MOUND

MDEXTA02 Data File Set

Description

This data file set contains one analytic file generated for a cohort mortality study, published in the *Journal of Occupational Medicine* in 1991, of men employed at the Mound Plant in Ohio.

This cohort mortality study of Mound workers was conducted to test the association between mortality and exposure to radiation. The published analyses focused on 3,229 white males monitored for exposure to external radiation, who were already employed as of January 1, 1947, or who were subsequently hired before 1979. A strong healthy worker effect was noted among white males who were monitored for external radiation [all causes of death standardized mortality ratio (SMR) = 79, 95% CI = 70-88]. No cause of death was significantly elevated. When mortality for workers who received external, cumulative whole-body doses that were at least 10 millisieverts (mSv) was compared with mortality among nonexposed workers, the rate ratios were not significantly elevated for any cause of death. However, a dose-response analysis was conducted considering three categories: nonexposed, or less than 10 mSv cumulative whole-body dose; exposed, 10-49.9 mSv; and exposed, greater than or equal to 50 mSv. This analysis reported a statistically significant relationship between external dose and mortality from all leukemias. This result was based on the identification of two deaths in the highest exposure category, one of which was a chronic lymphatic leukemia, a type of leukemia which has not been considered a radiogenic cancer.

The analytic file (ANFILE) contains 6,904 records representing male and female workers first hired from the beginning of the Dayton Project (about 1943) through part of 1979. During the course of the analyses, 20 of these records were found to be duplicates of other records in the file. The analyses in the published paper did not include these 20 duplicate records (N = 6,884). After the paper was published, two additional records were found to be either duplicative or belonging to a person who never worked at Mound. These 22 records have blank identification numbers. Monitoring data in the file include estimated first date of monitoring, cumulative whole-body dose through the end of 1979, and dates on which the cumulative whole-body dose reached 10, 50, or 100 mSv.

Vital status ascertainment was 98.1% complete for the 4,182 white males through January 1, 1980. Death certificates were obtained for 98.8% (586) of the 593 deaths that occurred between 1947 and 1979, inclusive.

Major operations conducted at Mound included the separation, chemistry, and metallurgy of polonium-210 and processing of plutonium-238 for heat sources. Later, small research projects involved other isotopes, including radium and thorium. Personal external monitoring data are available at Mound for years after 1947. ❖

MOUND

MDEXTA02 Data File Set

Citations

Wiggs, L. D., C. A. Cox-DeVore, G. S. Wilkinson, and M. Reyes. 1991. Mortality among workers exposed to external ionizing radiation at a nuclear facility in Ohio. *Journal of Occupational Medicine* 33:632-637.

Number of Analytic Files: 1

File Name	Number of Variables	Type of Data
ANFILE	21	annual, external whole-body doses; work history; vital status; demographic

Summary Death Tables

Cause of Death	No. of Deaths	
	Male	Female
Infectious & Parasitic Diseases	7	0
All Malignant Neoplasms	178	31
Lip, Oral Cavity & Pharynx	8	1
Digestive Organs & Peritoneum	40	4
Respiratory System	72	4
Bone & Connective Tissue	2	0
Skin	5	0
Breast	0	11
Genitourinary System	19	7
Brain/Central Nervous System (CNS)	3	1
Other & Unspecified Sites, Except Brain/CNS	13	1
Lymphatic/Hematopoietic	16	2
All Benign Neoplasms	2	0
All Neoplasms, Unspecified	1	0
Endocrine, Nutritional & Metabolic Diseases	19	2
Diseases of Blood & Blood-Forming Organs	1	0
Mental Disorders	5	0
Diseases of Nervous System & Sense Organs	7	1
Diseases of Circulatory System	454	19
Diseases of Respiratory System	53	1
Diseases of Digestive System	50	2
Diseases of Genitourinary System	19	2
Complications of Pregnancy & Childbirth	0	1
Diseases of Skin & Subcutaneous Tissue	0	0
Diseases of Musculoskeletal System & Connective Tissue	0	0
Congenital Anomalies	1	0
Symptoms & Ill-Defined Conditions	4	1
Accidents, Poisoning & Violence (External Causes)	99	11

