreasing, dipping, spraying, brushing, coating, etching, cleaning, pickling, plating, mixing, galvanizing and chemical reactions
- Solid operations: pouring, mixing, separations, extraction, crushing, conveying, loading, bagging and demolition.
- Pressurized spraying: cleaning parts, applying pesticides, degreasing, sand blasting and painting
- Shaping operations: cutting, grinding, filing, milling, melding, sawing and drilling

Gaseous Contaminants

- Inert gases (helium, argon, etc.), which do not metabolize in the body but displace air to produce an oxygen deficiency.
- Acid gases (SO2, H2S, HCl, etc.) which are acids or produce acids by reaction with water.
- Alkaline gases (NH3, etc.), which are alkalies or produce alkalies by reaction with water.
- Organic gases (butane, acetone, etc.), which exist as true gases or vapors from organic liquids.
- Organometallic gases (tetraethyl lead, organo-phosphates, etc.), which have metals attached to organic groups.

Particulate contaminants

- Dusts are mechanically generated solid particulates (0.5 to 10µm)
- Fumes are solid condensation particles of small diameter (0.1 to 1.0 µm)
- Mists are liquid particulate matter (5 to 100 µm)
- Smoke is chemically generated particulates (solid and liquid) of organic origins (0.01 to 0.3 µm)

Selection of Respirator
The following factors shall be taken into account when selecting the proper respirator:

Concentration and Type of Contaminant
The concentration and type of contaminant will determine the model and type of respirator and cartridges/filters or filters to be used. The concentration is based on a sampling of the atmosphere.

Location of Hazardous Area
(Confined Space, nearby contaminants, etc.)

Worker Activity
(Extreme heat, cold, welding hood requirement, etc.)

Types of Respirators

Air-purifying respirators can be either full-face or half masks with mechanical or chemical cartridges to filter dusts, mists, fumes, vapors or gases.

Powered air-purifying respirators use a blower to pass the contaminated air through a filter. The purified air is then delivered into a mask or hood. They filter dusts, mists, fumes, vapors and gases, just like ordinary air-purifying respirators.

Air-purifying respirators cannot be used in oxygen-deficient atmospheres, which can result when another gas displaces the oxygen or consumption of oxygen by a chemical reaction occurs. Oxygen levels below 19.5% require either a source of supplied air or supplied-air respirator protection. Levels below 16% are considered to be unsafe and could cause death. To determine the proper cartridge for air-purifying respirators contact the Dee Cramer, Inc. Safety Manager or a qualified on-site safety representative of the client. You should also consult the Safety Data Sheet of the substance that needs to be filtered.

All cartridges are assigned a color designating the type of contaminant they will filter:

White:	Acid gas
Black:	Organic vapors
Green:	Ammonia gas
Yellow:	Acid gas and organic vapors
Purple:	Radioactive materials
Orange:	Dust, fumes and mists
Olive:	Other gases and vapors

Once the wearer of the respirator can detect an odor, irritation, or taste of the contaminant, the cartridge should be replaced. All cartridges and/or filters shall be changed at the beginning of each shift.

Supplied-air respirators provide the highest level of protection against highly toxic and unknown materials. Supplied air refers to self-contained breathing apparatuses (SCBAs) and air-line respirators. SCBAs have a limited air supply that is carried by the user, allowing for good mobility and fewer restrictions than air-line respirators.

> *Air-line respirators* have an air hose that is connected to a fresh air supply from a central source. The source can be from a compressed air cylinder or air compressor that provides at least Grade D breathing air.
>
> *Emergency Escape Breathing Apparatuses* (EEBAs) provide oxygen for 5, 10 or 15 minutes depending on the unit. These are for emergency situations in which an employee must escape from environments immediately dangerous to life or health (IDLH).
>
> *SCBA* (Self Contained Breathing Apparatus)
> **Dee Cramer, Inc. does NOT allow employees to work in an Immediately Dangerous to Life and Health (IDLH) environment.**

In order to maintain the NIOSH/MSHA approval of any respirator, mixing parts from other respirator manufacturers is prohibited. This includes airline hoses, valves, gaskets, cartridges, etc. For example, do not use North cartridges or valve gaskets with an MSA product.

Brand and Models
Dee Cramer has selected North Safety as its NIOSH-certified respirator. Only this brand of respirator shall be used in compliance with the conditions of the certification of its Respiratory Protection Program (fit testing model, no mixing of different manufacturer parts, cartridges, filters, etc.).

The specific model will be based on the hazard, concentration of contaminant, oxygen level, work environment and type of work being performed. To aid in the selection process the following will be used to identify the proper North respiratory equipment for the work being performed and hazard that is present.

- NIOSH Pocket Guide to Chemicals
- North Cartridge Selection Guide
- North Respirator Selection Guide

Estimate of Exposures and Contaminant Information
- No employee shall enter an IDLH environment.
- Normal oxygen levels shall be maintained.
- No employee shall be exposed to an atmosphere containing concentrations that would exceed the STEL or PEL for the identified atmospheric hazard.

Respirator Fit Testing

Before an employee may be required to use any respirator with a negative or positive pressure tight-fitting face piece, the employee must be fit tested with the same make, model, style, and size of respirator that will be used. This section specifies the kinds of fit tests allowed, the procedures for conducting them, and how the results of the fit tests must be used.

All respirator users are fit-tested at least annually and more often if other federal requirements apply.

Supplied Air Respirators are required to be fit tested as well.

Dee Cramer, Inc. shall ensure that employees using a tight-fitting face piece respirator pass an appropriate qualitative fit test (QLFT) or quantitative fit test (QNFT) as stated in this program.

Dee Cramer, Inc. shall ensure that an employee using a tight-fitting face piece respirator is fit tested prior to initial use of the respirator, whenever a different respirator face piece (size, style, model or make) is used, and at least annually thereafter.

Dee Cramer, Inc. shall conduct an additional fit test whenever the employee reports, or Dee Cramer, Inc's PLHCP, supervisor, or Program Administrator makes visual observations of, changes in the employee's physical condition that could affect respirator fit. Such conditions include, but are not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight.

If after passing a QLFT or QNFT, the employee subsequently notifies Dee Cramer, Inc's, Program Administrator, supervisor, or PLHCP that the fit of the respirator is unacceptable, the employee shall be given a reasonable opportunity to select a different respirator face piece and to be retested.

The fit test shall be administered using an OSHA-accepted QLFT or QNFT protocol. The OSHA-accepted QLFT and QNFT protocols and procedures are contained in this section.

QLFT may only be used to fit test negative pressure air-purifying respirators that must achieve a fit factor of 100 or less. Half face air filtering respirators may be fit tested with irritant smoke while full face air filtering respirators require Portacount fit testing.

If the fit factor, as determined through an OSHA-accepted QNFT protocol, is equal to or greater than 100 for tight-fitting half face pieces, or equal to or greater than 500 for tight-fitting full face pieces, the QNFT has been passed with that respirator.

Fit testing of tight-fitting atmosphere-supplying respirators and tight-fitting powered air-purifying respirators shall be accomplished by performing quantitative or qualitative fit testing in the negative pressure mode, regardless of the mode of operation (negative or positive pressure) that is used for respiratory protection.

Qualitative fit testing of these respirators shall be accomplished by temporarily converting the respirator user's actual face piece into a negative pressure respirator with appropriate filters, or by using an identical negative pressure air-purifying respirator face piece with the same sealing surfaces as a surrogate for the atmosphere-supplying or powered air-purifying respirator face piece.

Quantitative fit testing of these respirators shall be accomplished by modifying the face piece to allow sampling inside the face piece in the breathing zone of the user, midway between the nose and mouth. This requirement

shall be accomplished by installing a permanent sampling probe onto a surrogate face piece, or by using a sampling adapter designed to temporarily provide a means of sampling air from inside the face piece.

Any modifications to the respirator face piece for fit testing shall be completely removed, and the face piece restored to NIOSH-approved configuration, before that face piece can be used in the workplace.

Fit Test Procedures

The requirements in this section apply to all OSHA-accepted fit test methods, both QLFT and QNFT.

The test subject shall be allowed to pick the most acceptable respirator from a sufficient number of respirator sizes so that the respirator is acceptable to, and correctly fits, the user.

Prior to the selection process, the test subject shall be shown how to put on a respirator, how it should be positioned on the face, how to set strap tension and how to determine an acceptable fit. A mirror shall be available to assist the subject in evaluating the fit and positioning of the respirator. This instruction may not constitute the subject's formal training on respirator use, because it is only a review.

The test subject shall be informed that he/she is being asked to select the respirator that provides the most acceptable fit. Each respirator represents a different size and shape, and if fitted and used properly, will provide adequate protection.

The test subject shall be instructed to hold each chosen face piece up to the face and eliminate those that obviously do not give an acceptable fit.

The more acceptable face pieces are noted in case the one selected proves unacceptable; the most comfortable mask is donned and worn at least five minutes to assess comfort. Assistance in assessing comfort can be given by discussing the following points:

- If the test subject is not familiar with using a particular respirator, the test subject shall be directed to don the mask several times and to adjust the straps each time to become adept at setting proper tension on the straps.
- Position of the mask on the nose
- Room for eye protection
- Room to talk
- Position of mask on face and cheeks

The following criteria shall be used to help determine the adequacy of the respirator fit:

- Chin properly placed;
- Adequate strap tension, not overly tightened;
- Fit across nose bridge;
- Respirator of proper size to span distance from nose to chin;
- Tendency of respirator to slip;
- Self-observation in mirror to evaluate fit and respirator position.

Use the Fit Test form.

User Seal Check

Before conducting the negative and positive pressure checks, the subject shall be told to seat the mask on the face by moving the head from side-to-side and up and down slowly while taking in a few slow deep breaths. The test subject shall conduct a user seal check, either the negative or positive pressure seal checks described below:

Positive Pressure Check

Close off the exhalation valve and exhale gently into the face piece. The face fit is considered satisfactory if a slight positive pressure can be built up inside the face piece without any evidence of outward leakage of air at the seal. For most respirators this method of leak testing requires the wearer to first remove the exhalation valve cover before closing off the exhalation valve and then carefully replacing it after the test.

Negative Pressure Check

Close off the inlet opening of the canister or cartridge(s) by covering with the palm of the hand(s) or by replacing the filter seal(s), inhale gently so that the face piece collapses slightly, and hold the breath for ten seconds. The design of the inlet opening of some cartridges cannot be effectively covered with the palm of the hand. The test can be performed by covering the inlet opening of the cartridge with a thin latex or nitrile glove. If the face piece remains in its slightly collapsed condition and no inward leakage of air is detected, the tightness of the respirator is considered satisfactory.

The test shall not be conducted if there is any hair growth between the skin and the face piece sealing surface, such as stubble beard growth, beard, moustache or sideburns which cross the respirator sealing surface. Any type of apparel which interferes with a satisfactory fit shall be altered or removed, including glasses.

If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician or other licensed health care professional, as appropriate, to determine whether the test subject can wear a respirator while performing her or his duties. If the employee finds the fit of the respirator unacceptable, the test subject shall be given the opportunity to select a different respirator and to be retested.

Prior to the commencement of the fit test, the test subject shall be given a description of the fit test and the test subject's responsibilities during the test procedure. The description of the process shall include a description of the test exercises that the subject will be performing. The respirator to be tested shall be worn for at least 5 minutes before the start of the fit test.

The fit test shall be performed while the test subject is wearing any applicable safety equipment that may be worn during actual respirator use which could interfere with respirator fit.

Test Exercises

Each test exercise shall be performed for one minute except for the grimace exercise which shall be performed for 15 seconds. The test subject shall be questioned by the test conductor regarding the comfort of the respirator upon completion of the protocol. If it has become unacceptable, another model of respirator shall be tried. If due to medical or health conditions the employee cannot perform the test exercises the fit test shall not be performed and the employee not allowed to use a respirator until all elements of the fit test can be achieved.

The respirator shall not be adjusted once the fit test exercises begin. Any adjustment voids the test, and the fit test must be repeated.

