#### EXHIBIT F

#### MISTAKEN IDENTITY

This is new evidence. Although this happened in 2003 and 2004, I was not given an explanation of how the Dose Reconstruction Report which determined the denial of my claim could have been properly made. Confusion exists due to the dates and time frame of the correspondence involved.

In the early stages of my claim, I was told that DOL had verified that was an employee of Blockson Chemical Company in Joliet, Illinois. The first Dose Reconstruction Report (completed 10/30/03) which you submitted to me, does not apply to This report was made showing as an employee of Blockson Chemical Company in Joliet, Illinois and utilizing the document "Basis for Development of an Exposure Matrix for Blockson Chemical Company" which was prepared for the EEOICPA project. When I attempted to get this corrected, I was told, in a telephone interview by a person named "Brad" that this did not make any difference and that "they were all Blockson". He probably was referring to the fact that Blockson Chemical Company is also known as Olin Mathieson Chemical Company. Records for these companies are kept in the same location and could account for suspected commingling of records. At the time I talked to "Brad", I did not know that the records of these companies were all kept at the same location. DOE had also verified that the period of employment was 1949 through

Later, I was asked to provide proof of employment. Proof of employment which I provided was received by DOL on April 5, 2004. In the meantime, DOL had forwarded corrected verification of employment at Mathieson Chemical Company in Pasadena, Texas to NIOSH on March 23, 2004. (They were still verifying the incorrect ending date as 1979, but that seems to be insignificant). (See Exhibit H.) The second Dose Reconstruction Report which was made for my claim, using the primary data source "Technical Information Bulletin: Technical Basis for Estimating the Maximum Plausible Dose to Workers at Atomic Weapons Employer Facilities", was completed on March 13, 2004. As you can see, this date is before the two dates shown above when verification of employment was received by NIOSH. These two Dose Reconstruction Reports were made using two different Technical documents as the basis. This questions the accuracy of other information that was used, and raises questions which I would like to have answered. According to the chart entitled "Time to Process Part B EEOICPA Cases" which was sent to me, and the time involved, the possibility that the dose reconstruction report completed March 13, 2004 could have been produced with any credibility is doubtful.

Please consider the following which gives information, and dates, as well as copies of correspondence which will explain why I am concerned:

Mathieson Chemical Company in Pasadena, Texas was named as a "Covered Facility" under the EEOICPA. who was President of Mathieson Chemical Company, and (of Olin Corporation) were friends. The two companies were almost equal in size and the idea of a merger was first broached in 1951. Even though neither man wanted to be subordinate to the other, a satisfactory agreement was reached and the two companies merged in 1954 to become the Olin Mathieson Chemical Company. In 1955, Olin Mathieson bought Blockson Chemical Company in Joliet, Illinois. In 1969, the company name became Olin Corporation. Other acquisitions were made during the time mentioned above, but I mention this bit of history to clarify why some might think that Mathieson Chemical Company and Blockson Chemical Company might be one and the same. Mathieson Chemical Company is located in Pasadena, Texas. Blockson Chemical Company is located in Joliet, Illinois. Each site location was named as a "Covered Facility" under the EEOICPA. These were separate plants, the size was not the same, the management was not the same, and the personnel were not the same. However, the sites were similar in that each was a pilot plant for producing uranium from phosphoric acid. Employees at both plants were exposed to danger from radiation exposure and toxic by-products due to contamination of their work sites. Each plant site was also the location of a huge pile of waste materials due to their operations. The size of the pile of waste materials at the Mathieson Chemical worksite was estimated to be approximately 240 acres about ten years ago. See Exhibit G for more on this.

I have stated since the beginning of this claim that no records were kept at Mathieson Chemical Company. I am repeating basic answers to questions asked me, relating to records and monitoring, in the telephone interview conducted on March 21, 1003. No records were kept relating to energy employees' doses. Employees did not wear radiation dosimeter badges. Employees did not participate in a biological radiation-monitoring program such as urine, fecal, breath, or in-vivo/whole body count. I do not have copies of any dosimeter badge or biological monitor records. There were none. No monitoring of any kind was done.

was never restricted from the work place or certain job duties because the energy employed had reached a radiation dose limit. Employees did not know about the presence of uranium in their workplace, which was Mathieson Chemical Company in Pasadena, Texas.

These statements were repeated in the updated summary of the phone interview which was sent to me by Mr. Richard Toohey, ORAU Team, in his letter dated September 10, 2003.

See attached letter dated October 30, 2003 to me from Mr. Larry J. Elliott transmitting a copy of a Draft NIOSH Report of Dose Reconstruction under the EEOICPA. This report was approved October 30, 2003 by Mr. Brant A. Ulsh, Ph.D.. In the Dose Reconstruction Overview (Page 4 of 15) "The Department of Labor (DOL) has verified that worked at the Blockson Chemical Company from through 1979 and was diagnosed with in 1986 and

cancer in 1994. No dosimetry or bioassay records for related to Blockson Chemical's work for the Atomic Energy Commission, (AEC, one of the predecessor agencies of the present Department of Energy) could be found." The report also states that the primary source of information used for this dose reconstruction was the document "Basis for Development of an Exposure Matrix for Blockson Chemical Company" prepared for the EEOICPA project. Mr. Elliott also said that within the next several days I would be contacted to schedule a convenient time for conducting a closing interview with me. He also stated, "The purpose of the closing interview is to review the dose reconstruction results and the basis on which the results were calculated. This will be the final opportunity during the dose reconstruction process for you to provide additional relevant information that may affect the dose reconstruction or indicate that you are in the process of obtaining such information." A copy of an OCAS-1 was also enclosed in this letter. (See Attachment 2.)

Also, under the title "Information Used" (on same page 4 of 15) "It presents the evaluation of information regarding the uranium recovery work performed by Blockson Chemical for the AEC. This document includes reports of uranium extraction work done at Blockson Chemical as well as process information from Blockson Chemical and four uranium mills. In addition, limited urinalysis data was available for 25 workers monitored between 1954 and 1958. Conservative (claimant-favorable) values of breathable air concentrations and inhalation times were derived from this information. The types of cancer and the date of diagnosis were obtained from the medical records and/or the death certificate submitted by the claimant."

In "Personal Background Information", according to this report, (Page 5 of 15) "The covered employee, began work at the Blockson Chemical Company, Joliet, Illinois, on 1949 and continued employment until 1979. Documentation submitted by the claimant verifies that during this period he was employed as Based on information cited above, occupational radiation exposure occurred during 1952 – 1979, with resultant dose calculated until the time of diagnosis in 1986 and diagnosis in 1994."

Under "Dose Estimate" the report states that "External dose is received from radiation originating outside of the body and is typically measured by dosimetry worn on the body." And "Because no radiation monitoring records were found, worst-case assumptions were used to estimate the external radiation dose received by per the provisions in 42 CFR 82.10(k)(2). The external dose reconstruction was based on source term information, and the claimant-favorable assumptions and parameters are described in a technical basis document."

Regarding "Radiation Type, Energy, and Exposure Conditions"
worked as during his employment at the Blockson
Chemical Company. From the records, it was not possible to state whether he was in a
position to be exposed to radioactive material or not." Other parts of this paragraph refer

to employment at Blockson Chemical Company. This employment did not exist.

The report mentioned above was obviously made using information from the file of some other employee. This information does not pertain to

This information is not information which I submitted related to the claim I filed.

employee of Mathieson Chemical Company in Pasadena, Texas where no monitoring was done, no records were kept, and employees did not know of the presence of uranium in the plant.

death certificate which I submitted shows him to have had cancer and cancer of

On November 21, 2003 a person named "Brad" had called me and said he wanted to make an appointment for a closing interview. I was not ready to have a closing interview because I was trying to obtain other medical information and I also told "Brad" that the Dose Reconstruction Report referred to a person other than and that I wanted to have someone else look at the report. "Brad" called me back and said that the employment location did not make any difference because it was all Blockson Chemical Company. I believe any claimant would be troubled by this statement and all the obvious discrepancies. "Brad" said he would call me again on December 2, 2003 for a closing interview.

This gentleman did call me again on December 2, 2003 and I told him that I needed more time to locate the medical records and I repeated by concern that he may be seeing incorrect information in file and that I believe activities caused him to be at a higher risk for exposure in a location where employees, without their knowledge, were exposed to dangerous levels of radiation. It appeared to me that the Dose Reconstruction Report showed generalized figures which could apply to anyone. "Brad" said he would have a Health Physicist call me to explain the dosage reports.

On December 3, 2003 I was called by a person named "Cheri" who identified herself as a Health Physicist. She began explaining the Dose Reconstruction Report to me. When she told me that 25 workers had been monitored, I asked her who they were because I have been unable to locate anyone who was monitored. She told me these 25 people were employees of Blockson Chemical in Joliet, Illinois and that the dose reconstruction referred to conditions in Joliet, Illinois. Unlike "Brad" she seemed very interested to know that had never worked in Illinois. I asked her to review file because of my concern that it may contain incorrect information. This lady told me she would review the file, send me a correct Dose Reconstruction Report, inform others of this action, and that time would be allowed for action on claim. I never heard from this lady again.

I did not return a signed OCAS-1 regarding the incorrect Dose Reconstruction Report which is not applicable to or to the location where he was employed. I have had no further contact or correspondence with this lady.

I received another letter, dated December 30, 2003 from Mr. Larry J. Elliott asking again for a properly signed OCAS-1. (See Attachment 3.) He told me if he did not receive this OCAS-1 from me by 01-13-04, they would administratively close the dose reconstruction and notify DOL of this action.

See attached letter dated Jan 5, 2004 from me to Mr. Larry J. Elliott informing him of the above happenings. I also told him that this report referred to a person who had worked for Blockson Chemical Company in Joliet, Illinois.

never worked in Illinois.

was employed at Mathieson Chemical Company in Pasadena, Texas. I could not let this incorrect information remain in my claim. I knew that Olin Mathieson had bought Blockson Chemical Company, but I felt that I should make it clear that

had worked in Pasadena, Texas even though the Dose Reconstruction Report had indicated that much work had been done on claims from the Blockson Chemical Company and it appeared that a lot of information was available from that location while nothing was available from Mathieson Chemical Company. Employees at Blockson Chemical Company had been monitored and process information had been submitted. Obviously more information was known about Blockson Chemical while I knew very little about processing my claim. I did not like to be pressured when there were obvious discrepancies in my file and more information yet to be considered. It appeared that no one knew what was going on and no one was taking this seriously except for their interest in conducting a final interview. I also returned the Form OCAS-1 which he had sent to me. However, I answered "No" to all the questions and added a note that this was not now appropriate. (See Attachment 4.)

