LANL's Environmental Hazards and Health Effects Records: An Overview

Katie Gregonis, Acting Institutional Records Management Team Leader, IRM

Patty Templeton, Collections Management Team Leader, NSRC

September 19, 2024

LA-UR-24-29812

Introductions

- Institutional Records Management (IRM)
  - Houses classified and unclassified records in analog and digital formats
  - Function: Assign and track records dispositions and link LANL to Federal Records Centers/NARA compliance

- National Security Research Center (NSRC)
  - Houses mainly classified, technical information in analog and digital forms
  - Function: Serves as classified library and classified digitization program to LANL researchers, particularly in Weapons Programs

- IRM & NSRC housed in the same building and work together

Access to Information

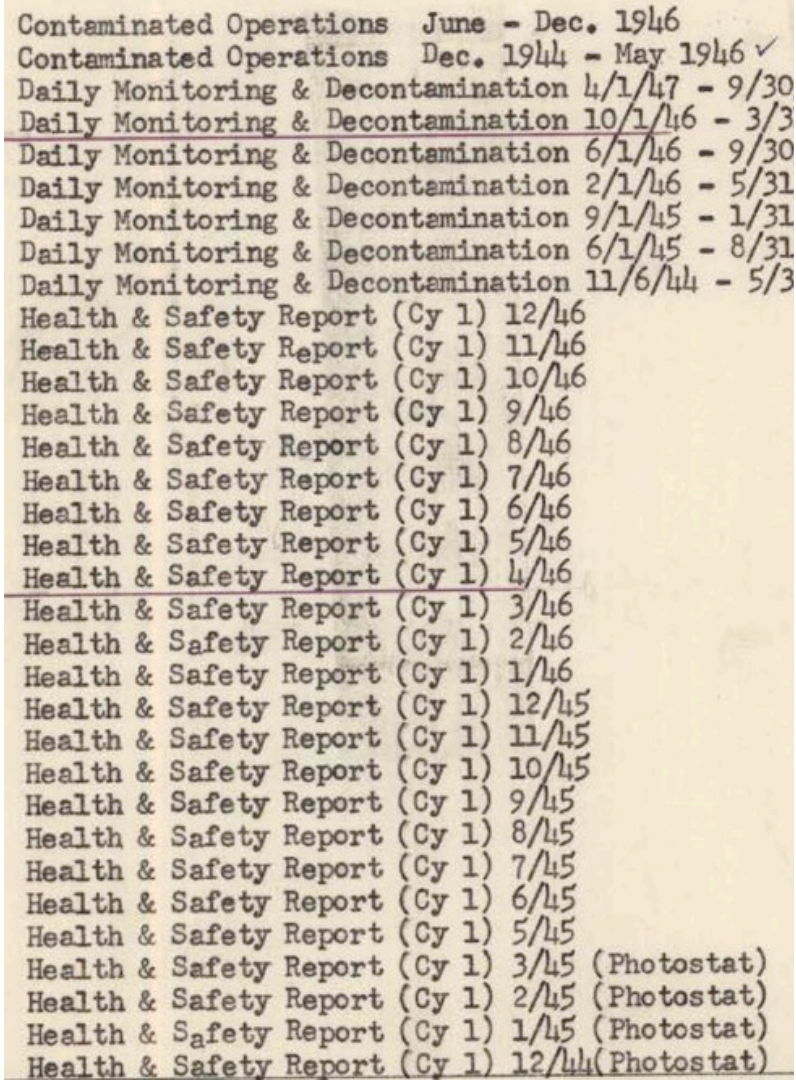
- IRM
  - Public: FOIA
  - Internal/Nuclear Complex/Cleared Government Researchers:
    - Need to Know, associated clearance checks, and researcher Manager approval established
    - Physical checkout of materials to LANL onsite location following rigorous receipt/tracking workflow

- NSRC
  - Public: FOIA, external publications
  - Internal/Nuclear Complex/Cleared Government Researchers:
    - Need to Know, associated clearance checks, and researcher Manager approval established
    - Digitize content and/or physically escort researcher to view material within NSRC's secure environment

- FOIA process:
  - Process includes IRM/NSRC research, LANL FOIA office research, digitization, classification review, delivery to FOIA customer by LANL FOIA office

Record Disposition

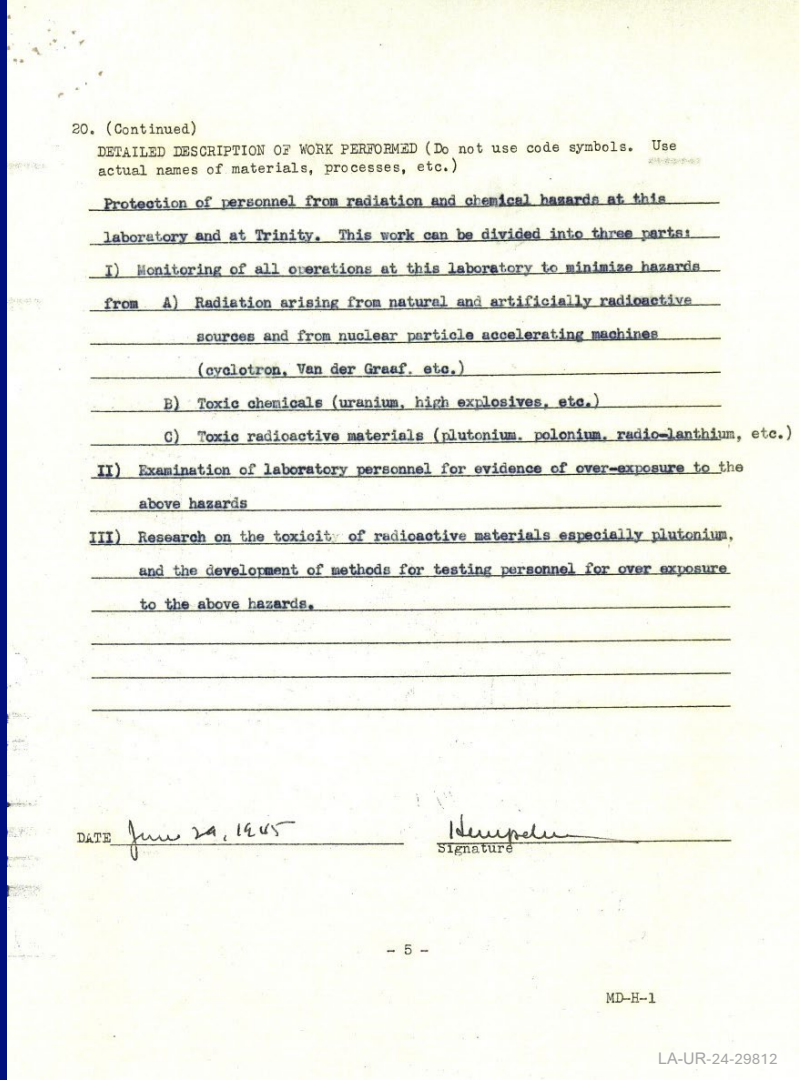
- Federal guidelines for disposition, which includes destruction timelines
- Department of Energy epidemiological moratorium
- Permanent records are offered to NARA after their local holding period (often 25 years)
- Reciprocal relationship with the National Security Research Center



Index from CMR Division health files

NSRC Search Process

- LAHDRA report materials scrutinized
- Keyword search through databases cross-referenced to date range to QC LAHDRA report
- Investigated materials accessioned 2010 – 2024 not covered by LAHDRA
- Physical spot-checking throughout vault
- Historical literature review (internal reports)



20. (Continued)
DETAILED DESCRIPTION OF WORK PERFORMED (Do not use code symbols. Use actual names of materials, processes, etc.)

