

<u>CNS OPERATIONS MANUAL</u> ADMINISTRATIVE PROCEDURE 0.36.5 LEAD EXPOSURE CONTROL PROGRAM	USE: INFORMATION QUALITY: QAPD RELATED EFFECTIVE: 1/17/00 APPROVAL: ITR-RDM OWNER: M. I. STAUFFER DEPARTMENT: CHEM
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REV.	DATE	CHANGES
2	10/22/98	Changed lead determination requirements and air monitoring.
3	see above	Reformatted per latest 0-PWG-01 guidance. Added additional information on hygiene and handling of lead. Title changes. Added information on pre-job briefs. Deleted posting of sample results. Eliminated buffer zone.

1. PURPOSE

1.1 This procedure provides the Lead Exposure Control Program for Cooper Nuclear Station (CNS), establishing the minimum requirements necessary to protect District employees and contractors working at CNS, from exposures to lead greater than allowed per OSHA Standards while performing any of the following activities:

- 1.1.1 Demolition or salvage of structures when lead or materials containing lead are present.
- 1.1.2 Removal or encapsulation of lead materials.

- 1.1.3 New construction, alteration, renovation, or repair of structures or components containing lead.
- 1.1.4 Installation or removal of lead products. (Excluding covered lead blankets and bricks, as long as their protective coverings are intact and proper hygiene and handling is practiced.)
- 1.1.5 Lead contamination and emergency cleanup.
- 1.1.6 Transportation, disposal, storage, or containment of lead materials on site where a construction activity is performed.
- 1.1.7 Maintenance operations where materials or equipment containing lead will be disturbed.

2. LEAD DETERMINATION

- 2.1 Before starting work processes that will disturb any existing coatings or paints, the responsible Job Supervisor shall determine if such coatings or paint contain lead.
- 2.2 The initial determination should begin with attempting to obtain information about the materials as to their lead content.
 - 2.2.1 Review of any applicable job specifications, to determine if lead-containing paints, coatings, piping, metals, etc., were used, or;

NOTE – Anything < 10 ppm of lead does not have to be reported on an MSDS sheet per OSHA guidelines.

- 2.2.2 Review the MSDS sheets and/or manufacturer's specifications on the paint products, coatings, piping, metals, etc., to determine lead contents.
- 2.2.3 If it can be determined with certainty that there is or is not lead in the products within the designated work area, then place copies of the documentation detailing this information in the appropriate job package.

2.3 When it cannot be determined whether or not the product(s) contain lead or if it cannot be determined as to the percent of lead in the product, then the Job Supervisor shall obtain and submit paint samples to an outside certified testing laboratory for total lead analysis (not TCLP).

NOTE 1 – If bulk analysis lead sampling will be done by taking scrapings of the coatings, the Job Supervisor shall allow ~ 2 weeks for the samples to be shipped, analyzed, and results returned from the testing lab.

NOTE 2 – The collection of paint samples for bulk analysis, does not result in airborne exposure to lead. Therefore, respirators and other protective equipment, except gloves, are not required when taking samples.

2.3.1 Samples shall be removed from the structure by scribing through all layers of paint down to the substrata (bare surface).

2.3.1.1 Generally, a minimum of 5 square inches (a square 2 1/4" on a side) is sufficient to provide the 10 grams (1/3 ounce) needed by the lab.

2.3.1.2 Tape a clear plastic bag or place a petri dish beneath the area to be sampled.

2.3.1.3 Cut through all layers of paint and scrape or chip all paint within the square into the bag.

2.3.1.4 If bulk paint samples are to be submitted for analysis, they shall include all layers of paint. Often the topcoat may not contain lead but primers (under coatings) can contain lead.

2.3.1.5 At least one sample, should be taken for each representative component of a structure.

2.3.1.6 Initiate Bulk Lead Sample Log, Attachment 6.

2.3.1.7 If necessary, contact the Radiation Protection Department for assistance in obtaining paint samples and guidance on which laboratories should be utilized.

2.4 The Radiation Protection Department will take the sample and will note the test results on Attachment 6, Bulk Lead Sample Log.

2.4.1 If a lab is being utilized, attach a copy of Attachment 6 and the testing laboratory's report(s) to the HWP (which will remain part of the Maintenance Work Order (WO) or Minor Maintenance (MM) package) upon their return, if bulk analysis lead sampling has been done.

2.5 Previous laboratory analysis on the same paint, in the same area, will satisfy this requirement.

- 2.6 When it is not practical to perform an analysis for lead and there is no documentation on file regarding the absence of lead, assume the paint contains lead for removal operations which could generate exposures above the permissible exposure levels.
- 2.7 If lead is known to be present, a Lead Paint Abatement Checklist, Attachment 2, shall be utilized. A competent person shall be used to test all surface coatings that may be:
- Abraded
 - Blasted
 - Filed
 - Cut
 - Heated
 - Ground
 - Sanded
 - Sawed
 - Scraped
 - Welded, or
 - In some other way disturbed causing lead to become airborne dust.
- 2.8 Based upon the results of that sampling and the method of paint removal, the Job Supervisor shall determine the necessary:
- 2.8.1 Special Instructions, including necessary precautions (Procedure 0.36, Attachment 2, in Section 3).
- 2.8.2 Personal protective clothing and equipment (Procedure 0.36, Attachment 1, in Section 14).
- 2.8.3 Respiratory protection required (Procedure 0.36, Attachment 1, in Section 14).
- 2.8.4 Tools (Procedure 0.36, Attachment 1, in Section 14).
- 2.8.5 Procedures, note in [] OTHER (Procedure 0.36, Attachment 1, in Section 14).
- 2.8.6 Controls to be put in place (Procedure 0.36, Attachment 1, in Section 12).
- 2.8.7 Crew size (Procedure 0.36, Attachment 1, in Section 12).
- 2.8.8 Personnel to perform the job or task and ensure they sign in and out (time) and date on Procedure 0.36, Attachment 2, Hazardous Work Permit Supplementary Time Report Form.
- 2.9 Prior to commencing the work task or project, the Job Supervisor shall conduct a pre-job briefing which all personnel involved shall attend.
- 2.9.1 The Job Supervisor will ensure Radiation Protection Department has received prior notification of work.
- 2.9.2 The Job Supervisor shall ensure all personnel involved have been tested for blood lead levels prior to commencement of work.
- 2.9.3 The Job Supervisor shall ensure if Negative Initial Determination (Steps 3.1.5 through 3.1.8) is being used, all personnel involved are lead abatement qualified.

