Great Western Painting

Lead

29 CFR 1910.125, lead
29 CFR 1910.125 App A, Substance data sheet for occupational exposure to lead
29 CFR 1910.125 App B, Employee standard summary
29 CFR 1910.125 App C, Medical surveillance guidelines
29 CFR 1910.125 App D, Qualitative fit test protocols

LEAD

Note: This written lead program has been developed and implemented to reduce lead exposures to or below the permissible limits. This company program will be adapted to a site specific program when needed.

RECORDKEEPING

Below is an overview of recordkeeping requirements that pertain to lead abatement activities:

Exposure Assessment

An accurate record will be established and maintained of all monitoring and other data used in conducting employee exposure assessments as required by 29 CFR 1910.1025(n), i.e., if any employee may be exposed to lead at or above the action level.

No employee will be exposed to lead at concentration levels greater than 50 µ/m³ averaged over an 8 hour time period. Reference our lead respiratory program.

a. Exposure monitoring records will include:
    1. the date(s), number, duration, location and results of each of the samples taken if any, including a description of the sampling procedure used to determine representative employee exposure where applicable;
    2. a description of the sampling and analytical methods used and evidence of their accuracy;
    3. the type of respiratory protective devices worn, if any;
    4. the name, social security number, and job classification of the employee monitored and of all other employees whose exposure the measurement is intended to represent; and
    5. the environmental variables that could affect the measurement of employee exposure.

b. Monitoring and other exposure records will be maintained for 30 years.

Medical Surveillance

An accurate medical record will be established and maintained for each employee subject to medical surveillance.

a. This record will include:

   1. the name, social security number, and description of the duties of the employee;
   2. a copy of the physician's written opinions;
   3. results of any airborne exposure monitoring done on or for that employee and provided to the physician; and
   4. any employee medical complaints related to exposure to lead.

The Safety Program Administrator will keep, or assure that the examining physician keeps, the following medical records:

a. a copy of the medical examination results including medical and work history required of those employees within a medical surveillance program as required by 29 CFR 1910.1025(j).
b. a description of the laboratory procedures and a copy of any standards or guidelines used to interpret the test results or references to that information;
c. a copy of the results of biological monitoring.

Medical records will be maintained for a period of 30 years.

Medical Removals

An accurate record will be established and maintained for each employee removed from current exposure to lead pursuant to paragraph 29 CFR 1910.1025(k), *Medical Removal Protection*.

a. Each record shall include:

   1. the name and social security number of the employee;
   2. the date of each occasion that the employee was removed from current exposure to lead as well as the corresponding date on which the employee was returned to his or her former job status;
   3. a brief explanation of how each removal was or is being accomplished; and
   4. a statement with respect to each removal indicating whether or not the reason for the removal was an elevated blood lead level.

This record (Medical Removal) will be maintained for at least the duration of an employee's employment.

Objective Data for Exemption from Requirement for Initial Monitoring

Objective data are information demonstrating that a particular product or material containing lead or a specific process, operation, or activity involving lead cannot release dust or fumes in concentrations at or above the action level under any expected conditions of use. Objective data can be obtained from an industry-wide study or from laboratory product test results from manufacturers of lead containing products or materials. The data that we use from an industry-wide survey must be obtained under workplace conditions closely resembling the processes, types of material, control methods, work practices and environmental conditions in the employer's current operations.

The record of the objective data relied upon will be maintained for at least 30 years.

Availability

All records required to be maintained by 29 CFR 1910.1025(n), *Recordkeeping*, will be made available, upon request, to affected employees, former employees, and their designated representatives, and to the Assistant Secretary and the Director for examination and copying.

Training records

All employee training records will be maintained for one (1) year beyond the last date of employment of each employee.

Availability of records

Upon request, the Safety Program Administrator will make any exposure records required by 29 CFR 1910.1025, *Lead*, available for examination and copying to affected employees, former employees, designated representatives, and the Assistant Secretary, in accordance with 29 CFR 1910.1020(a) through (e) and (g) through (i).

Upon request, the Safety Program Administrator, will make employee medical records required by 29 CFR 1910.1025, *Lead*, available for examination and copying to the subject employee, anyone having the specific written consent of the subject employee, and the Assistant Secretary, in accordance with 29 CFR 1910.1020.

Transfer of medical records

Should we cease to do business, the successor employer shall receive and retain all the above medical records.

Should we cease to do business and there is no successor employer to receive and retain the above medical records, they shall be transmitted to the Director.

At the expiration of the retention period for the above medical records, the Safety Program Administrator will notify the Director at least 3 months prior to the disposal of such records and shall transmit those records to the Director if he requests them within that period.

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TRAINING AND CERTIFICATION REQUIREMENTS

EMPLOYEE TRAINING (LEAD WORKERS)

All lead abatement workers must be trained in the hazards of lead abatement and proper methods to use during lead abatement projects. Training for those with potential lead exposure will be provided prior to initial work assignment and at least annually thereafter.

Specifically, for all affected workers, mandatory training includes:

a. A knowledge of the OSHA Lead Standard, 29 CFR 1910.1025.

    1. All affected employees will be informed of the contents of Appendix A, 29 CFR 1910.1025, *Substance Data Sheet for Occupational Exposure to Lead*.

    2. All affected employees will be informed of the contents of Appendix B, 29 CFR 1910.1025, *Employee Standards Summary*. This vital appendix provides, in plain language, the provisions of the lead standards that employees must be familiar with.

b. The specific nature of the operations which could result in exposure to lead above the action level.

c. The purpose, proper selection, fitting, use, and limitations of respirators.

d. The purpose and a description of our Medical Surveillance Program; the Medical Removal Protection Program including information concerning the adverse health effects associated with excessive exposure to lead (with particular attention to the adverse reproductive effects on both males and females and hazards to the fetus and additional precautions for employees who are pregnant).

e. The engineering controls and work practices associated with the job assignments including training in good work practices.

f. The contents of our Lead Abatement Program.

g. Instruction that chelating agents should not be routinely used to remove lead from their bodies and should not be used at all except under the direction of a physician.

h. All employees are instructed to their right of access to records under 29 CFR 1910.20.

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CERTIFICATE OF WORKER'S ACKNOWLEDGMENT

[NOTE: All personnel who work with lead in any capacity are required to read, understand, and sign this statement.]

