PLAINTIFF'S EXHIBIT
UC-5463

Operating Division GENERAL ORDER Vice Pres.-Operations	ELIMINATION OF DUSTY CONDITIONS	No. 2-5 Date 8-24-43 Page 1 of 2 Cancels Page 1 Dated 4-1-43

LAWS AND REGULATIONS

Plant Managers shall be familiar with state and local regulations concerning ventilation and dust elimination, and shall promptly notify their Production Manager of any violations, outlining the changes in equipment or methods necessary for full compliance.

Where elimination of dust is impossible under existing conditions, authority requests for dust collecting equipment shall be prepared and submitted to Production Manager.

REQUIRED PRECAUTIONS

Plant Managers are responsible for seeing that the following precautions are taken to eliminate extremely dusty conditions and should endeavor to avoid employing individuals previously exposed to hazardous dust concentrations:

Good ventilation shall be maintained in all working areas and cleanup work handled in a manner which will not greatly increase dust concentration.

Dust collecting equipment shall be regularly inspected and maintained, following instructions issued by the manufacturer.

Bates packers shall be kept tight and if necessary to avoid excessive dust, shall be equipped with hood and collector.

Conveying, elevating and mixing equipment shall be so maintained that they are not sources of excessive dust.

Men exposed to high concentrations of dust on infrequent jobs such as mixer clean-out, screening retarder, shaking out bags, sweeping or cleaning under very dusty conditions, etc., shall be required to wear respirators.

/ Buhr stone dressing operations shall be provided with equipment for removing the dust at the point of operation. The collector shall be a Ruemelin or equivalent type, which provides suction at the dressing tool and removes the dust from the surface of the stone. The dust drawn into the collector must be discharged into an arrestor. Workmen engaged in dressing buhr stones are required to wear goggles and respirators.

It is recommended that before any applicant for employment is hired, the history of his previous employment be fully developed. If there is a questionable history of exposure to asbestos or silica dust, or an indicated partial lung disability such as tuberculosis, the applicant should not be employed until satisfactorily passing a medical examination. Such a medical examination shall include the taking of chest X-Rays and their interpretation by Saranac Laboratories as set forth in Bulletin 4-5.

It is further recommended that the occupational history of all applicants for employment be fully recorded on Employment Data and Application card, Form 1614 -
/ 5/43 Rev., and this card become a part of the permanent employment record of all applicants hired. The procedure recommended in this and the preceding paragraph is a definite requirement at the East Chicago shingle plant, and at Oakfield.

/ Indicates change.

C- OP001 0298

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RESPIRATORS

With the exception of lime plants, where the Martindale Protective Mask is satisfactory, only respirators approved by the Bureau of Mines may be purchased and used for protection against dust.

The following respirators have received the Bureau of Mines' approval for non-poisonous dust, but must not be used for protection against poisonous gases, or where the hazard is lack of oxygen:

M.S.A. Dustfoe
M.S.A. Comfo
American Optical #R-1000
American Optical #R-9100
Willson #200
Willson #750
Chicago Eye Shield #94

Care of Respirators.- Respirators shall not be interchanged between employees and shall be sterilized regularly by one of the following methods and before reissue to another employee:

a. Wash rubber and metal parts with soap, brush, and warm water and sterilize by immersion for 10 minutes in a solution of formaldehyde (one part of 40 per cent formaldehyde solution and 9 parts of water.)

b. Wash rubber and metal parts with soap and water, and sterilize in a 3 per cent solution of carbolic acid, a 2 per cent solution of lysol, or a 70 per cent solution of denatured alcohol.

c. Subject respirator to sterilization in a moist atmosphere of antiseptic gas, preferably formaldehyde, for a period of 10 minutes at room temperature.

After sterilization respirators should be rinsed in water and dried. Filter, felt screens and lastic head bands shall always be removed before sterilization.

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ENGINEERING

Installations of operating equipment in all plants shall be so designed and installed as to meet or exceed any state requirement on ventilation and dust control. The Works Manager shall immediately notify his Production Manager in the event of any non-compliance of ventilation or dust control laws, outlining his recommendations for changes in equipment or design or methods necessary for full compliance with the state or local regulations.

Where the control of dust is impossible with existing plant facilities, authority request for dust-collecting equipment shall be prepared and submitted to the Production Manager.

REQUIRED PRECAUTIONS

Works Managers shall ascertain that the following precautions are taken to eliminate or prevent extremely dusty conditions and shall likewise avoid employment of individuals previously exposed to hazardous dust concentrations:

Adequate ventilation shall be maintained in all work areas. Clean-up work shall be handled in a manner which will not greatly increase dust concentration.

Dust-collecting equipment shall be regularly inspected and maintained following instructions issued by the manufacturer. Such equipment, when installed, shall be of such capacity as to control the maximum anticipated concentrations of dust.

Bates packers shall be kept tight and, if necessary equipped with hood and collector.

Conveying, elevating and mixing equipment shall be so maintained that they are not sources of excessive dust.

