

AIR CONTAMINANTS AND NOISE-LEVEL MONITORING -
MATERIAL REPROCESSING AND CONSOLIDATION
(MARC) CENTERS

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1. GENERAL

- 1.01 This section details procedures to be followed by the Logistics Services District and Procurement Safety to monitor certain air contaminants, i.e., lead dust, carbon monoxide, and noise levels, in a Material Reprocessing and Consolidation (MARC) Center work environment.
- 1.02 When this practice is reissued, the reason(s) for re-issue will be stated in this paragraph.
- 1.03 Guidelines addressing monitoring and controlling asbestos fibers in the workplace are provided in SW 010-100-904, Asbestos Procedures.

2. PURPOSE

- 2.01 Guidelines detailed in this section are provided to assist in controlling air contaminants and noise levels, and maintaining a safe MARC Center work environment.
- 2.02 Southwestern Bell Telephone (SWBT) Company has an overall legal responsibility to provide and maintain a workplace in which air contaminants and noise levels are below or equal to standards established by local, state and federal regulations.
- 2.03 The monitoring of air contaminants and noise levels at a MARC Center shall be in compliance with the Occupational Safety and Health Administration (OSHA) regulations, as well as applicable local and state regulations.

3. DEFINITIONS

- 3.01 Terms listed in this part are used throughout this practice and are provided to aid the reader in understanding the text.
- 3.02 **Action Level (lead):** The level when airborne concentrations of lead reach 30 micrograms per cubic meter

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(30 $\mu\text{g}/\text{m}^3$) of air requiring additional work practice and administrative controls.

- 3.03 **Action Level (noise):** An eight-hour time-weighted average of 85 decibels measured on the A-scale, slow response, or equivalently, a dose of fifty percent.
- 3.04 **Baseline Audiogram:** The audiogram against which future audiograms are to be compared.
- 3.05 **Decibel(dB):** A dimensionless unit used to express sound levels. Zero dB is the weakest sound that can be heard by a person with very good hearing in an extremely quiet location.
- 3.06 **$\mu\text{g}/\text{m}^3$:** Micrograms per cubic meter of air, the unit of measure for airborne lead concentrations.
- 3.07 **Permissible Exposure Limit (PEL):** Limit of exposure established by law averaged over an eight-hour period.

4. ROLES AND RESPONSIBILITIES

- 4.01 Paramount to controlling air contaminants and noise levels in the MARC Center environment is the administration and coordination of roles and responsibilities between related work groups. Those roles and responsibilities are as follows:
 - a) The Area Manager-Disposition Operations is responsible for:
 - 1. Administering the contract between Southwestern Bell Telephone Company and the contracting agency.
 - 2. Coordinating the scheduling of tests with Procurement Safety.
 - 3. Notifying Procurement Safety of changes in personnel, work operations or process controls which may result in new or additional exposure to air contaminants or increased noise levels.

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4. Notifying SWBT Company MARC Center personnel of laboratory analysis results.
- b) Procurement's Area Manager-Safety and Security Administration is responsible for:
1. Interpreting OSHA standards and providing direction to the Logistics Services District in order that operations performed at MARC Center locations are in compliance with current regulations.
 2. Acting as interface between the Procurement Department and the GHQ Safety staff.
 3. Conducting environmental testing to evaluate whether possible air contaminants are below or within permissible exposure limits (PEL), where applicable.
 4. Monitoring noise levels to determine occupational exposure.
 5. Forwarding air-contaminant test samples to accredited laboratories for analysis and acquiring results.
 6. Providing results of environmental testing to the Logistics Services District and the contracted labor agency.
 7. Recommending corrective action(s), which meets OSHA compliance, where air contaminants and/or noise levels exceed the action level or PEL for any given test.
 8. Performing periodic safety reviews to verify compliance with this practice.

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- c) The Manager-Disposition Operations is responsible for:
 - 1. Coordinating with representatives of Procurement Safety in order that monitoring of work conditions is timely and results are within acceptable parameters.
- d) The "lead person" employed by the contracted agency is responsible for:
 - 1. Supervising contracted employees during work operations which enhance the value of material received in the MARC Center.
 - 2. Identifying conditions not in keeping with the best health interests of contracted employees and rectifying such conditions.

5. BIOLOGICAL MONITORING (LEAD)

- 5.01 Prior to initial work assignment, blood-lead samples and analysis shall be conducted on SWBT Company personnel who may be exposed above the action level for more than 30 days per year in a MARC Center environment. Also, as required by law, the contracted agency is expected to have blood-lead samples and analysis conducted on their personnel.
- 5.02 Blood-lead samples and analysis will be conducted by a laboratory licensed by the Center for Disease Control (CDC), United States Department of Health, Education and Welfare. Sample analysis can also be conducted by a laboratory that has received a satisfactory grade in blood-lead proficiency testing from the CDC in the prior 12 months.
- 5.03 SWBT Company personnel results of blood-lead samples taken will be forwarded by the laboratory to the Area Manager-Disposition Operations.

