

HEALTH AND SAFETY PLAN  
THORIUM AREA REMEDIATION  
PERMANENT MOLD AREA  
CLEVELAND WORKS  
ALUMINUM COMPANY OF AMERICA

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PREPARED FOR  
ALUMINUM COMPANY OF AMERICA  
PITTSBURGH, PENNSYLVANIA

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## 1.0 INTRODUCTION

This Health and Safety Plan (HASP) describes the program to be implemented by the remediation contractor during the thorium area remediation for the Aluminum Company of America (Alcoa) at the Cleveland Works in Cleveland, Ohio. A site location map appears in Figure 1. The objective of this plan is to provide site-specific procedures to protect the health and safety of personnel during the conduct of this project and to mitigate the potential for off-site release of contaminants. All work shall be performed in accordance with Alcoa's "Specifications for Radiological Site Assessment and Remediation of the Southern Portion of the Permanent Mold Casting Division" dated May 30, 1990, revised June 27, 1990, and applicable federal, state, and local regulations, including:

- U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) - 29 Code of Federal Regulations (CFR) 1910 and 29 CFR 1926
- OSHA 29 CFR 1926
- U.S. Nuclear Regulatory Commission (NRC) - 10 CFR 20.

Additionally, the following shall be used as reference in the development and implementation of the health and safety programs:

- National Institute for Occupational Safety and Health/ OSHA/U.S. Coast Guard/U.S. Environmental Protection Agency (NIOSH/OSHA/USCG/EPA) Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, October 1985.
- U.S. Department of Health and Human Services, September 1990, Public Health Service, Centers for Disease Control, NIOSH, NIOSH Pocket Guide to Chemical Hazards.

- Weast, Robert C., Ph.D., Editor, 1976, Handbook of Chemistry and Physics, CRC Press, Cleveland, Ohio.
- American Conference of Governmental Industrial Hygienists, Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices for 1990 to 1991.
- American Industrial Hygiene Association, 1980, Manual of Recommended Practice for Combustible Gas Indicators and Portable, Direct Reading Hydrocarbon Detectors, American Industrial Hygiene Association, Akron, Ohio
- Sax, Irving N., Editor, Dangerous Properties of Industrial Material. 7th Edition.

### 1.1 PROGRAM DESIGN

The health and safety practices, procedures, and personal protective equipment (PPE) are based on site characterization and hazard assessment. Site characterization and hazard assessment are ongoing activities, and the level of protective procedures and practices shall be continuously evaluated during the conduct of this work to provide a safe working environment. All protective measures employed shall be commensurate with hazards associated with specific work activities and job tasks.

All contractor employees shall be adequately trained in health and safety aspects of their specific job assignments and in all aspects of this plan, including:

- Program organization and responsibilities
- Site characterization and hazard assessment
- Medical surveillance requirements
- Work practices and site control
- PPE
- Monitoring
- Materials handling and decontamination
- Emergency response
- Recordkeeping.

This HASP is derived from existing information on site characterization and hazard assessment. Information and experience gathered during the project may be used to modify and/or develop the HASP to tailor protective measures to actual hazards as necessary. Changing site conditions may also warrant changes in the HASP. Any changes shall be approved by the Alcoa and Contractor Corporate Health, Safety, and Industrial Hygiene Group and documented in site logs and records.

All employees working on site must be made familiar with the information, instructions, and emergency response procedures contained in the site-specific HASP. This training shall be documented per Chapter 9.0.

## 2.0 PROGRAM ORGANIZATION AND RESPONSIBILITIES

Implementation of the HASP shall be accomplished through an integral team effort comprised of the following:

- Project Manager - The Project Manager is responsible for assuring that all activities are conducted in accordance with the HASP. The Project Manager has the authority to suspend field activities if employees are in danger of injury or exposure to harmful agents. The Project Manager's responsibilities include:
  - Coordination of development of a site-specific HASP for all phases of the project
  - Assure that the appropriate health and safety equipment and PPE are available for project personnel
  - Assure that all personnel have received the appropriate training before they engage in activities that are potentially hazardous
  - Assure that all personnel have received the required medical examination, testing, and screening before engaging in work activities
  - Designate a Site Health and Safety Officer (SHSO) and other site personnel who will assure compliance with the HASP.
- Site Health and Safety Officer - The SHSO is responsible for the implementation of the HASP. The SHSO will:
  - Coordinate weekly safety meetings and daily safety briefings, as necessary
  - Manage health and safety equipment, including instruments, respirators, gloves, suits, and other PPE, used in field activities
  - Arrange emergency response provisions in cooperation with local emergency and health officials
  - Monitor conditions during field activities to assure compliance with HASP
  - Monitor conditions during field activities to determine if more stringent procedures or a higher level of PPE should be implemented

- Maintain log to record conditions, personnel involved in field activities, and other pertinent health and safety data
- Oversee the arrangement and execution of personnel and equipment decontamination
- Control visitor access to hazardous areas
- Suspend field activities if the health and safety of personnel are endangered.
- Project Health and Safety Officer (PHSO) - The PHSO is responsible for general development and monitoring of compliance with the HASP. The PHSO will be the primary contact for inquiries to the contents of the HASP. The PHSO will be consulted before changes to the HASP are approved or implemented. The PHSO will:
  - Develop new protocols or modify the HASP as appropriate and issue amendments to the HASP
  - Resolve issues that arise in the field with respect to interpretation or implementation of the HASP
  - Monitor the field program through a regular review of field health and safety records, on site audits of activities, or a combination of both
  - Determine that all on-site personnel have received the required training and medical surveillance
  - Coordinate review, evaluation, and approval of the HASP
  - Monitor compliance of site operations.
- Corporate Health and Safety Officer (CHSO) - The CHSO is responsible for:
  - Arrangement of training programs for site personnel
  - Arrangement of medical surveillance and injury management for site personnel
  - Review, evaluation, and approval of the HASP
  - Monitor compliance of site operations
- On-Site Field Health Physicist (FHP) - The FHP will be responsible for conducting monitoring for radioactivity, and implementation of the Radiological Control Plan.

- Employees and Subcontractors - Employees and subcontractors will be responsible for the following:
  - Familiarity with the HASP
  - Attend training sessions to review the HASP
  - Be alert to identified and non-identified hazards
  - Report unidentified hazards to the SHSO
  - Offer suggestions, ideas, or recommendations that may improve or enhance site safety
  - Comply with all contents of the HASP
  - Conduct must be orderly and appropriate for the site
  - Subcontractors are responsible for providing documentation of 40-hour training and a physicians "fit-for-duty" statement.

### 3.0 SITE CHARACTERIZATION AND HAZARD ASSESSMENT

#### 3.1 SITE BACKGROUND

Radioactive thorium is present at the permanent mold area located along the southern property line of the Alcoa facility at 2210 Harvard Avenue, Cleveland, Ohio. The radioactive thorium is believed to have been used in the alloying of magnesium by American Magnesium Company in the early 1900s. Alcoa is currently decommissioning portions of an aluminum forging facility at this location.

Several studies evaluating the presence of radioactive materials have been conducted at this site from 1985 through 1990. The studies indicate that an area measuring 70 by 100 feet contains thorium-232 (Th-232) in excess of the NRC release criteria. Materials that contain Th-232 in excess of the NRC release criteria will be removed for disposal after a careful screening and verification. An estimated area of contamination appears in ~~in~~ Figure 2.

#### 3.2 WORK PLAN

The contaminated area will be excavated in 0.1 yard increments using a small tractor-backhoe and an assortment of hand tools. Excavating will continue until the field instruments indicate that the soils at the interior surfaces of the excavation do not exhibit radioactivity above two times background.

Surface readings and wipe samples of exposed surfaces of the concrete slab will be collected during excavation activities. If sample analysis results indicate surface contamination in excess of established criteria, grinding of the surfaces will be conducted.

Materials identified for disposal will be loaded directly from the staging pile to the dump trailer using a front-end loader for bulk transportation to the disposal site.

Additional information and the full work plan appears in "Work Plan, Thorium Area, Cleveland Works," dated June 14, 1991.

### 3.3 HEALTH HAZARD ASSESSMENT

Th-232 is an unstable element that is radioactive. Thorium and its decay products will emit three types of ionizing radiations: alpha, beta, and gamma.

Alpha radiation is the least penetrating ionizing radiation. The outer layers of skin or clothing will stop alpha radiation. Alpha particles may be hazardous if inhaled or ingested.

Beta radiation has more penetrating ability than alpha. Beta radiation can cause damage to tissue and blood directly below the skin surface and can cause harmful burns to the skin. Beta radiation is also harmful if ingested or inhaled. Good personal

hygiene practices and protective clothing will protect against both beta and alpha radiation.

Gamma radiation has the most penetrating ability and can penetrate through all normal chemical protective equipment. Protective equipment will prevent inhalation and ingestion of gamma radiation-emitting dust and other materials.

For the purpose of determining compliance with requirements, the radiological control plan will specify suitable measurements of concentrations of radioactive materials in the air for detecting and evaluating airborne activity.

### 3.4 SEASONAL HAZARDS

#### 3.4.1 Heat Stress

Heat stress is a general physical hazard associated with outdoor work on hot days. There are three disorders that are of particular concern:

- Heat cramps
- Heat exhaustion
- Heat stroke.

Heat cramps occur due to the depletion of body salts from sweating. Heat exhaustion results from significant loss of body salts and fluid. Its symptoms may include weakness or fatigue, nausea, headaches, and in more serious cases, clammy, moist skin with

pale or flushed complexion. Heat stroke is the most serious and occurs when the body's system to regulate internal temperature fails. Symptoms are hot, dry skin, mental confusion or delirium, convulsions or unconsciousness, and body temperature of 105 degrees Fahrenheit (°F) or higher. In this situation, medical attention is needed immediately.

To prevent heat disorders, attention shall be paid to such variables as temperature, humidity, air movement, and the physical condition of employees. In addition, work breaks shall be taken as needed to let the body cool. Liquids designed to replace lost body salts shall be provided regularly.

#### 3.4.2 Heat Stress Prevention

Heat stress symptoms shall be monitored closely by the SHSO. A modified work/rest regime shall be implemented by the SHSO according to this procedure. The work/rest schedule shall be dependent on weather conditions encountered. A 10-minute break shall be taken at times to allow the SHSO to check heart rates according to the following schedule:

- Self-monitoring of physical condition and buddy monitoring will be essential in order to prevent any heat stress illness.
- When temperatures reach above 70°F, the SHSO shall monitor the heart rate of each working employee every 90 minutes.
- When temperatures reach above 80°F, the heart rate shall be monitored every 60 minutes and above 90°F, every 30 minutes.

- If individuals' heart rates are 110 beats per minute or less, they can resume work. If greater than 110 beats per minute, individuals will break another 10 minutes. If the heart rate is reduced below 110 at the end of the second 10-minute break, the employee may return to work and the next work period should be reduced by 33 percent (e.g., at 70°F to 80°F, work period should be reduced to 60 minutes; at 80°F to 90°F, reduce to 40 minutes; and at greater than 90°F, reduce to 20 minutes).
- If at the end of that 10-minute period, heart rate is still above 110, the individual shall proceed to the decontamination area, decontaminate out, and rest in the support zone for at least 1 hour. These periods may be modified as employees become acclimated to the heat.
- Each site personnel shall be required to drink at least 8 ounces of water or electrolyte-added drink at each break and at least 16 ounces at lunch.
- If the air temperature exceeds 70°F, the SHSO and buddy system shall watch Contractor and subcontractor personnel for any potential symptoms of heat stress or any unusual behavior.
- Rest means minimal physical activity in the shade. Activities that can be performed during rest periods include preparation of sampling documentation and other paperwork.

