



INDUSTRIAL HYGIENE RULES

RULE NUMBER:	DATE:	REPLACES RULE NUMBER:	OF DATE(S)
IH-001	1992 January 01	I-000	82-12-28

RE: INDUSTRIAL HYGIENE PROGRAM

Policy Statement

Maintenance of a healthy workplace in order to protect each employee from potentially harmful agents in the working environment is a basic premise underlying Rockdale Operations. This is achieved by:

- Periodic evaluations of the workplace for early detection of environmental conditions that might prove detrimental to employee health.
- Institution of appropriate controls to minimize employee work exposures to potentially harmful conditions, in accordance with good industrial hygiene practice.
- Training employees to recognize the potential health hazards of their jobs and the means of avoiding undue exposure.
- Assessing and recommending personal protection devices and providing instructions for their use and care.
- Active Industrial Hygiene support of plant Safety and Health Steering Committee and the Departmental Safety and Health Committees.
- Cooperation with local, state, and Federal government agencies charged with employee health protection so as to aid in the development of sound and effective standards and the development of common goals.

Elements of Rockdale Operations' Industrial Hygiene Program

- Respiratory Protection Program - Rockdale Operations has developed a Respiratory Protection Program designed to protect employees from undue exposure to airborne contaminants. A summary of this program is included in the Industrial Hygiene section of the Rockdale Operations Safety Manual and is identified as Rule I-002. Additional details are contained in Rockdale Operations Respiratory Protection Manual.



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- **Hearing Conservation Program** - Rockdale Operations has developed a comprehensive Hearing Conservation Program to protect employees from hearing loss due to exposure to occupational noise. The details of this program are included in Rule I-004 in the Industrial Hygiene section of the Rockdale Operations Safety Manual.
- **Hazardous Materials Control** - A procedure has been developed for early identification of hazardous materials at Rockdale Operations in order to ensure the safe use of these materials. Details of this procedure are given in Rule I-006 in the Industrial Hygiene section of the Rockdale Operations Safety Manual. Additionally, Rule I-003 describes the procedures to be used in disposing of wastes containing asbestos and Rule I-005 deals with disposal of empty containers.

Rockdale Operations Industrial Hygiene Survey contains a listing of materials used at the plant, the departments which use them, and a brief discussion of any associated hazards.

- **Urinary Fluoride Survey** - Rockdale Operations conducts urinary fluoride surveys in order to monitor employee exposures to fluoride generated in the potroom work area. The surveys are done in accordance with the procedures given in Alcoa's Urinary Fluoride Survey Manual.

Sample collection and analysis is done by the Industrial Hygiene Department. Feedback to and counselling of participants is done by the Medical Department and Industrial Hygiene.

- **Ionizing Radiation Control** - Rockdale Operations has a program designed to protect employees from overexposure to ionizing radiation. The program includes:
 - A. Maintaining an up-to-date of all ionizing radiation devices on the plant site and ensuring that all such devices are properly licensed by the Texas Department of Health.
 - B. Ensuring that all ionizing radiation devices are properly labelled and that appropriate warning signs are displayed in the areas where the devices are used.

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- C. Ensuring that all ionizing radiation devices are inspected at prescribed intervals and that records of such inspections are maintained.
- D. A film badge program to monitor the exposure of employees working with ionization radiation devices.

Items A, B, and C are the responsibility of the Senior Safety Engineer - Power. Item D is administered by the Medical Department.

Schedules for Testing and Training

Schedules for Testing are available from the Senior Industrial Hygiene Technician.

Schedules of Training are available through the Training Management System which also provides a record of such training.

The following pages are outlines of training programs which are available.

HEARING CONSERVATION

- I. Objective: to insure that employees at Rockdale Operations do not suffer hearing loss due to exposure to occupational noise.
- II. Training Program Outline
 - A. How the ear works
 - B. Identification of Noise Hazards
 - 1. Noise level surveys
 - 2. Personal exposure sampling
 - C. Control of noise exposure
 - 1. Engineering controls
 - 2. Administrative controls
 - 3. Personal protective equipment -- show styles available at Rockdale
 - D. Audiometric Testing
 - E. Education
 - F. OSHA/MSHA Standards
 - G. Audio-visual Presentation
- III. Questions and Answers

PCB SAFETY TRAINING

- I. Objective: to ensure that employees are properly training and equipped to handle PCB's found at Rockdale.
- II. Training Program Outline
 - A. What are PCB's -- Where do they come from?
 - B. Health effects of PCB exposure
 - C. Routes of PCB entry into the body
 - D. Personal protective equipment
 - E. Regulations governing the use, storage and disposal of PCB's
- III. Questions and Answers