Protection of personnel from radiation and chemical hazards at this laboratory and at Trinity. This work can be divided into three parts:

I) Monitoring of all operations at this laboratory to minimize hazards from A) Radiation arising from natural and artificially radioactive sources and from nuclear particle accelerating machines (cyclotron, Van der Graaf, etc.)

B) Toxic chemicals (uranium, high explosives, etc.)

C) Toxic radioactive materials (plutonium, polonium, radio-lanthium, etc.)

II) Examination of laboratory personnel for evidence of over-exposure to the above hazards

III) Research on the toxicity of radioactive materials especially plutonium, and the development of methods for testing personnel for over exposure to the above hazards.

DATE June 24, 1945 Signature

- 5 -

MD-H-1

LA-UR-24-29812

Applicable 1942 – 1947 Information Types

- Health Group records
- Staff directories
- Accident memos
- Early group manuals
- Histories written by staff (during and after time-period)
- Mostly analog paper, occasional still image prints/negatives, some digitized/OCRed (LAHDRA)

Ashley Pond, 1946

LAHDRA Report

Millions of pages reviewed across LANL

↓

8,372 documents entered in LAHDRA database

↓

Estimated 265 documents pertaining to 1942 – 1947

↓

Currently unknown number within 265 documents directly about military veterans

Location	Approximate Quantities Reviewed	Documents (or Groups of Documents) Selected and Summarized
LANL Records Center	16,896 boxes of documents; 18,000 rolls of microfilm; 31,420 notebooks	2,902
LANL Reports Collection	3,085 classified reports by LANL and 32,000 by others; 10,000 unclassified LANL reports in vault and 25,000 online; 90,000 unclassified reports by other plus 600,000 on microfiche	1,529
ES&H Records Center and satellites	1,187 boxes of documents plus dosimetry and air quality records	227
LANL Archives	1,532 archived collections, with 125,000 folders	992
Litigation Support Database	75,724 documents by title; 3,813 full documents	347
LANSCE Division	10,000 documents by title and 2,500 full documents in Admin. Building; 3,375 documents in Radiological Air Monitoring Archive	36; 97
WEM / WP Divisions	18,876 documents and 1,126 photos in vault; 36 safes containing 7,056 documents	2
Engineering Drawings Center	2,550 drawings on aperture cards plus ~1,000 reels of microfilm	188 and ~1,000 drawings
Environmental Stewardship Division	250,000 documents from the ERSS database; 137 boxes of NEPA/EA records; 12 drawers of EIS documents; ~100 Cultural Resources reports	1,056
Industrial Hygiene & Safety Records	8 lateral file drawers of historical records	17
Former J Division (Field Testing)	699 boxes with approximately 11,000 folders	0

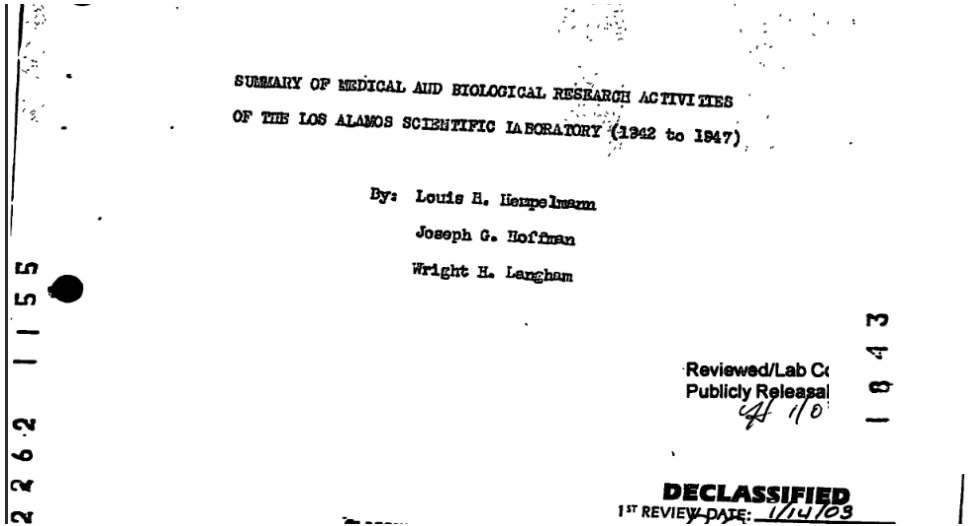
LAHDRA, p. ES-3

DOE Public Reading Room at Zimmerman Library, University of New Mexico

LAHDRA public database: https://oriseapps.orau.gov/cedr/cdc-lahdra.aspx

Examples of Health and Worker Records

Histories about groups and processes



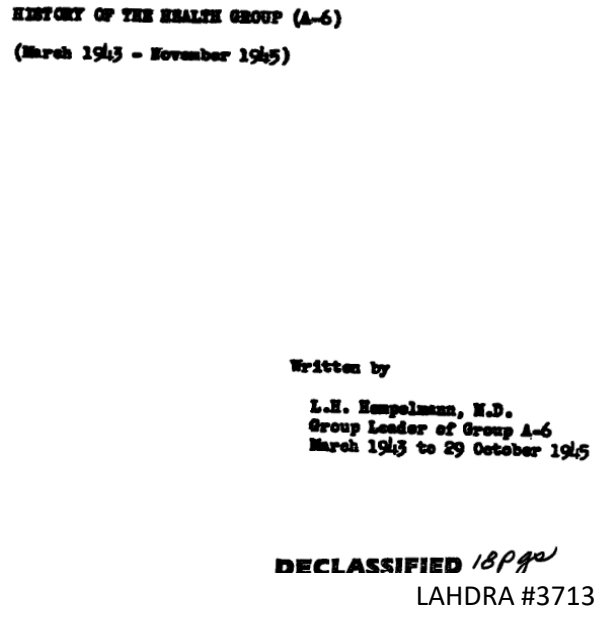
SUMMARY OF MEDICAL AND BIOLOGICAL RESEARCH ACTIVITIES
OF THE LOS ALAMOS SCIENTIFIC LABORATORY (1942 to 1947)

By: Louis H. Hempelmann
Joseph G. Hoffman
Wright H. Langham

Reviewed/Lab C
Publicly Releasa

DECLASSIFIED
1ST REVIEW DATE: 1/14/03

LAHDRA #36433



HISTORY OF THE HEALTH GROUP (A-6)
(March 1943 - November 1945)

Written by

L.H. Hempelmann, M.D.
Group Leader of Group A-6
March 1943 to 29 October 1945

DECLASSIFIED 18 pgs

LAHDRA #3713

C-37

HISTORY OF H-7 INDUSTRIAL LIQUID WASTES

Publicly Releasable

S-7 8/29/00

Reviewed/Lab Counsel Publicly Releasable

In 1947 the Los Alamos Hospital, a Zia mandatory function, hired a Sanitary Engineer to organize a Public Health and Sanitation Department for Los Alamos to supervise water and sewage treatment, vector control, garbage collection, food handlers, food and drink inspection, etc.