### 3.5 PHYSICAL HAZARDS

#### 3.5.1 Underground Utilities

Underground utilities can present hazards during excavating operations. The Site Supervisor will assure that Alcoa engineers have reviewed and approved the site for excavation before the task is initiated. An Alcoa digging permit shall be obtained before the Contractor initiates excavation.

### 3.5.2 Overhead Utilities

Energized overhead electrical lines may present a risk of electrocution. Employees and equipment will remain at least 10 feet from overhead wires at all times.

### 3.5.3 Railroad

Much of the project will involve working around an inactive railroad bed. Employees must be informed that there is an active railroad in close proximity. Employees should remain clear of the active railroad at all times to avoid hazards associated with moving rail cars.

## 3.6 CONFINED SPACES

OSHA defines a "confined space" as having the following characteristics:

- Contains or has a known potential to contain a hazardous atmosphere
- Has limited or restricted means of access
- Is large enough that an employee can bodily enter and perform work
- Is not designated for continuous employee occupancy
- Contains a material with potential for personnel engulfment
- Contains any other recognized serious safety or health hazard
- Excavations and trenches over four feet in depth are considered confined spaces.

This project is not expected to involve entry into areas that exhibited characteristics of a confined space. If a confined space entry is determined to be necessary, the Alcoa and/or Contractor Health, Safety, and Industrial Hygiene Group shall be consulted and this HASP shall be amended to include confined space entry procedures.

#### 4.0 MEDICAL SURVEILLANCE

Medical screening provides a method of identifying those employees whose medical history indicates potentially increased health risk when exposed to hazardous substances present within the working environment. The medical screening directly and indirectly measures the functional activity of organs affected by potential exposure during the work and includes physiological tests of parameters having a clinical relevance to the potential exposure. Medical surveillance shall be conducted in accordance with requirements in 29 CFR 1910.120.

##### 4.1 PREEMPLOYMENT SCREENING

Prior to engaging in work with hazardous materials, all employees shall undergo preemployment medical screening. This screening shall include:

- Medical history
- Occupational history
- Physical examination
- Determination of fitness to work wearing protective equipment
- Baseline laboratory studies.

The CHSO is responsible for scheduling medical examinations, selection of appropriate clinic or physicians, review of physicians' report, and maintenance of employee medical files. Employee medical files are confidential and shall not be released

without the express written approval of the employee. The medical files shall be maintained in the Contractor's corporate office. A copy of all physicians' reports and medical monitoring data shall be made available to the employee if requested.

Repeat tests or additional tests or examinations recommended by the physician, based on the initial medical screening and related to the employee's ability to work with hazardous materials, will be arranged by the CHSO.

#### 4.2 PERIODIC MEDICAL EXAMINATIONS

Employees engaged in work with potential exposure to hazardous materials shall undergo a yearly update of medical and occupational history and a yearly physical examination. More frequent medical examinations, consultations, and/or laboratory testing shall be provided if the examining physician determines that an increased frequency of examination is medically required.

The following tests and examinations are required for preemployment and annual physicals:

- Complete history and physical examination
- Chest X-ray (if not taken within past three years and/or indicated by medical judgment)
- Electrocardiogram (EKG) (if indicated by medical judgment)
- Spirometry
- Complete blood count
- Serum profile

- Complete urinalysis
- Audiometry (if not taken within the first three years and/or indicated by medical judgment)
- Vision test
- Drug abuse screen (urinalysis).

#### 4.3 INFORMATION PROVIDED TO THE PHYSICIAN

The Contractor will provide the following information to the examining physician:

- A copy of OSHA 29 CFR 1910.120
- A description of the work performed and the potential for exposure to hazardous substances
- A description of employee duties that involve the potential for exposure to hazardous substances
- Potential exposure levels of employees
- A description of PPE that may be required
- Information not readily available to the physician relating to previous examinations or emergency situations involving potential exposure to hazardous substances.

#### 4.4 MEDICAL RECORDS

All medical records, including preemployment medical screening, periodic medical examinations, emergency and non-emergency treatment records, and accident reports, shall be maintained in accordance with the following:

- OSHA 29 CFR 1910.20 - Access to employee exposure and medical records
- OSHA 29 CFR 1904 - Recording and reporting occupational injuries and illnesses.

Employees have access to their medical records and OSHA regulations concerning medical records and recordkeeping, if requested.

#### 4.5 TERMINATION EXAMINATION

Upon termination from employment, all employees whose work involved potential exposure to hazardous substances and who have not received a medical examination within the previous six months shall be provided a termination examination. Records of the termination examination shall be maintained in accordance with 29 CFR 1910.20, Subpart C. Employees will be notified regarding termination physical examination requirements.

#### 4.6 SITE-SPECIFIC MEDICAL MONITORING

All Contractor employees shall participate in a monitoring program for medical surveillance which will include nose swab analysis, urinalysis, and other biological indicators as described in the Radiological Control Plan.

## 5.0 WORK PRACTICES AND SITE CONTROL

In order to protect the health and safety of project personnel, safe work practices shall be established and implemented for each of the job tasks to be completed. Work practices to mitigate the potential for exposure to hazardous substances include evaluation of the waste characterization data and selection of appropriate protective clothing to prevent skin contact with hazardous materials.

The buddy system is an integral part of safe work practice at hazardous sites. All site activities that involve safety hazards and/or the potential for contact with hazardous materials shall be performed by a work team of no fewer than two people. For high hazard activities, an additional person shall serve as a watcher or rescue person.

### 5.1 PERSONAL HYGIENE

Administrative procedures require hygienic practices consistent with work hazards. Eating and food preparation are prohibited in any area other than those designated and properly protected. No food or beverages will be permitted in the work area, including items such as candy, gum, snuff, cigarettes, and chewing tobacco.

Employees who handle contaminated materials or articles must wash with soap or mild detergent and water before eating. To avoid

potential hand-to-mouth contamination, smoking or carrying of tobacco products are prohibited in the work area. The Site Supervisor shall perform inspections and document variations or violations.

The activities required during the conduct of site activities have the potential to contribute to the movement of contaminants from the site to unaffected areas. Site personnel and equipment may become contaminated and potentially may carry the material into clean areas. To minimize the transfer of hazardous substances from the site due to site activities, contamination control procedures are needed. Two general methods are used:

- Establishing site work zones
- Establishing decontamination procedures.

A site must be controlled to reduce the possibility of exposure to any contaminants present and their transport by personnel or equipment from the site.

The possibility of exposure or transfer of contaminated substances can be reduced or eliminated in a number of ways, including:

- Setting up barriers to exclude unnecessary personnel from contaminated areas
- Minimizing the number of personnel and equipment at the site
- Establishing work zones within the site

- Establishing control points with regular access to and egress from work zones
- Conducting operations in a manner to reduce exposure of personnel and equipment
- Implementing appropriate decontamination procedures.

## 5.2 DELINEATION OF WORK ZONES

One method to prevent or reduce the migration of contamination is to delineate zones on the site where prescribed operations occur. Movement of personnel and equipment between zones and onto the site itself is limited by access control points. By these means, contamination is expected to be contained within certain relatively small areas on the site and its potential for transfer thereby minimized. Three contiguous zones are recommended:

- Zone 1 - Exclusion Zone
- Zone 2 - Contamination Reduction Zone
- Zone 3 - Support Zone.

The establishment of site work zones is dependent upon the location of contamination and the job task to be performed on site. The exclusion zone or hot zone is the area where contamination exists. All personnel within the exclusion zone must wear the required level of protective gear. PPE is designated on the basis of site-specific conditions, including the job task to be performed and the hazard that might be encountered. Occasionally, within the exclusion zone, different levels of protection are justified. The level of protection required is determined by the concentration of contamination present and the job task to be performed.

Adjacent to the exclusion zone is a contamination reduction zone (CRZ), which provides an area of transition between contaminated and clean zones. The CRZ serves as a buffer to reduce the probability of the clean zone becoming contaminated. Decontamination stations for both personnel and equipment are established in the CRZ.

The support zone is a noncontaminated or clean area. Support equipment is located in this zone. Normal work clothes are appropriate within this zone, and potentially-contaminated personal clothing and equipment and samples are not permitted but are left in the CRZ until they are decontaminated.

The establishment of site work zones shall be based on the judgment of the FHP. Adequate room shall be allowed for necessary operations within each zone and shall provide adequate distances to prevent the spread of contamination.

### 5.3 DECONTAMINATION

Decontamination procedures are covered in the Radiological Control Plan.

## 6.0 PERSONAL PROTECTIVE EQUIPMENT

The objective of the protective equipment program is twofold:

- To protect workers from safety and health hazards present at sites containing hazardous substances
- To prevent injury to workers from incorrect use and/or malfunction of PPE.

Anyone entering hazardous waste sites must be protected against potential hazards. The purpose of PPE is to shield or isolate individuals from the chemical, physical, and biological hazards that may be encountered at a hazardous waste site.

No single combination of protective equipment and clothing is capable of protecting against all hazards. Thus, PPE should be used in conjunction with other protective measures, such as good work practices. The use of PPE can itself create significant worker hazards, such as heat stress, physical and psychological stress, impaired vision, mobility, and communication. In general, the greater level of PPE protection, the greater the associated risks. For any given work situation, equipment and clothing will be selected to provide an adequate level of protection. Overprotection as well as underprotection can be hazardous and will be avoided.

## 6.1 LEVELS OF PROTECTION

The minimum level of protection for all Contractor workers at active sites shall include standard work clothes, hard hats, and safety shoes. Eye protection shall be included for tasks such as removing debris, etc., which do not involve chemicals. The Project Manager should consult with Corporate Health and Safety for specific guidance or variance from this requirement.

Personnel must wear additional protective equipment when work activities involve known or suspected air contamination, when vapors, gases, or particulates may be generated, or when direct contact with skin-affecting substances may occur. Respirators are used to protect the lungs, gastrointestinal tract, and eyes against air toxicants. Chemical-resistant clothing can protect skin from contact with skin destructive and absorbable materials. Good personal hygiene limits or prevents ingestion of materials.

Equipment to protect the body against contact with chemical hazards is divided into four categories according to the degree of protection accorded:

- Level A - Should be worn when the highest level of respiratory, skin, and eye protection is needed.
- Level B - Should be worn when the highest level of respiratory protection is needed, but a lesser level of skin protection is needed.
- Level C - Should be worn when the types of airborne substances are known, the concentrations have been measured, and the criteria for using air-purifying respirators are met.

- Level D - Should not be worn on any site where respiratory or skin hazards are present. Level D is primarily a work uniform providing minimal protection.

The level of protection selected is based primarily on:

- The type, toxicity, and measured concentrations of the hazardous substances
- The potential or measured exposure to substances in the air, splashes of liquids, or other direct contact with materials due to the work being performed.