See attached letter dated March 4, 2004 to me from Mr. Steven F. Guerrero, Claims Examiner. Mr. Guerrero stated that they had forwarded to NIOSH the verified employment dates of November 8, 1949 through May 1, 1979 at the Blockson Chemical Plant (which was also known as Olin Mathieson) in Joliet, Illinois. He also said the Olin Corporation verified that worked at Blockson Chemical at Joliet Illinois, that they had initiated further development of employment and had sent a request to the Department of Energy to verify employment at the Mathieson Chemical Plant in Pasadena, Texas. He also requested that I provide proof of employment and informed me of documents that could be used as proof. He said it is my responsibility to provide this evidence. (See Attachment 5.)

I sent Mr. Guerrero a letter dated March 29, 2004 with 18 attachments, including statements from fellow employees, form SSA 581 which he had enclosed for me to complete, completed form EE-4 which contained information not previously considered, W-2 Forms from 1953 – 1979, a Social Security earnings statement showing earnings for all years, statements regarding Union membership, insurance, retirement, employee certificates for years of service, and other information which showed without doubt that had been employed in Pasadena and the dates of his employment. The U.S. Postal Service shows this certified letter was mailed March 30, 2004 and delivered to the Department of Labor on April 5, 2004. (See Attachment 6.)

After I had mailed this letter, I received a letter dated March 23, 2004, postmarked March 25, 2004, from Mr. Guerrero stating that the Department of Energy had verified that had worked at Mathieson Chemical Company, Pasadena, Texas from 1949 through 1979 and that this information had been forwarded to NIOSH that day. (See Attachment 7.)

See attached letter dated April 2, 2004 to me from Mr. Larry J. Elliott enclosing a copy of a Revised Draft NIOSH Report of Dose Reconstruction that supersedes any previous Dose Reconstruction Reports sent to me. He also enclosed a Form OCAS-1 that should be signed and returned to them. The dates on the Revised Draft NIOSH Report of Dose Reconstruction show:

Calculations performed By Elizabeth K. Algutifan, CHP 3/10/2004
Peer Review Completed By Regis A.Greenwood, CHP 3/13/2004
Dose Reconstruction Approved By Brant A.Ulsh, Ph.D., CHP 4/1/2004

These dates do not seem compatible with the date of March 23, 2004 when Mr. Guerrero states he forwarded information from DOE to NIOSH verifying employment at Mathieson Chemical Company in Pasadena, Texas. These dates also indicate that my letter to Mr. Guerrero, dated March 29, 2004, received by DOL on April 5, 2004, and containing information (18 Attachments) which should have been considered in any determination regarding my claim evidently were not considered due to the fact that they had not yet been received.

In a letter dated April 2, 2004 from Mr. Elliott, I received a revised Draft which shows was employed at Mathieson Chemical in Pasadena, Texas, that no records were available, that the primary data source utilized for this dose reconstruction was the "Technical Information Bulletin: Technical Basis for Estimating the Maximum Plausible Dose to Workers At Atomic Weapons Employer Facilities" prepared for the EEOICPA project." as well as other changes. Even though some things were changed on this report when compared to the first report, these semantics cast doubt as to the attention my claim was given. This report shows nothing about the actual plant site except for where it is located. This letter dated April 2, 2004 was written before NIOSH received my letter dated March 29, 2004 which, according to the Certified return receipt was received by DOL on April 5, 2004. and this Dose Reconstruction Report was made employment dates and work site location on before NIOSH had verified March 23, 2004. According to information furnished from you regarding the time required to complete a Dose Reconstruction Report, the report could not possibly have been made in this time period. Mr. Elliott again requested that I return a signed OCAS-1 report. I did sign this OCAS-1 and return it because I was afraid my claim would be closed. (See Attachment 8.)

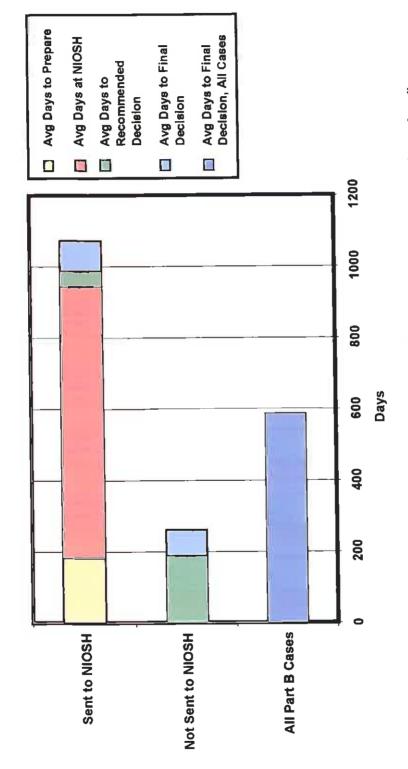
In a letter dated April 19, 2004 to me from Mr. Elliott I received a final NIOSH Report of Dose Reconstruction. This report had been completed 3/13/2004 and appeared to have the same information as the earlier revised Draft. Mr. Elliott informed me that a copy of this final dose reconstruction report had been forwarded to DOL. (See Attachment 9.)

In a letter dated April 23, 2004 (four days later) to me from Mr. Normal L. Fisher, Senior Claims Examiner, I received a Notice of Recommended Decision to deny my claim. (See Attachment 10.)

#### Attachments:

- (1) Chart Time to Process Part B EEOICPA Cases
- (2) Letter dated October 30, 2003 to me from Mr. Larry J. Elliott
- (3) Letter dated December 30, 2003 to me from Mr. Larry J. Elliott
- (4) Letter dated January 5, 2004 to Mr. Larry J. Elliott from me
- (5) Letter dated March 4, 2004 to me from Mr. Steven F. Guerrero
- (6) Letter dated March 29, 2004 to Mr. Steven F. Guerrero from me
- (7) Letter dated March 23, 2004 to me from Mr. Steven F. Guerrero (Received by me March 29, 2004)
- (8) Letter dated April 2, 2004 to me from Mr. Larry J. Elliott
- (9) Letter dated April 19, 2004 to me from Mr. Larry J. Elliott
- (10) Letter dated April 23, 2004 to me from Mr. Norman L. Fisher

Time to Process Part B EEOICPA Cases NIOSH Cases vs. Cases Not Sent to NIOSH



Average Processing Time for all Part B cases from date of filing through final decision date - for all cases with final decisions issued through June 30, 2010

- Cases sent to NIOSH took 1073 days
- Cases not sent to NIOSH took 262 days
- Average processing time, combining NIOSH and non-NIOSH cases, was 587 days



#### DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

**NIOSH Tracking Number:** 

National Institute for Occupational Safety and Health Robert A. Taft Laboratories 4676 Columbia Parkway Cincinnati, OH 45226-1998 Phone: 513-533-6800 Fax: 513-533-6817

October 30, 2003

#### Dear

This letter is to provide you with information on the status of the dose reconstruction for the claim you filed under the Energy Employees Occupational Illness Compensation Program Act (NIOSH Tracking Number 8957).

The National Institute for Occupational Safety and Health's (NIOSH) Office of Compensation Analysis and Support (OCAS) has completed a reconstruction of the radiation dose. Enclosed you will find a copy of a Draft NIOSH Report of Dose Reconstruction under the Energy Employees Occupational Illness Compensation Program Act (EEOICPA). Within the next several days, we will contact you to schedule a convenient date and time for conducting a closing interview with you. The purpose of the closing interview is to review the dose reconstruction results and the basis on which the results were calculated. This will be the final opportunity during the dose reconstruction process for you to provide additional relevant information that may affect the dose reconstruction or indicate that you are in the process of obtaining such information.

We have also enclosed a copy of a form (OCAS-1) which should be signed and returned to us not later than 60 days following the closing interview or receipt of a revised draft dose reconstruction report based on your provision of additional relevant information, whichever is later. Your signature on this form certifies that you have completed providing us with relevant information on radiation exposures and that the record for the dose reconstruction should be closed. Your signature on this form is not an indication that you agree with the decisions NIOSH made concerning how to use or not use information you provided for dose reconstruction or that you agree with the findings of the NIOSH dose reconstruction. The Department of Labor's (DOL) Office of Workers' Compensation Programs (OWCP) will notify you of any action that it may take regarding your claim, and of any rights you may have to raise objections. You will have an opportunity to raise objections to the final NIOSH Dose Reconstruction Report under EEOICPA following your receipt of a copy of the recommended decision on your claim from DOL by following the procedures described in the notice accompanying the recommended decision.

#### Page 2 -

Once we receive the signed OCAS-1 form from you, we will send the final copy of the dose reconstruction report to the DOL for adjudication of your claim. We will also send you and the Department of Energy a copy of the final dose reconstruction report. It is important that you return the properly signed OCAS-1 to us within the above-described time frame so that there is no delay in the adjudication of your claim. We will not forward the dose reconstruction report to DOL for adjudication without receipt of a properly signed OCAS-1. If we do not receive the OCAS-1 within the timeframe described above, we may administratively close the dose reconstruction and notify DOL of this action. PLEASE USE THE ENCLOSED PRE-ADDRESSED, POSTAGE-PAID ENVELOPE TO RETURN THE SIGNED OCAS-1 TO US.

If you have any additional questions regarding this dose reconstruction report, please contact our dose reconstruction contractor, Oak Ridge Associated Universities, toll-free at 1-800-322-0111.

Sincerely yours,

Larry J. Elliott, MSPH, CIH

Fellett

Director

Office of Compensation Analysis and Support

**Enclosures** 

cc: File

# NIOSH

OCAS

# NIOSH Report of Dose Reconstruction under the Energy Employees Occupational Illness Compensation Program Act (EEOICPA)

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Dose Reconstructio	n Approved By:					
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NOTE:

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REPORT BECAUSE I DID

NOT THINK THEY APPLIED.

of 15

### Introduction

The Energy Employees Occupational Illness Compensation Program Act of 2000 (EEOICPA), Executive Order No. 13179 and the Radiation Dose Reconstruction Rule (42 CFR  $\S~82)^I$ 

EEOICPA established a compensation program to provide a lump sum payment of \$150,000 and medical benefits as compensation to covered employees suffering from designated illnesses incurred as a result of their exposure to ionizing radiation, beryllium, or silica while in the performance of duty for the Department of Energy and certain of its vendors, contractors and subcontractors. This legislation also provided for payment of compensation to certain survivors of these covered employees.

