Table 2–1. Occupational Health Surveillance Charts.
Examples of Medical and Industrial Hygiene Considerations in an Aluminum Corporation

Airborne Contaminant	*Principal Use or Source of Emission*	*Health Effects*	*Medical Surveillance*	*1977 TLV*	*Air Sampling*	*Respiratory Protection or Other Controls*
Acetone	Solvent; present in fast drying paints or lacquers	Irritation of respiratory tract and mucous membranes; narcosis; dermatitis	Interval history	1000 ppm	Charcoal tubes Detector tubes	Air-purifying respirator with cartridge for organic vapors Rubber gloves
Alumina	Potrooms; materials handling areas; kilns; refractories	Lung overload; no fibrosis	Interval history	10 mg/m³ (1977 addition)	Gelman VM-1 membrane filter; nuclepore 0.45 micron filter	Air-purifying respirator with filter for nuisance dust
Ammonia	Spent pot relinings; cryolite recovery and pot repair; dross reclamation; cleaners; pretreatment of printed packaging	Irritation of respiratory tract and mucous membranes	Chest x-ray Lung function	25 ppm	Detector tubes Impinged in acid	Air-purifying respirator with cartridge for ammonia
Antimony Pentachloride	Catalyst	Gastrointestinal and heart disorders; respiratory irritation	EKG Chest x-ray Lung function	0.5 mg/m³	Millipore AA filter	Air-purifying respirator with filter for nuisance dust Stibine may be generated under reducing conditions
Asbestos	Insulation; coverings; lagging materials; marinite; molten metal control; brake linings	Fibrosis of lung; bronchogenic carcinoma; mesothelioma; cancer of stomach, colon, and rectum	Chest x-ray Lung function Sputum cytology (OSHA requirement — annual medical surveillance)	5 fibers/ml > 5μ in length (OSHA standard is 2 fibers/ml > 5μ)	Millipore AA filter (OSHA requirement — semiannual sampling)	Dependent upon concentration Positive pressure respirator Power filtered respirator Filter respirator Vacuum sweeping Local exhaust ventilation
Bauxite (may contain silica)	Materials handling	Lung overload	Chest x-ray Lung function	10 mg/m³ (nuisance dust)	Gelman VM-1 filter	Air-purifying respirator with filter for nuisance dust