RADIATION SAFETY TRAINING

- I. Objective: to ensure that employees are not exposed to harmful levels of ionizing radiation.
- II. Training Program Outline
 - A. Types of radiation and characteristics of each
 - B. Types of radiation devices found at Rockdale
 - C. Personal monitoring program - review results with participating employees
 - D. Discussion of Regulations
 - a. allowable dose
 - b. requirements for posting warnings and notices
 - c. licensing and registration requirements
 - E. Handout describing sources of annual radiation dose
- III. Questions and Answers

RESPIRATORY PROTECTION

A. Statement of Policy

1. Plant objective
2. OSHA/MSHA requirements

when discuss
- cleaning procedures
- maintenance
- care of resp
- Hazards vs Limitations
wh, esp

B. Fundamental Respiratory Anatomy and Physiology

1. Entry
2. Mode of Travel
3. Basic Working Unit of the Lung

C. Measurements of Toxic and Nuisance Atmospheres

1. Particulates
2. Gases

D. Particulate Atmospheres

1. Types
2. Physiological Reactions

E. Gaseous Atmospheres

1. Types
2. Physiological Reactions

F. Types of Available Respirators

1. Disposable
 - (a) 8706
 - (b) 8710
 - (c) 9910
 - (d) 9920
2. Rubber Face Piece Respirators
 - (a) AD 50 and 60 Series
3. Self-contained breathing apparatus (SCBA) (if applicable)

G. Fit-testing (if applicable)





INDUSTRIAL HYGIENE RULES

RULE NUMBER: IH-002	DATE: 1992 January 01	REPLACES RULE NUMBER: I-001	OF DATE(S) 88-04-21
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RE: ROCKDALE OPERATIONS RESPIRATORY PROTECTION PROGRAM

Statement of Policy

Rockdale Operations has developed a Respiratory Protection Program which will protect the employee while engineering design of equipment is being implemented. It is understood by Company management that the use of respiratory protection devices is permitted by OSHA/MSHA only when these engineering control methods are not feasible or are not completely effected, during the period that engineering control methods are being implemented, or in those cases of emergencies.

Selection

Respirators have been selected on the basis of hazards to which the worker is exposed and will provide adequate respiratory protection against the particular hazard for which they are designed in accordance with the standards established by competent authorities. A list of areas and jobs requiring respiratory protection is attached.

Training

The user shall be instructed and trained in the proper use of respirators and their limitations. Training shall include ~~qualitative fit testing~~ of all employees whose job requires the use of or who voluntarily elect to wear air purifying respirators. Because of the wide variation in the degree of protection caused by the presence of facial hair, employees with interfering ~~facial hair will not be fit tested~~. It will be the responsibility of the department superintendent to ensure that employees receive appropriate training.

Respirator Assignment

Nearly all of the respirators used at Rockdale are disposable types. Non-disposable respirators, where required, should be assigned to workers for their exclusive use.

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Cleaning, Maintenance and Storage

Non-disposable respirators shall be regularly inspected and cleaned by the user. Those used by more than one person (Scott Air-Paks, Sca-Paks and supplied air hose masks) shall be thoroughly cleaned and disinfected after each use.

Storage

Respirators shall be stored in a designated container in a convenient, clean, and sanitary location. *that not be in machine room*

Compressed Air Breathing Devices

Compressed air breathing devices such as air-supplied hoods, whitecap helmets, and airline respirators will be serviced and stored by users.

Self-Contained Breathing Devices

Self-contained breathing devices will be stored and serviced by guards at the main gate guard house. The only exceptions are those emergency devices strategically located around the plant. These emergency devices will be checked monthly by the guards and will be turned in for servicing after each use. Employees who are required to wear self-contained breathing devices must be fit tested annually. Employees with facial hair which interferes with the face piece seal cannot use self-contained breathing devices.

Inspection

Non-disposable respirators used routinely ~~shall be inspected by the user during cleaning.~~ If worn or deteriorated parts are found, the respirator shall be turned in for repair. Filters and cartridges shall be replaced each day or more often if necessary. Each respirator must have all the parts as designated by the manufacturer to be acceptable for use.