The following test exercises are to be performed for all fit testing methods prescribed in this procedure:

- Normal breathing. In a normal standing position, without talking, the subject shall breathe normally.
- Deep breathing. In a normal standing position, the subject shall breathe slowly and deeply, taking caution so as not to hyperventilate.
- Turning head side to side. Standing in place, the subject shall slowly turn his/her head from side to side between the extreme positions on each side. The head shall be held at each extreme momentarily so the subject can inhale at each side.
- Moving head up and down. Standing in place, the subject shall slowly move his/her head up and down. The subject shall be instructed to inhale in the up position (i.e., when looking toward the ceiling).
- Talking. The subject shall talk out loud slowly and loud enough so as to be heard clearly by the test conductor. The subject shall read from the Rainbow Passage

Rainbow Passage

> "When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond reach, his friends say he is looking for the pot of gold at the end of the rainbow." Continue to read for one minute.

- Grimace. The test subject shall grimace by smiling or frowning. (This applies only to QNFT testing; it is not performed for QLFT)
- Jogging in place. The test subject shall jog in place being careful to be aware of their surroundings.
- Normal breathing. Same as exercise (1).

Qualitative Fit Test (QLFT) Protocols

General

Dee Cramer, Inc. shall ensure that persons administering QLFT are able to prepare test solutions, calibrate equipment and perform tests properly, recognize invalid tests, and ensure that test equipment is in proper working order. Dee Cramer, Inc. shall ensure that QLFT equipment is kept clean and well maintained so as to operate within the parameters for which it was designed.

Irritant Smoke (Stannic Chloride) Protocol

This qualitative fit test uses a person's response to the irritating chemicals released in the ``smoke'' produced by a stannic chloride ventilation smoke tube to detect leakage into the respirator.

General Requirements and Precautions. The respirator to be tested shall be equipped with high efficiency particulate air (HEPA) or P100 series filter(s).

Only stannic chloride smoke tubes shall be used for this protocol. No form of test enclosure or hood for the test subject shall be used.

The smoke can be irritating to the eyes, lungs, and nasal passages. The test conductor shall take precautions to minimize the test subject's exposure to irritant smoke. Sensitivity varies, and certain individuals may respond to a greater degree to irritant smoke. Care shall be taken when performing the sensitivity screening checks that determine whether the test subject can detect irritant smoke to use only the minimum amount of smoke necessary to elicit a response from the test subject.

The fit test shall be performed in an area with adequate ventilation to prevent exposure of the person conducting the fit test or the build-up of irritant smoke in the general atmosphere.

The person to be tested must demonstrate his or her ability to detect a weak concentration of the irritant smoke.

- The test operator shall break both ends of a ventilation smoke tube containing stannic chloride, and attach one end of the smoke tube to a low flow air pump set to deliver 200 milliliters per minute, or an aspirator squeeze bulb. The test operator shall cover the other end of the smoke tube with a short piece of tubing to prevent potential injury from the jagged end of the smoke tube.
- The test operator shall advise the test subject that the smoke can be irritating to the eyes, lungs, and nasal passages and instruct the subject to keep his/her eyes closed while the test is performed.
- The test subject shall be allowed to smell a weak concentration of the irritant smoke before the respirator is donned to become familiar with its irritating properties and to determine if he/she can detect the irritating properties of the smoke. The test operator shall *carefully direct a small amount* of the irritant smoke in the test subject's direction to determine that he/she can detect it.

Irritant Smoke Fit Test Procedure

- The person being fit tested shall don the respirator without assistance, and perform the required user seal check(s).
- The test subject shall be instructed to keep his/her eyes closed if wearing a half face respirator.
- The test operator shall direct the stream of irritant smoke from the smoke tube toward the face seal area of the test subject, using the low flow pump or the squeeze bulb. The test operator shall begin at least 12 inches from the face piece and move the smoke stream around the whole perimeter of the mask. The operator shall gradually make two more passes around the perimeter of the mask, moving to within six inches of the respirator.
- If the person being tested has not had an involuntary response and/or detected the irritant smoke, proceed with the test exercises.
- The exercises identified in the Test Exercises of this procedure shall be performed by the test subject while the respirator seal is being continually challenged by the smoke, directed around the perimeter of the respirator at a distance of six inches.
- If the person being fit tested reports detecting the irritant smoke at any time, the test is failed. The person being retested must repeat the entire sensitivity check and fit test procedure.
- Each test subject passing the irritant smoke test without evidence of a response (involuntary cough, irritation) shall be given a second sensitivity screening check, with the smoke from the same smoke tube used during the fit test, once the respirator has been removed, to determine whether he/she still reacts to the smoke. Failure to evoke a response shall void the fit test.

- If a response is produced during this second sensitivity check, then the fit test is passed. The glass tube shall be disposed of properly.

Quantitative Fit Test (QNFT) Protocols

Using controlled negative pressure and appropriate instrumentation to measure the volumetric leak rate of a face piece to quantify the respirator have been demonstrated to be acceptable to OSHA.

Dee Cramer, Inc. shall ensure that persons administering QNFT are able to calibrate equipment and perform tests properly, recognize invalid tests, calculate fit factors properly and ensure that test equipment is in proper working order.

Dee Cramer, Inc. shall ensure that QNFT equipment is kept clean, and is maintained and calibrated according to the manufacturer's instructions so as to operate at the parameters for which it was designed.

Portacount Fit Test Requirements

- Check the respirator to make sure the respirator is fitted with a high-efficiency filter and that the sampling probe and line are properly attached to the face piece.
- Instruct the person to be tested to don the respirator for five minutes before the fit test starts. This purges the ambient particles trapped inside the respirator and permits the wearer to make certain the respirator is comfortable. This individual shall already have been trained on how to wear the respirator properly.
- Check the following conditions for the adequacy of the respirator fit: Chin properly placed; Adequate strap tension, not overly tightened; Fit across nose bridge; Respirator of proper size to span distance from nose to chin; Tendency of the respirator to slip; Self-observation in a mirror to evaluate fit and respirator position.
- Have the person wearing the respirator do a user seal check. If leakage is detected, determine the cause. If leakage is from a poorly fitting face piece, try another size of the same model respirator, or another model of respirator.
- Follow the manufacturer's instructions for operating the Portacount and proceed with the test.
- The test subject shall be instructed to perform the exercises in Test Exercises section of this procedure.
- After the test exercises, the test subject shall be questioned by the test conductor regarding the comfort of the respirator upon completion of the protocol. If it has become unacceptable, another model of respirator shall be tried.

Portacount Test Instrument

The Portacount will automatically stop and calculate the overall fit factor for the entire set of exercises. The overall fit factor is what counts. The Pass or Fail message will indicate whether or not the test was successful. If the test was a Pass, the fit test is over. Since the pass or fail criterion of the Portacount is user programmable, the test operator shall ensure that the pass or fail criterion meet the requirements for minimum respirator performance.

A record of the test needs to be sent to the Safety Manager and kept on file, assuming the fit test was successful. The record must contain the test subject's name; overall fit factor; make, model, style, and size of respirator used; and date tested.

Use, Maintenance and Care of Respirators

This section requires Dee Cramer, Inc. to provide for the use, cleaning and disinfecting, storage, inspection, and repair of respirators used by employees. Appendix B - Respirator Cleaning Procedures (Mandatory) shall be followed.

Use

- Items that can affect the face to mask seal are prohibited. This includes facial hair, glasses, clothing, etc.
- Each time a respirator is put on a positive and negative pressure check shall be performed.

Cleaning and Disinfecting Requirements

Dee Cramer, Inc. shall provide each respirator user with a respirator that is clean, sanitary, and in good working order. Dee Cramer, Inc. shall ensure that respirators are cleaned and disinfected using the procedures in this Respiratory Protection Program, or procedures recommended by the respirator manufacturer, provided that such procedures are of equivalent effectiveness. The respirators shall be cleaned and disinfected at the following intervals:

- Respirators issued for the exclusive use of an employee shall be cleaned and disinfected by the employee as often as necessary to be maintained in a sanitary condition,
- Respirators used in fit testing and training shall be cleaned and disinfected after each use by the Safety Manager or designated person.
- Each individual who is assigned a cartridge respirator is responsible for seeing that the respirator is cleaned, inspected and properly stored.

Cleaning Procedures

- Remove filters, cartridges, or canisters. Disassemble face pieces by removing speaking diaphragms, demand and pressure-demand valve assemblies, hoses, or any components recommended by the manufacturer. Discard or repair any defective parts.
- Wash components in warm water with a mild detergent or with a cleaner recommended by the manufacturer. A stiff bristle (not wire) brush may be used to facilitate the removal of dirt.
- Rinse components thoroughly in clean, warm, preferably running water. Drain.
- When the cleaner used does not contain a disinfecting agent, respirator components should be immersed for two minutes in commercially available cleansers of equivalent disinfectant quality. Another alternative is to use wipes containing alcohol that are intended for use with respirators.
- Rinse components thoroughly in clean, warm, preferably running water. Drain. The importance of thorough rinsing cannot be overemphasized. Detergents or disinfectants that dry on face pieces may result in dermatitis. In addition, some disinfectants may cause deterioration of rubber or corrosion of metal parts if not completely removed.
- Components should be hand-dried with a clean lint-free cloth or air dried. Reassemble face piece, replacing filters, cartridges, and canisters where necessary. Test the respirator to ensure that all components work properly.

Storage and Inspection

- Respiratory equipment shall be stored in a manner to protect it from damage, contamination, temperature extreme, etc.

- Respiratory equipment intended for emergency use shall be stored in an area that is readily accessible and be clearly marked.

Dee Cramer, Inc. shall ensure that respirators are inspected as follows:

- All respirators used in routine situations shall be inspected by the employee before each use and during cleaning;
- A check by the employee of respirator function, tightness of connections, and the condition of the various parts including, but not limited to, the face piece, head straps, valves, connecting tube, and cartridges, canisters or filters; and
- A check of elastomeric parts for pliability and signs of deterioration.
- Emergency respiratory equipment will be inspected at least monthly, and before and after each use.
- Escape only respiratory equipment will be inspected before being carried into workplace.

Breathing Air Quality and Use

Dee Cramer, Inc. shall ensure that compressed air accords with the following specifications:

- Compressed breathing air shall meet at least the requirements for Type 1-Grade D breathing air described in ANSI/Compressed Gas Association Commodity Specification for Air, G-7.1-1989, to include:
    - Oxygen content (v/v) of 19.5-23.5%;
    - Hydrocarbon (condensed) content of 5 milligrams per cubic meter of air or less;
    - Carbon monoxide (CO) content of 10 ppm or less;
    - Carbon dioxide content of 1,000 ppm or less; and
    - Lack of noticeable odor.

- Dee Cramer, Inc. shall ensure that oxygen is not used in compressed air units.
- Dee Cramer, Inc. shall ensure that oxygen concentrations greater than 23.5% are used only in equipment designed for oxygen service or distribution.
- Dee Cramer, Inc. shall ensure that cylinders used to supply breathing air to respirators meet DOT requirements and that:
    - Cylinders are tested and maintained as prescribed in the Shipping Container Specification Regulations of the Department of Transportation (49 CFR part 173 and part 178);
    - Cylinders of purchased breathing air have a certificate of analysis from the supplier that the breathing air meets the requirements for Type 1--Grade D breathing air; and
    - The moisture content in the cylinder does not exceed a dew point of -50 deg. F (-45.6 deg. C) at 1 atmosphere pressure.

- Dee Cramer, Inc. shall ensure that compressors used to supply breathing air to respirators are constructed and situated so as to:
    - Prevent entry of contaminated air into the air-supply system;
    - Minimize moisture content so that the dew point at 1 atmosphere pressure is 10 degrees F (5.56 deg. C) below the ambient temperature;

- Have suitable in-line air-purifying sorbent beds and filters to further ensure breathing air quality. Sorbent beds and filters shall be maintained and replaced or refurbished periodically following the manufacturer's instructions.

