SECTION 13282 – LEAD-CONTAINING PAINT CONTROL MEASURES

PART I - GENERAL

1.01 SUMMARY

In performing the handling of building components with lead-containing paint, all possible safeguards, precautions and protective measures shall be utilized to prevent exposure of any individual to lead particulates.

1.02 SCOPE

A. Furnish all labor, materials and equipment necessary to carry out the safe removal, clean-up, handling, transportation and disposal of lead paint and associated debris in compliance with all applicable laws and regulations concerning lead, including all incidental and pertinent operations. Penetrations through the existing structure for conduits and piping will be required for the renovation activities. Coordinate all work with the Engineer.

B. Lead-containing paint testing conducted in the surfaces affected by the demolition and renovation activities identified the following surfaces with lead-containing paint:

- White paint on drywall.

C. All untested paint will be assumed to contain lead.

D. The Contractor shall inform his employees, Subcontractors and all other persons performing work in this project, that interior surfaces are assumed to be painted or stained with a lead-containing paint or stain. The Contractor, his employees, Subcontractors, etc. shall initiate and maintain all programs necessary to execute the work in accordance with the contract documents, federal, state and local laws, codes, rules and regulations.

E. The Contractor shall be responsible for ensuring that all work generating lead-containing paint containing debris conforms to the following applicable federal, state and local laws, codes, rules and regulations.

1. Occupational Safety and Health Administration (OSHA); Hawaii Occupational Safety and Health (HIOSH) standards and rules.

2. Environmental Protection Agency (EPA), Toxic Substance Control Act (TSCA), 40 CFR Part 745, Lead, Requirements for Lead-Containing Paint Activities in Target Housing and Child Occupied Facilities.

3. Environmental Protection Agency (EPA), Resource Conservation and Recovery Act (RCRA) of 1976, amended in 1980 and 1984.

F. The Contractor shall be responsible for initiating and maintaining all safety precautions and programs necessary to keep the work place safe for his employees and Subcontractors; and ready for safe reoccupancy of the work area and building by the buildings occupants.

1.03 COORDINATION WITH OTHER SECTIONS

A. The Contractor shall coordinate all of his lead paint removal activities with the Engineer and the Contractor's hired Third party independent industrial hygienist.

1.04 CONTRACTOR RESPONSIBILITIES

A. The Contractor acknowledges that he alone is responsible for the instruction and for enforcing personnel protection requirements and that these specifications provide only a minimum acceptable standard. Contractor shall comply with all requirements of 29 CFR 1926.62 and HIOSH 12-148.1. The Contractor shall also be responsible for complying with all applicable EPA regulations in regards to lead-containing materials.

1. Respirators: Use appropriate respirators and filters which meet all requirements of OSHA 29 CFR 1926.62 and HIOSH 12-148.1.

2. Protective Clothing: Use appropriate personal protective clothing (disposable suits, eye protection, gloves, etc.) as required by OSHA 29 CFR 1926.62 and HIOSH 12-148.1.

1.05 GENERAL REQUIREMENTS

A. The work specified herein shall include the handling of components painted or coated with lead-containing paint, transportation and disposal procedures as required of lead-containing materials by persons with at least EPA Lead Training. This work must be performed in compliance with all applicable federal, state, and local regulations and be performed by workers who are capable of and willing to perform the work of this contract.

B. Applicable Standards and Guidelines: All work under this contract, and any other trade work conducted with the project, shall be done in strict accordance with all applicable federal, state and local regulations, standards and codes governing lead-containing paint removal, transportation and disposal of lead materials.

The most recent edition of any relevant regulation, standard, document or code shall be in effect.

C. Specific Statutory and Regulatory Requirements:

1. Title 29, Code of Federal Regulations, section 1926.62, entitled "Lead Exposure in Construction; Interim Final Rule".

2. Department of Labor and Industrial Relations: State of Hawaii, Occupational Safety and Health Standards; Title 12, Subtitle 8, Chapter 148.1, (also known as chapter 12-148.1, Hawaii Administrative Rules, entitled "Lead Exposure in Construction".