Later in 1947, a cooperative effort was mounted amongst: the Los Alamos Hospital; Dr. Jette of CMR Division, LASL; Mr. Gorman of DRD, Washington, AEC; Dr. Rucrhoft of USPHS, Cincinatti; Dr. Theis of USGS, Albuquerque and Carrol Tyler of Los Alamos AEC Office to organize an Industrial Wastes Group to perform research on treatment of liquid radioactive wastes and the effect of discharge of these wastes to the environment. Accordingly, the

LAHDRA #1003

S-7

PROCEDURE FOR PICK UP AND DISPOSTION OF HOT TRASH FROM BAYO CANYON.

Francis S. Smith
Francis S. Smith

Approved: HI Group Leader

August 14, 1947
Date

LAHDRA #0212

Histories that list staff

LA-5200
UC-2
ISSUED: March 1973

Manhattan District History

Nonscientific Aspects of Los Alamos Project Y

1942 through 1946

Written by Edith C. Truslow and edited by Kasha V. Thayer

LAHDRA #2154

VI. MILITARY ORGANIZATION AND PERSONNEL

Administration

Lt. Colonel J. M. Harman was originally assigned as Commanding Officer at this station and was sent out to set up his organization primarily in a service capacity, to take care of the feeding, housing, general comfort, and welfare of the University of California personnel. Lt. Colonel Harman set up the original office in Room Number 8 of the Bishop Building, in Santa Fe, in January 1943. Letters from General Groves (see next page) outlined the personnel and supply requirements for this Project, and gave the Commanding Officer of the new military post adequate power to perform his assignment.

The original plan was to have approximately six officers and a minimum number of civilians in key positions, with a group of WAC's and enlisted men to serve in clerical capacities. This arrangement was soon made obsolete by the development of the Project and the immediate need for a larger administrative staff. Each period of growth resulted in organization changes.

Colonel Harman, who was promoted in February 1943, remained Commanding Officer until May when he was succeeded by Lt. Colonel Whitney Ashbridge. Lt. Colonel Ashbridge commanded the Post until October 1944, at which time Colonel G. R. Tyler became Commanding Officer. He, in turn, was succeeded by Colonel L. E. Seeman in November 1945. Colonel Seeman was in Command until September 1946, when Colonel Herbert C. Gee was assigned that duty.

In addition to the Army staff, key civilians were appointed to act as supervisors in various sections. The Civilian Personnel Section was organized under J. P. Adams; P. A. Curran assisted Captain E. A. White in operating the Procurement Section; Town Management was the responsibility of F. W. Grefe and R. B. Osborne; the Commissary was managed by M. H. Gurley, and the Warehouse and Property Manager was V. R. Lefler.

From the small group of 32 Civil Service employees on the Post in February 1943, the strength grew to a peak of 2600 in March 1946. In April 1946 approximately 1800 employees were transferred to the newly organized Zia Company.

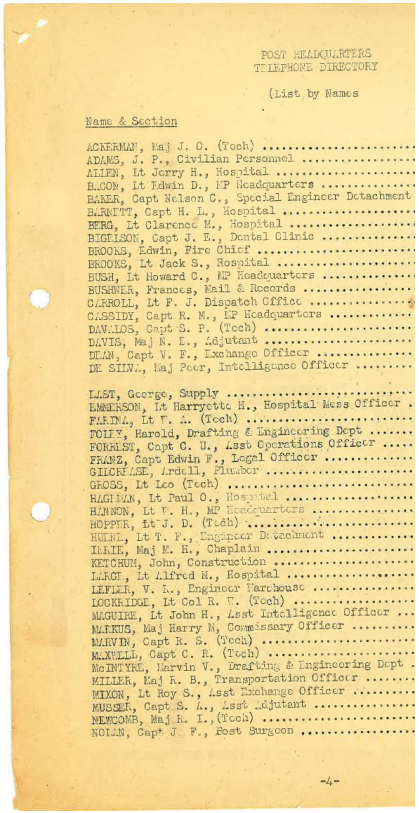
Military Personnel

In addition to the Headquarters staff, three troop units were originally assigned to the Post, and a fourth was initiated in October 1943. They were the Military Police Detachment, the Provisional Engineer Detachment, the Provisional WAC Detachment, and the Special Engineer Detachment.

The MP Detachment, 4817 Service Unit, started in April 1943 with seven officers and 196 enlisted men, plus a veterinary and a medical officer. The MP officers were Captain A. L. Cernaghan, 1st Lieut. C. E. Day, 1st Lieut. E. V. Hughie, 1st Lieut M. Wroe, 2nd Lieut. R. M. Cassidy, 2nd Lieut. H. C. Bush, and 2nd Lieut. J. F. Vollmer; 1st Lieut. J. J. Horowitz was the Medical Officer, and 1st Lieut. R. E. Thompsett was the Veterinary. The principal function of this detachment was to serve as security guard for the Project. As the Project grew, many additional guard posts were necessarily established, and the unit was authorized a new strength of nine officers and 486 enlisted men. By the end of December 1946, there were approximately 500 enlisted men assigned to this Detachment.

The Provisional Engineer Detachment with one officer, 1st Lieut. Clinton A. Nash, and 42 enlisted men reported to Colonel Harman in April 1943. It was purely a service organization with all personnel picked to fill specified jobs. They operated the power plant, steam plant, motor pool and garage, and mess halls and repaired and maintained buildings and roads. This unit was increased to 256 men and two officers, 1st Lieut. C. A. Nash and 2nd Lieut. T. F. Huene, to fill the needs of the growing community, by taking over positions in the Commissary, Post Exchange, and Post Engineer Office which could not be filled by qualified civilians. Later still, this detachment was increased to 465 men because of additional mess halls, enlargement of power and steam plants, and the larger number of motor vehicles. A small sawmill also was set up and operated by this unit. Both the MP and Provisional Engineer Detachments were subsistent on garrison rations, secured from the Quartermaster at Bruns General Hospital, Santa Fe. The MP Detachment operated the mess hall and supply room for both