Work Area Surveillance

Appropriate surveillance of work area conditions and degree of employee exposure or stress shall be maintained on a periodic basis as established by Industrial Hygiene guidelines. Carbon monoxide monitors are used to check CO content of each plant air compressor. Concentrations in excess of 30 ppm will cause shutdown of the compressor involved.

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Medical Considerations

Persons should not be assigned to tasks requiring use of respirators unless it has been determined that they are physically able to perform the work and use the equipment. The Company physician shall determine what health and physical conditions are pertinent. The respirator user's medical status will be reviewed annually at the time of the annual physical examination.

Insuring Compliance

Employees will be expected to comply with Respiratory Protection rules as with any other safety rule and will be subject to normal enforcement procedures.

Program Evaluation

no memo
Regular inspection and evaluations shall determine the continued effectiveness of the program. Audits shall be performed on a periodic basis.

Recordkeeping *Medical acceptance or rejection of EEs resp use*

The following records will be maintained as part of the Rockdale Operations Respiratory Protection Program:

1. Respiratory ~~training~~ and ~~fitting~~ with employee's signature.
2. Record of ~~inspection~~ and ~~maintenance~~.
3. Record of ~~disciplinary action~~ will be maintained in the ~~Employment Office~~.

Program Manual

A copy of the Respiratory Protection Program is included in each department's copy of the Rockdale Operations Safety Manual.

sent - none in resp use

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Areas and/or Jobs Requiring Respiratory Protection

1. Ore Shed - Basement - Dust - 3M 8710, 3M 8715, 3M 9900, 3M 9906, 3M 9916 AO 57A Cartridge, Moldex 2200, Scott 642D filter.
2. Ingot Plant - Skim loading - Skim dust - Air supplied helmet with powered air purifier.
3. Dust Collector Bag Changing -
 - A. Entering and blowing down dust collectors in preparation for bag-changing - Air-supplied hood.
 - B. Removing bags - 3M 8710, 3M 8715, 3M 9900, 3M 9906, 3M 9916, AO 57A Cartridge, Moldex 2200, Scott 642D filter.
4. Changing Chlorine Tanks - Ingot Plant - Chlorine gas - AO 53A Cartridge, 3M 7252 Cartridge, Scott 642AG Cartridge, Emergency Escape Only. R&M in a Chlorine environment requires a Scott Air-Pak.
5. Electrical Maintenance work inside precipitators - Dust-Scott Type C supplied air hose mask with Scott Sca-Paks for emergency escape.
6. Confined Spaces - Plantwide - Low Oxygen - Scott Air Pak if O₂ is below 19.5%. Needs to parallel to confined space JSA.
7. Paint Spraying - Maintenance - Blasting grit dust - Air-supplied hood. 3M 8709 (isocyanates): 3M Easi Care 5000 Series for organic vapor with 5010 paint spray prefilter, 3M Easi-Air 7000 Series with 7251 organic vapor cartridge, 7256 paint spray prefilter.
8. Sandblasting - Maintenance - Blasting grit dust - Air-supplied hood.
9. Carbon Plant - Flue wall gunniting - Silica - AO 57A Cartridge, 3M 8710, 3M 9900, 3M 9906, 3M 9916, Moldex 2200, Scott 642D filter.

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10. Carbon Plant - when performing jobs listed below - Coal tar pitch volatiles - 3M 8715, 3M 9900, 3M 9916, 3M 9920, AO 57A Cartridges, Moldex 2200, 3M 5000 Series with 7251 Cartridge and 7258 filter.
 - Dumping mix from mix spreader (M5)
 - Cleaning mixers, mixer doors, mixer slide gates, mixer vent pipes
 - Cleaning choke-up above presses
 - General clean-up on mixer floor
 - General clean-up above presses
 - Cleaning dust collector pipes SC 2 and SC 7.
 - Changing mixer dust collector bags
 - Unloading pitch and pitching up - Bldg. 52
11. Potlining - Dumping pot shells - nuisance and Fluoride dust - 3M 8710, 3M 8715, 3M 9900, 3M 9916, AO 57A Cartridge Dustfoe 66, Moldex 2200, Scott 642D filter.
12. Potlining - Dumping mixer and installing mix - Coal tar pitch volatiles - AO 57A Cartridge, 3M 8715, 3M 9900, 3M 9916, 3M 9920, Moldex 2200, 3M 5000 Series with 7251 Cartridge and 7258 filter.
13. Potlining and Utility - Air lancing - metal fumes - air-supplied hood, AO 5057/6057, 3M 9920.
14. Potlining - Installing Superex insulation - Silica - 3M 8710, 3M 8715, 3M 9900, 3M 9916, AO 57A Cartridge, Moldex 2200, Scott 6420 filter.
15. Rodding Room - Digging and relining induction furnace-Silica - Air-supplied helmet, 3M 8710, 3M 8715, 3M 9900, 3M 9906, 3M 9916, AO 57A Cartridge, Moldex 2200, Scott 6420 filter
16. Potrooms - Baking pots - Coal tar pitch volatiles, total particulate - AO 57A Cartridge, 3M 5000 series with 7251 Cartridge and 7258 filter, 3M Easi Care for organic vapors with prefilter.
17. Potrooms - TCC crews in T-51 lines when covering carbon or performing any task using air for cleaning - total dust and fluoride dust - AO 57A Cartridge 3M 8710, 3M 8715, 3M 9906, 3M 9916, Moldex 2200, Scott 642D filter

