LEVEL II

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Department of the Army
The Adjutant General Center
Directorate of Administrative Management
Records Management Division
Washington, DC 20314

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Trip Report of Field Search for Exercise Desert Rock Documentation Conducted by Representatives of The Adjutant General 18 June 1978 to 14 July 1978

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Prepared by
10 John Henry Hatcher PhD

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Contains Foreword, Table of Contents, Supporting Documentation, Sample Formats and historical background for the mid-1950 Nuclear Tests in Nevada, Acronyms, and the Isengard Bibliography of pertinent AFSWP/DASA/DNA/DOE Literature.

19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Nuclear Test Personnel Review, Buster-Jangle, Tumbler-Snapper, Upshot-Knothole, Teapot, Plumbob, Hardtack, Reynolds Electrical Engineering Company (REECO), Narver and Holmes, Las Alamos Scientific Laboratory (LASL), Sandia, Kirtland, Defense Nuclear Agency, Atomic Energy Commission, Lexington-Bluegrass Army Depot, Sacramento Army Depot, Camp Mercury, Camp Desert Rock, Fort MacArthur, FARC-San Francisco, FARC-Los Angeles,

20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This is an after action report of the field search which was undertaken for documentation dealing with EXERCISES DESERT ROCK, 1950-58. The search was made by representatives of The Adjutant General at the direction of the Chief of Staff (HQDA-DACS-DMC) during the period 18 June 1978 through 14 July 1978.

This search was undertaken when normal holdings of the National Archives, Federal Records Center System, and US Army retired records holding areas and other depositories failed to produce documentation required to meet Department of

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ITEM 19 Continued: NPRC-St Louis, Radiation Exposure, Dosimetry, Armed Forces Special Weapons Project (AFSWP), Defense Atomic Support Agency (DASA), NARS-5, Washington National Records Center, Sixth US Army, Presidio of California, Fort Ord, Fort McClelland, US Army Chemical Corps School, Defense Nuclear Agency Field Command, VIP Personnel File, Disposal Standards, Installion and Troop Lists.

ITEM 20 Continued: (Also cont) the Army's tasking for the Department of Defense Nuclear Test personnel Review Project (NTPR). The specific data sought consisted of identification of the US Army personnel -- military, contractor, civilian, guests and official observers -- who participated in the DESERT ROCK EXERCISES. Also sought was any possible evidence of radiation exposure and dosimetry history.

The report's nine parts include

This report has been prepared in nine parts, i. e., a summary statement followed by individual annexes for each geographical target of the field search. Where appropriate, supporting documentation has been appended to the summary statement and the individual annexes.

In one instance, the report ranges beyond the narrow confines of the primary target of the field search. It expands upon the personnel aspects of record keeping and considers the VIP Personnel Files maintained by the National Personnel Records Center, St Louis. Rationales are presented for a formal appraisal of these files with a view toward establishment of a government-wide standard for maintenance and preservation.

The author concludes that the search was generally successful in locating the still existant documentation, files and records.

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F O R E W O R D

The following after action report constitutes the official record of the field search for Exercise Desert Rock I through VIII, 1950-58, documentation conducted by representatives of The Adjutant General at the direction of the Chief of Staff (DACS-DMC) during the period 18 June 1978 through 14 July 1978.

This search was undertaken when the normal holdings of the National Archives, Federal Records Center System, and Army retired records holding areas and other repositoried failed to produce documentation required to meet Department of the Army's tasking for the Department of Defense Nuclear Test Personnel Review Project (NTPR). Specific data required consisted of identification of the US Army troops who participated in the Desert Rock Exercises along with any possible evidence of radiation exposure and dosimetry history.

This report has been prepared in nine parts, i. e., a summary statement followed by individual annexes for each geographical point of the field search. Where appropriate, supporting documentation has been appended to the summary statement and the individual annexes. In some instances, the report ranges beyond the narrow confines of the field search to touch on later aspects of the Nuclear Test Personnel Review Project and the Army Records Management System.

Washington, DC 20314
4 August 1978

John Henry Hatcher, PhD
Robert P. Smith, PhD
Archivists, Department of the Army

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DEPARTMENT OF THE ARMY
OFFICE OF THE ADJUTANT GENERAL AND THE ADJUTANT GENERAL CENTER
WASHINGTON, D.C. 20314

4 August 1978

DAAG-AMR-D

MEMORANDUM FOR: CHIEF, RECORDS MANAGEMENT DIVISION, ADMINISTRATIVE MANAGEMENT DIRECTORATE, THE ADJUTANT GENERAL CENTER

SUBJECT: Trip Report of Field Search for Exercise Desert Rock Documentation Conducted by Representatives of The Adjutant General by Direction of the Chief of Staff, 18 June 1978 to 14 July 1978

1. Failure to locate retired records of troop participation in the nuclear test Desert Rock Exercises, 1951-58, in pursuit of the Nuclear Test Personnel Review Project in normal retired records channels prompted an extraordinary field search during the period 18 June through 14 July 1978.

2. Tasking for this operation was issued by the Chief of Staff's office on 1 June 1978. Itinerary planning, travel arrangements, official notification of planned visits and clearance requirements were completed by the HQDA Records Management Division, Access and Release Branch, Admin Management Dir, 14 June 1978. Army archivists Dr. John H. Hatcher and Dr Robert P. Smith were selected to conduct the field search commencing with the Army's Lexington-Bluegrass Depot Activity on 18 June 1978.

3. The rationale for the field search sought to duplicate rough geographical patterns of installation complexes involved in the atmospheric nuclear test series of the 1950's. The continuing series of Desert Rock Exercises, 1951-58, were to be the primary focus of the search with specific attention to the AEC Exercises Tumbler-Snapper (1952) and Upshot-Knothole (1953) which provided the basis of the Army Exercises Desert Rock IV and Desert Rock V. Concentration on DR IV and DR V was prompted by the paucity of troop participation data generally available for them in the normal records repositories. Since HQDA resources had failed to produce the required data up until this date, the decision was taken to seek it in non-Army and non-DOD repositories as well as in certain field Army commands and respositories.

4. For a wide variety of reasons, the following geographical areas, installations, commands and agencies were included in the original itinerary:

a US Army Lexington-Bluegrass Depot Activity at Lexington, Kentucky, center fo· collection of Army generated radiation exposure dosimetry data since 1954 to the present.

b. Las Vegas, Nevada; Nevada Operations Office, Department of Energy; Liaison Office, Defense Nuclear Agency; Home Office, Reynolds Electrical and Engineering Company, Inc.

c. Mercury, Nevada; Nuclear Test Site (Camp Desert Rock, 1951-58) operated by the Reynold Electrical and Engineering Company, Inc.

d. Kirtland Air Force Base, Albuquerque, New Mexico; Field Command, Defense Nuclear Agency; United States Air Force Special Weapons Laboratory; Combined Technical Library; Base/Installation Records Staging Area.

e. Los Alamos, New Mexico; Los Alamos Scientific Laboratory operated as a GOCO (government-owned, contractor-operated) activity and non-profit quasi-public corporation by the University of California for nuclear device development and testing.

f. San Francisco, California; Federal Archives and Records Center-San Francisco (at San Bruno); Headquarters Sixth United States Army and Post Records Holding Area of the Predidio of California; Letterman Army Medical Center.

g. Sacramento, California; Sacramento Army Depot for dosimetry collection Western US and Pacific 1958-77. This was dropped from the itinerary after the visit to Lexington as no longer required since Sacramento's dosimetry function and data collection had been transferred to Lexington.

h. Monterey, California;Fort Ord and the 7th Infantry Division Headquarters; for tracing a records management audit trail from Camp Irwin to Fort MacArthur and finally Fort Ord as installations were closed and functions were consolidated and transferred.

i. Los Angeles, California; Federal Archives and Records Center-Los Angeles (at Laguna Niguel, California) for the retired nuclear testing records (GOCO) of Narver and Holmes, Inc., and the Reynolds Electrical and Engineering Company.

j. Seattle, Washington; Fort Lewis to trace a records management audit trail from Fort Worden (and the 369th Amphibious Engineer Regiment). This point on the itinerary was cancelled after the data sought for the 369th Engineers was located in the REECO Archives at Mercury, Nevada. (The 369th Engineers provided primary support and troop participation elements for Desert Rock V. Personnel lists for them had not been located until the visit to Mercury.)

k. St Louis, Missouri; Organizational Military Records Division, National Personnel Records Center to follow-up on leads developed during the field search and to screen the retired collection of US Army field command records, 1950-64 held by the National Personnel Records Center.

l. Washington, DC and Suitland, Maryland; Washington National Records Center and the National Archives to follow-up on leads developed during the field search for missing AFSWP and Hq 6th US Army retired records.

5. The results of the field search for Army-generated documentation dealing with the Desert Rock Exercise series were generally disappointing. While the field search sought any and all Desert Rock documentation, particular focus was on the 1952 and 1953 exercises (DR IV and DR V). Efforts until the field search had been moderately successful in producing troop participation lists for all other Desert Rock Exercises except for IV and V. Most of this data had come from non-Army files, the National Archives and the Lexington-Bluegrass

Army Depot Activity dosimetry data collection.

6. The most fruitful collection of material dealing with the atmospheric nuclear tests of the 1950's was found to be held by the Reynolds Electrical and Engineering Company, Incorporated, of Las Vegas, Nevada. REECO has been associated with the Nevada tests since 1952 and has operated the Mercury Test Site as a prime contractor since 1954. Camp Desert Rock was located in close proximity to the Mercury Test Site during the Desert Rock Exercises. REECO's collection of Desert Rock documentation is limited primarily to dosimetry data and seems to have come into REECO's custody over the years from DOD creators. It is highly probable that much of the missing Army created Desert Rock documentation makes up the core of the REECO collection.

7. One question not satisfactorily answered by the field search is "What happened to the Army's retired files from the Desert Rock Exercise series ?" There is strong suspicion after the field search that exercise files per se from the Desert Rock series were never retired. The continuing nature of the exercises over an eight-year period plus a rotating and constantly changing staff along certain administrative practices developed and followed during the exercises tend to support this conclusion. Adequate procedures existed during the 1950's to collect and preserve the records of operational exercises. And they were successful. All other Army exercises of Departmental interest are accounted for in the retired collection of field command records held by the National Personnel Records Center in St Louis. There was one unique condition peculiar to the Desert Rock Exercises which set them apart from other Army exercises of the 1950's.

8. The Desert Rock Exercises were a continuing series running some 8-10 years considering planning periods beginning and ending them. Individually none of the executed exercises (DR I through DR VIII) had a clearly defined stopping date. By the time one exercise was com[illegible]d and the after action reports had been written on-site, planning was far a[illegible]ed for the next. The early imposed requirement for writing the after action reports in the field tended to keep documentation in the field -- especially the requirement for an approved draft before releasing the present exercise staff to make place for the next ! Action officer reluctance to part with records under any pretext probably accounted for more accumulation in the field. Older materials of less and less utility were disposed of in the field as the years wore on. This disposal probably took two forms: destruction or donation to the test site operators. The net result of the Army's preferred mode of operation with rotating staffers and composite forces was retirement of very few records into normal records management channels. The Air Force practice of commiting TO&E Line organizations to the exercises tended to avoid this situation. These wings moved into the exercises as units, executed their exercise missions, created their records, brought them "home" with them after the exercises, and, eventually retired them.

9. One of the most promising lines of inquiry opened by the field search centered on location of approximately 600 linear feet of records pertaining to the decade of the 1950's which had been created by the Armed Forces Special Weapons Project and its successor agencies. From inventory descriptions published by the National Archives, it was generally inferred that records of the Armed Forces Special Weapons Project for the years 1947-71 had been accessioned into the National Archives. Examination of these records indicated many missing gaps.

Following certain leads developed in St Louis, it was discovered that some 600 linear feet of AFSWP/DASA records were still stored in retired status in the Washington National Records Center and had never been formally accessioned into the National Archives. Arrangements were made immediately for Army researchers to examine this collection for documentation central to current Army NTPR Project requirements. More discussion on this is found in Annex H following.

10. The arrangement of this report consists of the foregoing brief summary statement followed by individual annexes dealing with each point of the field search itinerary. Where appropriate, supporting documentation is appended to the individual annexes.

11. In final summation the field search for Desert Rock Exercise documentation may be considered successful for the following reasons. It eliminated much conjecture on possible sources for missing documentation; at the same time opened additional lines of more promising inquiry. The names with some dosimetry data for some thousands of troop participants in Exercises Desert Rock IV and V were added to lists being compiled by the Army NTPR Project Team. And, finally, it established effective liaison with many non-Army sources of data for future exploitation in connection with the Army's Nuclear Test Personnel Review Project tasking.

JOHN HENRY HATCHER, PHD
Chief, Declassification
Operations Branch

Inclosures

1. Unclassified extracts DR-V After Action Report (Sample)
2. Mini-GFSR for automation of USA Portion NTPR Project
3. TAG Tasking and Authority for the Desert Rock Field Search
4. AEC NOO Ltr, 1 May 70, Desert Rock Personnel Exposure
5. HQDA DACS-DMC Memo, 12 Apr 78 NTPR Priority of Effort

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Trip Report of Field Search
for Exercise Desert Rock Documentation
Conducted by Representatives of The Adjutant General
18 June 1978 to 14 July 1978

Sample Desert Rock After Action Report
Unclassified extracts, Desert Rock V

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COMMAND AND STAFF ORGANIZATION

SIXTH ARMY COMMANDER AND EXERCISE SUPERVISOR

Lieutenant General Joseph M. Swing

CAMP COMMANDER AND EXERCISE DIRECTOR

Brigadier General William C. Bullock

DEPUTY POST COMMANDER - OPERATIONS

Colonel Edward F. Thelen

DEPUTY POST COMMANDER - ADMINISTRATION

Colonel James S. Moncrief Jr

ASSISTANT CHIEF OF STAFF, G1: Colonel Floyd A. Rutherford

ASSISTANT CHIEF OF STAFF, G2: Colonel Frederick K. Hearn

ASSISTANT CHIEF OF STAFF, G3: Lieutenant Colonel Anthony H. Shookus

ASSISTANT CHIEF OF STAFF, G4: Lieutenant Colonel Howard F. Kusenning

HEADQUARTERS COMMANDANT AND CHIEF VISITORS BUREAU:

Lieutenant Colonel Harry P. Smith

ADJUTANT GENERAL: Lieutenant Colonel Roland A. LeMay (Jan to Apr)
Major William R. MacLaren (Apr to Jun)

ARMY AIR OFFICER: Captain Daniel M. Lewis

CHEMICAL OFFICER: Colonel Roy W. Muth

JUDGE ADVOCATE: Captain George T. Foresell Jr (Feb to Apr)
Captain Robert R. Bowen (Apr to Jun)

ORDNANCE OFFICER: Captain Roy C. Petty (Jan to Mar)
Lieutenant Colonel John D. Bowersock (Mar to Jun)

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POST EXCHANGE OFFICER: Captain Raymond H. Pickering

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SPECIAL SERVICES OFFICER: Captain Duane W. Bagley

SURGEON: Lieutenant Colonel Wilbur D. Dice

TRANSPORTATION OFFICER: Major Hilary E. DuVal

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STATION LIST

STATION COMPLEMENT

6012 ARMY SERVICE UNIT (DET F)

6020 ARMY SERVICE UNIT

SUPPORT UNITS

23rd Transportation Truck Company

26th Transportation Truck Battalion (Hq & Hq Company)

31st Transportation Truck Company

38th Transportation Truck Company (Detachment)

53rd Transportation Truck Company (Detachment)

50th Chemical Service Platoon

77th Army Band

93rd Army Band

94th Medical Detachment (Vet Food Insp)

163rd Quartermaster Laundry Detachment

360th Engineer Utilities Detachment

371st Evacuation Hospital (SMBL)

412th Engineer Construction Battalion

505th Military Police Battalion (Company C)

505th Signal Service Group (Composite Company)

705th Engineer Field Maintenance Platoon

762nd Quartermaster Subsistance Supply Company

3623rd Ordnance Company

PARTICIPATING UNITS

Composite Units	First Army
Composite Units	Second Army
Composite Units	Third Army
Composite Units	Fourth Army
Composite Units	Fifth Army
Composite Units	Sixth Army
Composite Units	U.S. Air Force

U.S. Marine Corps Provisional Atomic Exercise Brigade

Camp Desert Rock Troops

6

IV. PARTICIPATION.

Military personnel participated in nine shots during Exercise DESERT ROCK V. Troop observers were included in all shots and composite Battalion Combat Teams participated in six of the nine shots.