WORKING WITH LEAD CAN BE DANGEROUS. BLOOD LEAD LEVELS OVER 40µ/dl MAY HAVE ADVERSE HEALTH EFFECTS TO THE REPRODUCTIVE SYSTEM (AND FETUS) AS WELL AS ENZYME INHIBITIONS CAUSING SERIOUS HEALTH RISK. LEAD CAN HAVE A DEVASTATING EFFECT ON THE NEUROLOGICAL SYSTEMS WITH EFFECTS RANGING FROM IRRITABILITY AHD HEADACHES TO CONVULSIONS, COMA AND DEATH. LEAD ADVERSELY AFFECTS THE GASTROINTESTINAL SYSTEM, RENAL TOXICITY, AND KIDNEY FAILURE. TAKEN IN LARGE DOSES, LEAD CAN KILL WITHIN A MATTER OF DAYS. **APPENDIX A TO 29 CFR 1910.1025** PROVIDES EXPANDED HEALTH HAZARD DATA ON LEAD.

The contract for lead abatement on all projects requires that:

a. You be trained, at no cost to you, in safe work practices both in procedure and in use of equipment utilized on lead abatement projects.

b. You receive, at no cost to you, medical examinations, blood tests, and other medical tests as required to determine your fitness for lead work.

c. You will receive, <u>at no cost to you</u>, PPE including disposable suits, boot covers, gloves, hard hats, respirators, vented goggles. All maintenance costs associated with PPE, including cleaning and disposal, will be at no cost to you.

By signing this certificate, you are assuring the party for whom you are working that you have been provided the above services.

[NOTE: Your signature below is an affirmation of the three (3) paragraphs listed below]

1. RESPIRATORY PROTECTION: I have been trained in the proper use of respirators and I have been informed of the type or types of respirator to be used on various lead abatement projects. I have a copy of the Respirator Training Certificate and the Respirator Test Summary (Fit Test) covering the respirator(s) used by me on lead abatement projects.
2. TRAINING COURSE: I have been trained in the dangers inherent in handling lead and lead dust, and in proper work procedures. I have also been trained in personal and area protective measures. The topics covered in the course of study included the following:
   a. Physical characteristics of lead.
   b. Health hazards associated with lead.
   c. Respiratory protection and use of protective equipment.
   d. Negative air systems.
   e. Work practices.
   f. Personal decontamination procedures.
   g. Both personal and area air monitoring.
   h. Hazard communication.
3. MEDICAL EXAMINATION: I have had a medical examination and blood level test indicating a blood level below 40µg/dl within the past 12 months which was paid for by my employer. I have been informed of the existence, location, and availability of these records.

DATE: _____

WORKER'S SIGNATURE: _____ SSN: _____

WITNESS'S SIGNATURE: _____

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RESPIRATORY PROTECTION PROGRAM FOR LEAD

OVERVIEW

The best respiratory protection one can have is clean, breathable air. Engineering controls are our first line of defense against contaminated or oxygen deficient air. These controls include, but are not limited to, using measures such as enclosure or confinement to keep atmospheric hazards away from employees, general or local ventilation to exhaust hazardous atmospheres, and/or substitution of less toxic materials to avoid hazardous atmospheres in the first place. When effective engineering controls are not feasible, or during the time frame they are being instituted, appropriate respirators will be used.

Where any employee is exposed to lead above the PEL for more than 30 days per year, engineering, administrative, and work practice controls will be implemented to reduce and maintain employee exposure to lead in accordance with the implementation schedule in Table I, 29 CFR 1910.1025(e), i.e., 50 µ/m³. If this goal is infeasible, exposure will be reduced to the lowest possible level.

Note: With the use of appropriate respirators and other PPE, there is no actual employee personal exposure.

Note: In the event that an operation in which lead is emitted, a program will be create that identifies

- **a. the machinery used, material processed, controls in place, crews size, employee job responsibilities, operation procedures and maintenance practices.**
- **b. a description of the specific mean that will be employed to achieve compliance including engineering plans and studies used to determine methods selected for controlling exposure to lead.**
- **c. a report of the technology considered in meeting the permissible exposure limit.**
- **d. air monitoring data which documents the source of the lead emissions.**
- **e. a detailed schedule for implementation of the program.**
- **f. a work practice program.**
- **g. an administrative control schedule.**
- **h. other relevant information.**

The concept of respiratory protection is quite simple. Certain types of atmospheric hazards are merely particles that can be filtered out of the air through the use of an air-purifying respirator. Air-purifying respirators force the harmful particles into a filter specifically designed for the hazard(s) where they are trapped or absorbed. The air reaching the employee's lungs is essentially free of the hazard.

a. If the action of inhalation causes the ambient air to be sucked through the filter, the respirator is considered a negative pressure respirator.

b. If the ambient air is forced through the respirator filter (with a blower, for example), the respirator is considered a positive pressure respirator.

A respirator that removes harmful contaminants **is of no value** in an oxygen deficient (less than 19.5% oxygen) or oxygen enriched (more 23.5 % oxygen) atmosphere.

An atmosphere-supplying respirator will be used in oxygen deficient atmospheres or in atmospheres where a filter cannot reduce the particulate hazard to an acceptable level. This type of respirator provides clean , breathable air from a source independent of the ambient atmosphere. Different types of respirators provide different levels of protection. **Never** may an air-purifying respirator be substituted for a required atmosphere-supplying respirator.

While the concept is simple, unfortunately, respiratory protection is, at times, more complicated than it first appears. Because of the variety and severity of respiratory hazards, the types of respirators and their limitations, the methods for fitting and testing, and, most importantly, the detrimental ramifications of respirator misuse, this respiratory protection program is required.

Proper respirator selection and use can prevent occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays and vapors. In atmospheres that are immediately dangerous to life or health, proper respirator selection and use will save your life.

When required, employees will be supplied appropriate respirators and all incidental costs associated with respirator use (fit testing, repair parts, filters, medical examinations, cleaning supplies, etc.) will be borne by: Great Western Painting

PROGRAM ADMINISTRATOR

Our Respiratory Protection Program Administraro is: Robert Evans

The program administrator will keep abreast of developments in the respiratory protection field and ensure that our personnel are provided safe respiratory working conditions.

Additionally, the program administrator will:

a. measure, estimate, or review data on the concentration of airborne contaminants in the work area prior to respirator selection.

b. select the appropriate type of respirator that will provide adequate protection from the airborne contaminants or provide clean, breathable air.

c. maintain applicable records including:

1. fit test records.
2. medical records.
3. inspection records.
4. evaluation records.
5. training records.

DEFINITIONS

There are a number of terms and phrases, not used in ordinary everyday life, which must be understood by affected employees.

Air-purifying respirator: a respirator with an air-purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element.

Atmosphere-supplying respirator: a respirator that supplies the respirator user with breathing air from a source independent of the ambient atmosphere, and includes supplied-air respirators (SARs) and self-contained breathing apparatus (SCBA) units.

Canister or cartridge: a container with a filter, sorbent, or catalyst, or combination of these items, which removes specific contaminants from the air passed through the container.

Demand respirator: an atmosphere-supplying respirator that admits breathing air to the facepiece only when a negative pressure is created inside the facepiece by inhalation.