2.9.4 The Job Supervisor shall initiate Hazardous Work Permit Supplementary Time Report Form (Procedure 0.36), noting in Section 3, Special Instruction, "Pre-Job Briefing Attendees", and have all personnel attending sign the attachment.

2.10 The Radiation Protection Department is available to assist the Job Supervisor in determining requirements in Step 2.8, if necessary.

3. AIR MONITORING REQUIREMENTS

3.1 When required, air monitoring will be done to effectively document employee exposures to airborne lead. Air monitoring will consist of collecting personal air samples on employees and in and around lead dust-generating task activities. The appropriate data shall be logged by the Radiation Protection Department's personnel on Attachments 4 and 5.

3.1.1 Each Job Supervisor who has an operation covered by this procedure shall initially determine if any employee may be exposed to lead at or above the action level.

3.1.2 Where monitoring is required, the Radiation Protection Department shall coordinate collection of personal samples representative of a full shift including at least one sample for each job classification in each work area either for each shift or for the shift with the highest exposure level.

3.1.3 With respect to the lead related tasks listed in Step 1.1, where lead is present, until the Job Supervisor performs an exposure assessment and documents that the employees performing any of the listed tasks are not exposed above the PEL ($50 \mu\text{g}/\text{m}^3$ for 8 hour time weighted average), the Job Supervisor shall treat the employees as if the employees were exposed to above the PEL, and shall implement employee protective measures prescribed in Sections 5 through 8.

3.1.4 Monitoring for the initial determination where performed, may be limited to a representative sample of the exposed employees who the Job Supervisor reasonably believes are exposed to the greatest airborne concentrations of lead in the work place.

3.1.5 Where the Radiation Protection Department has previously monitored for lead exposures, and the data was obtained within the past 12 months during work operations conducted under work place conditions closely resembling the processes, type of material, control methods, work practices, and environmental conditions used and prevailing in the Job Supervisor's current operations, the Job Supervisor may rely on such earlier monitoring results to satisfy the requirements of Step 3.1.

3.1.6 Where the Radiation Protection Department has objective data, demonstrating that a particular product or material containing lead or a specific process, operation or activity involving lead cannot result in employee exposure to lead at or above the Action Level of $30 \mu\text{g}/\text{m}^3$, during processing, use, or handling, the Job Supervisor may rely upon such data instead of implementing initial monitoring.

- 3.1.7 The Environmental Technician shall establish and maintain an accurate record documenting the nature and relevancy of objective data used in assessing employee exposure in lieu of exposure monitoring.
 - 3.1.8 Negative initial determination - Where a determination conducted under this procedure is made that no employee is exposed to airborne concentrations of lead at or above the 30 $\mu\text{g}/\text{m}^3$ level, the Job Supervisor shall make a written record of such determination. The record shall include at least the date of determination, location within the work site, work task performed, and the name and social security number of each employee monitored.
- 3.2 Two types of air samples may be collected:
- 3.2.1 Lead-specific, Personal Air Samples (PAS).
 - 3.2.2 Lead-specific, Area Air Samples (AAS).
- 3.3 Both PASs and AASs shall be collected to meet the requirements of the OSHA lead standard and the requirements of this program.
- 3.4 All PASs and AASs shall be collected and analyzed per the National Institute of Safety and Occupational Health (NIOSH), Method 7082 for airborne lead.
- 3.5 When either area or air samples are collected, analyzed, and found to be $> 30 \mu\text{g}/\text{m}^3$, the Job Supervisor shall take additional steps to prevent future employee exposures to airborne lead and provide blood lead level tests to employees in the associated job classification.

4. PERSONAL AIR SAMPLES

- 4.1 Personal Air Samples (PAS) are contaminant-specific samples collected within an employees breathing zone by the Radiation Protection Department designee and logged on Attachment 7. The breathing zone is defined as the area in front of the employee and within 12" of the employee's nose.
- 4.2 PASs shall be collected on each job classification that may have occupational exposures to airborne lead above the action level.
- 4.3 When personal air sample analysis results are received, the employee on which the sample was collected shall be informed of the sample results in writing within five (5) working days.
 - 4.3.1 If both or either sample result is > 30 micrograms per cubic meter ($30 \mu\text{g}/\text{m}^3$), then personal and area air sample results shall continue to be collected.
 - 4.3.2 Most lead related jobs or tasks at CNS are short duration, low exposure jobs. Therefore, they are generally monitored at least once during the process and samples sent out to the labs for analysis.

- 4.3.3 After the Radiation Protection Department has received and reported the results of sampling, no further air monitoring is required for this job unless there are additional tasks initiated.

4.4 AREA AIR SAMPLES

- 4.4.1 Area air samples, if required, are contaminant-specific samples collected to determine the quality of the ambient air in and around the lead work area where lead-generating tasks are being conducted. The results shall be logged onto Attachment 5, Lead Air Sample and Custody and Data, by the Radiation Protection Department's personnel conducting the sampling.
- 4.4.2 The lead work area is defined as an area fully encompassing the lead dust-generating tasks being performed.
- 4.4.3 The perimeter sample is best collected at the perimeter of the lead work on the side toward the nearest standard construction tasks being conducted. The perimeter sample is meant to demonstrate that lead dusts are not migrating to affect other employees.

5. ENGINEERING CONTROLS

- 5.1 According to OSHA regulations, Engineering controls should be applied first, to the extent possible, before either work practice controls or personal protective equipment can be used.
- 5.2 Where an individual is exposed to lead above the permissible exposure limit (PEL), implement Engineering controls, when applicable, and work practice controls to reduce employee exposure to lead during work activities. Appropriate respiratory protection must be worn when the lead exposure is above the PEL.
- 5.3 There are numerous Engineering controls that can be used either alone or in combination to reduce potential employee exposure.
- 5.4 Controls may include, but are not limited to the use of these methods to reduce and maintain personal exposures to lead $\leq 50 \mu\text{g}/\text{m}^3$.
 - 5.4.1 Local exhaust ventilation with HEPA (high efficiency particulate air) filters.
 - 5.4.2 Partial or full enclosures.
 - 5.4.3 Variety of hand held tools (such as grinders, needle scalers, sanders, etc.) are available and equipped with low volume high velocity exhaust capabilities.
 - 5.4.4 For abrasive blasting, an enclosure shall be erected around the structure to be blasted.
 - 5.4.4.1 If the equipment is located inside a small building, the building itself may serve as the enclosure.

- 5.4.4.2 The enclosure shall be equipped with HEPA filtered exhaust ventilation equipment to reduce personnel exposures inside of the enclosure and to maintain a negative pressure within the enclosure to prevent environmental contamination.