- Have a tag containing the most recent change date and the signature of the person authorized by Dee Cramer, Inc. to perform the change. The tag shall be maintained at the compressor.
- For compressors that are not oil-lubricated, Dee Cramer, Inc. shall ensure that carbon monoxide levels in the breathing air do not exceed 10 ppm.
- For oil-lubricated compressors, Dee Cramer, Inc. shall use a high-temperature or carbon monoxide alarm, or both, to monitor carbon monoxide levels. If only high-temperature alarms are used, the air supply shall be monitored at intervals sufficient to prevent carbon monoxide in the breathing air from exceeding 10 ppm.
- Dee Cramer, Inc. shall ensure that breathing air couplings are incompatible with outlets for nonrespirable worksite air or other gas systems. No asphyxiating substance shall be introduced into breathing air lines.

Repairs

Dee Cramer, Inc. shall ensure that respirators that fail an inspection or are otherwise found to be defective are immediately removed from service, and are discarded or repaired or adjusted in accordance with the following procedures:

- Repairs or adjustments to respirators are to be made only by persons appropriately trained to perform such operations and shall use only the respirator manufacturer's NIOSH-approved parts designed for the respirator;
- Repairs shall be made according to the manufacturer's recommendations and specifications for the type and extent of repairs to be performed; and

Voluntary Use

If an employee chooses to voluntarily wear a respirator when not required by this Program (contaminants do not meet protection standards, odors, etc.) they will be advised of the following in their training:

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for employees.

However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the employee. Sometimes, employees may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If your employer provides respirators for your voluntary use, of if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard.

You should do the following:

- Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.
- Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies

respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.

- Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.
- Keep track of your respirator so that you do not mistakenly use someone else's respirator.

Workplace Monitoring

A program of monitoring potential employee exposures has been implemented through the corporate health and safety department. Project personnel may also be assigned with the task of conducting air monitoring. Direct-reading instruments will also be used in the characterization of potential exposures. All the data collected is used to determine the appropriateness of the respiratory equipment.

Recordkeeping

Dee Cramer, Inc. will establish and retain written information regarding medical evaluations, fit testing and the respirator program. Records of medical evaluations required by this section must be retained and made available in accordance with 29 CFR 1910.1020. COMPANY shall provide the employee with an opportunity to discuss the questionnaire and examination results with the PLHCP.

Records will be treated confidentially and maintained on file in the Dee Cramer, Inc. corporate office by the Safety Manager.

Program Evaluation

Dee Cramer, Inc. shall conduct evaluations of the workplace as necessary to ensure that the provisions of the current written program are being effectively implemented and that it continues to be effective.

Dee Cramer, Inc. shall regularly consult employees required to use respirators to assess the employees' views on this program's effectiveness and to identify any problems. Any problems that are identified during this assessment shall be corrected. Factors to be assessed and verified include, but are not limited to:

- Respirator fit (including the ability to use the respirator without interfering with effective workplace performance); Appropriate respirator selection for the hazards to which the employee is exposed;
- Proper respirator use under the workplace conditions the employee encounters; and
- Proper respirator maintenance.

Training

All employees will receive respirator training during their initial health and safety training class and on at least an annual basis, if required for their job classification. Training shall address employee knowledge of respirators, fit, use, limitations, emergency situations, wearing, fit checks, maintenance & storage, medical signs and symptoms of effective use and general requirements of the OSHA standard. The training must be provided before requiring the employee to use the respirator.

Retraining

Retraining shall be administered annually, and when the following situations occur:

- Changes in the workplace or the type of respirator render previous training obsolete;
- Inadequacies in the employee's knowledge or use of the respirator indicate that the employee has not retained the requisite understanding or skill; or
- Any other situation arises in which retraining appears necessary to ensure safe respirator use.

Dee Cramer, Inc. Qualitative Respiratory Fit Test Record Sheet

Note: Employee Must Have Completed Respiratory Protection Training and Passed Airway Exam Prior To Fit Testing

Test Date: _____

Employee Name: _____ **SS#** _____

Test Agent: Irritant Smoke (Stannic Chloride)

Respirator Identification:

Model: North 7700 Series Half Mask Size (circle one): Small Medium Large
Manufacturer: North Safety Products Approval No: 42 CFR 84
Additional Information: Respirator must be equipped with North HEPA filters

Fit Test Protocol (Test Subject Initials indicate steps were performed):

___ TOLD TO KEEP EYES CLOSED DURING SMOKE EXPOSURE

___Test subject smelled irritant smoke before fit test
___Protocol reviewed before fit test
___Shown how to wear respirator
___Mirror available for use by subject
___Must wear PPE (hard hat, etc.) if needed
___Wore respirator 5 minutes before fit test
___Test subject did not have hair in fitting area
___Performed positive pressure & negative fit check successfully after seating respirator

Fit Test Steps (1 minute each except Grimace = 15 seconds)

___ Breath normally
___ Nod up and down
___ Jog in place
___ Breathe deeply
___ Talking (Read Rainbow Passage)
___ Breath normally
___ Turned head side to side
___ Grimace

"When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond his reach, his friends say he is looking for the pot of gold at the end of the rainbow".

Fit Test Results: _____ Pass _____ Fail
Test Subject Signature: _____ Date: _____

Examiner's Name: _____ Examiner's Signature: _____ Date: _____

Distribution: **Employee Local File – Dee Cramer, Inc. Safety & Training Dept**

Rigging Material Handling

Dee Cramer Inc

Completed by: Valerie Bradley
Completed Date: 02/15/2013

Rigging Material Handling

Purpose

This written Rigging Material Handling Rigging equpiment for material handling shall be inspected prior to use on each shift and as necessary during its use to ensure that it is safe. Defective rigging equipment shall be removed from service immediately.

It is our intent to comply with the requirements of Part # 1926 Subpart H Title Rigging equpment for material handling 1910.184(a)1-5.

Administrative Duties

Valerie Bradley, Safety Director for Dee Cramer Inc., our company's Rigging Material Handling Administrator, is responsible for developing and maintaining the written Rigging Material Handling. This person is solely responsible for all facets of the plan and has full authority to make necessary decisions to ensure the success of this plan. Valerie Bradley, Safety Director for Dee Cramer Inc. is also qualified by appropriate training and experience that is commensurate with the complexity of the plan to administer or oversee our Rigging Material Handling and conduct the required evaluations of plan effectiveness.

The Rigging Material Handling is kept at the following location: Original policy will be kept in the main office located at 4221 E Baldwin Road., Holly MI 48442.

Company Information

- ***Name:*** **Dee Cramer Inc**
- ***Facility Type:*** **Heating - Cooling - Sheet Metal**
- ***Description of Activities:*** **HVAC - Installation - Repairs - Replacement**
- ***Facility Coordinator:*** **Valerie Bradley, Safety Director**

- *Alternate Coordinator:* **Jeremy Moore, Operations Manager**

Hazard Evaluation

Superintendents, Project Managers, Foreman performs our company's Hazard evaluation and assessment are done on a daily basis of task being performed. He/She goes about doing this by By a walk around the site, communicating with those schedule to work on rigging, other contractors on site that might be in area..

Our initial Hazard evaluation and assessment are done on a daily basis of task being performed revealed Based on size,shape, balance (center of gravity) weight,drawings, shipping documents, estimated weight if evaluation or assessment show signs of hazards an immediate re-evaluation is perform prior to lifting starts.

We understand that, after our initial Hazard evaluation and assessment are done on a daily basis of task being performed, additional ones are necessary. We perform additional Hazard evaluation and assessment are done on a daily basis of task being performed (enter your answer). Our procedures for additional Hazard evaluation and assessment are done on a daily basis of task being performed are: JSA are performed on all daily tasks.

Protective Equipment

Project managers and foreman is responsible for ensuring that the following provisions are met.

All protective equipment, including personal protective equipment (PPE), used at this facility will be provided without cost to employees. Protective equipment will be chosen based on anticipated hazards and will be provided to employees in the following manner: The PPE will be provided by the shipping department to each jobsite based on specific needs. Hard hats, safety glasses, eye protection and gloves are standard PPE provided to employees upon entry into company. If I job requires special PPE that will be delivered as stated above.

Here is the protective equipment we require:

Task:	Protective equipment required:
Lifting over head	hard hats
Handling rigging equiment	gloves
Falling or flying debris	safety glasses with side shields

Project managers and foreman shall ensure that appropriate protective equipment in the appropriate sizes is readily accessible at the workplace or is issued without cost to employees.

In order to assure the continued reliability of protective equipment, it must be inspected on a regular basis. The frequency of inspection is related to the frequency of use. Here are our frequencies for inspection:

Protective equipment type	Inspection	Frequency
All PPE is inspected daily by employees		

Protective equipment that fails an inspection or is otherwise found to be defective is removed from service, and is discarded or repaired or adjusted in accordance with the following procedures:

Any PPE that is damaged and/or worn shall be replaced by the warewhouse immediately. If repairs must be made according to the manufacturer's recommendations and specifications for the type and extent of repairs to be performned.

Operating Procedures

Pre-Operational Procedures

Evaluating the load; size, shape, balance and weight. Load weight must be exact, load to center of gravity, slings angles should be below 60 degrees, hand signal signage should be posted, lifting area should be identified and clearly marked, tag

lines should be used, watch for potential roll of load when setteing, NO lifting over anyone's head,keep hands clear of pinch points, palettes should not be used when lifting, walk around to verify load is rigged properly.

Operational Procedures

OSHA 1026251: Loads not to exceed recommended safe working load as prescribed on the identification markings by the manufacturer and not beused without affixed, legible identification markings. Rigging equipment, when not in use shall be removed from the immediate work area so as not to present a hazard to employees.
Select proper rigging equipment; wire rope,tag lines, nylon slings,shackles, utilize certified container, basket, net or other appropriate and approved means for hoisting of loose materials. Latches will be in place on all hooks preventing hook throat.

Follow-Up Procedures

Do a Trial Lift and walk around to verify load is rigged properly and that hooks/shackles are in proper psoition.

Maintenance Procedures

Equipment used in rigging is inspected and repairs or replaced upon the showing of wear, tear, or damaged. No defective equipment allowed on lifting sight.

Inspections

Only competent trained employees will be responsibile for performing inspections; Warehouse manager, operation manager is qualified to perform inspections for this Rigging Material Handling on a daily basis. Inspections are conducted as follows:

One person is assigned per job task to review tools, rigging equipment, to validate that the load is balanced no lagging, calmps, bolts, and any other fasteners are secure.
A complete walk around is performed prior to each lift

Notification

Our company gives employees these notifications:

Notification:	Details:	To who:	When:

Our disciplinary procedures are as follows:

Per Dee Cramer Disciplinary policy; first a verbal, second a written disciplinary is given and if a third should ever be acquired termination from project and possible employment.

Recordkeeping

Safety Director is responsible for maintaining the following records and documentation:

Record/Document	Details	Location	Duration kept
job logs are kept on all lifts by foreman			

Training

Under no circumstances may an employee Employees must be trained in rigging and signaling by a certified instructor and pass all test before working on a site. until he/she has successfully completed this company's training program under the Rigging Material Handling. This includes all new employees, regardless of claimed previous experience. Individuals in the following departments receive training:

all construction field personel

The Rigging Material Handling Administrator will identify trainees in each set of new employees and make arrangements with department management to schedule training. The Administrator will also identify those existing

employees who need retraining. Certified Professional Rigging and Signal person is responsible for conducting training. His/Her/Their qualifications include Certification and card holding.

Training is done in-house.

The company training program includes:

Communication - operator-competent person, Equipment inspection, storage of equipment, evaluating the load, selecting the proper rigging equipment and materials used, fall protection and any other special ppe required

Through training we ensure that employees in the departments listed above are knowledgeable in:

Material handling rigging and signaling

Training Certification

After an employee has completed the training program, the instructor will determine whether the employee can safely perform the job.

Valerie Bradley, Safety Director is responsible for keeping records certifying each employee who has successfully completed training. Each certificate includes the name of the employee, the date(s) of the training, and the signature of the person who did the training and evaluation.