Staff Directories



POST HEADQUARTERS
TELEPHONE DIRECTORY

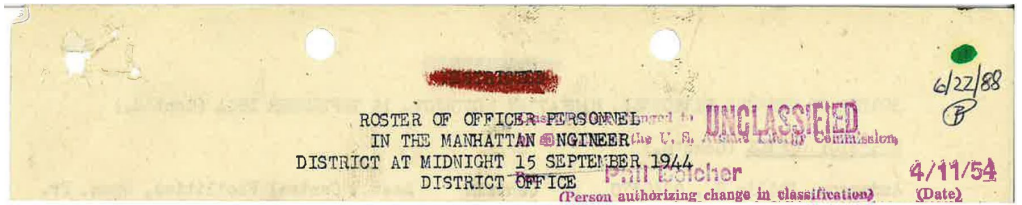
(List by Names

Name & Section

ACKERMAN, Maj J. O. (Tech) .....
ADAMS, J. P., Civilian Personnel .....
ALLEN, Lt Jerry H., Hospital .....
BACON, Lt Edwin D., MP Headquarters .....
BAKER, Capt Nelson C., Special Engineer Detachment .....
BARRETT, Capt H. L., Hospital .....
BERG, Lt Clarence M., Hospital .....
BIGELSON, Capt J. E., Dental Clinic .....
BROOKS, Edwin, Fire Chief .....
BROOKS, Lt Jack S., Hospital .....
BUSH, Lt Howard C., MP Headquarters .....
BUSHNER, Frances, Mail & Records .....
CARROLL, Lt F. J. Dispatch Office .....
CASSIDY, Capt R. M., MP Headquarters .....
DAVALOS, Capt S. P. (Tech) .....
DAVIS, Maj N. E., Adjutant .....
DEAN, Capt V. F., Exchange Officer .....
DE SHON, Maj Poor, Intelligence Officer .....

LAST, George, Supply .....
EMMERSON, Lt Harryette H., Hospital Mess Officer .....
FARINA, Lt V. A. (Tech) .....
FOLEY, Harold, Drafting & Engineering Dept .....
FORREST, Capt C. U., Asst Operations Officer .....
FRANZ, Capt Edwin F., Legal Officer .....
GILCREASE, Ardell, Plumber .....
GROSS, Lt Leo (Tech) .....
HAGMAN, Lt Paul O., Hospital .....
HANNON, Lt V. H., MP Headquarters .....
HOPPER, Lt J. D. (Tech) .....
HUENE, Lt T. P., Engineer Detachment .....
IRBIE, Maj E. H., Chaplain .....
KETCHUM, John, Construction .....
LARGE, Lt Alfred H., Hospital .....
LEFLER, V. R., Engineer Warehouse .....
LOOKRIDGE, Lt Col R. D. (Tech) .....
MCGUIRE, Lt John H., Asst Intelligence Officer .....
MARKUS, Maj Harry M, Commissary Officer .....
MARVIN, Capt R. S. (Tech) .....
MAXWELL, Capt C. R. (Tech) .....
McINTYRE, Marvin V., Drafting & Engineering Dept .....
MILLER, Maj R. B., Transportation Officer .....
MIXON, Lt Roy S., Asst Exchange Officer .....
MUSSER, Capt S. A., Asst Adjutant .....
NEWCOMB, Maj R. I., (Tech) .....
NOLAN, Capt J. F., Post Surgeon .....

-4-



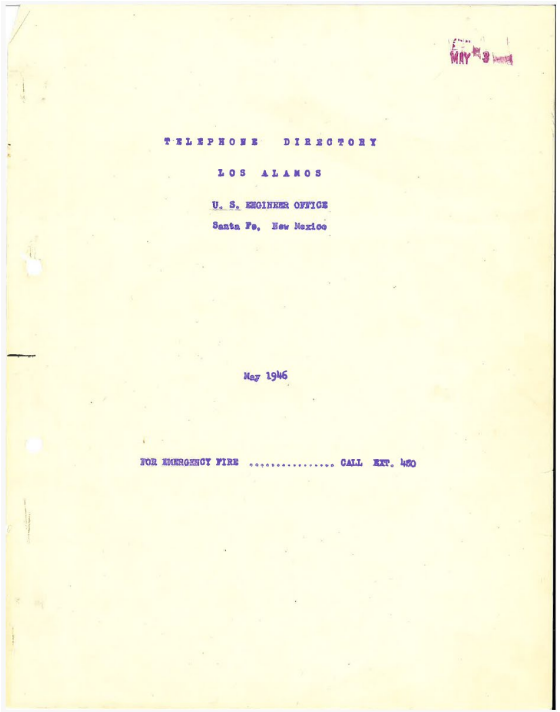
[redacted]

ROSTER OF OFFICER PERSONNEL
IN THE MANHATTAN ENGINEER
DISTRICT AT MIDNIGHT 15 SEPTEMBER 1944
DISTRICT OFFICE

UNCLASSIFIED
Authorized by the U. S. Atomic Energy Commission
Phil Belcher
(Person authorizing change in classification)

6/22/88
B

4/11/54
(Date)



MAY 9 1946

TELEPHONE DIRECTORY

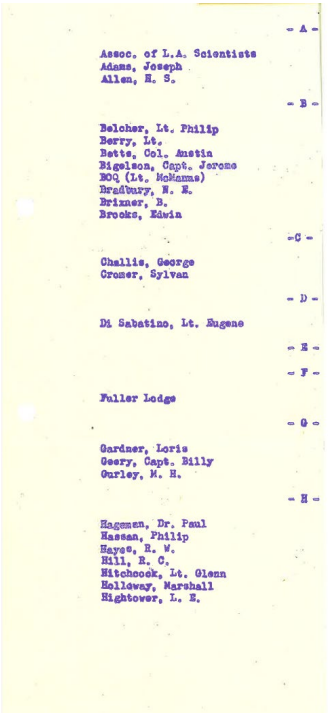
LOS ALAMOS

U. S. ENGINEER OFFICE

Santa Fe, New Mexico

May 1946

FOR EMERGENCY FIRE ..... CALL EXT. 460



- A -

Assoc. of L.A. Scientists
Adams, Joseph
Allen, H. S.