3. Title 29 Code of Federal Regulations Part 1910.134, Respiratory Protection.

4. Federal Register: Vol. 54, No. 131; Tuesday, July 11, 1989. Department of Labor, Occupational Safety and Health Administration; 29 CFR Parts 1910, 1915, 1917, and 1918; Occupational Exposure to Lead; Statement of Reasons; Final Rule.

5. Title 40 Code of Federal Regulations Part 61, National Emissions Standards for Hazardous Air Pollutants

6. Title 40 Code of Federal Regulations Part 745, Lead; Requirements for Lead-Based Paint Activities in Target Housing and Child Occupied Facilities; Final Rule

7. Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing.

1.06 DEFINITIONS

A. Action Level (AL): Employee exposure averaged over an 8-hour period, without regard to the use of respirators, to a particular airborne concentration. OSHA requirements become effective at this level. Lead: 30 micrograms per cubic meter of air.

B. Air Monitoring: The process of measuring the content of a specific, known, volume of air in a stated period of time. For this project, NIOSH 7082 method for lead monitoring.

C. Authorized Visitor: The Engineer, Contractor hired Third party independent industrial hygienist, their representatives, air monitoring personnel, or a representative of any regulatory or other agency having jurisdiction over the project.

D. Contaminated Area: An area where unwanted toxic or harmful substances exists.

E. HEPA Filter: A High Efficiency Particulate Absolute filter capable of trapping and retaining 99.97% of particulates greater than 0.3 micron in length.

F. Lead: Metallic lead, all inorganic lead compounds, and inorganic lead soaps. Excluded are all other organic lead compounds.

G. Monitoring Specialist: A person under the supervision of the Contractor's hired Third party independent industrial hygienist who is trained in health and safety requirements for lead exposure and air-monitoring in accordance with 40 CFR 745, 29 CFR 1926.62 and HIOSH 12-148.1.

H. Permissible Exposure Limit (PEL): The employer shall ensure that no employee is exposed to concentrations greater than the PEL as determined from an 8-hour time weighted average. Lead: 50 micrograms per cubic meter.

I. Personal Monitoring: Contractor's sampling of lead in air concentrations within the breathing zone of an employee to determine the 8-hour time weighted average. The samples shall be representative of the employee's work tasks. The breathing zone shall be considered an area within 12 inches of the nose or mouth of an employee.

J. Contractor's Third party independent industrial hygienist: Person hired by the Contractor, who is educated and trained in recognizing and evaluating work place hazards and stress (in this instance, lead-containing paint removal and related work in accordance with 40 CFR 745, 29 CFR 1926.62 and HIOSH 12-148.1) and providing guidance on the methods and means of removing or correcting such hazards and stresses within the work environment.

1.07 ABBREVIATIONS

A. CFR - Code of Federal Regulations

B. HIOSH - Department of Occupational Safety and Health, Department of Labor and Industrial Relations, State of Hawaii

C. EPA - U.S. Environmental Protection Agency

D. NIOSH - National Institute for Occupational Safety and Health

E. OSHA - Occupational Safety and Health Administration

F. NESHAP - National Emissions Standards for Hazardous Air Pollutants

G. LCP - Lead-Containing Paint

H. TCLP - Toxicity Characteristic Leaching Procedure

1.08 SUBMITTALS PRIOR TO WORK

A. Final payment will not be made until copies of all submittals have been furnished to and accepted by the DOT. Submit 8 copies of the submittal package no later than 10 work days from the notice of award unless otherwise specified in this section. The submittal package will include the items listed below.

1. Detailed Work Plan: The Contractor shall submit a project work plan for the lead-containing paint disturbance work. The Plan shall be prepared by the Certified Industrial Hygienist. The Contractor shall also provide detailed information concerning:

    a. Preparation of the work area

    b. Personal protective equipment including respiratory protection and protective clothing.

    c. Employees who will participate in the project: include documentation of experience, documented proof of lead removal training based on 29 CFR 1926.62, HIOSH 12-148.1 and/or the proposed EPA Model Accreditation for Lead-based Paint Removal Work Training, in addition to any current EPA regulatory requirements, and assigned responsibilities during the project.

    d. Decontamination procedures for the personnel who may be exposed to lead-containing paint.

    e. Lead-containing paint treatment, handling and disposal methods and procedures to be used.

    f. Required air monitoring procedures and sampling protocols.

    g. Procedures for final cleanup.

    h. A sequence of work and performance schedule in coordination with other trades.

    i. Emergency procedures.

