U. S. DEPARTMENT OF LABOR

Employees' Compensation Appeals Board

In the Matter of LILLIE MAY WESLEY claiming as the widow of BLAKE E. WESLEY and DEPARTMENT OF THE ARMY, ANNISTON ARMY DEPOT, Anniston, AL

Docket No. 02-1358; Submitted on the Record;
Issued February 20, 2003

DECISION and ORDER

Before COLLEEN DUFFY KIKO, DAVID S. GERSON,
WILLIE T.C. THOMAS

The issue is whether the employee's death from myelodysplastic syndrome on February 19, 2000 was causally related to toxic exposures in his federal employment.

On July 1, 1999 the employee filed a notice of occupational disease alleging that occupational exposures to hazardous chemicals caused myelodysplastic syndrome, first diagnosed in April 1997.[1] The employee worked at the employing establishment from June 1962 until his retirement on September 1, 1982. He stated that his positions as a machinist, lead foreman, machine shop foreman, toolmaker foreman and section chief entailed prolonged exposures to hazardous chemicals, including benzene. The employee asserted that he was first aware of the possible link between his myelodysplastic syndrome and chemical exposures at work on May 17, 1999. He explained that Dr. James E. Cantrell, Jr., his attending Board-certified hematologist, advised that such exposures could have caused or contributed to the development of myelodysplastic syndrome.

The record demonstrates that the employee began work at the employing establishment in June 1962 as a machinist in the employing establishment's maintenance division. In June 1965, he became a machinist in the combat vehicle transmissions section, but was then detailed as a combat vehicle mechanic in the engine section. From November 1965 through April 1969, the employee was promoted to machinist leader in the equipment branch's machine shop and welding section. The employee took required training in handling toxic agents in April 1967 and January 1968. He worked in various machine leader positions through December 1972 in the welding section, requiring exposure to explosive munitions and from December 1972 to September 1975 as a sheet metal and welding foreman in Building 108. In October 1977, the employee was promoted to machinist foreman in the machine shop section for Units 2, 2d and 3.

[1] In a January 12, 2001 letter, the Office of Workers' Compensation Programs stated that as the employee's condition was complex and he made legitimate attempts to file his claim as early as July 1, 1999, that his claim would be considered timely.

From March 1978 through his retirement in September 1982, the employee worked as a toolmaker foreman, machinist and fabricator.

The employee submitted medical evidence in support of his claim.

An April 3, 1997 bone marrow aspiration showed "[d]ysplastic and megaloblastoid features" demonstrative of myelodysplastic syndrome.

Dr. Cantrell submitted progress notes from January 6, 1998 to September 9, 1999, chronicling the employee's initially good response to Procrit therapy, resulting in a hematocrit sufficient for him to be maintained on an outpatient basis, although the employee was losing weight and experienced fatigue. Beginning in March 1999, Dr. Cantrell had to triple the dose of erythropoietin in order to boost the employee's hematocrit above 25.

In a November 9, 1999 form report, Dr. Cantrell diagnosed myelodysplasia. In response to the question, "Do you believe the condition found was caused or aggravated by an employment activity?" He responded "unknown."

In a January 3, 2000 report, Dr. Cantrell noted that the employee had lost 20 pounds, was pale, weak and suffered from urinary tract infections. He diagnosed "worsening myelodysplasia." A January 10, 2000 bone marrow biopsy showed pancytopenia, myelodysplastic syndrome and refractory anemia with excessive blasts all indicative of progressive myelodysplasia. Inpatient chemotherapy was begun on January 19, 2000 as the employee's hematocrit had dropped to 22.2.

The employee passed away on February 19, 2000. The employee's death certificate, filed February 25, 2000, prepared by Dr. Cantrell, stated that the immediate cause of death was myelodysplasia.

On April 18, 2000 appellant, the deceased employee's widow,[2] filed a claim for death benefits. She attributed the employee's death on February 19, 2000 from myelodysplasia to his exposure to benzene and other carcinogenic chemicals during his 20 years of employment as a machinist, machinist foreman and tool foreman at the employing establishment.[3]

In a September 12, 2000 statement, the employing establishment controverted appellant's claim, asserting that the employee was not exposed to any chemicals in the machine and tool shops where he worked. There "were not … chemical agents in and around the shop." The employing establishment admitted, however, that the employee was exposed to cutting oils in the performance of duty.