Emergency situation: any occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment that may or does result in an uncontrolled significant release of an airborne contaminant.

Employee exposure: exposure to a concentration of an airborne contaminant that would occur if the employee were not using respiratory protection.

End-of-service-life indicator (ESLI): a system that warns the respirator user of the approach of the end of adequate respiratory protection, for example, that the sorbent is approaching saturation or is no longer effective.

Escape-only respirator: a respirator intended to be used only for emergency exit.

Filter or air-purifying element: a component used in respirators to remove solid or liquid aerosols from the inspired air.

Filtering facepiece (dust mask): a negative pressure particulate respirator with a filter as an integral part of the facepiece or with the entire facepiece composed of the filtering medium.

Fit factor: a quantitative estimate of the fit of a particular respirator to a specific individual, and typically estimates the ratio of the concentration of a substance in ambient air to its concentration inside the respirator when worn.

Fit test: the use of a protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual.

Helmet: a rigid respiratory inlet covering that also provides head protection against impact and penetration.

High efficiency particulate air (HEPA) filter: a filter that is at least 99.97% efficient in removing monodisperse particles of 0.3 micrometers in diameter. The equivalent NIOSH 42 CFR 84 particulate filters are the N100, R100, and P100 filters.

Hood: a respiratory inlet covering that completely covers the head and neck and may also cover portions of the shoulders and torso.

Immediately dangerous to life or health (IDLH): an atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual's ability to escape from a dangerous atmosphere.

Loose-fitting facepiece: a respiratory inlet covering that is designed to form a partial seal with the face.

Negative pressure respirator (tight fitting): a respirator in which the air pressure inside the facepiece is negative during inhalation with respect to the ambient air pressure outside the respirator.

Oxygen deficient atmosphere: an atmosphere with an oxygen content below 19.5% by volume.

Physician or other licensed health care professional (PLHCP): an individual whose legally permitted scope of practice allows him or her to independently provide, or be delegated the responsibility to provide, some or all of the health care services required medical evaluation.

Positive pressure respirator: a respirator in which the pressure inside the respiratory inlet covering exceeds the ambient air pressure outside the respirator.

Powered air-purifying respirator (PAPR): an air-purifying respirator that uses a blower to force the ambient air through air-purifying elements to the inlet covering.

Pressure demand respirator: a positive pressure atmosphere-supplying respirator that admits breathing air to the facepiece when the positive pressure is reduced inside the facepiece by inhalation.

Qualitative fit test (QLFT): a pass/fail fit test to assess the adequacy of respirator fit that relies on the individual's response to the test agent.

Quantitative fit test (QNFT): an assessment of the adequacy of respirator fit by numerically measuring the amount of leakage into the respirator.

Respiratory inlet covering: that portion of a respirator that forms the protective barrier between the user's respiratory tract and an air-purifying device or breathing air source, or both. It may be a facepiece, helmet, hood, suit, or a mouthpiece respirator with nose clamp.

Self-contained breathing apparatus (SCBA): an atmosphere-supplying respirator for which the breathing air source is designed to be carried by the user.

Service life: the period of time that a respirator, filter or sorbent, or other respiratory equipment provides adequate protection to the wearer.

Supplied-air respirator (SAR) or airline respirator: an atmosphere-supplying respirator for which the source of breathing air is not designed to be carried by the user.

Tight-fitting facepiece: a respiratory inlet covering that forms a complete seal with the face.

User seal check: an action conducted by the respirator user to determine if the respirator is properly sealed to the face.

RESPIRATOR SELECTION/AREA SURVEILLANCE

RESPIRATOR SELECTION

No employee will be exposed to lead at concentration levels greater than 50 µ/m³ averaged over an 8 hour time period.

Respirators will be selected on the basis of hazards to which the employee will be exposed. Using an inappropriate respirator is just as bad, if not worse, than using no respirator at all because it can evoke a false sense of security while offering no protection to the hazard at hand.

All respirators will be NIOSH approved.

Work area surveillance will be made by the Program Administrator taking into consideration the actual work area conditions, the degree of exposure and employee stress.

Respirator selection will take into consideration the air quality; the contaminant; the amount of the contaminant; the time exposure to that contaminant; and the work area surveillance.

In oxygen-deficient atmospheres as well as atmospheres in which the respiratory hazard exposure cannot be determined (Immediately Dangerous to Life or Health atmospheres), one of the below respirators will be used:

a. A full facepiece pressure demand SCBA certified by NIOSH for a minimum service life of thirty minutes, or

b. A combination full facepiece pressure demand supplied-air respirator (SAR) with auxiliary self-contained air supply.

Note: Respirators provided only for escape from IDLH atmospheres shall be NIOSH-certified for escape from the atmosphere in which they will be used.

Generally, but not always, atmospheres work areas that require respiratory protection are not IDLH and in these cases respirator selection offers more options. The respirator selected will be adequate to protect the health of the employee and ensure compliance with all other OSHA statutory and regulatory requirements under routine and reasonably foreseeable emergency situations. Of course, the respirator selected will be appropriate for the chemical state and physical form of the contaminant.

For protection against gases and vapors, the respirator provided will be:

a. atmosphere-supplying.

b. air-purifying, provided that:

1. it is equipped with an end-of-service-life indicator (ESLI) certified by NIOSH for the contaminant; or

2. if there is no ESLI appropriate for conditions in respiratory hazard area, a change schedule for canisters and cartridges will be used that is based on objective data that will ensure that canisters and cartridges are changed before the end of their service life.

The Program Administrator will rely on past experience and cartridge manufacturer recommendations. If the competent person on site or any respirator user notices that breathing becomes more strained, the change schedule will be modified.

For protection against particulates, the respirator provided will be:

a. atmosphere-supplying; or

b. air-purifying equipped with a filter certified by NIOSH under 30 CFR part 11 like a HEPA filter; or

Note: Filters manufactured under 30 CFR part 11 standards may continued to be used, however, as of July 10, 1998, other than PAPR's , they are not to be purchased. Only 42 CFR part 84 type filters will be used.

c. air-purifying equipped with a filter certified for particulates by NIOSH under 42 CFR part 84; or

Note: These respirators and filters, other than PAPR's are identified on the packaging with numbers that take the form: TC-84A-XXX.

a. Filters will have an "N", "R", or "P" designation followed by "100", "99" or "95".
Examples: N100 or R99

1. "N" indicates the filter is for any solid or non-oil containing particulate contaminant.

2. "R" indicates the filter is for any particulate contaminant.
If used for an oil containing particulate, a one shift use limit applies.

3. "P" indicates the filter may be used with any particulate contaminant.

b. The number indicates the filter efficiency -- the higher the number, the more efficient.
100 = 99.97% efficiency; 99 = 99% efficiency; and 95 = 95% efficiency.

d. air-purifying equipped with any filter certified for particulates by NIOSH for contaminants consisting primarily of particles with mass median aerodynamic diameters (MMAD) of at least 2 micrometers.