The tactical situation assumed for troop participation was based on the concept that Aggressor airborne troops, after an initially successful attack, were now on the defensive and had established a strong position which was holding up the attack by friendly troops. Decision was made to use atomic weapons to force a breakthrough. In each case the actual burst represented one burst out of a group of 5 to 7 employed to execute the planned maneuver.

In each case ground zero was assumed to be 1,500 yards in rear of the enemy lines. Protective trenches were prepared and occupied at 3,500 to 4,000 yards from ground zero in all tower shots and at greater ranges for air dropped and artillery delivered weapons. In planning the maneuvers all tower shots, regardless of KT yield, were assumed to be artillery delivered atomic weapons.

The first atomic explosion in this series occurred on 17 March 1953. This was a tower shot which developed a yield of 16.3 KT and was followed by an attack on an objective to the left (west) of zero from trench positions 3,500 yards from ground zero. This attack was made by two Army BCT's composed of Camp Desert Rock permanent party personnel.

On 24 March two Army BCT's composed of personnel from Second, Third, Fifth, and Sixth Armies entrenched [illegible],000 yards from GZ attacked an objective to the west of ground zero immediately after the second atomic burst, a tower shot of 24.5 KT yield. In addition, a group of nine volunteer Army, Air Force, and Navy officers were positioned in a trench at 2,500 yards from ground zero as the first step in an experiment to determine how close personnel may be positioned to a burst without harmful effects.

There was no military participation in the third atomic detonation on 31 March 1953. The experimental device used on this occasion developed a yield of only .21 KT.

No military personnel were scheduled to observe the air drop of an atomic weapon on 6 April. However, 75 Marine Corps officers scheduled to participate in Shot V-5 took advantage of the opportunity to witness this detonation in order to be better qualified to orient their troops. They were joined by 60 officers and enlisted men of Camp Desert Rock who had not previously witnessed an atomic detonation. This weapon, yielding 10.8 KT, was detonated 6150 feet above the terrain, and was one of the most spectacular of the series.

The area to be used for Shot V-5 was contaminated by the detonation of Shot V-4. As a result Shot V-6 was advanced to 11 April. The detonation of this device, placed in a cab on a 100 foot tower and which yielded .22 KT, was witnessed by 63 observers originally scheduled to observe Shot 5 but who departed their home stations prior to receipt of the notice of the change in date.

The USMC Provisional Atomic Exercise Brigade formed into two Battalion Landing Teams totaling 2,318 officers and enlisted men, attacked toward ground zero after the detonation of Shot 5 on 11 April. In addition, a Marine Corps Helicopter Group airlifted one company to the vicinity of their objective. This weapon was placed in a cab on top of a 300 foot tower and developed a yield of 27.7 KT. A group of 6 Army and 6 Marine Corps officer volunteers were positioned in a trench 2,000 yards from ground zero to observe this burst. All withstood the atomic blast without incident.

Shot 7, the largest in the series was detonated on 25 April. This shot, an atomic device placed in a cab on top of a 300 foot tower, developed a yield of 51.5 KT. Troops from the Second, Fourth Fifth, and Sixth Armies, organized as two BCT's attacked toward objectives to the west of ground zero immediately after the detonation. These troops were halted 2,000 yards from ground zero because of the high radiation intensity in the area. Seven Army and one Navy officer volunteers were positioned in two trenches located 2,000 yards from ground zero. No unusual effects were noted by these officers.

On 8 May, a Mark 6 stockpile weapon was air dropped and detonated at a height of 2,423 feet above the terrain. This weapon, scheduled as Shot 9, is estimated to have developed a yield of approximately 26.4 KT. Two BCT's composed of personnel from the First, Third, and Fourth Armies plus a contingent of 326 officers and enlisted men of the Air Force attacked toward ground zero immediately after the detonation. A group of 60 of these officers and enlisted men were air lifted by helicopter to a point 1,500 yards from ground zero. This group reached ground zero one hour and two minutes after the detonation occurred.

Shot 8, which had been rescheduled because of contamination of the area, was detonated on 19 May. This device placed in a cab on top of a 300 foot tower developed an estimated yield of 34 KT. A total of 903 military personnel observed this detonation and the resulting effects on equipment, emplacements and animals.

Exercise DESERT ROCK V reached its climax with the detonation of a Mark 9 atomic shell delivered by a 280-mm artillery gun on 25 May. Two RCT's composed of troops from all the continental armies, attacked towards objectives beyond ground zero after the detonation. The Secretary of the Army, two members of Congress, the Chief of Staff of the U.S. Army, the Chief of Army Field Forces, the Commanding General of Sixth Army and 787 additional military and civilian personnel observed the detonation from positions in the troop entrenchment area.

A total of 17,696 military and civilian personnel witnessed the nine detonations in which the military participated. This total includes the Exercise DESERT ROCK Control Group which participated in all shots. All of the services were well represented throughout the series, with the total participation for each as follows:

Army	13,364
Navy & USMC	2,921
Air Force	1,273
Civilian (All services)	139

V. PSYCHOLOGICAL REACTIONS OF TROOPS AT THE DESERT ROCK V MANEUVERS.

The investigation of troop psychological reactions at the DR-V maneuvers was undertaken by Army Field Forces Human Research Unit No. 2. Research personnel from this unit were present at all shots attended by provisional battalion combat teams composed of Army personnel. The research performed was designed to accomplish the following objectives:

Observation of troop behavior in the forward trench area immediately prior to an r the detonation of an atomic device.

Measurement of changes in troop attitudes and level of information about atomic warfare before and after participation in the indoctrination and maneuver at DR-V.

Assessment of some of the factors governing the degree to which information gained and attitudes formed at DR-V by troop participants were communicated to home station troops upon return of the maneuver participants.

Obtaining reactions and opinions of a group of officers who were in a special forward volunteer group on some of the shots.

At this date only preliminary analyses have been made of the data collected at DR-V. Consequently, the findings reported here should be regarded as tentative. A final report of the psychological findings will be published under separate cover at a later date.

Preliminary findings indicate:

There was no evidence of panic or even overwhelming anxiety on the part of participating troops.

That participating troops acquired considerable information by the end of the exercise which resulted in a decrease in self-rated anxiety about the danger of injury from all the effects of an atomic burst, except radiation. However, there is little evidence that the experience of the exercise produced changes in broader attitudes about atomic warfare, troops interviewed indicating they were neither more nor less willing for the United States to use atomic weapons in Korea.

That more information is gained by participants who, at their home stations prior to departure to the exercise, participate in group discussions and are provided with lists of questions that members of the group desire answered.

That well indoctrinated officers are willing to position themselves in forward trenches located at distances they have calculated to be safe. That such officers feel that they have learned nothing new about atomic effects but by their actions have added to the confidence of participating troops in this and future exercises.

prior to the shot. This period was limited to a description of the tactical maneuver situation for the shot, presented by the AC of S, G3, and a brief general orientation and question conducted by an instructor.

The following subjects were covered in orientations during the exercise period:

SUBJECT	REVISED TIME
Introduction and Security	30 min
Atomic Weapons Family	50 min
Characteristics and Effects of an Atomic Explosion	50 min
Medical Aspects	30 min
Protective Measures and Radiac	30 min
Army Delivery Means	40 min
Air Force Delivery Means	35 min
Navy Delivery Means	35 min
Tactical Employment	80 min
History of Desert Rock Exercises	20 min
Seminar and "TUMBLER/SNAPPER" Film	30 min

Training films concerning atomic matters were shown at night for RCT and officer personnel on a voluntary attendance basis.

The orientation periods were revised continuously as new material became available to the instructors. Lessons learned from experience and suggestions from officers operating in the field of atomic energy who attended the orientations contributed to the improvement of the orientations.

X. RADIOLOGICAL SAFETY.

The Directive for Exercise DESERT ROCK V, issued by OCAFF, made the Exercise Director solely responsible for providing radiological safety for all participants in the exercise. This marked the first time the military was given the entire responsibility for radiological safety of its personnel in maneuvers conducted in connection with an atomic burst.

The Directive provided the Exercise Director with criteria to be used in exposing participants to atomic weapons effects. These criteria provided for a maximum permissible dosage of six (6) roentgens for the exercise.

Based upon the above criteria the Rad-Safe Officer prepared an SOP for Radiological Safety covering all operations in the forward area. These procedures prescribed the use of radiac instruments and film badges, monitoring requirements and decontamination regulations.

Prior to each shot the Radiological Safety Section conducted a school for monitors selected by the participating RCT's. During the maneuver following each shot these monitors checked for nuclear radiation in the area used by their respective units. In addition, the Rad-Safe officer and his monitors surveyed the entire maneuver area, reported intensity levels to the Exercise Director, and exercised overall radiological safety control.

Prior to each shot the Rad-Safe Section placed film badges in the field fortifications located in the display area. These badges were recovered after the shot and the readings were studied to determine the radiation dosages received in the fortifications. In addition, where possible, these readings were compared with radiation effects predicted by trained staff officers.

After each shot radiological surveillance of the area was continued, decay predictions made, and a situation map showing intensity levels was maintained.

XI. PREPARATION OF MANEUVER AND DISPLAY AREAS.

The 412th Engineer Construction Battalion was assigned to Camp Desert Rock for the purpose of constructing troop trenches and preparing the display areas for Exercise DESERT ROCK V. In addition, this unit was to render engineer support, in so far as its capabilities permitted, to the Directorate of Weapons Effects Tests, AFSWP and to Camp Desert Rock.

Preparation of the Exercise DESERT ROCK V sector of each shot area required the expenditure of 26,361 man hours and 7,700 equipment hours during the period 12 January to the detonation of Shot 10 on 25 May. Approximately 10,000 feet of trenches were dug for Shot V-1, V-2, V-5, V-7, V-9, and V-10 with Shots V-6 and V-8 requiring a lesser amount.

All display areas contained a standard layout of stakes, shallow trenches and bunkers, beginning at 500 yards from Ground Zero and at each 500 yards thereafter up to 3,500 yards. The following emplacements and stakes were placed on each 500 yard arc:

C-1 (C-9) Stake - A 4" x 4" wooden stake, extending 2' above the ground. Fig 1 (Page 77).
C-2 (C-8) Trench - A slit trench 4'6" long, 2' wide and 2' deep. Fig 2 (Page 77).
C-3 (C-7) Trench - A slit trench 4' long, 3' wide and 3'6" deep. Fig 3 (Page 77).
C-4 (C-6) Bunker - A one man covered emplacement. Fig 4 (Page 78).
C-5 "B" Bunker - A two man covered emplacement. Fig 5 (Page 79).

In addition, deep "A" type bunkers were dug at 100, 200, and 300, and 400 yards from ground zero for Shots V-2 and V-9. Various items of military equipment were also placed in the display areas to provide visible evidence of the damage effects of atomic weapons. Sheep were placed in selected A, B, and C type emplacements. Fig 6 (Page 80).

The Engineer support rendered to AFSWP TEST GROUP required an expenditure of 12,209 man hours and 2,318 equipment hours up to 25 May 1953. This effort was largely expended in the Frenchman Flat area.

Engineer support rendered to Camp Desert Rock for the construction of additional facilities required the expenditure of 17,929 man hours and 614 equipment hours.

The clean up of destroyed equipment in display areas for Exercise DESERT ROCK V and AFSWP will require additional effort.

Communication facilities for Exercise DESERT ROCK V were installed by Composite Company, 505th Signal Group. These facilities included telephone communication between the Control Group and the BCT Commanders, ABC Control Point, the vehicle parking areas, Camp Desert Rock and a forward line to Rad-Safe monitors. In addition, a radio net was established to duplicate the telephone system. A public address system was constructed in each trench and vehicle parking area to enable instructors to give "on site" orientation and instructions to the participants. The establishment of these communications facilities required the expenditure of 7,776 man hours and 2,340 equipment hours.

This unit also expended 10,080 man hours and 2,450 equipment hours in support of Project 3.20 (SIGNAL) in the AFSWP test area. This effort was expended in the construction of pole lines, buried lines, surface lines and construction of radio towers.

XII. VOLUNTEER OBSERVER PROGRAM.

Selected officer volunteers, capable of calculating effects of atomic weapons, were positioned in trenches at 2,500 and 2,000 yards on three shots.

Four Army, four Naval and one Air Force officer volunteers were positioned in a heavily revetted trench located 2,500 yards from ground zero on Shot 7-2. For Shot V-5, the volunteer trench was located 2,000 yards from ground zero and was not revetted. This trench was occupied by 6 Army and 6 Marine Corps Officers. Two trenches, one revetted and one not revetted, located at 2,000 yards from ground zero were utilized by the volunteer officer group on Shot V-7. This group consist seven Army and one Naval officer.

The location of the trench in each case was based upon the determination of a safe distance by the volunteers. This distance was calculated for the criteria under which the program was established, using effects data listed in TM 23-200 dated 1 Oct 1952. These criteria, established by CCAFF, were:

"Overpressure	8 psi at ground level."
"Thermal	1 cal/cm^2".
"Nuclear radiation	10 r in any one test, of which no more than 5 r is prompt, whole body radiation, and with the further limitation that no volunteer shall take more than 25 r in this series of tests."