Performance Evaluation

Each trained employee is evaluated By the qualified person on site to verify that the employee has retained and uses the knowledge and skills needed to operate safely. This evaluation is done by job foreman and/or project manager. If the evaluation shows that the employee is lacking the appropriate skills and knowledge, the employee is retrained by our instructor(s). When an employee has an accident or near miss or some unsafe operating procedure is identified, we do retraining.

Current Trained Employees

Under no circumstances may an employee Employees must be trained in rigging and signaling by a certified instructor and pass all test before working on a site. until he/she has successfully completed this company's training program. The following table lists employees who are currently trained employees at this company:

Department or work area:	Employee name/title
All construction field employees	

All employees have a general obligation to work safely.

Plan Evaluation

It is inherent that problems may occasionally arise in this Rigging Material Handling. Although we may not be able to eliminate all problems, we try to eliminate as many problems as possible to improve employee protection and encourage employee safe practices. By having our plan administrator, Valerie Bradley, Safety Director for Dee Cramer Inc., thoroughly evaluate and, as necessary, revise our Rigging Material Handling, we can eliminate problems effectively.

At this company, plan evaluation, performed semi annually by our plan administrator, involves the following:

a post job site meeting amongst all key employees on site while lifting was performed

Risk Assessments

Dee Cramer INC

Completed by: Valerie Bradley
Completed Date: 08/28/2015

Risk management and loss control

Purpose

This written Risk management and loss control To identify and analyze potential loss exposure. Finding a solution and follow up to ensure that the solution is effective.

Administrative Duties

The safety director along with all mangers are responsible for maintaining and updating this written plan for not only Dee Cramer Inc., employees but also for any subcontractors working under Dee Cramer Inc., on any or all projects.
The safety director is also one of the instructors to ensure all employees are trained and familiar with the process of Risk Management., our company's Risk management and loss control Administrator, is responsible for developing and maintaining the written Risk management and loss control. This person is solely responsible for all facets of the plan and has full authority to make necessary decisions to ensure the success of this plan. The safety director along with all mangers are responsible for maintaining and updating this written plan for not only Dee Cramer Inc., employees but also for any subcontractors working under Dee Cramer Inc., on any or all projects. The safety director is also one of the instructors to ensure all employees are trained and familiar with the process of Risk Management. is also qualified by appropriate training and experience that is commensurate with the complexity of the plan to administer or oversee our Risk management and loss control and conduct the required evaluations of plan effectiveness.

The Risk management and loss control is kept at the following location: The written plans are kept at Dee Cramer Inc., main office located at 4221 E. Baldwin Road, Holly, MI 48442 along with electronic copy in the Pdrive safety folder..

Company Information

- ***Name:*** **Dee Cramer INC**
- ***Facility Type:*** **The main office in Holly MI**
- ***Description of Activities:*** **Headquarters for the entire company**
- ***Facility Coordinator:*** **Safety Director whom may be reached by 810 579 5000**
- ***Alternate Coordinator:*** **All area Superintendents -**

Affected Operations

The following company operations are affected:

Operation	Description
N/A	

Our company uses the following equipment:

Make, model, and serial number:	Type:	Quantity:	Purpose and location:

Hazard Evaluation

Every foreman, project manager, are responsible to analysis each and every job function for hazard exposures. This is relay to all crew members each and every day. This is discussed with not only employees of Dee Cramer, Inc., but also all subcontractors working under a Dee Cramer contract. performs our company's A job hazard form is filled out and reviewed with all employees each day - if the job duties change through out the day than another form is revised and review with all employees.
Along with filling out JHA, the job is evaluated by the severity it might cause: RED, meaning Extremely High Risk, ORANGE - medium to moderate risk, and YELLOW, having the lowest risk.
Once the level is determined the JHA is gone through with any and all employees that work or might enter into the area of hazard
. He/She goes about doing this by By sharing and examining with all parties involved to agree upon as a majority team. Examination of what, how and where dangerous events can or might occur - than discuss with employees and supervisors concerning any safety and health problems that they have experienced.

Our initial A job hazard form is filled out and reviewed with all employees each day - if the job duties change through out the day than another form is revised and review with all employees.
Along with filling out JHA, the job is evaluated by the severity it might cause: RED, meaning Extremely High Risk, ORANGE - medium to moderate risk, and YELLOW, having the lowest risk.
Once the level is determined the JHA is gone through with any and all employees that work or might enter into the area of hazard
revealed Past experiences, previous loss histories, surveys and questionnaires to employees.
Inspections and audits.
Seeking outside advice from risk management and loss control experts..

We understand that, after our initial A job hazard form is filled out and reviewed with all employees each day - if the job duties change through out the day than another form is revised and review with all employees.
Along with filling out JHA, the job is evaluated by the severity it might cause: RED, meaning Extremely High Risk, ORANGE - medium to moderate risk, and YELLOW, having the lowest risk.
Once the level is determined the JHA is gone through with any and all employees that work or might enter into the area of hazard
, additional ones are necessary. We perform additional A job hazard form is filled out and reviewed with all employees each day - if the job duties change through out the day than another form is revised and review with all employees.
Along with filling out JHA, the job is evaluated by the severity it might cause: RED, meaning Extremely High Risk, ORANGE - medium to moderate risk, and YELLOW, having the lowest risk.
Once the level is determined the JHA is gone through with any and all employees that work or might enter into the area of hazard
When and if the process is changed from the beginning of a shift or even in the middle of a shift. Our procedures for additional A job hazard form is filled out and reviewed with all employees each day - if the job duties change through out the day than another form is revised and review with all employees.
Along with filling out JHA, the job is evaluated by the severity it might cause: RED, meaning Extremely High Risk, ORANGE - medium to moderate risk, and YELLOW, having the lowest risk.
Once the level is determined the JHA is gone through with any and all employees that work or might enter into the area of hazard
are: Avoiding potential exposures by choosing not to become involved in a particular activity that can cause harm and injury to any one..

Loss prevention and loss reduction reduce the frequency of workplace

accident and injuries. Providing additional PPE and training workers is the proper use of loss prevention.
Improvements are more manageable if they are assigned a level of importance and completed in a understandable order. A criterion for prioritizing corrective measures are: review of company injury and illness records - audits on safety and health issues and making available time and resources. Following up is good management style Dee Cramer Inc. takes pride in doing.

Medical Surveillance

At our company, persons will not be assigned to certain tasks relating to this plan unless it has been determined that they are physically able to perform the work. Areas emergency clinics with phone numbers are posted through offices and jobsites of See posting in offices and jobsites for information will perform medical evaluations. All medical examinations are confidential and handled during the employee's normal working hours or at a time and place convenient to the employee. All employees are provided an opportunity to discuss the examination results with their PLHCP.

Before any initial examination is given, we supply the PLHCP with the following information so that he/she can make the best recommendation concerning an employee's ability to work:

Expected physical work effort, duration and frequency of tasks, protective clothing and equipment to be worn.

Once the PLHCP determines whether the employee has the ability to do his/her job, the PLHCP sends our company a written recommendation containing only the following information:

Follow up medical evaluations

A follow-up medical examination will be provided if N/A. Our follow-up medical examination includes N/A.

Our company provides additional medical evaluations if When symptoms affect his/her ability.

Contact Safety manager or HR Director for a copy of your confidential medical evaluation

Control Measures

We will use the following administrative controls to reduce employee injury and illness:

Administrative control:	Description:

Marking

Contractor Employers

Procedures regarding contractor employers are as follows:

N/A

Scaffolding Safety Plan

Dee Cramer Inc

Completed by: Valerie Bradley
Completed Date: 12/17/2012

Scaffolding Safety Procedures for Construction

Purpose

It is this company's purpose in issuing these procedures to further ensure a safe workplace based on the following formal, written procedures for scaffold work. These procedures will be reviewed and updated as needed to comply with new OSHA regulations, new best practices in scaffolding, and as business practices demand. The Corporation Safety Director is the plan coordinator/manager and is responsible for its implementation.

Copies of the written program may be obtained at Main office, 4221 E. Baldwin Road., Holly, MI 48442.

This written plan describes the work site.

Application

This general scaffold plan applies to All employees who perform work while on a scaffold, who are involved in erecting, disassembling, moving, operating, repairing, maintaining or inspecting scaffolds. All scaffolds on all sites where Dee Cramer is doing work..

General Procedures

The following general procedures apply to all scaffold and aerial lift operations for Dee Cramer Inc.

[Editor's Note: The requirements in our written plan originate from the new scaffolding rule that became effective on November 29, 1996. It contains sample entries and may or may not apply to your operation. In order to be in full compliance you need to be familiar with and use this new rule when completing your written safety plan to fit your specific operation(s).]

Capacity

Taking into account the OSHA rules we must apply and the engineering/manufacturing requirements of our scaffolds, the following rules apply. Note: We have also included in the appendix, the manufacturer's safety requirements for particular scaffold assemblies.

- Each scaffold and scaffold component we use will support, without failure, its own weight and at least four times the maximum intended load applied or transmitted to it.
- When we use non-adjustable suspension scaffolds, each suspension rope, including connecting hardware, will support, without failure, at least six times the maximum intended load applied or transmitted to that rope.
- Scaffold shall be designed by a qualified person and shall be constructed and loaded in accordance with that design. Direct connections to roofs and floors and counteweights used to balance adjustable suspension scaffold, shall be capable of resisting at least 4 times the tipping moment imposed by the scaffold operating at the rated load of the hoist. Each suspension rope, including connecting hardware, used on non-adjustable suspension scaffolds shall be capable of supporting without failure at least 6 times the maximum inteded load applied or transmitted to that rope.
  The stall load of any scaffold hoist shall not exceed 3 times its rated load.

Platform Construction

This section documents the procedures and safety requirements we use to construct our scaffold platforms.

Type of Scaffold: Supported and suspension scaffolds; Supported scaffolds are platforms supported by legs, outrigger beams, brackets, poles, uprights, posts, frames or similar rigid supports/
A suspension scaffold mens one or more platforms supended by ropes or other non rigid means from an overhead structure

Type of Planking: Scaffold planking shall be capable of supporting without failure, its own weight and at least 4 times the intended load. Solid sawn wood, fabricated planks, and fabricated platforms may be used as scaffold planks following the manufacturer.

Fall protection used: Personal fall arrest systems including; harness, lanyard, components of harness; dee-rings snaphooks, lifelines and anchorge points

The following safety rules apply for this scaffold platform construction:

- Each scaffold plank will be installed so that the space between adjacent planks and the space between the platform and uprights is no more than one inch wide. If, in certain situations, we need to make this space wider, we will attach our demonstration in the appendix to this plan.
- Except for outrigger scaffolds (3 inches) and plastering and lathing operations (18 inches), the front edge of all platforms will not be more than 14 inches from the face of the work, unless we have a guardrail or personal fall arrest system in place that meets regulations.
- Usage shall be performed as through training under MIOSHA regualtions

The following additional construction and safety information is included depending on the type of scaffold being erected.

Supported Scaffolds

- Supported scaffolds with a height to base width ratio of more than four to one (4:1) must be restrained from tipping by guying, tying, bracing, or equivalent means.
- Supported scaffold poles, legs, posts, frames, and uprights will always bear on base plates and mud sills or other adequate firm foundations.
- Supported scaffolds with a height to base width ratio of more than 4 to one shall be restrained from tipping by guying, tying, bracing or equivalent means.

Suspension Scaffolds

- Before a scaffold is used, all direct connections will be evaluated by our competent person. Our competent person will confirm, based on the evaluation, that the supporting surfaces are capable of supporting the loads that will be imposed.
- When winding drum hoists are used on a suspension scaffold, they will never contain less than four wraps of the suspension rope at the lowest point of

scaffold travel.

- Dee Cramer will not be using the supension scaffold system. However the support for outrigger beams, corninc 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.