In Presidential Executive Order No. 13179, the President designated the U.S. Department of Labor to administer this program for claims by current and former employees of nuclear weapons production facilities and their survivors who seek compensation for cancers caused by radiation exposures sustained in the performance of duty. The Executive Order also directed the Department of Health and Human Services to estimate (reconstruct) the radiation doses received by these employees. The Department of Labor uses the reconstructed radiation dose in evaluating whether the employee's cancer was at least as likely as not related to employment at the facilities covered by EEOICPA. To fulfill the responsibilities assigned to the Department of Health and Human Services, the National Institute for Occupational Safety and Health's (NIOSH) Office of Compensation Analysis and Support (OCAS) completes dose reconstructions using the methods described in the Radiation Dose Reconstruction Rule (42 CFR § 82) for the Department of Labor's use in making compensation decisions.

# The Purpose of Radiation Dose Reconstruction

A radiation dose reconstruction is used to estimate the radiation dose received by the specific organ(s) in which a worker developed cancer, particularly when radiation monitoring data is unavailable, incomplete, or of poor quality. Even in instances when radiation dosimetry data is available, it rarely specifies dosage to an organ and often is based on monitoring procedures that do not meet modern standards.

The basic principle of dose reconstruction is to characterize the occupational radiation environment to which workers were exposed using available worker and/or workplace monitoring information. In cases where radiation exposures in the workplace environment cannot be fully characterized based on available data, default values based on reasonable scientific assumptions are used as substitutes.

EEOICPA recognized that the process of estimating radiation doses would require dealing with uncertainties and limited data and thus required that the government establish methods for arriving at reasonable estimates of radiation dose received by individuals who were not monitored or inadequately monitored for exposures to radiation, or for whom exposure records are missing or incomplete. To the extent that the science and data involve uncertainties, these uncertainties are typically handled to the advantage, rather than to the detriment, of the claimant. NIOSH has used the best available science to develop the methods and guidelines for

dose reconstruction. These methods have been reviewed and commented upon by the public, including experts in the field of dose reconstruction, and the presidentially appointed Advisory Board on Radiation and Worker Health.

#### How Radiation Doses are Reconstructed

NIOSH reconstructs radiation doses by evaluating all available, appropriate data relevant to the employee's radiation exposure. Some examples of data that may be included in the dose reconstruction include, but are not limited to, internal dosimetry (such as results from urinalysis), external dosimetry data (such as film badge readings), workplace monitoring data (such as air sample results), workplace characterization data (such as type and amount of radioactive material processed) and descriptions of the type of work done at the work location.

Although the specific methods used for each dose reconstruction can vary, after a claim has been referred by the Department of Labor to NIOSH for a dose reconstruction, NIOSH typically requests the worker's personal radiation monitoring information from the Department of Energy. Upon receipt of the requested information, at least one voluntary informational interview with the claimant and/or survivors is conducted and a copy of the interview report is sent for their review. After all of the necessary and available information is gathered, a dose is estimated, using the methods in the Radiation Dose Reconstruction Rule. After a NIOSH health physicist reviews the information, methods, and results, the claimant receives a draft copy of the dose reconstruction report and a closing interview, during which the claimant can add any additional relevant information that may affect the dose reconstruction. If the claimant certifies that he/she has completed providing information and that the record for dose reconstruction should be closed, the final dose reconstruction report is sent to the claimant, the Department of Labor, and the Department of Energy.

As applied in the EEOICPA, dose reconstructions must rely on information that can be developed on a timely basis and on carefully stated assumptions. Therefore, the guiding principle in conducting these dose reconstructions is to ensure that the assumptions used are fair, consistent, and well-grounded in the best available science, while ensuring that uncertainties in the science and data are handled to the advantage, rather than to the detriment, of the claim when feasible. When dose information is not available, is very limited, or the dose of record is very low, NIOSH may use the highest reasonably possible radiation dose, based on reliable science, documented experience, and relevant data, to complete a claimant's dose reconstruction. In other instances, NIOSH may not need to fully complete a dose reconstruction because a partial dose reconstruction results in an estimated dose which produces a probability of causation of 50% or greater.

How Radiation Dose Reconstructions Are Used in Final Compensation Determinations
The results of a claimant's dose reconstruction are used by the Department of Labor to determine
the probability that a worker's cancer was "at least as likely as not" due to his or her
occupational exposure to ionizing radiation during employment at a covered facility. Criteria and
guidelines for making this determination are established by <u>EEOICPA</u> and the Probability of
Causation Guidelines (42 CFR § 81)<sup>2</sup>. The dose reconstruction is not the final determination of a
claim, but an interim product that is used by the Department of Labor in making its final

decision. Final determinations are made by the Department of Labor based on standards determined by EEOICPA and its implementing regulations.

# **Dose Reconstruction Overview**

The Office of Compensation Analysis and Support has performed a dose reconstruction for in accordance with the applicable requirements of the Energy Employees Occupational Illness Compensation Program Act. The Department of Labor (DOL) has verified that worked at the Blockson Chemical Company from through and was diagnosed with in 1986 and in 1994. No dosimetry or bioassay records for related to Blockson Chemical's work for the Atomic Energy Commission (AEC, one of the predecessor agencies of the present Department of Energy) could be found. The primary source of information used for this dose reconstruction was the document "Basis for Development of an Exposure Matrix for Blockson Chemical Company" prepared for the EEOICPA project.

Since the covered condition is of the reconstruction evaluated his radiation exposure to the exposure starting in 1952 until time of in 1986 and in 1994.

For the purposes of this dose reconstruction, was assigned the highest reasonably possible radiation dose using worst-case assumptions related to radiation exposure and intake, based on current science, documented experience and relevant data. Even under these assumptions, NIOSH has determined that further research and analysis will not produce a level of radiation dose resulting in a probability of causation of 50% or greater. Based on this efficiency process, the maximum estimated dose to the was from interna exposure and from external exposure. The maximum estimated dose to the was from internal exposure and from external exposure. In accordance with the provisions of 42 CFR 82.10(k)<sup>1</sup>, NIOSH has determined that sufficient research and analysis has been conducted to consider this dose reconstruction complete.

## **Information Used**

The primary data source utilized for this dose reconstruction was the document "Basis for Development of an Exposure Matrix for Blockson Chemical Company" prepared for the EEOICPA project. It presents the evaluation of information regarding the uranium recovery work performed by Blockson Chemical for the AEC. This document includes reports of uranium extraction work done at Blockson Chemical as well as process information from Blockson Chemical and four uranium mills. In addition, limited urinalysis data was available for 25 workers monitored between 1954 and 1958. Conservative (claimant-favorable) values of breathable air concentrations and inhalation times were derived from this information. The types of cancer and the date of diagnosis were obtained from the medical records and/or the death certificate submitted by the claimant.

# **Personal Background Information**

The covered employee, began work at the Blockson Chemical Company, Joliet, Illinois, on 1949 and continued employment until 1979.

Documentation submitted by the claimant verifies that during this period he was employed as an Based on information cited above, occupational radiation exposure occurred during 1952 - 1979, with resultant dose calculated until the time of cancer diagnosis in 1986 and cancer diagnosis in 1994.

# **Dose Estimate**

#### External Dose

External dose is received from radiation originating outside of the body and is typically measured by dosimetry worn on the body. External radiation dose may have been delivered quickly (acute exposure) or slowly over a period of time (chronic exposure).

Because no radiation monitoring records were found, worst-case assumptions were used to estimate the external radiation dose received by per the provisions in 42 CFR § 82.10(k)(2)<sup>1</sup>. The external dose reconstruction was based on source term information, and the claimant-favorable assumptions and parameters are described in a technical basis document<sup>4</sup>.

Radiation Type, Energy, and Exposure Conditions. worked as an during his employment at the Blockson Chemical Company. From the records, it was not possible to state whether he was in a position to be exposed to radioactive material or not. The claimant-favorable assumption was made that he was chronically exposed in close proximity to the source, the yellowcake drums during processing. This assumption will result in an overestimate of dose. The source was composed of natural uranium in the form of yellowcake, with the most significant radiation for external exposure being photons with energies greater than 250 keV. Photon exposure from contaminated surfaces and assumed annual diagnostic x-rays were also considered to contribute to dose. In addition, residual radioactivity following the end of Blockson's work for the AEC on March 31, 1962 was assumed to result in additional photon exposure until the end of employment. The external doses due to submersion in air contaminated with yellowcake dust and contamination on the skin are negligible and were not considered in the dose calculation. Table 1 below shows the estimated annual doses to the pancreas and rectum due to photon exposure from a drum of yellowcake. Table 2 shows the estimated annual doses to due to photon exposure from contaminated surfaces. Table 3 shows the estimated annual doses to the due to the assumed annual x-ray. Table 4 shows the estimated annual doses to the due to exposure to residual radioactivity following the end of Blockson's work for the AEC on 1962.



# DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

**NIOSH Tracking Number:** 

National Institute for Occupational Safety and Health Robert A. Taft Laboratories 4676 Columbia Parkway Cincinnati, OH 45226-1998 Phone: 513-533-6800 Fax: 513-533-6817

December 30, 2003

#### Dear

This letter is to provide you with information on the status of the claim you filed under the Energy Employees Occupational Illness Compensation Program Act (NIOSH Tracking Number:

The National Institute for Occupational Safety and Health's (NIOSH) Office of Compensation Analysis and Support (OCAS) completed a reconstruction of your radiation dose, and conducted a closing interview with you on . To date, we have not received a signed OCAS-1 form which was enclosed in our letter of 10-30-03 with our draft dose reconstruction report.

NIOSH will not forward the dose reconstruction report to the Department of Labor (DOL) for adjudication without receipt of a properly signed OCAS-1. If we do not receive a properly signed OCAS-1 from you by 01-13-04, we will administratively close the dose reconstruction and notify DOL of this action. Upon receiving this notification by NIOSH, DOL may administratively close the claim.

If you have any additional questions regarding your claim, please feel free to contact us toll-free at 1-800-35NIOSH (1-800-356-4674). You can also email us at ocas@cdc.gov or contact our office directly at (513) 533-6800. Additional information on OCAS can also be found on our Web site at <a href="http://www.cdc.gov/niosh/ocas">http://www.cdc.gov/niosh/ocas</a>.

Sincerely yours,

Larry J. Elliott, MSPH, CIH

Director

Office of Compensation Analysis and Support

File

January 5, 2004

Mr. Larry J. Elliott, MSPH, CIH, Director Office of Compensation Analysis and Support National Institute for Occupational Safety and Health Robert A. Taft Laboratories 4676 Columbia Parkway Cincinnati, OH 45226-1998

CMRR:

Re: NIOSH Tracking Number

Social Security Number

Dear Sir:

I have received your letter dated December 30, 2003 regarding Form OCAS-1 and closing the record on a NIOSH Dose Reconstruction under the Energy Employees Occupational Illness Compensation Program Act. In that letter, you refer to your letter of October 30, 2003 in which you sent a NIOSH Report of Dose Reconstruction and a Form OCAS-1 which you requested that I sign and return to you.