All calculations were based upon the above criteria and the predicted yield of the weapon to be detonated. The actual yield was less than the predicted yield for Shots V-2 and V-5, but exceeded the predicted yield of 40 KT by 25 percent on Shot V-7.

As a result of their experience these officer volunteers concluded:

That the volunteer trenches were located at a safe distance under the given conditions for each shot.

That data in TM 23-200, dated 1 October 1952, can be used to determine safe observer positions if properly qualified officers make the computations.

That troops could have observed these shots safely from positions located in the same areas as the volunteer trenches. However, it was further concluded that troops should be placed no closer than 3,500 or 4,000 yards to ground zero in troop orientation and indoctrination exercises, such as Exercise DESERT ROCK V, for the following reasons:

Troops can feel the effects of the detonation at those distances as well as they could at a closer point.

Troops can better observe the fireball and mushroom cloud at those distances.

Troops are sufficiently removed from the heavy dust cloud and possible radiation hazard.

Reduction of the distance between ground zero and the troop entrenchment area below 3,500 to 4,000 yards reduces the area available for troop maneuvers.

That a trench six feet deep and unrevetted gave adequate protection under the given conditions.

That there was no discomfort from blast or thermal effects.

That ground shock, at this distance, is not of sufficient magnitude to be of any concern.

That the existing volunteer program, with its present mission and limiting criteria, has served its purpose and should be discontinued.

That a volunteer program of this type, with a mission of indoctrination for personnel having special weapons training or assignments with special weapons programs, would be worthwhile.

That future volunteer programs would have greater value if volunteers were positioned in a variety of standard field fortifications and combat vehicles approximating actual combat conditions.

That instrumentation placed in trenches to record pressures, heat, ground shock, and nuclear radiation would be of assistance in evaluating observers reactions.

Study of the results of the volunteer program must be done with great care. Readers are cautioned to remember that all shots in which volunteers participated were tower shots. Different information might result if a similar program were undertaken for shots in which the detonation took place considerably higher than the 300 foot height of the tower used in those shots.

XIII. CONCLUSIONS.

From experience gained in Exercise DESERT ROCK V it is concluded:

That the overpressure and thermal radiation criteria used in determining troops positions for this exercise are sound and should be followed in future exercises.

That the criteria for nuclear radiation to be accepted should be increased to permit maneuver closer to ground zero than was possible in this exercise. The amount of increase should be determined by observation of the volunteer officers who accepted larger dosages than permitted for troop participants.

That the criteria for distances between ground zero and the troop trenches used in this exercise are sound and should be retained in future exercises.

That a volunteer program which would permit officers trained in special weapons or assigned to special weapons programs to be positioned in trenches closer to ground zero than the participating troops would be worthwhile for indoctrinating such officers in atomic weapons effects.

That atomic weapons effects data found in TM 23-200, dated 1 October 1952, can be used by qualified officers to determine safe troop positions and to predict damage to equipment, emplacements and personnel as the result of an atomic weapon detonation.

That indoctrinated soldiers show no evidence of fear of an atomic detonation and will willingly attack objectives at or near ground zero.

That continued detonation of atomic weapons over the same flat terrain found in the Yucca and

Frenchman Flats of the Nevada Proving Ground precludes the obtaining of valuable data on the effects of atomic weapons detonated in rough terrain and under other than ideal conditions.

That improved military participation could be obtained by more direct contact between the Exercise Director and the Test Manager, AEC Nevada Proving Ground, rather than the Exercise Director being required to communicate through AFSWP to the Test Manager.

That emphasis in future atomic weapons tests should be placed upon tactical operations rather than weapons effects in order to increase our knowledge of the tactical employment of nuclear weapons. Although a great deal of theoretical work has been done on the tactical employment of nuclear weapons, a great deal remains to be done. Ultimately, and with as little delay as possible, armored and infantry divisions should attack behind multiple atomic detonations which have been incorporated into a fire plan involving all of the conventional weapons. A vast amount of data is presently available on weapons effects.

That the assignment of a photodosimetry team and laboratory to Camp Desert Rock would have made more accurate and complete Rad-Safe operations in Exercise DESERT ROCK V.

That dependence upon Camp Mercury sources for photographic coverage of Exercise DESERT ROCK V is unsatisfactory.

XIV. RECOMMENDATIONS.

To improve future Exercises DESERT ROCK, it is recommended:

That the overpressure and thermal criteria used in this exercise be retained.

That the nuclear radiation tolerances be increased to permit maneuver closer to ground zero.

That troops entrenching positions be located no closer to ground zero than 3,500 to 4,000 yards.

That future exercises of this type include a volunteer observer program with a mission of indoctrination for officers having special weapons training or assignments in special weapons programs, and that such a program be expanded to include larger numbers and less stringent prerequisites for participants.

That future exercises include attacks against fortified positions located in rough terrain, utilizing stockpile weapons that would be used under similar conditions in combat where possible.

That future exercises employ standard atomic weapons under adverse weather conditions to determine the effectiveness of these weapons under such weather conditions from offensive and defensive points of view.

That Department of the Army obtain the necessary authority to secure and utilize limited numbers of stockpile weapons in exercises for which it is completely responsible and which are free from artificial test detonations, equipment and electronic measuring devices.

That planning be started for a large scale exercise, employing two or more divisions attacking a simulated enemy after detonations of multiple burst of stockpile weapons and in conjunction with the coordinated fire of conventional weapons.

That the Department of Defense take steps to have greater emphasis placed upon tactical operations and troop participation in any future test series scheduled by the AEC.

That the Exercise Director for future exercises DESERT ROCK be made a deputy to the Test Manager in order to have direct contact on all matters pertaining to troop participation and tactical operations.

That steps be taken to obtain items of display equipment through technical service channels at least 4 months prior to the first shot.

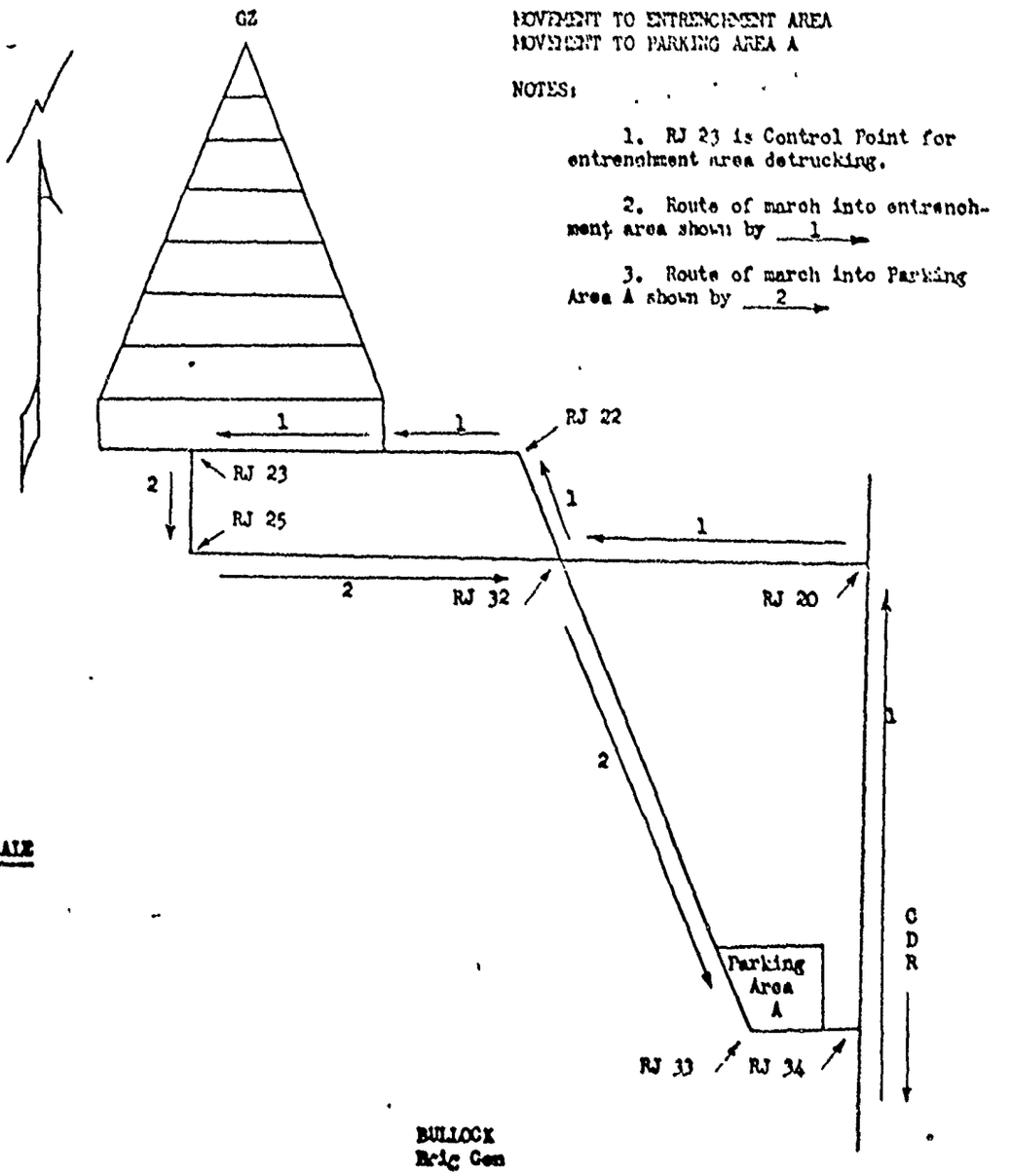
That the quotas for troop observers and BCT's be held at the same level as quotas for Exercise DESERT ROCK V; that is, a maximum of 600 troop observers and two (2) BCT's with a strength of 1,200 each.

That in future exercises a photodosimetry team and laboratory be assigned to Camp Desert Rock

That steps be taken to obtain AEC permission for Camp Desert Rock photographers to cover Exercise DESERT ROCK activities within the Nevada Proving Ground, with the complete understanding that all photographs will be developed and classified within the Nevada Proving Ground and in conjunction with AEC personnel.

HQ CAMP DESERT ROCK
LAS VEGAS (872536) NEV
211200 April 1953

Appendix A (TRAFFIC CIRCULATION) to Annex 4 (Schedule of Events) to Opn O 4
EXERCISE DESERT ROCK V



MOVEMENT TO ENTRENCHMENT AREA
MOVEMENT TO PARKING AREA A

NOTES:

1. RJ 23 is Control Point for entrenchment area detrucking.

2. Route of march into entrenchment area shown by 1

3. Route of march into Parking Area A shown by 2

NOT TO SCALE

BULLOCK
Brig Gen

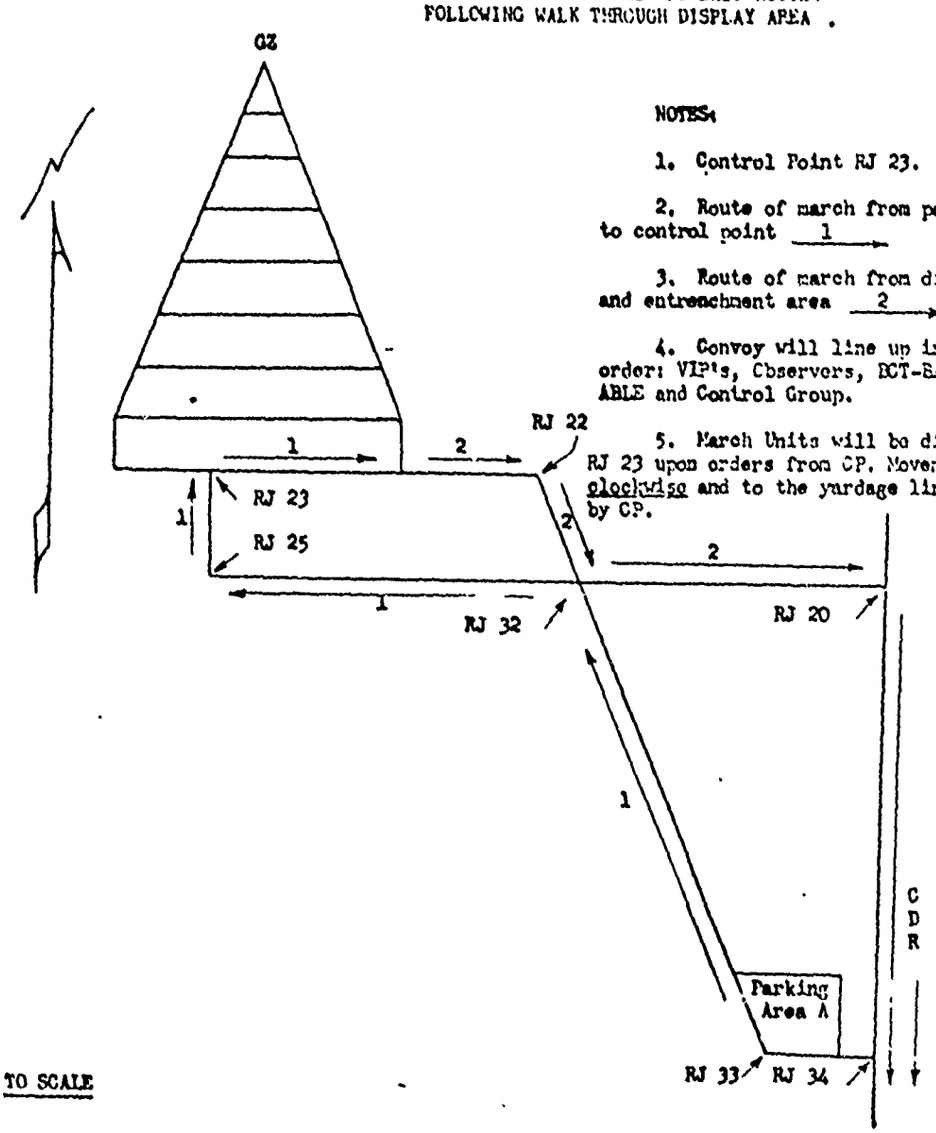
OFFICIAL:
Shookus
SHOOKUS
G 3

RESTRICTED DATA
ATOMIC ENERGY ACT 1946

HQ CAMP DESERT ROCK
LAS VEGAS (872536) NEV
211200 April 1953

Appendix B (TRAFFIC CIRCULATION) to Annex 4 (Schedule of Events) to Opn O 4
EXERCISE DESERT ROCK V

LOCATION OF VEHICLES AND EXIT ROUTES
FOLLOWING WALK THROUGH DISPLAY AREA .