While PPE reduces the potential for contact with harmful substances, ensuring the health and safety of personnel requires, in addition, safe work practices, decontamination, and other safety considerations. Together, these practices establish a combined approach for reducing potential harm to workers.

## 6.2 SELECTED LEVEL OF PROTECTION

All work performed on site shall be in accordance with air monitoring results, as outlined in Chapter 7.0. All other work on site shall be conducted in Level D protection consisting of:

- Work clothes
- Steel-toe work boots with steel shanks
- Safety glasses
- Hard hat.

Should air monitoring warrant, the level of protection shall be upgraded to Level C protection. The FHPs will make the determination as to when a level of contamination may require upgrading protection. The Radiological Control Plan presents specific PPE for Level C protection.

## 7.0 AIR MONITORING

Air monitoring is covered in the Radiological Control Plan.

## 8.0 EMERGENCY PROCEDURES

The HASP for the project has been established to allow site operations to be conducted without adverse impacts on worker health and safety. In addition, supplementary emergency response procedures have been developed to cover extraordinary conditions that may possibly occur at the site.

### 8.1 GENERAL

All accidents and unusual events shall be dealt with in a manner to minimize continued health risk of site workers:

- First aid or other appropriate initial action should be administered by those closest to the accident/unusual event. This assistance shall be conducted in a manner to assure that those rendering assistance are not placed in a situation of unacceptable risk.

All accidents shall be reported to and documented by the Emergency Coordinator, who is responsible for coordinating the emergency response in an efficient, rapid, and safe manner. The Emergency Coordinator will decide if off-site assistance, medical treatment, or both are required and will arrange for such assistance. The Emergency Coordinator will ensure that adequate emergency equipment will be available on site.

- Contractor employees shall conduct themselves in a mature, calm manner in the event of an accident/unusual event.

The following Contractor emergency equipment shall be available at the site:

- First-aid kit
- Fire extinguisher
- Emergency eyewash station.

The SHSO will be responsible for documenting all Contractor-related accidents/injuries and will act as the Emergency Coordinator.

## 8.2 RESPONSES TO SPECIFIC SITUATIONS

### 8.2.1 Worker Injury

If an employee working in a contaminated area is physically injured, Red Cross first-aid procedures should be followed. Depending on the severity of the injury, emergency medical response may be sought. If the employee can be moved, he will be taken to the edge of the work area (on a stretcher, if needed) where contaminated clothing will be removed, emergency first aid administered, and transportation to a local emergency medical facility awaited.

If the injury to a worker is chemical in nature (e.g., overexposure), the following first-aid procedures are to be instituted:

- Eye Exposure - If contaminated solid or liquid gets into the eyes, wash the eyes immediately at the emergency eye-wash station using large amounts of water and lifting the lower and upper lids occasionally. Obtain medical attention immediately. Contact lenses will not be worn when working.
- Skin Exposure - If contaminated solid or liquid gets on the skin, promptly wash the contaminated skin using soap or mild detergent and water. If solids or liquids penetrate through the clothing, remove the clothing immediately and wash the skin using soap or mild detergent and water. Obtain medical attention immediately.
- Swallowing - If contaminated solid or liquid has been swallowed and the person is conscious, give the person

large quantities of salt water immediately and induce vomiting. Do not make an unconscious person vomit. Obtain medical attention immediately if signs of overexposure develop.

- Breathing - If a person has difficulty breathing, move the exposed person to fresh air at once. If breathing has stopped, perform artificial respiration. Keep the affected person warm and at rest. Obtain medical attention as soon as possible.

All accidents and injuries shall be documented on the appropriate Form HS-18 (Appendix A) by the Emergency Coordinator.

#### 8.2.2 Emergency Decontamination Procedures

In the event of a medical emergency, patients are to be adequately decontaminated before transfer, if possible. This is to prevent contamination of the medical transport vehicle and medical facility.

At a minimum, the patient should have the following removed before transport:

- Protective outer clothing
- Protective boots
- Protective gloves
- Other protective equipment.

If necessary, one of the site personnel equipped with appropriate PPE may accompany the injured worker and perform decontamination with supervision of medical personnel.

### 8.2.3 Fires

Fire extinguishers should be provided on site. If a localized fire breaks out, chemical fire extinguishers will be used to bring the occurrence under control. If necessary and feasible, soil or other inert materials will be placed on the burning area to extinguish the flames and minimize the potential for spreading.

## 8.3 EMERGENCY CONTINGENCY AND RESPONSE PLAN

### 8.3.1 Emergency Coordinator

The SHSO acting as the Emergency Coordinator is responsible for all emergency response events and procedures and for the implementation of the Emergency Contingency and Response Plan (ECRP). As the Emergency Coordinator, specific duties include:

- Communicating site ECRP requirements to all personnel, whether directly involved in emergency response or not
- Specifying a backup alternate
- Controlling activities of subcontractors and respond to outside agencies and plant personnel
- Anticipating, identifying, assessing, and controlling fires, explosions, chemical releases, and other emergency situations.

### 8.3.2 Contractor Employees and Subcontract Personnel

All on-site personnel and subcontractors, whether involved in emergency response or not, shall be notified of their responsibilities in an emergency. They shall be familiar with the ECRP and the Emergency Coordinator's authority.

### 8.3.3 Personal Protection

PPE for emergency response may include any or all of the following:

- Polyvinyl chloride boots
- Saranex® suits
- Tyvek® suits, polyethylene coated and uncoated
- Nitrile gloves
- Face shields and goggles
- Self-contained breathing apparatus
- Full-face air-purifying respirators.

### 8.3.4 First-Aid Equipment

Emergency first-aid equipment shall include:

- Antiseptics
- Emergency eyewash
- Bandage materials
- Antibacterial ointments
- Cold packs.

The first-aid equipment shall be kept in a first-aid kit in the clean zone near the personnel decontamination area or in the site field trailer.

### 8.3.5 Hazard Mitigation

Hazard mitigation equipment shall include:

- Fire extinguishers, A,B,C dry chemical-type
- Containers to hold contaminated material.

### 8.3.6 Communications

The primary internal communication system will rely on voice communications between site personnel. Hand signals may be used should voice communications not be effective. External

communications will employ a stationary telephone located in the field office.

Personnel shall be familiar with protocol for contacting support groups. Emergency telephone numbers shall be posted at strategic locations throughout the site. The form to list emergency numbers can be located in Appendix A.

#### 8.3.6.1 Assembly Area

A site evacuation area shall be designated in an upwind location from the site before the start of operations. At this location, emergency needs shall be provided such as:

- Assembly for evacuated personnel
- First aid for injured personnel
- Decontamination material
- Communications.

#### 8.3.6.2 Emergency Services Route Map

An emergency services route map shall be prepared and posted on site showing the directions to the hospital.

#### 8.3.7 Notification

If the Emergency Coordinator determines that the site has an uncontrolled situation, such as a spill, fire, or explosion, that could threaten public health or the environment, he shall report his findings as follows:

- Alert site personnel
- Site security
- Hospital

- Fire department
- Police department.

The notification report shall be made from the site office to the appropriate support groups and shall include:

- Description of incident (e.g., release, fire)
- Name and telephone number of reporter
- Name and address of incident
- Name and quantity of materials or material involved to the extent known
- The extent of injuries, if any
- The possible hazards to human health or the environment and cleanup procedures
- Assistance that is requested.

#### 8.3.8 Hazard Assessment

The Emergency Coordinator will assess possible hazards to human health or the environment that may result from a chemical release, fire, explosion, or severe weather conditions. The Emergency Coordinator will assess the hazards posed by an incident through the following steps, as appropriate:

- Assess the immediate need to protect human health and safety
- Identify the materials involved in the incident
- Identify exposure and/or release pathways and the quantities of materials involved
- Determine the potential effects of the exposure/release and appropriate safety precautions
- Determine if release of materials meets EPA requirements for reportable quantities for spills under the Resource

Conservation and Recovery Act or the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

This assessment will consider both the direct and indirect effects of the chemical release, fire, explosion, or severe weather conditions (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated or the effects of any hazardous surface water runoff from water or chemical agents used to control fire and heat-induced explosions).

Based on this assessment, the Emergency Coordinator shall determine what risks are posed to employees, neighboring plant workers, and community populations. If the incident cannot be controlled by operating personnel without incurring undue risk, the Emergency Coordinator shall order the evacuation of all workers at risk and notify the appropriate parties of the situation and the assistance required.

Emergency contacts shall be made by the Emergency Coordinator. If the Emergency Coordinator is unavailable, the next most senior Contractor person on site shall contact the appropriate emergency services. A copy of emergency telephone numbers shall be posted in a conspicuous location in the support zone.

### 8.3.9 Reporting Protocol

Protocol for notification of response or regulatory personnel will be determined by the specific circumstances and nature of the emergency event. Suggested protocol for the Emergency Coordinator includes the following.

#### 8.3.9.1 Medical Emergencies

Serious or multiple injuries or illnesses shall be reported to:

- Site security
- Local emergency response personnel
- Local hospital.

If injuries are due to a release (vapor cloud, etc.) of chemical contaminants, local police shall be notified in the event that the release may affect off-site personnel.

As specified by OSHA in 29 CFR 1904.8, within 48 hours after the occurrence of an accident that is fatal to one or more employees or that results in the hospitalization of five or more employees, the employer shall report the accident either orally or in writing to the nearest Area Director of OSHA. This step should be handled by the Contractor's corporate office, if possible.

#### 8.3.9.2 Fires or Explosions

Small fires that are extinguished by site personnel shall be recorded in the site daily log. In the event of larger fires, explosions, or fires that release toxic vapors or if the

potential exists for release of toxic vapors to nearby residents, local authorities shall be notified.

#### 8.3.9.3 Chemical Releases

In the event of a spill, measures shall be taken to contain the spill and clean it up. For the purpose of this HASP, a spill is defined as a release of a hazardous substance to soils or surface waters. Any release to soils or surface waters equaling or exceeding the reportable quantities under CERCLA (40 CFR 304) or the EPA Clean Water Act (40 CFR 116 and 117) shall be reported to the USCG National Response Center at 1-800-535-8802.

#### 8.3.9.4 Natural Disaster

When a severe weather warning has been issued or when severe weather occurs (within a five-mile radius of the site), the information will be immediately relayed to the Emergency Coordinator in the clean area and all personnel shall stand by for emergency procedures. In the case of severe weather, personnel shall institute shutdown procedures. When a storm passes, the Emergency Coordinator will inspect all of the on-site equipment to ensure its readiness for operation. If any equipment has been damaged, the work shall not be restarted until the equipment has been repaired or replaced.

#### 8.3.10 Security

During activation of the ECRP, the Emergency Coordinator or his designated representative shall control access to the site and maintain a security incident log that shall include:

- Time of entry (Visitors log, Appendix A)
- Expected exit time
- Use of team or "buddy" system
- Task being performed
- Location of task
- Rescue and response equipment used
- Protective equipment being used.

#### 8.3.11 Medical Treatment/Accident

Affected personnel shall be removed from the contaminated area, be given appropriate first aid, and decontaminated, if circumstances permit. If injuries are not serious or life threatening, affected personnel may be transported by other site personnel to the local medical facility. Emergency medical response personnel shall be contacted in the event of serious or multiple injuries. Medical personnel shall be provided with all available information regarding the nature of the incident and chemicals involved. If on-site decontamination of injured employee(s) is not possible, the Emergency Coordinator shall provide polyethylene sheeting for a stretcher, and ambulance. If necessary, a site employee equipped with appropriate protective equipment and clothing will accompany the injured employee and will perform decontamination under the supervision of emergency medical personnel.