9916 RESPIRATOR

Rockdale Operations is now stocking the 3M 9916 disposable respirator. This respirator is an update of the 9906 blue respirator that we presently use.

The features include a collapse-resistant shell for greater reliability in heat, a redesigned nose cushion for improved wearer comfort, and an exhalation valve for relief of warm moist air from the face of the wearer.

It is NIOSH/MSHA approved for dusts and mists up to ten times the permissible exposure limit, or the applicable OSHA limit, whichever is lower. 3M recommends this respirator for nuisance level acid gas relief. Typical gases that the 9916 could be used for are:

Hydrogen fluoride (below the current OSHA PEL of 3 ppm)

Sulfur dioxide (below the current OSHA PEL of 2 ppm)

Hydrocarbon vapors (below current OSHA PELs)

Nuisance levels are those below the permissible exposure limit for the particular gaseous contaminant.

The 9916 is not to be used for paint spray, welding fumes or any other fumes, gases, or vapors; asbestos or sandblasting. This respirator does not supply oxygen.

In test subjects, the 9916 lasted two to three and even eight times longer than the 9906. Duration will be highly dependent on the tasks being performed. At any time when breathing becomes difficult, a taste or smell is detected, leave the contaminated area, discard and replace the respirator.

As a reminder, at ~~any time~~ an employee wears a respirator, voluntarily or mandated, they are to be ~~fit tested~~. This is required by OSHA and Alcoa policy. This or any other respirator shall not be worn with beards or other facial hair that prevents direct contact between the face and the edge of the respirator.

If there are any questions, you may contact the Rockdale Operations Safety and Industrial Hygiene Department.



INDUSTRIAL HYGIENE RULES

RULE NUMBER: IH-003	DATE: 1992 January 01	REPLACES RULE NUMBER: I-002	OF DATE(S): 87-08-07
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RE: ASBESTOS WASTE DISPOSAL CONTROL

Asbestos-containing products used at Rockdale have been reduced in number in recent years as substitutes containing no asbestos have been found. There are, however, a few items still in use. The purpose of this rule is to identify these products and restate the procedure to be followed when disposing of them after removal from service.

Asbestos Products at Rockdale

1. Garlock gasket material.
2. Valve packing.
3. Transite potroom fume duct sections.
4. Brake linings.
5. Pipe insulation installed before the changes to fiberglass insulation was made.
6. Furnace insulation in Bldgs. 34 and 90 may contain asbestos. The new furnaces in Bldg. 401 contain no asbestos insulation. Unless it can be positively established that no asbestos is present, demolition of furnace linings must be conducted as though asbestos were present and asbestos waste disposal procedures must be followed.

Method of Disposal

Items 1, 2, 3, and 4

These items are bonded and do not become friable to the extent that they might become airborne and result in an asbestos fiber concentration in the air in excess of the standard. It is, therefore, permissible to dispose of them in normal plant trash containers.

Items 5 and 6

Unless it is definitely known that the insulation to be removed is non-asbestos, the material in question will be treated as asbestos. Any asbestos removal done at Rockdale Operations will be done by an approved contractor.

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Contractors will be permitted to dispose of waste asbestos in a designated section of Alcoa's Class II Landfill. Disposal must be coordinated with the Construction Department so that arrangements can be made to cover the waste with six (6) inches of soil within twenty-four hours. Any waste placed in the area must be in containers approved for asbestos disposal.