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A. Employee Notification (Lead)

SWBT Personnel

- 5.04 Personnel whose blood-lead results exceed 40 µg/100g of whole blood shall be notified in writing within five (5) working days after SWBT receives the biological monitoring results from the laboratory.
- 5.05 Personnel whose blood-lead results are below or equal to 40 µg/100g of whole blood shall be notified in a timely manner.
- 5.06 The report received from the laboratory may be utilized as notification to personnel referred to in paragraphs 5.04 and/or 5.05.
- 5.07 Personnel shall acknowledge notification of the blood-lead results by signing and dating the laboratory report. The manager disclosing laboratory results shall concur coverage with personnel by dating and initialing the report.
- NOTE: SHOULD AN EMPLOYEE REFUSE TO ACKNOWLEDGE BLOOD-LEAD RESULTS HAVE BEEN DISCLOSED TO HIM/HER, IT SHALL BE SO NOTED ON THE LABORATORY RESULTS.**
- 5.08 A copy of the signed laboratory analysis reports shall be forwarded to Procurement Safety.

Contracted Personnel (Lead)

- 5.09 Notification to contracted personnel of blood-lead sample results is the responsibility of the contracting agency.
- 5.10 Personnel whose blood-lead sample results are at or above 40 µg/100g of whole blood shall be re-assigned to nonlead-handling work operations until two consecutive blood-lead analysis are below 40 µg/100g of whole blood. The designated lead person will inform the Manager-MARC Operations of any necessary job reassignments.

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B. Follow-up Blood-Sampling Test (Lead)

5.12 Six months following initial monitoring, blood-lead sample(s) and analysis shall be conducted to determine personnel's current blood-lead level.

NOTE: CONTINGENT ON BLOOD-LEAD SAMPLE RESULTS, WORK CONDITIONS, PERSONNEL, ETC., MONITORING MAY BE CONDUCTED MORE FREQUENTLY, AS DETERMINED BY SWBT.

5.13 Personnel indicating blood-lead levels below 40 $\mu\text{g}/100\text{g}$ of whole blood shall have blood-lead levels monitored on an annual basis, following the six month analysis.

5.14 Personnel with blood-lead levels analyzed at or above 40 $\mu\text{g}/100\text{g}$ of whole blood will be monitored every month following the six month analysis until two consecutive blood samples are analyzed at or below 40 $\mu\text{g}/100\text{g}$ of whole blood. Thereafter, blood-lead samples and analysis will be conducted as directed in paragraph 5.13.

5.15 Personnel indicating exposure levels at or above 40 $\mu\text{g}/100\text{g}$ of whole blood shall be re-assigned to a nonlead-handling assignment.

C. Medical Surveillance (Lead)

5.16 Personnel who may be exposed above the action level for more than 30 days per year shall be included in a Medical Surveillance Program.

NOTE: THE CONTRACTING AGENCY IS RESPONSIBLE FOR INSTITUTING A MEDICAL SURVEILLANCE PROGRAM FOR CONTRACTED PERSONNEL.

5.17 The Medical Surveillance Program shall be administered in compliance with OSHA regulations.

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6. COORDINATING AIR-CONTAMINANTS MONITORING

- 6.01 Routine monitoring for air contaminants in a MARC Center shall be performed semiannually unless analyzed results or unusual activity likely to release contaminants in the air indicates the need for more frequent monitoring.
- 6.02 Scheduling to conduct monitoring shall be coordinated by the Area Manager-Safety and Security Administration with the Area Manager-Disposition Operations.

A. Lead-Dust Monitoring

- 6.03 Air monitoring for each work operation and job classification requiring the handling of lead shall be performed. These operations may vary for each MARC Center.
- 6.04 Personal samples shall be collected from a representative number of contracted labor and SWBT company personnel for a minimum of seven continual hours.
- 6.05 The date, time, name and social security number of individual(s) selected and work operation(s) involved during monitoring shall be recorded on the Sample Data Sheet (Exhibit 1). Air sampling cassettes utilized for monitoring will be assigned a unique serial number corresponding to the Sample Data Sheet for cross referencing.

NOTE: Additional information recorded on the Sample Data Sheet shall be in accordance with OSHA's Industrial Hygiene Technical Manual.

- 6.06 An unused air-sampling cassette shall be exchanged for the previous cassette each time personnel participating in the monitoring change work operations. For example, a sampling cassette placed on an individual assigned to dereel lead cable for two and one-half hours shall be exchanged with a new cassette when that same person is assigned to a new work operation for the remaining four and one-half hours.