2. Shop Drawings: Submit shop drawings for the following items as a minimum:

    a. Descriptions of any equipment to be employed not discussed in this section.

    b. Security provisions, if any, in and around the project area.

    c. Outline of work procedures to be employed.

    d. Location of the waste storage area.

    e. Staging of the work, the sequence

    f. Entrances and exits to the work place

    g. Location and construction of worker decontamination units

h. Water filtration system for all contaminated water. Description of water disposal and copy of water disposal permit from the City & County of Honolulu, Environmental Services, Division of Environmental Quality, *Temporary Industrial Wastewater Discharge* Permit.

3. Notices: The Contractor shall obtain a Generator's EPA Identification number (if necessary) for the lead-containing waste material generated from the project that is determined to be hazardous.

4. Insurance: Proof of insurance for Workman's Compensation and General Liability which covers asbestos, lead, and pollution.

5. Qualifications of the Third party independent industrial hygienist.

6. Manufacturer's Data: Copies of manufacturer's specifications, installation instructions and field test procedures for each material and all equipment related to lead handling and abatement and include other data as may be required to show compliance with these specifications and proposed uses.

7. Documentation for Instructions:

   a. Submit documentation satisfactory to the Engineer that the Contractor's *employees*, including foremen, supervisors, and any other company personnel or agents who will be exposed to airborne lead dust or who shall be responsible for any aspects of the lead-containing paint removal work activities, have received training in accordance with this specification, 29 CFR 1926.62, HIOSH 12-148.1, (OSHA Lead Awareness or the EPA Model Accreditation for Lead-based Paint Removal Work Training) and any current EPA regulatory requirements.

   b. Submit to the Engineer a written respiratory protection program meeting the requirements of 29 CFR 1910.134(b)(d)(e) and (f), documentation that all employees using respirators have received training, and documentation of respirator fit-testing for all Contractor employees and agents who will enter the work area wearing negative pressure respirators. The Contractor shall be solely responsible for his employee's personal protection.

8. Documentation From Physician: Before exposure to lead dust or fumes, the Contractor shall provide workers with a comprehensive medical examination as required by HIOSH 12-148.1 and 29 CFR 1926.62, or whichever is stricter. This examination will not be required if adequate records show the employees have been examined as required by the aforementioned regulations within the last year.

9. Respirators: Submit document NIOSH approvals for all respiratory protective devices used on site. Include manufacturer certification of HEPA filtration capabilities for all cartridges and filters.

10. Emergency Planning Procedures:

    a. The Contractor shall submit an emergency evacuation plan for the Engineer's acceptance prior to the commencement of work. This plan shall include consideration of fire explosion, toxic atmospheres, electrical hazards, slips, trips and falls, confined spaces and heat related injury. In non-life threatening situations, the injured or incapacitated employee shall decontaminate following normal procedures, with assistance from co-workers if necessary, before exiting the work area to obtain proper medical treatment. In life threatening situations, worker decontamination shall take least priority after measures to stabilize the injured worker, remove the injured worker from the work area, and secure proper medical treatment.

    b. Emergency Response and Evacuation: The Contractor shall provide and document training in emergency response and evacuation procedures to all workers entering the work area.

11. Weekly Submittals During the Lead-containing Paint Disturbance Work: Copies of the following:

    a. Contractor's weekly job progress reports detailing lead-containing paint disturbance, handling, transportation, and disposal activities. In the job progress reports, the Contractor shall include information on the review of progress concerning previously established milestones and schedules, major problems and action taken, injury reports, equipment breakdown, and bulk material and air sampling results.

    b. Work site entry logbooks with information on worker and visitor access.

    c. Daily logs documenting filter changes on respirators, HEPA vacuums, and other engineering controls.

    d. Waste disposal manifest forms for all lead-containing waste material removed from the lead-containing paint removal site and transported to the disposal site. The papers will include a chain-of-custody form with the names and addresses of the facility, the Contractor, the landfill operator, as well as the estimated quantity of lead-containing waste material, and the number and type of containers used. The form shall be signed and dated by the Facility Owner, the Contractor, and the landfill operator as the material changes custody. If a separate hauler is employed, their name, address, telephone number, and signature also shall appear on the form.