- B -

Belcher, Lt. Philip
Berry, Lt.
Bette, Col. Austin
Bigelson, Capt. Jerome
BOQ (Lt. McNamee)
Bradbury, N. E.
Brixner, B.
Brooks, Edwin

- C -

Challis, George
Cromer, Sylvan

- D -

Di Sabatino, Lt. Eugene

- E -

- F -

Fuller Lodge

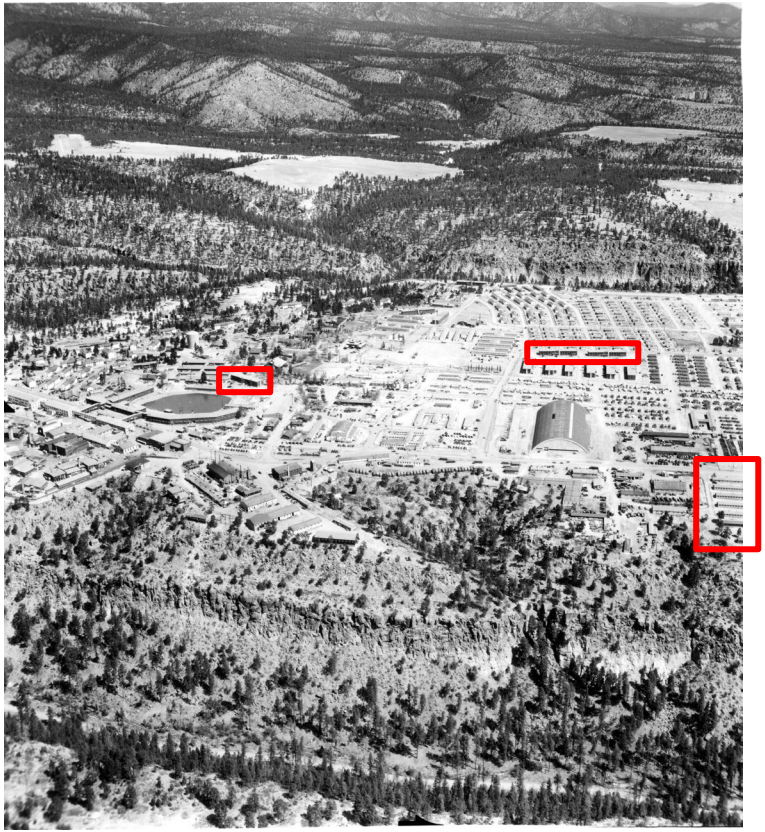
- G -

Gardner, Loris
Geery, Capt. Billy
Gurley, M. H.

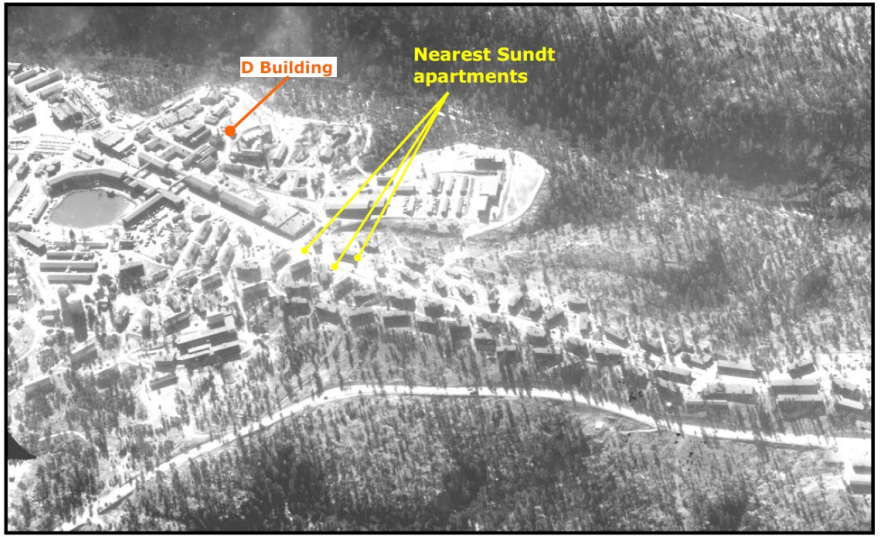
- H -

Hagaman, Dr. Paul
Hasan, Philip
Hayes, R. W.
Hill, R. C.
Hitchcock, Lt. Glenn
Holloway, Marshall
Hightower, L. E.

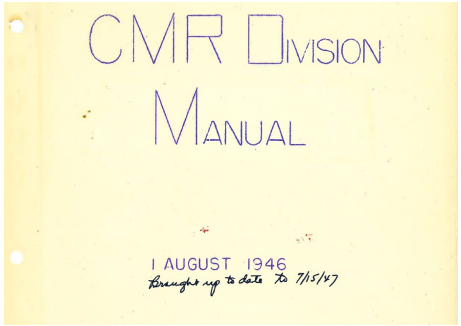
Environmental Images (Housing)

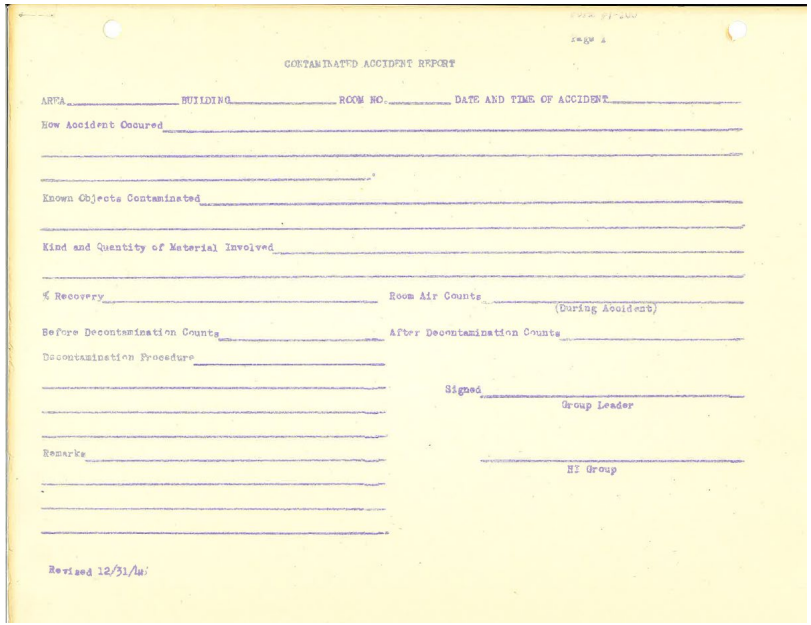


Ashley Pond and surrounding technical areas, 1946



Early group manuals


CMR DIVISION
MANUAL
1 AUGUST 1946
Brought up to date to 7/15/47


Page 4

CONTAMINATED ACCIDENT REPORT

AREA_____BUILDING_____ROOM NO._____DATE AND TIME OF ACCIDENT_____

How Accident Occured_____

Known Objects Contaminated_____

Kind and Quantity of Material Involved_____

% Recovery_____ Room Air Counts_____ (During Accident)