Often, the permissible exposure limit (PEL) and suggested respirator is listed on an MSDS. Published exposure limits for the contaminant at hand will assist in determining respirator selection.

The Program Administrator will select respirators based on:

a. the nature of the hazardous operation or process.

b. the type of respiratory hazard including permissible exposure limits.

c. the period of time for which respiratory protection must be worn.

d. the activities of workers in the hazardous area.
e. the respirator's characteristics, capabilities, and limitations.

Airborne Concentration of Lead or Condition of Use	Required Respirator
Not in excess of 0.5 mg/m³ (10X PEL)	Half mask, air purifying respirator equipped with high efficiency filters. [2] [3]
Not in excess of 2.5 mg/m³ (50X PEL)	Full facepiece, air purifying respirator with high efficiency filters. [3]
Not in excess of 50 mg/m³ (1000X PEL)	(1) Any powered, air purifying respirator with high efficiency filters [3] or (2) Half-mask supplied air respirator operated in positive pressure mode.
Not in excess of 1000 mg/m³ (2000X PEL)	Supplied-air respirators with full facepiece, hood, helmet, or suit operated in positive pressure mode.
Greater than 100 mg/m³, unknown concentration or fire fighting	Full facepiece, self-contained breathing apparatus operated in positive pressure mode.

[1] Respirators specified for high concentrations can be used at lower concentrations.

[2] Full facepiece is required if the lead aerosols cause eye or skin irritation at the use concentrations.

[3] A high efficiency particulate filter means 99.97 percent efficient against 0.3 micron size particles.

PARTICULATE RESPIRATOR SELECTION

Prior to respirator selection, the following factors must be known:

a. The identify and concentration of the particulates in the workplace air.
b. The permissible exposure limit (PEL), the NIOSH recommended exposure limit (REL) or other occupational exposure limit.
c. The hazard ratio (HR). The (HR) is obtained by dividing the airborne particulate concentration by the exposure limit.
d. The assigned protection factor (APF) for the type of respirator to be used. The (APF) is the minimum anticipated level of protection provided by each type of respirator worn in accordance with an adequate respiratory protection program. For example, an (APF) of 10 means that the respirator should reduce the airborne concentration of a particulate by a factor of 10 (or to 10% of the workplace concentration).
e. The immediately dangerous to lift or health (IDLH) concentration, including oxygen deficiency.

The (APF) should be greater that the (HR) and multiplying the occupational exposure limit by the APF give the maximum workplace concentration in which the respirator may be used.

All filters will have a 99.97% efficiency rating indicated by the number 100.

Employees may opt to use a PAPR, even if not required, at no cost to the employee.

SERVICE LIFE OF FILTERS

If the selected filters have an end-of-service-life indicator (ESLI), the filters will be used until the indicator shows that it is time to be replaced.

In the absence of an ESLI, the following is our policy of service life of filters:

All HEPA filters manufactured under 30 CFR part 11 (for PAPR's) will be replaced at least daily (once each work shift) or if breathing resistance becomes excessive or if the filter suffers physical damage (tears, holes, etc.) If PAPR filters become available under 42 CFR part 84 standards, they will be used and fall under the below schedule:

All filters will be replaced whenever they are damaged, soiled, or causing noticeably increased breathing resistance.

N-series filters may be used and reused subject only to considerations of hygiene, damage, and increased breathing resistance. If the competent person determines the workplace to be exceptionally dirty, the filters will be changed each work shift.

R-series filter will be changed every work shift if oil is present. If oil is not present, they be used and reused subject only to considerations of hygiene, damage, and increased breathing resistance. If the competent person determines the workplace to be exceptionally dirty, the filters will be changed each work shift.

P-series filters will be used and reused in accordance with the manufacturer's time-use limitations when oil aerosols are present. P-series filters can be used and reused subject only to consideration of hygiene, damage, and increased breathing resistance if oil aerosols are not present.

RESPIRATOR FIT TEST

There are various protocols for fit testing respirators and they can be found in Appendix A, 29 CFR 1910.134. One of the four qualitative protocols listed below will be used:

Protocol/Fit Test Procedure	Appendix A to 29 CFR 1910.134
a. Isoamyl Acetate	Paragraph B2
Fit Test Procedure	Paragraph B2(b)
b. Saccharin Solution Aerosol	Paragraph B3
Fit Test Procedure	Paragraph B3(b)
c. BitrexTM Solution Aerosol	Paragraph B4
Fit Test Procedure	Paragraph B4(b)
d. Irritant Smoke (Stannic Chloride)	Paragraph B5
Fit Test Procedure	Paragraph B5(c)

The purpose of fit testing is to ensure that the respirator selected will actually do the job for which it was intended. Different manufacturers make different sizes of each model. Fit testing, following the OSHA approved protocols, will ensure that the specific make, model and size is appropriate for the user. An employee may only use the specific respirator(s) on which he/she has passed a fit test.

Eye glasses and contact lenses pose special problems when dealing with respirators. Contact lenses will not be worn during the fit test or during respirator use. Normal eye glasses, while they do not interfere with the skin to facepiece seal of a ½ face respirator, will prevent a proper seal on a full face respirator and thus will not be worn. If glasses are needed, special adapters can be provided to hold lenses within the respirator.

Upon successful completion of respirator fit testing, a Record of Respirator Fit Test form will be completed and maintained with the employee's records. Only the latest fit test record need be retained. The Respirator Fit Test will be repeated at least annually or when:

a. a different respirator facepiece (size, style, model or make) is used.
b. there has been a weight change of at least 20 pounds.
c. there has been significant facial scarring in the area of the face-piece seal.
d. there has been significant dental changes; i.e., multiple extractions without prosthesis or acquiring dentures.
e. reconstructive or cosmetic surgery.
f. any other condition that may interfere with facepiece sealing.

As explained in the protocols, the fit tests shall not be conducted if there is any hair growth between the skin and the facepiece sealing surface. Further, there shall not be mustaches that are so long as to interfere with the inlet or exhaust valves in the respirator. Of course, these requirements apply not only to fit testing procedures, they apply to actual on the job use where the seal between face and respirator must be maintained.

USER SEAL CHECK

A user seal check, performed in accordance with the manufacturer's instructions or Appendix B-1 to 29 CFR 1910.134 will be made prior to each use by the wearer of a tight-fitting respirator.

A user seal check is solely for respiratory protection of the employee and without this check there is no way of knowing if the selected respirator is actually working. Failure to perform a seal check may result in the use of a respirator which is of little or no value.

HAZARD COMMUNICATION & EMERGENCY PROCEDURES

One would not be wearing a respirator in the first place if there were not some detrimental health consequences of non-use. Often, these consequences are chronic (long term) and immediately unnoticeable.