12. Waste Disposal and Landfill Requirements: Contractor shall separate lead-containing paint chips and debris from non-hazardous waste materials such as used plastics, disposable tools, etc. Contractor shall clean all bulk lead-containing debris and waste from non-hazardous plastic, tools, suits, etc. prior to disposal.

    a. If Toxic Characteristic Leaching Procedure (TCLP) test results of the containers of waste material are below the EPA limit the lead-containing waste materials (paint chips, contaminated materials, etc.) shall be disposed of at a landfill approved for such purposes. The Contractor shall submit to the Engineer, documentation that the lead-containing waste material removed from the work area has been accepted by the landfill Owner.

    b. If the TCLP test results are above the EPA limit or if materials are identified as hazardous waste, the lead-containing waste materials shall be disposed of at an EPA approved facility capable of accepting such hazardous waste.

    c. The Contractor shall submit to the Engineer, documentation that disposal of the lead-containing waste material at the selected landfill is approved by the State of Hawaii, or the EPA approved mainland facility for hazardous lead-containing waste material.

1.09 SUBMITTAL AFTER WORK IS COMPLETED

A. At the completion of the work, a final report shall be prepared by the Contractor for acceptance by the Engineer. The report shall be submitted and shall include the items listed below.

    1. The project name, Abatement Contractor, Abatement Contractor license number, EPA waste generator number, work duration, material removed, respiratory protection employed, waste manifest signed by the Contractor, waste transporter, and landfill operator, and total quantity of waste, TCLP lead reports, employee exposure air sample results, and results of the most current PAT round results for the laboratory conducting the employee exposure air sample analysis.

    2. Certification of the Abatement Contractor's employees.

    3. Visitor/Worker Entry Log: The daily log of all personnel including the Contractor's employees and agents who enter the work area while lead abatement operations are in progress, until final clearance is received from the Third party independent industrial hygienist. The log shall contain the listed information as a minimum and shall be certified by the Contractor hired Third party independent industrial hygienist.

        a. Date of visit/worker entry

b. Visitor/Worker's name, employer, business address and telephone number

c. Time of entry and exit from work area

d. Purpose of visit

e. Type of protective clothing and respirator worn

f. Certificate of release signed and filed with the contractor

4. Clearance certifications received from the Contractor hired Third party independent industrial hygienist.

5. A statement signed by the Lead Abatement Contractor that all lead abatement and disposal was completed in compliance with this specification, Federal and State regulations, and the approved Work Plan.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 POTENTIAL LEAD HAZARD

A. The disturbance or dislocation of lead-containing materials may cause lead-containing dust to be released into the atmosphere, thereby creating a potential health hazard to the workers and the general public. Apprise all workers, supervisory personnel, subcontractors, consultants, authorized visitors, occupants and neighbors who will be at or near the job site of the seriousness of the hazard and of proper work and protective procedures which must be followed (such as informing affected individuals as required by 40 CFR 745, keeping windows and doors closed; and air conditioning and ventilation units shut down during removal work).

B. Where in the performance of the work, workers, supervisory personnel, subcontractors, or consultants who may encounter, disturb, or otherwise function in the immediate vicinity of any identified lead-containing materials, take appropriate continuous measures as necessary to protect all workers and the general public from the potential hazard of exposure to respirable airborne lead dust. Such measures shall include the procedures and methods described in the regulations of applicable federal, state and local agencies.

C. Paint in good condition need not be removed prior to selective demolition/renovation activities except where the activities create airborne dust such as drilling, saw cutting, or surface preparation for repainting (cracking, peeling, flaking). 6 mil polyethylene must be placed in the work areas where these types of activities may occur to capture and contain the paint waste.

Removal of lead-containing paint shall follow wet methods to minimize dust and no chemical stripping of paint using methylene chloride shall be allowed. All paint waste must be containerized (DOT drum) and characterized for proper disposal (see Section 3.03.A).

3.02 WORK AREA PREPARATION

A. Protect occupants, and surrounding area from possible contamination: Inform occupants of the removal work involving lead.