6. PERSONAL PROTECTIVE EQUIPMENT REQUIREMENTS

6.1 ADMINISTRATIVE CONTROLS

- 6.1.1 Administrative controls (job rotation) can be used to minimize personnel's TWA exposure to lead if an exposure above the PEL has been detected.
- 6.1.2 If administrative controls are used to reduce personnel exposures, the job rotation schedule shall include the following information:
 - 6.1.2.1 Name and Social Security number of each employee.
 - 6.1.2.2 Duration and exposure for each job or work task.
 - 6.1.2.3 Other information to demonstrate reliability of controls.

6.2 RESPIRATORY PROTECTION

- 6.2.1 Personnel, whether NPPD or contractors, shall wear the appropriate respiratory protective equipment during job or work tasks, where lead exposure levels cannot be maintained below the PEL. The type of respirator used shall be noted by the Job Supervisor or Radiation Protection Department's personnel conducting the sampling on Attachment 2, Section IV, Employee Protection, and Attachment 7.
 - 6.2.1.1 Provisions of CNS Respiratory Protection Program shall be followed.
 - 6.2.1.2 Fit testing every 12 months for negative pressure respirators shall be maintained for those employees active in lead paint related activities or provide an annual fit test, with a second test given just prior to performing work, if it is performed within the same year.
 - 6.2.1.3 Only approved respirators shall be used as defined by the CNS Radiation Protection Department's Respiratory Protection Program and procedures.
 - 6.2.1.4 No respirators shall be used at CNS, unless they are approved by the CNS Radiation Protection Department.
 - 6.2.1.5 Respirators will be issued by the CNS Radiation Protection Department, unless other arrangements have been made, prior to their use.
 - 6.2.1.6 Respirators shall be cleaned and sanitize between uses.
- 6.2.2 Respiratory protective equipment shall also be worn in cases where lead exposure levels have not yet been quantitatively determined, but are suspected, and are being evaluated via personal air monitoring.

NOTE – Leather shoes cannot be decontaminated. If an employee's leather shoes get covered with lead-containing dust, the shoes shall be disposed of as contaminated waste.

6.3 Personnel who may be exposed to lead levels above the OSHA PEL $\geq 50 \mu\text{g}/\text{m}^3$, shall wear appropriate protective clothing and equipment and noted on Attachment 2, Section IV, Employee Protection, and Attachment 7, Personnel Exposure Data.

6.3.1 This may include the use of:

6.3.1.1 Disposable coveralls or similar full-body protective clothing.

6.3.1.2 Disposable gloves, head cover, shoe covers.

6.3.1.3 Face shields and goggles.

6.3.2 Specific protective clothing and equipment will be dependent upon the nature of the job or work task and the resulting lead potential.

NOTE – Personal protective clothing and equipment required by this procedure are for protection against lead only. There may be other personal protection requirements for the job work task (e.g., radiation protection, confined space, oxygen deficient atmosphere, working at heights, etc.).

6.4 The following are the recommended respirators and personal protective clothing to be worn for the lead work activity and the appropriate method logged on Attachment 2, Section 2, noting the "Paint Removal Method".

NOTE – Personal protective clothing and equipment may be required for protection against physical and chemical hazards.

6.4.1 For hand scraping to remove loose, flaking paint, wet sanding, and chemical stripping - no personal protective clothing or equipment for lead is necessary based upon previous objective testing.

6.4.2 For light hand sanding, as a minimum, a mask respirator with HEPA cartridges are required.

6.4.3 For hand scraping to bare metal, power sanding/grinding, or power wire brushing with an installed HEPA dust collector, as a minimum, a full mask cartridge equipped respirator with HEPA filters is required. Disposable coveralls including head/foot covers and gloves are required.

6.4.4 For welding/torch cutting, as a minimum (without air sampling data to aid in determining appropriate personal protective equipment), full face masks with supplied air respirators are required, operated in continuous-flow mode.

6.4.5 For abrasive blasting, as a minimum, air line abrasive blasting hoods. Gloves, disposable coveralls, and foot covers are required.

7. HYGIENE FACILITIES AND PRACTICES

7.1 CHANGE ROOMS

- 7.1.1 A clean change room shall be provided for personnel who work in an area where the airborne exposure to lead is above the PEL, without regard to the use of respirators.
- 7.1.2 A change room shall be an area remote from lead dust-generating work areas.
- 7.1.3 Prior to leaving the work area, the following steps shall be performed:
 - 7.1.3.1 Personnel shall vacuum off respirators and disposable coveralls with HEPA filtered vacuum cleaners.
 - 7.1.3.2 Carefully remove the disposable coveralls, foot covers and gloves, placing them in a disposal container labeled according to this procedure. The label shall read:

**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.**

- 7.1.3.3 Remove respirator and place in the designated container.
- 7.1.4 The change room shall be equipped with separate storage facilities for protective work clothing and equipment, and one for street clothes to prevent cross-contamination.
- 7.1.5 Personnel, who are exposed to lead levels above the PEL, shall not leave the workplace wearing clothing or equipment worn during the work shift.
- 7.1.6 Lead contaminated clothing, materials, or equipment shall not be taken home by workers.

7.2 SHOWERS

- 7.2.1 A shower facility shall be provided for personnel who work in an area where airborne exposure to lead is above the PEL, without regard to the use of respirators.
- 7.2.2 Personnel, who are exposed to lead levels above the PEL, shall shower at the end of their work shift, if feasible. When showering is not feasible, the hands and face shall be washed before leaving the work site/facility. The location of the wash facilities shall be noted on Attachments 2, Section IV, Employee Protection.

7.3 LUNCHROOMS

- 7.3.1 Lunchroom facilities shall be provided for personnel who work in area where airborne exposure to lead is above the PEL, without regard to the use of respirators.
- 7.3.2 Lunchroom facilities shall be temperature controlled, positive pressure, filtered air supply, and be readily accessible to employees.
- 7.3.3 Personnel who work in an area where the airborne exposure to lead is above the PEL, without regard to the use of respirators, shall wash their hands and face prior to eating, drinking, smoking, chewing, or applying cosmetics.
 - 7.3.3.1 Provisions shall be made for employees to wash contaminated skin areas in remote locations, washing of hands, face, etc., shall be done before entering vehicles.
- 7.3.4 Personnel shall not enter the lunchroom facility with protective clothing or equipment, unless the surface lead dust has been removed by HEPA vacuuming, down draft booth, or other cleaning method.

8. WORK PRACTICE CONTROLS

CAUTION – According to OSHA there is no pass/fail criterion for the amount of lead in a paint sample. Although paint that contains < 0.06% lead by weight in the dried film is generally considered lead free, it is possible that employees removing paint containing this low level of lead using power tools or dusty abrasive means may be overexposed to lead. For this reason, power tool and abrasive removal of paint should be avoided.