NOTES:

1. Control Point RJ 23.

2. Route of march from parking Area A to control point 1

3. Route of march from display area and entrenchment area 2

4. Convoy will line up in the following order: VIP's, Observers, BCT-BAKER, BCT-ABLE and Control Group.

5. March Units will be dispatched from RJ 23 upon orders from CP. Movement will be clockwise and to the yardage line indicated by CP.

NOT TO SCALE

BULLOCK
Brig Gen

OFFICIAL:
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SHOOKUS
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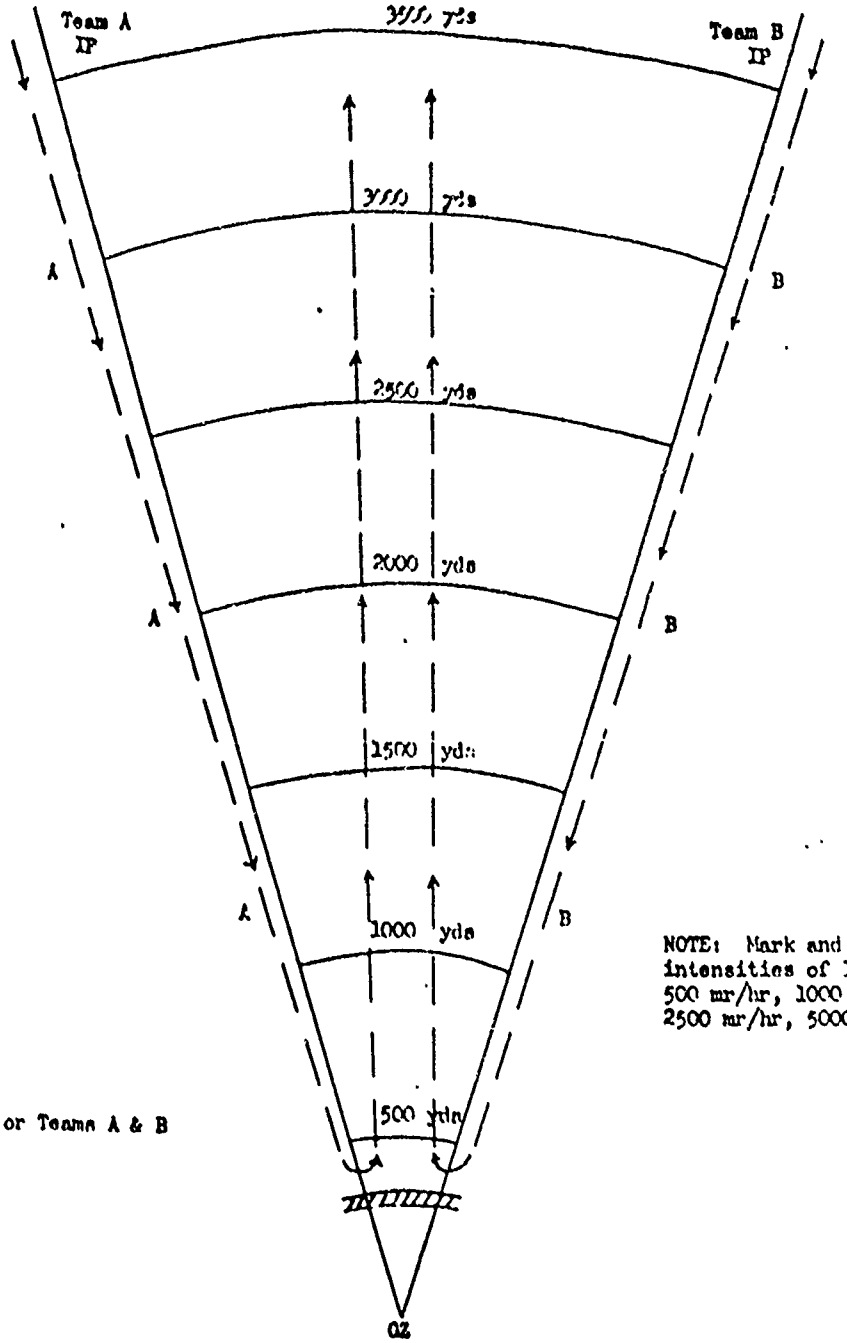
RESTRICTED DATA
ATOMIC ENERGY ACT 1946

Appendix A (ROUTE OF MONITOR TEAMS) to Annex 7 (Rad-Safe) to Opn O 4
EXERCISE DESERT ROCK V



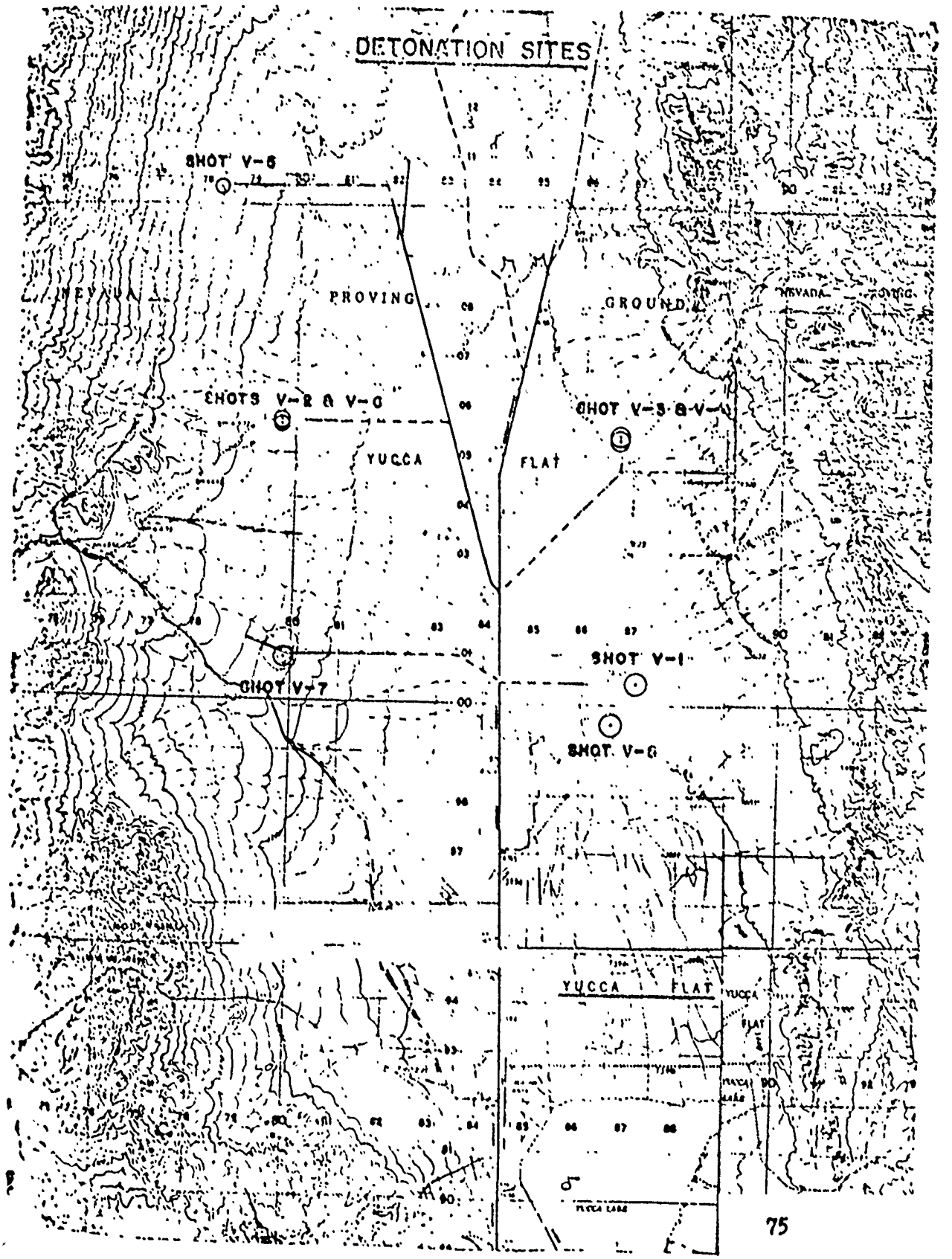
NOTE: Mark and report intensities of 10 mr/hr 500 mr/hr, 1000 mr/hr 2500 mr/hr, 5000 mr/hr

Route of Monitor Teams A & B

BULLOCK
Brig Gen

DISTRIBUTION: Special

OFFICIAL:
Shookus
SHOOKUS
O 3



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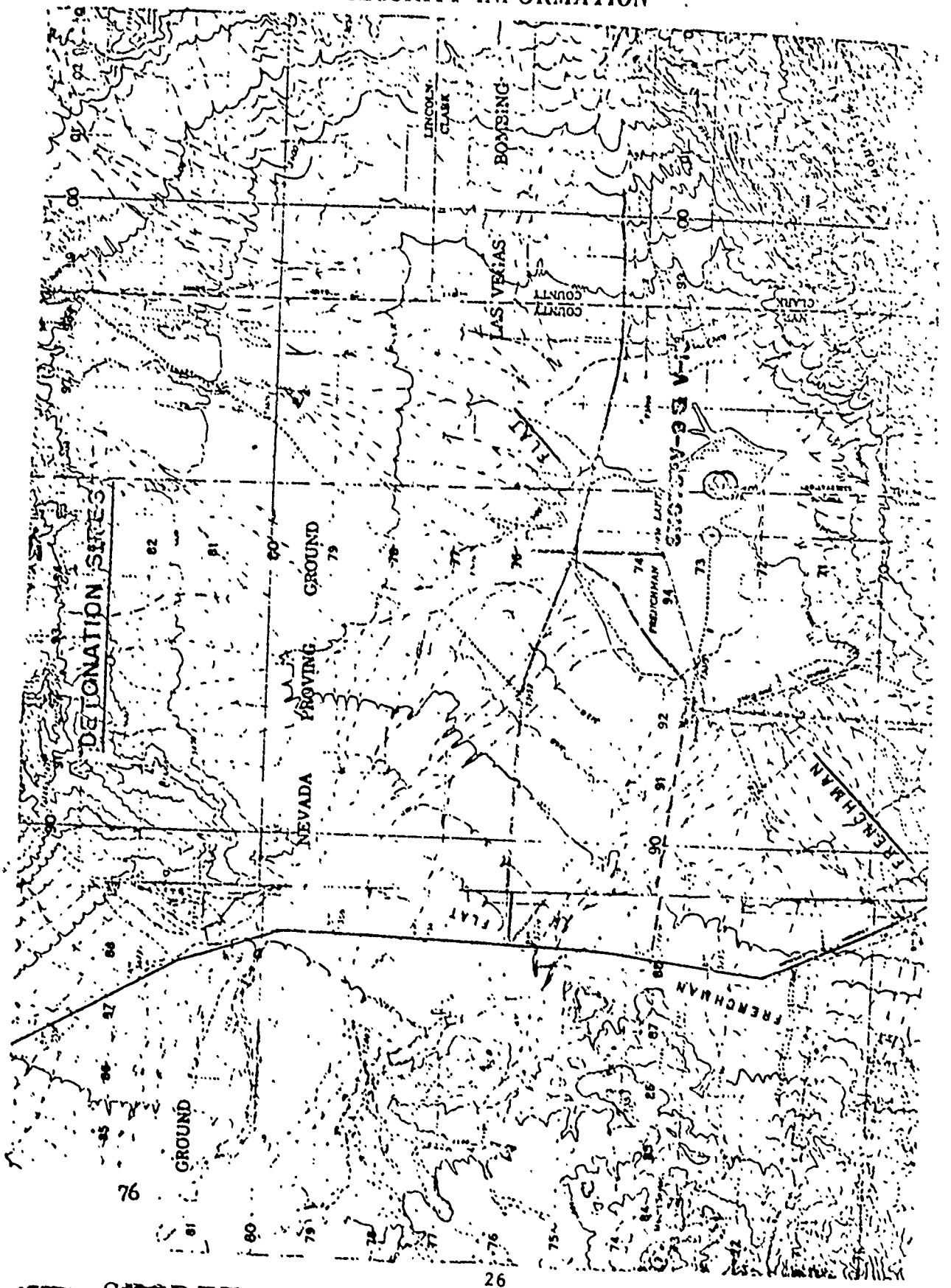
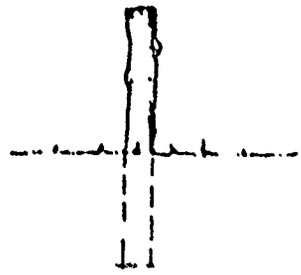
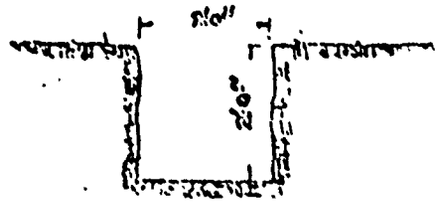
RESTRICTED DATA
ATOMIC ENERGY ACT 1946


DETONATION SITES
NEVADA PROVING GROUND
LAS VEGAS BOMBING
LINCOLN CLARK
COUNTY
FLAT
FRENCHMAN
GROUND
76



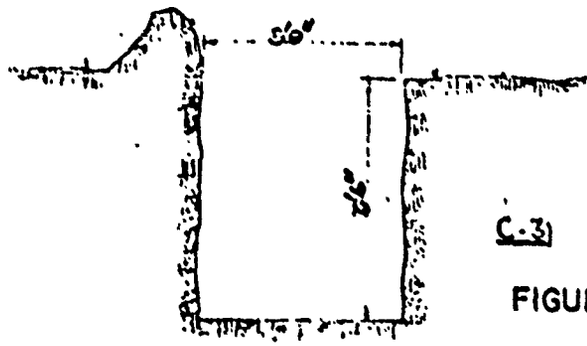
C-1 WOODEN STAKE

FIGURE 1



C-2 4'4" LONG

FIGURE 2



C-3 4'0" LONG

FIGURE 3

SYMBOL	DESCRIPTION	DATE	APPROVAL
	REVISIONS		

SANDIA BASE, NEW MEXICO

TEST COMMAND

ARMED FORCES SPECIAL WEAPONS PROJECT

DFS
DRWN TR
CHK
LDN
SUPV
HEAD
MGR
ENGR CONS
PROJ MGMT

SIXTH ARMY
EMPLACEMENTS

DRAWINGS NO. C-1, C-2, C-3 [redacted]