10/1/1991
Hawaii

HQ 001557



INDUSTRIAL HYGIENE RULES

RULE NUMBER:	DATE:	REPLACES RULE NUMBER:	OF DATE(S):
TH-004	1992 January 01	I-003	82-12-15

RE: HEARING CONSERVATION PROGRAM

Objective

It is Alcoa's policy to prevent hearing loss due to occupational exposure to noise. Employee exposures should not exceed 85 decibels A-scale (dBA), as an eight-hour time-weighted average. To obtain this goal, reduction of excessive exposures must be accomplished by engineering or administrative controls, where feasible, and hearing protection, otherwise. In addition, an effective Hearing Conservation Program must be established whenever exposures exceed 85 dBA, as an eight-hour time-weighted average.

The Rockdale Hearing Conservation Program includes the following elements: identification of noise hazards in new facilities and equipment, noise surveys, hearing protection, engineering controls, audiometric testing, investigation of significant threshold shifts and employee training.

Responsibilities

Engineering

1. Engineering management shall assure that noise controls are properly considered in the selection/development of new facilities and equipment.
 - It is Alcoa's policy that noise exposures from modernized facilities and new equipment should not exceed 85 dBA, as an eight-hour average. This requirement is waived only when technical or economic infeasibility can be demonstrated and documented.
 - The Alcoa Noise Control Worksheet (SF-4887) shall be completed and submitted with capital expenditure "Request for Authorization" (instructions are contained in Alcoa Engineering Standard 30.3.3). A copy of the completed form should be submitted to the Safety/Industrial Hygiene Manager.

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- Earth moving machinery, trucks, tractors, personnel, carriers, sweepers, mobile vacuum cleaners, fork lift trucks, and other industrial vehicles shall be purchased, leased, or rented whenever possible, in accord in Alcoa Engineering Standard 30.3.2.

Departmental Management

1. Departmental management shall assure that employees are not exposed to noise greater than 85 dBA as an eight-hour average. Noise exposures shall be controlled by engineering or administrative methods, where feasible, and otherwise by the enforcement of hearing protection for specific job activities or in designated plant areas. Areas and jobs where eight-hour TWA noise exposure can be expected to exceed 85 dBA are included in Appendix A.
2. Departmental management shall assure that each employee assigned to a job where the noise exposure may exceed 85 dBA, as an eight-hour average, is properly trained in the health effects of noise, audiometric testing, noise hazard of their work, the proper use of hearing protection, OSHA noise regulations and the provision of the Hearing Conservation Program. ~~Training~~ shall be repeated annually as indicated in Appendix D.

Industrial Hygiene

1. The Rockdale Hearing Conservation Program is administered by the Safety/Industrial Hygiene Department.
2. The Senior Industrial Hygiene Technician shall evaluate the noise exposure for each job classification at Rockdale Operations. Where appropriate, engineering controls, administrative controls and/or hearing protection to reduce employee noise exposures to acceptable levels will be recommended.
3. The Senior Industrial Hygiene Technician shall investigate the noise exposure and use of hearing protection by employees with moderate or repeated significant threshold shifts.
4. The Safety/Industrial Hygiene Department shall administer the employee training program in Hearing Conservation.

Medical Department

1. The Medical Department shall provide for baseline and

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*audit review
new
5-10-92*

periodic audiometric testing of all employees. Employees exposed above the 85 dBA criteria shall be tested at least annually.

- Audiometric testing, a form of medical surveillance, serves as an early warning of developing hearing disability which may be caused by many factors including noise, mechanical damage, infection and disease.
 - Each audiogram is interpreted by a professional audiologist and/or otologist.
2. Employees with significant threshold shifts shall be counselled and notified in writing by the Medical Department as described in Appendix C. A significant threshold shift is warning that a change in hearing which, if left uncorrected and allowed to repeat over a period of time, could lead to a hearing impairment.
 3. The Medical Department will ~~fit all~~ insert type hearing protectors and provide employees with instructions for their proper use. Hearing protectors used at Rockdale are listed in Appendix B.

