FILE NAME: Reichhold (REI)

DATE: 0000

DOC#: REI024

DOCUMENT DESCRIPTION: Form Letters - 2

REICHHOLD CHEMICALS, INC.
Creative Chemistry . . . Your Partner in Progress
Executive Offices

Reichhold Chemicals, Inc.

Attention: Plant Manager

Dear Sir:

I acknowledge that I have been offered a comprehensive medical examination as set out in the Occupational Safety and Health Standards, paragraph 1910.93(a)-Asbestos, at the expense of Reichhold Chemicals, Inc.

I decline such physical examination.

Very truly yours,

REICHHOLD CHEMICALS, INC.

Creative Chemistry... Your Partner in Progress

Executive Offices • RCI BUILDING, WHITE PLAINS, N. Y. 10602

CABLE: RECHOLITE WHITE PLAINS
TELEPHONE: 914 • 948-4200

This is to advise you that under the rules promulgated by the Occupational Safety and Health Administration (OSHA), Reichhold Chemicals, Inc. is required to inform you that a portion of the waste given to you for disposal contains asbestos. The asbestos containing waste has been placed in separate sealed drums which have been labelled according to the regulations. Your attention is drawn to paragraph 1910.93(a) - Asbestos, of the Occupational Safety and Health Standards which gives permissible exposure limits to airborne concentrations of asbestos fibers which must be observed by you during the waste disposal process.

The total amount of asbestos-containing waste given to you for disposal comprises only shipping containers and floor sweepings, we would not expect you to experience any difficulties at your disposal facilities.

Very truly yours,

TABLE G-2

Material	8-hour time weighted average	Acceptable ceiling concentration	Acceptable maximum peak above the acceptable ceiling concentration for an 8-hour shift	
			Concentration	Maximum duration
Benzene (Z37.4-1968)	10 p.p.m.	25 p.p.m.	50 p.p.m.	10 minutes.
Beryllium and beryllium compounds (Z37.29-1970)	2 µg./m.³	25 µg./m.³	125 µg./m.³	30 minutes.
Carbon monoxide (Z37.9-1970)	50 p.p.m.	400 p.p.m.	800 p.p.m.	5 minutes in any 4 hours.
Carbon tetrachloride (Z37.17-1967)	10 p.p.m.	25 p.p.m.	200 p.p.m.	5 minutes in any 4 hours.
Chloroform (Z37.20-1967)	10 p.p.m.	50 p.p.m.	500 p.p.m.	5 minutes in any 3 hours.
Ethylene dibromide (Z37.31-1970)	20 p.p.m.	30 p.p.m.	50 p.p.m.	5 minutes in any 3 hours.
Ethylene dichloride (Z37.21-1969)	50 p.p.m.	100 p.p.m.	200 p.p.m.	5 minutes in any 3 hours.
Formaldehyde (Z37.16-1965)	3 p.p.m.	5 p.p.m.	10 p.p.m.	30 minutes.
Methylene chloride (Z37.3-1968)	500 p.p.m.	1000 p.p.m.	2000 p.p.m.	5 minutes in any 2 hours.
Organo (alkyl) mercury (Z37.30-1969)	0.01 mg./m.³	0.04 mg./m.³	0.04 mg./m.³	30 minutes.
Styrene (Z37.15-1968)	100 p.p.m.	200 p.p.m.	600 p.p.m.	5 minutes in any 3 hours.
Tetrachloroethylene (Z37.19-1967)	do	do	300 p.p.m.	5 minutes in any 3 hours.
Tetrachloroethylene (Z37.28-1967)	do	do	do	5 minutes in any 3 hours.
Toluene (Z37.12-1967)	200 p.p.m.	300 p.p.m.	500 p.p.m.	10 minutes.
Trichloroethylene (Z37.22-1967)	100 p.p.m.	200 p.p.m.	300 p.p.m.	10 minutes in any 2 hours.
Vinyl chloride (Z37.14-1969)	1 p.p.m.	5 p.p.m.	10 p.p.m.	30 minutes.
Xylene (Z37.3-1968)	100 p.p.m.	150 p.p.m.	300 p.p.m.	10 minutes.
Asbestos and chrysotile (Z37.2-1966)	2 fibers/cc.	do	do	do

