

U. S. DEPARTMENT OF LABOR

Employees' Compensation Appeals Board

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In the Matter of MARGRETTE H. MAKRAM and DEPARTMENT OF ENERGY,  
LOS ALAMOS AREA OFFICE, Los Alamos, NM

*Docket No. 00-447; Submitted on the Record;  
Issued November 19, 2001*

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DECISION and ORDER

Before MICHAEL J. WALSH, MICHAEL E. GROOM,  
A. PETER KANJORSKI

The issue is whether appellant has met her burden of proof in establishing that she sustained injury from exposure to radiation at work.

On July 20, 1998 appellant, then a 56-year-old nuclear engineer, filed a claim for a variety of neurological and blood disorders, which she related to exposure to radiation in her work, particularly in the inspection of contaminated sites. She contended that she had radiation contamination from radon, plutonium, americium and depleted uranium that exceeded the allowable limits set by the employing establishment. She stated that she had a severe allergic reaction to allergy testing which caused the tests to be stopped. She indicated that she had been diagnosed with temporal arteritis, a disease that could cause deafness, blindness, jaw claudication, joint stiffness and bone deterioration. She also commented that she had respiratory problems caused by americium.

In an August 18, 1998 memorandum, an employing establishment official indicated that many of the medical conditions cited by appellant in her claim occurred after she left the employing establishment. The official indicated that appellant's work at the employing establishment required her to visit radiologically controlled areas and to infrequently visit radiation areas. He noted that the results of dosimetry readings and whole body radiation counts would be routinely provided to the head of the employing establishment's Environmental, Safety and Health Branch, who was also appellant's employer. He indicated that appellant's supervisor, therefore, would have been informed in the ordinary course of business whether appellant had been exposed to radiation at work.

The Office of Workers' Compensation Programs received a copy of a March 18, 1996 letter, sent by the employing establishment to appellant's representative. An employing establishment official noted that appellant had alleged that she was internally contaminated with radioactive material. The official indicated that an investigation into appellant's allegation, conducted in 1992, concluded that the initial bioassay yielded a false positive result. In an accompanying letter, the employing establishment stated that the detection equipment used to

determine radiation exposure based on chest count did not provide an accurate screening for large figured individuals. The employing establishment official reported that confirmatory bioassay tests performed at two other facilities of the employing establishment did not find any evidence of internal radioactive contamination.

In a July 19, 1996 letter, appellant indicated that in 1990 she was assigned to duties requiring that employing establishment facilities in her area complied with federal, state and local health ordinances. She stated that she found numerous safety violations involving radiation in her work. Appellant related that in January 1991 a routine, full body, radiation count showed contamination by plutonium, americium and uranium. She commented that, although employing establishment rules required retesting within 48 hours, she was not tested again until March 17, 1992, which also was positive for internal contamination. She related that employing establishment claimed that the full body counters were calibrated for people weighing 110 to 190 pounds and were five feet, six inches tall and, therefore, were not calibrated for appellant who weighed 245 pounds and stood five feet, five inches tall. Appellant indicated that she was referred to another facility for testing but, although technicians should have taken tissue, urine and fecal samples as required by the employing establishment's manual, the technicians only took a urine sample. She commented that the facility had calibrated its equipment for the same body size as the employing establishment so it used a corrective factor. Appellant stated that even with the correction factor, she tested positive for radon and unidentified isotopes similar to americium.

The employing establishment submitted an August 23, 1996 report, which indicated that appellant's tests for external radiation doses from 1990 through 1993 and internal radiation doses in 1992 were negative.

In a February 22, 1999 letter, the Office requested further information from appellant on her exposure to radiation in her job. In a February 27, 1999 response, appellant stated that, as a nuclear engineer, she was brought close to nuclear material. She indicated that she was exposed to plutonium, americium, radon and depleted uranium. She commented that she could not answer questions on the cause or duration of the exposure to radiation because the contamination was discovered after her exposure to radiation. She stated that test results showed she was exposed to greater than the allowable limits for plutonium, depleted uranium, radon and americium.