- 8.1 Work practice controls may be used alone or in addition to either Engineering controls or personal protective equipment. Work Control methods shall be noted in Section III of Attachment 2. Work practice controls to consider include, but are not limited to:
 - 8.1.1 Use of encapsulant.
 - 8.1.2 Wet work methods - Use of fine water mist before and during sanding, grinding, or scraping to control airborne dust.
 - 8.1.3 Using hand tools instead of power tools.
 - 8.1.4 Using lead abatement professionals to remove lead from the affected areas.
 - 8.1.5 Strict hand and face washing protocols.
 - 8.1.6 Strict and frequent air monitoring.

- 8.2 Regardless of the lead-based paint removal method, steps shall be taken to contain and collect the removed paint. The discharge or release to the environment of waste resulting from lead-based paint removal is not permitted.
- 8.2.1 If hand scraping to bare metal, hand wire brushing, welding/torch cutting, or chemical stripping, a flame resistant tarp, or other suitable covering shall be placed on the ground below the lead-based paint removal area.
- 8.2.2 The sewer drains in the immediate work area shall be covered. If work is done inside a structure with a non-earthen floor, the floor covering is not necessary, but drains/sewers shall still be covered.
- 8.2.3 The paint chips/residue shall be collected in a suitable container and properly labeled for disposal.
- 8.3 To prevent over exposures to lead, areas where lead paint removal is taking place shall be regulated, observing the following guidelines:
- 8.3.1 Warning signs shall be posted at paint removal operations where airborne lead may be released at levels above the permissible exposure limit (PEL).
- 8.3.2 The warning signs shall contain the following legend:

**WARNING
LEAD WORK AREA
POISON
NO SMOKING OR EATING**

- 8.3.3 Until sufficient air sampling results are established indicating that the personal exposure is below the action level for lead, the warning signs will be posted when performing the following lead paint removal processes:
- 8.3.3.1 Power wire brushing/grinding.
- 8.3.3.2 Abrasive blasting.
- 8.3.3.3 Welding/torch cutting.

CAUTION – In the event that releases to the environment (air, soil, water, or drains) occurs, contact the Radiation Protection Department and Environmental Policy Department at the General Office.

- 8.4 Equipment and surfaces contaminated with lead containing dust shall be thoroughly cleaned.
- 8.4.1 Lead contaminated materials shall never be blown-off, shaken, or handled in a manner which would release dust or particulate debris into the atmosphere.

CAUTION – Use of compressed air for cleanup is prohibited, unless used in conjunction with an approved HEPA ventilation system designed to capture airborne dust.

8.4.2 Vacuum clean only with HEPA filtered vacuum cleaners.

8.4.2.1 When emptying HEPA vacuums, they shall be emptied in a manner which minimizes the potential for releases of lead into the atmosphere.

8.4.3 Wet wiping with rags soaked with water or other suitable cleaners or solvents.

NOTE – Where hand scuffing to remove loose flaking paint is done, no cleanup is necessary beyond collecting paint chips.

8.4.4 Shoveling, brushing, and wet or dry sweeping should only be used, if the use of HEPA vacuuming (or other methods) have been tried and were found to be ineffective.

9. DISPOSAL

9.1 Paint removal waste or residue shall be collected in suitable containers and labeled and actions noted on Attachment 2, Section V, Waste Management.

9.2 Paint removal projects that produce liquid waste are subject to additional requirements. Disposal of waste paint residues will be coordinated with the Radiation Protection Department and the Environmental Policy Department at the GO for disposal guidance on lead waste.

9.3 Waste generated from lead associated job or work tasks will be identified as either a special waste, hazardous waste, mixed waste, or radioactive waste depending upon the amount of lead or other metals and the radioactivity of the waste materials.

9.3.1 Disposal of the waste is dependent on the identification of the waste's characteristics.

9.3.2 The applicable CNS waste procedures and Hazardous Waste/Waste Control.

9.3.3 Waste removal media may require a Toxicity Characteristics Leaching Procedure (TCLP) test to determine the classification of the waste.

9.4 Disposable protective clothing shall be HEPA vacuumed to remove lead particulate.

9.5 Once the vacuumed clothing and the respiratory filters are ready for disposal, they shall be placed in double plastic bags, sealed, labeled, and disposed as solid waste to an approved landfill.

9.5.1 Protective clothing can only be disposed of as a solid waste after HEPA vacuuming is performed.

10. RECORD KEEPING

- 10.1 Exposure monitoring and medical surveillance records are to be maintained, as a minimum, for the duration of employment plus 30 years.
- 10.2 Exposure assessment records and airborne monitoring records are to be maintained at the location and as part of the appropriate Work Package records. When project record information is complete, a copy shall be submitted to the Environmental Department in Columbus, Nebraska.
- 10.3 Airborne exposure monitoring and exposure records shall include the:
 - 10.3.1 Date, duration, location, and results of samples taken.
 - 10.3.2 Sampling methods used.
 - 10.3.3 Name, Social Security number, and job classification or description of the personnel affected.
 - 10.3.4 The type of personal protective equipment and respiratory protection used.
 - 10.3.5 Environmental conditions during the monitoring.
- 10.4 Medical surveillance records shall be maintained at the GO Medical Records Department.
 - 10.4.1 Medical surveillance records shall include:
 - 10.4.1.1 The name, Social Security number, and description of the personnel's job duties.
 - 10.4.1.2 Copies of the examining physician's opinions.
 - 10.4.1.3 Work history, medical examination, and blood lead monitoring results for the employee.
 - 10.4.1.4 Medical complaints related to lead exposure.
 - 10.4.1.5 Description of laboratory procedures and data interpretation guidelines.
 - 10.4.2 Medical removal records shall include:
 - 10.4.2.1 Name and Social Security number.
 - 10.4.2.2 Date employee was removed from or returned to job status.
 - 10.4.2.3 Explanation of how removal was accomplished.
 - 10.4.2.4 A statement that removal was triggered by high blood lead.

11. MEDICAL EXAMINATION

11.1 A medical surveillance program, consisting of blood sampling analysis and medical examinations, shall be established when employee exposures exceed the action level for more than 30 days per year (exposure based on data without regard for respiratory protection that may be utilized).

11.2 Medical examinations shall be made available to affected employees.

11.2.1 At least annually for each employee that had a blood test result of $> 40 \mu\text{g}/\text{dl}$ lead (micrograms per deciliter) in the blood.