B. Treatment of Surfaces: During disturbance work, acceptable industry standard dust control methods shall be used to control dust (such as wetting items to be disturbed, by misting; provide dust screens; remove items in large, whole pieces; avoid crushing and pulverizing removal methods; encapsulate material prior to disturbace; use amended water; and containerize wet waste material). Prevent contamination spreading to the surrounding public and residential area.

C. Barriers: Standard barriers such as construction warning tape, fencing, etc. shall be used to prevent the general public access on to the work site. Seal any penetrations to the affected work area with 6 mil polyethylene plastic sheeting and duct tape.

D. NESHAP Compliance: Compliance with the requirements of EPA's NESHAP regulation is required for this project. Proper notification of the renovation of the building to the Department of Health shall be the Contractor's responsibility.

E. Ensure that all personnel working on site during the removal work are properly trained and protected as required by law.

3.03 CLEANUP AND TESTING

A. Wet clean and HEPA vacuum clean surfaces and surrounding ground within the lead control area daily. Do not allow lead painted/coated debris, paint chips, and dust to accumulate. Restrict the spread of dust and debris. Keep waste from being distributed over the general area. Do not dry sweep or use compressed air to clean the area. When the removal operation has been completed, the area will be cleaned of all visible lead paint contamination by vacuuming with a High Efficiency Particulate Absolute (HEPA) filtered vacuum cleaner followed by wet mopping where applicable.

B. The paint chip/debris (separated out or mixed with other construction debris) must be TCLP (Toxicity Characteristic Leachability Product) by the contractor to determine if it should be disposed of as hazardous waste or regular construction debris. If determined to be hazardous waste, then the waste manifest must be signed by the Engineer's Environmental Health and Safety Office's Hazardous

Materials Manager before disposal. For the purposes of bidding, the contractor shall include the cost of the TCLP testing and disposal costs as as regular construction debris. Should the TCLP test fail and the debris is considered hazardous waste, the Engineer will issue a change order to the contractor to dispose of as hazardous waste.

C. The Contractor's Third party independent industrial hygienist (a third party independent industrial hygiene consultant hired by the General Contractor and not affiliated with the abatement contractor) shall conduct visual inspection of the lead abatement area to ensure that the area is clean and free of visible lead dust.

D. All non-hazardous waste shall be removed from the site by the completion of the project. The Contractor, in the presence of the Third party independent industrial hygienist, shall collect representative samples of the waste stream for TCLP lead analysis (as noted above). All hazardous waste shall be removed from the site to an EPA approved disposal facility within 90 days of the removal work.

E. Do not remove the lead control area or roped-off perimeter and warning signs prior to the receipt of the Third party independent industrial hygienist's lead clearance certification.

F. All wastewater shall be treated as lead contaminated and shall be properly filtered so as not to allow large visible particles of paint debris from accumulating in the water. Lead-contaminated waste water shall be tested and disposed of in compliance with the City & County of Honolulu, Environmental Services, Division of Environmental Quality, Temporary Industrial Wastewater Discharge Permit for the disposal of filtered waste water into the sanitary sewer system. Waste water shall be tested by the Third party independent industrial hygienist to determine if it is a hazardous waste and disposed of in accordance with current regulations and guidelines and as specified herein. Disposal of waste water in the City and County of Honolulu sanitary sewer must be tested to be <0.6 mg/L lead in water. Waste water shall not be allowed to be discharged into the storm drain system unless an appropriate NPDES permit has been obtained.

3.04 TRANSPORTATION AND DISPOSAL

A. Disposal of Hazardous Waste and Non-hazardous Waste: Contractor shall separate potentially non-hazardous waste material (i.e. plastic sheeting, disposable protective suits, etc.) from hazardous waste material prior to testing. All other debris, scraps, waste materials, rubbish and trash contaminated with lead-containing paint and contaminated dust from the immediate work area and place in UN approved (49 CFR 178) and appropriately labeled containers and store on site for TCLP lead testing. The Contractor shall be responsible for collecting and paying of all TCLP testing.

1. Local waste landfill facilities do not accept any RCRA hazardous waste. All hazardous waste must be disposed of at an EPA approved mainland U.S. RCRA hazardous waste disposal facility. Hazardous waste must be disposed of within 90 days of the waste being created.

