PLAINTIFF'S
EXHIBIT
BRK-173

The Industrial Commission
Of Ohio
Division Of Safety & Hygiene
246 N. High St., Col., O. 43215

November 23, 1983

Legal Section
The Industrial Commission of Ohio
246 North High Street
Columbus, Ohio 43215

RE: OD #20642-22
Florence McCurdy
Packard Electric
Warren, Ohio 44486

Attention: Ms. Judy Spencer

Dear Ms. Spencer:

At your request, this report has been prepared based on information obtained from the facsimile file which you have provided and on additional information obtained on October 13, 1983, during a visit to the Packard Electric North River Road Complex. Packard Electric, a Division of General Motors, employs several thousand persons in the manufacture of wiring harnesses for G.M. automobiles.

The claimant, who has been employed by Packard for approximately 13 years, in her claim application describes her condition as "pulmonary sarcoidosis." Three doctors, who have completed O-D-4a reports, are in general agreement that this individual's sarcoidosis has resulted from unknown causes. Two of these physicians, in addition to sarcoidosis, have diagnosed a condition of asthma in this individual, and, in the O-D-4a report, state that it "might be caused by or aggravated by exposure to respiratory irritants," or refer to the condition as "occupational asthma." The physician who refers to respiratory irritants possibly causing or aggravating the claimant's asthma, in an earlier letter, states that the claimant's sarcoidosis "has aggravated her asthma and caused many of her physical symptoms."

During her period of employment at Packard, this claimant has worked primarily as an assembler on conveyor lines in several departments. Normally there is no soldering carried out on the assembly lines nor is there heat involved which may contribute to the generation of air contaminants. During the time period from August, 1981, until January, 1983, just prior to the onset of her illness

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In January of 1983, the claimant worked in Department 1401 as a progressive harness assembly relief person. During this period, while not doing relief work on the line, the claimant helped in the adjoining repair area, where harnesses, which are improperly assembled, are disassembled and wired properly.

During a visit to Department 1401 and the adjoining repair area, it was learned from employees that the relief person normally works on the line for about six hours a day with the remainder of their time assisting in the repair area. As mentioned earlier, the generation of contaminants on the line is unlikely since no materials are used which would be expected to generate dusts or vapors. The only material used, other than wire and electrical tape, is a heavy sealing grease which is applied to connectors by a machine. The company has conducted personal and area monitoring for possible vapors from this grease and supplies their results in the file. The sampling results indicate no vapors reported for the samples obtained in January of 1983, and approximately 0.5 ppm of Stoddard Solvent in the samples obtained in June of 1982. The TLV for Stoddard Solvent is 100 ppm. Also, it should be added that there are no operations in the immediate area of Department 1401 which would be expected to generate air contaminants at excessive levels. There were no odors detected during the visit and excellent air movement was supplied in the area, both from pedestal fans and ceiling mounted rotating air movers.

In the repair work in which the claimant was involved, for approximately two hours per day, some work involved soldering. A small unvented solder pot, approximately six-by-six inches square, is located in this work area. An employee who has worked for 12 years in this area stated that very little dip soldering, at the most 15 per hour, takes place in harness repair. When soldering is required, the wire is dipped in a liquid flux and then into the solder, with the whole process completed in seconds. From this description of soldering, the work would normally require not more than 30 seconds in an hour.

Hydrogen chloride, a possible decomposition product of fluxing materials, has been monitored at Packard, by both the Division and OSHA, at continuous soldering operations, with very low concentrations being detected. Six samples obtained at three separate machines by the Division on March 16, 1983, ranged from 0.04 to 0.19 ppm, while the highest of three OSHA samples was a 0.54 ppm. The exposure limit for hydrogen chloride is a ceiling limit of 5.0 ppm. The concentrations of hydrogen chloride near an unautomated hand dip soldering operation would likely be considerably less than the concentrations near a continuous operation, keeping in mind that the concentrations near the continuous operations were well within the suggested limits.

Other possible exposures described by the claimant include the use of solvents to clean the harnesses being repaired. Normally LPS #3 solvent is used for this purpose. This high boiling petroleum

solvent, if concentrations were excessive, would have been detected in the air samples which were acquired by the company. In the cleaning process, the wire is wiped with a cloth which contains the kerosene like solvent.

The claimant also states that she used a solvent called "triethylene." This name is probably incorrect, since this material cannot be referenced. Other employees in the area and company representatives are not aware that any solvents, except LPS #3, have ever been used in the repair area.

Although it is apparent that this claimant is suffering a respiratory problem, it is difficult, with the lack of any excessive concentrations of air contaminants in her work area, to associate her illness with her working atmosphere. As described earlier, no odors or generation of contaminants were identified in this individual's work areas. Also, it should be noted that the company has a policy of installing local exhaust ventilation at any operation where it is indicated that toxic contaminants may be concentrated. Examples of good local exhaust ventilation are present in nearly all areas of this large manufacturing facility.

Threshold Limit Values refer to airborne concentrations of substances and represent conditions under which it is believed that nearly all workers may be repeatedly exposed day after day without adverse effect. Because of wide variations in individual susceptibility, however, a small percentage of workers may experience discomfort from some substances at concentrations at or below the threshold limit; a smaller percentage may be affected more seriously by aggravation of a pre-existing condition or by development of an occupational illness.

Sincerely yours,

Donald B. Meeker

Donald B. Meeker
Industrial Hygienist

DBM/klp