Deaths, With ICD Code	900	71
Deaths, No ICD Code	227	49
Total Deaths, All Causes	1,127	120

Variables for Analytic File

ANFILE

635 KB

Name	Description
bdate	date of birth
cvs	current vital status as of 12/31/79
ach1rem	date cumulative external radiation dose reached 1 rem
ach10rem	date cumulative external radiation dose reached 10 rem
ach5rem	date cumulative external radiation dose reached 5 rem
firstext	estimated date for first measurement of external radiation dose
drace	race as shown on the death certificate
dsex	sex as shown on the death certificate
ddate	date of death
dstate	state of death
educ	education level
cumext	cumulative external radiation dose as of 1979
hiredate	date of first hire at the Mound Plant
duremp	duration of employment at Mound
icda8	cause of death - ICDA 8th rev.
id	identification number
sex	sex of worker
race	race of worker
st_ssa82	results of 1982 SSA search
st_ssa83	results of 1983 SSA search
termdate	date of final termination prior to 1980

MOUND

MDPOLA03 Data File Set

Description

This data file set consists of one analytic file generated for a cohort mortality study, published in *Health Physics* in 1991, of men who were employed at the Mound Plant.

This cohort mortality study of Mound workers was conducted to test the association between mortality and exposure to polonium-210. The published analyses focused on 4,402 white males employed during 1944-1972, the period during which Mound conducted operations using polonium-210. Of the 4,402 white males, there were 2,181 who were monitored for exposure to polonium. A healthy worker effect was noted among the cohort of 4,402 white males [all causes of death standardized mortality ratio (SMR) = 93, 90% CI = 89-99; all cancer SMR = 100, 90% CI = 89-113]. The SMR for lung cancer was elevated to a level of statistical significance only for workers employed between 1944 and 1945. The SMR for deaths due to all causes for workers exposed to polonium was less than 100 (SMR = 92, 90% CI = 85-98). Although the SMR for lung cancer was elevated (SMR = 113), the 90% confidence limits included 100 (87-117). Dose-response analyses using the MOX program were performed using kidney dose as the exposure metric. No statistically significant trends in mortality were observed.

The single analytic file (ANFILE) in this data file set contains data for 6,884 workers who were initially hired between 1943 through 1979, inclusive. Exposure data in the file include the estimated first date of monitoring, cumulative whole-body dose through the end of 1979, and dates on which the whole-body dose reached 10, 50, or 100 millisieverts (mSv). Polonium exposure data include the date and volume of the sample, the results of the radiochemical analysis, and any comments specific to the sample or the radiochemical analysis of the sample. An electronic file containing these data was used by Mound staff to calculate kidney and spleen doses due to polonium-210 (in millirems). These organ doses appear in this analytic file.

Vital status was ascertained for 95.6% of the 4,402 white males through January 1, 1984. There were 987 deaths identified in this group, and death certificates were obtained for 97.4% (961) of these deaths. Vital status was ascertained for 96.6% (2,106) of the 2,181 polonium workers, and death certificates were obtained for 98.6% (558) of them.

Major operations conducted at Mound include the separation, chemistry, and metallurgy of polonium-210 and processing of plutonium-238 for heat sources. Later, small research projects involved other isotopes, including radium and thorium. Records pertaining to Mound's external dosimetry monitoring program, first using film badges and later switching to thermoluminescent dosimeters, began in 1947. Mound began urine bioassays for polonium in 1944. The last time a worker entered the polonium bioassay program was in 1972. ❖

MOUND

MDPOLA03 Data File Set

Citations

Wiggs, L. D., C. A. Cox-DeVore, and G. L. Voelz. 1991. Mortalilty among a cohort of workers monitored for Po-210 exposure: 1944-1972. *Health Physics* 61:71-76.