NOTE: Individual personnel will not handle lead more than three hours in any given work day. A

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daily log (Exhibit 2) shall be maintained by the Manager-MARC Operations indicating the period of time personnel are assigned to a lead-handling operation.

- 6.07 The time of removal shall be recorded on each cassette and corresponding Sample Data Sheet as it is removed from participating personnel.
- 6.08 Upon the recommendation of Procurement Safety, any personnel suspected of exposure above the PEL during monitoring will be removed from the work assignment(s) in the suspected work area until an analysis of exposure level is determined.

B. Laboratory Analysis and Disclosure (Lead)

- 6.09 Sampling cassettes shall be forwarded within five workdays following monitoring to an accredited laboratory for analysis.
- 6.10 Within two (2) working days of receipt of airborne-lead sample analysis, Procurement Safety shall forward personal sample results to the Area Manager-Disposition Operations. Laboratory analysis shall be disclosed to personnel within five (5) working days after receipt by the company.
- 6.11 The Disclosure of Environmental Tests Results-Personal Samples Sheet (Exhibit 3) will be utilized to disclose laboratory analysis to personnel.
- 6.12 Where measurements equal or exceed the PEL, 50 $\mu\text{g}/\text{m}^3$, appropriate administrative, work practice and engineering controls shall be determined by the Area Managers. Implementing of determined administrative, work practice and engineering controls will assist in achieving an immediate reduction in exposure to personnel.

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C. Follow-up Lead-Dust Monitoring

- 6.13 Contingent on exposure measurements, follow-up testing shall be scheduled as outlined below:
- a) exposure equal to or exceeding the PEL - testing shall be conducted monthly until two consecutive measurements performed at least seven (7) days apart are equal to or below the action level. At that time, monitoring shall be conducted as stated in paragraph 6.01.
 - b) In addition, if there is a change in operation, process control or personnel which may result in new or additional exposure to lead; or whenever management has any other reason to suspect a change could result in new or increased lead levels, additional monitoring in accordance with this practice must be conducted.

7. VERIFICATION OF COMPLIANCE (LEAD)

SWBT Personnel

- 7.01 At the time of initial job assignment and annually thereafter, Appendices A and B of 29 CFR, Part 1910.1025 will be reviewed by each SWBT employee assigned to work at a MARC Center.
- 7.02 Each SWBT employee reviewing Appendices A and B shall sign the Lead Substance Data Sheet, Exhibit 4, acknowledging coverage of the appendices. The acknowledgement sheet will be maintained in the employee's personnel file located in the District Office.

NOTE: SHOULD AN EMPLOYEE REFUSE TO ACKNOWLEDGE COVERAGE OF APPENDICES A AND B, IT SHALL BE SO NOTED ON THE LEAD SUBSTANCE DATA SHEET.

- 7.03 The Area Manager-Safety and Security Administration will schedule an annual review to monitor compliance to OSHA regulations with SWBT company employees. Review of compliance to OSHA regulations shall include but are not limited to the following:

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- a) **employee information and training** (to include date of training and information from Appendices A and B of the 29 CFR, Section 1910.1025);

NOTE: COVERAGE OF THE RESPIRATOR PROTECTION PROGRAM IS ADDRESSED IN APPENDIX B OF SECTION 1910.1027.

- b) **biological monitoring and written notification to employee** (to include date of blood-lead level test, name and social security number of employee tested, receipt date of notification from lab, copy of notification provided to employee, and date notified);
- c) **written notification of environmental monitoring results; and**
- d) **proof of medical examinations for employees indicating a blood lead level at or above 40 µg/100g during the preceding 12 months.** (Refer to the OSHA Standard, Section 1910.1025, paragraph (j), Medical surveillance for items to be included during compliance review.)

- 7.04 Area(s) of noncompliance will be brought to the attention of the Area Manager-Disposition Operations, corrective action determined and documented by Procurement Safety. A copy of the documented review will be forwarded to the District Manager-Logistics Services.

Contracted Personnel

- 7.05 As required by law, the contracting agency shall be responsible for coverage of Appendices A and B of 29 CFR with its employees.

8. OTHER AIR CONTAMINANTS

- 8.01 Personal, when required, and area samples of additional air contaminants, i.e., carbon monoxide, possibly present in a MARC Center environment and

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noise-level monitoring will be conducted as stated in paragraph 6.01.

A. Carbon Monoxide Testing

- 8.02 Area and personal sampling will be conducted to determine the exposure level of carbon monoxide in each MARC Center.
- 8.03 To obtain personal samples, monitoring equipment will be attached to clothing, as close as practicable, near the breathing zone of personnel participating in the testing.
- 8.04 Area samples will be obtained by displaying testing equipment in locations where fork-lift traffic is expected to be heaviest.
- 8.05 The Procurement Safety staff will administer testing for carbon monoxide in accordance with instructions provided by the manufacturer of the monitoring equipment.
- 8.06 The cumulative exposure for an eight-hour work shift shall be recorded on the Detector Tube Data worksheet illustrated in Exhibit 5.