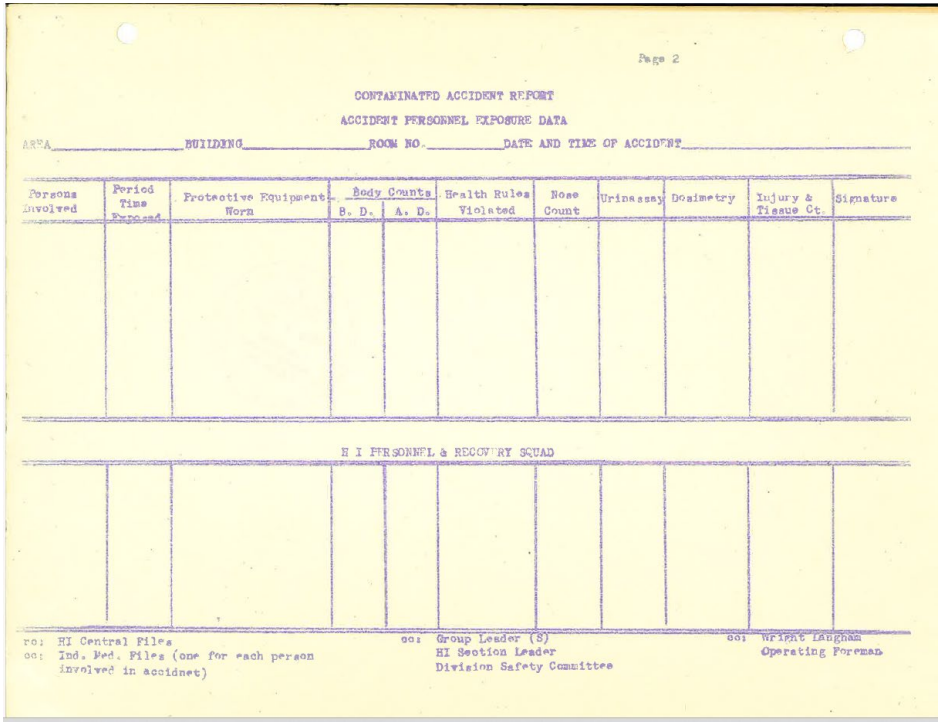
Before Decontamination Counts_____ After Decontamination Counts_____

Decontamination Procedure_____

Signed_____ Group Leader

Remarks_____ HI Group

Revised 12/31/46


Page 2

CONTAMINATED ACCIDENT REPORT

ACCIDENT PERSONNEL EXPOSURE DATA

AREA_____BUILDING_____ROOM NO._____DATE AND TIME OF ACCIDENT_____

Persons Involved	Period Time Exposed	Protective Equipment Worn	Body Counts B. D.	Body Counts A. D.	Health Rules Violated	Nose Count	Urinassay	Dosimetry	Injury & Tissue Ct.	Signature
HI PERSONNEL & RECOVERY SQUAD										

cc: HI Central Files
cc: Ind. Med. Files (one for each person involved in accidnet)

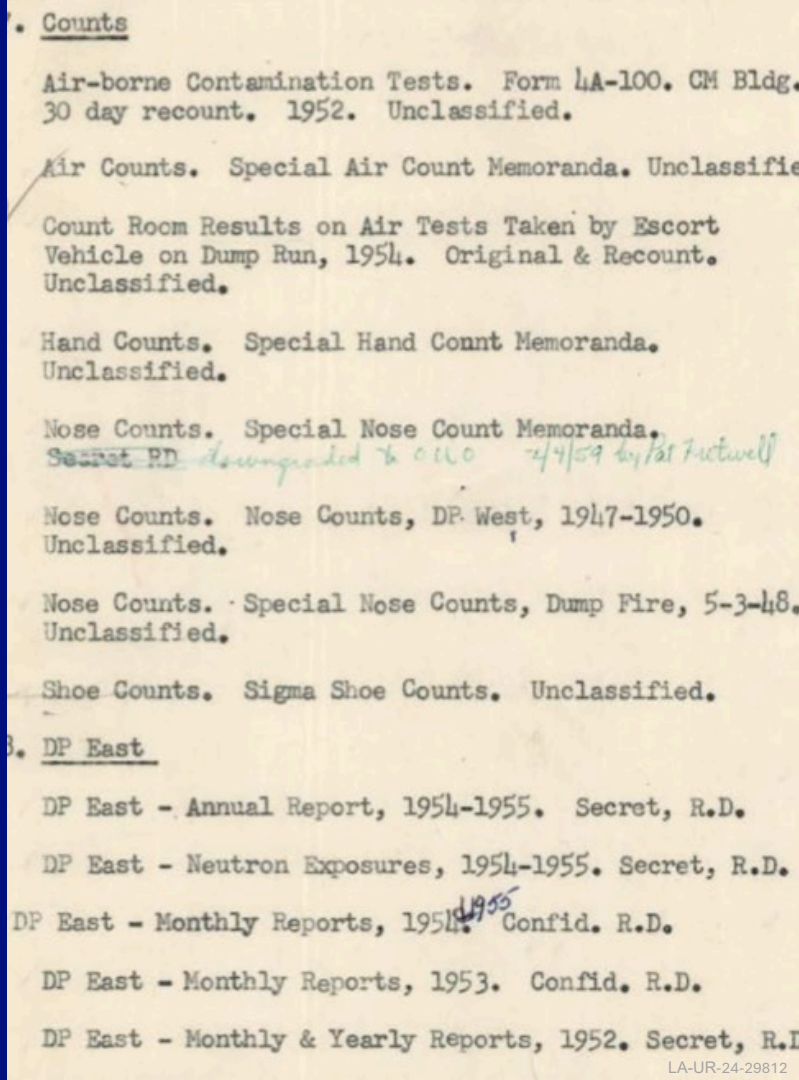
cc: Group Leader (S)
HI Section Leader
Division Safety Committee

cc: Wright Langham
Operating Foreman

IRM Search Process

- Keyword searching through records databases
- Indexes examined for date range
- Calls to other organizations on site who generate records on relevant topics

Transfer Request 00404



. Counts

Air-borne Contamination Tests. Form 4A-100. CM Bldg. 30 day recount. 1952. Unclassified.

Air Counts. Special Air Count Memoranda. Unclassifie

Count Room Results on Air Tests Taken by Escort Vehicle on Dump Run, 1954. Original & Recount. Unclassified.

Hand Counts. Special Hand Count Memoranda. Unclassified.

Nose Counts. Special Nose Count Memoranda. Secret RD

Nose Counts. Nose Counts, DP West, 1947-1950. Unclassified.

Nose Counts. Special Nose Counts, Dump Fire, 5-3-48. Unclassified.

Shoe Counts. Sigma Shoe Counts. Unclassified.

. DP East

DP East - Annual Report, 1954-1955. Secret, R.D.

DP East - Neutron Exposures, 1954-1955. Secret, R.D.

DP East - Monthly Reports, 1954-1955 Confid. R.D.

DP East - Monthly Reports, 1953. Confid. R.D.