If respirator failure would lead to noticeable physical or mental impairment, two employees will be assigned in the same area and in view of each other. If one employee presents symptoms of physical or mental distress, the second employee will remove the first employee from the area. If there is not an immediate, total recovery, the affected employee will be provided medical care by emergency responders.

In the event work is being performed in an IDLH atmosphere, a safety harness and safety lines will be used so that the employee may be pulled to safety. Suitable rescue equipment will be available and a standby man or men with suitable self-contained breathing apparatus shall be at the nearest fresh air base for emergency rescue.

All personnel should be aware of the appropriate MSDS for the products they are working with, and particular attention should be given to health hazards, both acute and chronic; symptoms of overexposure; first aid measures; emergency procedures; and exposure limits.

WORK AREA SURVEILLANCE

The competent person at the work area where respirator use is required will maintain appropriate surveillance of work area conditions and degree of employee exposure or stress. When there is a change in work area conditions or degree of employee exposure or stress that may affect

respirator effectiveness, the Program Administrator or competent person will reevaluate the continued effectiveness of the respirator.

Employees are to leave the respirator use area:

a. to wash their faces and respirator facepieces as necessary to prevent eye or skin irritation associated with respirator use.

b. if they detect vapor or gas breakthrough, changes in breathing resistance, or leakage of the facepiece.

c. to replace the respirator or the filter, cartridge, or canister elements.

Defective respirators will be repaired or replaced before returning to the respirator use area.

AIR QUALITY

Atmosphere-supplying respirators, depending on the type (supplied-air or SCBA) use compressed air, compressed oxygen, liquid air or liquid oxygen. Compressed and liquid oxygen must meet the requirements of the United States Pharmacopoeia for medical or breathing oxygen. Compressed breathing air must meet the requirements of Grade "D" breathing air including: oxygen content (v/v) of 19.5-23.5%; hydrocarbon (condensed) content of 5 milligrams per cubic meter of air or less; carbon monoxide content of 10 ppm or less; carbon dioxide content of 1,000 ppm or less; and lack of noticeable odor. Compressed oxygen shall not be used in supplied-air respirators or open circuit self-contained breathing apparatus that have previously used compressed air. Oxygen must never be used with air line respirators.

Breathing air may be supplied to respirators from cylinders or air compressors. If cylinders are used, they will be tested and maintained as prescribed in the Shipping Container Specification Regulations of the Department of Transportation (49 CFR part 178).

If a compressor is used for supplying breathable air by way of air line hoses to a respirator mask, it is a Type "C" system. The hose couplings used on these systems must not be compatible with any other gas systems. Breathable air -- not pure oxygen -- is used in these systems. All safety and standby devices will be maintained in working order such as alarms to warn of compressor failure or overheating. Compressors will be located so that contaminated air does not enter the system and suitable in-line filters will be installed. A receiver of sufficient capacity to enable the respirator wearer to escape from a contaminated atmosphere in the event of a compressor failure shall be in place. If an oil lubricated system is used, it shall have a high temperature and carbon monoxide alarm.

Additionally, the competent person will ensure that compressed air, compressed oxygen, liquid air, and liquid oxygen used for respiration accords with the following specifications:

a. oxygen concentrations greater than 23.5% are used only in equipment designed for oxygen service or distribution.

The competent person will ensure that cylinders used to supply breathing air to respirators meet the following requirements:

a. 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);

b. cylinders of purchased breathing air have a certificate of analysis from the supplier that the breathing air meets the requirements for Grade D breathing air; and

c. the moisture content in the cylinder does not exceed a dew point of
- 50 deg.F (-45.6 deg.C) at 1 atmosphere pressure.

d. compressors used to supply breathing air to respirators are constructed and situated so as to:

1. prevent entry of contaminated air into the air-supply system;

2. minimize moisture content so that the dew point at 1 atmosphere pressure is 10 degrees F (5.56 deg.C) below the ambient temperature;

3. 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.

e. have a tag containing the most recent change date and the signature of the person authorized by the employer to perform the change. The tag shall be maintained at the compressor.

For compressors that are not oil-lubricated, the competent person will ensure that carbon monoxide levels in the breathing air do not exceed 10 ppm.

For oil-lubricated compressors, the competent person will 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 will be monitored at intervals sufficient to prevent carbon monoxide in the breathing air from exceeding 10 ppm.

CLEANING; INSPECTION; AND MAINTENANCE

Respirators issued for the exclusive use of one worker will be cleaned and disinfected after each day's use or more often, if necessary. A respirator used by more than one person will be cleaned and disinfected after each use by the employee who used it. Cleaning should be done using the manufacturer's recommendations or the guidelines in Appendix B-2 to 29 CFR 1910.134 (immediately following this program). Remove or protect the filters/cartridges before cleaning because moisture can defeat the effectiveness of a filter. During cleaning, an inspection of the respirator will be made to ensure it retains its original effectiveness. Valves, straps, canisters, elasticity, facepieces, if applicable, will be inspected per the manufacturer's instructions. Defective parts will be replaced before reuse.

Employees who use respirators will be instructed in the replacement of parts as allowed by the manufacturer (such as valves and straps). Respirators that require a higher level of repair will be returned to the manufacturer. All replacement parts will be of the same manufacture as the respirator and all replacement parts will be NIOSH approved. Maintenance will be limited to replacing parts (straps, filters, valves, etc.) allowed by the manufacturer. Only respirators in 100% working order will be used.

Cleaning supplies and replacement parts will be provided at no cost. In the event a respirator is not used for thirty (30) days, it will be inspected by a competent person. Particular attention will be paid to SCBA apparatus and Type "C" connections. SCBA apparatus shall be inspected monthly and air and oxygen cylinders will be fully charged according to the manufacturer's instructions. All warning devices will be checked to ensure they are properly functioning.

MAINTENANCE OF EMERGENCY/UNASSIGNED RESPIRATORS

Emergency and unassigned respirators (respirators used by more than one person) will be cleaned and inspected for defects every thirty (30) days and after each use. Particular attention will be given to the elasticity of the respirator and ensuring that the respirator is defect free. Only the latest record of this inspection will be maintained. A tag showing the name of inspector, the date, and condition of the respirators will be attached to the respirator.

STORAGE OF RESPIRATORS

Respirators will be stored in a convenient, clean, and sanitary location in such a manner as to protect them from dust, heat, sunlight, extreme cold, excessive moisture, and damaging chemicals. On a job site, a plastic bag can help protect a respirator from dust and moisture. Respirators will not be stored in lockers or tool boxes unless they are in cases or cartons.

Respirators will be stored with the facepiece and exhalation valve resting in a normal position. This will also prevent the soft, pliable material of which respirators are made from setting in an abnormal position, changing shape, and reducing face to mask seal.

