



September 26, 1986

Ms. Judy Spencer  
Legal Section  
Industrial Commission of Ohio  
246 North High Street  
Columbus, Ohio 43215

RE: #OD 25877-22  
Elmolie Leveck  
Owens Illinois

Dear Ms. Spencer:

On June 25, 1986 a visit was made to Owens Illinois (O.I.) of Findlay, to obtain information on the above claim. John Holhl, Industrial Relations Director, was interviewed and conducted a plant tour.

The claimant's medical and work history is in the facsimile file.

The claimant has worked at O.I. Findlay for 17 years.

1975-1981 - Packed blow molded plastic bottles in cardboard boxes  
1981-1982 - Janitorial work throughout plant and offices  
1982-1985 - Reclaim Department

The emphasis of this report is of the reclaim department. The reclaim operation, when Rocadyne was used, is dismantled. The new system is not like the old system.

O.I. Findlay manufactures blow mold polyethylene containers for detergents, softeners and food products. The lines are automated from bulk plastic suppyls to packing finished and labeled containers.

The reclaim department takes imperfect containers, grinds them into pellet size pieces. Various colors are held in separate bins.

The pellets have the label pieces and glue attached. The pellets are pneumatically transported to a washing system. The wash water is heated to 140 degrees Fahrenheit to hasten the removal. The pellets move on a conveyor over a blow dryer system. The cleaned pellets can then be dosed with fresh polyethylene in the container manufacturing.

Specific ventilation is provided for the reclaim operation and the reclaim room.

#### Old reclaim operation

The old system was dismantled in January 1983 and was a smaller version of the present system.

Rocadyne brand disinfectant was used in July, 1982 to stop odors in the unheated wash water and the waste water sump. The fresh ground scrap did not have the disinfectant applied.

The disinfectant was diluted by pouring 1 gallon into a five hundred gallon wash water vat. Only two gallons were used during July 1982, then the disinfectant's use was discontinued.

#### Exposure Potentials

The exposures questioned were those of the disinfectant and the reclaim dust.

Exposure of the claimant to the Rocadyne disinfectant cannot be recreated because the old reclaim area does not exist.

#### Rocadyne

This disinfectant was used for a short period to reduce odors in the label wash portion of the old reclaim operation. One gallon was mixed with 500 gallons of water. Since the water was heated, a septic tank type biodigestion occurred in the wash water. The gases and odors, during digestion, parallel any sewage treatment plant.

The iodine portion would give the vapor from the wash a specific biting odor. Extremely low levels (0.6 parts per million) of pure iodine have irritated the eyes and mucous membranes. Severe exposures have created pulmonary problems in animals and human responses may have the same effect. Chronic effects are not noted.

Phosphoric acid in the disinfectant helps keep the systems clean and kill the bacteria. Phosphoric acid is an eye, skin and upper respiratory irritant.

These symptoms are for the pure acid; as diluted the responses would be markedly reduced.

The irritation properties noted on Rocadyne Material Safety Data Sheets are for the concentrate not the 500 to 1 dilution.

#### Reclaim exposure potentials

Plastic and label dust is generated during the scrap grinding. The plastic is a polyethylene with various pigments. The label adhesive is a hot melt resin glue.

### Polyethylene

This thermoset plastic is used for the detergent, softeners and food containers. This plastic is nontoxic. The grinding polyethylene dust would be considered a nuisance type dust.

Nuisance dusts have been called (biologically) "inert" dusts. But, there is no dust which does not evoke some cell response in the lung if inhaled in sufficient amounts. Inhalation does not affect the air sacs structure. Scar tissue is not formed to a significant extent and the tissue reaction is potentially reversible.<sup>3</sup>

### Glue

The hot melt resin glue only presents a hazard when it is hot.<sup>2</sup> The manufacturer's material safety data sheet suggests heat is the only hazard. A noticeable wax fume odor can be present when the glue is applied.

### Labels

Dust from grinding may contain cellulose, clay type fillers and printing inks. Specifics were not readily available.

### Air Sampling

Owens Illinois did some area sampling in the reclaim department. The low results represent all materials on the filters and are a very rough estimate of employee exposures to dusts.

These samples were not the preferred personal sampling of a reclaim employee. The sampling results do not represent employee exposures.

### Smoking

The claimant had a 40 pack year cigarette history or a pack a day for 40 years.

The increase of chronic obstructive lung disease (COLD) in a pack-a-day smoker is as much as 30 times greater than nonsmokers. There is a strong dose response relation to COLD and cigarettes per day, earliness of starting and depth of inhalation.<sup>4</sup>

### Conclusion

Individual susceptibility must be considered.

The literature of the claimant's exposure potentials does not suggest COLD. The claimant's smoking history is very incriminating based on the literature.

Respectfully submitted,

*Richard Wilder*  
Richard Wilder  
Industrial Hygienist

RW/rr

- <sup>1</sup>Documentation of the TLV's 1986 American Conference of Governmental Industrial Hygienists
- <sup>2</sup>Condensed Chemical Dictionary 1981 - 10th Ed. G. Hawley
- <sup>3</sup>Chemical HAZards of the Workplace - Proctor and Hughes 1978
- <sup>4</sup>Smoking: Health Effects and Control, Fielding M.P. N. Engl. J. of Med. Vol. 313 #8 11-15-85.