Gaining Access to Scaffolds

We know that getting to the working platform is critical to the safety of our employees. This section outlines the mechanical requirements for gaining access to scaffold platforms such as: (1) ladders, (2) ramps and walkways, (3) stairrails, and (4) direct access from another scaffold. This section is divided into two parts. The first part is for workers gaining access to scaffold platforms to do work; the second part is access for employees erecting and dismantling scaffolds.

Working Employees:

- Portable, hook-on, and attachable ladders will be positioned so as not to tip the scaffold.
- All stairrail systems and handrails will be surfaced to prevent injury to our employees from punctures or lacerations, and to prevent snagging of their clothes.
- When scaffold platforms are more than 2 feet above or below a point of access, portable ladders, hook-on ladders, attachable ladders, stair towers, stairway-type ladders, ramps, walkways,or similar surface shall be used. Crossbraces shall NOT be used as a means of access

Erectors and Dismantlers:

[Editor's Note: Effective September 2, 1997 access for employees erecting or dismantling supported scaffolds must be in accordance with 1926.451(e)(9).]

Our company shall provide safe means of access for each employee erecting or dismantling a scaffold where the provision of safe access is feasible and does not create a greater hazard. We shall have a competent person determine whether it is feasible or would pose a greater hazard to provide, and have employees use a safe

means of access. This determination shall be based on site conditions and the type of scaffold being erected or dismantled.

Hook-on or attachable ladders shall be installed as soon as scaffold erection has progressed to a point that permits safe installation and use.

When erecting or dismantling tubular welded frame scaffolds, (end) frames, with horizontal members that are parallel, level and are not more than 22 inches apart vertically may be used as climbing devices for access, provided they are erected in a manner that creates a usable ladder and provides good hand hold and foot space.

Cross braces on tubular welded frame scaffolds shall not be used as a means of access or egress.

Fall Protection Plan

Fall protection planning is critical to the safety and well being of our employees. Our fall protection plan follows the OSHA requirements that are different depending on the type of scaffold we are using. In this plan we address fall protection for our scaffold erectors and dismantlers separately.

One fact never changes. We know we must provide fall protection for any employee on a scaffold more than 10 feet above a lower level.

Working Employees:

This fall protection plan for our working employees is for the following type(s) of scaffold(s):

- To meet all requirements of 1926.502 -OSHA fall protection rule Single or two point adjustable suspension scaffold - We will protect each employee on our single or two point adjustble suspension scaffolds by a personal fall arrest system.

Self-contained adjustable scaffold supported by the frame structure-We will protect each employee on our self-contained, frame structure supported, adjustable

scaffolds by a guardrail system. The guardrail system:

- Has a minimum 200-pound toprail capacity.
- Will be installed before being released for use by our employees.
- Guardrail systems shall be installed along all open sides and ends of platforms. Midrails, screens, mesh, solid panels shall be installed as needed per job site conditions.

Falling Object Protection

All employees must wear hardhats when working on, assembling, or dismantling scaffolds. This is our primary protection from falling objects. Additionally, we will:

- Install all guardrail systems with openings small enough to prevent passage of potential falling objects.
- Prevent tools, materials, or equipment that inadvertently fell from our scaffolds from striking employees by barricading the area below the scaffold.
- Where there is a danger of tools, materials, or equipment falling from a scaffold and striking employees below. All protective guarding will be used per condition of jobsite enviorment.

Using Scaffolds

Site preparation, scaffold erection, fall protection, and gaining access to the working platform are only some of the requirements for scaffold work. While this all takes concentration and safe work practices, the most dangerous time can be when employees are concentrating on their work and not particularly aware of the hazards of working from scaffolds. It is critical that employees who use scaffolds be trained, among other things, in the recognition of the hazards associated with the type of scaffold being used and to understand the procedures to control or minimize those hazards. Our competent person will inspect all scaffolds and scaffold components for visible defects before each work shift, and after any occurrence that could affect a scaffold's structural integrity. However, in addition to that, all users of scaffolds in this company will know and understand the following safety rules:

- Scaffolds and scaffold components will never be loaded in excess of their

maximum intended loads or rated capacities.

- Debris must not be allowed to accumulate on platforms.
- Scaffolds shall not be moved horizontally while employees are on them. Inspection must be done by a competent person each work shift. Employees shall be prohibited from working on scaffolds cover with snow, ice or other slipper material.Ladders shall not be used on scaffolds to increase the working level height of employees.

Specific Procedures

In addition to the general procedures in this written safety plan, there are procedures that apply to specific types of scaffolds. The safety rules for these specific types of scaffolds are found in 1926.452.

Prohibited Practices

The following practices will never be tolerated in this company:

- Scaffold components manufactured by different manufacturers will never be intermixed unless the components fit together without force and the scaffold's structural integrity is maintained.
- Unstable objects will never be used to support scaffolds or platform units. Footings must be level, sound, rigid, and capable of supporting the loaded scaffold without settling or displacement.
- Crossbraces will never be used as a means of access.
- The use of shore or lean-to scaffolds is prohibited.
- Crossbraces will never be used as a means of access. The use of shore or lean - to scaffolds is prohibited. Unstable objects will never be used to support scaffolds or platform units. Footings must be level, sound, rigid, and capable of supporting the loaded scaffold without seetling or displacement. No defective equipment will be used and will be tagged approiately out of service.

Aerial Lifts

Anytime aerial lifts, including: (1) extensible boom platforms, (2) aerial ladders, (3)

articulating boom platforms, (4) vertical towers, or (5) a combination of any such devices, are used to elevate employees to job-sites above ground, the following safety rules will apply:

- No aerial lift this company owns or uses will be 'field modified' for uses other than those intended by the manufacturer unless: (1) the manufacturer certifies the modification in writing, or (2) any other equivalent entity, such as a nationally recognized testing lab, certifies the aerial lift modification conforms to all applicable provisions of ANSI A92.2-1969, and the OSHA rules at 1926.453. The lift must be at least as safe as the equipment was before modification.

Ladder Trucks and Tower Trucks:

- Aerial ladders must be secured in the lower traveling position by the locking device on top of the truck cab, and the manually operated device at the base of the ladder before the truck is moved for highway travel.

Extensible and articulating boom platforms:

- We will test lift controls each day prior to use to determine they are in safe working condition.
- Only authorized employees can operate an aerial lift.
- A body belt must be worn and a lanyard attached to the boom or basket when working from an aerial lift.
- Only authorized employees can operate an aerial lift. Fall protection shall be used while on platform requlated by equipment recommendations.

Duties of Competent and Qualified Persons

When working with scaffolds in this company there are some tasks that must be done by our competent or a qualified person. By definition they are:

- Competent person-One 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.

- Qualified person-One who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training and experience, has successfully demonstrated his/her ability to solve or resolve problems related to the subject matter, the work, or the project.

The following tasks will only be done by the person we have deemed competent or qualified to perform them:

Competent Person:

- We will not intermix scaffold components manufactured by different manufacturers unless the components fit together without force and the scaffold's structural integrity is maintained. Scaffold components manufactured by different manufacturers will not be modified in order to intermix them unless our competent person determines the resulting scaffold is structurally sound.
- Before a suspension scaffold is used, direct connections must be evaluated by our competent person who will confirm, based on the evaluation, that the supporting surfaces are capable of supporting the loads to be imposed.
- Prior to each work shift and after every occurrence that could affect a rope's integrity, suspension scaffold ropes will be inspected by our competent person. Ropes will be replaced if any of the conditions outlined in 1926.451 (d)(10) exist.
- Scaffolds will be erected, moved, dismantled, or altered only under the supervision and direction of a competent person.
- Scaffolds will be erected, moved, dismantled or altered only under the supervision and direction of a competent person, Qualified person. Inspection shall be done before each shift scaffold is being used daily. (complete as required from 1926.450-.454)

Qualified Person:

- Scaffolds must be designed by a qualified person and shall be constructed and loaded in accordance with that design.
- Swaged attachments or spliced eyes on wire suspension ropes of suspension scaffolds will not be used unless they are made by the wire rope

manufacturer or a qualified person.

- We will have each employee who performs work while on a scaffold trained by a person qualified in the subject matter to recognize the hazards associated with the type of scaffold being used and to understand the procedures to control or minimize those hazards.
- Scaffold will be erected, moved, dismantled, or altered only under the supervision and direction of a competent person. Qualified person

Training

Recognizing the need for training for employees who: (1) perform work while on scaffolds, (2) are involved in erecting, disassembling, moving, operating, repairing, maintaining, or inspecting scaffolds, and (3) have lost the requisite proficiency, the following training syllabus is a part of this written safety plan.

Employees Who Use Scaffolds:

Our employees who perform work on scaffolds will be trained by a qualified person to recognize the hazards associated with the type of scaffold being used and to understand the procedures to control or minimize those hazards. The training will include the following areas as applicable:

- The nature of and the correct procedures for dealing with electrical hazards.
- The nature of and the correct procedures for erecting, maintaining, and disassembling the fall protection and falling object protection systems used.
- The proper use of the scaffold, and the proper handling of materials on the scaffold.
- The maximum intended load and the load-carrying capacities of the scaffolds used.
- Any other pertinent requirements of the OSHA rules.

Employees Who Erect, Disassemble, Move, Operate, Repair, Maintain, or Inspect Scaffolds:

Our employees who erect, disassemble, move, operate, repair, maintain, or inspect scaffolds will be trained by our competent person to recognize the hazards associated with the work being done. The training will include the following topics

as applicable:

- The nature of scaffold hazards.
- The correct procedures for erecting, disassembling, moving, operating, repairing, inspecting, and maintaining the type of scaffold in question.
- The design criteria, maximum intended load-carrying capacity, and intended use of the scaffold.
- Any other pertinent requirements of this subpart.

Employees Who Need Retraining:

When we have reason to believe that one of our employees lacks the skill or understanding needed for safe work involving the erection, use or dismantling of scaffolds, we will retrain the employee so that the requisite proficiency is regained. Retraining will be done in at least the following situations:

- Where changes at the worksite present a hazard about which the employee has not been previously trained.
- Where changes in the types of scaffolds, fall protection, falling object protection, or other equipment present a hazard about which an employee has not been previously trained.
- Where inadequacies in an affected employee's work involving scaffolds indicate that the employee has not retained the requisite proficiency.

Subcontractor Management Plan

Dee Cramer Inc

Completed by: Valerie Bradley
Completed Date: 03/08/2013

Subcontractor Management Plan

Purpose

This written Subcontractor Management Plan This plan provides the mandatory occupational health and safety requirements for subcontractors performing work for Dee Cramer Inc.

Administrative Duties

Valerie Bradley, Safety Director, our company's Subcontractor Management Plan Administrator, is responsible for developing and maintaining the written Subcontractor Management Plan. This person is solely responsible for all facets of the plan and has full authority to make necessary decisions to ensure the success of this plan. Valerie Bradley, Safety Director is also qualified by appropriate training and experience that is commensurate with the complexity of the plan to administer or oversee our Subcontractor Management Plan and conduct the required evaluations of plan effectiveness.

The Subcontractor Management Plan is kept at the following location: the main office of Dee Cramer, Inc., 4221 E. Baldwin Road., Holly, MI 48442.

Company Information

- ***Name:*** **Dee Cramer Inc**
- ***Facility Type:*** **Heating - Cooling - Sheet Metal**
- ***Description of Activities:*** **HVAC - Installation - Repair - Replacement**
- ***Facility Coordinator:*** **Valerie Bradley, Safety Director**
- ***Alternate Coordinator:*** **Operational Manager**

Operating Procedures

Pre-Operational Procedures

Prior to contract award; subcontractors will be required to submit a pre-qualification form including 3 years of data on EMR, OSHA 300-300A log, DART, and any additional required safety stats requested. Form attached

Operational Procedures

-Subcontractors shall be included in pre jobsite meeting and all employees will be required to complete the safety orientation program prior to work staring.
-Subcontractors shall demonstrate competence in performing desinated work in effective safety management, i,e, acceptable injury rates.
-Subcontractors shall perform operations in accordance with applicable federal, state, OSHA and MIOSHA laws and regulations.
-Subcontractors shall have established documents in place for job safety analysis, hazard assesments for specific hazardous work, including but not limited to hot work policy, lockout/tagout procedure, fall protection, hazard communication programs.
-Subcontractors shall provide sufficient employee training, such as hazcom, respiratory protection training, if applicable. Specific construction activites, such as delevated work, confined space, ladder training, scaffolding or any specific training required per trade work.
-Subcontractors competent person shall sufficiently identify and document potential workplace hazards and take adequate protective measures including the use of PPE (personal protective equipment). A competent person is defined as someone who is capable of identifying and controlling potenetial occupational hazards analysis and written project safety plan.
-Subcontractors competent person shall perform a work area induction with their employees on construction projects, including a review of specifically identified workplace hazards. The employees shall be empowered to immediately stop work that they feel is unsafe.
-Subcontractors performing construction activities shall perform and document regular inspections of the job site by a competent person.
-Subcontractors shall allow only qualified employees to operate equipment and machinery.
-Subcontractors shall perform a post job safety performance review.