PROGRAM EVALUATION

This Program will be evaluated on a continual basis and updated if the need arises. Reasons for upgrading would include new atmospheric hazards; new respiratory protection equipment; new or altered work procedures; the introduction of new engineering controls; the failure of employees to follow standard operating procedures.

Often, the effects of breathing contaminated atmospheres are chronic in nature and thus some employees may tend to become lax in using their respirators properly. Supervisors must be on alert for this tendency.

Employees must realize that they must use the provided respiratory protection in accordance with the instructions and training received.

TRAINING

Training will be given by a competent person, prior to use, to ensure each affected employee can demonstrate knowledge of at least the following:

a. why a respirator is necessary and how improper fit, usage, or maintenance can compromise the protective effect of the respirator.
b. what the limitations and capabilities of the respirator are.
c. how to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions.
d. how to inspect, put on and remove, use, and check the seals.
e. the procedures for maintenance and storage of the respirator.
f. how to recognize medical signs and symptoms that may limit or prevent the effective use of respirators.

Retraining will be given annually and when:

a. changes in the workplace or the type of respirator render previous training obsolete.
b. inadequacies in the employee's knowledge or use of the respirator indicates that the employee lacks the required understanding or skill.
c. a situation arises in which retraining appears necessary to ensure safe respirator use.

OSHA RESPIRATORY PROTECTION STANDARDS

29 CFR 1910.134, *Respiratory Protection*, and its appendices is found in Section III of our safety program. All sections of this standard are applicable to respiratory protection during abatement with the exception of paragraph (d)(i)iii and paragraph (e), Medical Evaluation.

Appendices C, *OSHA Respirator Medical Evaluation Questionnaire (Mandatory)* and D, *Information for Employees Using Respirators When Not Required Under the Standard* also do not apply to lead abatement work.

Lastly, to assist in fit testing procedures, the "Rainbow Passage" from Appendix A to § 1910.134: *Fit Testing Procedures*, is found in Section 3 of this project manual.

RESPIRATORY PROTECTION PROGRAM

THE 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.

[NOTE: The Rainbow Passage is cited Appendix A to 29 CFR 1910.134, *Fit testing Procedures*, and it is an integral part of fit test protocols. Reading the Rainbow Passage while wearing a respirator provides a method of checking the face to mask seal because, in theory, all one's facial muscles are utilized while reading this Passage. The Rainbow Passage is extracted from this Appendix to make its use a simpler task.]

PROJECT #: _____

AIR MONITORING REPORT
LEAD ABATEMENT PROJECTS

DATE: _____

SAMPLE I.D.	SAMPLE TYPE	WORKER'S NAME	SOCIAL SECURITY NUMBER	LOCATION	ACTIVITY	RESPIRATOR TYPE

ANALYTICAL INFORMATION

SAMPLE I.D.	PUMP NUMBER	CALIB. BEGINNING	FLOW END	RATE (L/min) AVERAGE	START TIME	STOP TIME	DURATION (MINUTES)	VOLUME (Liters)

Comments:

_____

SAMPLE TYPE		ACTIVITY		RESPIRATOR
PRS=personal	BGD=background	REM=removal	PREP=site prep	HM=half mask
ENV=environmental	CL=clearance	CLN=clean-up	IC-inside cont.	FF=full face
HEX=HEPA exhaust	FC=final clearance	BGLO=bag load out	OC=outside cont.	APR=air purifying resp.
				SA=supplied air

Note: Sampling media used in 37mm 0.8µ MCE filter unless otherwise noted.

SAMPLED BY: _____
ANALYZED BY: _____
REVIEWED BY: _____
APPROVED BY: _____

Great Western Painting

MEDICAL SURVEILLANCE PROGRAM

This Medical Surveillance Program is vital to the health and safety of our lead workers. Our program is designed to comply with the requirements outlined in the Occupational Safety and Health Administration (OSHA) standard 29 CFR 1910.1025 (general industry standard for lead). All costs incurred by the Program will be borne by the company. Specifically, Medical Surveillance for lead exposure is covered in detail in 29 CFR 1910.1025(j) and these requirements are complied with.

Medical Surveillance is required when:

a. An employee is occupationally exposed on any day to lead at or above the action level. Initial medical surveillance consists of biological monitoring in the form of blood sampling and analysis for lead and zinc protoporphyrin levels.

b. An employee is or may be occupationally exposed at or above the action level for more than 30 days in any consecutive 12 months.

c. An employee is required to wear a negative pressure respirator.

The Medical Surveillance Program consists of:

a. A pre-placement medical examination. Furthermore, additional medical examinations and/or blood sampling are administered as required, but not less than annually. All medical examinations and procedures will under the supervision of licensed physician.

b. Supplying the attending physician with a copy of the appropriate standard to ensure that all the requirements of the standard are met.

c. The Report of Examination and the Medical Opinion for Respirator Wear.

d. The actual medical examination which must include, at a minimum:

(1) A thorough physical examination with particular attention to teeth, gums, hematologic, gastrointestinal, renal, cardiovascular, and neurological systems. Pulmonary status should be evaluated as respiratory protection will be utilized.

(2) A blood sample and analysis which determines:

Blood lead level.

Hemoglobin and hematocrit determinations, red cell indices, and examination of peripheral smear morphology.

Zinc protoporphyrin

Blood urea nitrogen

Serum creatinine

Routine urinalysis with microscopic examination

Any laboratory or other tests relevant to lead exposure which the examining physician deems necessary by sound medical practice.

Note: If the employee uses the physician selected by us, the employee may select a second physician to review any findings, determinations, or recommendations of the initial physician and to conduct such examinations, consultations, and laboratory tests as the second physician deems necessary to facilitate this review. We will promptly notify an employee of the right to seek a second medical opinion after each occasion that an initial physician conducts a medical examination. We condition our participation in, and payment for, the multiple physician review upon the employee doing the following within 15 days of receipt of the foregoing notification, or receipt of the initial physician's written opinion, which ever is later: The employee must, within the time frame above, inform the safety program administrator that he/she intends to seek a second opinion; the employee must take the initial steps to make an appointment with the second physician.]

TIMING OF MEDICAL EXAMINATIONS

Biological Monitoring: Blood lead and ZPP level sampling and analysis for lead and zinc protoporphytin levels every 2 months for the first 6 months and every 6 months thereafter.

For each employee whose blood sampling and analysis indicates a blood lead level at or above 40µg/dl must be notified within five (5) days and must continue to have blood sampling and analysis at 2 month intervals until two (2) consecutive blood samples and analysis indicated a blood lead level below 40µg/dl.

For each employee who is removed from lead exposure due to an elevated blood lead level, during the removal period, blood sampling and analysis will be done at least once per month.