*new Sept 2001
modification?
instructions
and types of protectors*

APPENDIX A

AREAS AND JOBS SUBJECT TO HEARING PROTECTION REQUIREMENTS

Areas Over 85 dBA, 8 Hr. TWA

1. Atomizer - Bldg. 401 (outside acoustical enclosure)
2. Atomizer - Bldg. 402
3. Boiler House - Bldg. 66 (outside acoustical enclosure)
4. Compressor House - Bldg. 27G
5. Ingot Plant - Bldg. 34
6. Properzi - Bldgs. 90 and 91 - Furnace and Mill Areas
7. Rodding - Bldg. 32 - West of Push-off Station
8. Green Carbon Area - Bldgs. 54 and 56 - Ball Mill Area
9. Bldg. 58 - Platform
10. Press Room - Bldg. 54
11. Below A-398 Units - Lines 5, 7 and 8
12. Below Line 6 Precipitators
13. Below A-446 Units - Bldgs. 160, 162 and 164
14. Scrubber Water Pump Room - Bldg. 76X

APPENDIX A - continued

AREAS AND JOBS SUBJECT TO HEARING PROTECTION REQUIREMENTS

Jobs Over 85 dBA

1. Rowelling Siphons - Potrooms
2. Blowing Off Carbon with Compressed Air - Potrooms
3. Blowing Off Anode Bus with Compressed Air - Potrooms
4. Blowing Off Deck Plates with Compressed Air - Potrooms
5. Cleaning Floors with Compressed Air - Potrooms
6. Melting Buttons Off Anode Bus
7. Operating any Pneumatic Hammer or Impact Tool or Wrench
8. Operating Chambersberg Hammer - Bldg. 44
9. Operating or Working within Forty (40) Feet of Supersucker
10. Digging Pots with Pneumatic Digger
11. Operating Car Shaker - Bldg. 52
12. Unloading Precipitator Catch - Bldg. 19A
13. Operating Friction Joiner - Bldg. 32F
14. Cleaning Butts with Chipping Gun - Potrooms
15. High Pressure Shower Cleaning Unit

APPENDIX A - continued

AREAS AND JOBS SUBJECT TO HEARING PROTECTION REQUIREMENTS

Vehicles Over 85 dBA

1. Any Holt Lift V80D Forklift
2. Any Walden 4000 Front End Loader
3. Any Walden 6000 Front End Loader
4. Hyster Forklift - Loading Pad
5. Silent Hoist Forklift - Properzi
6. Payloader - Scrap Metal Pickup
7. Trackmobile
8. Taylor 520 Forklift - Loading Pad
9. Tow Tractor for Hauling Precipitator Dust
10. Any Caterpillar Forklift
11. Silent Hoist Tractor for Carrying Carbon Blocks
12. Any Tennant Sweeper
13. All Clark Tractors
14. International 515 Front End Loader
15. Erickson Platform Truck for Hauling Brick
16. Kalamazoo Scooter with Welding Unit On
17. Kalamazoo Scooter with Goodall Starter Running
18. Towmotor Fork Truck
19. Ford Farm Tractor
20. Case 75 Backhoe
21. Rosco Vibrat Roller
22. Dreiser 8K Concrete Saw

APPENDIX B

HEARING PROTECTION AVAILABLE AT SAFETY CENTER

Safety Center Stock Number

QB2 (Quiet Band)	HL070-6
QB2 (Replaceable Pad for Above)	HL070-7
EAR (Disposable)	ER070-301
EAR (with Cord)	ER070-31
Air Soft (with Cord)	HL070-4
EAR - Ultrafit (with Cord)	ER070-4004
Quiet (with Cord)	HL070-2
Ear Muffs (Noise Foe)	MS070-2

APPENDIX C

Locations: Rockdale Operations

Test Date: 1991 December 15

Dear MRS. JANE DOE:

Recently you had your hearing checked in the Medical Department and the results indicate that there has been a decrease in your hearing ability. This diminished ability in hearing may be due to several factors: aging, medication or noise. Although you are not currently exposed to excessive amounts of noise, in your job, to prevent further hearing changes, you are encouraged to wear hearing protection while working around noisy off-the-job equipment such as tractors and chain saws or while participating in noisy hobbies, such as target shooting.

We will be rechecking your hearing in the next few months to determine if your hearing has stabilized. If you have questions regarding this letter, or if you have questions at any time concerning your hearing, please do not hesitate to call the Medical Department.

Thank you for participating in Alcoa's Hearing Conservation Program.

Very truly yours,

LOCATION MEDICAL DEPARTMENT

Soc. Sec. No. 000-000-0001
Department No. 001

APPENDIX C - continued

Location: ROCKDALE OPERATIONS

Test Date: 1991 December 15

Dear MR. J. H. DOE:

Recently you had your hearing checked in the Medical Department. The results of that check indicate that your hearing ability has decreased. This diminished ability in hearing may be due to several factors: aging, medication or noise. Since you presently work in a noisy area, we ask that you begin to wear hearing protection on the job, if you do not already do so. The appropriate hearing protection will be provided. The hearing protection is to help insure that no further changes in hearing will occur due to noise.