Maintenance Procedures

Maintenace on subcontractors equipment will be performed by the subcontractors.

Emergency Situations

Our emergency/accident response procedures include the following:

Emergency procedures will be provided per jobsite at owners/and/or general contractors specifications to be followed by all subcontractors

Phone numbers of primary emergency responders include:

Phones numbers for emergecy need; hospitals, ambulance, will be posted per jobsite

Our company provides the following emergency equipment and support:

General Contrators and/or owners will provide all necerssary emergency equipment and resources per jobsite project

Training

Under no circumstances may an employee subcontract employees will perform no services per trade until trained and documents have been submitted to Dee Cramer safety department until he/she has successfully completed this company's training program under the Subcontractor Management Plan. This includes all new employees, regardless of claimed previous experience. Individuals in the following departments receive training:

Safety Department

The Subcontractor Management Plan Administrator will identify trainees in

each set of new employees and make arrangements with department management to schedule training. The Administrator will also identify those existing employees who need retraining. safety director is responsible for conducting training. His/Her/Their qualifications include must have certifications and/or be a professional safety admistrator.

Training is done by an outside company. See the attached information about the outside company and their training materials.

The company training program includes:

This could be classroom instruction that uses lecture, discussion, videotape, conference formats, parctical exercise and or hands on instruction formats

Through training we ensure that employees in the departments listed above are knowledgeable in:

project and trade specific training requirments

Training Certification

After an employee has completed the training program, the instructor will determine whether the employee can safely perform the job.

Safety Director is responsible for keeping records certifying each employee who has successfully completed training. Each certificate includes the name of the employee, the date(s) of the training, and the signature of the person who did the training and evaluation.

Performance Evaluation

Each trained employee is evaluated annually, unless task requires more frequent to verify that the employee has retained and uses the knowledge and skills needed to operate safely. This evaluation is done by Safety Director and acting supervisor. If the evaluation shows that the employee is lacking the appropriate skills and knowledge, the employee is retrained by our instructor(s). When an employee has an accident or near miss or some

unsafe operating procedure is identified, we do retraining.

Current Trained Employees

Under no circumstances may an employee subcontract employees will perform no services per trade until trained and documents have been submitted to Dee Cramer safety department until he/she has successfully completed this company's training program. The following table lists employees who are currently trained employees at this company:

Department or work area:	Employee name/title
All employees	

All employees have a general obligation to work safely.

Appendices

Our company has attached the following appendices to this written plan:

Subcontractor Safety Pre-Qualification Form

DEE CRAMER

To Whom It May Concern:

Dee Cramer, Inc. is focused on providing its employees and customers with a workplace that is safe. Obviously, we are concerned that our subcontractors also share our commitment in this regard. Attached you will find a copy of our Safety Prequalification Form. Please fill this out in its entirety and return to my attention within the next two weeks.

Your commitment to safety will form a significant part of our evaluation in choosing subcontractors for our projects in the future. Your answers to these questions will be helpful in determining your commitment to safety. Please return the attached form along with your signed copy of our purchase order.

If you have any questions, please feel free to contact me.

Respectfully,

Dee Cramer, Inc.

Valerie Bradley

Valerie Bradley
Safety Director
(810) 579-5000

Attachment

DEE CRAMER

Subcontractor Safety Pre-Qualification Form

Company Name _____
Person Completing Form_____ Title_____
Company Mailing
Address/City/State/Zip_____
Phone Number_____ Fax Number_____
E-Mail:_____
Signature_____ Date Completed_____

1. List your firm's experience modification rate (EMR) for the three most recent years.

   2008 _____ Average_____
   2009_____
   2010_____

2. Please use your OSHA 200 and 300 logs for the three most recent years to complete this section.

A. Actual Hours Worked	_____	_____	_____	
B. Lost Workday Accident Rate (For the 200 log, use columns 2+9x200, 000 ÷ Actual Hours Worked; for the 300 log, use column H x 200,000 ÷ Actual Hours Worked)	_____	_____	_____	_____ (Average)
C. Recordable Accident Rate (For the 200 log, use columns 2+6+9+13 x 200,000 ÷ Actual Hours Worked: For the 300 log, use columns G+H+I+J x 200,000 ÷ Actual Hours Worked)	_____	_____	_____	_____ (Average)

3. Do you have a written safety program which includes Hazardous Communication? Yes_____ No_____
4. Do you have a light duty/restricted work policy? Yes_____ No_____
5. Do all employees complete safety orientation prior to performing work activities? Yes_____ No_____
6. Do you conduct documented site inspections? Yes_____ No_____
7. Do you require the OSHA 30 or 10 hour class for all supervisors? Yes_____ No_____
8. Do you conduct documented post accident investigations? Yes_____ No_____

In house: Return to V. Bradley

Purpose

The purpose of this program is to provide establish requirements for the safe operation of hand and power tools and other portable tools, including proper guarding. All hand and power tools shall be maintained in a safe condition.

This program applies to all Dee Cramer, Inc. employees who use hand and power tools.

Scope

This program is applicable to all Dee Cramer, Inc. employees while engaged in work at Dee Cramer, Inc. facilities and/or facilities operated by others.

Responsibilities

Any tool which is not in compliance with any applicable requirement of this plan is prohibited and shall either be identified as unsafe by tagging or locking the controls to render them inoperable or shall be physically removed from its place of operation.

Managers/Supervisors

- Ensure that all employees using portable tools have been trained and fully understand the operations and maintenance procedures of such tools, including their proper use.
- Provide and train employees with all additional PPE that may be needed for the safe operation of portable tools.

Employees

- Shall ensure they have and properly use the correct tool for each task.
- Shall follow manufactures safety and operating instructions before using

Practices/Procedures Relating to Hand Tools

- All tools, regardless of ownership, shall be of an approved type and maintained in good condition.
- Tools are subject to inspection at any time.
- All employees have the authority and responsibility to condemn unsafe tools, regardless of ownership.
- Unsafe tools shall be tagged with a “DO NOT USE OR OPERATE” tag to prevent their use.
- Employees shall always use the proper tool for the job to be performed. Makeshift and substitute tools shall not be used. Modifications to hand tools are prohibited
- Hammers with metal handles, screwdrivers with metal continuing through the handle, and metallic measuring tapes shall not be used on or near energized electrical circuit or equipment.
- Tools shall not be thrown from place to place or from person to person; tools that must be raised or lowered from one elevation to another shall be placed in tool bags/buckets firmly attached to hand lines.
- Tools shall never be placed unsecured on elevated places.
- Impact tools such as chisels, punches, and drift pins that become mushroomed or cracked shall be dressed, repaired, or replaced before further use.

- Chisels, drills, punches, ground rods, and pipes shall be held with suitable holders or tongs (not with the hands) while being struck by another employee.
- Shims shall not be used to make a wrench fit.
- Wrenches with sprung or damaged jaws shall not be used.
- Tools shall be used only for the purposes for which they have been approved.
- Tools with sharp edges shall be stored and handled so that they will not cause injury or damage. They shall not be carried in pockets unless suitable protectors are in use to protect the edge. They shall not be carried in pockets unless suitable protectors are in use to protect the edge.
- Wooden handles that are loose, cracked, or splintered shall be replaced. The handle shall not be taped or lashed with wire. The handle shall not be taped or lashed with wire.
- Tools shall not be left lying around where they may cause a person to trip or stumble.
- When working on or above open grating, a canvas or other suitable covering shall be used to cover the grating to prevent tools or parts from dropping to a lower level where others are present or the danger area shall be barricaded or guarded.
- The insulation on hand tools shall not be depended upon to protect users from high voltage shock (except approved live line tools).

Portable Electric and Power Tools

- The non-current carrying metal parts of portable electric tools such as drills, saws, and grinders shall be effectively grounded when connected to a power source unless the tool is an approved double-insulated type or the tool is connected to the power supply by means of an isolating transformer or other isolated power supply.
  All powered tools shall be examined prior to use to ensure general serviceability and the presence of all applicable safety devices.
- Powered tools shall be used only within their design and shall be operated in accordance with manufacturer's instructions. The use of electric cords for hoisting or lowering tools shall not be permitted.
- All tools shall be kept in good repair and shall be disconnected from the power source while repairs or adjustments are being made.
- Electrical tools shall not be used where there is hazard of flammable vapors, gases, or dusts without a valid Hotwork Permit.
- Ground fault circuit interrupters or use of an Assured Grounding Program shall be used with portable electric tools. This does not apply to equipment run off of portable or truck mounted generators at 5kw or less that are isolated from ground or to equipment ran directly off of secondaries.

Pneumatic Tools

- Pneumatic tools shall never be pointed at another person.
- Pneumatic power tools shall be secured to the hose or whip by some positive means to prevent the tool from becoming accidentally disconnected.
- Safety clips or retainers shall be securely installed and maintained on pneumatic impact (percussion) tools to prevent attachments from being accidentally expelled.

- Compressed air shall not be used for cleaning purposes, except where reduced to less than 30 psi and then only with effective chip guarding and personal protective equipment.
- Compressed air shall not be used to blow dust or dirt from clothing.
- The manufacturers stated safe operating pressure for hoses, pipes, valves, filters, and other fitting shall not be exceeded.
- The use of hoses for hoisting or lowering tools shall not be permitted.
- Before making adjustments or changing air tools, unless equipped with quick-change connectors, the air shall be shut off at the air supply valve ahead of the hose. The hose shall be bled at the tool before breaking the connection.
- Compressed air tools, while under pressure, must not be left unattended.
- All connections to air tools shall be made secure before turning on air pressure.
- Air at the tool shall not be turned on until the tool is properly controlled.
- All couplings and clamps on pressurized air hose shall be bridged (pinned) with suitable fasteners.
- Hose and hose connections used for conducting compressed air to utilization equipment shall be designed for the pressure and service to which they are subjected.
- Use only approved end-fitting clamps (screw type heater hose clamps are not acceptable).
- While blowing down hose, do not point it toward people.
- Power tools are to be operated only by competent persons who have been trained in their proper use.
- Conductive hose should not be used near energized equipment.
- Foot protection shall be worn while operating paving breakers, tampers, rotary drills, clay spades, and similar impactor-type tools or at other times when instructed by supervision.
- All pneumatically driven nailers, staplers, and other similar equipment provided with automatic fastener feed, which operate at more than 100 psi. pressure at the tool shall have a safety device on the muzzle to prevent the tool from ejecting fasteners, unless the muzzle is in contact with the work surface.
- Airless spray guns of the type which atomize paints and fluids at high pressures (1,000 pounds or more per square inch) shall be equipped with automatic or visible manual safety devices which will prevent pulling of the trigger to prevent release of the paint or fluid until the safety device is manually released.
- In lieu of the above, a diffuser nut (which will prevent high pressure), high velocity release (while the nozzle tip is removed), plus a nozzle tip guard (which will prevent the tip from coming into contact with the operator), or other equivalent protection, shall be provided.