11.2.2 Prior to assignment, if the employee will be or is reasonably expected to be exposed to airborne concentrations of lead at or above the action level.

11.2.3 As soon as possible if signs or symptoms appear due to an over-exposure to lead.

NOTE – An employee is to be provided a medical examination or consultation upon request if the employee expresses concern regarding effects of current or past exposure to lead on his or her ability to procreate a healthy child.

11.2.4 Blood sampling is to be performed annually.

11.2.4.1 Blood sampling is to be performed every 2 months if a sample shows a level of $40 \mu\text{g}/\text{dl}$ of whole blood.

11.2.4.2 Sampling is to be continued every 2 months until two consecutive samples indicate a blood level $< 40 \mu\text{g}/\text{dl}$.

11.2.5 Each time an employee's blood lead level results are returned from the lab indicating levels $\geq 40 \mu\text{g}/\text{dl}$, he or she is to be notified in writing within 5 working days by the Medical Examination Coordinator.

11.2.6 Employees whose average blood sampling results over the previous 6 month period indicate lead levels $\geq 50 \mu\text{g}/\text{dl}$, are to be removed from any work that would expose him or her to lead above the action level until such time that two consecutive tests indicate blood levels $< 40 \mu\text{g}/\text{dl}$.

12. RECORDS

12.1 Attachment 2, 3, 4, 5, 6, or 7 (when attached to a work package) is sent to CNS Records (quality record upon TECO).

NOTE – The following definitions are provided to clarify terms used in this procedure.

<u>TERM</u>	<u>DEFINITION</u>
ACTION LEVEL	An airborne concentration of lead of 30 $\mu\text{g}/\text{m}^3$ (micrograms per cubic meter of air), without regard to the use of respirators, calculated as an 8-hour time weighted average (TWA).
AEROSOLS	Airborne dust, mists, fumes, or vapors.
AIRBORNE PARTICLE	Small particles of lead in the air caused by high speed grinding or other machining, melting lead, or by handling powdered lead or lead shot. This is the most hazardous form of lead.
BASELINE	Baseline refers to the medical condition of an employee prior to being exposed to a contaminant.
BIOLOGICAL MONITORING	Blood sampling and analyses for lead and zinc protoporphyrin levels performed by or under the supervision of a licensed physician. The accuracy of the analyses shall be plus or minus fifteen percent ($\pm 15\%$) or six micrograms per deciliter 6 $\mu\text{g}/\text{dl}$, which ever is greater, with a confidence level of ninety-five percent (95%). Analyses shall be conducted by a laboratory approved by OSHA. Blood levels $\geq 40 \mu\text{g}/\text{dl}$ shall require immediate action to reduce employee exposure.
COMPETENT PERSON	One who is capable of identifying existing and predictable lead hazards and who has authorization to take prompt corrective measures to eliminate them.
EXPOSURE	Employer is required to determine if any employee is exposed to ASSESSMENT lead at or above the action level.
HEPA FILTER	A High Efficiency Particulate Air filter capable of trapping and retaining at least 99.97% of all monodispersed particles of 0.3 micrometers in diameter or larger.
LEAD	Metallic lead, all inorganic lead compounds, and organic lead soaps. Excluded from this definition are all other organic lead compounds.
OBJECTIVE DATA	Information demonstrating that a particular product or material containing lead or a specific process, operation or activity involving lead cannot release lead aerosols (dust, vapors, or fumes) in concentrations at or above the action level under any expected conditions. Examples include industry-wide studies or laboratory product test results.
PERMISSIBLE EXPOSURE LIMIT	Airborne concentration of lead $> 50 \mu\text{g}/\text{m}^3$ (micrograms per cubic meter of air) calculated as an 8-hour, time-weighted average.

<u>TERM</u>	<u>DEFINITION</u>
PERSONAL AIR MONITORING	Time Weighted Average (TWA) samples collected for at least six (6) hours, within twelve inches (12") of the employee's nose. Samples must meet the quality information requirements.
QUALITY INFORMATION	Information gathered following prudent industrial hygiene protocol. Air, bulk, and wipe sample results must be accurate to not less than plus or minus twenty-five percent ($\pm 25\%$) with a confidence level of ninety-five percent (95%).
TCLP	Toxicity characteristic leaching procedure. An EPA analytical procedure which is required for waste classification.
TWA	Time-Weighted Average is an averaged over a given (working) period of a person's exposure, as determined by sampling at given times or intervals during the period. Time Weighted Average (TWA) samples collected in the immediate area where activities that may produce lead aerosols are being conducted. Areal samples are usually collected for the entire duration of the shift or during just one operation (e.g., welding on a vessel). Samples must meet the quality information requirements.
WORK AREA	The work area is that part of the job or work task site where construction, demolition, or maintenance activities are being performed. The work area is not necessarily one contiguous area. It may be several smaller areas. Access to this area typically requires some employee indoctrination training and a minimal amount of personal protective equipment. Office space where administrative activities are performed are typically not part of the work area.

ATTACHMENT 3 LEAD BULK SAMPLE CUSTODY AND DATA

ATTACHMENT 3 LEAD BULK SAMPLE CUSTODY AND DATA

WO OR MM NUMBER: _____

Building or Location: _____

Project Description: _____ Project ID Number*: _____

Date Sample Obtained: _____ Obtained By: _____ SSN: _____

Laboratory Utilized: _____

Were Samples Taken and Analyzed by Same Individual? [] YES; [] NO

If NO, complete the multiple custody record below the sample number/descriptions section.

Bulk Sample ID Number:	_____	Description:	_____
Bulk Sample ID Number:	_____	Description:	_____
Bulk Sample ID Number:	_____	Description:	_____
Bulk Sample ID Number:	_____	Description:	_____
Bulk Sample ID Number:	_____	Description:	_____
Bulk Sample ID Number:	_____	Description:	_____
Bulk Sample ID Number:	_____	Description:	_____
Bulk Sample ID Number:	_____	Description:	_____
Bulk Sample ID Number:	_____	Description:	_____

ATTACHMENT 3 LEAD BULK SAMPLE CUSTODY AND DATA

RELINQUISHED BY	SEALED (S) OR UNSEALED (U)	RECEIVED BY	SEALED (S) OR UNSEALED (U)	DATE	TIME	REASON FOR CHANGE OF CUSTODY	

Comments: _____

Form Completed By:

Reviewed and Approved By:

Name: _____

Name: _____

Signature: _____

Signature: _____

Date: _____

Date: _____

*Obtain project ID Number from Radiation Protection Department.