Number of Analytic Files: 1

File Name	Number of Variables	Type of Data
ANFILE	27	annual, external whole-body doses; work history; vital status; demographic; polonium data

Summary Death Tables

Cause of Death	No. of Deaths	
	Male	Female
Infectious & Parasitic Diseases	8	1
All Malignant Neoplasms	243	49
Lip, Oral Cavity & Pharynx	10	1
Digestive Organs & Peritoneum	60	8
Respiratory System	96	6
Bone & Connective Tissue	2	0
Skin	5	0
Breast	0	18
Genitourinary System	25	10
Brain/Central Nervous System (CNS)	5	1
Other & Unspecified Sites, Except Brain/CNS	18	1
Lymphatic/Hematopoietic	22	4
All Benign Neoplasms	2	0
All Neoplasms, Unspecified	1	0
Endocrine, Nutritional & Metabolic Diseases	20	5
Diseases of Blood & Blood-Forming Organs	2	0
Mental Disorders	7	0
Diseases of Nervous System & Sense Organs	12	1
Diseases of Circulatory System	545	33
Diseases of Respiratory System	64	5
Diseases of Digestive System	56	4
Diseases of Genitourinary System	21	2
Complications of Pregnancy & Childbirth	0	1
Diseases of Skin & Subcutaneous Tissue	0	0
Diseases of Musculoskeletal System & Connective Tissue	0	0
Congenital Anomalies	1	0
Symptoms & Ill-Defined Conditions	6	1
Accidents, Poisoning & Violence (External Causes)	107	13

Deaths, With ICD Code	1,095	115
Deaths, No ICD Code	172	23
Total Deaths, All Causes	1,267	138

Variables for Analytic File

ANFILE

895 KB

Name	Description
bdate	date of birth
cvs	current vital status as of 12/31/79
ach1rem	date cumulative external radiation dose reached 1 rem
ach10rem	date cumulative external radiation dose reached 10 rem
ach5rem	date cumulative external radiation dose reached 5 rem
firstext	estimated date for first measurement of external radiation dose
alive	date last known alive
drace	race as shown on the death certificate
dsex	sex as shown on the death certificate
ddate	date of death
dstate	state of death
first_po	first sample date for polonium-210
last_po	last sample date for polonium-210
educ	education level
exkidney	kidney dose of polonium-210, mrem
exspleen	spleen dose of polonium-210, mrem
cumext	cumulative external radiation dose as of 1979
hiredate	date of first hire at the Mound Plant
duremp	duration of employment at Mound
icda8	cause of death - ICDA 8th revision
id	identification number
race	race of worker
sex	sex of worker
st_ssa82	results of 1982 SSA search
st_ssa83	results of 1983 SSA search
termdate	date of final termination prior to 1980
vstat83	vital status, 1983

MOUND

MDSMRA01 Data File Set

Description

This analytic data file set consists of one file generated for a cohort mortality study, published as a Los Alamos National Laboratory (LANL) report, of white males employed at the Mound Plant.

A cohort mortality study of workers was conducted to test for an association between mortality and employment at the Mound Plant. The study examined differences in mortality for workers at the plant during its polonium-210 era (1943-1959) and for its plutonium-238 era (1960-1980) by computing period-specific standardized mortality ratios (SMRs) based on U.S. rates. The analysis focused on 4,697 white and presumed white males who were employed between April 1, 1942, and December 31, 1979, at the Mound Plant. SMRs of 96 were observed for all causes and for all cancers for the study period (1943-1979). No SMR was significantly greater than 100 for these workers. A significantly elevated SMR for lung cancer (SMR = 204, 90% CI = 140, 290) was observed for workers employed during World War II (1943-1945). Similar results were noted for all causes of death, all cancers, cancers of the rectum, nonmalignant respiratory diseases, and all injuries during this time period. SMRs for these causes of death during the polonium era, but after World War II, were not elevated. No elevated SMRs were observed during the plutonium era. A very strong healthy worker effect was observed for workers in the plutonium era, although the length of follow-up for these workers was relatively short.