An employing establishment official reviewed appellant's response. In a March 4, 1999 reply, the official stated that appellant's answer addressed what radionuclides were identified in her whole body measurement. He commented that appellant did not indicate the source of the contamination. He suggested that the potential source for portions of the radionuclides could be from her previous jobs. He noted that plutonium and uranium were present at appellant's assigned facilities.

At the request of the Office, appellant submitted additional test results relating to her radiation exposure. She noted points in the data which showed that she was exposed to radiation beyond allowable limits.

In an August 4, 1999 report, Dr. Mervyn Willard, a Board-certified family practitioner, stated that appellant had five possible impairments that could lead to permanent disability status; toxic radiation exposure both past and future, gas asphyxiation with hydrogen sulfide exposure,<sup>1</sup> polymyalgia rheumatica, affecting her shoulder, temporal arthritis and asthma. Dr. Willard indicated that the gas asphyxiation affected appellant's cognitive ability, particularly her ability to work as an engineer. He related that testing showed a dramatic drop in appellant's IQ. Dr. Willard commented that the polymyalgia rheumatica caused limitation in appellant's range of motion, repetitive activity, lifting, walking and other activities required in most types of employment. He noted that the temporal arthritis carried the danger of vision loss at any point in time. Dr. Willard stated that the unpredictable timing of the vision loss made appellant's status one of low employability.

In a subsequent report received by the Office on August 30, 1999, Dr. Willard stated that trans-uranics elements emit radiation continuously. He noted that the radiation had a long biological half-life and had a high absorption rate in the bone marrow and blood stream, affecting all gonads, the eyes, kidney, liver, urinary tract and lungs. Dr. Willard indicated that, because of the continuous emission of these chemicals in appellant's body, her immune system was continually fighting and her nervous and musculoskeletal systems were affected, which accounted for the abnormalities in her blood tests and the need for immuno-suppressant medication. Dr. Willard commented that no medical proceeding could purge long-lived isotopes. He added that in appellant's case the chemicals were already inhaled, ingested and in the lungs. Dr. Willard concluded that appellant's immune system disorder and neurological condition, as well as the asthma, were caused by radiation contamination and exposure. He stated that appellant was permanently disabled and her condition was caused by radiation exposure and complicated by gas exposure.

In another undated report, Dr. Willard stated that appellant's neurological condition, which caused eyesight and hearing loss, was caused by radiation exposure. He indicated that due to the high toxicity of the long-lived isotopes of plutonium, uranium and americium, appellant had abnormalities in his blood chemistry. Dr. Willard attributed appellant's asthma, eyesight loss, hearing loss, muscle cramps and fatigue to radiation exposure. He commented that plutonium was the most toxic material known to man. Dr. Willard indicated that long-lived isotopes could not be purged from the body so the exposure would cause permanent damage due to the high absorption of the material into the blood stream.

In a September 15, 1990 decision, the Office denied appellant's claim for compensation on the grounds that the evidence failed to support that the claimed events, incidents or exposures occurred at the time, places and in the manners alleged. The Office indicated that the evidence submitted by appellant did not show the source of the exposure, the length of exposure or incidents of exposure because appellant stated that there was no known exposure. It noted that the employing establishment indicated that it had no record of exposure.

The Board finds that the case is not in posture for decision.

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<sup>1</sup> Appellant filed a claim for exposure to natural gas in her residence. The Board rejected appellant's claim on the grounds that it did not occur within the performance of duty.