Buhr stone dressing operations shall be provided with adequate equipment for removing dust at point of operation. The collector shall be of a type which provides suction at the dressing tool and removes the dust from the surface of the stone. The dust drawn into the collector must be discharged into an arrestor. Workmen engaged in dressing of buhr stones are required to wear goggles and respirators.

BRICKLAYERS

Employees required to regularly handle fire brick containing a high percentage of free silica shall be required to wear adequate respiratory equipment.

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Asbestos Exposure

Operations involving manual handling of asbestos in any plant shall be considered in an area in which employees shall be required to wear adequate respiratory equipment.

Pre-Employment Physical Examinations

Before any applicant for employment is hired, the history of his previous employment should be fully developed. If there is a questionable history of exposure to asbestos or silica dust, or an indicated partial lung disability such as tuberculosis, the applicant shall not be employed in any plant until he satisfactorily passes an X-ray examination.

The occupational history of all applicants for employment should be fully recorded on Employment Data and Application Card, Form 1614 - 12/52 Revised, for all applicants hired.

RESPIRATORS

Only respirators approved by the United States Bureau of Mines may be purchased and used for protection against injurious dusts. In other locations it may be well to provide Martindale Protective Masks to employees to minimize the inhalation of nuisance dusts.

Employees exposed to high concentrations of dust on infrequent jobs such as mixer clean out, screen retarder, sweeping or cleaning under very dusty conditions, etc., shall be required to wear an approved filter-type respirator.

A complete list of such respirators, entitled "List of Respiratory Protective Devices Approved by Bureau of Mines", Information Circular No. 7636, is available at no cost from the United States Department of Interior Bureau of Mines, Washington, D. C.

Care of Respirators

Respirators shall not be interchanged among employees and shall be washed and sterilized by one of the following methods before reissue to the same employee: (NOTE: Remove filter units before sterilizing and washing.)

1. Immerse respirator in a 1-to-2-per cent solution of creosol. Rinse thoroughly and allow to dry.

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2. Immerse respirator in alcohol in strength of 75% or more. Avoid alcohol that is denatured with poisonous or irritating substances, unless the respirator is thoroughly rinsed after sterilizing.

3. Place the respirator in a moist atmosphere of antiseptic gas, such as formaldehyde. This must be done in a tight cabinet.

4. Immerse respirator for 10 minutes in a solution of Formalin, then rinse. The solution can be made by mixing 1 part of 40% formaldehyde in 9 parts of water.

5. Immerse respirator in boiling water or live steam for 5 minutes. (NOTE: Repeated immersions in boiling water or steam will harden rubber parts of the respirator.)

Prior to sterilizing the respirators, it is well to wash the rubber and metal parts with soap, brush and warm water and rinse thoroughly.

EXPLOSIVE DUSTS

Dust which has an explosion or flash fire potential such as coal, wood, paper, starch, etc., shall be adequately controlled, arrested and removed to eliminate or minimize the possibility of an explosion or flash fire. Refer all questions concerning explosive dusts and their control to Department 186 - Tax and Property Department, Chicago Office.

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HAZARDOUS CHEMICALS
Used in Paint Manufacture

No. 602
Date 9-3-48
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Dated

Compound	Hazard	Precautions	Treatment after contact or exposure
Chromic fluoride	Irritating to skin and mucous membranes, with possible ulceration. Toxic if taken internally, but systemic poisoning in industry is rare.	Avoid contact with the material, using personal protection when needed. Inhalation of any of this dust must be avoided and local exhaust ventilation used when any amounts of the material are handled. Respiratory protection can be used for short exposures, but respirators must be kept cleaned. Maximum allowable concentration 1 milligram per 10 cubic meters of Air.	Chrome produces dermatitis and ulceration - treatment by a physician. Protective ointments. Fluorine produces fluorosis with eventual calcification of ligaments.
Isopropyl alcohol Denatured alcohol	Gastric disturbances if taken internally. Vapors not toxic but can have narcotic action.	Maximum allowable concentration for propanol about 400 parts per million parts of air. Denatured alcohol would be slightly higher. Good general room ventilation generally sufficient.	Gastric lavage for internal treatment - fresh air or oxygen for inhalation.

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Operating Division INFORMATION BULLETIN Approved:	HAZARDOUS CHEMICAL Used in Paint Manufacture	No. 602 Date 9-15-66 Page 1 Cancels Page 1 Dated 9-3-48

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Compound	Hazard	Precautions	Treatment after contact or exposure
Ammonia water	Irritation of the eyes and respiratory passages from the gas.	Maximum allowable concentration 100 parts per million parts of air.	Anesthetic ointment for eyes - sedative cough syrup for respiratory irritation - Oxygen inhalations if severe.
	Men cannot work in concentrations that are dangerous for it is too irritating.	Local exhaust ventilation should be used over any mixing tanks.	
	Accidental breakage of storage tanks can be serious to personnel.	Storage tanks should not be inside of buildings.	
Asbestos	Inhalation of the dust for long periods of time can produce a disabling lung condition called asbestosis.	Not to be handled in confined areas without local exhaust ventilation at the point of handling.	Asbestos "warts" on hands due to asbestos fibres penetrating skin - fibre must be completely removed.
		Intermittent handling for short periods may be done in open areas with good general room ventilation.	Asbestosis - lungs should be x-rayed periodically.
		Dust counts should be less than 5 million at such operations (1 million on a count of asbestos alone, not including the other dust present.	
Chrome alum	Irritating to skin and mucous membranes	Avoid contact with the material using personal protection when needed.	No systemic effect - locally a dermatitis - protective ointments - if ulceration develops, treatment by a physician.
		Avoid breathing of dust.	