Powder Actuated Tools (Tools actuated by an explosive charge)

- Only those employees who have been certified in their use shall operate these tools.
- Explosive charges shall be carried and transported in approved containers.
- Operators and assistants using these tools shall be protected by means of eye, face, and hearing protection.
- Tools shall be maintained in good condition and serviced regularly by qualified persons. The material upon which these tools are to be used shall be examined before work is started to determine its suitability and to eliminate the possibility of hazards to the operator and others.
- Prior to use, the operator shall ensure that the protective shield is properly attached to the tool.
- Before using a tool, the operator shall inspect it to determine to his satisfaction that it is clean, that all moving parts operate freely, all guards and safety devices are in place, and that the barrel is free from obstructions.

- Before using tools the operator shall read and become familiar with the manufacturers operating guidelines and procedures.
- When a tool develops a defect during use, the operator shall immediately cease to use it, until it is properly repaired in accordance with the manufactures specifications.
- Tools shall not be loaded until just prior to the intended firing time, nor shall an unattended tool be left loaded. Empty tools are to be pointed at any workmen.
- In case of a misfire, the operator shall hold the tool in the operating position for at least 30 seconds. He shall then try to operate the tool a second time. He shall wait another 30 seconds, holding the tool in the operating position; then he shall proceed to remove the explosive load in strict accordance with the manufacturer's instructions.
- A tool shall never be left unattended in a place where it would be available to unauthorized persons.
- Fasteners shall not be driven into very hard or brittle materials including, but not limited to, cast iron, glazed tile, surface hardened steel, glass block, live rock, face brick, or hollow tile.
- Driving into materials easily penetrated shall be avoided unless such materials are backed by a substance that will prevent the pin or fastener from passing completely through and creating a flying missile hazard on the other side.
- Tools shall not be used in an explosive or flammable atmosphere.

Hydraulic Power Tools

- The fluid used in hydraulic powered tools shall be fire-resistant fluids and shall retain its operating characteristics at the most extreme temperatures to which it will be exposed.
- The manufacturer's safe operating pressures for hoses, valves, pipes, filters and other fittings shall not be exceeded.
- All hydraulic tools, which are used on or around energized lines or equipment, shall use non-conducting hoses having adequate strength for the normal operating pressures.

Hydraulic Jacks

Loading and Marking

- The operator shall make sure that the jack used has a rating sufficient to lift and sustain the load.
- The rated load shall be legibly and permanently marked in a prominent location on the jack by casting, stamping or other suitable means.

Operation and Maintenance

- In the absence of a firm foundation, the base of the jack shall be blocked. If there is a possibility of slippage of the cap, a block shall be placed in between the cap and the load.
- The operator shall watch the stop indicator, which shall be kept clean, in order to determine the limit of travel. The indicated limit shall not be overrun.
- After the load has been raised, it shall be cribbed, blocked, or otherwise secured at once.
- Hydraulic jacks exposed to freezing temperatures shall be supplied with adequate antifreeze liquid.
- All jacks shall be properly lubricated at regular intervals.
- Each jack shall be thoroughly inspected before each use. Jacks, which are in unsafe condition, shall be tagged accordingly, and shall not be used until repairs are made.

Fuel Powered Tools

- All fuel-powered tools shall be stopped while being refueled, serviced, or maintained, and fuel shall be transported, handled, and stored in accordance with the Flammable and Combustible Liquids Program.
- When fuel powered tools are used in enclosed spaces, the applicable requirements for concentrations of toxic gases and use of personal protective equipment, shall be adhered too.

Guarding Portable Tools

Guards shall be in place and operable at all times while the tool is in use. The guard may not be manipulated in such a way that will compromise its integrity or compromise the protection in which intended.

Portable Circular Saws

- All portable, power-driven circular saws having a blade diameter greater than 2 in. shall be equipped with guards above and below the base plate or shoe.
- The upper guard shall cover the saw to the depth of the teeth, except for the minimum arc required to permit the base to be tilted for bevel cuts.
- The lower guard shall cover the saw to the depth of the teeth, except for the minimum arc required to allow proper retraction and contact with the work.
- When the tool is withdrawn from the work, the lower guard shall automatically and instantly return to covering position.
- All cracked saw blades shall be removed from service.

Switches and Controls

- All hand held powered tools, circular saws, drills, tappers, fastener drivers, horizontal or vertical angle grinders, etc., shall be with a constant pressure switch or control, and may have a lock-on control provided that turnoff can be accomplished by a single motion of the same finger or fingers that turn it on.
- All hand-held powered circular saws having a blade diameter greater than 2 inches, electric, hydraulic or pneumatic chain saws, and percussion tools without positive accessory holding means shall be equipped with a constant pressure switch or control that will shut off the power when the pressure is released. All hand-held gasoline powered chain saws shall be equipped with a constant pressure throttle control that will shut off the power to the saw chain when the pressure is released.
- The operating control on hand-held power tools shall be so located as to minimize the possibility of its accidental operation, if such accidental operation would constitute a hazard to employees.
- Grounding of portable electric powered tools shall meet the electrical requirements that can be found in the Electrical Safety Program. All electric power tools shall be equipped with a three-prong plug.

Abrasive Wheel Machinery and/or Other Rotating Equipment

Portable Abrasive Wheels

Safety Guards Exceptions

- Wheels used for internal work while within the work being ground.
- Mounted wheels used in portable operations 2 inches and smaller in diameter.
- Guards shall be made of steel or other material with adequate strength.
- A safety guard shall cover the spindle end, nut and flange projections. The safety guard shall be mounted

so as to maintain proper alignment with the wheel, and the strength of the fastenings shall exceed the strength of the guard.

- Exception: safety guards on all operations where the work provides a suitable measure of protection to the operator may be so constructed that the spindle end, nut and outer flange are exposed. Where the nature of the work is such as to entirely cover the side of the wheel, the side covers of the guard may be omitted.
- Exception: the spindle end, nut, and outer flange may be exposed on portable machines designed for, and used with, type 6, 11, 27, and 28 abrasive wheels, cutting off wheels, and tuck pointing wheels.

Mounting and Inspection of Abrasive Wheels

- Immediately before mounting, all wheels shall be closely inspected and a ring test performed, to make sure they have not been damaged in transit, storage, or otherwise.
- Ring test – “tap" wheels about 45 degrees each side of the vertical centerline and about 1 or 2 inches from the periphery; then rotate the wheel 45 degrees and repeat the test; a sound and undamaged wheel will give a clear metallic tone - If cracked, there will be a dead sound and not a clear "ring.”
- The spindle speed of the machine shall be checked before mounting of the wheel to be certain that it does not exceed the maximum operating speed marked on the wheel.
- Grinding wheels shall fit freely on the spindle and remain free under all grinding conditions.
- A controlled clearance between the wheel hole and the machine spindle (or wheel sleeves or adaptors) is essential to avoid excessive pressure from mounting and spindle expansion.
- The machine spindle shall be made to nominal (standard) size plus zero minus .002 inch, and the wheel hole shall be made suitably oversize to assure safety clearance under the conditions of operating heat and pressure.
- All contact surfaces of wheels, blotters, and flanges shall be flat and free of foreign matter.
- When a bushing is used in the wheel hole it shall not exceed the width of the wheel and shall not contact the flanges.

Portable Grinders

- Special "revolving cup guards" which mount behind the wheel and turn with it shall be used. They shall be made of steel or other material with adequate strength and shall enclose the wheel sides upward from the back for one-third of the wheel thickness. It is necessary to maintain clearance between the wheel side and the guard. The clearance shall not exceed one-sixteenth inch.
- Vertical portable grinders, also known as right angle grinders, shall have a maximum exposure angle of 180 degrees and the guard shall be located between the operator and the wheel during use. Adjustment of the guard shall ensure that pieces of an accidentally broken wheel will be deflected away from the operator.
- The maximum angular exposure of the grinding wheel periphery and sides for safety guards used on other portable grinding machines shall not exceed 180 degrees and the top half of the wheel shall be enclosed at all times.

Personal Protective Equipment

Employees using hand and power tools and exposed to the hazard of falling, flying, abrasive, and splashing objects, or exposed to harmful dust, fumes, mists, vapors or gases shall be provided with the particular PPE necessary to protect them from the hazard.

Body Positioning, Ergonomics and Repetitive Motion Hazards

Dee Cramer, Inc. requires each worksite to establish and maintain an ergonomics procedure with the following elements:

- Ongoing training of management, supervisors, and employees (including new hires) on lifting and manual handling awareness hazards and control measures.
- Training of specialized staff (designated Dee Cramer, Inc. Representative, JHSC members) on lifting or manual handling hazard assessment and control measures
- Tracking of MSD statistics
- MSD hazard identification and assessment (see MSD Hazard Identification form)
- Control of MSD hazards through the application of engineering and/or administrative controls
- Implementation of the ergonomics procedure by incorporating ergonomic control principles into the purchasing process, i.e., by proactively integrating ergonomics principles into purchasing equipment and furniture
- Proactively integrating ergonomics principles into workplace design and work techniques
- Ongoing evaluation (no less than annually) of the local ergonomics procedure implementation and effectiveness
- A realization that personal protective equipment may only be used as a substitute for engineering or administrative controls if it is used in circumstances in which those controls are not practicable.

Dee Cramer, Inc. must ensure that every worker who may be exposed to a risk of musculoskeletal injury is informed of the risk and of the signs and common symptoms of any musculoskeletal injury associated with their work.

Worksite Assessment

A hazard assessment must be performed before manually lifting and handling a load. Before a worker manually lifts, lowers, pushes, pulls, carries, handles, or transports a load that could injure the worker, Dee Cramer, Inc. must perform a hazard assessment that considers the weight of the load, the size of the load, the shape of the load, the number of times the load will be moved and the manner in which the load will be moved. The assessment shall include the following factors must be considered, where applicable:

- Physical Demands
  - Neck Back Shoulder Wrist
  - Hand
  - Knee Ankle/
  - Feet
- Force Required and Working Distance
  - Do employees push, pull, lift, lower, or carry objects that are too heavy or require too much force; away from the center of the body or in a jerky or twisting manner?
- Work Postures
  - Is the back is curved too much or in a stooped position?
  - Is the back is twisted during movements?

- Is the neck bent or twisted?
- Are the arms away from the body?
- Are the wrists flexed, extended or pinched positions?

- Repetitive Use of Similar Muscles
  - Do employees perform movements over and over in the same way
- Static Muscle Use and Duration
  - Do employees hold any of the above work postures for > 20 sec.?
  - Stand for long periods with their knees locked?
  - Stand in one position without moving or stretching?
- Contact Stress
  - Do employees put localized pressure on any part of their body?
- Work Space Layout and Conditions
  - Are there working heights, reaches in workspace, equipment, tool design, storage conditions, etc., that cause or contribute to employees experiencing any of the physical demands risk factors?
  - Also consider seating, floor surfaces, the characteristics of objects handled, including size and shape, load condition and weight distribution, and container as well as tool and equipment handles.
- Organization of Work
  - Are there work processes, monotonous job tasks, work recovery cycles, task variability, work rate, machine paced tasks or peak activity demands that cause or contribute to rushing, frustration, fatigue or other visible signs of stress?
- Environmental Conditions
  - Are employees exposed to poor lighting, vibration, cold or hot air/wind/water?

Mechanized Equipment

Mechanized equipment is provided, wherever practicable, to assist with material handling and should be used for material handling, whenever practicable. Dee Cramer, Inc. must provide, where reasonably practicable, appropriate equipment for lifting, lowering, pushing, pulling, carrying, handling or transporting heavy or awkward loads.

Handling Heavy or Awkward Loads

Dee Cramer, Inc. will take all practicable means to adapt the heavy or awkward loads to facilitate lifting, holding or transporting by workers or to otherwise minimize the manual handling required. Those include:

- Employees shall not attempt to lift more than they can comfortably taking and absolutely not more than 18kg without assistance from another employee or use of mechanical aids (pallet jack, hand dolly, etc.) to lift the load.
- All loads carried on handcarts shall be secured.
- All awkward type loads shall be secured to prevent tippage.
- Additional methods include:

- reducing the weight of the load by dividing it into two or more manageable loads
- increasing the weight of the load so that no worker can handle it and therefore mechanical assistance is required
- reducing the capacity of the container
- reducing the distance the load must be held away from the body by reducing the size of the packaging
- providing hand holds
- team lift the object with two or more workers
- improve the layout of the work process to minimize the need to move materials
- reorganize the work method(s) to eliminate or reduce repeated handling of the same object
- rotate workers to jobs with light or no manual handling
- Use mobile storage racks to avoid unnecessary loading and unloading.