I AM ATTACHING THIS OCAS-1 ON WHICH I HAVE MADE CORRECTIONS.

I HAVE OBTAINED OTHER MEDICAL RECORDS BUT, DUE TO THE HOLIDAYS, I HAVE BEEN UNABLE TO HAVE A DOCTOR REVIEW THEM. I HOPE TO SEND THEM TO YOU WITHIN A FEW DAYS.

This gentleman did call me on December 2, 2003 and I told him that I needed more time to locate the medical records and I repeated my concern that he may be seeing incorrect information in file. I believe that activities caused him to be at a higher risk for exposure in a location where employees, without their knowledge, were exposed to dangerous levels of radiation. It appeared to me that the Dose Reconstruction Report showed generalized figures which could apply to anyone. Brad said he would have a Health Physicist call me to explain the dosage reports.

On December 3, 2003 I was called by a person named "Cheri" who identified herself as a Health Physicist. She began explaining the Dose Reconstruction Report to me. When she told me that 25 workers had been monitored, I asked her who they were because I have been unable to locate anyone who was monitored. She told me these 25 people were employees of Blockson Chemical in Joliett, Illinois and that the Dose

#### Page 2 of 2

Reconstruction Report referred to conditions in Joliett, Illinois. Unlike Brad, she seemed very interested to know that and never worked in Illinois. I asked her to review file because of my concern that it may contain incorrect information. This lady told me she would review the file, send me a correct Dose Reconstruction Report, inform others of this action, and that time would be allowed for action on claim.

In view of the above, I saw no reason for me to return a signed Form OCAS-1 regarding the incorrect Dose Reconstruction Report which is not applicable to or to the location where he was employed. Also, I have not had a closing interview. I was assured that I was working within the time constraints.

AS OF THIS DATE, I HAVE NOT RECEIVED THE DOSE RECONSTRUCTION REPORT FROM THE LADY.

I am requesting that you review file and allow whatever time and effort is necessary in order that all pertinent information be assembled and considered. I hope that you will clarify the glaring discrepancies in file and correct the apparent lack of communication between the persons handling this claim. I am interested in knowing that all correct information is considered and will appreciate your help and cooperation.

Sincerely,

Attachment

Form OCAS -I August 2001

NO

OMB No. Exp. Date 5/31/05

# Statement by the Claimant Closing the Record on a NIOSH Dose Reconstruction under the Energy Employees Occupational Illness Compensation Program Act

I, a claimant under the Energy Employees Occupational Illness Compensation Program Act (EEOICPA), certify that I have completed providing information to the National Institute for Occupational Safety and Health (NIOSH) and its representatives information relating to potential radiation doses incurred by while under the employment of DOE, a DOE contractor, or an Atomic Weapons Employer. In signing this form, I also certify that I have read, understand, and agree with the following statements: I am not aware of any additional information available to me that may be relevant a) to NIOSH in completing a dose resonstruction to estimate the radiation doses incurred by the employee as specified above; and, I have reviewed the draft NIOSH dose reconstruction report and agree that it b) identifies all of the relevant information I provided to NIOSH to complete the dose reconstruction; and, c) NIOSH should forward a final dose reconstruction report to the Department of Labor (DOL), so that DOL can continue adjudication of my claim and produce a recommended decision to accept or reject my claim; and, I understand that my opportunity to seek a review of the NIOSH dose d) reconstruction occurs only if DOL were to produce a recommended decision to deny my claim; and, By signing this form, I do NOT certify or imply that I agree with NIOSH e) decisions indicated in the draft NIOSH dose reconstruction report concerning how NIOSH has used or not used information I have provided for the dose reconstruction; and, By signing this form, I do NOT certify or imply that I agree with the findings of f)

Notice: Any person who knowingly makes any false statement, misrepresentation, concealment of fact or any other act of fraud to obtain compensation as provided under EEOICPA or who knowingly accepts compensation to which that person is not entitled is subject to civil or administrative remedies as well as felony criminal prosecution and may, under appropriate criminal provisions, be punished by a fine or imprisonment or both. I affirm that the information provided on this form is accurate and true.

the NIOSH dose reconstruction.

NIOSH ID:

#### U.S. DEPARTMENT OF LABOR

Employment Standards Administration
Energy Employees Occupational Illness Compensation
1999 Broadway Suite 1120
PO Box 46550
Denver CO 80201-6550
1-888-805-3389
(720) 264-3099 FAX



March 4, 2004

File No:

Dear

This letter is about your claim for benefits.

In the process of verifying employment with the Mathieson Plant, it is possible the wrong verification was made. We forwarded to National Institute for Occupational Safety and Health (NIOSH) the verified employment dates of 1949 through 1979 at the Blockson Chemical Plant (which was also known as Olin Mathieson) in Joliet, IL. The Olin Corporation verified that worked at Blockson Chemical at Joliet, IL. After further review of your claim we have initiated further development of employment. We have sent a request to the Department of Energy to verify employment at the Mathieson Chemical Plant, Pasadena, TX.

Therefore, we have to request that you provide any proof of his employment that may be available. Please submit any of the following records that you may have for his employment at the Mathieson Chemical Plant. In particular the time period 1951-1953:

- Records created by any government agency or by any regular business activity
- Time and attendance forms
- Minutes from a meeting that lists the participants at a meeting
- · Punch card
- Wage statements
- Sign in and sign out forms from logbooks, etc.
- · Security clearance

If written employment records are not available, employment history affidavits (EE-4) from co-workers that worked with him at the Mathieson Plant may be used. Also, please complete the enclosed form SSA-581 and return it in case we need to use this to contact the Social Security Administration about his earnings at the Mathieson Chemical Plant. At this time the medical evidence to support your claim for cancer has been met and all we need is proof of his employment at a covered facility.

Please be advised that as part of the EEOICPA, the Department of Energy (DOE) has established a program for DOE contractor and subcontractor employees who have an illness that may have been caused by exposure to a toxic substance while doing work for DOE. Under this program, DOE can help workers obtain state workers' compensation benefits in the state in which they worked. State workers' compensation benefits are different from the DOL-administered program; they usually cover a portion of

wages lost as well as medical care for the condition. For individuals who qualify for the DOE program, DOE will convene a panel of independent physician experts to conduct objective reviews of claims to determine medical causation. If you are a worker, or a survivor of a worker, who feels you may benefit from such a review, please contact the DOE Office of Worker Advocacy's toll free hotline at 877-447-9756, visit DOE's website at (www.energy.gov/benefits), or contact your DOL-DOE Resource Centers for additional information and claim forms.

It is the claimant's responsibility to submit the evidence needed to establish a claim under EEOICPA. You have 30 days from the date of this letter to provide the requested information, but you may contact us if you require more time.

If you have any questions or concerns, or need any assistance, please contact the District Office at 1-888-805-3389 or you may fax to 720-264-3099. Please include this correspondence when submitting the requested information.

Sincerely,

Steven F. Guerrero Claims Examiner

Encl.: EE-4 SSA-581

#### March 29, 2004

Mr. Steven F. Guerrero, Claims Examiner US Department of Labor EEOICP 1999 Broadway Ste 1120 PO Box 46550 Denver CO 80201-6550

CMRR:

Re: NI

**NIOSH Tracking Number** 

Social Security Number

Dear Sir:

In response to your letter of March 4, 2004, I am attaching the following:

- 1. Statement of verifying employment. was employed at Mathieson Chemical/Olin Corporation from 1950 until 1980.
- 2. Statement of verifying employment. was employed at Mathieson Chemical/Olin Corporation from 1952 until 1994.
- 3. Completed Form SSA-581 Authorization to obtain earnings data from the Social Security Administration,
- Completed Form EE-4 Employment History Affidavit for Claim under the EEOICP Act.
- 5. Form W-2 for 1953, Form W-2 for 1954, Form W-2 for 1955.
- Form W-2 for 1956, Form W-2 for 1957, Form W-2 for 1958.
- Form W-2 for 1959, Form W-2 for 1960.
- 8. Form W-2 for 1978, Form W-2 for 1979 from Olin Corporation.
- 9. Form W-2 for 1978, Form W-2 for 1979 from another employer.
- 10. Form W-2P for 1984, Form 1099-R for 1991.
- 11. Earnings Statement from Social Security, dated September 19, 1988, when requested an estimate of what his Social Security benefit would be. Complete statement is available. I show only the part which relates to this issue.

- 12. Letter dated March 19, 2004 from PACE International Union with attached forms verifying union membership from 1953 to 1972 in Pasadena Texas.
- Cover sheet dated 6-1-68 showing employee covered by group Metropolitan Life Insurance Company policy.
- 14. Cover sheet dated 9-25-72 showing employee covered by group Prudential Insurance Company of America policy.
- 15. Letter dated January 17, 1984 from Olin regarding application for retirement.
- 16. Service Certificate 10 years completed on 1959.
- 17. Service Certificate 20 years completed on 1969.
- 18. Service Certificate 25 years completed on 1974.

employment at Mathieson Chemical/Olin Corporation in Pasadena, Texas began in 1949 and ended in 1978. I have been told that he worked in the Labor Pool in his early employment at Mathieson Chemical. I did not meet him until September 1952. At that time his military discharge had not yet been processed but he had already returned from military service in the war in Korea and had resumed his employment at Mathieson Chemical. We 1953. I do not have his W-2 Forms prior to 1953 but the statement furnished by the Social Security Administration (Attachment 11) shows earnings for 1951 and 1952. Earnings over 50 years ago were quite low compared to wages today. I have included 1978 and 1979 W-2 Forms from Olin Corporation and from another employer to show when his employment ended. I believe that the amount shown on the 1979 W-2 Form from Olin Corporation was probably severance pay. began receiving a retirement benefit from Olin Corporation at age 55. This benefit stopped when he died. The W-2P form for 1984 and the Form 1099-R for 1991 reflect retirement pay from Olin. The Service Certificates clearly show that employment began 1949.

If anything else is needed, please let me know.

Sincerely,

Attachments (18)



# Track/Confirm - Intranet Item Inquiry - Domestic

 Item: 7002 3150 0001 8525 0681
 Date/Time Mailed: 03/30/2004 10:09

 Destination
 ZIP Code: 80201
 City: DENVER
 State: CO

 Origin
 ZIP Code: 77501
 City: PASADENA
 State: TX

Class: First Class

Scheduled Delivery: 04/02/2004

Weight: lb: 0 oz: 5

Special Services	Associated Labels	Amount
CERTIFIED MAIL	7002 3150 0001 8525 0681	\$2.30
RETURN RECEIPT		\$1.75

Event DELIVERED	Date 04/05/2004 Firm Name:   Recipient : '/		Location DENVER CO 80201 BOR 46550	Scanner ID K709296
	Request Delivery Record			
	View Delivery	Signatur	e and Address	
ARRIVAL AT UNIT ACCEPT OR PICKUP	04/05/2004	06:01 10:09	DENVER CO 80202 PASADENA TX 77501	K709296

Enter Request Type and Item Number:

Quick Search © Extensive Search

Explanation of Quick and Extensive Searches

Item Number:

Submit

Inquire on multiple items.