In a November 28, 2000 report, Dr. Cantrell stated that the employee died on February 19, 2000 "from myelodysplasia. His family has informed me that he worked at [the employing establishment] and may have been exposed to some agents that could have damaged his marrow and possibly even caused myelodysplasia. I am unable to make that determination,

[2] Appellant submitted her marriage license, dated January 21, 1939.

[3] Appellant submitted funeral bills totaling $6,382.00

but am writing to inform you that he did in fact have this diagnosis and as you may know, this disease can be caused by chemicals and radiation."

By decision dated January 16, 2001, the Office denied appellant's claim on the grounds that causal relationship was not established. The Office found that appellant submitted insufficient rationalized medical evidence to establish that the employee's myelodysplastic syndrome was related to any factor of his federal employment. The Office further found that appellant submitted insufficient evidence to substantiate the employee's occupational exposure to "radiation or chemical agents."

Appellant disagreed with this decision and in a February 7, 2001 letter, requested an oral hearing before a representative of the Office's Branch of Hearings and Review, held September 6, 2001.

At the hearing, Ray Van Shoubroeck, a coworker of the employee, stated that, from 1962 until the early 1980s, there were few safety precautions taken. Mr. Van Shoubroeck recalled working with the employee in the restricted area of the employing establishment, used for munitions storage, including chemical munitions, blister agents and nerve agents. The employee worked in the nonrestricted area in the engine division and was exposed to large quantities of fumes.

Lavelle Wesley, the employee's son, recalled that the employing establishment used caged rabbits to monitor whether "igloos," small buildings used for storage of highly hazardous materials, were leaking. If a rabbit died, it indicated a leak.

Brenda Smelley, the employee's daughter, testified that the employee began work at the employing establishment in June 1962 as a Machinist 12, in Building 129. Ms. Smelley discussed specific work sites and positions, noting that the employee was exposed to cadmium, chromium, lead, nickel, solvents, welding fumes, benzene, greases and degreasers. She stated that most greases or lubricants are manufactures from petroleum distillates and that the hydrocarbons produced in grinding and other uses of machines produced benzene. The employee was promoted to the position of machine leader in October 1962 and worked as a combat vehicle mechanic beginning in February 1965, which required the employee to work in poorly heated, lit and ventilated areas, as well as exposure to exhaust fumes. Ms. Smelley asserted that the employing establishment's characterizations of the employee's work environments as safe and hazard free were in sharp conflict with witness statements and job descriptions prepared by the employing establishment, in particular regarding working in areas with toxic chemicals, storage and destruction of ammunition, working with cooling systems, assembly line, tearing down or cleaning ammunition either on the dock or in buildings in the restricted area. The employee received awards for his service in the restricted areas and took courses on handling toxic materials. In August 1971, the employee returned to the industrial area, working as a welding supervisor in Building 108. The building was poorly ventilated, exposing the employee to fumes, smoke and chemicals, particularly in the process of melting lead.

Appellant submitted a March 2001 affidavit by Charles R. Phillips, coworker of the employee, who worked with him in the restricted area when the employee was a machinist

leader, Dock 10, but 16 to 17 calls per eight-hour shift to the restricted area, including where ammunition was being destroyed, Buildings 168, 381, 680, igloo areas. She also submitted the March 2001 affidavits of Johnnie Latham, Fred Murray and Walter Hopper, coworkers of the employee, who asserted that the employee was frequently exposed to hazardous chemicals and fumes in the Dock 10 and toxic chemical storage areas.

In a September 5, 2001 letter, Colonel Gerald Bates, Jr., commander of the employing establishment's safety division, stated that there were no records at the employing establishment substantiating the presence of benzene. However, Colonel Bates also stated that paint thinner, lubricants and adhesives used at the employing establishment did contain benzene.

In a September 28, 2001 letter, Steven D. Henry, chief of industrial hygiene at the employing establishment, alleged that the employee had not been exposed to benzene in the performance of duty. He stated that, from 1977 to 1982, there were no excessive airborne mists produced by metal cutting fluids.

In an October 5, 2001 letter, Sue A. Turton, the employing establishment's safety division chief, asserted that the employee had not been exposed to benzene, ammunition or explosives. However, Ms. Turton admitted that there were explosives and ammunition in the areas in which the employee worked.

In an October 16, 2001 letter, appellant responded to the employing establishment's comments. Appellant explained that, although the employing establishment denied that the employee was exposed to fumes, dusts, benzene, chemicals, ammunition or explosives, that each of these exposures was substantiated in the employee's personnel record. Appellant noted in particular that benzene was found in the soil and groundwater at the employing establishment and was a derivative of cutting oils, lubricants and fumes to which the employee was exposed at work.