ATTACHMENT 4 AIR SAMPLE DATA SHEET

ATTACHMENT 4 AIR SAMPLE DATA SHEET

WO OR MM NUMBER: _____

Air Sample ID Number: _____

Building or Location: _____

Project Start Date: _____ Project Number*: _____

Project Description: _____

Air Sample Date: _____

Air Sample Start Time: _____

Air Sample Stop Time: _____

Total Minutes Sampled: _____

Calibration and Sample Record Book Number: _____ Page Number: _____

Sample Location: _____

Type of Sample (check one): Personal; Area

Air Monitor Setup Performed By: _____ SSN: _____

Air Sample Worn By: _____ SSN: _____

Sample Results: _____ $\mu\text{g}/\text{m}^3$

Are Sample results an 8 hour time weighted average? YES; NO

Laboratory Used: _____

Date of Analysis: _____

INDIVIDUALS REPRESENTED BY AIR SAMPLE

Name	SSN

NOTE – A separate data sheet shall be completed for each sample.

Form Completed By	Form Reviewed By
Name:	Name:
Signature:	Signature:
Date:	Date:

*Obtain project ID Number from Radiation Protection Department.

ATTACHMENT 5 LEAD AIR SAMPLE CUSTODY AND DATA

ATTACHMENT 5 LEAD AIR SAMPLE CUSTODY AND DATA

Building or Location: _____

Project Description: _____ Project ID Number*: _____

Date Sample Obtained: _____ Obtained By: _____ SSN: _____

Laboratory Utilized: _____

Were Samples Taken and Analyzed by Same Individual? [] YES; [] NO

If NO, complete the multiple custody record below the sample number/descriptions section.

Bulk Sample ID Number:	_____	Description:	_____
Bulk Sample ID Number:	_____	Description:	_____
Bulk Sample ID Number:	_____	Description:	_____
Bulk Sample ID Number:	_____	Description:	_____
Bulk Sample ID Number:	_____	Description:	_____
Bulk Sample ID Number:	_____	Description:	_____
Bulk Sample ID Number:	_____	Description:	_____
Bulk Sample ID Number:	_____	Description:	_____
Bulk Sample ID Number:	_____	Description:	_____

ATTACHMENT 5 LEAD AIR SAMPLE CUSTODY AND DATA

RELINQUISHED BY	SEALED (S) OR UNSEALED (U)	RECEIVED BY	SEALED (S) OR UNSEALED (U)	DATE	TIME	REASON FOR CHANGE OF CUSTODY	

Comments: _____

Form Completed By:

Reviewed and Approved By:

Name: _____

Name: _____

Signature: _____

Signature: _____

Date: _____

Date: _____

*Obtain project ID Number from Radiation Protection Department.

ATTACHMENT 6 BULK LEAD SAMPLE LOG

ATTACHMENT 6 BULK LEAD SAMPLE LOG

Page _____ of _____

DATE	BULK SAMPLE	SAMPLE NUMBER	WO OR MM NUMBER (CNS)	PROJECT NUMBER*	AREA SAMPLED		LAB UTILIZED	TEST RESULTS LEAD CONTENT (%)
					Sample Taken By: (Name/SSN)	Sample Taken By: (Name/SSN)		
					By:	SSN:		
					By:	SSN:		
					By:	SSN:		
					By:	SSN:		
					By:	SSN:		
					By:	SSN:		
					By:	SSN:		

* Obtain Project ID number from Radiation Protection Department.

ATTACHMENT 7 PERSONNEL EXPOSURE DATA

ATTACHMENT 7 PERSONNEL EXPOSURE DATA

WO or MM NUMBER: _____ Page _____ of _____

PROJECT ID NO**:		PROJECT DESCRIPTION:					
PROJECT START DATE:							
AIR SAMPLE ID. NO.	SAMPLE DATE	SAMPLE TYPE*	SAMPLE RESULTS	INDIVIDUAL REPRESENTED BY SAMPLE	SSN	TYPE OF RESPIRATOR USED	PROTECTIVE CLOTHING
		<input type="checkbox"/> INITIAL		1			<input type="checkbox"/> YES <input type="checkbox"/> NO
		<input type="checkbox"/> PERIODIC		2			<input type="checkbox"/> YES <input type="checkbox"/> NO
		<input type="checkbox"/> DURATION		3			<input type="checkbox"/> YES <input type="checkbox"/> NO
				4			<input type="checkbox"/> YES <input type="checkbox"/> NO
				5			<input type="checkbox"/> YES <input type="checkbox"/> NO
AIR SAMPLE ID. NO.	SAMPLE DATE	SAMPLE TYPE*	SAMPLE RESULTS	INDIVIDUAL REPRESENTED BY SAMPLE	SSN	TYPE OF RESPIRATOR USED	PROTECTIVE CLOTHING
		<input type="checkbox"/> INITIAL		1			<input type="checkbox"/> YES <input type="checkbox"/> NO
		<input type="checkbox"/> PERIODIC		2			<input type="checkbox"/> YES <input type="checkbox"/> NO
		<input type="checkbox"/> DURATION		3			<input type="checkbox"/> YES <input type="checkbox"/> NO
				4			<input type="checkbox"/> YES <input type="checkbox"/> NO
				5			<input type="checkbox"/> YES <input type="checkbox"/> NO

ATTACHMENT 7 PERSONNEL EXPOSURE DATA

AIR SAMPLE ID. NO.	SAMPLE DATE	SAMPLE TYPE*	SAMPLE RESULTS	INDIVIDUAL REPRESENTED BY SAMPLE	SSN	TYPE OF RESPIRATOR USED	PROTECTIVE CLOTHING
		<input type="checkbox"/> INITIAL		1			<input type="checkbox"/> YES <input type="checkbox"/> NO
		<input type="checkbox"/> PERIODIC		2			<input type="checkbox"/> YES <input type="checkbox"/> NO
		<input type="checkbox"/> DURATION		3			<input type="checkbox"/> YES <input type="checkbox"/> NO
				4			<input type="checkbox"/> YES <input type="checkbox"/> NO
				5			<input type="checkbox"/> YES <input type="checkbox"/> NO

* **NOTE** – All samples must be personal samples.