Selected on-site emergency personnel shall be trained:

- In on-the-spot first aid and cardiopulmonary resuscitation treatment techniques
- To establish contact with medical experts
- To establish liaisons with local emergency response support agencies.

Training program elements shall include as a minimum:

- Procedures for contacting medical support services
- Establishing on-site emergency first-aid stations
- Establishing personnel data records.

#### 8.4 PUBLIC RESPONSE AGENCIES

Following is a list of public response agencies that may be contacted, depending on the nature of the situation. They may assume authority for emergency response. In the event that this occurs, the SHSO should assist the agency in charge. Telephone numbers for the listed agencies shall be obtained after arrival at the site, but before start of work:

- Fire department
- Police department
- Ambulance service
- Hospital
- Poison Control Center.

## 9.0 RECORDKEEPING

Employees or their designee will have access to their exposure and medical records as provided under 29 CFR 1910.20. Employees may seek access by notifying the CHSO as identified in Chapter 2.0 of this HASP. Employees that assign access rights to a designee must submit an authorization request in writing to the CHSO.

OSHA Regulations may be reviewed by employees. The site supervising personnel shall provide immediate access to regulations that are kept on site, and shall request other applicable regulations for employees from the CHSO within a reasonable period of time after the employee request.

Employees shall be provided access to information on toxic and hazardous substances to which they have potential exposure in conformance with the Alcoa and/or Contractor's Corporate Health and Safety Manual, Chapter 13.0, Hazard Communication Program and OSHA 29 CFR 1910.1200 Hazard Communication requirements. MSDSs that apply to the site shall appear in the HASP appendix and/or the Alcoa and/or Contractor Hazard Communication, Employee Right-to-Know MSDS binder. Individual copies of MSDSs will be provided as soon as reasonably possible following an employee requests. All potentially toxic and hazardous substances brought on site shall be properly labeled to identify:

- Name of chemical
- Hazard warning of chemical characteristics.

All site health and safety activities shall be properly documented using appropriate forms (Appendix A). In addition, the following notification and records shall be posted on site:

- OSHA poster
- Equal opportunity employment poster
- Emergency phone numbers list.

## 10.0 TRAINING

### 10.1 GENERAL

All employees or other personnel in or entering the site (other than the support zone) shall receive training in compliance with OSHA 29 CFR 1910.120.

The training requirements are intended to provide employees with the knowledge and skills necessary to perform hazardous waste site operations while minimizing the potential for injury. For most employees, initial hazardous training waste operations consists of a minimum of 40 hours of off-site classroom and practical exercise training and three days of actual field experience. Training must be updated annually with 8 hours of off-site training. Supervising personnel complete an 8-hour training session for supervisors.

Training shall be certified by record and/or certificate. A copy of certificates shall be kept on site by the SHSO.

Subcontractors must also abide to all training requirements under OSHA 29 CFR 1910.120.

### 10.2 SITE-SPECIFIC TRAINING

Site-specific training shall consist of an initial health and safety briefing on the following information:

- Names of individuals responsible for site health and safety and methods of communicating safety and health concerns
- Site-specific health and safety hazards
- Use of PPE
- Work practices by which employees can minimize risk
- Safe use of equipment on site
- Recognition of symptoms and signs of exposure to hazardous materials
- Site control measures
- Decontamination procedures
- Emergency response procedures.

The SHSO shall conduct the initial site-specific training prior to the initiation of field activities.

### 10.3 ADDITIONAL TRAINING

All Contractor employees shall have received hazardous waste operations training in compliance with OSHA regulations. In addition, site employees shall receive an on-site initial health and safety training session and regular on-site training during the course of this project.

Initial training shall cover the HASP. Additional training sessions shall deal with specific job-related tasks. All training sessions shall be documented using Form HS-3 (Appendix A).

11.0 HEALTH AND SAFETY PLAN APPROVALS

Prepared by:

---

Russell B. Palchak  
Manager of Health, Safety, and  
Industrial Hygiene

Reviewed by:

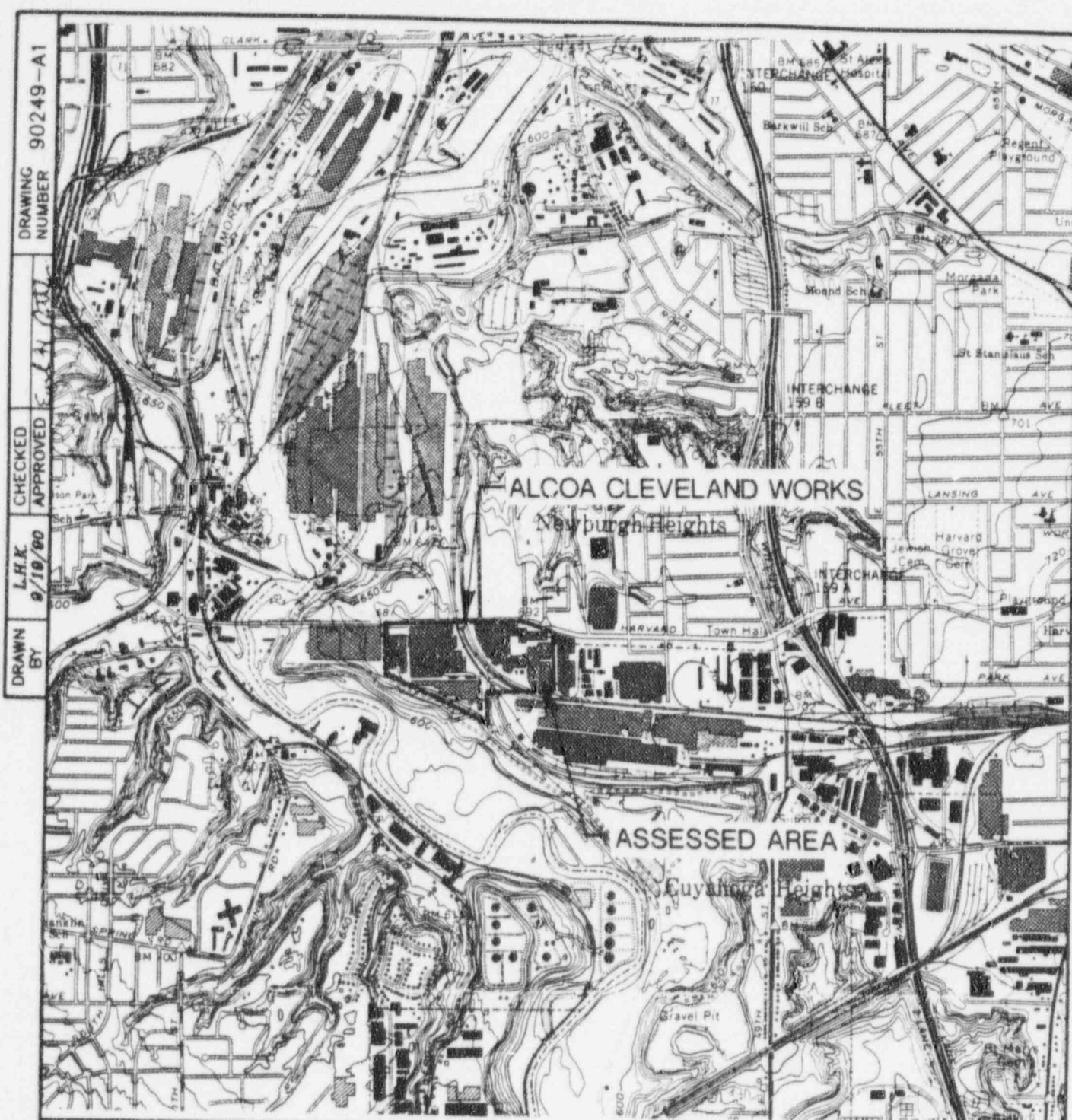
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Ronald W. Krivan  
Assistant Project Scientist

---

Earl H. Rothfuss  
Senior Project Manager

**FIGURES**

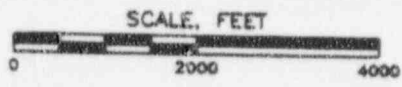


DRAWING NUMBER 90249-A1

CHECKED APPROVED

L.H.K. 9/19/90

DRAWN BY



**REFERENCE:**  
 USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE  
 CLEVELAND SOUTH, OHIO, 1963  
 PHOTOREVISED 1984. SCALE 1=24,000

FIGURE 1

ALCOA SITE  
 LOCATION MAP  
 ALCOA  
 CLEVELAND WORKS  
 PREPARED FOR  
 ALCOA  
 CLEVELAND, OHIO



DRAWING NUMBER 91062-B1

CHECKED APPROVED

RAZ 060491

DRAWN BY

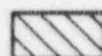
BUILDING 71

CONTROLLED AREA  
BOUNDARY

ASSESSMENT AREA  
BOUNDARY

NEWBURGH AND SOUTH  
SHORE RAILROAD

LEGEND:



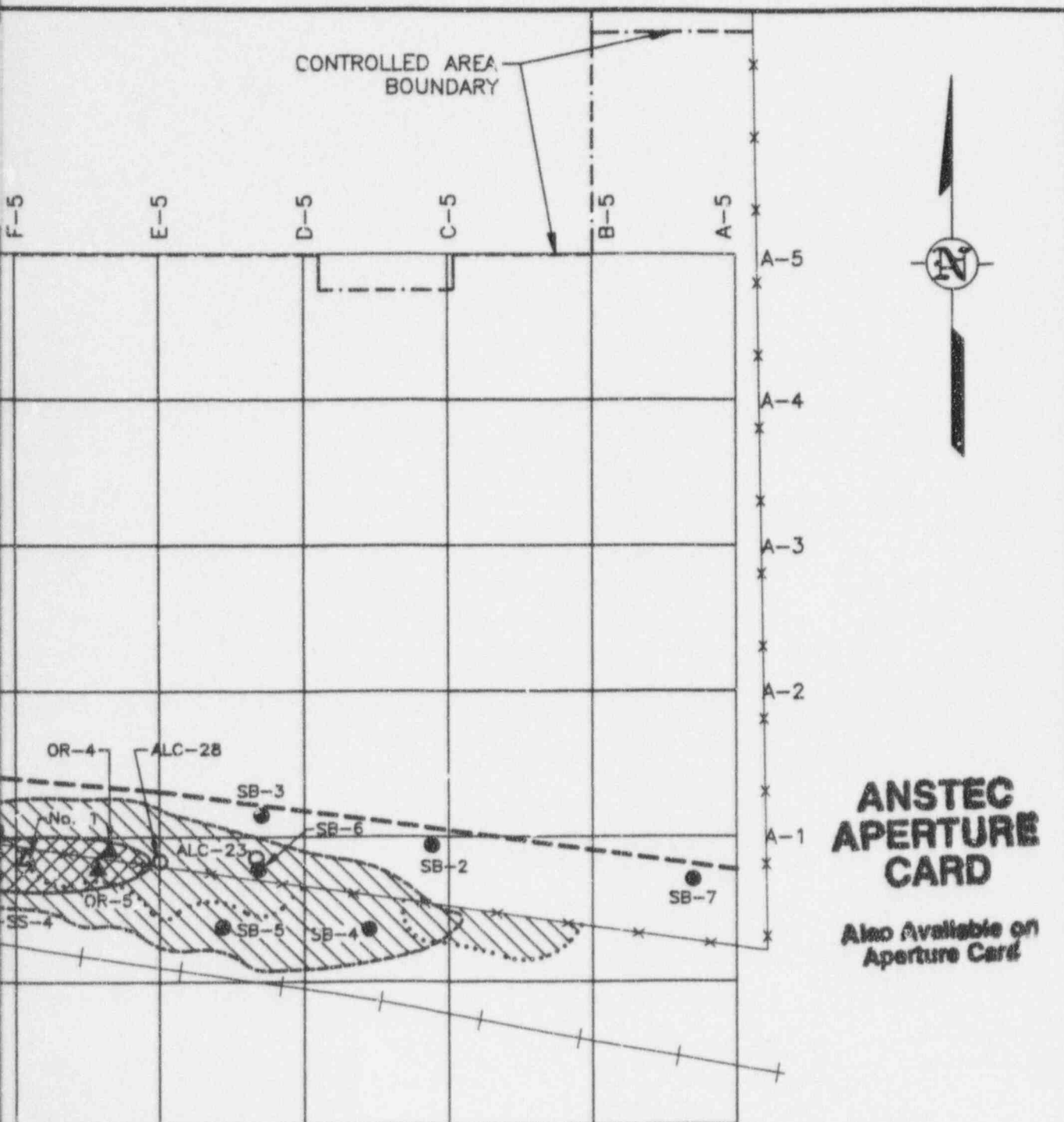
ESTIMATED AREAS OF SUSPECTED  
TH-232 CONTAMINATION ( $>15 \mu\text{rem/hr}$   
OR 100 ccpm) AS INDICATED ON  
FIGURE 3 FROM INDIRECT MEASUREMENTS  
(i.e. FIELD SCREEN)



ESTIMATED AREAS OF TH-232  
CONTAMINATION ( $>10 \text{ pCi/g}$ )  
AS INDICATED BY ANALYTICAL  
RESULTS

REFERENCE:

NL/S, NOVEMBER 1989.



# **ANSTEC APERTURE CARD**

Also Available on  
Aperture Card

**FIGURE 2**

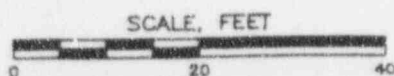
ESTIMATED AREA OF  
TH-232 CONTAMINATION

ALCOA  
CLEVELAND, OHIO

PREPARED FOR  
ALCOA  
CLEVELAND WORKS



9707070370-01



APPENDIX A

FORMS



# JOBSITE SAFETY CHECKLIST

HS-1

Project Name & Number

Person Making Inspection

Jobsite Location

Date of Inspection

A. Adequate at time of inspection. C. Item not applicable.  
B. Need immediate attention. N/A No items in section applicable.

Check one of the following:

## A. Posters & Records

N/A ☐ A ☐ B ☐ C ☐

1. OSHA poster displayed? ☐
2. Foremen holding weekly safety meetings - recording? ☐
3. Emergency medical numbers posted? ☐
4. Explosives inventory current? ☐
5. Copy of OSHA regulation on jobsite? ☐
6. Have utility contacts been made/recorded? ☐
7. Are safety talk subjects available? ☐
8. Blank accident report forms available? ☐
9. Using employment applications before hiring? ☐
10. Are safety posters being displayed? ☐

## B. Housekeeping & Sanitation

N/A ☐

11. General housekeeping of jobsite? ☐
12. Passageways and walkways clear? ☐
13. Nails removed from lumber? ☐
14. Materials of all types properly stockpiled? ☐
15. Is an area provided for waste and trash and is it removed regularly? ☐
16. Adequate lighting in passageways, stairways, and work areas? ☐
17. Toilet facilities adequate and clean? ☐
18. Sanitary supply of drinking water? ☐
19. Disposable drinking cups and refuse container available? ☐
20. Means provided for sanitizing personal protective equipment? ☐

## C. Fire Protection

N/A ☐

21. Are "No Smoking" or "Flammable" signs posted at all storage and fueling locations? ☐
22. Clear access provided to all fire fighting equipment/are inspections recorded? ☐
23. Location of all fire fighting equipment prominently marked? ☐
24. Are flammable liquids stored in approved containers? ☐
25. Fire extinguishers adequate size? ☐
26. Large fuel tanks properly diked and separated? ☐

## D. First Aid

N/A ☐

27. First aid kits well stocked? ☐
28. Trained first-aiders on jobsite? ☐

Check one of the following:

## E. Electrical

N/A ☐ A ☐ B ☐ C ☐

29. Distribution boxes covered or marked? ☐
30. GFI's in use or positive grounding been tested? ☐
31. Temporary lighting protected? ☐

## F. Tools

N/A ☐

32. Damaged or broken tools tagged out of service? ☐
33. Proper storage space provided? ☐
34. Operating guards on all power tools? ☐
35. Persons using power actuated tools certified? ☐
36. Are guards provided on grinders? ☐
37. Airhose couplers secured or safety valve in line? ☐
38. Tools being properly used? ☐
39. Correct personal protection being used? ☐
40. Extension cords tested for assured ground? ☐

## G. Structures

N/A ☐

41. Floor opening covered or guardrailed? ☐
42. Standard guardrailing on scaffolds, bridge decks, floors of buildings, work platforms, and walkways? ☐
43. Work areas clear of debris, snow, ice, and grease? ☐
44. Adequate fire protection? ☐
45. Stairways provided with handrails? ☐
46. Hollow pan-treads filled with solid material? ☐
47. Ladders properly constructed? ☐
48. Side rails of ladders extend 36" above landing? ☐
49. Scaffolds properly anchored, braced, and plumb? ☐
50. Protection provided over vertical rebar when working above? ☐
51. Safety belts in use when guardrails are absent? ☐
52. Employees clear of swinging crane loads? ☐
53. Tag lines used on suspended crane loads? ☐
54. Gas cylinders separated, secured upright, and capped if not in use? ☐
55. Safety lines in use on suspended scaffolds? ☐
56. Heating devices properly ventilated? ☐
57. Gates functioning on all levels when materials or personnel hoist units used? ☐
58. Safe procedures being used to wreck forms? ☐

A. Adequate at time of inspection.

B. Need immediate attention. N/A No items in section applicable.

C. Item not applicable.

Check one of the following:

Check one of the following:

**H. Traffic Control**

N/A ☐ A B C

59. Advance signing at approaches to work areas? ☐
60. Correct message on signs? ☐
61. Traffic control set-up on highways meet DOT regulations? ☐
62. Flag persons properly dressed and equipped? ☐
63. Flag persons performing properly ☐

**I. Welding & Cutting**

N/A ☐ A B C

64. Using right type of eye protection? ☐
65. Gauges, valves, torches, and lines in good condition and free of oil and grease? ☐
66. Cylinders not in use capped? ☐
67. Cylinders in use or storage secured upright? ☐
68. Anti-flashback valves at torch? ☐
69. Stored oxygen separated from acetylene by 20 ft. ☐
70. Fire extinguisher near welding or cutting operations? ☐
71. Adequate ventilation provided? ☐
72. Grounding for arc welding machine? ☐
73. All parts of arc welding outfits properly insulated? ☐

**J. Heavy Equipment**

N/A ☐ A B C

74. Operators wearing hard hats? ☐
75. Hearing protection being used? ☐
76. Dust control? ☐
77. Haul road adequate and maintained? ☐
78. Equipment speeds excessive for safety? ☐
79. Horns and back-up alarms functioning? ☐
80. Clearing cabs on machines when clearing? ☐
81. Engines shut-down when refueling or lubricating? ☐
82. Seat belts on machines with ROPS? ☐
83. Steps and hand holds adequate and safe condition? ☐
84. Adequate lighting of haul roads at night? ☐
85. Parked or unattended equipment have blade lowered to the ground? ☐
86. No hitchhikers riding on equipment ☐
87. Full fire extinguisher near refueling tank? ☐
88. Dump man prominently located? ☐
89. Overhead guard on fork lift truck? ☐
90. Vehicles with restricted rear visibility equipped with operating back-up alarms? ☐

**K. Cranes**

N/A ☐ A B C

91. Power line distance from machines? ☐
92. Annual inspection? ☐
93. Cables in safe condition? ☐
94. Rear swing protection and pinch point guarding? ☐
95. Exposed gears, shaft, and belts guarded? ☐
96. Fire extinguisher, boom angle indicator, load capacity chart and hand signal poster in crane? ☐
97. Signs and/or flags on cranes in transit? ☐
98. Operator making daily inspections and tests? ☐

**L. Trenching & Excavations**

N/A ☐ A B C

99. Trench side shored, layed back or boxed? ☐
100. Utilities contacted and located before digging? ☐
101. Ladder in trench? ☐
102. Stop logs placed where necessary along top of trench? ☐

103. Excavated material stockpiled far enough from the edge of the trench? ☐
104. Laser warning signs in place? ☐
105. Adequate ventilation in pipe? ☐
106. Traffic control adequate? ☐
107. Sides of excavation for building shored or protected? ☐
108. Oxygen level tested in tunnel, shafts or confined space? ☐
109. Public protected from exposure to open excavation? ☐

**M. Miscellaneous**

N/A ☐ A B C

110. Sufficient quantities of approved personal protective equipment? ☐
111. Procedures established to handle toxic and carcinogenic materials? ☐
112. Sewers, vaults, tanks, and bins tested for adequate oxygen levels before employees are permitted to enter? ☐
113. Everyone wearing hard hat? ☐
114. Fall protection being used on steel erection? ☐
115. Walls properly braced (concrete and block construction)? ☐
116. If toxic fumes, vapors, and dusts present, is ventilation adequate? ☐
117. Guards in place and used on woodworking machines? ☐
118. Explosives being used, transported, and stored in compliance with regulations? ☐
119. Blaster following all safety precautions? ☐
120. Tunneling operations/lighting, and ventilation adequate? ☐
121. Belts, pulleys, shafts, gears, and chains guarded on all machinery and equipment? ☐
122. Masonry saws grounded and personal protective equipment being used? ☐
123. Exit signs over doors in offices, and storage buildings? ☐

\* This checklist does not include all hazards on every job, but is intended to remind you of the most common hazards.

Unsafe acts and/or practices observed.

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I, the undersigned superintendent, have reviewed the indicated hazards and will take the necessary action to immediately correct them.