We will be rechecking your hearing in the next few months to determine if your hearing has stabilized. We encourage you, until that time, while working around noise to use hearing protection both on and off the job.

If you have any questions regarding this letter, or if you have questions at any time concerning your hearing, please do not hesitate to call the Medical Department.

Thank you for participating in Alcoa's Hearing Conservation Program.

Very truly yours,

LOCATION MEDICAL DEPARTMENT

Soc. Sec. No. 001-001-0002
Department No. 002

APPENDIX D

TRAINING PROGRAM OUTLINE

- I. Description of the Program
 - A. Objective of the Program
 - B. Elements of the Program *use of PPE*
 - 1. Identification of Noise Hazards
 - 2. Noise and Personal Exposure Surveys
 - 3. Engineering Controls
 - 4. Hearing Protection
 - 5. Audiometric Testing
 - 6. Employee Education
 - C. OSHA/MSHA Standards and Rockdale Operations' Requirements
- II. Audio-Visual Presentations:
 - "Hear Today - Gone Tomorrow"
 - "Just the Facts" (CORE Chapter 17)
 - "Hearing Safety" (Tel-A-Train)
- III. Handouts:
 - "Just the Facts" - On-the-Job Pamphlet
 - "Hearing Safety" - Off-the-Job Pamphlet
 - Hearing Protectors
- IV. Review:
 - "Do you know the answers?" - CORE Chapter 17 Review



INDUSTRIAL HYGIENE RULES

RULE NUMBER:	DATE:	REPLACES RULE NUMBER:	OF DATE(S):
IH-005	1992 August 10	IH-005	92-01-01

RE: HAZARDOUS MATERIALS HANDLING COMMITTEE POLICY ON CONTAINER DISPOSAL

Rockdale's container disposal policy is summarized below:

Empty Containers Approved for Release to Employees

<u>Type Container</u>	<u>Material Contained</u>
Fiber Drum	Tabular Alumina
Fiber Drum	Activated Alumina
Plastic Pail	Soap
Plastic Pail	Refractory Cement (Penseal 25)
Open Top Metal Drums	Non-toxic or Non-hazardous Alloying Material

Supervisors are responsible for insuring that containers to be taken are clean. Their signature on the gate pass attests to the fact that they have inspected and released the containers.

It is important that this inspection be thorough in order to avoid incidents which could result in liability claims.

Empty Metal Container Disposal

Returnable empty metal containers are accumulated at the waste storage pad in the South yard and sold to D.O.T.-approved reclaimer.

Non-returnable metal containers are also accumulated at the waste oil storage pad in the South yard for disposal in the Class II landfill. Disposal is accomplished by taking accumulated containers to the landfill at a time when the area is being worked on by the bulldozer. This will facilitate immediate crushing and covering of the containers.

Accumulated metal containers, other than those on the approved list, are not to be released for any use inside or outside the plant fence because of potential chemical exposure hazards and because severe explosions and/or subsequent fires may result if welding, cutting, or other hot work is done on containers that may not be entirely free of combustible solids, liquids, dusts, and gases.





INDUSTRIAL HYGIENE RULES

RULE NUMBER:	DATE:	REPLACES RULE NUMBER:	OF DATE(S):
IH-006	1992 January 01	I-005	82-07-27

RE: PROCEDURES FOR IN-PLANT CONTROL OF HAZARDOUS MATERIALS

Early identification of hazardous materials is vital if controlled usage is to be accomplished with minimum risk. The use of the Purchasing-Stores function as the primary control and check point seems to be logical and at locations where it has been tested, has proven to be very effective. The early participation of the requisition writer (and those who countersign requisitions) insures that the people who are closest to the in-plant users of the material are aware of the hazards.

Control of the procurement of hazardous materials will be accomplished as follows:

1. New items to be purchased enter our system by means of a Purchasing Department Requisition (Form Number SF25) or through an Addition to Stores (Form Number SF225.)

Upon receipt of the SF25 or SF225, the known non-hazardous materials will be processed and handled in the usual manner. For all other items, the Purchasing Department Buyer will check to see if an Alcoa Material Safety Data Sheet has been issued. If so, this will be noted on the request form and it will be processed. The resultant order will carry an appropriate note such as:

"If any product covered by this purchase order is, or contains, a chemical substance as defined in Title 40, Part 710 of the TOSCA regulations and/or must fulfill shipping and package requirements of Title 49 of Code of Federal Regulations, vendor's acceptance of the order indicates its compliance with all regulations."

or,

"Supplier is to furnish material safety data sheets (OSHA Form 20) specifying generic and trade name of product, product specification, full hazard information including receiving and storage hazards. Instructions and special equipment needed for handling and instructions for disposal of material and containers in accordance with RCRA regulations."