APPROVED _____ DATE _____

FOR THE COMMANDER

DIRECTOR

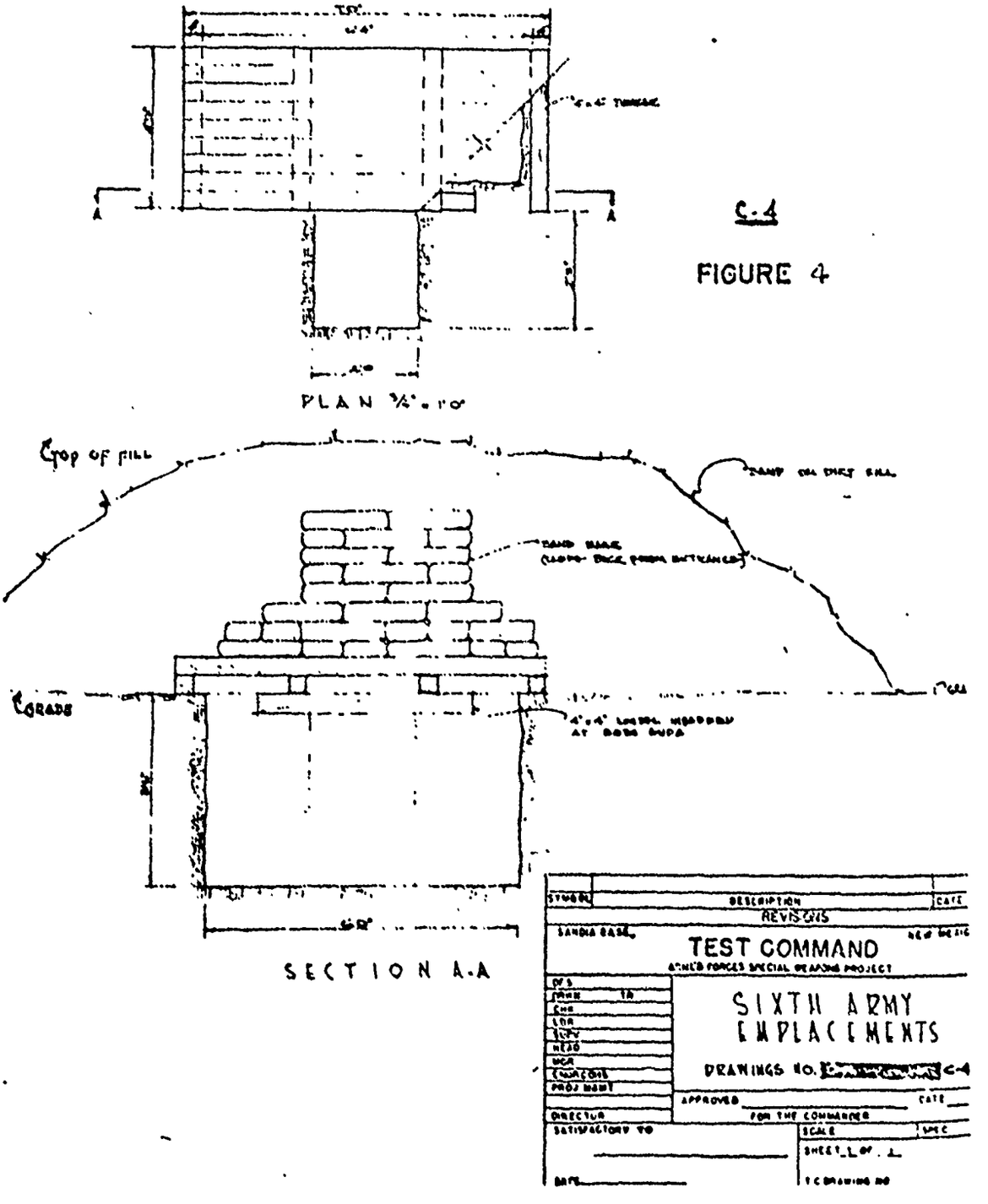
SATISFACTORY TO _____

SCALE _____ SPEC

SHEET 1 OF 1 77

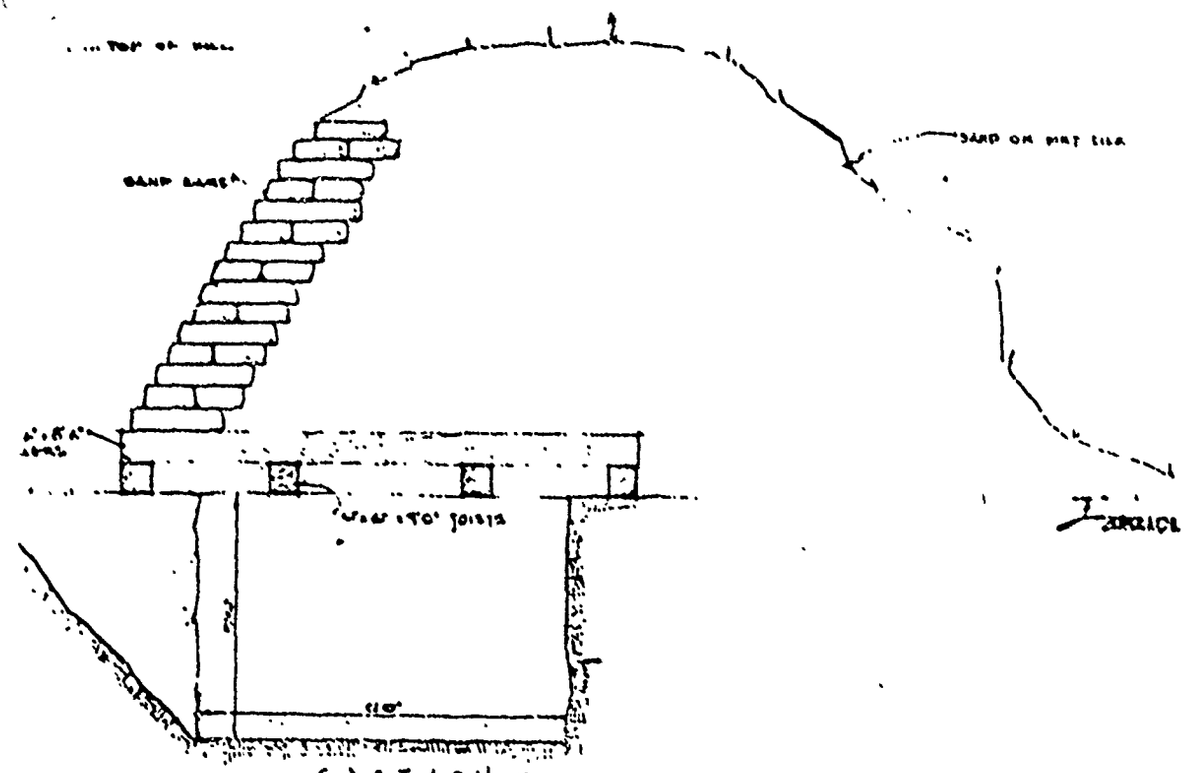
DATE _____

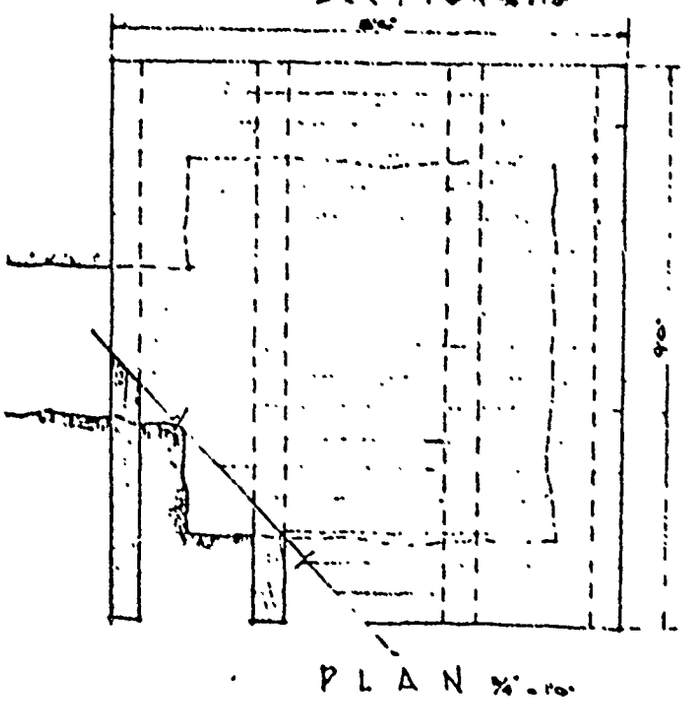
T C DRAWING NO _____


PLAN
Top of fill
Grade
SECTION A-A
REVISIONS
TEST COMMAND
SIXTH ARMY
EMPLACEMENTS
DRAWINGS NO.
C-4
APPROVED
FOR THE COMMANDER
DIRECTOR
SATISFACTORY TO
SCALE
SHEET 1 OF 1

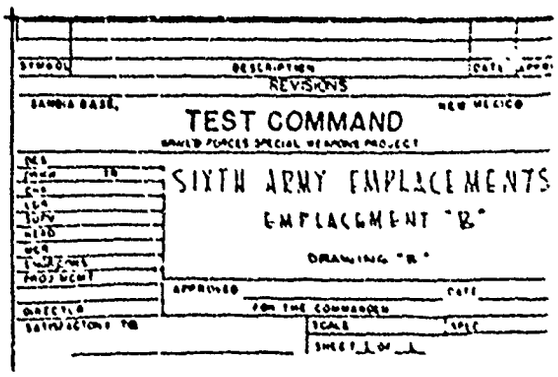
C-4

FIGURE 4





EMPLACEMENT
'B'
C-5
FIGURE 5



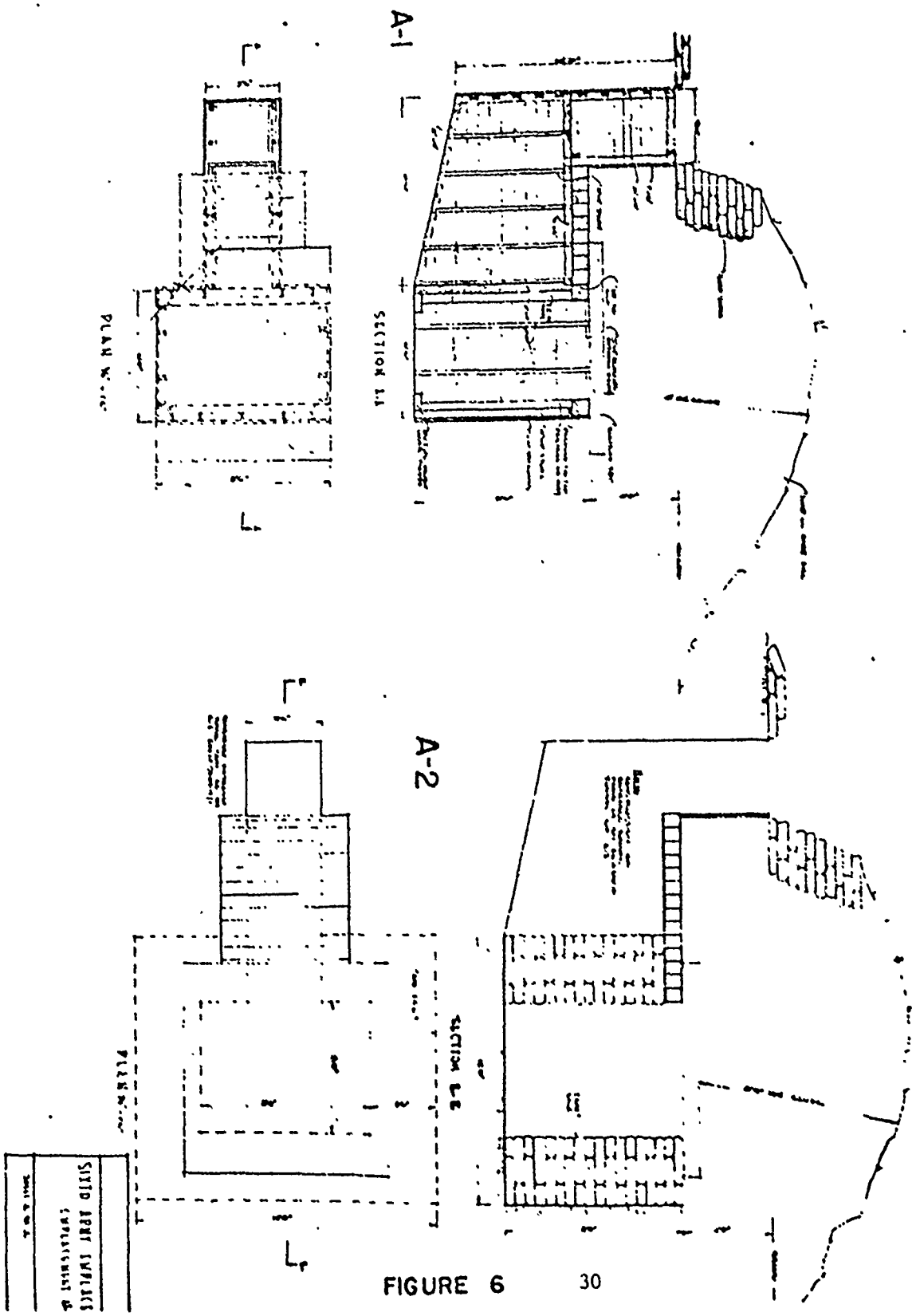


FIGURE 6

A-1 and A-2 Type Emplacements

HQ CAMP DESERT ROCK
LAS VEGAS (872536) NEV
011200 June 1953

Annex 3 (SHOT VICTOR 2) to Final Report
EXERCISE DESERT ROCK V

I. GENERAL.

Incoming observers and troop personnel for Shot 2 closed in Camp Desert Rock on 20 March. Troop participants were from the Second, Third, Fifth, and Sixth Army Areas.

A full dress rehearsal was conducted on 22 March in the Yucca Flat Area, actual site for this shot. The control group departed Camp Desert Rock at 0807 hours and all units closed in the entrenchment area at 1045 hours.

Actual shot day conditions were in order during the rehearsal. One of the RCT commanders experienced some difficulty in placing members of his command in the allotted trenches. Another "dry run" remedied this situation.

The arrival and detrucking of approximately 3,000 officers and men at the entrenching area was accomplished in the one (1) hour allotted for this purpose. It was surprising to note the crowded conditions that existed when troops detrucked in the relatively small area.

The RCT started the simulated attack from the trenches at 1200 hours. The attack continued for 1,500 yards and at that point the advance was halted. This concluded the tactical phase of the rehearsal.

The observers and troop personnel were taken through the equipment and animal display area shortly after the tactical phase ended. Later the observers were taken to the site of Shot 1 to observe the damage to equipment from a previous detonation.

Movement for return trip started at 1350 hours and all personnel closed in Camp Desert Rock at 1632 hours. The rehearsal progressed on schedule and much experience was gained by the staff in executing this phase of the exercise.

The control group departed camp for Shot 2 at 0041 hours, 24 March. A total of 185 vehicles were required to transport the Control group, observers and troops to the shot site. All personnel closed in the entrenchment area at 0340 hours. Vehicles were moved to a motor park, 8.5 miles from ground zero.