TABLE G-3—MINERAL DUSTS

Substance	Respirable	Total
Silica:		
Crystalline:		
Quartz (respirable)	250/%SiO₂	
	%SiO₂+5	%SiO₂+10
Quartz (total dust)		%SiO₂+30
		Amorphous
Silicates (less than 1% crystalline silica):		
Asbestos (all forms)	5 fibers/cc.	
Graphite (natural)	15	
Mica	20	
Soapstone		
Talc (containing asbestos)	5 fibers/cc.	
Talc (fibrous)	5 fibers/cc.	
Talc (not containing asbestos)	20	
Portland cement	50	
Graphite (natural)	15	
Coal dust (less than 5% SiO₂)		2.4mg/m³
Coal dust (more than 5% SiO₂)		%SiO₂+2
Soapstone		20 mppcf
Talc (containing asbestos)		%SiO₂+2
Portland cement	15	50 mppcf
Talc (fibrous)	10	20 mppcf
Talc (not containing asbestos)		20 mppcf
Tobacco dust		5 mg/m³
Total dust		15 mppcf

Mixed dusts (fibrous and particulate):

Exposure limit for fibrous dust in mixed dusts containing less than 1% quartz:

$$\frac{\text{Fibers/cc.}}{5} + \frac{\text{mppcf}}{20} = 1$$

Exposure limit for fibrous dust in mixed dusts containing more than 1% quartz:

$$\frac{\text{Fibers/cc.}}{5} + \frac{\text{mppcf}}{20} = \frac{\%\text{SiO}_2}{50}$$

Exposure limit for particulate dust in mixed dusts containing less than 1% quartz:

$$\frac{\text{mg./m.}^3}{10} + \frac{\text{mppcf}}{20} = 1$$

Exposure limit for particulate dust in mixed dusts containing more than 1% quartz:

$$\frac{\text{mg./m.}^3}{10} + \frac{\text{mppcf}}{20} = \frac{\%\text{SiO}_2}{50}$$

Where two or more of the above mixed dust formulae are applicable, the observed exposure shall be in compliance with each applicable formula or reduced accordingly.

Where the percentage of quartz is greater than 50, 50 shall be used as the numerator for the quartz formulae.

Where the percentage of quartz is greater than 100, 100 shall be used as the numerator for the quartz formulae.

Aerodynamic diameter (unit density sphere)	Percent passing selector
2	90
2.5	75
3.5	50
5.0	25
10	0

The requirements under this note refer to the use of an elutriator or other suitable device having the characteristics set forth in the table for establishing compliance with the standard.

§ 1910.93a Asbestos.

(a) *Definitions.* For the purpose of this section, (1) "Asbestos" includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite.

(2) "Asbestos fibers" means asbestos fibers longer than 5 micrometers.

(b) *Permissible exposure to airborne concentrations of asbestos fibers.*—(1) *Standard effective July 7, 1972.* The 8-hour time-weighted average airborne concentrations of asbestos fibers to which any employee may be exposed shall not exceed five fibers, longer than 5 micrometers, per cubic centimeter of air, as determined by the method prescribed in paragraph (e) of this section.

(2) *Standard effective July 1, 1976.* The 8-hour time-weighted average airborne concentrations of asbestos fibers to which any employee may be exposed shall not exceed two fibers, longer than 5 micrometers, per cubic centimeter of air, as determined by the method prescribed in paragraph (e) of this section.

(3) *Ceiling concentration.* No employee shall be exposed at any time to airborne concentrations of asbestos fibers in excess of 10 fibers, longer than 5 micrometers, per cubic centimeter of air, as determined by the method prescribed in paragraph (e) of this section.

(c) *Methods of compliance.*—(1) *Engineering methods.* (i) *Engineering controls.* Engineering controls, such as, but not limited to, isolation, enclosure, exhaust ventilation, and dust collection, shall be used to meet the exposure limits prescribed in paragraph (b) of this section.

(ii) *Local exhaust ventilation.* (a) Local exhaust ventilation and dust collection systems shall be designed, constructed, installed, and maintained in accordance with the American National Standard Fundamentals Governing the Design and Operation of Local Exhaust Systems, ANSI Z9.2–1971, which is incorporated by reference herein.

(b) See § 1910.6 concerning the availability of ANSI Z9.2–1971, and the maintenance of a historic file in connection therewith. The address of the American National Standards Institute is given in § 1910.102.

