

**MCCORMICK V. UNITED NUCLEAR CORP., 1976-NMCA-106, 89 N.M. 740, 557 P.2d  
589 (Ct. App. 1976)**

**Bunny McCORMICK, a widow, Individually, and as  
Administratrix of the Estate of Jack McCormick,  
Deceased, and Shell Ann McCormick, an infant,  
by her mother and next friend, Bunny  
McCormick, Plaintiffs-Appellees,**

**vs.**

**UNITED NUCLEAR CORPORATION and Moki Oil & Rare Metals  
Company, also known as Moki Oil Company, and  
Employers Insurance of Wausau and Travelers  
Insurance Company, Defendants-Appellants.**

No. 2483

COURT OF APPEALS OF NEW MEXICO

1976-NMCA-106, 89 N.M. 740, 557 P.2d 589

October 26, 1976

Petition for Writ of Certiorari Denied December 6, 1976

**COUNSEL**

Thomas J. McBride, Johnson, Paulantis & Lanphere, Albuquerque, for defendants-appellants.

Sylvain Segal, Jr., Wollen, Segal & Scott, Albuquerque, for plaintiffs-appellees.

**JUDGES**

HERNANDEZ, J., wrote the opinion. LOPEZ, J., concurs. SUTIN, J., dissents.

**AUTHOR:** HERNANDEZ

**OPINION**

{\*741} HERNANDEZ, Judge.

{1} This is the second time this matter has come before this court (**McCormick v. United Nuclear Corporation**, 87 N.M. 274, 532 P.2d 203 (Ct. App.1974)) which is an action under the New Mexico Occupational Disease Disablement Law, §§ 59-11-1 to 59-11-43, N.M.S.A. 1953 (2d Repl. Vol. 9, pt. 1, 1974).

{2} The principal issue involved in this appeal is whether the appellants, United Nuclear Corporation (United) and its insurance carrier, Travelers Insurance Company, are to be obliged to pay benefits for the death of Jack McCormick, who was {742} working for the Moki Oil & Rare Metals Company (Moki) at the time of his death. The trial court entered judgment in favor of appellees; appellants allege three points of error, the third of which is dispositive of this appeal.

{3} The decedent worked approximately three years for United as a uranium miner near Grants, New Mexico. In June of 1968 the mine in which he was working was sold by United to Moki and decedent continued to work for Moki. About the middle of November, the decedent became ill and went to Albuquerque for medical treatment. He never returned to work. The illness was diagnosed as cancer of the lungs. He died on May 8, 1969.

{4} Appellees had sued not only United and its insurance carrier but Moki and its insurance carrier as well. On January 17, 1974, Moki and its insurance carrier were dismissed from the suit by reason of a settlement, the terms of which are not pertinent to this appeal.

{5} We believe that a definition of terms and recital of some of the testimony of Dr. Victor E. Archer, an epidemiologist who had conducted extensive research into lung cancer among uranium miners, is necessary to an understanding of this discussion.

{6} Appellants' third point of error is that: "As a matter of law, the exposure received by Jack McCormick to radon daughters during the last eleven months of his employment with United Nuclear Corporation was not his last injurious exposure within the meaning of § 59-11-11, N.M.S.A. 1953. \* \* \*" Section 59-11-11, N.M.S.A. 1953 (2d Repl. Vol. 9, pt. 1) reads in part as follows:

"Where compensation is payable for an occupational disease the only employer liable shall be the employer in whose employment the employee was last injuriously exposed to the hazards of employment resulting in such disease \* \* \*."

Radon is defined as: "A heavy radioactive gaseous element of the group of inert gases formed by disintegration of radium." Websters Third New International Dictionary (unabridged, 1971). After radon diffuses out of the uranium ore it begins to decay quite rapidly into its so-called "daughters," alpha particles, beta rays, and gamma rays. Beta rays are really not rays but particles, so that a beta ray is a stream of beta particles. Gamma rays are electromagnetic waves like heat, light, and X-rays. It is believed that these atomic radiations cause damage to human tissue because of their "ionizing" effect. "[Ionization] or electronic excitation, i.e., ejection of an orbital electron from an atom or raising the energy level of such an electron without removing it." S. Glasstone, Sourcebook on Atomic Energy, 736 (3d ed. 1967). These particles attach themselves to the dust particles in the air which in turn are breathed into the lungs.

"The specific long-range effects of ionization in humans may encompass any one or more of the following: genetic damage, sterility, fetal damage, cancer, leukemia, leukopenia, cataracts, bone necrosis, epilation, shortened life span, and death.

\* \* \* \* \*

"Another complicating factor in atomic radiation cases is the cumulative effect of overexposure.