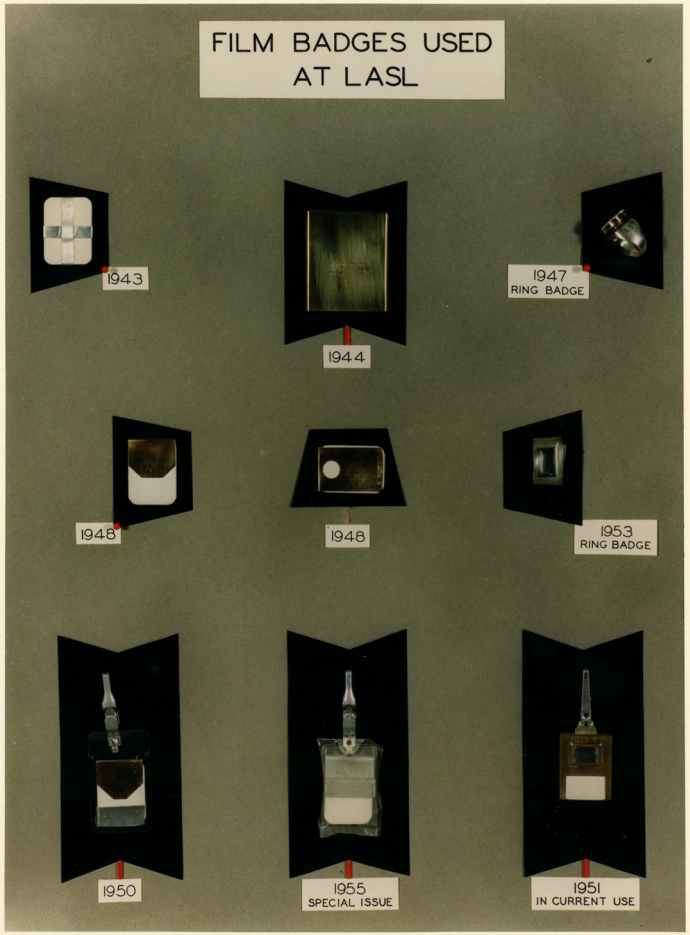
DP East - Monthly & Yearly Reports, 1952. Secret, R.D

Los Alamos NATIONAL LABORATORY

Applicable 1942 – 1947 Information Types

- Health Division records
- Contaminated operations reports
- Dosimetry logs
- Accident reports
- Construction records
- Legal analysis and reports
- Data transcribed into modern databases

Examples of Health and Worker Records

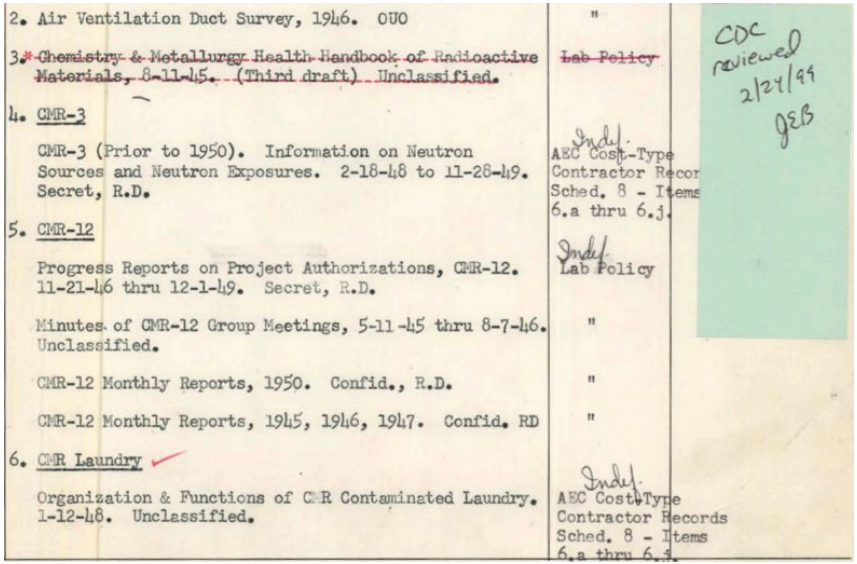


Los Alamos NATIONAL LABORATORY

LA-UR-24-29812

Examples of Related Records

H-Div. Personnel Requirements
H-Division Personnel Graded Series
H-Division Personnel Orientation
H-Division Personnel Badges
H-Div. Military Personnel Memos (1948-1962) + summer Employees (1948-1965)



2. Air Ventilation Duct Survey, 1946. OUO — "

3. ~~Chemistry & Metallurgy Health Handbook of Radioactive Materials, 8-11-45. (Third draft) Unclassified.~~ — ~~Lab Policy~~

4. CMR-3

CMR-3 (Prior to 1950). Information on Neutron Sources and Neutron Exposures. 2-18-48 to 11-28-49. Secret, R.D. — Indef. AEC Cost-Type Contractor Recor Sched. 8 - Items 6.a thru 6.j.

5. CMR-12

Progress Reports on Project Authorizations, CMR-12. 11-21-46 thru 12-1-49. Secret, R.D. — Indef. Lab Policy

Minutes of CMR-12 Group Meetings, 5-11-45 thru 8-7-46. Unclassified. — "

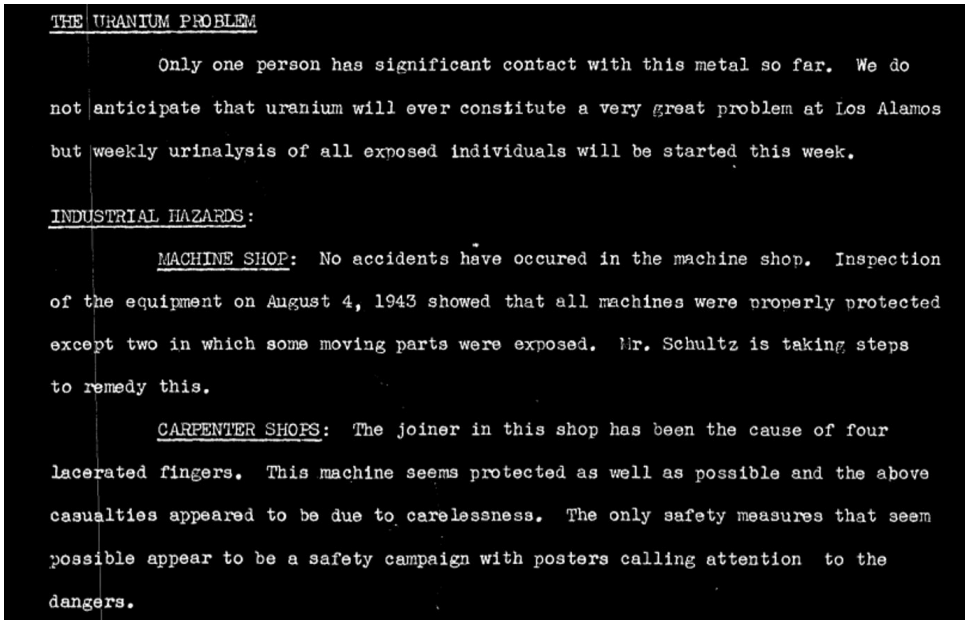
CMR-12 Monthly Reports, 1950. Confid., R.D. — "

CMR-12 Monthly Reports, 1945, 1946, 1947. Confid. RD — "

6. CMR Laundry

Organization & Functions of CMR Contaminated Laundry. 1-12-48. Unclassified. — Indef. AEC Cost-Type Contractor Records Sched. 8 - Items 6.a thru 6.j.