HQ 001569



**INDUSTRIAL HYGIENE RULE IH-006 - PROCEDURES FOR IN-PLANT CONTROL
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Any other requests on which there could be any questions about possible hazards are to be copied and both the copy and the original are to be "red-flagged". The copy will be returned to the request originator along with instruction sheets requesting more information on the material and how it will be used. These sheets are shown as Attachment A. The original request will be promptly processed into an inquiry by Purchasing in the usual manner except:

- A. Every effort will be made in the inquiry to obtain full hazard information from the supplier.
 - B. No commitment will be made until the requested information from the requisition writer and the vendor has been received and a determination has been made that the material can be handled safely.
 - C. Once the material has been approved and ordered, it will be added to the plant material inventory.
2. Materials currently in use in the plant have been listed and are included, along with descriptive information concerning the hazards, in the Industrial Hygiene Survey. This information is available on request from the Environmental Superintendent.

ATTACHMENT A

FROM

TO

RE: HAZARDOUS MATERIALS - RED FLAG REPLY - REQUISITION NO.

Reply needed by _____ or sooner

There is a possibility that the material on your requisition could be defined as a "Hazardous Material". Often this can be classified with more information from you. Please review the "Hazardous Material Definition" and supply as much of the following information as you can:

1. If your description is by trade name or catalog number, please complete the description in layman and scientific language. (Include both Generic Description and Proprietary Names) What are the ingredients?
2. Do you foresee any hazard potential? (Fire, corrosive, irritant, poisonous by ingestion, inhalation, skin absorption, etc.)
3. Does the product deteriorate when package is broken? Can or will any of the hazard shown in item 2 above occur in the presence of high humidity or rain? Does high or low transport and storage temperature create any hazard potential? Is long storage unadvisable?
4. Any special protective equipment required for people handling or using the material? Can it be stored near other materials with safety?
5. What are you setting out to accomplish by use of the material? What is its function and how will it be used? What less hazardous alternate materials could be acceptable?
6. What disposition can be made of material after it has served your purpose? Any ecology problems? Any potential salvage?



ALCOA

SF-2386

Your prompt reply will speed the order release and delivery of your requisition.

HQ 001571

**ALCOA HAZARDOUS MATERIAL DEFINITION:
GASES, VAPORS, LIQUIDS, SOLIDS OR PARTICULATE
HAVING ONE OR MORE OF THE FOLLOWING CHARACTERISTICS:**

- | | |
|--|---|
| 1. Flammable
flash point, closed cup | Below 100°F (37.8°C) |
| 2. Combustible
flash point, closed cup | Between 100 and 200°F
(37.8 and 93.3°C) |
| 3. Toxic by Inhalation
Threshold Limit Value (TLV)
Gas or vapor, PPM
Particulate, MG/M ³
Particulate, MPPCF | Below 500
Below 10
Below 30 |
| 4. Toxic by Ingestion
Single oral dose
MG/KG of body weight
LD ₅₀ for rats | Below 500 |
| 5. Toxic by absorption
Skin contact (dermal)
MG/KG of body weight
LD ₅₀ for rabbits | Below 2000 |
| 6. Chronic Toxicity | Materials having serious or irreversible
chronic health or environmental toxicity
as determined by the corporate
Industrial Hygiene and Medical Dept.
or Environmental Control Dept. |
| 7. Visible Destruction or
Alterations to Tissue at
Site of Skin Contact | 24-hour test |
| 8. Hazardous Processes | In course of normal operations, can
produce gases, vapors, or particulate
having one or more of the above
characteristics. |
| 9. Chemical Reactivity | Any material that, as a result of
foreseeable storage or processing
and/or as a result of interaction with
other materials, has the potential of
readily detonating or polymerizing with
the release of a large amount of
energy, undergoing spontaneous
combustion, and/or generating other
hazardous materials (gases, vapors or
particulates) having one or more of the
above characteristics. |
| 10. Radioactive Materials | These materials are fully covered by
the Nuclear Regulatory Commission (NRC)
regulations. All Alcoa locations
using radioactive sources have a
radiation safety supervisor. |

(The above is extracted from Engineering Standard 18.15 Section 2)