To establish that an injury was sustained in the performance of duty in an occupational disease claim, a claimant must submit the following: (1) medical evidence establishing the presence or existence of the disease or condition for which compensation is claimed;<sup>2</sup> (2) a factual statement identifying the employment factors alleged to have caused or contributed to the presence or occurrence of the disease or condition;<sup>3</sup> and (3) medical evidence establishing that the employment factors identified by the claimant were the proximate cause of the condition for which compensation is claimed or, stated differently, medical evidence establishing that the diagnosed condition is causally related to the employment factors identified by the claimant.<sup>4</sup> The medical evidence required to establish causal relationship, generally, is rationalized medical opinion evidence. Rationalized medical opinion evidence is medical evidence which includes a physician's rationalized opinion on the issue of whether there is a causal relationship between the claimant's diagnosed condition and the implicated employment factors. The opinion of the physician must be based on a complete factual and medical background of the claimant,<sup>5</sup> must be one of reasonable medical certainty,<sup>6</sup> and must be supported by medical rationale explaining the nature of the relationship between the diagnosed condition and the specific employment factors identified by the claimant.<sup>7</sup>

In this case, there are conflicting interpretations of the test data relating to appellant's exposure to radiation at work. Appellant claimed that the test data, even with corrections relating to her body mass, showed that she was exposed to radiation at work which caused radiation contamination. The employing establishment stated that the initial test data registered a false positive result and subsequent test data were negative. However, the determination of whether the test data showed that appellant was exposed to radiation is a medical determination. There is no report in the record from a physician who reviewed the test data and provided his reasoned opinion on whether appellant was exposed to radiation at work.

The Office found that appellant had not established that she was exposed to radiation at work. Appellant, however, indicated that she was constantly exposed to radiation in her job as a nuclear engineer. She only indicated that, as she was not aware of radiation contamination until the initial test results, she was unable in retrospect to identify the source of that radiation or the duration of her exposure to the radiation. The employing establishment has not specifically confirmed or denied that appellant was exposed to radiation at work, but only suggested that she may have been exposed or contaminated by radiation in one of her previous jobs. If the medical evidence of record shows that appellant was exposed to or contaminated by radiation at work, the Office must assume, in the absence of evidence to the contrary, that such exposure or contamination occurred while appellant was performing her duties as a nuclear engineer, because

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<sup>2</sup> See *Ronald K. White*, 37 ECAB 176, 178 (1985).

<sup>3</sup> See *Walter D. Morehead*, 31 ECAB 188, 194 (1979).

<sup>4</sup> See generally *Lloyd C. Wiggs*, 32 ECAB 1023, 1029 (1981).

<sup>5</sup> *William Nimitz, Jr.*, 30 ECAB 567, 570 (1979).

<sup>6</sup> See *Morris Scanlon*, 11 ECAB 384-85 (1960).

<sup>7</sup> See *William E. Enright*, 31 ECAB 426, 430 (1980).

no other source of such exposure or contamination outside of her employment has been identified.

Appellant submitted the reports of Dr. Willard who attributed much of appellant's physical problems to radiation exposure and contamination. He explained that, once appellant was contaminated by radioactive particles, she would be constantly exposed to radiation in her body that would affect her blood stream and bone marrow. If the medical evidence of record establishes that appellant was exposed to or contaminated by radiation, then the reports of Dr. Willard provide an uncontradicted finding that appellant's conditions were caused by or affected by such radiation. His reports, while insufficient to establish appellant's claim, are sufficient to require further development of the medical evidence if the test data shows that appellant sustained radiation exposure or contamination.<sup>8</sup>

The case must, therefore, be remanded for further development. On remand, the Office should refer appellant, together with the case record the test data of record to an appropriate physician for his review and determination of whether the test data establishes that appellant was exposed to or contaminated by radiation. If the physician should determine that appellant was exposed to radiation at work, he should then determine whether appellant's physical conditions are causally related to her exposure to radiation at work. After further development as it may find necessary, the Office should issue a *de novo* decision.

The decision of the Office of Workers' Compensation Programs, dated September 15, 1999, is hereby set aside and the case remanded for further action as set forth in this decision.

Dated, Washington, DC  
November 19, 2001

Michael J. Walsh  
Chairman

Michael E. Groom  
Alternate Member

A. Peter Kanjorski  
Alternate Member

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<sup>8</sup> *John J. Carlone*, 41 ECAB 354 (1989).