CDC reviewed 2/24/99 GEB



THE URANIUM PROBLEM

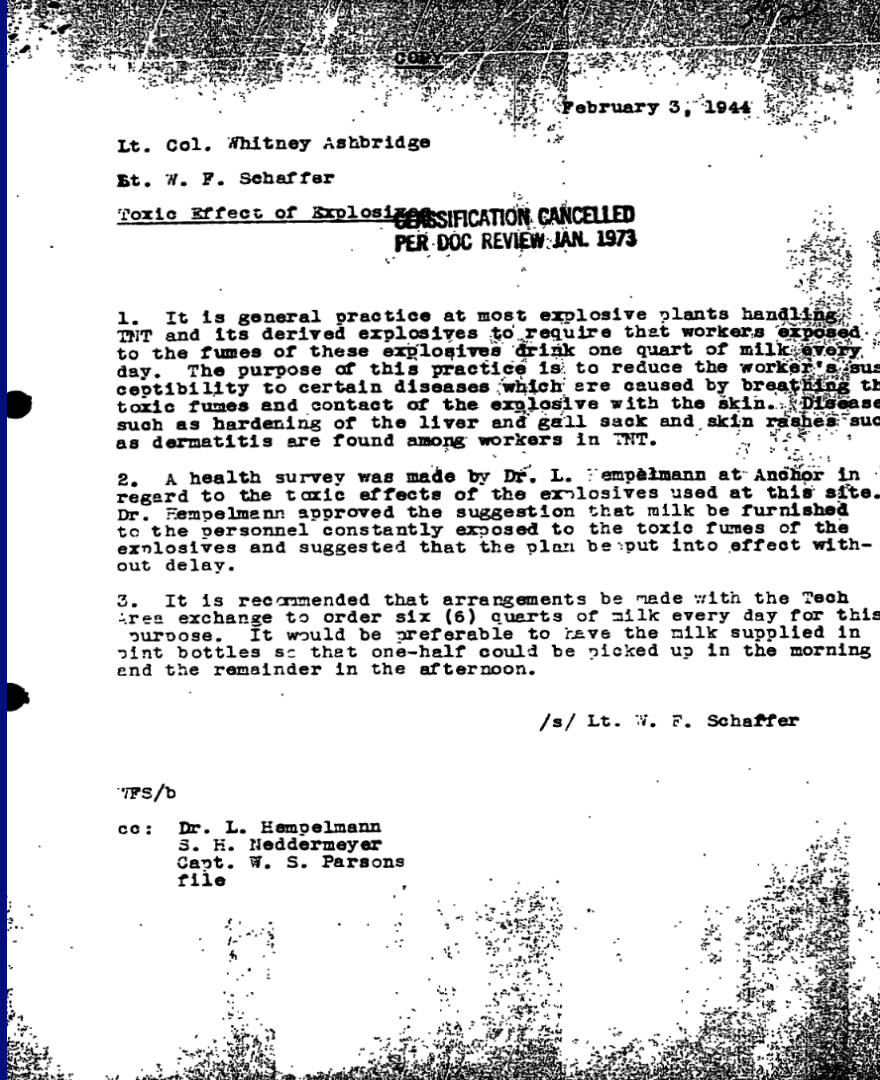
Only one person has significant contact with this metal so far. We do not anticipate that uranium will ever constitute a very great problem at Los Alamos but weekly urinalysis of all exposed individuals will be started this week.

INDUSTRIAL HAZARDS:

MACHINE SHOP: No accidents have occured in the machine shop. Inspection of the equipment on August 4, 1943 showed that all machines were properly protected except two in which some moving parts were exposed. Mr. Schultz is taking steps to remedy this.

CARPENTER SHOPS: The joiner in this shop has been the cause of four lacerated fingers. This machine seems protected as well as possible and the above casualties appeared to be due to carelessness. The only safety measures that seem possible appear to be a safety campaign with posters calling attention to the dangers.

Extent and Search Details



COPY

February 3, 1944

Lt. Col. Whitney Ashbridge

Lt. W. F. Schaffer

Toxic Effect of Explosives

CLASSIFICATION CANCELLED
PER DOC REVIEW JAN. 1973

1. It is general practice at most explosive plants handling TNT and its derived explosives to require that workers exposed to the fumes of these explosives drink one quart of milk every day. The purpose of this practice is to reduce the worker's susceptibility to certain diseases which are caused by breathing the toxic fumes and contact of the explosive with the skin. Diseases such as hardening of the liver and gall sack and skin rashes such as dermatitis are found among workers in TNT.

2. A health survey was made by Dr. L. Hempelmann at Anchor in regard to the toxic effects of the explosives used at this site. Dr. Hempelmann approved the suggestion that milk be furnished to the personnel constantly exposed to the toxic fumes of the explosives and suggested that the plan be put into effect without delay.

3. It is recommended that arrangements be made with the Tech Area exchange to order six (6) quarts of milk every day for this purpose. It would be preferable to have the milk supplied in pint bottles so that one-half could be picked up in the morning and the remainder in the afternoon.

/s/ Lt. W. F. Schaffer

WFS/b

cc: Dr. L. Hempelmann
S. H. Neddermeyer
Capt. W. S. Parsons
file

Extent and Formats

- IRM: 6 estimated cubic feet of possible interest
  - Paper
  - Photographs
  - Microforms
  - Some items digitized and processed through Optical Character Recognition (OCR)

- NSRC: 5 estimated cubic feet of possible interest
  - Paper
  - Photographs
  - Some items digitized and processed through Optical Character Recognition (OCR)
    - Most of material digitized via LAHDRA Report. May need re-digitization or visit to UNM Zimmerman Library Reading Room (unclassified, public space)
    - Most about era, known site exposures, and environment – not necessarily about military

Search Terms Used (sample)

- 60+ search terms (site-specific locations and general), including:
  - Work cards, medical records, death records, health questionnaire
  - Occupational health, occupational medicine, health group
  - Louis Hemplemann, James F. Nolan
  - Industrial hygiene, contamination, cleanup
  - Exposure assessment, exposure characterization
  - Chemical exposure/dose, plutonium exposure/dose
  - Dosimetry, dose construction, dose analysis
  - Environmental release/exposure/hazards, industrial waste
  - Military personnel, military badging, soldier, military police, guard
  - Hand/head/shoe/nose count (nose swipe, nasal swipe), urinalysis, urine counts
  - Laundry, laundry contamination, laundry processing

Search Effort Details

- Effort across two groups
  - IRM:
    - 1 staff at 1 FTE for 10 days
    - 1 staff at .5 FTE for 2 days
  - NSRC:
    - 1 staff at 1 FTE for 13 days
    - 1 staff at 1 FTE for 7 days
    - 3 staff at .75 FTE for 10 days
- August 28 – September 19, 2024
- Indexes located in databases, individual boxes of materials opened to better determine extent

Expanded Resources

- LAHDRA Report
- LAHDRA Database
- Manhattan Project Veterans Database, Atomic Heritage Foundation at the National Museum of Nuclear Science & History, Albuquerque, NM
- DOE Public Reading Room, Zimmerman Library, University of New Mexico
- United States Transuranium and Uranium Registry, Washington State University