Appellant submitted numerous reports documenting the presence of benzene and other hazardous chemicals at the employing establishment.

A November 1977 search of records conducted by the employing establishment showed that "[p]otentially hazardous wastes" continued to "contaminate several areas" of the employing establishment, including the vehicle rebuild area in which the employee worked. "Major contaminants identified in the VR [vehicle rebuild] area include heavy metals (cadmium, chromium, copper, lead, nickel, zinc), phenols, greases and oils, industrial chemicals and abrasive wastes…." The study found that wastes had leached three to four feet into the ground, creating hazardous areas. The study also found a sink hole filled with containers labeled "ammonium Hydroxide" and "Sodium Hydroxide," with no safety or control measures for waste disposal. The study also found phosgene, cyanogens, chloride, nitrogen mustard and storage of radioactive materials including tritium, promethium 147, radium and cobalt in Buildings 105A, 106 and 400 and bins of grossly contaminated waste in the salvage yard.

A March 1978 industrial hygiene survey of the employing establishment documented that employees had "excessive exposure to welding fumes and chrome fumes" in Building 400, with levels 65 to 70 times the permissible exposure levels, 17 to 21 times permissible levels in the hull

burnout area, 6 to 18 times in the welding area in which the employee worked, six to eight times permissible levels of cadmium in the position weld areas. The employing establishment recommended immediate implementation of safety precautions, including discontinuing use of cadmium plated brackets and medical surveillance for all welders including annual sputum cytology and urinalysis.

An April 1978 assessment showed hazardous materials were placed in an unsafe waste lagoon, including spent cyanide plating bath solutions, spent stripping and cleaning bath solutions, spent "halogenated solvents used in degreasing: trichlorethane; trichloroethene; methylene chloride; 1,1,1-trichloroethane; carbon tetrachloride; chlorinated fluorocarbons." Groundwater samples showed excessive levels of lead and the following organic compounds: chloroform; 1,1-dichloroethene; methylene chloride (dichloromethane); trichloroethene (trichloroethylene); trichlorofluoromethane; benzene.

A mid-1980 industrial hygiene analysis of organic contaminants at the employing establishment showed levels exceeding safety criteria for the following compounds: chloroform; 1,1-dichorethene; methylene chloride (dichloromethane); trichlorethane (trichloroethylene); trichlorofluoromethane; benzene.

A mid-1980 inventory of industrial waste sources generated at the industrial shops area at the employing establishment showed that Building 129, where the employee worked, had wastes from alkaline corrosion removal, paint stripping, chromate dipping, steam cleaning, degreasing, black oxide processing, chromate and cyanide rinses, alkali derivate corrosion removal, phosphoric acid, hydrochloric acid and zinc. Throughout the vehicle disassembly area in which the employee worked were wastes from repainting, blasting and repair, including cyanide, chrome wastes, acids, alkali, with Building 129 producing a high amount of phosphates and phenol wastes.

A mid-1980s assessment of the chemical waste lagoons found leakage dating back to the mid 1960s of cadmium and phenols. The employing establishment documented soil and water contamination from a three- to four-foot deep layer of ammunition at various dumping sites, as well as spills of chrome plating solutions and lead. The study concluded that there were potentially hazardous wastes throughout the employing establishment, including explosive wastes, phenols, greases, oils, cadmium, chromium, copper, lead, nickel, zinc, 400 leaking calcium hypochlorite drums, mustard munitions beginning in 1961, leaking munitions, radioactive waste from a watch shop, which operated from 1946 to 1966 and tank gun sites containing tritium repaired in Building 130.

A mid-1980s groundwater assessment confirmed that the following compounds leached into the groundwater from disposal trenches at the employing establishment: electroplating bath sludges; cyanide solutions; spent halogenated degreasing solvents including tetrachloroethene, trichlorethane, methylene chloride, trichlorethane, carbon tetrachloride, chlorinated fluorocarbons and related recovery sludges; spent nonhalogenated solvents including xylene, acetone, carbon disulfide, ethyl acetate, ethyl benzene, ethyl ether, isobutanol, pyridine, n-butyl alcohol, cyclohexanone, methanol, toluene, methyl isobutylketone, methyl ethyl ketone and related recovery sludges; corrosive and reactive wastes. Each of these compounds was classified as a hazardous substance.