Go to the Product Tracking System Home Page.

#### U.S. DEPARTMENT OF LABOR

Employment Standards Administration Energy Employees Occupational Illness Compensation 1999 Broadway Suite 1120 PO Box 46550 Denver CO 80201-6550



March 23, 2004

File No:

Dear

This letter concerns your claim for compensation.

This is to inform you that the Department of Energy has verified that worked at Mathieson Chemical Company, Pasadena, TX from November 8, 1949 through May 1, 1979.

This information was forwarded to the National Institute for Occupational Safety and Health (NIOSH) today.

If you have specific questions regarding the status of the dose reconstruction, you may contact the NIOSH office located in Cincinnati, Ohio at (513)-841-4498. Any other questions should still be addressed to the Denver Office.

Sincerely,

Steven F. Guerrero Claims Examiner

THIS LETTER WAS
RECEIVED AFTER I MARIED
MY LETTER DATED MARIH 29,2004.



#### DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

NIOSH Tracking Number:

National Institute for Occupational Safety and Health Robert A. Taft Laboratories 4676 Columbia Parkway Cincinnati, OH 45226-1998 Phone: 513-533-6800 Fax: 513-533-6817

April 2, 2004

#### Dear

This letter is to provide you with information on the status of the dose reconstruction for the claim you filed under the Energy Employees Occupational Illness Compensation Program Act (NIOSH Tracking Number

The National Institute for Occupational Safety and Health's (NIOSH) Office of Compensation Analysis and Support (OCAS) has completed a revised reconstruction of the radiation dose based upon additional relevant information that NIOSH has obtained. Enclosed you will find a copy of a revised Draft NIOSH Report of Dose Reconstruction under the Energy Employees Occupational Illness Compensation Program Act (EEOICPA) that supercedes any previous dose reconstruction reports we have sent you. During the next two weeks, we will attempt to contact you to schedule a convenient date and time for conducting a new closing The purpose of the closing interview is to review the revised dose interview with you. reconstruction results and the basis on which the results were calculated. This will be the final opportunity during the dose reconstruction process for you to provide additional relevant information that may affect the dose reconstruction or indicate that you are in the process of obtaining such information. To facilitate the scheduling of the interview, you can contact us at the following telephone number 1-800-790-6728 (1-800-790-ORAU). If, after three weeks from the date of this letter, we have not heard back from you regarding a convenient time to schedule the interview, then we will assume that you have decided not to participate in the interview.

We have also enclosed a copy of a form (OCAS-1) that should be signed and returned to us within 60 days. You should sign and return this form even though you may have previously signed and returned a similar form after reviewing a previous version of a draft dose reconstruction report. Your signature on this form certifies that you agree with the following statements: 1) you are not aware of any additional information that may be relevant to the dose reconstruction; 2) you have reviewed the revised draft dose reconstruction report and agree that it identifies all of the relevant information you provided to NIOSH regarding the dose reconstruction; and 3) the revised dose reconstruction report is ready to be forwarded to the Department of Labor (DOL) for a determination regarding your claim. Your signature on this form is not an indication that you agree with the decisions NIOSH made concerning how to use or not use information you provided for dose reconstruction or that you agree with the findings of the NIOSH dose reconstruction. DOL's Office of Workers' Compensation Programs (OWCP) will notify you of any action that it may take regarding your claim, and of any rights you may have to raise objections. You will have an opportunity to raise objections to the final NIOSH Dose Reconstruction Report under EEOICPA following your receipt of a copy of the recommended decision on your claim from DOL by following the procedures described in the notice accompanying the recommended decision.

### Page 2 -

Once we receive the signed OCAS-1 form from you, we will send the final copy of the dose reconstruction report to the DOL for adjudication of your claim. We will also send you and the Department of Energy a copy of the final dose reconstruction report. It is important that you return the properly signed OCAS-1 form to us within the above-described time frame so that there is no delay in the adjudication of your claim. We will not forward the dose reconstruction report to DOL for adjudication without receipt of a properly signed OCAS-1 form. If we do not receive the OCAS-1 form within the time frame described above, we may administratively close the dose reconstruction and notify DOL of this action. PLEASE USE THE ENCLOSED PRE-ADDRESSED, POSTAGE-PAID ENVELOPE TO RETURN THE SIGNED OCAS-1 FORM TO US.

If you have any additional questions regarding the <u>revised</u> dose reconstruction report, please contact our dose reconstruction contractor, Oak Ridge Associated Universities, toll-free at 1-800-322-0111.

Sincerely yours,

Larry J. Elliott, MSPH, CIH

Akllit

Director

Office of Compensation Analysis and Support

**Enclosures** 

cc: File

Form OCAS -1 August 2001

OMB No. Exp. Date 5/31/05

# Statement by the Claimant Closing the Record on a NIOSH Dose Reconstruction under the Energy Employees Occupational Illness Compensation Program Act

I, a claimant under the Energy Employees Occupational Illness Compensation Program Act (EEOICPA), certify that I have completed providing information to the National Institute for Occupational Safety and Health (NIOSH) and its representatives information relating to potential radiation doses incurred by while under the employment of DOE, a DOE contractor, or an Atomic Weapons Employer. In signing this form, I also certify that I have read, understand, and agree with the following statements:

- a) I am not aware of any additional information available to me that may be relevant to NIOSH in completing a dose reconstruction to estimate the radiation doses incurred by the employee as specified above; and,
- b) I have reviewed the draft NIOSH dose reconstruction report and agree that it identifies all of the relevant information I provided to NIOSH to complete the dose reconstruction; and,
- c) NIOSH should forward a final dose reconstruction report to the Department of Labor (DOL), so that DOL can continue adjudication of my claim and produce a recommended decision to accept or reject my claim; and,
- d) I understand that my opportunity to seek a review of the NIOSH dose reconstruction occurs only if DOL were to produce a recommended decision to deny my claim; and,
- e) By signing this form, I do NOT certify or imply that I agree with NIOSH decisions indicated in the draft NIOSH dose reconstruction report concerning how NIOSH has used or not used information I have provided for the dose reconstruction; and.
- f) By signing this form, I do NOT certify or imply that I agree with the findings of the NIOSH dose reconstruction.

Notice: Any person who knowingly makes any false statement, misrepresentation, concealment of fact or any other act of fraud to obtain compensation as provided under EEOICPA or who knowingly accepts compensation to which that person is not entitled is subject to civil or administrative remedies as well as felony criminal prosecution and may, under appropriate criminal provisions, be punished by a fine or imprisonment or both. I affirm that the information provided on this form is accurate and true.

Signature

\_\_\_\_ Date April 12, 2004

NIOSH ID:



#### **DEPARTMENT OF HEALTH & HUMAN SERVICES**

Public Health Service

NIOSH Tracking Number:

National Institute for Occupational Safety and Health Robert A. Taft Laboratories 4676 Columbia Parkway Cincinnati, OH 45226-1998 Phone: 513-533-6800 Fax: 513-533-6817

April 19, 2004

Dear

This letter is to provide you with information on the status of the claim you filed under the Energy Employees Occupational Illness Compensation Program Act (NIOSH Tracking Number

The National Institute for Occupational Safety and Health's (NIOSH) Office of Compensation Analysis and Support (OCAS) has completed a reconstruction of the radiation dose for your claim, conducted a closing interview with you, and received a properly signed OCAS-1 form. Enclosed you will find a copy of the final NIOSH Report of Dose Reconstruction under the Energy Employees Occupational Illness Compensation Program Act (EEOICPA).

We have forwarded a copy of the enclosed final dose reconstruction report to the appropriate Department of Labor (DOL) District Office of the Office of Workers' Compensation Programs for their use in adjudicating your claim. We have also sent a copy of this report to the Department of Energy.

If you have any additional questions regarding your claim, please feel free to contact us toll-free at 1-800-35-NIOSH (1-800-356-4674). You can also email us at <a href="mailto:ocas@cdc.gov">ocas@cdc.gov</a> or contact our office directly at (513) 533-6800. Additional information on OCAS can also be found on our Web site at <a href="http://www.cdc.gov/niosh">http://www.cdc.gov/niosh</a>.

Sincerely yours,

Larry J. Elliott, MSPH, CIH

Director

Office of Compensation Analysis and Support

**Enclosures** 

cc: File

# NIOSH **OCAS** NIOSH Report of Dose Reconstruction under the **Energy Employees Occupational Illness Compensation** Program Act (EEOICPA) NIOSH ID: Social Security No. **DOL District Office** Denver **Energy Employee** Name: Last First Middle Date of Birth Covered **Employment:** Mathieson Chemical Company, '1951 -1979 Pasadena, Texas Location Cancer: 1986 1994 ICD Code Date of Diagnosis Calculations Performed By: Elizabeth K. Algutifan, CHP 3/10/2004 Name Date Peer Review Completed By: Regis A. Greenwood, CHP 3/13/2004 Date Dose Reconstruction Approved By: 4/1/2004 Brant A. Ulsh, Ph.D., CHP

# **Introduction**

The Energy Employees Occupational Illness Compensation Program Act of 2000 (EEOICPA), Executive Order No. 13179 and the Radiation Dose Reconstruction Rule (42 CFR § 82)<sup>1</sup>

EEOICPA established a compensation program to provide a lump sum payment of \$150,000 and medical benefits as compensation to covered employees suffering from designated illnesses incurred as a result of their exposure to ionizing radiation, beryllium, or silica while in the performance of duty for the Department of Energy and certain of its vendors, contractors and subcontractors. This legislation also provided for payment of compensation to certain survivors of these covered employees.

In Presidential Executive Order No. 13179, the President designated the U.S. Department of Labor to administer this program for claims by current and former employees of nuclear weapons production facilities and their survivors who seek compensation for cancers caused by radiation exposures sustained in the performance of duty. The Executive Order also directed the Department of Health and Human Services to estimate (reconstruct) the radiation doses received by these employees. The Department of Labor uses the reconstructed radiation dose in evaluating whether the employee's cancer was at least as likely as not related to employment at the facilities covered by EEOICPA. To fulfill the responsibilities assigned to the Department of Health and Human Services, the National Institute for Occupational Safety and Health's (NIOSH) Office of Compensation Analysis and Support (OCAS) completes dose reconstructions using the methods described in the Radiation Dose Reconstruction Rule (42 CFR § 82)<sup>1</sup> for the Department of Labor's use in making compensation decisions.