Whenever the results of a blood lead level test indicate that an employee's blood lead level exceeds 40µg/dl, the employee will be informed of the blood lead level criteria that requires temporary removal from exposure. A blood lead level of 50µg/dl requires a temporary medical removal. We will will provide a second (follow-up) blood sampling test within two weeks after receiving the results of the first blood sampling indicating medical removal.

Upon receipt of a written opinion by the physician as to the worker's work capabilities and a written confirmation that the worker has been advised by

the physician of the results of the examination, safety program administrator will:

a. Provide the worker with a copy of the physician's opinion within 30 days of receipt.

b. Maintain a copy of the medical records of the worker for a period of 30 years beyond the duration of employment.

We have determined that the more an employee is involved with the medical examination process, the more complete the results will be. It is important to understand why certain procedures are required and what the results of the procedures mean.

The pre-employment medical examination has two major functions:

a. To determine an individual's fitness for duty including the ability to work while wearing a respirator.

b. To provide a set of baseline data for comparison with future medical data.

The actual medical examination will be provided by a physician who is well versed about the hazards a lead abatement worker faces. It is important that the individual undergoing the examination be totally honest with the physician and bring to his/her attention any medical problems or unusual medical histories.

The pulmonary function test, also known as the spirometry test, measures the air capacity of the lungs. This is performed by determining the Forced Vital Capacity (FVC) and the Forced Expiatory Volume in one second (FEEV1). A reduction of the FVC in subsequent examinations may signify that a restrictive change is occurring in the lungs. A reduction of the FEEV1 in subsequent examinations may be a sign of respiratory obstruction or other problems involving the lungs.

Under no circumstances do we want to expose our employees to any unnecessary health risks. Our medical surveillance program is but one of many health safeguards designed to protect our workers.

Great Western Painting

WORKER ACKNOWLEDGMENT

EMPLOYEE USE OF SECOND MEDICAL OPINION

If the employee uses the physician selected by our company, the employee may select a second physician to review any findings, determinations, or recommendations of the initial physician and to conduct such examinations, consultations, and laboratory tests as the second physician deems necessary to facilitate this review. We will promptly notify an employee of the right to seek a second medical opinion after each occasion that an initial physician conducts a medical examination. We condition our participation in, and payment for, the multiple physician review upon the employee doing the following within 15 days of receipt of the foregoing notification, or receipt of the initial physician's written opinion, which ever is later: The employee must, within the time frame above, inform the safety program administrator that he/she intends to seek a second opinion; the employee must take the initial steps to make an appointment with the second physician.

I have read and understand the above statement.

☐ I elect to accept the original physicians findings for the physical examination/test results dated: _____.

☐ I elect to seek a second medical opinion on the original physician's findings for the physical examination/test results dated: _____.

EMPLOYEE SIGNATURE: _____

DATE: _____

WITNESS SIGNATURE: _____

DATE: _____

Great Western Painting

LEAD ABATEMENT PROCEDURES

DATE: _____

PROJECT NUMBER: _____

PROJECT NAME: _____

_____

PROJECT ADDRESS: _____
(Street Address)

_____
(City/State)

[NOTE: Below listed are our standard operating procedures. Should this project required specific methods or procedures due to contract specifications, special conditions, or local law (which do not conflict with OSHA/EPA standards), those changes will be noted on the last page of this document.]

Lead abatement procedures will include, at a minimum, the steps noted below. Often, more stringent procedures are employed due to conditions encountered on specific projects as well as differing job specifications and requirements.

ADMINISTRATIVE PROCEDURES

As a matter of policy, we will not use administrative procedures as a means to reduce an employee's time weighted average (TWA) exposure to lead. Specifically, in the interest of our employees' health, we will not expose workers to even minimum amounts of lead exposure over short periods of time to circumvent the more stringent requirements of engineering controls.

ENGINEERING CONTROLS

There are eight primary steps involved in the engineering controls for the lead abatement process. These steps, overseen by a Competent Person, are applicable to removal, demolition, and/or renovation projects.

1. Set up the enclosure.

Before setting up the enclosure, all movable objects such as chairs, desks, rugs, light fixtures, etc., will be removed to prevent them from

becoming contaminated with lead dust. Objects that cannot be removed from the enclosure will be covered with two (2) layers of 6 mil polyethylene sheeting that is securely taped with duct tape to form an air tight seal. A minimum of two (2) layers of 4 mil polyethylene will be placed on the walls and a minimum of two (2) layers of 6 mil polyethylene will placed on the floors. The following warning shall be posted where exposure to lead is above the PEL:

WARNING
LEAD WORK AREA
POISON
NO SMOKING OR EATING

These signs shall be illuminated or cleaned as necessary so that the legend is clearly visible.

2. Ensure the integrity of the enclosure.

The enclosure will be inspected before lead removal begins and prior to each work shift throughout the entire period work is being conducted in the enclosure. This is accomplished best by running a hand over all seams in the plastic enclosure to ensure that no seams are ripped and the tape is securely in place.

3. Control entry to and exit from the enclosure.

The competent person should ensure that all unauthorized personnel do not enter the enclosure and that all employees and other personnel who enter the enclosure have the proper protective clothing and equipment. The competent person will also ensure that all employees and other personnel who enter the enclosure use the hygiene facilities and observe the proper decontamination procedures.

4. Supervise all employees exposure monitoring.

Air monitoring will be performed in accordance with the Air and Wipe Sampling Plan.

5. Ensure the use of protective clothing and equipment.

All costs associated with personal protective equipment will be borne by: Great Western Painting

Respiratory equipment will be worn in accordance with our Respiratory Protection Program. Further, all employees will wear appropriate protective clothing and equipment that protects contamination of the worker and his/her garments such as, but not

limited to: disposable Tyvek suits (or similar full body clothing); gloves, hats, and shoes or boots or disposable shoe coverlets; and face shields, vented goggles, or other appropriate equipment. Containers of contaminated protective or equipment shall be labeled as follows:

**CAUTION: CLOTHING CONTAMINATED WITH LEAD.
DO NOT REMOVE DUST BY BLOWING OR SHAKING.
DISPOSE OF LEAD CONTAMINATED WASH WATER
IN ACCORDANCE WITH APPLICABLE LOCAL, STATE,
OR FEDERAL REGULATIONS.**

6. Ensure that employees are trained in the use of engineering controls, work practices, and personal protective equipment.

Proper work practices are necessary during lead abatement, demolition, and renovation to ensure that the lead dust concentration inside the enclosure remains as low as possible. One of the most important work practices is to wet the surfaces of lead coated material before it is disturbed and throughout the removal activity. After the lead coated material is thoroughly wetted with water and a wetting agent, it should be removed by stripping starting at the farthest point from the AFD.