(iii) *Particular tools.* All hand-operated and power-operated tools which may produce or release asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section, such as, but not limited to, saws, scorers, abrasive wheels, and drills, shall be provided with local exhaust ventilation systems in accordance with subdivision (ii) of this subparagraph.

(2) *Work practices.*—(i) *Wet methods.* Unless no practicable, asbestos shall be handled, mixed, applied, removed, cut, scored, or otherwise worked in a wet state sufficient to prevent the emission of airborne fibers in excess of the exposure limits prescribed in paragraph (b) of this section, unless the usefulness of the product would be diminished thereby.

(ii) *Particular products and operations.* No asbestos cement, mortar, coating, grout, plaster, or similar material containing asbestos shall be removed from bags, cartons, or other containers in which they are shipped, without being either wetted, or sprayed, or ventilated so as to prevent effectively the release of airborne asbestos fibers in excess of the limits prescribed in paragraph (b) of this section.

(iii) *Spraying, demolition, or removal.* Employees engaged in the spraying of asbestos, the removal, or demolition of pipes, structures, or equipment covered or insulated with asbestos, and in the removal or demolition of asbestos insulation or coverings shall be provided with respiratory equipment in accordance with paragraph (d) (2) (iii) of this section and with special clothing in accordance with paragraph (d) (2) of this section.

(d) *Personal protective equipment.*—(1) Compliance with the exposure limits prescribed by paragraph (b) of this section may not be achieved by the use of respirators or shift rotation of employees, except:

(i) During the time period necessary to install the engineering controls and to institute the work practices required by paragraph (c) of this section;

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(iii) In work situations in which the methods prescribed in paragraph (c) of this section are either technically not feasible or feasible to an extent insufficient to reduce the airborne concentrations of asbestos fibers below the limits prescribed by paragraph (b) of this section; or

(iii) In emergencies.

(iv) Where both respirators and personnel rotation are allowed by subdivisions (i), (ii), or (iii) of this subparagraph, and both are practicable, personnel rotation shall be preferred and used.

(2) Where a respirator is permitted by subparagraph (1) of this paragraph, it shall be selected from among those approved by the Bureau of Mines, Department of the Interior, or the National Institute for Occupational Safety and Health, Department of Health, Education, and Welfare, under the provisions of 30 CFR Part 11 (37 F.R. 6744, May 25, 1972), and shall be used in accordance with subdivisions (i), (ii), (iii), and (iv) of this subparagraph.

(i) *Air purifying respirators.* A reusable or single use air purifying respirator, or a respirator described in subdivision (ii) or (iii) of this subparagraph, shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the exposure limits prescribed in paragraph (b) of this section, when the ceiling or the 8-hour time-weighted average airborne concentrations of asbestos fibers are reasonably expected to exceed no more than 10 times those limits.

(ii) *Powered air purifying respirators.* A full facepiece powered air purifying respirator, or a powered air purifying respirator, or a respirator described in subdivision (iii) of this subparagraph, shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the exposure limits prescribed in paragraph (b) of this section, when the ceiling or the 8-hour time-weighted average concentrations of asbestos fibers are reasonably expected to exceed 10 times, but not 100 times, these limits.

(iii) *Type "C" supplied-air respirators, continuous flow or pressure-demand class.* A type "C" continuous flow or pressure-demand, supplied-air respirator shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the exposure limits prescribed in paragraph (b) of this section, when the ceiling or the 8-hour time-weighted average airborne concentrations of asbestos fibers are reasonably expected to exceed 100 times those limits.

(iv) *Establishment of a respirator program.* (a) The employer shall establish a respirator program in accordance with the requirements of the American National Standards Practices for Respiratory Protection, ANSI Z88.2-1969, which is incorporated by reference herein.

(b) See § 1910.6 concerning the availability of ANSI Z88.2-1969 and the maintenance of an historic file in connection therewith. The address of the American National Standards Institute is given in § 1910.160.

(c) No employee shall be assigned to tasks requiring the use of respirators if, based upon his most recent examination, an examining physician determines that the employee will be unable to function normally wearing a respirator, or that the safety or health of the employee or other employees will be impaired by his use of a respirator. Such employee shall be rotated to another job or given the opportunity to transfer to a different position whose duties he is able to perform with the same employer, in the same geographical area and with the same seniority, status, and rate of pay he had just prior to such transfer, if such a different position is available.