Signature of Project Supervisor

# JOBSITE SAFETY CHECKLIST

Project \_\_\_\_\_

Project No. \_\_\_\_\_ Person Making Inspection \_\_\_\_\_

Jobsite Location \_\_\_\_\_

Date of Inspection \_\_\_\_\_

A. Adequate at time of inspection.  
B. Needs immediate attention.

C. Item not applicable.  
N/A No items in section applicable.

Check one of the following:

A B C

Check one of the following:

A B C

- A. Posters & Records** N/A ☐
1. OSHA poster displayed? ☐ ☐ ☐
  2. Foremen holding weekly safety meetings — recording? ☐ ☐ ☐
  3. Emergency medical numbers posted? ☐ ☐ ☐
  4. Explosives inventory current? ☐ ☐ ☐
  5. Copy of OSHA regulations on jobsite? ☐ ☐ ☐
  6. Have utility contacts been made/recorded? ☐ ☐ ☐
  7. Are safety talk subjects available? ☐ ☐ ☐
  8. Blank accident report forms available? ☐ ☐ ☐
  9. Using Employment Applications before hiring? ☐ ☐ ☐
  10. Are Safety posters being displayed? ☐ ☐ ☐
- d. Housekeeping & Sanitation** N/A ☐
11. General housekeeping of jobsite? ☐ ☐ ☐
  12. Passageways and walkways clear? ☐ ☐ ☐
  13. Nails removed from lumber? ☐ ☐ ☐
  14. Materials of all types properly stockpiled? ☐ ☐ ☐
  15. Is an area provided for waste and trash and is it removed regularly? ☐ ☐ ☐
  16. Adequate lighting in passageways, stairways and work areas? ☐ ☐ ☐
  17. Toilet facilities adequate and clean? ☐ ☐ ☐
  18. Sanitary supply of drinking water? ☐ ☐ ☐
  19. Disposable drinking cups and refuse container? ☐ ☐ ☐
  20. Means provided for sanitizing personal protective equipment? ☐ ☐ ☐
- C. Fire Protection** N/A ☐
21. Are "No Smoking" or "Flammable" signs posted at all storage and fueling locations? ☐ ☐ ☐
  22. Clear access provided to all fire fighting equipment/are inspections recorded? ☐ ☐ ☐
  23. Location of all fire fighting equipment prominently marked? ☐ ☐ ☐
  24. Are flammable liquids stored in approved containers? ☐ ☐ ☐
  25. Fire extinguishers adequate size? ☐ ☐ ☐
  26. Large fuel tanks properly diked and separated? ☐ ☐ ☐
- 7. First Aid** N/A ☐
27. First Aid Kits well stocked? ☐ ☐ ☐
  28. Trained first-aiders on jobsite? ☐ ☐ ☐

- E. Electrical** N/A ☐
29. Distribution boxes covered or marked? ☐ ☐ ☐
  30. GFI's in use or positive grounding been tested? ☐ ☐ ☐
  31. Temporary lighting protected? ☐ ☐ ☐
- F. Tools** N/A ☐
32. Damaged or broken tools tagged out of service? ☐ ☐ ☐
  33. Proper storage space provided? ☐ ☐ ☐
  34. Operative guards on all power tools? ☐ ☐ ☐
  35. Persons using powder actuated tools certified? ☐ ☐ ☐
  36. Are guards provided on grinders? ☐ ☐ ☐
  37. Airhose couplers secured or safety valve in line? ☐ ☐ ☐
  38. Tools being properly used? ☐ ☐ ☐
  39. Correct personal protection being used? ☐ ☐ ☐
  40. Extension cords tested for assured ground? ☐ ☐ ☐
- G. Structures** N/A ☐
41. Floor openings covered or guardrailed? ☐ ☐ ☐
  42. Standard guardrail on scaffolds, bridge decks, floors of buildings, work platforms and walkways? ☐ ☐ ☐
  43. Work areas clear of debris, snow, ice, and grease? ☐ ☐ ☐
  44. Adequate fire protection? ☐ ☐ ☐
  45. Stairways provided with handrails? ☐ ☐ ☐
  46. Hollow pan-treads filled with solid material? ☐ ☐ ☐
  47. Ladders properly constructed? ☐ ☐ ☐
  48. Side rails of ladders extend 36" above landing? ☐ ☐ ☐
  49. Scaffolds properly anchored, braced and plumb? ☐ ☐ ☐
  50. Protection provided over vertical rebars when working above? ☐ ☐ ☐
  51. Safety belts in use when guardrails are absent? ☐ ☐ ☐
  52. Employees clear of swinging crane loads? ☐ ☐ ☐
  53. Tag lines used on suspended crane loads? ☐ ☐ ☐
  54. Gas cylinders separated, secured upright and capped if not in use? ☐ ☐ ☐
  55. Safety lines in use on suspended scaffolds? ☐ ☐ ☐
  56. Heating devices properly ventilated? ☐ ☐ ☐
  57. Gates functioning on all levels when material or personnel hoists used? ☐ ☐ ☐
  58. Safe procedures being used to wreck forms? ☐ ☐ ☐



A. Adequate at time of inspection.  
B. Needs immediate attention.

C. Item not applicable  
N/A No items in section applicable.

Check one of the following:

A B C

Check one of the following:

A B C

H. Traffic Control N/A ☐

59. Advance signing at approaches to work areas? ☐ ☐ ☐
60. Correct message on signs? ☐ ☐ ☐
61. Traffic control set-up on highways meet ODOT regulations? ☐ ☐ ☐
62. Flag persons properly dressed and equipped? ☐ ☐ ☐
63. Flag persons performing properly? ☐ ☐ ☐

I. Welding & Cutting N/A ☐

64. Using right type eye protection? ☐ ☐ ☐
65. Gages, valves, torches and lines in good condition and free of oil and grease? ☐ ☐ ☐
66. Cylinders not in use capped? ☐ ☐ ☐
67. Cylinders in use or storage secured up-right? ☐ ☐ ☐
68. Anti-flashback valves at torch? ☐ ☐ ☐
69. Stored oxygen separated from acetylene by 20 ft.? ☐ ☐ ☐
70. Fire extinguisher near welding or cutting operations? ☐ ☐ ☐
71. Adequate ventilation provided? ☐ ☐ ☐
72. Grounding for arc welding machine? ☐ ☐ ☐
73. All parts of arc welding outfits properly insulated? ☐ ☐ ☐

J. Heavy Equipment N/A ☐

74. Operators wearing hard hats? ☐ ☐ ☐
75. Hearing protection being used? ☐ ☐ ☐
76. Dust Control? ☐ ☐ ☐
77. Haul road adequate and maintained? ☐ ☐ ☐
78. Equipment speeds excessive for safety? ☐ ☐ ☐
79. Horns and back-up alarms functioning? ☐ ☐ ☐
80. Clearing cabs on machines when clearing? ☐ ☐ ☐
81. Engines shut-down when refueling or lubricating? ☐ ☐ ☐
82. Seat belts on machines with ROPS? ☐ ☐ ☐
83. Steps and hand holds adequate and safe condition? ☐ ☐ ☐
84. Adequate lighting of haul roads at night? ☐ ☐ ☐
85. Parked or unattended equipment have blade lowered to the ground? ☐ ☐ ☐
86. No hitchhikers riding on equipment? ☐ ☐ ☐
87. Full fire extinguisher near refueling tank? ☐ ☐ ☐
88. Dump man prominently located? ☐ ☐ ☐
89. Overhead guard on fork lift truck? ☐ ☐ ☐
90. Vehicles with restricted rear visibility equipped with operating back-up alarms? ☐ ☐ ☐

K. Cranes N/A ☐

91. Power line distance from machines? ☐ ☐ ☐
92. Annual inspection? ☐ ☐ ☐
93. Cables in safe condition? ☐ ☐ ☐
94. Rear swing protection and pinch point guarding? ☐ ☐ ☐
95. Exposed gears, shafts and belts guarded? ☐ ☐ ☐
96. Fire extinguisher, boom angle indicator, load capacity chart and hand signal poster in crane? ☐ ☐ ☐
97. Signs and/or flags on cranes in transit? ☐ ☐ ☐
98. Operator making daily inspections and tests? ☐ ☐ ☐

L. Trenching & Excavations N/A ☐

99. Trench side shored, layed back or boxed? ☐ ☐ ☐
100. Utilities contacted and located before digging? ☐ ☐ ☐
101. Ladder in the trench? ☐ ☐ ☐
102. Stop logs placed where necessary along top of the trench? ☐ ☐ ☐

103. Excavated material stockpiled far enough from the edge of the trench? ☐ ☐ ☐
104. Laser warning signs in place? ☐ ☐ ☐
105. Adequate ventilation in pipe? ☐ ☐ ☐
106. Traffic control adequate? ☐ ☐ ☐
107. Sides of excavation for building shored or protected? ☐ ☐ ☐
108. Oxygen level tested in tunnel, shafts or confined space? ☐ ☐ ☐
109. Public protected from exposure to open excavation? ☐ ☐ ☐

M. Miscellaneous N/A ☐

110. Sufficient quantities of approved personal protective equipment on the jobsite? ☐ ☐ ☐
111. Procedures established to handle toxic and carcinogenic materials? ☐ ☐ ☐
112. Sewers, vaults, tanks and bins tested for adequate oxygen levels before employees are permitted to enter? ☐ ☐ ☐
113. Everyone wearing hard hat? ☐ ☐ ☐
114. Fall protection being used on steel erection? ☐ ☐ ☐
115. Walls properly braced (concrete and block construction)? ☐ ☐ ☐
116. Toxic fumes, vapors and dusts present, ventilation adequate? ☐ ☐ ☐
117. Guards in place and used on wood working machines? ☐ ☐ ☐
118. Explosives being used, transported and stored in compliance with regulations? ☐ ☐ ☐
119. Blaster following all safety precautions? ☐ ☐ ☐
120. Tunneling operations/lighting and ventilation adequate? ☐ ☐ ☐
121. Belts, pulleys, shafts, gears and chains guarded on all machinery and equipment? ☐ ☐ ☐
122. Masonry saws grounded and personal protective equipment being used? ☐ ☐ ☐
123. Exit signs over doors in offices and storage buildings? ☐ ☐ ☐

\*This checklist does not include all hazards on every job, but is intended to remind you of most common hazards.

Unsafe acts and/or practices observed:

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I the undersigned superintendent have reviewed the indicated hazards and will take the necessary action to immediately correct them.

\_\_\_\_\_  
Signature of Project Supervisor



## FIRST REPORT OF INJURY

HS-2

This form MUST be completed and forwarded to Corporate Health & Safety within 24 hours of injury.

### EMPLOYEE

1. Name: \_\_\_\_\_
2. Home Address: \_\_\_\_\_
3. Home Telephone: \_\_\_\_\_ ( ) - \_\_\_\_\_
4. Social Security Number: \_\_\_\_\_ - -
5. Age: \_\_\_\_\_ 6. Sex: \_\_\_\_\_
7. Occupation: \_\_\_\_\_
8. Department: \_\_\_\_\_

### ACCIDENT/INJURY

9. Date & time of injury: \_\_\_\_\_
10. Place of accident: \_\_\_\_\_
11. Was accident on Remcor property? \_\_\_\_\_
12. What was Employee doing when injured? \_\_\_\_\_
13. How did the injury occur? \_\_\_\_\_
14. Body part injured and nature of injury: \_\_\_\_\_
15. Name of object/substance that directly injured the employee: \_\_\_\_\_
16. Worker's Compensation claim to be filed? ☐ YES ☐ NO

### MEDICAL

17. Date of medical assistance: \_\_\_\_\_
18. Name and address of medical provider: \_\_\_\_\_
19. Diagnosis: \_\_\_\_\_
20. Was injury/accident fatal? ☐ YES ☐ NO
21. If hospitalized, Name and Address of hospital: \_\_\_\_\_

EMPLOYEE'S SIGNATURE: \_\_\_\_\_

Date

SUPERVISOR'S SIGNATURE/TITLE: \_\_\_\_\_

Date

RECEIVED BY HEALTH & SAFETY DEPARTMENT:

HEALTH & SAFETY SIGNATURE: \_\_\_\_\_

Date

7/90



# TRAINING SESSION DOCUMENTATION RECORD

HC-3

Project Name: \_\_\_\_\_

By: \_\_\_\_\_ Project Number: \_\_\_\_\_

Date: \_\_\_\_\_ Sheet \_\_\_\_\_ of \_\_\_\_\_

Time: Start \_\_\_\_\_ Finish \_\_\_\_\_

Instructor: \_\_\_\_\_

Material Covered: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

ATTENDEES

NAME (print)

SIGNATURE

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines in total, with a slightly larger margin at the top. The paper appears to be from a notebook or a standard ruled sheet of paper.