The single analytic file (ANFILE) in this data file set contains demographic and vital status data for 4,697 white males and presumed white males who were employed between April 1, 1942, and December 31, 1979. Not included in the analytic file are workers employed less than 30 days during this period, workers with unknown birth dates, and workers with both unknown hire and termination dates. No exposure data are included in the file.

Vital status was determined for 97.6% (4,588) of the workers in this file. Death certificates were obtained for 97% (803) of the known deaths.

The Mound Plant has been a center for the separation, chemistry, and metallurgy of polonium-210 and processing of plutonium-238 for heat sources. Other small research projects involved radium and thorium. Workers could have been exposed to external and internal sources of radiation; however, this analysis did not examine exposure data. ❖❖

MOUND

MDSMRA01 Data File Set

Citations

Reyes, M., G. S. Wilkinson, G. L. Tietjen, L. D. Wiggs, and W. A. Galke. 1991. *Mortality among workers at the Mound Facility.* Los Alamos Report LA-11997-MS.

Number of Analytic Files: 1

File Name	Number of Variables	Type of Data
ANFILE	11	demographic; work history; vital status; internal deposition

Summary Death Tables

Cause of Death	No. of Deaths	
	Male	Female †
Infectious & Parasitic Diseases	7	
All Malignant Neoplasms	208	
Lip, Oral Cavity & Pharynx	9	
Digestive Organs & Peritoneum	48	
Respiratory System	83	
Bone & Connective Tissue	2	
Skin	4	
Breast	1	
Genitourinary System	23	
Brain/Central Nervous System (CNS)	3	
Other & Unspecified Sites, Except Brain/CNS	16	
Lymphatic/Hematopoietic	19	
All Benign Neoplasms	2	
All Neoplasms, Unspecified	1	
Endocrine, Nutritional & Metabolic Diseases	17	
Diseases of Blood & Blood-Forming Organs	2	
Mental Disorders	6	
Diseases of Nervous System & Sense Organs	9	
Diseases of Circulatory System	458	
Diseases of Respiratory System	51	
Diseases of Digestive System	49	
Diseases of Genitourinary System	18	
Complications of Pregnancy & Childbirth	0	
Diseases of Skin & Subcutaneous Tissue	0	
Diseases of Musculoskeletal System & Connective Tissue	0	
Congenital Anomalies	0	
Symptoms & Ill-Defined Conditions	5	
Accidents, Poisoning & Violence (External Causes)	93	

Deaths, With ICD Code	926	
Deaths, No ICD Code	26	
Total Deaths, All Causes	952	

† *No females were included in this study.*

Variables for Analytic File

ANFILE

244 KB

Name	Description
bdate	date of birth
hiredate	date of first hire at Mound
termdate	date of last termination from Mound
ddate	date of death
icda8	cause of death - ICD 8th revision
sex	sex of worker
race	race of worker
educat	education level
cvs	current vital status as of 12/31/79
dstate	state of death
id	identification number

OAK RIDGE/K-25

ORK25A01 Data File Set

Description

This analytic data file set consists of one file generated for a study, published in *IARC Scientific Publications*, of nickel workers at the Oak Ridge K-25 Facility.

This study examined mortality patterns in a group of 814 workers potentially exposed to nickel powder because previous studies of workers at nickel refineries had shown excesses of lung and nasal sinus cancers. Between January 1, 1948, and December 31, 1953, the Oak Ridge Gaseous Diffusion Plant (ORGDP, now known as the K-25 Facility) employed over 800 white males in the manufacture of "barrier" material for nuclear weapons. This process required the use of metallic nickel powder. For the study, a comparison group of 7,552 white males employed for at least 1 day at K-25 between January 1, 1948, and December 31, 1953, and who had no indications of occupational involvement in the production of barrier material was selected. Mortality rates in the nickel workers and non-nickel workers were compared with each other and with those of U.S. white males. There was no evidence of increased mortality due to lung cancers or nasal sinus cancers in the nickel workers. Increases, not statistically significant, in mortality due to cancers of the buccal cavity, pharynx, and digestive system were observed in the nickel worker group when compared with the non-nickel worker group.

