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Cadmium Exposure Compliance Program for Construction

The purpose of this program is to inform interested persons, including employees, that the EMA is complying with the OSHA cadmium standard, Title 29 Code of Federal Regulations 1926.1127 and 1910.1027 by:

- Ensuring that no employee is exposed to cadmium at concentrations greater than 5 ug/m^3 of air averaged over an eight (8) hour period.
- Knowing that when respirators are used to limit employee exposure as required by paragraph (c) of Section 1926.1127, and all requirements of paragraphs (e)(1) and (f) of Section 1926.1127, have been met, employee exposure may be considered to be at the level provided by the protection factor of the respirator for those periods the respirator is worn. Those periods may be averaged with exposure levels during periods when respirators are not worn to determine the employee's daily TWA exposure.

This program applies to all abatement, construction, demolition, or renovation work where one of our employees may be occupationally exposed to cadmium. All work related to construction, alteration, including painting is included.

This program is available for review and copying by all employees, their representatives, the Assistant Secretary, and Director.

Administrative Duties

The Project Manager is responsible for its implementation and maintenance of this program. Copies of this written program may be obtained in EMA written Safety and Health manual or at the corporate office.

This written safety plan covers the multiple potential job sites of EMA Corp.

Exposure Assessment

Protection of Employees during Exposure Assessment

When tasks are presumed to generate cadmium exposures greater that the permissible exposure limit (PEL) of 5 ug/m3 of air averaged over an eight hour period, we treat affected employees as if they were exposed above the PEL and implement procedures to protect workers until we perform an employee exposure assessment and document that an employee's cadmium exposure is not above the PEL.

Tasks estimated to generate a TWA of 5 ug/m3 of air include:

- Manual demolition, manual scraping, manual sanding, heat gun applications, and power tool cleaning with dust collection systems where cadmium coatings or contaminants are present.
- Emergency operations involving cadmium or cadmium burning.
- Power tool cleaning without dust collection systems where cadmium contamination is present.

- Cleanup activities, where dry expendable abrasives are used, and abrasive blasting enclosure movement and removal where cadmium containing coatings or contaminants are present.

Based on historical data from previous cadmium jobs, we will take measures as recommended in 29 CFR 1926.62 to protect our employees. These measures include but are not limited to:

- Appropriate respiratory protection (protection factor of 10, 25, 5, or 100 depending on the tasks involved and the estimated exposures).
- Proper personal protective clothing and equipment
- Change areas
- Hand washing facilities
- Biological monitoring
- Training

Initial Determination

We assess each new project to determine if employees may be exposed to cadmium at or above the action level of 2.5 ug/m3 of air as an eight hour TWA. This initial determination can be based on:

- Employee exposure monitoring.
- Objective data demonstrating that under expected conditions, specific processes, operations, or activities involving cadmium cannot result in employee exposure to cadmium at or above the action level.
- Previous monitoring for cadmium exposures within the last 12 months during work operations conducted under workplace conditions closely resembling the processes, types of materials, control methods, work practices, and environmental conditions used and prevailing in your operations.

We base initial determinations on employee exposure data. Our employee exposure monitoring data includes:

- Information, observations, or calculations which would indicate employee exposure to cadmium.
- Previous measurements of airborne cadmium.
- Any employee complaints of symptoms which may be attributable to exposure to cadmium.

Initial Determination Results

If our initial determination reveals employee exposures to be below the action level, we will conduct periodic air monitoring during operations to confirm that airborne cadmium levels are below the action level.

If our initial determination reveals employee exposures to be at the action level but at or below the PEL, we will conduct air monitoring and personal air sampling of 25% of the represented work force.

If our initial determination reveals that employee's exposures will be above the PEL, attempts will be made through administrative and engineering controls to reduce exposures below

the PEL. If this should fail to reduce the exposure level, employees shall wear the appropriate level of PPE necessary to reduce exposures below the PEL.

Additional Exposure Assessments

If changes in equipment, process, control, personnel or tasks occur after initial determination, we reevaluate to determine if employees are exposed to higher concentrations of cadmium. We will conduct periodic air monitoring of the work site to determine if changes occur in the exposure levels.