2. Non-hazardous lead waste and debris may be disposed of at the local waste landfill facility that is State approved to accept such waste.

    a. Notify Non-hazardous Waste Landfill Operator: The Contractor shall advise the Non-hazardous Waste landfill operator, at least twenty-four (24) hours prior to transportation, of the material to be delivered.

    b. Provide the Non-hazardous Waste Landfill Operator with applicable TCLP results which indicate that the waste material is non-hazardous.

B. Disposal of Non-Hazardous Painted Construction Debris (TCLP for Lead Not Exceeding EPA Limits): Remove non-hazardous lead waste including, debris, scraps, waste materials, rubbish, and trash from the site and disposed of at a landfill approved for disposal.

C. The Contractor shall submit disposal manifest and receipts showing acceptance of all waste material by the approved waste disposal site to the Contractor's hired Third party independent industrial hygienist. The shipping papers shall include a chain-of-custody form and include names and addresses of the Facility Owner, the Contractor, and the Landfill Operator and information on the type and number of waste containers.

3.05 CLEARANCE CRITERIA

A. Visual clearance of the work area will be performed by the Third Party Industrial Hygienist. The clearance criteria shall be based on the latest Housing and Urban Development (HUD) "Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing" publication. Any additional clearance inspection, sampling and analysis initiated by the Contractor or required due to failure of the first set of clearance inspection and sampling, shall be at the Contractor's expense.

3.06 TESTING AND AIR MONITORING

A. The Contractor's hired Third party independent industrial hygienist shall have the authority to instigate engineering controls during the project.

B. Testing, daily area (environmental) air monitoring and final clearance inspections shall be provided by the Contractor's hired Third party independent industrial hygienist, for the purpose of:

    1. verifying compliance with the specifications and the applicable regulations listed in this section;

    2. ensuring that the documentation required by these specifications and by law is collected and reported to the Engineer;

    3. instigating engineering control during the project.

3.07 CONTRACTOR RESPONSIBILITIES

A. The Contractor shall be responsible for all TCLP lead testing and analysis.

B. The Contractor shall be responsible for his employees' personnel protection, personal air monitoring and necessary records as required by OSHA, Hawaii State Law and all other applicable laws and as required in these specifications. The Contractor shall provide all required documentation to the Engineer. Contractor shall collect daily personal air samples on at least 25% of the personnel performing removal work with the most exposure for the duration of the project.

C. The Contractor shall procure legally required reports for air monitoring as part of the contract. All air monitoring reports shall included all field data, laboratory reports, test results and other pertinent information about the daily work activities.

D. Contractor's hired Third party independent industrial hygienist shall make available, one copy of daily area air monitoring reports for the Contractor's use. The Contractor may accept such reports as they are offered at his own risk. Availability of additional copies of the reports during the work or at any future time shall not be considered a part of the contract. The Contractor shall be responsible for his own personnel air monitoring as required by law and these specifications.

E. Air monitoring and testing which becomes necessary in order to follow up on work by the Abatement Contractor, rejected as not conforming to the requirements shall be the responsibility of the Abatement Contractor. The full cost of such additional monitoring shall be borne by the Abatement Contractor, and shall not be a part of the final contract payment.

F. The Abatement Contractor shall be responsible for the proper required notifications to the State of Hawaii Department of Health.

3.08 MONITORING RESULTS

A. Airborne lead levels in areas adjacent to the work area or in any part of the work site impacted by the removal activities shall not exceed 30 micrograms per cubic meter of air or 1.5 micrograms per cubic meter of air.

B. If the above ambient concentrations and/or the PEL's are exceeded, the Contractor shall cease all work immediately in any work area causing or contributing to such a condition. The Contractor shall take remedial action (e.g. misting with more water, encapsulation, provide dust screens, etc.) to reduce concentrations to acceptable levels.

C. The Contractor is solely responsible for monitoring his personnel in compliance with all OSHA and HIOSH requirements.

PART 4 - MEASUREMENT AND PAYMENT

4.01 METHOD OF MEASUREMENT

Work under this Section will not be measured for payment but will be paid for at the Contract Lump Sum Price.

Item No.	Item	Unit
13282.1	Lead-Containing Paint Control	Lump Sum

END OF SECTION