The single analytic file (K25EVER1) contains one record for each of the 8,378 individuals in the cohort that includes the nickel workers and the comparison group of non-nickel workers. Vital status was ascertained for 100% of the cohort through December 31, 1977, which allowed at least 24 years of follow-up for each individual. There were 137 deaths identified in the nickel worker group and 1,920 deaths in the comparison group. Death certificates were obtained for 97% of the total number (2,057) of deaths.

Radiation monitoring data were not used in this study; however, smoking histories for some workers were available through the plant medical records. All of the nickel workers' medical records and a random sample of 20% of the comparison group's medical records were abstracted for smoking data. Information was obtained for 54% of the nickel workers and for 48% of the other workers whose records were in the sample. The nickel workers had a slightly lower frequency of smoking than the other workers based on the sample. Air monitoring data indicated that nickel workers worked in an enviroment where nickel levels were above National Institute of Occupational Safety and Health (NIOSH) standards. ❖

OAK RIDGE/ K-25

ORK25A01 Data File Set

Citations

Cragle, D. L., D. R. Hollis, and T. H. Newport. 1984. A retrospective cohort mortality study among workers occupationally exposed to metallic nickel powder at the Oak Ridge Gaseous Diffusion Plant. *IARC Scientific Publications* 53:57-63.

Number of Analytic Files: 1

File Name	Number of Variables	Type of Data
K25EVER1	13	vital status; smoking history; work history

Summary Death Tables

Cause of Death	No. of Deaths	
	Male	Female †
Infectious & Parasitic Diseases	19	
All Malignant Neoplasms	427	
Lip, Oral Cavity & Pharynx	7	
Digestive Organs & Peritoneum	96	
Respiratory System	177	
Bone & Connective Tissue	1	
Skin	7	
Breast	0	
Genitourinary System	50	
Brain/Central Nervous System (CNS)	14	
Other & Unspecified Sites, Except Brain/CNS	25	
Lymphatic/Hematopoietic	50	
All Benign Neoplasms	2	
All Neoplasms, Unspecified	4	
Endocrine, Nutritional & Metabolic Diseases	28	
Diseases of Blood & Blood-Forming Organs	4	
Mental Disorders	12	
Diseases of Nervous System & Sense Organs	13	
Diseases of Circulatory System	1,135	
Diseases of Respiratory System	122	
Diseases of Digestive System	81	
Diseases of Genitourinary System	17	
Complications of Pregnancy & Childbirth	0	
Diseases of Skin & Subcutaneous Tissue	1	
Diseases of Musculoskeletal System & Connective Tissue	5	
Congenital Anomalies	7	
Symptoms & Ill-Defined Conditions	99	
Accidents, Poisoning & Violence (External Causes)	220	

Deaths, With ICD Code	2,196	
Deaths, No ICD Code	64	
Total Deaths, All Causes	2,260	

† *No females were included in this study.*

Variables for Analytic File

K25EVER1

700 KB

Name	Description
birth	birth date
ik25	worked at K-25
hire	first hire date at any Oak Ridge facility
term	last termination date
dlast	last known status date
istat	vital status
id	identification number
icd	3-digit ICD code for cause of death
khire	first hire at K-25 facility
kterm	last term from K-25 facility
smk	smoking history code
wkr	barrier worker
nhire	first date in a nickel department

OAK RIDGE/K-25

ORK25A02 Data File Set

Description

This analytic data file set consists of one file generated for a retrospective cohort mortality study of all workers at the K-25 Facility in Oak Ridge, Tennessee, who were employed for at least 30 days and hired before January 1, 1985.

Of the 35,712 workers in the study cohort 72.1% were white males, 3.4% were nonwhite males, 22.6% were white females, and 1.9% were nonwhite females. Full-scale operation at the facility began in January of 1945, and more than 57% of the members of study cohort were hired by the end of that year. Although the plant was in operation until 1985, less than 16% of the cohort was employed for 10 or more years while 44% was employed for less than 1 year. Unlike most occupational cohorts, no healthy worker effect was seen for these workers. Further, there were statistically significantly elevated standard mortality ratios for white males for all causes (1.03, 95% CI = 1.01-1.05), malignant and nonmalignant respiratory diseases, and bone cancer.