Review & Updating Ergonomics Procedure

- Each worksite will review the effectiveness of the ergonomics procedure at least annually. Any injuries will be reviewed for MSI and ergonomics procedure deficiencies and those factors must be corrected without undue delay and the MSD and ergonomics procedure revised. When the monitoring required identifies deficiencies, they must be corrected without undue delay.
- Any revision must involve retraining of employees at the effect of the corrective actions.

Training

Workers are provided ergonomics training. Dee Cramer, Inc. will ensure that a worker who may be exposed to the possibility of musculoskeletal injury is trained in specific measures to eliminate or reduce that possibility.

Dee Cramer, Inc. must ensure that a worker who may be exposed to the possibility of musculoskeletal injury is trained in specific measures to eliminate or reduce that possibility. Dee Cramer, Inc. must ensure that the training includes identification of factors that could lead to a musculoskeletal injury, the early signs and symptoms of musculoskeletal injury and their potential health effects and preventive measures including, where applicable, the use of altered work procedures, mechanical aids and personal protective equipment.

Training shall be documented and must remain in the worker's training file.

Welding/Cutting Safety Program

Dee Cramer Inc

Completed by: Valerie Bradley
Completed Date: 02/12/2013

Welding & Cutting Procedures

These written Welding & Cutting Procedures establish guidelines to be followed whenever any of our employees work with welding and cutting equipment at this company. The procedures here establish uniform requirements designed to ensure that welding and cutting safety training, operation, and maintenance practices are communicated to and understood by the affected employees. These requirements also are designed to ensure that procedures are in place to safeguard the health and safety of all employees.

It is our intent to comply with the requirements of 29 CFR 1926.350 through.354. These regulations have requirements for welding and cutting operations. We also comply with applicable requirements of:

Standard or Regulation:	**Name:**
ANSI Z49.1-1967	*Safety in Welding and Cutting*
CGA Pamphlet P-1-1965	*Safe Handling of Compressed Gases*
29 CFR 1926, Subpart D	*Occupational Health and Environmental Controls*
29 CFR 1926, Subpart E	*Personal Protective And Life Saving Equipment*
29 CFR 1926.406(c)	*Electrical—Specific Purpose Equipment and Installations*
49 CFR 192	*Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards*
49 CFR 171-180	*Hazardous Materials Regulations*

Administrative Duties

Corporation Safety Director is responsible for developing and maintaining the written Welding & Cutting Procedures. These procedures are kept at the following location: All major jobsites - Master copy in main office located at 4221 E. Baldwin Road., Holly, MI 48442.

Welding and Cutting Equipment

Our company uses the following welding and cutting equipment:

Make, model, and serial number:	Type:	Quantity:	Purpose and location:
ESAB	Meg Welders	15	Shops Facilities
Airco	Meg Welders	5	4221 E Baldwin Rd., Holly MI 48442

Training

It is the policy of Dee Cramer Inc to permit only trained and authorized personnel to operate welding and cutting equipment. Welding Shop Supertintendent will identify all new employees in the employee orientation program and make arrangements with department management to schedule training.

The following person(s) will conduct initial training and evaluation: The training is done by the local unions JATC program. This instructor(s) has the necessary knowledge, training, and experience to train new welding and cutting equipment operators. His/Her/Their qualifications include: They are qualified certified welding instructions.

Initial Training

Our classroom instruction includes the following formats: All training is done in our

local union apprencticship training facility- depending on what local union. Classroom instruction, itself, covers the following topics: All OSHA/MIOSHA requirements are met prior to graduating to a journeyman mechanic sheetmetal

Our practical training includes these formats: Information is on site of the local training centers. All welders and cutters are trained and tested on the equipment they will be operating before they begin their job. Our practical training covers the following:

All required OSHA/MIOSHA by 1910.252 254 and 255 regulations are covered under the apprenticeship program.

During training, Dee Cramer Inc covers the operational hazards of our welding and cutting operations, including:

- Hazards associated with the particular make and model of the welding and cutting equipment;
- Hazards of the workplace; and
- General hazards that apply to the operation of all or most welding and cutting equipment.

See Appendix A for company-specific hazards of our welding and cutting equipment and our workplace.

Each potential welder or cutter who has received training in any of the elements of our training program for the types of equipment which that employee will be authorized to operate and for the type of workplace in which the welding and cutting equipment will be operated need not be retrained in those elements before initial assignment in our workplace if Dee Cramer Inc has written documentation of the training and if the employee is evaluated to be competent.

Training is done by an outside company. See the attached information about the outside company and their training materials.

Training Certification

After an employee has completed the training program, the instructor will

determine whether the potential welder or cutter can safely perform the job. At this point, the trainee will take a performance test or practical exercise through which the instructor(s) will decide if the training has been adequate. All welding and cutting trainees are tested on the equipment they will be operating.

Performance Evaluation

Each certified welder or cutter is evaluated Once employee is brought into the company sample testing is given to ensure proper knowledge of such requests can be met. to verify that the welder or cutter has retained and uses the knowledge and skills needed to operate safely. This evaluation is done by The Shop Supervisor. If the evaluation shows that the welder or cutter is lacking the appropriate skills and knowledge, the welder or cutter is retrained by our instructor(s). When a welder or cutter has an accident or near miss or some unsafe operating procedure is identified, we do retraining.

Current Welders and Cutters

Under no circumstances may an employee operate welding or cutting equipment until he/she has successfully completed this company's welding and cutting training program. This includes all new welders and cutters regardless of claimed previous experience. The following table lists employees who are currently authorized welders and cutters at this company:

Department or work area:	Employee name/title:	Equipment make and model:
Welding Shop	Given upon request	all previously listed equipment

All employees have a general obligation to work safely with and around welding and cutting operations.

Operating Procedures

Welding and cutting can create certain hazards that only safe work practices can prevent. That's why we have created a set of operating procedures. Our

operating procedures follow:

Compressed Gas Cylinders

Handling, storage and use of compressed gases around the workplace represents a number of hazards. Approved practices include but not limited to: keep valve cap in place at all time when a cylinder is not is use. Use care in handling and storage of cylinders, when hositing cylinders, secure cylinders in an upright position at all times. Maintain a distance of at least 20 feet or provide a non-combustible barrier at least five feet high in separating fuel gas cylinders from oxygen cylinders,

Gas Welding and Cutting

Anytime you work with equipment that produces sparks or an open flame, a process that generates excessive heat, there is a risk of fire. Hot Work can be controlled through a hot work policy; some hot work hazards: fire, property and personal loss, explosions of compressed gases, metal splatter,and electrical shock.
HOT WORK PERMIT is needed prior to any hot work being done
-Under the welding and cutting regulation, management is responsible for safe cutting and welding on its property or jobsites. Cutting and welding shall NOT be permitted in areas not authorized by management, sprinklered buildings, the presence of explosives (mixtures of flammable gases, vapors, liquids or dusts with air), near storage of large quantities of exposed, readily ignitible materials such as sulfur, baled paper or cotton.
Also:
Before a regulator to a cylinder valve is connected, crack the valve to clear it of dust or dirt. Stand to one side of the outlet, not in front of it. Make sure sparks, flame or other possible sources of ignition are not present. Open cylinder slowly. Do not place anything on top of fuel gas cylinder when in use. Before a regulator is removed from a cylinder valve, always close the cylinder valve and release the gas from the regulator. Check with Supervisor prior to any type of welding with questions or concerns regarding usage, area, equpiment etc.

Arc Welding and Cutting

Wet conditions, or high humidity check for electric shock concern. Do not dip hot electrode into water. Use of holders, cable and other apparatus specifically designed for the purpose, matched to the job and other componenets and good repair. Turning off the arc welding or cutting machine when it is not being attended. NEVER use cable with repairs or splice within 10 feet of the holder.

Fire Prevention

At all times fire extinguisher will be readily availabe to all employees and areas where welding and cutting is being performed. When the object to be welded, cut or heated can be moved and a fire-resistant, safe workspace is available, then the welding, cutting brazing or heating must be done in that space. If not, all fire hazards must be protected by guards to confine the heat, sparks and slag from such fire hazards. If welding can not be performed as stated above than welding can NOT be conducted at all. All employees must wear flame - resistant clothing, have firewatcher in attendance when welding, remove all combustible material 35 feet or more from work area, get a hot work permit and follow safety precautions.

Fire Watchers

Fire watchers are to provide: support for welders to help prevent and or contain should a fire break out. A fire watcher will be trained in fire hazards and have a fire extinguisher ready and available at all times. They also must remain at least 1/2 hour after completion of welding or cutting to make sure no smoldering fires occur.

Ventilation

Ventilation will be sufficient to protect passerby as welding is going on. No Oxygen shall be used for ventilation. When ventilation is not sufficient to provide clean, respirable air, respirators will be specified according to specifications of our policy. Employees will be trained to know the symptons of fumes and gases and to leave an area immediatley. Peform atmospheric tests and keep a safe distance from fume or gas plume

Personal Protective Equipment

Proper eye protection, helmets, hand shields, goggles, flame resistance aprons will be provided to those welding and cutting. Along with but not limited to: proper protective clothing and first aid equipment. When known or unknown toxic materials aer present in a job, respirators will be provided.

Flammable, Toxic, or Hazardous Materials

The company will have a competent person to test the flammability of unknown coatings or obtain information from owner of project. If coating is found to be highly flammable, it will be stripped from the area to prevent fire.

Fall Protection

A welder or helper working on platforms, scaffolds, or runways shall be protected against falling. This may be accomplished by the use of railings, safety harnessess, or other euqally effective safetguards recommended by OSHA/MIOSHA. Welders shall place welding cable and other equipment so that it is clear of passageways, ladders, and stairways.Maintaining a clear welding or cutting area to prevent slips, trips and.or falls

Maintenance

Any deficiencies found in our welding and cutting equipment are repaired, or defective parts replaced, before continued use. However, no modifications or additions that affect the capacity or safe operation of the equipment may be made without the manufacturer's written approval. If such modifications or changes are made, the capacity, operation, and maintenance instruction plates, tags, or decals, must be changed accordingly. In no case may the original safety factor of the equipment be reduced.

While defective parts may be found, we prefer to invest time and effort into the proper upkeep of our equipment, which results in day-to-day reliability. Keeping up with the manufacturer's recommended maintenance schedules, and completing the proper records, will also increase our welding and cutting equipment's longevity.

The Shop Superintendent and Operations Manager: order, receive, review and inspect along with manufactuer representative on all new and repaired equipment. complete(s) a receiving or delivery inspection whenever our company purchases welding and cutting equipment.

Shop Superintendent along with employee working on specific machine follow(s) the manufacturer's operator instruction manual for daily or weekly maintenance..

Periodic maintenance (those completed monthly or less frequently) is done by a factory-trained-expert, or a dealer.

Signs and Labels

Our company posts signs as follows:

All types of signs are posted in shop area and on job sites if welding is being performed in accordance with OSHA/MIOSHA 29 CFR 1910.252, 253, 1926.350 regarding fumes, flashing, heat, sparks,etc

We use the following labels:

All labeling required by OSHA/MIOSHA regulation requirements are used.

Recordkeeping

Shop Superintendent is responsible for maintaining the following records:

All required OSHA/MIOSHA record keeping requirements are kept in the shop office for review

These records are maintained in 4221 E. Baldwin Road, Holly MI 48442 for Until equipment is no longer in use and removed from building.

Appendix A

Company-specific hazards of our welding and cutting equipment and our workplace include:

Task and location:	Equipment:	Hazard:
Listing are found in shop areas for review prior to work day		