#### The Purpose of Radiation Dose Reconstruction

A radiation dose reconstruction is used to estimate the radiation dose received by the specific organ(s) in which a worker developed cancer, particularly when radiation monitoring data is unavailable, incomplete, or of poor quality. Even in instances when radiation dosimetry data is available, it rarely specifies dosage to an organ and often is based on monitoring procedures that do not meet modern standards.

The basic principle of dose reconstruction is to characterize the occupational radiation environment to which workers were exposed using available worker and/or workplace monitoring information. In cases where radiation exposures in the workplace environment cannot be fully characterized based on available data, default values based on reasonable scientific assumptions are used as substitutes.

EEOICPA recognized that the process of estimating radiation doses would require dealing with uncertainties and limited data and thus required that the government establish methods for arriving at reasonable estimates of radiation dose received by individuals who were not monitored or inadequately monitored for exposures to radiation, or for whom exposure records are missing or incomplete. To the extent that the science and data involve uncertainties, these uncertainties are typically handled to the advantage, rather than to the detriment, of the claimant. NIOSH has used the best available science to develop the methods and guidelines for

dose reconstruction. These methods have been reviewed and commented upon by the public, including experts in the field of dose reconstruction, and the presidentially appointed Advisory Board on Radiation and Worker Health.

#### How Radiation Doses are Reconstructed

NIOSH reconstructs radiation doses by evaluating all available, appropriate data relevant to the employee's radiation exposure. Some examples of data that may be included in the dose reconstruction include, but are not limited to, internal dosimetry (such as results from urinalysis), external dosimetry data (such as film badge readings), workplace monitoring data (such as air sample results), workplace characterization data (such as type and amount of radioactive material processed) and descriptions of the type of work done at the work location.

Although the specific methods used for each dose reconstruction can vary, after a claim has been referred by the Department of Labor to NIOSH for a dose reconstruction, NIOSH typically requests the worker's personal radiation monitoring information from the Department of Energy. Upon receipt of the requested information, at least one voluntary informational interview with the claimant and/or survivors is conducted and a copy of the interview report is sent for their review. After all of the necessary and available information is gathered, a dose is estimated, using the methods in the Radiation Dose Reconstruction Rule. After a NIOSH health physicist reviews the information, methods, and results, the claimant receives a draft copy of the dose reconstruction report and a closing interview, during which the claimant can add any additional relevant information that may affect the dose reconstruction. If the claimant certifies that he/she has completed providing information and that the record for dose reconstruction should be closed, the final dose reconstruction report is sent to the claimant, the Department of Labor, and the Department of Energy.

As applied in the EEOICPA, dose reconstructions must rely on information that can be developed on a timely basis and on carefully stated assumptions. Therefore, the guiding principle in conducting these dose reconstructions is to ensure that the assumptions used are fair, consistent, and well-grounded in the best available science, while ensuring that uncertainties in the science and data are handled to the advantage, rather than to the detriment, of the claim when feasible. When dose information is not available, is very limited, or the dose of record is very low, NIOSH may use the highest reasonably possible radiation dose, based on reliable science, documented experience, and relevant data, to complete a claimant's dose reconstruction. In other instances, NIOSH may not need to fully complete a dose reconstruction because a partial dose reconstruction results in an estimated dose which produces a probability of causation of 50% or greater.

How Radiation Dose Reconstructions Are Used in Final Compensation Determinations
The results of a claimant's dose reconstruction are used by the Department of Labor to determine
the probability that a worker's cancer was "at least as likely as not" due to his or her
occupational exposure to ionizing radiation during employment at a covered facility. Criteria and
guidelines for making this determination are established by <u>EEOICPA</u> and the Probability of
Causation Guidelines (42 CFR § 81)<sup>2</sup>. The dose reconstruction is not the final determination of a
claim, but an interim product that is used by the Department of Labor in making its final

decision. Final determinations are made by the Department of Labor based on standards determined by EEOICPA and its implementing regulations.

# **Dose Reconstruction Overview**

The Office of Compensation Analysis and Support has performed a dose reconstruction for in accordance with the applicable requirements of the Energy Employees Occupational Illness Compensation Program Act. The Department of Labor (DOL) has verified that worked at the Mathieson Chemical Company from 1949 through 1979 and was diagnosed with cancer of the in 1986 and cancer of the in 1994. No dosimetry or bioassay records for related to Mathieson Chemical's work for the Atomic Energy Commission (AEC, one of the predecessor agencies of the present Department of Energy) could be found. Mathieson Chemical Company performed work for the AEC between 1951 and 1953. The primary source of information used for this dose reconstruction was the document "Technical Information Bulletin: Technical Basis for Estimating the Maximum Plausible Dose to Workers at Atomic Weapons Employer Facilities" prepared for the EEOICPA project.

In accordance with NIOSH documentation, the dose to the lower large intestine was assigned as the appropriate internal dose for the cancer. Doses to the and were assigned as the appropriate external doses for the and respectively. Doses were evaluated for the potential exposure starting in 1951 until the respective times of cancer diagnosis in 1986 and 1994.

For the purposes of this dose reconstruction, was assigned the highest reasonably possible radiation dose using worst-case assumptions related to radiation exposure and intake, based on current science, documented experience and relevant data. Even under these assumptions, NIOSH has determined that further research and analysis will not produce a level of radiation dose resulting in a probability of causation of 50% or greater. Based on this efficiency process, the maximum estimated dose to was from internal exposure and from external exposure. The maximum estimated dose to was from internal exposure and from external exposure. In accordance with the provisions of 42 CFR 82.10(k)<sup>1</sup>, NIOSH has determined that sufficient research and analysis has been conducted to consider this dose reconstruction complete.

# **Information Used**

The primary data source utilized for this dose reconstruction was the "Technical Information Bulletin: Technical Basis for Estimating the Maximum Plausible Dose to Workers at Atomic Weapons Employer Facilities" prepared for the EEOICPA project. It presents the evaluation of information regarding the uranium processing work performed by various atomic weapons employer (AWE) facilities for the AEC. Conservative air concentrations and inhalation times were assumed to estimate doses to these workers<sup>4</sup>. The types of cancer and the dates of diagnosis were obtained from the medical records and/or the death certificate submitted by the claimant.

Social Security #

# Personal Background Information

The covered employee, began work at Mathieson Chemical Company on 1949 and continued employment until 1979. Documentation submitted by the claimant verifies that during this period he was employed as

Based on information cited above, occupational radiation exposure occurred during 1951-1953, with resultant doses calculated until the times of cancer diagnosis in 1986 and 1994.

# **Dose Estimate**

#### External Dose

External dose is received from radiation originating outside of the body and is typically measured by dosimetry worn on the body. External radiation dose may have been delivered quickly (acute exposure) or slowly over a period of time (chronic exposure).

Because no radiation monitoring records were found, worst-case assumptions were used to estimate the external radiation dose received by per the provisions in 42 CFR § 82.10(k)(2)<sup>1</sup>. The external dose reconstruction was based on source term information, and the claimant-favorable assumptions and parameters are described in a technical basis document<sup>4</sup>.

Radiation Type, Energy, and Exposure Conditions. worked as during his employment at Mathieson Chemical Company. From the records, it was not possible to state whether he was in a position to be exposed to radioactive material or not. The claimant-favorable assumption was made that he was chronically exposed in close proximity to the source, uranium during processing. This assumption will result in an overestimate of dose. The source was uranium, with the most significant radiation for external exposure being photons with energies between energies greater than Photon exposure from contaminated surfaces and assumed annual diagnostic x-rays were also considered to contribute to the and dose. In addition, residual radioactivity following the end of Mathieson Chemical's work for the AEC in 1953 was assumed to result in additional photon exposure until the end of employment. Tables 1 and 2 show the estimated annual doses to the (surrogate for (surrogate for respectively, due to photon exposure from uranium. Tables 3 and 4 show the estimated annual doses due to photon exposure from contaminated surfaces. Tables 5 and 6 show the estimated annual doses from the assumed annual x-ray. Tables 7 and 8 show the estimated annual external doses from residual radioactivity following Mathieson Chemical's work for the AEC.

Table 1. Estimated annual external doses to the uranium.

(surrogate for

due to photons from

Year	Annual Organ Doses due to Photons 30-250 keV (rem)	Annual Organ Doses due to Photons > 250 keV (rem)
1951		
1952	-	
1953		

Table 2. Estimated annual external doses to the from uranium.

(surrogate for

due to photons

Year	Annual Organ Doses due to Photons 30-250 keV (rem)	Annual Organ Doses due to Photons > 250 keV (rem)
1951		
1952		
1953		

Table 3. Estimated annual external doses to the

(surrogate for

due to photons

from contaminated surfaces.

Year	Annual Organ Doses due to Photons 30-250 keV (rem)	Annual Organ Doses due to Photons > 250 keV (rem)
1951		
1952		
1953		

Table 4. Estimated annual external doses to the from contaminated surfaces

surrogate for

due to photons

from contaminated surfaces.

Year	Annual Organ Doses due to Photons 30-250 keV (rem)	Annual Organ Doses due to Photons > 250 keV (rem)
1951		
1952		
1953		

Table 5. Estimated annual doses to the

surrogate for

due to photons from the

annual diagnostic x-ray.

Year	Annual Organ Doses due to Photons		
	(rem)		
1951			
1952			
1953			

Table 6. Estimated annual doses to the annual diagnostic x-ray.

(surrogate for

due to photons from the

Year	Annual Orga	n Doses due	to Photons
		(rem)	
1951			
1952			
1953			

Table 7. Estimated annual external doses to the radioactivity.

(surrogate for

due to residual

Year	Annual Organ Doses due to Photons 30-250 keV	Annual Organ Doses due to Photons > 250 keV
	(rem)	(rem)
1954		
1955		
1956		
1957		
1958		
1959		
1960		
1961		
1962		
1963		
1964		
1965		
1966		
1967		
1968		
1969		
1970		
1971		
1972		
1973		
1974	-	
1975		
1976		
1977		
1978		
1979		

Table 8. Estimated annual external doses to the radioactivity.

(surrogate for

due to residual

Year	Annual Organ Doses of Photons 30-250 ke (rem)	due to	Annual O Photo	rgan Doses ( ons > 250 keV (rem)	lue to
1954				(00111)	_
1955				_	
1956					
1957			-		
1958					
1959					
1960					
1961					
1962					
1963					
1964		-			
1965				_	
1966				_	_
1967				_	
1968				_	
1969					
1970					
1971					
1972			-	_	
1973					_
1974					
1975			-		
1976					
1977					
1978				_	
1979					

#### Internal Dose

Internal dose is received from radiation originating inside the body, i.e., from radioactive material taken into the body in some way. It can be calculated based on bioassay measurements of individual workers or on measurements of radiological conditions in the work place.