Employee Notification

Within five (5) working days of completing an exposure assessment we notify each employee in writing of his/her assessment results. Our procedure for this notification process is that we will post all air monitoring results for employees to review within five (5) working days.

Methods of Compliance

This program is our written strategy and schedule for protecting our workers from cadmium exposure. It incorporates all relevant information that relates to this goal, so that we determine whether we appropriately analyzed problems and solutions (including alternatives) relating to cadmium exposure.

This program is intended to reduce employee exposure to at or below the PEL. When all feasible engineering and work practice controls that can be instituted are not sufficient to reduce employee exposure to acceptable levels, appropriate respiratory protection will be provided to supplement such controls.

Our job sites, equipment, and materials are regularly inspected. This company reviews this program at least every six months to revise it as necessary. For most projects, cadmium abatement activities are expected to be the primary cause of our cadmium exposures.

To reduce and maintain employee exposures to cadmium at or below the PEL, we have implemented state-of-the art engineering and work practices to include, but not limited to; wet methods, negative air systems, necessary PPE. Additionally, housekeeping practices that will be followed include:

- Vacuuming floors and other surfaces where cadmium accumulates to minimize the likelihood of cadmium becoming airborne.
- Shoveling or wet sweeping (permitted only where vacuuming or other equally effective methods have been tried and found ineffective).
- Use of HEPA filters on vacuum cleaners.
- Emptying vacuums so that cadmium is not reintroduced into the workplace.

The written work practices shall be utilized to control exposure to cadmium during normal operations and maintenance activities involving maintenance of specific tools and engineering controls equipment, such as ventilation machines.

Our jobs are typically multi-employer worksites. The procedure we use to cooperate with other contractors and inform all employees of potential exposure to cadmium shall be that the contractor must supply this organization copies of cadmium training certificates for all employees who may be exposed to cadmium from cadmium abatement activities. All contractor employees shall receive a site safety orientation to include the hazards of cadmium of the site prior to beginning work.

As an employer we want to keep our employees fully informed of all aspects of this plan. Our Job Site Supervisor/Competent Person will make frequent and regular inspections of the job site, materials, and equipment, and ensure a copy of this written plan is available at the worksite. We review and update our written plan every six months to reflect the current status of the program.

Respiratory Protection

As our engineering controls and work practices are generally sufficient to reduce exposures to at or below the PEL without the use of respirators, unless an employee specifically requests a respirator, respiratory protection will not be routinely used on our worksites.

During our exposure assessment to document that our employees are not exposed above the PEL, we treat employees performing certain operations as if they were exposed above the PEL. This means providing respiratory protection. Our respirator program includes a copy of the requirements of 29CFR1926.1127(f), 29CFR1926.1127 App. A & App. B, and 29 CFR 1910.134 and is included in this plan. We provide NIOSH approved respirators, recommended in Table 1 of 29 CFR 1926.1127, to employees who request them. Any employee may ask his supervisor for a respirator and one will be provided upon that request in accordance with company policy.

We provide powered air purifying respirators (PAPR) instead of respirators recommended in Table 1 of 29CFR1926.1127 to employees exposed to 250 ug/m3 of air or more who request them. Any employee who requests a PAPR through his supervisor will be provided one upon that request in accordance with company policy.

A copy of our respiratory protection program is attached.

Protective Work Clothing and Equipment

We provide personal protective equipment as interim protection for employees during exposure assessment, since our employees may be exposed to cadmium (1) above the PEL without regard to the use of respirators, or (2) to cadmium compounds which may cause skin or eye irritation. This outline of our Protective Work Clothing and Equipment policy is included as part of the site plan when required. We provide protective clothing and equipment at no cost to our employees.

The types of protective clothing provided by our company shall include, but is not limited to: Cotton tyvek coveralls, with hood; Saranex coated tyvek coveralls with hood; latex gloves with taped interfaces, safety glasses, and hardhats where necessary. This equipment is considered disposable, and is to be disposed of at the job site.

We will replace or repair any damaged equipment providing the employee notifies his supervisor of the damage to his protective clothing.