Reviewed by: Corp. H&S \_\_\_\_\_

Proj. Mgr. \_\_\_\_\_

Site Superintendent or Foreman

## MEMO

TO: \_\_\_\_\_ DATE: \_\_\_\_\_  
FROM: Health and Safety Representative  
RE: REMCOR ANNUAL SURVEILLANCE PROGRAM

All hazardous waste site workers must undergo an annual medical examination. You have been scheduled for an entrance exam on:

at: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

IMPORTANT:

- Please do not eat or drink anything (except water) after midnight the night before.
- Please fill out the attached forms and give them to the nurse or doctor. Results of the exam will be made available to you upon request.
- Please note the exam will include a drug and alcohol screening test. This physical exam will be paid for by Remcor.
- Annual chest X-rays are optional for employees unless:
  - The attending physician determines a chest X-ray is required to diagnose your state of health.
  - It has been three full years since your last chest X-ray.

Upon termination of employment, an exit physical exam is required. It is our policy to have the exit exam completed before the final paycheck is issued.

Return to:

I have read, understood, and agree to comply with Remcor's Medical Surveillance Program.

Original: H/S and Industrial  
Hygiene Department

Copy: Employee

10/90



EXIT PHYSICAL EXAMINATION:  
EMPLOYEE NOTIFICATION

HS-6

As provided for by the Remcor, Inc. (Remcor) Corporate Health and Safety Program, and as required by the U.S. Department of Labor, Occupational Safety and Health Administration (29 CFR 1910.120(f)):

Upon termination of employment with Remcor, each employee who's job assignment required at least 30 days per year in hazardous waste operations will be provided an exit physical examination if he/she has not had such an exam within the previous six months.

This examination will be paid for by Remcor. It is Remcor policy to have the exit examination before a final paycheck is issued.

I have read and understand the above.

\_\_\_\_\_ I agree

\_\_\_\_\_ I do not agree

to undergo the required exit examination.

\_\_\_\_\_  
Employee's Signature

\_\_\_\_\_  
Date

Exam Scheduled: Place: \_\_\_\_\_

Date: \_\_\_\_\_

Time: \_\_\_\_\_

\_\_\_\_\_  
Supervisor's Signature

\_\_\_\_\_  
Date

Original: Corporate H/S File  
Copy: Employee  
Copy: Project File





## PERSONNEL DATA RECORD

HS-8

A copy for each applicable certification (for indicated training date) must be forwarded to the Health & Safety Department within 7 days of starting date.

### EMPLOYEE

Name: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Home Telephone No.: \_\_\_\_\_

Local Telephone No.: \_\_\_\_\_

Start Date: \_\_\_\_\_ Position: \_\_\_\_\_

Social Security No.: \_\_\_\_\_

### TRAINING DATES

40-Hour Hazardous Waste: \_\_\_\_\_

8-Hour Refresher: \_\_\_\_\_

8-Hour Supervisor: \_\_\_\_\_

Confined Space: \_\_\_\_\_

First Aid: \_\_\_\_\_

CPR: \_\_\_\_\_

Respirator Fit-test: \_\_\_\_\_

### TO BE NOTIFITED IN CASE OF INJURY/ILLNESS

Name: \_\_\_\_\_ Relationship: \_\_\_\_\_

Address: \_\_\_\_\_ Home Telephone No.: \_\_\_\_\_

Work Telephone No.: \_\_\_\_\_

### FOR OFFICE USE

Recieved by Health & Safety Department: \_\_\_\_\_ Date

Entered into database by: \_\_\_\_\_ Date



## EQUIPMENT LOSS/DAMAGE REPORT

HS-9

This form MUST be completed and forwarded to corporate office within 24 hours of loss/damage.

Project Manager: _____	Date of Report: _____
Project Name: _____	Project Number: _____
Address: _____	

Date & Time of Loss: \_\_\_\_\_ am/pm

Location of Loss or Damage Sustained: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

<u>EQUIPMENT LOST OR DAMAGED:</u>	<u>REMCOR ID NO. or SERIAL NO.:</u>
_____	_____
_____	_____
_____	_____

DESCRIBE LOSS OR DAMAGE SUSTAINED: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

<u>TYPE OF LOSS:</u>		
<input type="checkbox"/> Theft	<input type="checkbox"/> Collision	
<input type="checkbox"/> Water	<input type="checkbox"/> Vandalism	
<input type="checkbox"/> Fire	<input type="checkbox"/> Other _____	

Plant Security notified:	<input type="checkbox"/> No	<input type="checkbox"/> Yes
Police notified:	<input type="checkbox"/> No	<input type="checkbox"/> Yes
Report filed:	<input type="checkbox"/> No	<input type="checkbox"/> Yes

Department name: \_\_\_\_\_  
Address: \_\_\_\_\_  
To whom reported: \_\_\_\_\_

REPORTED BY: \_\_\_\_\_

DATE

SUPERVISOR'S SIGNATURE: \_\_\_\_\_

DATE

REVIEWED BY PROJECT MANAGER: \_\_\_\_\_

DATE

8/90



## PERSONNEL ENTERING CONTAMINATED AREAS

H-10

[illegible]

Level A - SCBA, Full Suit  
Level B - Supplied Air

Level C - Full/Half Face Mask  
Level D - Minimum Uniform

Project Number: \_\_\_\_\_

Date: \_\_\_\_\_



## VISITORS' LOG

PROJECT NUMBER: \_\_\_\_\_

SITE SUPERINTENDENT: \_\_\_\_\_

HS-11

DATE	TIME IN/OUT	NAME/REPRESENTING	PURPOSE OF VISIT	SAFETY BRIEFING Y/N : BY	PROTECTIVE EQUIPMENT ISSUED Y/N : LEVEL
	/			:	:
	/			:	:
	/			:	:
	/			:	:
	/			:	:
	/			:	:
	/			:	:
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	/			:	:



HS-12

SITE: \_\_\_\_\_  
INSTRUMENT: \_\_\_\_\_  
PROJECT NO. \_\_\_\_\_

PROJECT NO.:

SERIAL #:

CALIBRATION DATE:

[illegible]

Reviewed:

Signature,  
Site Superintendent:

Corp. H&S

Proj. Mgr.

REMCOR, Inc. - 701 Alpha Drive - P.O. Box 38310 - Pittsburgh, PA 15238 - (412) 963-1106

8/90



## HOT WORK PERMIT

HS-13

DATE: \_\_\_\_\_ WELDING: \_\_\_\_\_  
PROJECT: \_\_\_\_\_ BURNING: \_\_\_\_\_  
FOREMAN: \_\_\_\_\_ OTHER: \_\_\_\_\_  
WORK AREA: \_\_\_\_\_ (Specify)  
WORK PLANNED: \_\_\_\_\_ VALID TIME: \_\_\_\_\_

### SAFETY CHECKLIST

	Y	N/A
PERCENT L.E.L./TIME /		
PERCENT OXYGEN/TIME /		
OPERATIONS/PLANT PERSONNEL BEEN INFORMED		
TANKS/LINES/VALVES BLOCKED/DISCONNECTED		
ELECTRICAL SERVICES LOCKED OUT/TAGGED OUT		
SURROUNDING AREA SAFE FOR HOT WORK		
COMBUSTIBLE ITEMS REMOVED/PROTECTED		
FIRE WATCH PROVIDED		
FIRE SUPPRESSION EQUIPMENT AVAILABLE		
WARNING/CAUTION SIGNS POSTED		
EQUIPMENT HAS BEEN CLEANED/PURGED		
CHECK: WATER _____ STEAM _____ INERT GAS _____ AIR _____		

SPECIAL INSTRUCTIONS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

SUPERVISOR CONDUCTING TEST: \_\_\_\_\_

NOTICE: This Hot Work Permit is issued for specific work, with times specified for Specific Work Area.

**NOT TRANSFERABLE**



## SAFETY STATISTICS SUMMARY REPORT

Client: \_\_\_\_\_ Project No.: \_\_\_\_\_

Location: \_\_\_\_\_ Date: \_\_\_\_\_

Safety Statistics for the Month of \_\_\_\_\_ 19 \_\_\_\_ From \_\_\_\_\_ To \_\_\_\_\_

1. Number of Disabling Injuries for Month: \_\_\_\_\_

2. Number of Days Lost During Month: \_\_\_\_\_

3. Frequency: \_\_\_\_\_  
(Number of Disabling Injuries x 1,000,000 Divided by  
Man-hours.)4. Severity: \_\_\_\_\_  
(Number of Days Lost x 1,000,000 Divided by Man-hours.)

5.

Summary	Disabling Injuries	Days Lost	Man Hours	Frequency	Severity	Injury Index*
---------	-----------------------	--------------	--------------	-----------	----------	------------------

Year to Date	_____	_____	_____	_____	_____	_____
--------------	-------	-------	-------	-------	-------	-------

Contract to Date	_____	_____	_____	_____	_____	_____
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\* Injury Index (Severity x Frequency Divided by 1,000)

6. Number of OSHA Recordable Injuries for Month: \_\_\_\_\_

7. Incident Rate: \_\_\_\_\_  
(Number of OSHA Recordable Cases x 200,000 Divided by  
Man-hours.)8. Lost Time Incidence Rate: \_\_\_\_\_  
(Number of Disabling Injuries x 200,000  
Divided by Man-hours.)

9. Number of First-Aid Cases for Month: \_\_\_\_\_

Report Prepared by: \_\_\_\_\_  
Name (Printed) Signature Title/Position



## FIT-TEST RECORD

HS-15

This record represents a factual account of a qualitative Fit-Test conducted on the named individual and the conditions under which the test was conducted.

NAME: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_  
LOCATION: \_\_\_\_\_ DATE: \_\_\_\_\_  
NAME OF FIT-TESTER: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

TYPE OF TEST:	Irritant Smoke / Stannic Oxychloride
---------------	--------------------------------------

Type of Mask:	_____	PASS	FAIL
Manufacturer:	_____		
Model:	_____	Size:	_____

Type of Mask:	_____	PASS	FAIL
Manufacturer:	_____		
Model:	_____	Size:	_____

Type of Mask:	_____	PASS	FAIL
Manufacturer:	_____		
Model:	_____	Size:	_____

Type of Mask:	_____	PASS	FAIL
Manufacturer:	_____		
Model:	_____	Size:	_____

Type of Mask:	_____	PASS	FAIL
Manufacturer:	_____		
Model:	_____	Size:	_____

Additional Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



## RESPIRATORY PROTECTION PROGRAM

HS-16

I understand that the Remcor, Inc (Remcor) Respiratory Protection Program is provided for my protection. The program has been explained to me, and I am aware of my responsibilities to provide proper maintenance, care, and use of a respirator. I also understand that I may receive a copy of the Respiratory Program, located in Section 14 of the Remcor Health and Safety Manual, upon request.