A pre-shot indoctrination and orientation was delivered over the public address system from 0410 to 0500 hours.

At H-Hour minus 10 minutes the Exercise Director ordered all personnel into the trenches.

At H-Hour minus 2 minutes, all personnel were ordered to crouch low in the trenches. A siren blast of 30 seconds duration was sounded at this time.

At H-Hour minus 90 seconds, the Atomic Energy Commission took over the public address system and counted off the remaining time at 30 second intervals until reaching H-Hour minus 10 seconds. Once more came the now well remembered "9, 8, 7, 6, 5, 4, 3, 2, 1 and MOW count" (0510 hrs).

A very bright light, which seemed to linger longer than the light noticed during the first shot, was observed in the trenches. Very little ground shock was received but the noise was deafening. Debris falling into the trenches in large quantities, followed by dust conditions, obscured the vision of personnel. None of the debris was large enough to cause injury.

A large fireball, engulfed in a huge dust cloud, was observed initially. Soon after the blast, the wind direction changed and caused a dust cloud to blow over the troops in the entrenchment area. A reading of 18 mr was noted at the trenches.

At 0533 hours the RCT's attacked objectives 4,000 yards to the north. The unit on the east, nearest to ground zero, had to sideslip to the west as the advance neared ground zero because of radiation intensities. Troops were able to move to within approximately 500-700 yards of their objectives when halted by Rad-Safe personnel as no further advance could be made under the established radiation criteria.

Nine (9) volunteer officers were positioned in a trench 2,500 yards from ground zero during the blast. They were in constant wire communication with the control trench, 1,500 yards to the rear, before, during and after the blast. None of the volunteers experienced any ill effects and all felt their combat efficiency would have been unimpaired.

A Marine Corps Helicopter Group (H-19) conducted experiments during the shot. Four (4) helicopters were on the ground approximately 16,500 yards from ground zero during the detonation. Three (3) of the aircraft became airborne immediately after the detonation and prior to the arrival of the blast wave. One of the airborne aircraft proceeded towards the burst after the arrival of the blast wave and was flown to within 3,500 yards of ground zero. Dust and airborne radiation limited any further movement toward ground zero.

The shock wave produced no adverse effects on either airborne or parked helicopters. It was determined that the initial intense light from a detonation would not noticeably affect the pilot of an airborne helicopter providing the pilot was observing 180 degrees from the blast area.

An Army helicopter (H-23) was used to perform a rapid survey of the equipment and animals in the display area two (2) hours after the detonation. Using this mode of travel, it was possible to proceed to within 400 yards of ground zero.

The observer group departed the entrenchment area at 0631 hours for a tour of the equipment and animal display. Troop units also visited the display area at the conclusion of the tactical maneuver. Shortly after 0800 hours, march units started the return trip and all closed in Camp Desert Rock at 1032 hours.

The maneuver, motor movement and other portions of the exercise were executed according to schedule and without incident.

No damage occurred in protective trenches at 1,500 yards and beyond. Sheep positioned in the open were alive and walking around after the blast. All sand bags, facing ground zero, were burned at this distance.

Participating in the exercise were 2,845 military and 16 civilian personnel, a total of 2,86 persons.

At ground level, in the entrenchment area, at shot time, temperature was recorded at 50.7 degrees Fahrenheit. Wind velocity, from a direction of 310 degrees true north, was 2 knots per hour. Almost simultaneously with the burst, a wind of 4 - 6 knots from approximately 5 degrees developed.

II. INTELLIGENCE AND SECURITY.

The two Battalion Combat Teams arrived properly cleared, were briefed, performed in a most cooperative manner and presented no security problems before, during, or after the shot.

The vehicle convoy was cleared through the forward area more smoothly than on the previous shot.

Newspaper representatives were not allowed to be present in the Shot Area for this shot. The problem of safeguarding of classified information was greatly reduced because of the absence of news interviews.

Signal photographers were barred by the Atomic Energy Commission from taking pictures unless the photographers were "Q" cleared. No "Q" clearances have been received for any of the photographers although more than six weeks have elapsed since application for such clearance was initiated. In order for the exercise to receive proper documentation it is extremely necessary that certain photographs of the area be secured. Because of this new ruling Desert Rock must rely on photographers within Camp Mercury, who are already assigned other committments, in order to secure these photographs.

III. INSTRUCTOR GROUP.

On 21 March the orientation of one BCT in two groups of approximately 600 men each and the observer group for shot V-2 began. A rehearsal was held on 22 March which included a trip for the observer group to the display areas for Shot V-1. A discussion of the damage to equipment and the general condition of the area of the shot was presented.

The second BCT and remainder of the observer group instruction was completed on 23 March. A

1 hour evening orientation was given to late arrivals. This was followed by a showing of Training Film "Operation TUMBLER-SNAPPER" (SECRET) to all observer personnel, on a voluntary attendance basis. This training film was favorably received. The same evening, in the open air theater, the following training films were shown on a voluntary basis to the BCT's: "The Effects of Atomic Explosion" (RESTRICTED), "Medical Aspects of Nuclear Radiation" (RESTRICTED), "Self-preservation in A-bomb Attack" (RESTRICTED), and "The Great Gun" (UNCLASSIFIED).

Shot V-2 was fired on 24 March and BCT's and observers were conducted through the equipment display area to observe, and receive orientation as to the effects of the detonation.

The conduct of the orientation for shot V-2 was improved both in the training auditorium and the forward area as a result of the use of proper equipment and training aids which were unavailable for shot V-1. Mobile sound trucks were furnished to the instructors with the BCT's to further assist in the orientation and control in the forward area.

IV. SIGNAL.

The requirements for this shot were generally the same as for Shot V-1. A few changes were made to provide a better communication system in the forward area.

Public address loudspeakers were installed on three (3) thirty (30) foot poles in the entrenchment areas. This provided a good coverage for all parts of the trench area.

Once more the battalion commanders were provided AN/PRC-10 radios for command and control purposes. More frequencies were assigned to the Exercise Director and, although radio communication was improved considerably, some transmission difficulty was experienced when the battalions were 2000-3000 yards from the control trench.

A more satisfactory wire communications service was provided in the display area than on Shot 1. This was accomplished by burying the wire along both sides of the equipment display triangle prior to the shot. This wire system terminated at stakes which were located at 500 yards intervals as far forward as 1000 yards from ground zero. Rad-Safe personnel installed telephones at these locations when wire communications with the control trench was desired.

V. RADIOLOGICAL SAFETY.

Shot Day Operations. The 2.5 r/hr limit was reached by the monitors at 850 and 1250 yards from ground zero on the right and left sides of the sector respectively. The 5 r/hr line was less than 100 yards beyond. Intensities ranging from 5 mr/hr upward were encountered over the entire test area. Rad-Safe Operations for Shot 2 were the same as for Shot 1 with two exceptions:

The monitor and marking party trucks were used to transport the volunteer observers to and from their trenches on the 2500 yard line.

A change in the direction of the wind caused part of the radioactive cloud to pass over the trenches. There was no appreciable fall-out in the trench area, but radiation intensities at ground level reached 18 mr/hr while the cloud was overhead. There was rather heavy fall-out of radioactive material in the maneuver area, particularly in a draw which lay between the attacking troops and their objective. The deposit in the draw was of high enough radiation intensity (about 14 r/hr) and of sufficient extend to call for withdrawal of the troops from the contaminated ground. The CBR monitors of the BCT's proceeded into the area without giving any indication of their readings to their unit commanders. Upon being directed by the Rad-Safe Officer, the unit commanders seemed to experience difficulty in withdrawing their men. However, little time was spent in the area. The first of these deficiencies may be attributed to training which emphasizes techniques and does not train the monitor in what to do when radiation fields of high intensity are approached and entered. The second deficiency probably resulted from the provisional organization of the attacking troops.

Special Operations.

Immediate radiation intensities were recorded in the same manner as in Shot 1.

The unexpected fall-out in the area west of Shot 2 ground zero extended over positions being prepared for Shot 5. Since the radiation intensity was approximately 2 r/hr work was discontinued. Prediction of decay rates and calculation of time of stay in the area was necessary to plan for engineer operations. Future intensities and conditional dosages were calculated. Early morning surveys were made daily to check the calculations. It was found that the actual reduction in intensi-

HQ CAMP DESERT ROCK
LAS VEGAS (872536) NEV
011200 June 1953

Annex 6 (SHOT VICTOR 6) to Final Report
EXERCISE DESERT ROCK V

GENERAL.

Shot V-6 was detonated on a 300 foot steel tower at 0445 hours, 11 April. Observers from all services witnessed the explosion from a vantage point on News Nob, a small hill near the Atomic Energy Commission Control Point at the entrance to Yucca Flat. The steel tower containing the nuclear device was located in the west-central portion of Yucca Flat, approximately ten (10) miles from the observers.

This shot was a low yield experiment and no troop exercise was conducted in connection with it. Participating as an observer group from Camp Desert Rock, were thirty three (33) Army, twenty five (25) Marine, four (4) Air Force and one (1) Navy officers. The twenty five (25) Marine personnel were commanders and staff officers of the Marine Corps Provisional Atomic Exercise Brigade who came to Camp Desert Rock as members of the advance party of the Brigade to prepare for Marine participation in shot V-5 which followed Shot V-6 due to a change in AEC schedules. The purpose of having these Marine officers attend the V-6 shot was to familiarize them with atomic phenomena so that they could disseminate the information to the Marine units. The effectiveness of having commanders view a detonation prior to directing troops in an atomic exercise was well demonstrated in later operations.

The observers, totaling 63 personnel, departed Camp Desert Rock at 0300 hours, 11 April for News Nob, a distance of twenty five (25) road miles. The convoy arrived at News Nob at 0412 hours without incident.

Vehicles were parked in a parking area 100 yards from News Nob near the observation point. A member of the Camp Desert Rock Instructor Group gave all observers a twenty minute briefing and orientation on the burst phenomena at the observation point.

Since the burst was small, and the observers were 10 miles from the detonation, no shelter was necessary for personnel or equipment. The observers were required to face away from the tower immediately prior to H-hour and remain faced away until after the flash of detonation. The observers witnessed the formation of the mushroom cloud and the subsequent action of the fireball very clearly. No blast wave was felt, but a sharp crack of sound reached the observation point. Four Marine helicopters (H19 type) participated in the shot and were clearly seen from the observation point on News Nob.

The return trip to Camp Desert Rock was completed without incident at 0540 hours. No assistance from the Rad-Safe personnel was required at any time during the operation. No measurable radiation was received at the observation point.

Communications for the operation consisted of direct telephone lines into the Proving Ground Command Post and into the AEC switchboard. A loudspeaker system tied into the AEC command post circuit was also used to broadcast the count down sent out by an AEC announcer from the control point.

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Annex 7 (SHOT VICTOR 7) to Final Report
EXERCISE DESERT ROCK V

I. GENERAL.

Troop observers arrived at Camp Desert Rock during the period 21-24 April. Arrival times were so separated that less than one half of the observers were present the first day the orientation course was conducted. Troops from the Second, Fourth, Fifth and Sixth Armies closed in camp on 22 April and were organized into two (2) RCT's for participation in the tactical maneuver.

A rehearsal of the tactical maneuver and the observer program was conducted in the Yucca Flat area on 23 April. Actual site positions to be occupied on shot day were utilized. The Control Group departed Camp Desert Rock for the forward area at 0700 hours and all march units closed in the exercise area, 33.2 miles from camp, at 0945 hours.

An on site orientation program was conducted by a member of the Instructor Group. Time selected for H-Hour was 1030 hours. At this time all personnel positioned themselves in the trenches and troop units started the simulated attack at 1035 hours.

The attacking forces moved very rapidly and at the end of thirty five (35) minutes had advanced a distance of 2500 yards. Attacking waves of troops formed solid masses in some instances and the commander experienced difficulty in controlling his units. Upon arrival at the 2000 yard line, the attack was halted and this completed the tactical phase of the maneuver.

Troop units and observers were taken through the equipment display area. Later the observer group was taken to the site of Shot V-5 (18 April) to observe damage incurred on equipment by a previous detonation. Return motor movement to camp started at 1300 hours and the last march unit closed in Camp Desert Rock at 1505 hours. No unusual incidents occurred during the rehearsal.

The control group departed camp for Shot V-7 at 0030 hours 25 April. Transportation requirements to move the control group, observers and troops to the shot site totaled 179 vehicles. All march units and personnel closed in the entrenchment area at 0322 hours. Vehicles were moved to a parking area 5.9 miles from ground zero.

A member of the Instructor Group conducted a pre-shot orientation from 0330 to 0420 hours. Information pertaining to an atomic device detonated from a tower was presented to the observers and troops.

The Exercise Director ordered all personnel to enter the trenches at H minus 15 minutes and at H minus 2 minutes all personnel were instructed to crouch low in the trenches. A siren warning of 30 seconds duration was sounded at this time. With 90 seconds remaining prior to the detonation, an Atomic Energy Commission spokesman from the command post took over on the public address system and counted off the remaining time at 30 second intervals until reaching H minus 10 seconds. At H minus 5 seconds, the final count down started with the familiar "4, 3, 2, 1 and NOW." It was now 0430 hours.

A bright light, of approximately 3 seconds duration, was noted at the time of detonation. The ground shock was heavy, and the earth appeared to roll for a moment. Noise accompanying the blast was deafening, loudest of this series of shots. Dust conditions following the blast and debris falling into the trenches obscured the vision of personnel in the trenches.

As usual for tower shots, the fireball was engulfed in a large dust cloud initially. The cloud rose steadily and actually formed the well known "atomic mushroom." This was by far the most picturesque atomic cloud to be observed, from a tower shot, in this series of shots. An initial radiation intensity of 5 r/hr registered on survey meters in the trenches; however, the radiation lasted for such a short time, the initial radiation dose was less than 25 mr.

Both RCT's started the attack at 0444 hours towards objectives 4000 yards to the north. The RCT on the east (R) advanced to within 2000 yards of ground zero at 0600 hours. At this time the attack was halted by the Rad-Safe monitors due to a reading of 2.5 roentgens at this point. The RCT on the west (L) encountered no areas having a high radiation intensity and advanced until the attack was halted for other reasons.

Upon completion of the tactical phase of the maneuver, observer and troop personnel were moved through the equipment and animal display area. Movement forward was limited to the 2000 yard line due to radiation levels encountered.

Eight (8) volunteer Army and Navy officers were positioned in trenches 2000 yards from ground zero during the blast. Telephone communication was established from the control trench to the volunteers and the Exercise Director was able to keep all volunteers informed prior to, during and after the shot. All volunteers withstood the blast without incident.

The Marine Corps Helicopter Group (H-19 type) conducted experiments during the shot. A full report on this participation is included in paragraph VIII.