EXPIRED

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Compound	Hazard	Precautions	Treatment after contact or exposure
Chromic fluoride	Irritating to skin and mucous membranes, with possible ulceration. Toxic if taken internally, but systemic poisoning in industry is rare.	Avoid contact with the material, using personal protection when needed. Inhalation of any of this dust must be avoided and local exhaust ventilation used when any amounts of the material are handled. Respiratory protection can be used for short exposures, but respirators must be kept cleaned. Maximum allowable concentration 1 milligram per 10 cubic meters of Air.	Chrome produces dermatitis and ulceration - treatment by a physician. Protective ointments. Fluorine produces fluorosis with eventual calcification of ligaments.
Isopropyl alcohol Denatured alcohol	Gastric disturbances if taken internally. Vapors not toxic but can have narcotic action.	Maximum allowable concentration for propanol about 400 parts per million parts of air. Denatured alcohol would be slightly higher. Good general room ventilation generally sufficient.	Gastric lavage for internal treatment - fresh air or oxygen for inhalation.

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Compound	Hazard	Precautions	Treatment after contact or exposure
Ammonia water	Irritation of the eyes and respiratory passages from the gas. Men cannot work in concentrations that are dangerous for it is too irritating. Accidental breakage of storage tanks can be serious to personnel.	Maximum allowable concentration 100 parts per million parts of air. Local exhaust ventilation should be used over any mixing tanks. Storage tanks should not be inside of buildings.	Anesthetic ointment for eyes - sedative cough syrup for respiratory irritation- Oxygen inhalations if severe..
Asbestos	Inhalation of the dust for long periods of time can produce a disabling lung condition called asbestosis.	Not to be handled in confined areas without local exhaust ventilation at the point of handling. Intermittent handling for short periods may be done in open areas with good general room ventilation. Dust counts should be less than 5 million at such operations (1 million on a count of asbestos alone, not including the other dust present.	Asbestos "warts" on hands due to asbestos fibres penetrating skin - fibre must be completely removed. Asbestosis - lungs should be x-rayed periodically.
Chrome alum	Irritating to skin and mucous membranes	Avoid contact with the material using personal protection when needed. Avoid breathing of dust.	No systemic effect - locally a dermatitis - protective ointments - if ulceration develops, treatment by a physician.

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Compound	Hazard	Precautions	Treatment after contact or exposure
Sodium oxalate Ammonium oxalate	Local irritation to the skin from handling. Irritation to the mucous membranes when dust is inhaled. Strong poison when taken internally.	Careful handling of these materials is generally sufficient protection. Local exhaust ventilation should be provided for dry grinding operations. Respiratory protection should be used where the material is dusty, and exposure is short.	Gastric lavage for internal treatment. Protective ointments for skin. Careful washing of eyes with blend collyrium for conjunctivitis
Sodium pentachlorphenate Sodium tetrachlorphenate Ortho-phenylphenol	These materials are skin irritants which can cause a troublesome dermatitis. They are toxic on inhalation and ingestion.	Contact with the powdered materials or solutions should be avoided and the use of protective clothing when handling large quantities is advisable. Local exhaust ventilation is advisable if dust is present throughout a working day. Respiratory protection can be used for short exposure periods.	Wash off spillage with soap and water.
Sodium stannate	Caustic material which is irritating to the skin. Irritation to eyes and nasal passages from dust.	Avoid contact with this material. Washing facilities should be near the operation. Respiratory protection against dust.	Personal hygiene - protective ointments.

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HAZARDOUS CHEMICALS
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Compounds	Hazard	Precautions	Treatment after contact or exposure
Lead driers Cobalt driers Manganese driers	Irritation to skin of some people. Systemic intoxication from handling of these materials in industry is rare.	Keep contact with these materials at a minimum using protective clothing where necessary.	Wash off spillage with soap and water.
Mica	Indications that mica can cause a lung pathology from inhalation of the dust over long periods of time.	Good general room ventilation is generally sufficient except at grinding operations. Mica dust in air is misleading and it will appear to be worse than it actually is for the dust particles are quite noticeable. Dust counts should be kept below 20 million.	Periodic x-ray of chest for silicatosis.
Sodium hydroxide	Can cause severe caustic burns on the skin. Strong irritation of nasal passages from dust or mist.	Protective clothing needed when handling large amounts. Washing facilities should be near the operations. Respiratory protection needed if large amounts of dust in working area.	Produces caustic burns which are slow to heal. Water soaking of burn as soon as possible. Then sterile dressings - no neutralization to be permitted.

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