After completing gross removal, all surfaces from which lead materials have been removed shall be wet washed with a solution of trisodium phosphate (1 ounce of 5 percent trisodium phosphate to each gallon of water) and HEPA vacuumed.

Bagging lead and lead contaminated waste material in two (2) 6 mil bags or drums promptly after its removal is another work practice control that is effective in reducing the airborne concentration of lead dust within the enclosure. Good housekeeping practices will be employed during lead abatement projects. Floors will be cleaned, when possible, by HEPA vacuuming or other methods which prevent the likelihood or lead becoming airborne. Dry sweeping is strictly forbidden. Wet sweeping will only be used if HEPA vacuuming is impossible. High pressure air will not be used unless it is used in conjunction with a ventilation system designed to capture the airborne dust.

7. Ensure the use of hygiene facilities and the observance of proper decontamination procedures.

A decontamination enclosure unit that consists of a shower chamber, an equipment room, and a clean room will be installed in conjunction

with the enclosed work area. This unit will be used by all persons who enter the enclosure to prevent cross-contamination of work and street clothing. All employees will shower as required by paragraph (i)(3)(i), 29 CFR 1910.1025.

Within the enclosure (or any place lead is present at any measurable level), food and beverages will not be consumed, tobacco products will not be used, and cosmetics will not be applied. Eating area will be provided that are as free as practicable from lead contamination and the are readily accessible to employees.

Hygiene facilities will be available.

8. Ensure that engineering controls are functioning properly.

The Supervisor or Foreman on all lead abatement projects shall be a Competent Person. He/she will assign specific job tasks to individual workers during each work shift and he/she shall be responsible for their supervision and ensuring that all engineering controls are maintained.

All machines will be plugged into GFCI's, fitted with HEPA filtered exhausts (if applicable) and decontaminated after use.

All waste will be containerized, labeled and transported in accordance with all local, state and federal regulations.

ADDENDUM
TO
LEAD ABATEMENT PROCEDURES

DATE: _____

PROJECT NUMBER: _____

PROJECT NAME: _____

_____

PROJECT ADDRESS: _____
Street Address)

_____
(City/State)

On this project, our standard operating procedures will be modified as noted below:

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Great Western Painting

AIR, WIPE, AND WASTE SAMPLING PLAN FOR LEAD ABATEMENT PROJECTS

ACCURATE AND TIMELY AIR, WIPE, AND WASTE SAMPLING RESULTS ARE CRITICAL TO PROJECT CONTROL. BELOW LISTED IS A SUMMARY OF THE AIR, WIPE, AND WASTE SAMPLING STRATEGIES TO BE USED ON LEAD ABATEMENT PROJECTS:

AIR SAMPLING

Note: NOTE: For all lead abatement projects, we assume the lead levels will exceed the minimum requirement (exposure to lead levels above the action level, without regard to the use of respirators, to an airborne concentration of lead of 30µg/m³) at which point air sampling will be required.

BACKGROUND AIR SAMPLING: Background air samples having a volume of not less than 400 liters to a maximum of 1200 liters at a flow rate of 1 to 4 liters per minute.

AMBIENT AIR SAMPLING: Ambient air samples will be collected daily for those projects utilizing the enclosure method of removal. All ambient air samples will have a volume of not less than 400 liters to a maximum of 1200 liters at a flow rate of 1 to 4 liters per minute. Sampling locations for ambient air samples include both inside and outside the enclosure system.

Routine air sampling outside the enclosed work area may be accomplished by AFD exhaust testing.

All air sampling will be accomplished by a person experienced, trained, and tested in current air sampling techniques (especially NIOSH Method 7082 procedures) and in the operation, calibration, and maintenance of air sampling equipment.

REPRESENTATIVE PERSONAL AIR SAMPLING: Representative personal air sampling will be provided on all lead abatement projects regardless of the magnitude of duration. At least one personal sample for each shift for each job classification in each work area will be taken. For those projects requiring the enclosure method of removal, an eight (8) hour time weighted average will be obtained for each job being performed inside the enclosure. Full shift samples [representative of the employee's regular daily exposure to lead] will be taken which means at least 7 continuous hours of monitoring.

Note: If the initial monitoring reveals employee exposure to be below the action level the measurements need not be repeated unless there is a change which would result in additional exposure to lead.

If the initial determination or subsequent monitoring reveals employee exposure to be at or above the action level but below the permissible exposure limit the we will repeat monitoring in at least every 6 months. We will continue monitoring until at least two consecutive measurements, taken at least 7 days apart, are below the action level at which time we will discontinue monitoring for that employee unless there is a change which would result in additional exposure to lead.

If the initial monitoring reveals that employee exposure is above the permissible exposure limit we will repeat monitoring quarterly. The employer will continue monitoring at the required frequency until at least two consecutive measurements, taken at least 7 days apart, are below the PEL but at or above the action level at which time we will repeat monitoring for that employee at the frequency every six months unless there is a change which would result in additional exposure to lead.

Affected employees shall be notified of the results of any monitoring performed within 15 working days, either individually in writing or by posting the results in an appropriate location that is accessible to affected employees. Whenever the results indicate that the representative employee exposure, without regard to respirators, exceeds the permissible exposure limit, in the written notice shall be included a statement that the permissible exposure limit was exceeded and a description of the corrective action taken or to be taken to reduce exposure to or below the permissible exposure limit.

CLEARANCE SAMPLING: Clearance sampling will be conducted following the completion of the removal of lead, lead dust, and lead containing materials for projects utilizing the enclosure method of removal. Final clearance will not be given to an enclosure until airborne concentrations of lead fall below the action level.

All Air Sampling Plans are subject to review and additional sampling may be required.

WIPE SAMPLING

PRE-ABATEMENT: Before an abatement project, wipe sampling may be conducted in accordance with NIOSH Method 7082.

CLEARANCE SAMPLING: Three wipe samples, generally using non-alcohol wipes over a 1 square foot area, will be taken for each project area.

WASTE SAMPLING

WASTE SAMPLING: Will be performed as required by Disposal Site Guidelines and all applicable rules and regulations.

LEAD SAMPLING LOG
(AIR AND WIPE)

DATE	SAMPLE I.D.	SAMPLE TYPE	LABORATORY	RESULTS	REPORT NUMBER	REMARKS (ACTIVITY, ETC.)

SAMPLE TYPE		ACTIVITY	
AIR	WIPE	REM=removal	PREP=site prep
		CLN=clean-up	IC-inside cont.
		DRLO=drum load out	OC=outside cont.

NOTE: Sampling media used in 25mm 0.8µ MCE filter unless otherwise noted. LOQ = Limit of Quantitation: The method assumes the lowest quantitative concentration is 10 fibers/100 fields and is volume dependent. Samples below the LOQ are non-quantifiable and therefore are non-reliable.

PROJECT #: _____

LOCATION: _____