As noted above, no internal dose monitoring records were found for individual workers at Mathieson Chemical Company. Thus, conservative air concentration values were assumed to produce a source term for internal dose estimation<sup>4</sup>.

NIOSH ID#

Social Security #

Radiation Type, Energy, and Exposure Conditions.

during his employment at the Mathieson Chemical Company. From the records, it was not possible to state whether he was in a position to be exposed to radioactive material. Thus it was assumed that he was exposed chronically to the source during processing. The source was uranium and the most significant radiation for internal exposure was alpha radiation.

The assumption was made that the source was taken into the body by inhalation and ingestion during uranium processing operations. Uranium processing operations were assumed to occur daily, resulting in a chronic intake of uranium. In accordance with the NIOSH Internal Dose Reconstruction Implementation Guideline<sup>3</sup>, the IMBA program<sup>6</sup> was used to calculate the doses to the (surrogate for ) and the from exposure to both ingested and inhaled alpha radioactivity. For inhalation dose, the uranium was assumed to be a moderately soluble (i.e., absorption type M) material. For ingestion dose, a soluble material (fractional uptake of 0.02) was assumed. Uranium was assumed to be U-234 for internal dose assessment purposes because some AWE sites handled enriched uranium as well as natural uranium and U-234 is claimant favorable for either situation. These assumptions will result in an overestimate of probability of causation.

The estimated uranium inhalation rate was 8.1E+06 pCi per year and the estimated uranium ingestion rate was 3.14E+06 pCi per year during employment at Mathieson Chemical Company for the period of time that the AEC work was ongoing. These values were used in the IMBA program<sup>6</sup> to calculate annual and doses for determination of probability of causation. Tables 9 through 12, respectively, show the annual inhalation and ingestion doses to the and due to these assumed uranium intake rates.

In addition, because worked at Mathieson Chemical Company after the completion of AEC-related work in 1953, additional internal exposure to residual radioactivity is assumed to have occurred. To account for this, an additional year's inhalation and ingestion intake were assumed to have occurred at operational levels in the year immediately after AEC-related operations ceased. Doses due to these intakes are included in the doses in Tables 9 through 12 as appropriate.

Table 9. Annual inhalation doses to the uranium intake.

(surrogate for

due to

Year	Annual Dose (rem)	Year	Annual Dose (rem)
1951		1969	
1952		1970	
1953		1971	
1954		1972	
1955		1973	
1956		1974	
1957		1975	
1958		1976	
1959		1977	
1960		1978	
1961		1979	
1962		1980	
1963		1981	
1964		1982	
1965		1983	
1966		1984	
1967		1985	
1968		1986	

Table 10. Annual ingestion doses to the uranium intake.

(surrogate for

) due to

Year	Annual Dose (rem)	Year	Annual Dose (rem)
1951		1969	
1952		1970	
1953		1971	
1954		1972	
1955		1973	
1956		1974	
1957		1975	
1958		1976	
1959		1977	
1960		1978	
1961		1979	
1962		1980	
1963		1981	
1964		1982	
1965		1983	
1966		1984	
1967		1985	_
1968		1986	

Table 11. Annual inhalation doses to the due to uranium intake.

Year	Annual Dose (rem)	Year	Annual Dose (rem)
1951		1973	
1952		1974	
1953		1975	
1954		1976	
1955		1977	
1956		1978	
1957		1979	
1958		1980	
1959		1981	
1960		1982	
1961		1983	
1962		1984	
1963		1985	
1964		1986	
1965		1987	
1966		1988	
1967		1989	
1968		1990	
1969		1991	_
1970		1992	_
1971		1993	<del></del>
1972		1994	

Table 12. Annual ingestion doses to the due to uranium intak

	ingestion doses to the	due to uranii	um intake.
Year	Annual Dose (rem)	Year	Annual Dose (rem)
1951		1973	
1952		1974	
1953		1975	
1954		1976	
1955		1977	
1956		1978	
1957		1979	
1958		1980	
1959		1981	
1960		1982	
1961		1983	
1962		1984	
1963		1985	
1964		1986	
1965		1987	
1966		1988	
1967		1989	
1968		1990	
1969		1991	
1970		1992	
1971		1993	
1972		1994	

#### **Dose from Radiological Incidents**

No evidence was provided by the claimant, or any other documented source, that any radiological incidents occurred during employment, nor are any such incidents reported in the available records cited in Reference 4. Thus there was no indication of any incident that should be taken into account.

## **Summary**

was assumed to have been exposed internally during his employment at Mathieson Chemical Company from 1951 through 1979 to an intake of radioactive material sufficient to result in a dose to the of and a dose to the of He was assumed to have received an external photon dose of to the and to the The reported dose is a reasonable overestimate of occupational radiation dose for claim determination purposes. The attachment contains the dose reconstruction summary sheets that will be used by the Department of Labor to make the final probability of causation determination for the claim.

### References

- 42 CFR § 82, Methods for Radiation Dose Reconstruction Under the Energy Employees
   Occupational Illness Compensation Program Act of 2000; Final Rule, Federal
   Register/Vol.67, No. 85/Thursday, May 2, 2002, p 22314
- 2. 42 CFR § 81, Guidelines for Determining the Probability of Causation Under the Energy Employees Occupational Illness Compensation Program Act of 2000; Final Rule, Federal Register/Vol.67, No. 85/Thursday, May 2, 2002, p 22296
- 3. NIOSH, (2002) Internal Dose Reconstruction Implementation Guideline, Rev 0, OCAS-IG-002, National Institute for Occupational Safety and Health, Office of Compensation Analysis and Support, Cincinnati, Ohio, August 2002
- 4. ORAU Dose Reconstruction Team, Technical Information Bulletin: Technical Basis for Estimating the Maximum Plausible Dose to Workers at Atomic Weapons Employer Facilities; Rev. 03, December 2003
- NIOSH, NIOSH-Interactive RadioEpidemiological Program (NIOSH-IREP) Technical Documentation, Final Report, National Institute for Occupational Safety and Health, Office of Compensation Analysis and Support, Cincinnati, Ohio, June 2002
- ACJ & Associates and the UK National Radiological Protection Board, Integrated Modules for Bioassay Analysis, (IMBA), Phase 1, Software produced for NIOSH-OCAS as part of the EEOICPA Program, Version 1.0.42, UK, November 2002

# **ATTACHMENT 1: IREP Input Tables**

Claimant Name	MOSH ID #	Claimant SSN	DOL Detrict Office	Gender	Birth Yee	Year of Datument	Cancer Model	Should all model be n. No
AMANT CANCER	Takana ta							
Demoti Cierzii		Dimer Carrier		S		ter MSocombay Contor (S		
тин Тура	Tours and the last	12111111111111111111111111111111111111	N/A	N/A	N/A	N/A		
to of Chapman	1000	1994	NIA	N/A	NZA	NEA .		
					, , , , , , , , , , , , , , , , , , , ,	, , , , , , ,		
POSURE INFORM	ATION							٦
umber of exposures					_ :	_ :		
F								]
Exposure #	Exposure Year	Exposure Rate	Radiation Type	Dose Distribution	Trust Parameter	1 Parameter 2	Parameter 3	]
	1951	chronic	-{	Constant				4
3	1953	ctronic	1	Constant				
4	1951	circuic	Į,	Constant		·		
5	1952	chronic	ţ.	Covatant	•	- 1		
6	1953	chronic		Constant				-
7	1951	chronic	7	Constant				-{
6	1952	chronic	1	Constant	•			
9 10	1953	chronic	1	Constant				
טו 11	1951	chronic	)	Constant		. 1		
11	1952	chronic	·	Constant				
13	1951	ehronic acute	1	Constant	T			-
14	1952	minds	1	Comptant				-
15	1953	acute	1	Constant				
16	1954	chronic	1	Constant	•	•		
17	1955	chronic	1	Constant	•	:		
18	1956	chronic	]	Constant	- 41			Į
19	1957	chronic;	-	Constant				[]
20	1958	chronic	4	Constant				
22	1960	chronic	1	Constant		1		1
23	1981	chronic	1	Constant		(6)		1
24	1982	chronic	1	Constant		14		1
25	1983	chronic	=	Constant				-
26	1984	chronic		Complant				-
27	1965	chronic		Constant				-
28 29	1985 1987	chronic		Constant				1
30	1968	chronic chronic		Constant		2		1
31	1969	chronic		Constant Constant		-		1
32	1970	chronic	1	Constant	4			1
33	1971	chronic		Constant		*		4
34	1972	chronic		Constant			_	-
	1973	chatmic		Constant				1
38 37	1974	chronic		Constant				
38	1975 1976	chronic		Constant				
39	1977	chronic		Constant	1			
40	1978	chronic	-	Constant		<del></del>		-
41	1979	chronic	-	Constant				
42	1954	chronic	-	Cormiani				-
43	1955	chronic		Constant			• • • • • • • • • • • • • • • • • • • •	1
44	1958	chronic		Constant	·			1
45 48	1957	chronic		Comiant				
47	1958	chronic		Constant	·			_
48	1980	Chronic	_	Constant	<del></del>			4
49	1981	chronic		Constant				
50	1982	chronic		Constant		79		
51	1983	chronic	1	Constant		•		
52	1984	chronic		Constaint				
53	1985	chronic		Constant				7
55	1988	chronic	_	Constant				
55 56	1987	chronic		Constant				
57	1968 1969	chronic		Constant				
58	1970	chronic		Constant Constant	*			
59	1971	civoric		Constant	•			
80	1972	chronic	_	Constant			·	-
81	1973	chromic	-	Constant				-

