

SECTION 01030
LEAD ABATEMENT

PART 1 GENERAL

1.1 SUMMARY

- A. This specification details the requirements for worker protection, containment, environmental protection, and waste disposal for the removal of lead paint when required by the Contract Documents before repainting or recoating. The CONTRACTOR shall implement programs and procedures which comply with the requirements of the specification and all applicable Federal, State and Local OSHA and EPA Standards and regulations. The CONTRACTOR shall perform the work with a minimal impact on the environment and protect all workers, OWNER and ENGINEER from lead and other safety and health hazards.

- B. The CONTRACTOR shall obtain the services of a Certified Industrial Hygienist (CIH) certified by the American Board of Industrial Hygiene in comprehensive practice. The Certified Industrial Hygienist shall:
 - 1. Certify training.
 - 2. Review and approve lead-containing paint removal plan for conformance to the applicable referenced standards
 - 3. Inspect lead-containing paint removal work for conformance with the approved plan
 - 4. Direct monitoring
 - 5. Ensure work is performed in strict accordance with specifications and applicable codes and regulations at all times.
 - 6. Ensure hazardous exposure to personnel and to the environment are adequately controlled at all times.

1.2 REFERENCES

A. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

- 1. ANSI Z88.2 1980 Respiratory Protection

B. CODE OF FEDERAL REGULATIONS

- 1. 29CFR 1910.134 Respiratory Protection
- 2. 29CFR 1910.1025 Lead
- 3. 29CFR 1910.1200 Hazard Communication
- 4. 29CFR 1926.55 Gases, Vapors, Fumes, Ducts, and Mists
- 5. 29CFR 1926.62 Lead Construction Industry Standard
- 6. 40CFR 260 Hazardous Waste Management Systems: General

7. 40CFR 261 Identification and Listing of Hazardous Waste
8. 40CFR 262 Regulations for Hazardous Waste Generators
9. 40CFR 263 Regulations for Hazardous Waste Transporters
10. 40CFR 264 Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
11. 40CFR 265 Interim Status Standards for Owner's and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
12. 40CFR 266 Standards for the Management of Specific Hazardous Waste and Specific types of Hazardous Waste Management Facilities

C. RESOURCE AND RECOVERY ACT (RCRA)

1. Hazardous Waste Characterization
2. Toxic Characteristic Leaching Procedure (TCLP)

D. NATIONAL INSTITUTE OF OCCUPATIONAL SAFETY & HEALTH (NIOSH):

1. NIOSH Method 7082
2. NIOSH 81-123, Occupational Health Guidelines for Chemical Hazards

E. OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA):

1. OSHA CPL 2-2.20A, Chapter VIII: Sampling for Surface Contamination
2. OSHA Pub 3126 Working with Lead in the Construction Industry

F. STEEL STRUCTURES PAINTING COUNCIL (SSPC)

1. Guide 5 Guide to Maintenance Painting Programs
2. Guide 61 (CON) Guide for containing Debris Generated During Paint Removal Operation
3. Guide 71 (DIS) Guide for the Disposal of Lead Containment Surface Preparation Debris.

1.3 SUBMITTALS

- A. PRE-JOB SUBMITTALS: These submittals shall be made at least two (2) weeks before the start of any field work. Approval of the plan must be obtained prior to the start of any paint removal work.
- B. LEAD CONTAINING PAINT REMOVAL PLAN: Submit a detailed job-specific plan of the work procedures to be used in the removal of lead-containing paint. Obtain approval of the plan prior to the start of paint removal work. Prior to beginning work, the CONTRACTOR and CIH shall meet with the OWNER's representative to discuss in detail the lead containing paint removal plan, including work procedures and precautions. The plan shall include:

1. location, size, and details of lead control area.
 2. location and details of decontamination rooms, change rooms, shower facilities and mechanical ventilation system.
 3. eating, drinking, smoking and restroom procedures, interface of trades.
 4. sequencing of lead related work,
 5. collected wastewater and paint debris disposal plan
 6. air sampling plan
 7. respirators, protective equipment
 8. a detailed description of the method of containment of the operation to ensure that airborne lead concentrations of 30 micrograms per cubic meter of air are not exceeded outside of the lead control area.
 9. air sampling, training and strategy, sampling methodology, frequency, duration of sampling, and qualifications of air monitoring personnel in the air sampling portion of the plan.
- C. CONTRACTOR'S TEST LABORATORY: Submit name, address and telephone number of the CONTRACTOR's testing laboratory selected to analyze the representative samples of wash water and debris by TCLP as required. This submittal must be approved by the ENGINEER prior to the start of lead removal work.
- D. HAZARDOUS WASTE MANAGEMENT PLAN: Submit a Hazardous Waste Management Plan for OWNER's approval. The Hazardous Waste Management Plan shall comply with applicable requirements of federal, state, and local hazardous waste regulations and address:
1. Identification of hazardous wastes associated with the work.
 2. Estimated quantities of wastes to be generated and disposed of.
 3. Names and qualifications of each contractor that will be transporting, storing, treating, and disposing of the wastes. Include the facility location and a 24-hour point of contact. Furnish two copies of EPA, state hazardous waste permits and EPA Identification numbers.
 4. Names and qualifications (experience and training) of personnel who will be working on-site with hazardous wastes.
 5. List of waste handling equipment to be used in performing the work, to include cleaning, volume reduction, and transport equipment.
 6. Spill prevention, containment, and cleanup contingency measures to be implemented.
 7. Work plan and schedule for waste containment, removal and disposal. Wastes shall be cleaned up and containerized daily.
 8. Cost for hazardous waste disposal according to this plan.
- E. MEDICAL EXAMINATION: Before exposure to lead-contaminated dust, provide workers with a comprehensive medical examination as required by 29 CFR 1910.1025 and 29 CFR 1910.1200. The examination will not be required if adequate records show that employees have been examined as required by 29 CFR 1910.1025 within the last year. Maintain complete and accurate medical records of employees

for a period of at least 40 years or for the duration of employment plus 20 years, which ever is longer.

F. STATEMENTS:

1. Qualifications of CIH
2. Lead containing paint removal plan
3. Hazardous waste management plan

G. POST JOB SUBMITTALS:

1. Completion Date and Certificate of Completion.
2. Hazardous waste manifests (within 20 days of shipment offsite).
3. Employee Listings: An alphabetical listing of each employee used on this project and the dates that each employee worked on this project.
4. Employee Air Monitoring Results: A notarized copy of employee air monitoring results relative to OSHA respiratory level compliance.
5. Daily Sign In/Out Logs: Copies of logs showing each person who entered the work area. These logs shall contain the date, name, social security number, company represented and reason for entry into the work area.

H. SOIL TESTING

1. Soil samples shall be taken at the site before any work is started. Four (4) samples shall be given to the OWNER, and four (4) to the CONTRACTOR for lead analysis. Following the abrasive blast cleaning and painting operations, four (4) additional soil samples shall be taken and analyzed for lead content. The ENGINEER shall determine the location of the soil samples. Soil samples shall be analyzed for lead content by a laboratory approved by the State of Florida and the ENGINEER. The cost of testing and analysis shall be borne by the CONTRACTOR including sampling and transporting.
2. Sampling and analysis shall be performed in accordance with a Florida Department of Environmental Protection approved comprehensive quality assurance plan.

I. DEFINITIONS

1. OSHA Occupational Safety and Health Administration.
2. NIOSH National Institute of Occupational Safety and Health.
3. CIH Certified Industrial Hygienist.
4. EPA United States Environmental Protection Agency
5. NESHAPS National Emissions Standard for Hazardous Air Pollutants.
6. TCLP Toxic Characteristic Leaching Procedure.
7. PEL Permissible Exposure Limit
8. *Abate or Abatement*: The elimination of exposure to lead-based substances that may result in lead toxicity or poisoning, by the removal of or encapsulation of