**Obtain Project ID Number from Radiation Protection Department.

Form Completed By: _____ Reviewed and Approved By: _____
 Name: _____ Name: _____ Date Posting: _____
 Signature: _____ Signature: _____ Location of Posting: _____
 Date: _____ Date: _____ Date Removed: _____

1. DISCUSSION

- 1.1 The OSHA Action Level for an employee's exposure to airborne lead, without regard to the use of respirators, can not exceed a concentration of 30 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) calculated as an 8-hour TWA.
- 1.2 The OSHA Permissible Exposure Limit (PEL) for lead is 50 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) calculated as an 8-hour TWA. If an employee works a shift longer than 8 hours, the permissible exposure is reduced according to the following formula:
 - 1.2.1 Allowable Employee Exposure = $400 \div$ hours worked in the day.
- 1.3 Activities may involve exposures to lead, when the products contain or work process involve handling lead containing materials, when they can produce sufficient airborne or perceptible bodily exposures to lead, creating a personnel hazard.
 - 1.3.1 Personal monitoring (air sampling), may be used to evaluate potential exposures to airborne lead during these activities, to determine if control measures are required.
 - 1.3.2 Work processes, such as soldering or splicing lead coated cables, are not considered to create quantities of lead exposure sufficient to require protective measures due to the limited work times involved and the quantity of lead used in the materials.
- 1.4 Control measures will be established, based upon air sampling, or an evaluation of the information on the existing products from design specifications, MSDSs, or previous analytical results.
- 1.5 Employees performing lead-related work tasks shall, at a minimum, have the following training and medical surveillance accomplished prior to their engaging in lead-related tasks:
 - 1.5.1 Lead Awareness training.
 - 1.5.2 Medical respiratory evaluation.
 - 1.5.3 Respiratory training and fit tests.
 - 1.5.4 Baseline blood lead level determination.
- 1.6 Personnel protection requirements for lead exposure consists of:
 - 1.6.1 Respiratory protection.
 - 1.6.2 Protective clothing.
 - 1.6.3 Employee training.

- 1.6.4 Designated changing areas.
- 1.6.5 Hand washing facilities available for use.
- 1.6.6 Medical monitoring and surveillance, shall include a base line blood level determination prior to engaging in lead abatement jobs or tasks.
- 1.7 The protection provided to employees will be based on the work task to be performed.
- 1.8 Any lead projects performed within the RCA shall be reviewed by the appropriate personnel to ensure the job is completed ALARA.
- 1.9 Abatement projects requires the issuance of a Hazardous Work Permit (HWP).
- 1.10 PROPERTIES OF LEAD
 - 1.10.1 Metallic lead is a dense soft grey metal. It has numerous properties which have contributed to its use in many applications. Its properties include:
 - 1.10.1.1 It is durable and very workable.
 - 1.10.1.2 Does not corrode.
 - 1.10.1.3 Expands when water freezes, thereby preventing pipes from bursting.
 - 1.10.1.4 Does not readily crack due to building settling.
- 1.11 SOURCES OF LEAD
 - 1.11.1 White lead (for paint).
 - 1.11.2 Red lead, litharge (used for paints and ceramics).
 - 1.11.3 Interior and exterior lead-based paints.
 - 1.11.4 Soils in the immediate area below lead-based paints, especially green and white colors.
 - 1.11.5 Gasoline additives.
 - 1.11.6 Storage batteries.
 - 1.11.7 Electrical wire and cable coverings.
 - 1.11.8 Ammunition.
 - 1.11.9 Solder.
 - 1.11.10 Caulking.

1.12 This procedure is applicable to the removal of lead paint using any of the following methods:

1.12.1 HAND SANDING, SCRAPING, WIRE BRUSHING

1.12.1.1 Hand tool cleaning generates little dust and low quantity of debris.

1.12.1.2 This removal method is labor intensive and may not completely remove the risk of lead exposure.

1.12.1.3 The debris generated is usually limited to actual product (paint), which has a greater potential of being classified as a hazardous waste.

1.12.2 POWER WIRE BRUSHING AND GRINDING

1.12.2.1 Power tools, consisting primarily of needle guns, power wire brushes, grinders, flappers, and chippers, when configured for use with a High Efficiency Particulate Air (HEPA) filtered vacuum cleaner, provide a more effective but somewhat labor intensive method of lead paint removal.

1.12.2.2 Exposure to lead dust is generally reduced using this method.

1.12.2.3 The debris generated consists of actual product (paint) and small amounts of rust and or scale materials.

1.12.3 DRY ABRASIVE BLASTING

1.12.3.1 Dry abrasive blasting, with either expendable abrasive or recyclable abrasive, is very efficient in removing paint.

1.12.3.2 Because of the large amount of dust and debris generated, this method will require the tightest controls, such as containment to protect the environment.

1.12.3.3 In addition, ventilation and Personal Protective Equipment (PPE) shall be required to protect the workers.

1.12.4 WET ABRASIVE BLASTING

1.12.4.1 The use of abrasive with high pressure water blast will increase productivity.

1.12.4.2 The waste generated will be increased significantly and it is still necessary to collect and dispose of the waste water and debris properly.

1.12.4.3 Although wet methods of paint removal will greatly reduce the problem of airborne dust being inhaled, the hazard of ingestion still exists.

1.12.5 WELDING AND CUTTING TORCH

- 1.12.5.1 Welding and cutting dust fumes from lead-containing products poses a potential health hazard. This is one of the reasons why using heat on or around lead-containing materials is not recommended.
- 1.12.5.2 Inhalation of very fine particles, such as vapors or lead dust, fumes or mists, that are inhaled can get into the lungs is the fastest method for lead entry into the body.
- 1.12.5.3 The amount of lead that is absorbed by the body is dependant on the size of particles. Very small particles, such as those created by welding, that reach the lowest levels of the lungs are almost completely absorbed.

1.12.6 CHEMICAL STRIPPERS (*Peel-Away*® or similar materials)

- 1.12.6.1 This method of removing lead paint involves using a caustic or solvent based paste.
- 1.12.6.2 The paste is applied by trowel, brush, or spray and allowed to remain for several hours or overnight, and then removed by scraping.
- 1.12.6.3 Residue must then be thoroughly removed by washing or rinsing the material off.
- 1.12.6.4 The debris, consisting of stripper, paint, and rinsing material shall be collected and tested to determine if it is a hazardous waste.
- 1.12.6.5 With caustic strippers, the surface shall be neutralized before repainting.
- 1.12.6.6 While the use of chemical strippers will reduce the concern for airborne dust, caustic strippers can cause sever burns unless precautions are taken to keep the chemical off the skin and out of the eyes.
- 1.12.6.7 Solvent based strippers may be flammable and/or toxic and require proper safeguards.

1.13 TASKS ASSUMED TO CREATE EXPOSURES OF ~ 50-500 $\mu\text{g}/\text{m}^3$

- 1.13.1 Manual demolition (e.g., dry wall coated with lead containing paints, pipes, or joints containing lead, etc.).
- 1.13.2 Manual scraping (including the removal process using "*Peel-Away*®" in which the residue of paint must be mechanically removed).
- 1.13.3 Heat gun use for paint removal.
- 1.13.4 Cleaning with power tools with HEPA dust collection.
- 1.13.5 Spray painting with paints containing lead.