The single analytic file (ANALUPD1) contains a record, which includes vital status as of January 1, 1990, demographic, and work history data, for 40,785 employees of both genders and all races who were employed for at least 30 days and hired before January 1, 1985. Due to "critical errors" in their data, mainly missing race, gender, or paycode status, 5,073 of these individuals were eliminated from the study cohort. The last Social Security Administration (SSA) submission for this population provided "alive" status as of January 1, 1985; the "alive" category is no longer obtainable from SSA. However, the National Death Index (NDI) provides a record of all deaths occurring since January 1, 1979. If not identified as deceased by SSA or NDI, individuals last known to be alive before January 1, 1979, were considered lost to follow-up on the last date known alive while those known to be alive after January 1, 1979 were considered alive at the end of the study. There were 12,848 deaths from all causes with death certificates available for 97.8% of these individuals. The number of deaths by race/gender groups were 10,956 white males, 370 nonwhite males, 1,412 white females, and 110 nonwhite females.

K-25 produced enriched uranium through gaseous diffusion processes. There were numerous occupational exposures at the Facility with soluble uranium being a major contributor. Other potential hazards included some external radiation; insoluble uranium oxides; uranium hexafluoride; hydrofluoric acid; solvents; laboratory chemicals, such as fluorocarbons, metallic nickel, and epoxy resins; and hardeners. Mortality outcomes of special interest because of the particular occupational exposures present included cancers of the respiratory, lymphatic, and hematopoietic systems and nonmalignant diseases of the kidneys and respiratory system. ❖

OAK RIDGE/ K-25

ORK25A02 Data File Set

Contact

Dr. Elizabeth Dupree
Oak Ridge Institute for Science and Education
P.O. Box 117
Oak Ridge, TN 32831

Number of Analytic Files: 1

File Name	Number of Variables	Type of Data
ANALUPD1	19	vital status; demographic; work history

Summary Death Tables

Cause of Death	No. of Deaths	
	Male	Female
Infectious & Parasitic Diseases	174	24
All Malignant Neoplasms	2,697	521
Lip, Oral Cavity & Pharynx	61	15
Digestive Organs & Peritoneum	591	103
Respiratory System	1,126	91
Bone & Connective Tissue	24	3
Skin	44	10
Breast	5	107
Genitourinary System	328	100
Brain/Central Nervous System (CNS)	80	15
Other & Unspecified Sites, Except Brain/CNS	220	36
Lymphatic/Hematopoietic	218	41
All Benign Neoplasms	9	2
All Neoplasms, Unspecified	24	9
Endocrine, Nutritional & Metabolic Diseases	188	47
Diseases of Blood & Blood-Forming Organs	13	6
Mental Disorders	109	12
Diseases of Nervous System & Sense Organs	90	11
Diseases of Circulatory System	6,175	688
Diseases of Respiratory System	987	108
Diseases of Digestive System	463	72
Diseases of Genitourinary System	178	25
Complications of Pregnancy & Childbirth	0	5
Diseases of Skin & Subcutaneous Tissue	5	4
Diseases of Musculoskeletal System & Connective Tissue	27	10
Congenital Anomalies	17	2
Symptoms & Ill-Defined Conditions	402	45
Accidents, Poisoning & Violence (External Causes)	1,120	125

Deaths, With ICD Code	12,678	1,716
Deaths, No ICD Code	263	87
Total Deaths, All Causes	12,941	1,803