A January 1984 report from the Department of Defense documented removal of 62,119 tons of hazardous wastes from degreasing, paint stripping and metals processing from a lagoon and sludge pile, as well as a sump at Building 130, in proximity to Building 129 where the employee worked.

A March 13, 1989 Environmental Protection Agency survey of the employing establishment showed "massive contamination, especially by chlorinated hydrocarbons, in localized areas … and there is evidence of dense nonaqueous phase liquids … in the bedrock and residuum groundwater" in the industrial areas.

A 1995 Department of Defense report on the employing establishment stated that, from 1981 to 1983, corrective actions included "the removal of 62,000 tons of sludge and contaminated soil."

Appellant also submitted several reports from 1999 to September 2001, reiterating the findings of massive contamination at the employing establishment, but not specifically addressing the period 1962 to 1982.

Appellant also submitted information about myelodysplastic syndrome and articles about the causal relationship between occupational exposure to diesel exhaust, metal working fluids,[4] benzene and organic solvents and the development of myelodysplastic syndrome. None of these documents mention the employee.

By decision dated and finalized February 11, 2002, the Office hearing representative affirmed in part and modified in part the January 16, 2001 decision. The hearing representative modified the prior decision, finding that appellant had established that the employee was exposed to chemicals, including benzene. The hearing representative found that the evidence presented by appellant, Ms. Smelley and the employee's coworkers was "overwhelmingly demonstrative [in] establishing that [the employee] was exposed to hazardous chemicals, specifically benzene from diesel fuel, smoke and dust during the course of his employment as claimed." However, the hearing representative also found that appellant had not submitted sufficient medical evidence to establish a causal relationship between the employee's chemical exposures and the myelodysplasia. The hearing representative noted that Dr. Cantrell was unable to make a determination of the cause of the condition.

The Board finds that appellant has failed to meet her burden of proof in establishing that the employee's death from myelodysplastic syndrome was causally related to toxic exposures in the performance of duty.

The Federal Employees' Compensation Act provides that the United States shall pay compensation for disability or death of an employee resulting from personal injury sustained while in the performance of duty.[5] However, an award of compensation in a survivor's claim

[4] In a 1995 article, the Department of Labor's Occupational Safety and Health Administration conceded that exposure to metalworking and machining fluids caused cancers and illnesses even below the permissible exposure limits

[5] 5 U.S.C. § 8102(a).

may not be based on surmise, conjecture or speculation, or on appellant's belief that the employee's death was caused, precipitated or aggravated by his employment.[6] Thus, appellant has the burden of establishing by the weight of the reliable, probative and substantial evidence that the employee's death was causally related to factors of his employment.[7] This burden includes the necessity of furnishing a rationalized medical opinion based on an accurate factual and medical background and supported by medical rationale explaining the nature of the cause and effect relationship between the employee's death and specific employment factors.[8]

The Board finds that appellant has submitted detailed, probative evidence establishing that the employee was exposed to hazardous chemicals in the course of his 20 years of work as a machinist and foreman, including benzene. The November 1977 employing establishment study showed hazardous waste contamination from cadmium, chromium, copper, lead, nickel, zinc, phenols, greases and oils throughout the vehicle rebuilding area where the employee worked. A March 1978 industrial hygiene survey found exposure to welding fumes, containing chromium and cadmium, at 6 to 18 times permissible levels in the area where the employee worked. April 1978 and mid-1980 studies showed massive contamination with organic solvents and benzene throughout the welding and plating areas. A mid-1980 inventory of Building 129, where the employee worked, showed a high output of phosphate and phenol wastes, in addition to degreasers, alkali, chromates, zinc and acids. The sump at Building 130, very close to where the employee worked, required emergency removal of tons of hazardous wastes in 1983, including degreasers and stripping solutions containing petroleum distillates and benzene.

The employee's exposure to benzene is further established by admission of the employing establishment. In a September 5, 2001 letter, Colonel Bates, commander of the employing establishment's safety division, confirmed that paint thinner, lubricants and adhesives in use at the employing establishment contained benzene.