(3) *Special clothing.* The employer shall provide, and require the use of, special clothing, such as coveralls or similar whole body clothing, head coverings, gloves, and foot coverings for any employee exposed to airborne concentrations of asbestos fibers, which exceed the ceiling level prescribed in paragraph (b) of this section.

(4) *Change rooms:* (i) At any fixed place of employment exposed to airborne concentrations of asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section, the employer shall provide change rooms for employees working regularly at this place.

(ii) *Clothes lockers:* The employer shall provide two separate lockers or containers for each employee, so separated or isolated as to prevent contamination of the employee's street clothes from his work clothes.

(iii) *Laundering:* (a) Laundering of asbestos contaminated clothing shall be done so as to prevent the release of airborne asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section.

(b) Any employer who gives asbestos-contaminated clothing to another person for laundering shall inform such person of the requirement in (a) of this subdivision to effectively prevent the release of airborne asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section.

(c) Contaminated clothing shall be transported in sealed impermeable bags, or other closed, impermeable containers, and labeled in accordance with paragraph (g) of this section.

(e) *Method of measurement.* All determinations of airborne concentrations of asbestos fibers shall be made by the membrane filter method at 400–450 X (magnification) (4 millimeter objective) with phase contrast illumination.

(f) *Monitoring*—(1) *Initial determinations.* Within 6 months of the publication of this section, every employer shall cause every place of employment where asbestos fibers are released to be monitored in such a way as to determine whether every employee's exposure to asbestos fibers is below the limits prescribed in paragraph (b) of this section. If the limits are exceeded, the employer shall immediately undertake a compliance program in accordance with paragraph (c) of this section.

(2) *Personal monitoring*—(i) Samples shall be collected from within the breathing zone of the employees on membrane filters of 0.8 micrometer porosity mounted in an open-face filter holder. Samples shall be taken for the determination of the 8-hour time-weighted average airborne concentrations and of the ceiling concentration of asbestos fibers.

(ii) *Sampling frequency and pattern.* After the initial determinations required by subparagraph (1) of this paragraph, samples shall be of such frequency and pattern as to represent with reasonable accuracy the levels of exposure of employees. In no case shall the sampling be at intervals greater than 6 months for employees whose airborne concentrations are at levels greater than 5 fibers but not more than 10 fibers per milliliter of air, or for employees whose exposures to asbestos may reasonably be foreseen to exceed the limits prescribed by paragraph (b) of this section.

(3) *Environmental monitoring*—samples shall be collected from areas in a work environment which are representative of the airborne concentration of asbestos fibers which may reach the breathing zone of employees. Samples shall be collected on a membrane filter of 0.8 micrometer porosity mounted in an open-face filter holder. Samples shall be taken for the determination of the 8-hour time-weighted average airborne concentrations and of the ceiling concentrations of asbestos fibers.

(ii) *Sampling frequency and pattern.* After the initial determinations required by subparagraph (1) of this paragraph, samples shall be of such frequency and pattern as to represent with reasonable accuracy the levels of exposure of employees. In no case shall sampling be at intervals greater than 6 months for employees whose exposures to asbestos may reasonably be foreseen to exceed the exposure limits prescribed in paragraph (b) of this section.

(4) *Employee observation of monitoring.* Affected employees, or their representatives, shall be given a reasonable opportunity to observe any monitoring required by this paragraph and shall have access to the records thereof.

(g) *Caution signs and labels.* (1) Caution signs. (i) *Posting.* Caution signs shall be provided and displayed at each location where airborne concentrations of asbestos fibers may be in excess of the exposure limits prescribed in paragraph (b) of this section. Signs shall be posted at such a distance from such a location that an employee may read the signs and take necessary protective steps before entering the area marked by the signs. Signs shall be posted at all approaches to areas containing excessive concentrations of airborne asbestos fibers.

(ii) *Sign specifications.* The warning signs required by subdivision (i) of this subparagraph shall conform to the requirements of 20" x 14" vertical format signs specified in § 1910.145(d)(4), except as to this subdivision. The signs shall contain the following legend in the lower panel, with letter sizes and styles of such visibility at least equal to that specified in this subdivision.

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