An army helicopter (H-23) was used for reconnaissance purposes after the detonation. It was possible to observe the equipment and animals in the forward area during these flights. Another helicopter was available for evacuation purposes.

Return movement to Camp Desert Rock started at 0625 hours and all march units and personnel closed in camp at 0957 hours without incident.

Sand bags in the entrenchment area, 4000 yards from ground zero were singed. Joshua trees, located 400 yards west and 200 yards north of the entrenchment area were ignited shortly after the detonation.

Of unusual interest, occurring as a result of this shot, was the caving in of a C-4 type bunker at the 1500 yard line. A sheep, tied to a stake, was placed in this bunker on 24 April, prior to time of cave-in. On 13 May, a working party removed the top portion of the bunker and the trapped sheep leaped from the emplacement. Even though the animal had been without food and water for nineteen (19) days, it appeared in good condition and was able to walk. The animal recovered completely and was used in an animal display for a subsequent shot.

Participating in the exercise were 3,102 military and 24 civilian personnel, a total of 3,126 persons.

At ground level, in the entrenchment area, temperature was recorded at 53 degrees Fahrenheit. Wind velocity, from a direction of 340 degrees, true north, was 5 knots per hour and visibility was 50 miles. Measured humidity was 26 percent and atmospheric pressure was 870 millibars.

II. INTELLIGENCE AND SECURITY.

The major difficulty encountered during the convoy movement was the identification of vehicles within the march units. Only two march units dimmed their lights at check points. Signs were dusty and hard to decipher.

Once again observers arrived without security clearance indicated on their orders. This was corrected by sending messages to observers home station for clearances.

Late arrivals created a problem as to checking attendance at orientation briefings in that rosters could not be completed prior to check-in time at the theater. No security violations were reported for the group attending this shot.

III. INSTRUCTOR GROUP.

In preparation for Shot V-7, the Instructor Group presented three types of orientation programs. An eight hour period of SECRET classification was presented to those troop observers who arrived at Camp Desert Rock on or before 22 April. A four hour periods of orientation was presented to those observers who arrived after 22 April, and another four hour presentation was provided on the CONFIDENTIAL level for RCT's and all observers not cleared above the CONFIDENTIAL access level. In general, the change in arrival plans of certain contingents of observers was such that they arrived at Camp Desert Rock on the day prior to the shot rather than three days before caused a hurried rearrangement of orientation programs. Each group, however, received adequate orientation prior to the shot, though not the full eight hours originally planned.

Two hundred and ten (210) observers for Shot V-7 arrived at Camp Desert Rock prior to 0700 hours 22 April. All RCT personnel were present prior to this time. The Instructor Group presented a four hour CONFIDENTIAL orientation for RCT ABLE during the morning of 22 April and for RCT BAKER in the afternoon. All classes were conducted in the open air amphitheater. Ample seating was available for the full twelve hundred men oriented at one time. No difficulty was encountered in hearing

the instructor from any part of the amphitheater, the Signal Corps amplifiers completely filling the requirement for sound. Training aids such as charts set up on the stage could be seen very well from the rear of the amphitheater.

The 210 observers arriving on 21 April received a four hour portion of the standard eight hour orientation for observers on the SECRET level beginning at 0730 and concluding at 1155 hours, 22 April. For this same group, two films were shown during the afternoon. "Operation Greenhouse", a documentary of the AEC tests on Eniwetok Atoll in the spring of 1951, and "Operation Tumbler Snapper", a documentary of military participation in the spring tests at Nevada Proving Ground in 1952, were screened on a voluntary basis. A total of one hundred and sixty hour (164) observers attended the film showing.

On 23 April, a rehearsal of the troop and observer participation in Shot V-7 was conducted. Although one half of the observers had not yet arrived, those present went through the rehearsal and were able to pass on instructions and assistance to later arrivals. Both BCT's took part in the rehearsal. In the trench area, at a time simulated as H minus 20 minutes, a member of the Instructor Group carried out a terrain orientation followed by instructions for procedure in the trenches prior to H hour. Following H-Hour, an instructor escorted the observer group and other instructors conducted each BCT through the display areas so that a basis for comparison of damage could be made following the actual shot. It was carefully pointed out to all that contamination might deny the area to observers and troops on shot day, nearer the tower than 1500 or 2000 yards.

On 24 April, those observers who had received the first four hour period of orientation on 22 April were presented the second four hours. During the afternoon of 24 April, 250 observers were oriented in weapon delivery means available to the services and in tactical employment of atomic weapons. At 1930 hours, 24 April, late arrivals and general officers were briefed as to the tactical problem of the exercise and, in general, procedures to follow while in the forward area. At this time technical questions, within the limits of SECRET classification, were answered by a member of the Instructor Group.

From H minus 60 minutes to H minus 2 minutes on shot day, a member of the Instructor Group conducted a pre-shot orientation of a general nature as to terrain, safety, and air participation in the exercise. Following the shot, instructors conducted each BCT and the observer group through the display area to the 2000 yard line. Closer approach was prohibited by radiation levels. Damage results at ranges closer than 2000 yards were obtained by the instructors and presented to all personnel, though viewing by all was not possible.

IV. SIGNAL COMMUNICATION.

The layout of the trench area for this shot was generally the same as for previous shots in the forward area and the communication installations generally conformed to the plan followed in prior shots detonated in this area.

Three speaker poles were installed in the trench area, mounted with four speakers pointing in four directions to cover all troops within the general area of the speaker pole. Each group of four speakers were fed from one public address system and the three systems were all tied in to one central system in the Exercise Director's trench for control. This installation proved to be very satisfactory and is now the standard installation used in all shots.

Telephones were installed in the forward trench of each BCT commander. In addition, telephones were installed in the observers trench, the parking area and the heliport. Communication with Camp Mercury and Camp Desert Rock was provided through the forward switchboard located in the trench area.

Normal radio communication was installed with the Rad-Safe officers in one net, the Exercise Director and the BCT commanders, the parking area and the heliport in another net and each of the BCT's in a separate net.

Four mobile public address systems were used for orientation purposes in the display area. The public address systems worked out very well and were in place ready for operation prior to the arrival of the troop units. Two power megaphones were used by the BCT commanders for oral orders to their respective units and proved quite satisfactory.

V. RAD-SAFE.

No changes were made in the organization and operation of the Camp Desert Rock Rad-Safe orga-

ation. Pre-shot tasks included conducting a 6 hour radiological monitor refresher course and test for participating army units.

This shot was characterized by an apparent higher yield and more wide-spread radiological contamination than previously encountered. There was little wind at shot time. The cloud drifted eastward with a heavy fall-out in that direction. Radiological Safety monitors for the troop units were in position at H plus 5 minutes in spite of the heavy dust cloud which hung over the area. The display area survey teams reached their initial points at approximately H plus 15 minutes. The 2.5 r/hr intensity was reached on the east (R) side of the display area at 2000 yards from Ground Zero with the 5 r/hr intensity being reached at 2000 yards. On the west (L), the 2.5 r/hr intensity was reached at 2500 yards with the 5 r/hr intensity at 2100 yards. Intensities in the troop trench area slowly rose to 120 mr/hr but quickly receded to about 30 mr/hr. Due to the high intensities encountered in the test area and on the access roads, final personnel and vehicle monitoring was impossible in the test area. Troops and vehicles were moved to the decontamination station at Yucca Pass and to Parking Area A (837925) for field decontamination and final monitoring.

The performance of the unit CBR personnel as radiological monitors was considerably improved over the previous army units. Troop participation from the stand point of radiological safety was excellent.

Rad-Safe operations in the field of providing for the collection of information were continued on the same scale as for Shot V-5, except no pressure gauges were available for this shot.

Post shot evaluation of the operation indicated that the corrective measures taken after Shot V-5 were effective.

Procedure:

Heat sensitive paper was placed in positions exposed to direct thermal radiation and in positions shielded from direct radiation but exposed to reflected or scattered radiation at 500 yard intervals from ground zero from 500 yards to 3000 yards. The exposed papers were placed in vertical position so as to receive near maximum radiant energy. The sheltered ones were placed in a horizontal position, face up to measure radiation in the trenches. At 1500 yards and 2000 yards papers were exposed in a horizontal position on the surface of the ground with no thermal shielding.

Results:

Values given are approximations:

Distance from GZ in yards	Sheltered Position	Exposed Position
500	Lost	Paper destroyed, more than 34 cal/cm^2.
1000	Lost	Paper destroyed, more than 34 cal/cm^2.
1500	No effect, less than .45 cal/cm^2.	Vertical paper destroyed, more than 34 cal/cm^2. Horizontal paper, about 5 cal/cm^2.
2000	No effect, less than .45 cal/cm^2.	Vertical paper, 25 cal/cm^2. Horizontal paper, about 5 cal/cm^2.
2500	No effect, les than .45 cal/cm^2.	4 cal/cm^2.
3000	No effect, less than .45 cal/cm^2.	25 cal/cm^2.

Immediate Radiation in roentgens received in emplacements.

Distance from GZ in yards	C1 Exposed post	C2 Shallow slit Trench	C3 Deep slit Trench	C4 1 Man emplacement	C5 2 Man emplacement
1500	1150.0	lost	lost	24.5 r	lost
2000	175.0	lost	80.0	3.2	4.6
2500	22.0	18.5	11.0	.2	1.0
3000	5.6	1.7	.7	.5	.5
3500	.95	.25	.1	0	0

Badges placed in 6 ft trenches at 1500 yards recorded 28.1 r. The film badge in the 1750 yard trench was lost. Trench at 2000 yards received 8.75 r.

These data represent the immediate radiation personnel protected by the emplacements and unprotected at the same distance from ground zero would have received.

Badges were exposed in National Bureau of Standards holders.

VI. MEDICAL.

The medical support for this operation was carried out in an identical manner to that for V-5. The same plan for emergency medical care for the volunteer group was prepared, but as no casualties occurred it was not implemented. The only casualty reported was one of the enlisted men from BCT Baker. This man developed a rather severe nose bleed just prior to the detonation. He was treated immediately after H-Hour. It was felt that he should not participate with the troops and he was therefore held at the aid station until the conclusion of the exercise.

Medical evaluation of test items:

On the day prior to the detonation 37 sheep were placed at varying distances from ground zero. Commencing at 500 yards five sheep were placed at each 500 yard interval extending through 3500 yards from ground zero. The sheep employed at each of the 500 yard intervals were placed one to each C-type position (C-5, C-6, C-7, C-8 and C-9). In addition to the above positions there were two special trenches, one at 1500 yards and one at 1700 yards. One sheep was placed in each of these two positions.

The two special trenches at 1500 yards and 1700 yards are conventional type trenches 6 ft. in depth similar in design to the trenches used by volunteer observers.

The veterinary officer and one enlisted man accompanied the control group. Immediately following the detonation a medical technician accompanied by a monitor moved forward by truck to observe the sheep. A veterinary technician accompanied the loading party later in the morning to aid in rendering a tentative evaluation of the effects of the detonation in relation to the effects incurred by the sheep. When the sheep were returned to Camp Desert Rock a final evaluation was rendered by the veterinary officer. The veterinary officer, because of previously acquired radiation, was not permitted to advance past the control trench, so it was necessary to follow the above procedures in relation to evaluating the effects incurred by the sheep.

Most of the evaluation results are covered in the evaluation forms or the picture captions, but following are some of the more pertinent results.

The sheep at 3500 yards were all found to be normal.

The sheep at position C-9, 3000 yards had moderate wool burns. The other sheep at this distance were normal.

At 2500 yards the sheep at position C-9 had second degree burns on the face and wool burns covering 1/4 of the body area. The sheep at position C-7 had moderate wool burns. The sheep at positions C-5, C-6 and C-8 were all normal.

At 2000 yards the sheep at position C-9 had second degree burns on the ears and extensive wool burns covering 1/2 the body area. This animal suffered no other ill effects until epilation, i.e., loss of hair, appeared 8 May. This animal has as yet shown no inappetence and it is considered to have a better than average chance to effect a recovery. The dose of radiation this animal received was 253 r. The sheep at position C-8 had third degree burns on the face and moderate wool burns.

It suffered no other ill effects until epilation appeared 10 May. This animal has, as yet, shown no inappetence and it is believed that it will recover. The radiation dosage for this animal was 175 r. The sheep at position C-7 suffered no visible effects from the detonation. Epilation ensued 10 May. This animal has, as yet, shown no inappetence and it is believed that it will recover. The radiation dosage for this animal was 113 r. The sheep at position C-5 and C-6 were both normal.

At 1500 yards the sheep at position C-9 had third degree burns on the face and extensive wool burns. It refused food and water after being returned to the sheep pens and died the night of 26 April. The data on the amount of radiation received by this animal was lost, but it is assumed to have received in excess of 1000 r. The sheep at position C-8 had moderate wool burns. It remained normal until 3 May when epilation ensued. This animal has not shown any inappetence, but it is inconceivable that this animal will survive since the radiation dosage it received was 950 r. The sheep at position C-6 and C-7 have shown no visible effects. The radiation dosage reported for them was 464 r and 427 r respectively. At position C-5 the entrance to the bunker collapsed so the sheep is assumed to have died from suffocation.

The sheep in the conventional type trenches at 1500 and 1700 yards initially suffered no visible effects. Epilation appeared in the sheep placed at 1700 yards on 3 May. It has shown no inappetence, so it is assumed this sheep will recover. The radiation dosage received by this animal was 173 r. Epilation appeared in the sheep placed at 1500 yards on 10 May. This sheep has shown no inappetence, so it is assumed it will recover. The radiation dosage received by this sheep was 222 r. Both sheep have previously been exposed to an atomic detonation.

At 1000 yards the sheep at position C-9 was killed by blast effects. It was blown back approximately 50 yards. The sheep at position C-8 was killed by blast effects. It was blown clear of the trench and back approximately 40 yards. The sheep at position C-7 had extensive wool burns on the back. It developed in-coordination the morning of 26 April and became prostrate the afternoon of 27 April. Death occurred the night of 27 April. Death was attributed to acute radiation sickness. The radiation dosage this animal received was 10,735 r. The sheep at position C-6 initially suffered no visible effects. It became prostrate the afternoon of 28 April and died the night of 28 April. There was a complete absence of external injuries, and this can be considered a typical case of acute lethal radiation sickness. The radiation dosage received by this animal was 4,638 r. The sheep at position C-5 initially suffered no visible effects. Epilation appeared 10 May. This animal has shown no inappetence, but it is doubtful that this animal will recover since the radiation dosage received was 623 r.

At 500 yards the sheep at position C-6, C-7, C-8 and C-9 were all killed by blast effects. At position C-5 the bunker was collapsed, so it is assumed the sheep at this position died directly from blast effects or indirectly from suffocation.