- lead-containing substances, by thorough cleanup procedures, and by post-cleanup treatment of surfaces.
9. *Area Monitoring:* The sampling of airborne lead concentrations within the lead control area and outside the exclusion boundary which may reach the breathing zone of CONTRACTOR employees or other personnel.
 10. *CONTRACTOR:* Any business entity, public unit, or person performing the actual abatement for a lead abatement project.
 11. *Containment System:* A containment system includes the tarps, screens, supports, shrouds and scaffold utilized to enclose a paint removal tool or enclose the entire worksite. Ground covers are also utilized as part of a containment system. When an existing floor, concrete slab, or the ground serves as the base of the containment, it shall be completely covered with impervious material such as solid panels of plywood or flexible materials such as tarpaulins. The materials shall be maintained throughout the project to avoid losing debris through rips, tears, or breaks in the coverings. When the structure being prepared serves as the floor (e.g. bottom interior of tank), it shall remain uncovered to provide access for surface preparation and painting. The purpose is to minimize or prevent abrasive blast debris from entering into the environment and contain the blast debris within for collection and proper disposal.
 12. *Decontamination Unit:* A series of connected rooms, with curtained doorways between any two adjacent rooms, for the decontamination of workers or of materials and equipment. For the purposes of this project, a decontamination unit shall consist of a free-standing enclosed room with hot and cold or warm running water suitably arranged for complete showering during decontamination which is in close proximity to the work area(s).
 13. *Equipment Decontamination Enclosure System:* A decontamination enclosure system for materials and equipment, typically consisting of a washroom, an airlock, and a holding area.
 14. *Enclosure:* Procedures necessary to completely enclose material containing lead-based paint behind airtight, impermeable, permanent barriers.
 15. *Equipment Decontamination Enclosure System:* A decontamination enclosure system for materials and equipment, typically consisting of a washroom, an airlock, and a holding area.
 16. *Equipment Room:* A contaminated area or room which is part of the worker decontamination enclosure system, with provisions for storage of contaminated clothing and equipment.
 17. *HEPA filter:* A High Efficiency Particulate Absolute (HEPA) filter capable of trapping and retaining 99.97 percent of non-dispersed particles greater than 0.3 microns in diameter.
 18. *HEP Vacuum Equipment:* Vacuuming equipment equipped with a HEPA-filtration system.
 19. *Lead Abatement Project:* Any work performed in order to abate the presence of a lead-containing substance.
 20. *Lead-Containing Substance:* Any paint, or other surface coating material containing more than 0.06 percent lead by weight calculated as lead metal in the dried solid.

21. *Lead Control Area:* An area where lead paint removal operations are performed which is isolated by physical boundaries to prevent unauthorized entry of personnel thereby preventing the exposure to, or spread of lead. Physical boundaries shall be established and located such that the level of airborne lead shall not exceed 30 micrograms per cubic meter of air outside of the established boundary at any time.
22. *Lead Permissible Exposure Limit:* The exposure limit as required by 29 CFR 1910.1026 or 29 CFR 1926.55, as applicable.
23. *Removal:* The act of removing lead containing or contaminated materials from the structure under properly controlled conditions to a suitable disposal site.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

3.1 CONTRACTOR OPERATIONS

- A. The CONTRACTOR will carry out the lead paint removal operations in strict accordance with the approved lead removal plan and the requirements of this contract.

3.2 TRAINING

- A. CONTRACTOR and CONTRACTOR employees will be trained by the Certified Industrial Hygienist in the proper handling of lead; health hazardous and risks involved, including the illness possible from exposure to lead; use and limits of the respiratory equipment to be used; and the importance of engineering and other hazard control techniques and procedures used during lead removal. Personnel who will perform CONTRACTOR's personnel air monitoring required by this Contract shall be trained and qualified by the CIH to perform such monitoring.

- B. Only properly trained personnel shall be permitted to enter the containment area.

3.3 WARNING AND CAUTION SIGNS

- A. The CONTRACTOR shall provide signs posted at approaches to lead control areas. These signs shall be posted at such a distance that they may be read and necessary precautions taken prior to entering the control areas. Caution labels shall also be posted on lead waste disposal containers.
- B. Warning signs shall comply to 29CFR 1910.145 paragraph (d) (4) and shall display the following legend:

WARNING
LEAD WORK AREA
POISON
NO SMOKING, EATING OR DRINKING

3.4 DISPOSAL OF USED ABRASIVE:

- A. Test used abrasive in accordance with 40 CFR 261 to determine if it is a hazardous waste. Handle and dispose of hazardous waste in accordance with local State rules and regulations for Hazardous Waste Generation, Transportation, Treatment, Storage and Disposal, 40 CFR 260, 261, 262, 263, 264, 265, and 266.

3.5 DISPOSAL OF WASH WATER

- A. Residual water from pressure washing operations shall be collected and filtered with a two stage filter. The first filter stage being a 100 micron unit and the second, a 1 micron unit. The filtered water shall be tested and disposed of properly according to the test results. The filtered out paint chips and debris shall be tested and disposed of as specified in section 3.4.

END OF SECTION

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