\* \* \* \* \*

"[I]t seems quite clear, however, that in certain cases there definitely is a cumulative effect such that damage that would not result from a single small dose will occur if that small dose is repeated often enough. For example, a recent report of the National Academy of Sciences on radiation injury makes the categorical statement that there is no dose too small to have a genetic effect or to shorten the life span." E. B. Stason, S. E. Estep, W. J. Pierce, *Atoms and The Law*, 17, 23, 24 (1959).

In order to measure the amount of radiation that uranium miners are exposed to in quantitative terms, the unit "Work Level Month" (WLM) was adopted. This was {743} arrived at by multiplying the instantaneous level of radiation exposure by the number of hours worked in a month. A standard was then established setting the maximum dosage that a miner could safely receive in a year's time, without running the risk of developing some disease or damage. That figure is four WLM per year.

{7} Dr. Archer in his testimony described how this standard was arrived at:

"By assuming that uranium miners would work approximately thirty years and stating then that after thirty years his exposure should not exceed 120 Work Level Months, it was calculated back to show that if he received four Work Level Months per year, then it would not exceed that 120."

It is undisputed that the decedent was exposed to 17.73 WLMs during the last 11 months that he worked for United and 2.25 WLMs during the 6 months that he worked for Moki. Tests conducted after his death showed that he had received somewhere between 185 and 250 WLMs of exposure, with the 250 figure perhaps being the more accurate of the two. The figure of 250 was arrived at by measuring the lead two-ten in his bones.

{8} Dr. Archer on deposition testified in part as follows:

"Q. Is it your conclusion that there is then a definitive relationship between the quantity of exposure to which a miner is exposed and the resultant effects on his health, that is to say, the greater the quantity, the greater effects on his health?"

"A. Yes. Yes, it has been established that the greater the exposure is, the greater is the effect.

\* \* \* \* \*

"Q. Do you have a medical opinion as to the effect of an exposure beyond the four WLMs per year level upon the health of a uranium miner?

\* \* \* \* \*

"A. Yes. Any exposure beyond that must be considered as increasing his risk of lung cancer among other things.

\* \* \* \* \*

{9} Cross-examination:

"Q. All right, Doctor. Now if a miner whose exposure already was in excess of, let's say, 140 WLMs were to receive 2.25 WLMs in a six month period subsequently dying of lung cancer as a result of his occupation as a uranium miner, would you say that in his case that was injurious?

\* \* \* \* \*

"A. Yes, in that case I would say that the 2.25 was probably not injurious.

"Q. You are saying that an exposure of 2.25 WLM in excess of this range between 100 and 140 that you have described as cumulative lifetime Work Level Months would not be injurious if it was over and above that minimal accumulated dosage?

"A. What I am saying is that the total dosage involved there probably would be injurious but the small increment of two or three at the end of it probably would not be.

\* \* \* \* \*

"Q.... I am asking you to assume that there was an effect, lung cancer as a result of uranium mining. Now, with that additional fact, does that mean that the 2.25 over six months for someone who is already in excess of the recommended cumulative time total would not be injurious?

"A. No, one cannot make the flat statement that it would not be injurious. But considering the probability and relating it to our philosophy of accepting some small damage as being acceptable, we would have to say that that small increment at the end was probably not injurious.

\* \* \* \* \*

{\*744} "Q. And you did say that for anyone whose exposure has exceeded the 120 WLMs any exposure is dangerous, potentially injurious?

\* \* \* \* \*

"A. Yes."

{10} Another fact which must be mentioned is that the decedent had been examined on January 6, 1968, and a sputum cytology and long x-ray were both negative as to the presence of cancer.

{11} It is also undisputed that the decedent died of cancer of the lungs and that the cancer was caused by a long period of exposure to radon daughters. Exactly when the decedent contracted the cancer is not known. What is known is that even as late as January 6, 1968, there was no clinical evidence that he had the disease. The first clinical evidence that he had cancer was found in November, 1968, when he was examined in Albuquerque because he had been spitting up blood. Dr. Archer, when asked if he had an opinion as to how long prior to that date the cancer might have begun, answered: "\* \* \* it could be anywhere from two months to two years. But considering the type of cancer that he had, the average time would have been about six months." He went on to clarify his answer by saying that he meant six months before the date of death. Considering that the decedent died on May 8, 1969, he may have contracted cancer as late as October or November, 1968. Or stated another way, the latent period could have ended as late as October or November, 1968, when he was working for Moki.

{12} As is pointed out in the Sourcebook on Atomic Energy, supra, 737-39:

"Consequently, severe radiation damage may be suffered without any realization at the time on the part of the exposed subject. The nature and extent of the symptoms which develop vary with the individual. They depend on the type of radiation; on the depth to which the radiation has penetrated, on the extent of the body exposed, on the amount of radiation absorbed, and also upon whether the exposure was chronic, i.e., repeated or prolonged so as to lead to a cumulative effect, or acute, i.e., received in one large dose.