The Board notes that, despite the copious factual evidence indicating the employee's exposure to benzene, other organic solvents and heavy metals in the performance of duty, the employing establishment denied that such exposures occurred. In his September 5, 2001 letter, Colonel Bates initially denied the presence of benzene at the employing establishment. Similarly, in a September 28, 2001 letter, Mr. Henry, chief of industrial hygiene, also asserted that the employee had not been exposed to benzene, or that there were any excessive fumes measured from 1978 to 1982. Ms. Turton, the employing establishment's safety division chief, made similar assertions in her October 5, 2001 letter. Considering the staggering volume of industrial hygiene surveys conducted at the employing establishment and their findings of massive chemical contamination from solvents, including benzene, leached into the soil and groundwater, leaking from barrels into unsafe waste lagoons and trenches, it is ludicrous for the employing establishment to attempt to claim that the employee was not exposed to these chemicals. The studies noted above pinpoint the presence of benzene, other organic solvents and heavy metals in the vehicle rebuild areas and in Building 129 where the employee worked.

[6] *Juanita Terry (Rex Terry)*, 31 ECAB 433-34 (1980).

[7] *Judith L. Albert (Charles P. Albert)*, 47 ECAB 810 (1996).

[8] *Kathy Marshall (Dennis Marshall)*, 45 ECAB 827, 832 (1994).

While the alleged employment factors have thus been firmly established, the critical question remains whether these well-documented exposures to benzene, organic solvents and heavy metals caused or contributed to the employee's myelodysplastic syndrome. Appellant submitted medical evidence from Dr. Cantrell, the employee's Board-certified hematologist, which she asserts is sufficient to establish this causal relationship,

Dr. Cantrell submitted progress notes from January 6, 1998 to January 19, 2000, detailing his treatment of the employee's myelodysplastic syndrome. He addressed causal relationship in a November 9, 1999 form report, stating that it was unknown if the employee's myelodysplastic syndrome was caused or aggravated by an employment activity. In a November 28, 2000 report, he provided some support for causal relationship, stating that the appellant informed him that the employee "worked at [the employing establishment] and may have been exposed to some agents that could have damaged his marrow and possibly even caused myelodysplasia. I am unable to make that determination, but … this disease can be caused by chemicals and radiation."

The Board finds that Dr. Cantrell's reports contain insufficient medical rationale to establish a causal relationship between the employee's occupational exposures to benzene, other organic solvents and heavy metals and his myelodysplastic syndrome. Dr. Cantrell stated that he was unable to determine whether the employee's toxic exposures at work caused the myelodysplasia, but noted that the disease could "be caused by chemicals and radiation."

However, this report did not address or explain the chain of causation as arising out of the employee's employment or any of the accepted conditions.

It is not clear from the record if Dr. Cantrell was aware of the details of the employee's documented occupational exposures to benzene, cadmium, chromium, copper, lead, nickel, zinc, phenols, greases, oils, degreasers, welding fumes containing chromium and cadmium, organic solvents, alkali, chromates and phosphates. He did not mention any of these documented exposures or any specific substance in his reports. Without a clear medical explanation setting forth how and why these exposures to these particular substances would cause bone marrow suppression and myelodysplastic syndrome, Dr. Cantrell's opinion is insufficient to establish causal relationship in this case.[9]

The Board also finds that appellant did not submit sufficient factual information to substantiate that the employee was exposed to radiation in the course of his federal employment. Appellant did not submit a description detailing the precise buildings, docks, "igloos," waste trenches, lagoons or other areas where the employee worked in proximity to radiation, the radioactive substances and their sources in those locations, the job duties requiring exposure to radiation, the dates of such exposure, the frequency and duration of exposure and any safety precautions in use.

Appellant also submitted various articles and medical journal abstracts regarding the epidemiologic connection between myelodysplastic syndrome and exposure to benzene, organic solvents and heavy metals. However, these articles do not refer directly to the employee or to the employing establishment. The Board has held that excerpts from publications and medical

[9] *Lucrecia M. Nielsen*, 42 ECAB 583 (1991).

literature are not of probative value in establishing causal relationship as they do not specifically address the individual claimant's medical situation and work factors. Therefore, such materials do not aid in determining causal relationship as they are of general application.[10]

As appellant did not provide sufficient medical evidence to establish that the employee's death was due to chemical exposures at work, or to establish occupational exposure to radiation, the employee's death on February 19, 2000 is not established as compensable under the Act.

The decision of the Office of Workers' Compensation Programs dated and finalized February 11, 2002 is hereby affirmed.

Dated, Washington, DC
February 20, 2003

Colleen Duffy Kiko
Member

David S. Gerson
Alternate Member

Willie T.C. Thomas
Alternate Member

[10] *Gloria J. McPherson*, 51 ECAB 441 (2000).