Hygiene Facilities and Practices

We provide hygiene facilities for our workers and assure they follow good hygiene practices. We prohibit smoking, eating, applying cosmetics, and the presence of tobacco products, foodstuffs, or cosmetics in all work areas where employees are exposed to cadmium above the PEL. We make sure worker will comply with these requirements through regular inspections by supervisory personnel. Employees who fail to follow accepted/proscribed hygiene and safety procedures will be subject to disciplinary actions as prescribed by company policy.

Medical Surveillance

Our company supports the practices necessary for early detection of cadmium exposure. The medical surveillance program supplements the primary goals of the cadmium exposure control program of preventing disease through elimination or reduction of airborne concentrations of cadmium, and sources of ingestion. The medical surveillance provisions incorporate both initial and ongoing medical surveillance.

We provide initial medical surveillance to employees who are occupationally exposed to airborne cadmium levels greater than the action level 30 days a year or above the PEL for greater than 10 days a year. This monitoring consists of visits with the physician to include a detailed occupational history and laboratory analysis per 1910.1027(l), as required. To ensure appropriate medical surveillance is performed, we provide to the physician and/or representative copies of the regulation and appendices, a description of the employees duties, a list of the personal protective equipment worn by the employee, and past exposure assessment data.

All medical examinations, procedures, and blood Cadmium level sampling/analysis shall be conducted by licensed healthcare practitioners and/or physicians. Our medical surveillance program shall meet the requirements of 29 CFR 1910.1028(l).

Medical Removal Protection

We remove employees from work who have exposures to cadmium at or above the action level each time a periodic and a follow-up blood sample indicates that medical removal is necessary as required by 1926.1127 (l)(3),(4), & (6). We also remove employees from work who have exposures to cadmium at or above the action level when a health care professional determines that they have medical conditions which, when exposed to cadmium, places them at greater risk for those health problems. Employees who are removed from work will receive all wages, benefits, for a period of 18 months without loss of seniority or promotion opportunities. The company reserves the right to place an employee in a position, of equal responsibility, where the employee will not be exposed occupationally to cadmium.

Employee Education and Training

Employees can do much to protect themselves from the risks of occupational cadmium exposure if they know about them. In our training programs we inform employees of the specific hazards associated with their work environment, protective measures which can be taken, and

their rights under the standard (Including the contents of 29 CFR 1926.1127 and appendices A & B) prior to the time of initial assignment. All employees working in areas with airborne cadmium levels above the PEL are required to possess appropriate training certifications. Training certifications will detail identity of employee trained, signature of qualified trainer, and date(s) of training. Training records will be retained at the corporate office for a period of no less than 1 year.

Signs

Because exposure to cadmium is a serious health hazard, we post signs that warn employees of cadmium hazards and of the possible need to use respirators and other protective equipment in the area. Appropriate cadmium warning signs will be provided at all entrances and exits to the work area. Additionally, employees will be instructed as to the meanings of the various signs at the worksite during training.

Record keeping

We maintain accurate biological and environmental monitoring records of employee exposures to potentially toxic materials, including cadmium. We allow employees unlimited access to their records.

We include the following exposure monitoring records:

- Exposure assessment
- Medical surveillance results
- Medical removals
- Objective data for exemption from requirement for initial monitoring
- Procedures for making records available
- Procedures for transfer of records

Observation of Monitoring

We provide our employees or their representatives the opportunity to observe exposure monitoring of toxic materials or harmful physical agents. When an observer is present, supervisory personnel shall ensure that the observer is provided with the following:

- An explanation of the measurement procedures being used.
- Allowing the observation of all steps related to the measurement procedures.
- The dissemination of the results when returned by the laboratory.
- Providing the observer with the proper personal protective equipment.
- Assuring that observers comply with all applicable safety and health procedures.

Emergency Situations

In emergency situations, which involve a substantial release of cadmium, EMA shall ensure workers are protected by following all aspects of this program. This will include limiting access to authorized employees, provision and use of ppe, exposure monitoring, medical surveillance, hygiene facilities, work practices, fugitive emission controls, and proper disposal. A site specific safety and health plan shall be developed in accordance with our Hazwoper program included in our written Safety & Health manual.

Semi-Annual Program Evaluation

This program has been evaluated on the below noted date. All facets of the program have been included in the evaluation. The program meets or exceeds the purpose, policies, and procedures as outlined in this written program.

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