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Remcor Witness: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

MODEL: \_\_\_\_\_

SERIAL NUMBER: \_\_\_\_\_

DATE \_\_\_\_\_

	PASS	FAIL	PASS	FAIL	PASS	FAIL
<b>CYLINDER AND CYLINDER ASSEMBLY</b>						
Check cylinder label for current hydrostatic test date.						
Inspect tank for large dents or gouges in metal/fiberglass.						
Inspect cylinder gauge and threads.						
Open cylinder valve to clear any obstructions.						

**PREPARATION FOR INSPECTION**

	PASS	FAIL	PASS	FAIL	PASS	FAIL
Check that high-pressure-hose connector tight on cylinder fitting.						
Check that by-pass valve is closed.						
Check that mainline valve is closed.						
Check that regulator outlet is not covered or obstructed.						

**BACKPACK AND HARNESS ASSEMBLY**

	PASS	FAIL	PASS	FAIL	PASS	FAIL
Inspect for a complete set of straps that are not damaged or contaminated.						
Check wear and function of buckle.						
Check backplate for damage and attachment to cylinder.						

**CYLINDER AND HIGH-PRESSURE HOSE ASSEMBLY**

	PASS	FAIL	PASS	FAIL	PASS	FAIL
Check cylinder to assure that it is firmly fastened to backplate.						
Open cylinder valve; listen or feel for leakage around packing and hose connection.						
Check high-pressure hose for damage or leaks.						

**REGULATOR AND LOW-PRESSURE ALARM**

	PASS	FAIL	PASS	FAIL	PASS	FAIL
Cover regulator outlet with palm of hand. Open mainline valve. Note stoppage of air flow after positive pressure builds. Close mainline valve.						
Remove hand from regulator outlet. Open by-pass valve. Cover regulator outlet again with palm of hand. Open mainline valve. Note pressure reading on regulator gauge; it should read a minimum of 1800 psi.						

DATE

PASS

FAIL

PASS

FAIL

PASS

FAIL

**REGULATOR AND LOW-PRESSURE ALARM (cont.)**

Close cylinder valve while keeping hand over regulator outlet. Slowly remove hand from outlet and allow air to flow. Note pressure when low-pressure warning alarm sounds; it should be between 550-650 psi. Remove hand from regulator outlet. Close mainline valve.						
Check regulator for leaks; blow air into regulator for 5-10 seconds, suck air from outlet for 5-10 seconds. *If a positive pressure or vacuum cannot be maintained, do not use SCBA.						

**FACEPIECE AND BREATHING TUBE**

Visually inspect head harness for cuts, damage, and deteriorated rubber.						
Visually inspect lens for proper seal in facepiece.						
Stretch breathing tube and carefully inspect for holes and deterioration. Inspect connector for damage and presence of <u>          </u> .						
Visually inspect exhalation valve for buildup of <u>          </u> foreign materials.						
Remove the <u>          </u> ring from inside mask and <u>          </u> sure that speaking diaphragm and mask <u>          </u> ring are in proper position.						
Ensure that wagon wheel and disc valve are in good condition.						
Ensure that neck strap is not damaged or contaminated.						

**INSPECTION RESULT**

Unit to remain in service. (If unit fails, remove from service.)						
--	--	--	--	--	--	--

NOTE: Before returning to storage, be sure that all valves are closed, pressure is released from high-pressure hose, and straps are fully extended.

**COMMENTS:**


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Signature of Inspector:

Date

Signature of Inspector:

Date

Signature of Inspector:

Date



## ACCIDENT INVESTIGATION REPORT

HS-18

This form **MUST** be completed and forwarded to Corporate Health & Safety within 10 days of injury.

1. Today's Date: \_\_\_\_\_
2. Injured Employee's Name: \_\_\_\_\_
3. Occupation/Department: \_\_\_\_\_
4. Date of Injury: \_\_\_\_\_
5. Place of Accident: \_\_\_\_\_
6. Nature of Injury: \_\_\_\_\_
7. What was the employee doing when injured? (Be specific): \_\_\_\_\_
8. Describe how the injury occurred? (Be specific): \_\_\_\_\_
9. What acts, failures to act and/or conditions contributed most directly to this incident? \_\_\_\_\_
10. What are the reasons for the existence of these acts and/or conditions? \_\_\_\_\_
11. What action has or will be taken to prevent reoccurrence? \_\_\_\_\_
12. LOST TIME: ☐ NO ☐ YES..... NUMBER OF DAYS: \_\_\_\_\_
13. FIRST AID: ☐ NO ☐ YES

COMPLETED BY:  
Signature/Title: \_\_\_\_\_

Date

REVIEWED BY:  
Project Manager: \_\_\_\_\_

Date

Corporate Health & Safety: \_\_\_\_\_

Date

OSHA Reportable Injury:

☐ NO ☐ YES

This form **MUST** be completed and forwarded to corporate office within 24 hours of accident.

Department: _____		Date of Report: _____	
Time & Place of Accident	Date of Accident: _____		Time _____ am/pm
	Accident occurred at: _____		
	City: _____		State: _____
Driver & Description of Accident	Name of Driver: _____		Age: _____
	Address: _____		
	_____		Phone No.: _____
	Driver's License No.: _____		State Issued: _____
	Description of Accident: _____		
Information Concerning Remcor Vehicle	Make of Vehicle: _____		Year: _____
	Remcor ID No.: _____		Serial No.: _____
	If Leased, Name of Owner: _____		
	Address: _____		
	Description of Damage: _____		
	_____		
Persons Injured	Estimated Cost of Repairs: \$ _____		
	Occupants of Remcor Vehicle: _____		Address/Phone No. _____ Injuries: _____
	_____		
	_____		
	Others: _____		Address/Phone No. _____ Injuries: _____
	_____		

(continued)

<b>Damage to Property of Others</b> (Use additional pages if more than one owner)	Owner of Damaged Property: _____			
	Address: _____			
	Description of Damage: _____		Phone No.: _____	
	If Other Vehicle Involved:			
	Make of Vehicle: _____		Year: _____	
	Estimated Cost of Repairs: \$ _____			
	Name of Driver: _____		Age: _____	
	Address: _____			
	_____		Phone No.: _____	
	Driver's License No.: _____		State Issued: _____	
Insurance Company: _____				
Where car can be inspected: _____				
<b>Witnesses</b> (Very Important)	Name _____		Address _____	Phone No. _____
	_____		_____	_____
	_____		_____	_____
	_____		_____	_____
	_____		_____	_____
<b>Police Response</b>	Agency: _____		Police Response:	
	Address: _____		YES _____ NO _____	
	Phone Number: _____		Report Filed:	
	Officer's Name: _____		YES _____ NO _____	
	_____		_____	

SIGNATURE OF PERSON COMPLETING FORM: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE \_\_\_\_\_

1. Are respirators selected on the basis of hazards to which the worker is exposed?  
Yes ☐ No ☐
2. Have respirators been issued to the users for their exclusive use?  
Yes ☐ No ☐
3. Are employees testing the facepiece-to-face seal before entering restricted work area?  
Yes ☐ No ☐
4. Are workers prohibited from entering restricted work area requiring the use of a respirator when facial hair or other characteristics may cause face seal leakage?  
Yes ☐ No ☐
5. Are employees keeping respirators on at all times while in respirator restricted work areas?  
Yes ☐ No ☐
6. Are respirators cleaned and disinfected at least weekly?  
Yes ☐ No ☐
7. Are respirators stored in a manner to protect them from dust, sunlight, heat, excessive cold or moisture, or damaging chemicals?  
Yes ☐ No ☐
8. Are respirators stored properly in storage so as to prevent them from deforming?  
(i.e. in plastic bags, not hung by straps)  
Yes ☐ No ☐
9. Are respirators inspected before and after each use and during cleaning?  
Yes ☐ No ☐
10. Is respirator protective equipment designated as "emergency use" inspected at least monthly, in addition to after each use?  
Yes ☐ No ☐
11. Is a record kept of the inspection of "emergency use" respiratory protective equipment?  
Yes ☐ No ☐
12. Are the original manufacturer's replacement parts used to repair the respirator?  
Yes ☐ No ☐
13. Are users trained in proper respirator use, cleaning, and inspection?  
Yes ☐ No ☐
14. Are records, that indicate that all users have been trained and successfully fitted, complete and available?  
Yes ☐ No ☐
15. Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Project Name and Number: \_\_\_\_\_ Date: \_\_\_\_\_

Superintendent: \_\_\_\_\_

Inspector: \_\_\_\_\_



# NUMBERS TO KNOW

HS-21

Post this notice and map at site.

## EMERGENCY NUMBERS

AMBULANCE

DOCTOR

HOSPITAL

FIRE DEPARTMENT

POLICE

SHERIFF

NATIONAL RESPONSE CENTER

800-424-8802

CHEMTREC

800-424-9300

NATIONAL POISON CONTROL CENTER

404-588-4400

## DIRECTIONS TO EMERGENCY ROOM

Post map with route highlighted.

## UTILITY NUMBERS

ELECTRIC COMPANY

WATER COMPANY

GAS COMPANY

11/90



## AIR SAMPLE DOCUMENTATION

HS-23

## SAMPLING ENVIRONMENT

Date: \_\_\_\_\_ Type of Sample: \_\_\_\_\_

Location: \_\_\_\_\_

Weather Conditions: \_\_\_\_\_

Personnel Subject: \_\_\_\_\_

Job Task: \_\_\_\_\_

Beginning Time: \_\_\_\_\_ Ending Time: \_\_\_\_\_

Comments: \_\_\_\_\_

## SAMPLING RATES

Beginning  
Time: \_\_\_\_\_Ending  
Time: \_\_\_\_\_

1. \_\_\_\_\_

1. \_\_\_\_\_

2. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

3. \_\_\_\_\_

Avg. = \_\_\_\_\_ LPM

Avg. = \_\_\_\_\_ LPM

Calibration Device Used: \_\_\_\_\_

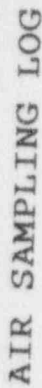
	<u>Time</u>	<u>Status</u>
Checked Pump:	_____	_____
Checked Pump:	_____	_____
Checked Pump:	_____	_____
Total Hours:	_____	
Total Minutes:	_____	

Sampled By: \_\_\_\_\_

Signature: \_\_\_\_\_

Date

3/91



# AIR SAMPLING LOG

## PROJECT SITE INFORMATION:

Project Name:

Project No.:

Exact Location:

Field Technician:

Date:

Title:

SAMPLING DATA:

[illegible]

\* - Attach map or blueprint indicating sample(s), location(s)  
 \*\* - BB = Bubble Buret  
 R = Rotometer  
 O = Other

Remcor, Inc. - 701 Alpha Dr. - P.O. Box 38310 - Pittsburgh, PA 15238 - (412) 963-1106

1/91