62	1974	chronic	Constant
63	1975	chronic	Constant
64	1976	chronic	Constant
65	1977	chrone:	Constant
68	1976	chronic	Constant
68	1979	chronic	Constant
69	1951 1952	chronic chronic	Constant
70	1953	chronic	Constant
71	1954	chronic	Constant
72	1955	chronic	Constant
73	1958	chronic	Constant
74	1957	chronic	Constant
75	1958	chronic	Constant
79 77	1950 1960	chrunic	Contained
78	1960	chronic	Constant
70	1962	chronic	Constant
60	1963	chronic	Constant
81	1984	chronic	Constant
82	1985	chronic	Constant
63	1988	chronic	Constant
B4	1967	chronic	Constant
85	1988	chronic	Constant
86	1989	chronic	Constant
88	1970 1971	chronic	Constant
89	1972	chronic chronic	Constant Constant
90	1973	chronic	Constant
<u>91</u>	1974	chronic	Constant
92	1975	chronic	Constant
83	197H	chronic	Constant
94 95	1977 1976	chronic	Constant
25	1979	chronic	Constant
97	1960	Chance	Constant
98	1981	chronic	Constant
99	1982	chronic	Constant
100	1983	chronic	Constant
101	1984	chronic	Constant
102 103	1985	chronic	Constant
104	1986 1951	chronic	Constant
105	1952	chronic	Constant Constant
108	1953	chronic	Constant
107	1954	chronic	Constant
108	1955	chronic	Contant
109	1958	chronic	Constant
110	1957	chronic	Constant
111	1958	Chronic	Considered
113	1959 1980	chronic	Constant
114	1981	chronic chronic	Constant
115	1982	chronic	Constant Constant
118	1983	chronic	Constant
117	1984	chronic	Constant
118	1985	chronic	Constant
119	1986	chronic	Constant
120	1987	chronic	Constant
122	1989	chronic	Constant
123	1970	, chronic chronic	Constant
124	1971	chronic	Constant Constant
125	1972	chronic	Constant
128	1973	chronic	Constant
127	1974	chronic	Complant
128	1975	chronic	Constant
129 130	1976	chronic	Constant
131	1977 1978	chronic	Constant
132	1979	chronic Chronic	Constant
			Constant
133	1980	chronic	Constant
133 134 135	1980 1981 1982	chronic	Constant Constant

Covered Employee

NIOSH ID#

Social Security #

136	1983	chronic	alpha	Constant
137	1984	chronic	alpha	Constant
138	1965	chronic	alpha	Constant
139	1986	chronic	alpha	Constant

OTHER ADVANCED FEATURES	
Semala Stee Random Send	
Liver Defined Uncartainty Distribution	
Down Distribution Type Parameter 1 Parameter 2	Parameter 3

PERSONAL INFORMA	ATION							
Claiment Name	HOSHID#	Claiment SSN	DOL District Office DE	Gender	Birth Year	Year of Disgnosis 1994	Carrier Model Pancress	Should git model be not No
CLAMAIT CANCER						<del></del>		
	Primary Concer #1	Printers Century #2	Primary Concer (C	Secondary Concur #15	econdary Canour	#Secondary Corresp #3		
Career Type	Ĭ		NKA	N/A	N/A	NA		
Cate of Chagnesis	959	1994	N/A	NEA	N/A	NEA		
EXPOSURE INFORMA				1				٦
Number of exposures								
156			1					1
Exposure #	Exposure Year 1951	Exposure Rate	Radiation Type	Down Distribution Type	Parameter 1	Parameter 2	Parameter 3	
2	1952	chronic	-	Constant				
3	1953	chronic		Constant				
4	1951	chronic	1	Corntará				4
5	1952	chronic	1	Corutani				-
6	1953	chronic	1	Constant				-
7	1951	chronic		Constant				
8	1952	chronic	1	Constant				
9	1953	chronic		Constant		· 1		
10	1951	chronic	Į	Constant				
11	1952	chronic	1	Constant				
12	1953	chronic	1	Constant				
14	1951 1952	BCUAD	1	Constant		4		
15	1952	acuán		Constant				
18	1954	chronic		Constant				
17	1955	chronic	1	Constant Constant				
18	1958	chronic	i	Constant				_
19	1957	chronic	1	Constant				
20	1958	chronic	-	Constant				
21	1959	chronic		Constant				1
22	1960	chronic		Constant		*		
<b>Z</b> 3	1981	chronic		Constant				
24	1982	chronic		Constant				
25	1983	chronic	-	Constant				-
<u>26</u>	1984	chronic		Constant				1
28	1985	chronic		Constant				
29	1988 1987	chronic		Constant		,		
30	1968	chronic		Constant Constant				
31	1989	chronic	-	Constant				4
32	1970	chronic	-	Constant	_			-1
33	1971	chronic	-	Constant				-
34	1972	chronic	•	Constant				
35	1973	chronic		Constant				1
36	1974	chronic		Constant		ri .		Ì
37	1975	chronic	_	Constant				l
38	1976	chronic		Constant				
40	1977	chronic		Constant				
41	1979	chronic		Constant				
42	1954	chronic		Constant Constant		II.		
43	1855	chronic		Constant		<del></del>		
44	1966	chronic		Constant		•		
45	1957	chronic	-	Constant				
46	1858	chronic		Constant				-
47	1959	chronic		Corntaré				
48	1960	chronic		Constant		*		
49	1981	chronic		Constant		T .		1
50 51	1982	chronic		Constant				
52	1983 1984	chronic		Constant		III.		
53	1985	chronic		Constant				
54	1906	chronic		Constant				
55	1997	chronic chronic		Constant Constant		,		
56	1950	chronic		Constant				
57	1989	chronic		Constant		*		
58	1970	chronic		Constant				
59	1971	chronic						-4
		CHICKE		Constant				
60	1972	chronic		Constant Constant	-			-

82	1974	chronic	Constant
63	1975	claumic	Constant
64	1976	chronic	Constant
6.5	1977	chronic	Constant
66	1978	chronic	Constant
67 68	1979	chronic	Constant
69	1951 1952	chronic	Constant
70	1952	chronic chronic	Constant
71	1954	chronic	Constant
72	1955	chronic	Constant
73	1958	chronic	Constant
74	1857	chronic	Constant
75	1958	chronic	Constant
76 77	1959 1950	chronic	Constant
78	1981	chronic chronic	Constant
79	1962	chronic	Constant
80	1983	chanic	Constant Constant
81	1984	chronic	Constant
82	1965	chronic	Constant
83	1986	chronic	Constant
	1987	chronic	Constant
85	1988 1989	chrunic	Constant
87	1970	chronic	Constant
88	1971	chronic chronic	Constant
89	1972	chronic	Constant Constant
90	1973	chronic	Constant
91	1974	chronic	Compani
92	1975	chronic	Complete
93	1976	chronic	Constant
95	1977	chronic	Constant
95	1978 1979	chronic chronic	Comtant
97	1980	chronic	Constant
98	1901	shranic	Constant Constant
99	1982	chronic	Constant
100	1963	chronic	Constant
101	1964	chrenic	Constant
102 103	1865	chronic	Constant
104	1988 1987	chronic	Constant
105	1985	chronic chronic	Constant
108	1959	chronic	Constant Constant
107	1990	charmic	Constant
108	1991	Circuia	Constant
109	1992	chronic	Constant
110	1993	chronic	Constant
111	1994 1951	chronic	Constant
113	1952	chronic	Corming
114	1963	chronic chronic	Constant
115	1954	chronic	Constant
118	1955	chronic	Constant
117	1956	Chronic	Constant
_ 118	1957	chronic	Comptent
119	1858 1859	chronic	Constant
121	1980	chronic	Constant
122	1961	chronic chronic	Constant
123	1962	chronic	Constant Constant
124	1983	chronic	Constant
	1954	chronic	Constant
125			
126	1965	Chronic	Constant
126	1965	chronic chronic	Constant Constant
126 127 128	1965 1986 1987	chronic chronic chronic	Constant Constant Constant
128 127 128 129	1965 1986 1987 1968	chronic chronic chronic chronic	Constant Constant Constant Constant Constant
128 127 128	1965 1966 1967 1968 1969	chronic chronic chronic chronic chronic	Constant Constant Constant Constant Constant Constant Constant
125 127 128 129 130	1965 1995 1997 1968 1959 1970 1971	chronic chronic chronic chronic chronic chronic	Constant Constant Constant Constant Constant Constant Constant Constant
128 127 128 129 130 131 132 133	1965 1966 1967 1968 1969 1970 1971	chronic chronic chronic chronic chronic	Constant
125 127 128 129 130 131 132	1965 1995 1997 1968 1959 1970 1971	chronic chronic chronic chronic chronic chronic chronic	Constant Constant Constant Constant Constant Constant Constant Constant

136	1975	chronic	Constan
137	197B	chronic	Constan
138	1977	chronic	Constan
139	1978	chronic	Constan
140	1978	Chronic	Constan
141	1980	chronic	Constan
142	1981	chronic	Constan
143	1982	chronic	Constan
144	1983	chronic	Constan
145	1984	chronic	Constan
146	1985	chronic	Constan
147	1986	chronic	Constan
148	1987	chronic	Constan
148	1959	chronic	Constan
150	1989 "	Chronic	Constan
151	1990 ^	chronic	Constan
152	1991	claunic	Constan
153	1992	chronic	Constant
154	1993	Chronic	Constant
155	1994	chronic	Constan
ADVANCED I	EATURES		
mple Size	Random Seed		1
afford Donatal	ly Distribution		



## U.S. DEPARTMENT OF LABOR

APR 2 3 2004

Employment Standards Administration
Energy Employees Occupational Illness Compensation
1999 Broadway Suite 1120
PO Box 46550
Denver CO 80201-6550

File No:

Dear

Enclosed is the Notice of Recommended Decision of the District Office concerning your claim for compensation under the Energy Employees Occupational Illness Compensation Program Act (EEOICPA). The District Office recommends a denial of your claim for benefits. Please note that this is only a RECOMMENDED Decision; this is not a Final Decision. The Recommended Decision has been forwarded to the Final Adjudication Branch (FAB) for their review and issuance of the Final Decision.

Please read the Notice of Recommended Decision and Notice of Rights of Action carefully.

If you agree with the Recommended Decision and wish to waive any objections to it, you must follow the instructions for doing so provided in the section entitled "If You Agree with the Recommended Decision." If you submit the attached Waiver Sheet (or a statement waiving the right to object) to the FAB, a final decision can be issued before the end of the sixty (60) day period for filing objections. If you fail to submit a Waiver Sheet or statement, the final decision cannot be issued until after the end of the sixty (60) day period.

If you disagree with the Recommended Decision, you must follow the instructions provided in the section entitled "If You Wish to Object to the Recommended Decision." Your objections must be filed within sixty (60) days from the date of the Recommended Decision by writing to the Final Adjudication Branch.

Please be advised that as part of the EEOICPA, the Department of Energy (DOE) has established a program for DOE contractor and subcontractor employees who have an illness that may have been caused by exposure to a toxic substance while doing work for DOE. Under this program, DOE can help workers obtain state workers' compensation benefits in the state in which they worked. State workers' compensation benefits are different from the DOL-administered program; they usually cover a portion of wages lost as well as medical care for the condition. For individuals who qualify for the DOE program, DOE will convene a panel of independent physician

experts to conduct objective reviews of claims to determine medical causation. If you are a worker, or a survivor of a worker, who feels you may benefit from such a review, please contact the DOE Office of Worker Advocacy's toll free hotline at 877-447-9756, visit DOE's website at (www.energy.gov/benefits), or contact your DOL-DOE Resource Centers for additional information and claim forms.

Senior Claims Examiner

Singerety,

Encl: Proposed Decision

Copy to: NIOSH