"The changes produced by radiation on the body are of two main types, namely, somatic and genetic effects. Somatic effects are those experienced directly by the exposed individual; on the other hand, the genetic effects are not evident in the irradiated person but become apparent in subsequent generations. The consequences of somatic effects may be further divided into two categories. There are first, the early effects which start to be felt within a short time, e.g., from a few minutes to several hours (or days for small doses) after exposure. Then there may be late or delayed effects which do not appear until months or even years later.

\* \* \* \* \*

"The descriptions of the effects of radiation given above have referred, in particular, to exposure from an external source. The general biological effects of nuclear radiations from ingested radioactive materials are essentially the same, but there are certain circumstances in which even a very small quantity of such sources within the body can produce considerable injury."

{13} The trial court made the following findings of fact, among others:

"13. Jack McCormick sustained an exposure of 17.73 WLMs during the last eleven month period of his employment by Defendant UNITED NUCLEAR CORPORATION.

"14. He sustained an exposure of 2.25 WLMs during the subsequent six month period of his employment by Defendant MOKI OIL AND RARE METALS COMPANY.

"15. Jack McCormick's exposure to radioactive materials during the last eleven months of his employment by Defendant UNITED NUCLEAR CORPORATION was his last {745} injurious exposure to that hazard [radioactive materials]."

This last "finding" is clearly not a finding but a conclusion of law based upon the specific facts already found. See **Stevenson v. Lee Moor Contracting Co.**, 45 N.M. 354, 115 P.2d 342 (1941). It requires construing the words "last injurious exposure" as used in § 59-11-11, supra. We are not bound by the trial court's conclusions of law. It is our opinion that the trial court erred in its conclusion.

{14} This brings us then to that part of Dr. Archer's testimony which the trial court obviously relied upon in concluding as it did. He testified that the exposure of the decedent to 2.25 WLMs in the six month period that he worked for Moki "would be unlikely to produce an injury affecting health." He went on to say that "the reason for this statement is that it is less than the four WLM standard." Just what Dr. Archer had in mind when he gave this answer, which in our opinion contradicted his previous testimony that "the greater the exposure is, the greater is the effect," we do not know. Perhaps he was speaking in terms of statistical probabilities. Nevertheless, our concern is not what Dr. Archer had in mind but what § 59-11-11, supra, requires, which in pertinent part is "the only employer liable shall be the employer in whose employment the employee was last injuriously exposed to the hazards of employment resulting in such disease." It is apparent that the Legislature was aware of the near impossibility of determining the precise part that any given exposure played in causing a given occupational disease. They could have required that it be the last injurious exposure causing the disease or the last exposure which was a material factor in causing the disease. The only requirement is that the exposure be injurious. Since the decedent in the 11 months prior to working for Moki had already been exposed to over 4 times the maximum level of 4 WLMs, and considering the cumulative effect of radiation, we therefore hold that, as a matter of law, decedent's exposure to 2.25 WLMs during the time that he worked for Moki was the last injurious exposure to the radiation which caused the cancer of which he died. To decide otherwise, given the present state of medical knowledge, would involve the trial courts of this state in futile searches for

unattainable factual certainties. **Conner v. Riner Plastering Company**, 131 So.2d 465 (Fla.1961); **White v. Scullin Steel Company**, 435 S.W.2d 711 (Mo. App.1968).

{15} As a result of our holding in this case, it is necessary to overrule our previous decision, **McCormick v. United Nuclear Corporation**, 87 N.M. 274, 532 P.2d 203 (Ct. App. 1974). That decision reversed the dismissal of the complaint against United Nuclear on the ground that it was "a state of facts provable under the claim" that decedent was last injuriously exposed to the hazards of employment resulting in cancer while he was employed by United Nuclear, the penultimate employer. Under our holding today, any exposure "of a kind contributing to the disease" (**Mathis v. State Accident Insurance Fund**, 10 Or. App. 139, 499 P.2d 1331 (1972)) while in the employ of the last employer is sufficient as a matter of law to make the last employer solely liable.

{16} This case is reversed and remanded with instructions to the trial court to vacate the judgment heretofore entered in favor of plaintiffs and to enter judgment in favor of the defendants United Nuclear Corporation and Travelers Insurance Company.

{17} IT IS SO ORDERED.

LOPEZ, J., concurs.

SUTIN, J., dissents.

#### DISSENT

SUTIN, Judge (dissenting).

{18} I dissent because there is substantial evidence to support the trial court's findings that "Jack McCormick's exposure to radioactive materials during the last eleven months of his employment by Defendant UNITED NUCLEAR CORPORATION was his last injurious exposure to that hazard [radioactive materials]."