1.13.6 Any other tasks in which the exposure may exceed the PEL.

1.14 TASKS ASSUMED TO CREATE EXPOSURES OF $> \sim 500 \mu\text{g}/\text{m}^3$

1.14.1 Cleaning with power tools without HEPA dust collection.

1.14.2 Cleaning activities where dry abrasives are used.

1.14.3 Moving or removing blast enclosures.

1.15 TASKS ASSUMED TO CREATE EXPOSURES OF $> \sim 2500 \mu\text{g}/\text{m}^3$

1.15.1 Abrasive blasting.

1.15.2 Welding.

1.15.3 Cutting.

1.15.4 Torch burning.

1.16 HEALTH EFFECTS OF LEAD EXPOSURE

1.16.1 The effects of exposure to any hazardous material is dependent on the concentration of the material, the amount of time the worker is exposed, and the chemical nature of the hazardous material. The combined effect of two or more hazardous materials can produce an effect greater than that of either alone.

1.16.2 Dust fumes from lead poses a potential health hazard. There are two routes by which this lead can enter the body.

1.16.2.1 Inhalation of lead dust, fumes, or mists. Only very fine particles, such as vapors or lead fumes, that are inhaled can get into the lungs. This is the fastest method for lead entry into the body. It is absorbed into the blood stream and is circulated throughout the body and stored in various organs and tissues. In normal adults 30% to 50% of inhaled lead is retained. The amount of lead that is absorbed by the body is dependant on the size of particles. Very small particles, such as those created by welding, that reach the lowest levels of the lungs are almost completely absorbed. This is one of the reasons why using heat on or around lead containing materials is not recommended.

- 1.16.2.2 When lead is ingested, swallowed, and dissolved by stomach acids, the gastrointestinal tract absorbs part of the lead that was ingested. For adults, about 5% to 15% of the ingested lead is absorbed. The amount of lead absorbed is dependent upon the size of the particles. Generally the smaller the particles, the higher the absorption rate. Fine dusts generated by sanding or grinding are more readily absorbed than flakes of paints. In addition, fine dusts are harder to detect and control, and therefore more easily ingested.
- 1.16.3 Lead ingestion is probably the exposure pathway that most contributes to lead exposure. It is very important to ensure lead containing dust is cleaned from the work area.
- 1.16.4 As exposure to lead dust, fumes, or mists continues, the amount of lead stored in the body increases, if the individual is absorbing more lead than the body is excreting.
- 1.16.4.1 Health effects can vary, depending upon the exposures. Symptoms of lead poisoning include:
- a. Headache.
 - b. Poor appetite.
 - c. Dizziness.
 - d. Irritability/Anxiety.
 - e. Constipation.
 - f. Pallor.
 - g. Excessive tiredness.
 - h. Numbness.
 - i. A metallic taste in the mouth.
 - j. Muscle/joint pain/soreness.
 - k. Sleepiness.
 - l. Weakness.
 - m. Reproductive difficulties.
 - n. Nausea.
 - o. Fine tremors.

p. "Lead Line" on gums.

q. Hyperactivity.

1.16.4.2 Chronic over exposure to lead may result in damage to the following systems: blood forming, nervous, urinary, and reproductive.

2. RESPONSIBILITIES

2.1 MANAGEMENT

2.1.1 CNS Management is responsible for ensuring this procedure is implemented and communicating their expectations concerning the Lead Procedure to NPPD employees and contractors on the site.

2.2 RADIATION PROTECTION DEPARTMENT

2.2.1 The Radiation Protection Department has been designated as the Lead Program Administrator for CNS, to provide oversight on the lead abatement projects and ensure procedural adherence.

2.2.2 The Radiation Protection Department, as Program Administrator, is responsible for:

2.2.2.1 Monitoring the implementation practices by the appropriate Job or Work Task Supervisor.

2.2.2.2 Ensuring the Lead Program components are integrate with the CNS Industrial Safety Programs.

2.2.2.3 Providing oversight during the performance of ongoing lead abatement projects.

2.2.2.4 Reviewing and updating the Lead Abatement Program and procedures, as necessary.

2.2.2.5 Verifying records for lead jobs or work tasks, Engineering controls, and related reports are documented and maintained.

2.2.2.6 Verifying testing is performed to determine the presence of lead.

2.2.2.7 Ensuring airborne lead monitoring is performed to determine the appropriate use of personal protective clothing and equipment, Engineering controls, and administrative procedures are followed.

2.2.2.8 Ensuring employees are identified by the appropriate Job or Work Task Supervisor, for inclusion into the lead biological monitoring and medical surveillance programs.

2.3 Job Supervisors are responsible for:

- 2.3.1 Ensuring employees are aware of the procedural requirements when performing lead related jobs or work tasks.
- 2.3.2 Ensuring personnel are appropriately trained, respirator fit tested, and have the appropriate medical testing prior to performing lead jobs or work tasks.
- 2.3.3 Identifying existing and predicable lead hazards and take prompt corrective measures to ensure the procedural requirements are met.
- 2.3.4 Planning and directing personnel in jobs or work tasks involving lead to ensure compliance with CNS procedures.

2.4 Employees are responsible for complying with the CNS Lead Procedural requirements, attending the required training, and informing the Job Supervisor or the Radiation Protection Department of concerns or ideas for improving the program.

2.5 Medical Examination Coordinator (GO) is responsible for:

- 2.5.1 Establishing biological (blood level) monitoring and medical surveillances are performed for affected personnel.
- 2.5.2 Maintaining medical records and related documentation for both CNS (or NPPD) as well as contractors working at CNS involved with lead exposures.
- 2.5.3 Notifying individuals of their blood lead level results within 5 days of receipt of the results.

3. REFERENCES

3.1 COMMITMENTS AND OBLIGATIONS MATRIX

COMMITMENTS AND OBLIGATIONS	AFFECTED STEPS
QAPD	Unvalidated

3.2 CODES AND STANDARDS

- 3.2.1 NPPD Environmental Policy Department's Lead Procedure.
- 3.2.2 30CFR Part 11.140-5, National Institute for Occupational Safety and Health (NIOSH), NIOSH Certified Equipment List.
- 3.2.3 Occupational Safety and Health Administration (OSHA) Standard, 29CFR 1910.1025, Lead (General Industry).
- 3.2.4 OSHA Standard, 29CFR 1910.1926.62, Lead (Construction Industry).
- 3.2.5 OSHA Standard 29CFR 1910.134, Respirator Protection.