Variables for Analytic File

ANALUPD1

4 MB

Name	Description
id	identification number
birth	birth date
fpay	first pay code at K-25
lpay	last pay code at K-25
fhire	first hire date at K-25
lterm	last termination date
multihire	multihire code
doefac	number of other DOE facilities at which person worked
samflag	SAM laboratory employment flag
dayslt45	number of days at K-25 from 5/31/1943 through 1/19/1945
dayslt48	number of days at K-25 from 1/20/1945 through 12/31/1947
daysge48	number of days at K-25 from 1/1/1948 through 1/1/1984
sex	sex of worker
race	race of worker
vstat	vital status code
ldate	last date known
icd8	underlying cause-of-death code per ICD 8th revision
ca8	additional cancer code
flag	flag indicating corrected records

OAK RIDGE/K-25

ORK25A03 Data File Set

Description

K-25 workers who were employed in the gas centrifuge process were the focus of an interview study completed by Cragle et al. The study was conducted to determine the incidence rate of cancers and illness symptoms that could be related to epoxy resin and solvent exposures that were prevalent in this process. A total of 263 workers who were judged to have worked the closest to the process for the longest period of time were interviewed as well as 271 other employees who were at the plant during the same era of time but did not work in the centrifuge process.

The centrifuge workers and the non-centrifuge workers had similar overall cancer incidence rates. However, the centrifuge workers reported 5 incident bladder cancers since beginning work in the centrifuge process versus none reported in the non-centrifuge group. The centrifuge workers also reported significantly more rashes, dizziness, and numb or tingling limbs during employment, which are all symptoms of high solvent exposure.

The analysis file consists of a single file containing all the answers to questions administered through interviews with the study subjects. There are 610 records in the file and 537 variables.;

Exposures of interest in context of operations conducted at the facility: One of the epoxy resins used in the early years of the process was potentially a bladder carcinogen, but none of the workers with bladder cancer had jobs that required routine, hands-on work with the material. A specific causative agent for the increase in bladder cancer was not identified.❖

Citations

Wooten, H.D., Centrifuge workers study. Phase II, completion report. 53p. NTIS Order Number DE97002963.

Cragle, Donna L., (Oak Ridge Institute for Science & Education, TN), Susan M. Wells, William G. Tankersley. An Occupational Morbidity Study of a Population Potentially Exposed to Epoxy Resins, Hardeners, and Solvents. *Applied Occupational and Environmental Hygiene.* 1992; 7:826-834.

Number of Analytic Files: 1

File Name	Number of Variables	Type of Data
CENTRIF.ID	5	record identifiers
CENTRIF.Q2	31	Components of question 2
CENTRIF.Q3	244	Components of question 3
CENTRIF.Q4	16	Components of question 4
CENTRIF.Q5	196	Components of question 5
CENTRIF.Q6	44	Components of question 6
CENTRIF.Q7	7	Components of question 7

Note: ***Summary Death Tables do not apply to this data file set***

Variables for Analytic File
CENTRIF.ID

Name	Description
cc	case/control indicator
centid	id number of the case
ac	action code
centdate	date person entered centifuge
id	identification number

Variables for Analytic File
CENTRIF.Q2

Name	Description
id	identification number
30 variables	for 30 questions concerning contact with medical doctors and hospitals (grouped under “Question 2”)

Variables for Analytic File
CENTRIF.Q3

Name	Description
id	identification number
243 variables	for 243 questions concerning diagnoses of heart attack or stroke, illness, asthma, asbestosis, tuberculosis, emphysema, and other specified illnesses (grouped under “Question 3”)

Variables for Analytic File

CENTRIF.Q4

Name	Description
id	identification number
15 variables	for 15 questions concerning marital status and progeny (grouped under “Question 4”)

Variables for Analytic File

CENTRIF.Q5

Name	Description
id	identification number
195 variables	for 195 questions concerning education, military service, occupational history, and ethnographic data (grouped under “Question 5”)

Variables for Analytic File

CENTRIF.Q6

Name	Description
id	identification number
43 variables	for 40 questions concerning smoking and alcohol consumption (grouped under “Question 6”)

Variables for Analytic File

CENTRIF.Q7

Name	Description
id	identification number
6 variables	for 6 demographic questions (grouped under “Question 7”)