NOTE: Additional information recorded on the Detector Tube Data worksheet shall be in accordance with OSHA's Industrial Hygiene Technical Manual.

- 8.07 Exposure to carbon monoxide in any eight-hour work shift shall not exceed 35 parts per million (ppm). Computations resulting in exposure levels above 35 ppm will require the immediate implementing of engineering controls by Logistics Services. Engineering controls to increase ventilation, e.g., forced movement of air by motorized fans, opening of additional windows and/or doors, etc., can be utilized to achieve compliance with OSHA regulations.
- 8.08 Remonitoring will be performed on the same or subsequent day of the initial test to ensure engineering controls implemented were successful in lowering the exposure level.

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B. Noise-Level Exposure Monitoring

- 8.09 Personal monitoring to determine the noise level in a MARC Center will be conducted utilizing a dosimeter. Area monitoring shall be performed when the noise levels are relatively constant and personnel is not mobile.
- 8.10 Manufacturer's instructions contained in dosimeter and sound-level meter operating manuals shall be followed.
- 8.11 Test results will be recorded on the Noise Survey worksheet illustrated in Exhibit 6.

NOTE: Information recorded on the Noise Survey work sheet shall be in accordance with OSHA's Industrial Hygiene Technical Manual.

- 8.12 Results indicating an exposure to noise over an eight-hour time weighted average of 85 dBa or greater will require coordination between Procurement Safety and Logistics Services to implement engineering controls, i.e., baffling, noise enclosures, isolation, etc.
- 8.13 Additional monitoring shall be conducted when there are significant changes in machinery or production processes that may result in increased noise levels.

9. RECORD RETENTION

- 9.01 Biological monitoring results, environmental monitoring results and compliance reviews shall be retained for 40 years or the term of service plus 20 years, whichever is longer, on MARC Center personnel by Procurement Safety.

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EXHIBIT 3

DISCLOSURE OF ENVIRONMENTAL TESTS RESULTS
(PERSONAL SAMPLE)

Following are the results of tests for airborne lead performed on _____ at the _____ (date) (facility) in _____ (address). The samples were analyzed by _____ of _____ (laboratory) (city, state).

EMPLOYEE: _____ SSN: _____
JOB TITLE: _____

RESULTS:

_____ $\mu\text{g}/\text{m}^3$ based on 8 HR. T.W.A.

ADDITIONAL INFORMATION:

Action Level = 30 $\mu\text{g}/\text{m}^3$

Permissible Exposure Level = 50 $\mu\text{g}/\text{m}^3$

ACKNOWLEDGMENT: The undersigned acknowledges receipt of the test results as stated above.

Employee Signature: _____ Date _____

Concurred By: _____ Date _____

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EXHIBIT 5

DETECTOR TUBE DATA WORKSHEET

DETECTOR TUBE DATA

LOCATION (ADDRESS, STREET, CITY, STATE, ZIP CODE NO., POB NO.)						Date:
PUMP OFF	Model	Serial	Leak Check	Detector Tube	Lot No.	Expiration Date
Temperature		Relative	Humidity			
Job Description, Comments, Work Location(s), Conditions, Comments, Sketch						
Detector Tube	Time	Re- Screen	Color	Concentration	Location (See Sketch)	Comments
Measurements Taken By _____						Signature

NOTE: SAMPLE DATA SHEET TO BE PREPARED BY PROCUREMENT SAFETY IN ACCORDANCE WITH IN OSHA'S INDUSTRIAL HYGIENE TECHNICAL MANUAL.

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EXHIBIT 6

NOISE SURVEY WORKSHEET

NOISE SURVEY

DATE _____

EMPLOYEE / AREA : _____ SS# : _____

TITLE : _____

WORK ADDRESS : _____

SUPERVISOR : _____ PHONE : _____

TYPE OF WORK PERFORMED : _____

TYPE OF EQUIPMENT USED : _____

DESCRIPTION OF WORK ACTIVITY : _____

LOCATION OF WORK ACTIVITY : _____

SURVEY INSTRUMENT : _____

SERIAL # : _____

CALIBRATION DISPLAY : _____

START _____ FINISH _____

TIME MONITORED : _____

HTL L-AVG _____

HTL DOSE _____

HTL TWA _____

LTL L-AVG _____

LTL DOSE _____

LTL TWA _____

PEAK LEVEL _____

SLOW MAX _____

OL TIME _____

REMARKS _____

SURVEYOR _____

NOTE: SAMPLE DATA SHEET TO BE PREPARED BY PROCUREMENT SAFETY IN ACCORDANCE WITH OSHA'S INDUSTRIAL HYGIENE TECHNICAL MANUAL.

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