Total number of sheep exposed thirty-seven; eight killed directly or indirectly from blast (suffocation); three died from acute lethal doses or radiation. At the present time twenty-six of the original thirty-seven are still alive. It is considered that at least two of this total will eventually die.

It will be noted that the picture section of this report is rather brief in comparison with the two proceeding reports. This is due to the fact that there was too much radiation present in the display area, and consequently a photographer could not enter this area for several days following the detonation.

VII. VOLUNTEER OBSERVER PROGRAM.

Volunteer observer trenches were located 2000 yards from ground zero on an azimuth of approximately 180°. Trenches were 6 feet deep and 3 feet wide. One trench was revetted with sandbags and timber. The second was an unrevetted trench with a sandbag parapet.

The volunteers consisted of 7 Army Officers and 1 Naval Officer. All officers were well indoctrinated in the field of special weapons and capable of calculating effects of atomic weapons, utilizing TM 23-200, dated 1 Oct 1952. After careful calculation all agreed that the trenches were located at a safe distance for a weapon of the yield predicted.

The atomic weapon exploded was an experimental device placed on a 300 foot tower. The predicted yield was estimated as 35 KT, plus or minus 5 KT. Calculations of volunteers were based on the highest predicted possibility, 40 KT. It is estimated that the actual yield, although not available at this time, will probably exceed the highest predicted possibility by as much as 25 percent.

Weather data for Ground Zero at the time of burst were:

Temperature	53 degrees F
Wind Direction	040 degrees T
Wind Speed	7 Knots
Visibility	50 miles
Pressure	870 millibars

Volunteers reported the following effects were noted:

Initial flash. The light was reported as being of great intensity. Objects in the trench could not be distinguished during the period of greatest intensity. Normal vision returned immediately after the light subsided.

Thermal effects. All observers reported feeling heat from above at the time of the light. This heat was not intense but was distinctly noticeable. There were no instruments available for measuring the amount of heat received in the trench.

Blast effects. The air blast was reported as a very loud sharp noise. Concussion pressure was felt but no pain or after effects were noted. Sand and dirt blown into the trenches by the air blast.

Ground shock. The ground shot was described as being short vibration-like motions similar to a mild earthquake. The duration of the shock was short and no separate pulses were felt.

Nuclear radiation effects. First reading noted on radiac instruments gave a rate of 100 roentgens per hour. During the 5 minute period the volunteers remained in the vicinity of the trenches this rate fell to 20 roentgens per hour. As the group moved toward the road, to meet vehicles sent forward to evacuate them, they passed through a heavy fall out of sand sized particles carrying a radiation reading of 50 roentgens per hour. As they evacuated to the rear radiac instrument readings declined rapidly to 1 roentgen per hour 1000 yards in rear of the trenches they had occupied. Dosimeters carried by the volunteers registered an average total dosage of 10.4 roentgens. Developed film badges registered total dosages ranging from 11.7 to 16.3 roentgens. The wide range of the readings of these film badges raises a question as to the reliability that should be assigned to readings so obtained.

Miscellaneous effects. At the instant of first light several observers felt a shock variously reported as similar to an earth tremor or air blast. One observer holding a telephone, connected to a direct line between volunteer trench and control trench, received a distinct electric shock and a tingling sensation about the neck. The operator holding the telephone in the control trench (at 4000 yards from Ground Zero) reported receiving a shock equivalent to that received when holding a bare 110 volt electric wire. All observers reported a generally reduced efficiency during the first 5 minutes after the blast because of heavy dust conditions.

The following conclusions were made by the volunteer observers:

That troops would gain very little by being entrenched closer to Ground Zero than 4000 yards during orientation and indoctrination exercises because:

They can feel the effects of the detonation at this distance as well as they could at a closer point.

They can better observe the fireball and mushroom cloud.

They are sufficiently removed from the heavy dust and possible radiation hazard.

That the present volunteer observer program, with present mission and limiting criteria, has served its purpose and should be discontinued.

That a volunteer program of this type with a mission of indoctrination for personnel having special weapons training or assignments with special weapons programs would be worthwhile.

That future volunteer programs would have greater value if volunteers were positioned in a variety of standard field fortifications and combat vehicles approximating actual combat conditions.

That instrumentation placed in the trenches to record pressures, heat, ground shock, and nuclear radiation would be of assistance in evaluating observer's reactions.

MARINE CORPS AIR (HELICOPTER).

Marine Helicopters "A" and "B" were positioned at approximately 12,440 yards from ground zero. Helicopter "A" was positioned with its left side exposed and "B" was facing the blast. From one (1) minute prior to the blast until after the passage of the shock wave, Helicopters "A" and "B" hovered at about ten (10) feet above the ground.

The pilots of Helicopters "A" and "B" protected their eyes by lowering the bills of their caps so as to shield their eyes from the flash. The pilots experienced no flash blindness. The co-pilots were standard 4.2 density goggles at the time of detonation and were prepared to assume control of the helicopter should the pilot be blinded by the flash.

Helicopters "A" and "B" were subjected to .59 psi at their position. The control of the helicopters was not effected; however, a window in the passenger compartment of Helicopter "A" was blown out of the rubber molding. No other damage occurred.

After passage of the shock wave, Helicopters "A" and "B" proceeded toward the shot area. Helicopter "A" skirted the dust column noting radiological conditions up to 50 r/hr. Helicopter "B" proceeded to a position 2000 yards west of ground zero and landed. The monitor in "B" disembarked and continued on foot to a position 950 yards from ground zero recording radiological readings up to 10 r/hr.

Helicopter "C" took off from Camp Desert Rock twenty two (22) minutes prior to detonation and arrived at the south end of Yucca Lake two (2) minutes prior to detonation. Helicopter "C" was continuing its flight toward the shot area at the time of detonation and during the passage of the shock wave maintaining 400 feet altitude and 60 knots indicated air speed. The pilot protected his eyes from the direct rays of the flast by lowering the bill of his cap and concentrating his vision on the flight instruments. No flash blindness was noted. The co-pilot wore standard 4.2 density goggles. The passage of the shock wave, which subjected "C" to .55 psi, did not effect the control or harm the helicopter in any way.

After passage of the shock wave, Helicopter "C" proceeded around the upwind side of the dust column and landed about 2200 yards northwest of ground zero.

Trip Report of Field Search
for Exercise Desert Rock Documentation
Conducted by Representatives of The Adjutant General
18 June 1978 to 14 July 1978

Mini-GFSR for the Automation of the
US Army Portion of the DOD Nuclear
Test Personnel Review (NTPR) Program

INCLOSURE #2 to the
Summary Statement

RE: Mini-GFSR for the automation of the Army portion of the DOD Nuclear Test Personnel Review (NTPR) Program.

1. SYSTEM TITLE: Army Nuclear Test Personnel Review (ANTPR).

2. SYSTEM CLASSIFICATION: Data acquisition and process control.

3. GENERAL DESCRIPTION OF FUNCTIONAL AREA: The system, when fully implemented, will be an immediately accessible data base containing information on all individuals involved in nuclear atmospheric testing. The system objective is to provide an automated method of searching a variety of data sources, assembling required information in a common base, and providing a data base update and random query capability for records on at least 100,000 person involved in nuclear atmospheric testing during the period 1945 to 1962. The process will be iterative in nature starting with data collection followed by data validation and culminating in a continuing need to update and provide data in support of medical follow-up, litigation and claims of over at least the next 5 to 7 years. Data sources are numerous including DA, DOD, other government agencies, and civilian contractor sources (see attachment 1). Data elements are also numerous including a need to identify the source of most separate bits of data (see attachment 2). DA agencies involved include as a minimum: OCSA, OTAG, OTSG, ODCSOPS and OTJAG. Numerous agencies outside DA will also have to interface with the data base, these are elaborated on in more detail in paragraph 7.

4. SYSTEM OBJECTIVES: It is not possible at this time to envision all the objectives since the ANTPR is iterative in nature and has the

potential for long term use. Some specific system objectives are listed below.

a. Establish a system that is capable of assimilating data from a variety of sources (attachment 1) in a variety of input modes i.e., computer tape to computer tape, card to tape, transaction tape to computer tape and hard copy to computer tape.

b. The initial phase (already underway) is primarily data reduction - hard copy source documents to transaction tape. Additional AAD assistance is required in terms of increased data reduction capability.

c. Once the data base is established, a random query capability preferably by CRT, will be required. This capability needs to be on-line in order to provide timely answers to Congressional, Federal agency, and private inqueries.

d. There will be a continuous requirement to update the data base with new or more current information. This should be done "on-line" by CRT so the program manager has immediate acess to current files in order to compare new or conflicting data and determine data validity in cases of conflicting information.

e. A random ad hoc query capability is required for the following data sorts as a minimum.

(1) Ability to review the records on an individual.

(2) Identify all individuals in a specific Army unit at a specific time.

(3) Identify all individuals with specific dose reading or dose ranges over various time periods.

(4) Identify individuals at a specific test site and for specific time periods.

(5) Identify individuals by shot status i.e., participant, observer, volunteer.

(6) Identify individuals by organization outside the Army i.e., DOE, contractors, press etc.

(7) Identify individuals with specific medical maladies.

(8) In general, we need the capability to fix parameters on each data element and sort out records that fit those parameters.

f. Once a validated data base is established, certain data elements will have to be reported to DOD in a format yet to be determined.

5. ASSUMPTIONS: Congress will continue to have great interest in this program. The results of this data collection and research effort could have international significance if low level radiation exposure increases the incidence of cancer.

6. CONSTRAINTS: The events being researched occurred 20 to 25 years ago. Formats of existing computerized data probably vary widely between agencies since the systems were not designed to be compatible. Social security numbers, a key interface data element, will not be available initially since most source documents contain a service number rather than a SSAN. The system is required by 1 August 1978

which may be a short suspense for such an effort. About 90% of the system requirements have been identified as of now, the remaining requirements will be developed during the course of the system development.

7. SYSTEMS INTERFACE:

External Interface: (see attachment 1 for abbreviations) GSA - Records availability search VA - SSAN and claims information DNA - a. Computerized list of telephone and letter information b. Two contractor theoretical dose programs. c. Report of final results and subsequent updates. DOE - Computerized dose information HEW - CDC medical follow-up program All Other Services - Data exchange on Army personnel involved in other service tests and visa versa DASIAC - Source document identification IRS - SSAN NAS - Exchange of detailed data on specific individuals DRB - Any available data NPRC - Any available data
Purpose/Requirement: (See external interface above)
Input Vehicle: Magnetic transaction tape, computer tape, punch cards

Constraints: see paragraph 6
Interface Event: Data input from a variety of sources already described. Periodic exchange of data between agencies. Congressional report requirements. Final DOD report input.
Frequency of Interface: Continuous
Security Classification: Unclassified but subject to privacy act provisions.
Remarks: It is desirable to have computer interface with any source of missing information if feasible. Information sources are not limited to those identified in attachment 1. As new data sources are discovered during the research phase they will be exploited.

8. BENEFITS OF THE SYSTEM: It appear evident without detailed economic analysis that data collection, analysis, update and exchange of information on 100,000 individuals involving 30 or more data sources over a 5 to 7 year period would require for more resources to accomplish manually than by computer.

9. AUTHORIZATION DIRECTIVE: DAS Memorandum of 28 April 1978, subject, Automation Support for the Nuclear Test Personnel Review (NTPR) Program.

10. DATA COMMUNICATIONS: On line cathode ray tube type access is required at DACS-DMC and TAG. Hard copy print capability is required but not necessarily at DACS-DMC and TAG.

11. SECURITY REQUIREMENT: Unclassified.

12. PRIVATE IMPACT: Privacy act provisions apply.

13. PROJECT CONTROL: DACS-DMC is the current focal point. The ANTRP will eventually be assigned to another DA Staff agency probably TAG.

14. BACKUP REQUIREMENTS: Copies of other agency computer inputs must be maintained. A method to insure our master data base cannot be destroyed, must be provided.

12 Jun 78

DATA SOURCE CODES

01. Lexington Blue Grass Microfilm
02. Morning Reports
03. Security Clearance Forms
04. Orders
05. Security Rosters
06. Discharge Papers
07. Medical Records
08. Letters and phone calls other than JAYCOR
09. Letters and phone calls - JAYCOR
10. General Services Administration (GSA)
11. Veterans Administration (VA)
12. Reynolds Electrical Engineering Company (REECO) Tape
13. Center for Disease Control (CDC)
14. Internal Revenue Service (IRS)
15. Science Applications, Inc. (SAI)
16. National Academy of Sciences (NAS)
17. The Adjutant General (TAG)
18. Navy
19. Air Force
20. Marines
21. Coast Guard
22. Army
23. Assumed Dose - JAYCOR
24. Assumed Dose - SAI
25. DA Analysis of Data
26. Defense Nuclear Agency (DNA)
27. DASIAC
28. Muster Rolls (Navy)
29. Deck Log of Officers (Navy)
30. Daily Deck Log (Navy)
31. REECO Microfilm
32. Discharge Review Board - DRB
33. Army Council of Review Boards - ACRB
34. Army Board for Corrections of Military Records - ABCMR
35. National Personnel Records Center - NPRC
36. USA Reserve Components Personnel and Administration Center - RCPAC
37. Retired Pay Division - US Army Finance and Accounting Center
38. Federal Bureau of Investigation (FBI)

Trip Report of Field Search
for Exercise Desert Rock Documentation
Conducted by Representatives of The Adjutant General
18 June 1978 to 14 July 1978

Authority for the Field Search
and Preparatory Instructions to
US Army Field Commands and certain other Federal Agencies

INCLOSURE #3 to the
Summery Statement

01 33 PP PP UUUU

NO

CDRTAGCEN WASHDC //DAAG-AMR//

CDR CP MERCURY LAS VEGAS NV

CDR LOS ALAMO SCIENTIFIC LAB SANTA FE NM

CDRFLDCOMDNA KIRTLAND AFB NM

CDRUSASIX SFRAN CA

CDRLAMC SFRAN CA

CDR FT ORD CA

CDRSAAD SACRAMENTO CA

CDR FT LEWIS WA

INFO CDRFORSCOM FT MCPHERSON GA

CDRTRADOC FT MONROE VA

CDRDARCOM ALEX VA

CDRHSC FT SAM HOUSTON TX

ZEN DNA WASHDC

ZEN DOE WASHDC

UNCLAS

SUBJECT: SEARCH FOR NUCLEAR TESTING RECORDS

1. DR. JOHN H. HATCHER, GS-14, MANAGEMENT ANALYST, SSN 301-26-6120, TOP SECRET CLEARANCE, REPRESENTING THE OFFICE OF THE CHIEF OF STAFF,

CF: DR. HATCHER, DAAG-AMR-D

MR. R. S. CHRISTIAN, MGT ANAL

DAAG-AMR-S,AUTOVON 223-1847,8 JUN 78

09 1755Z JUN 1978

ROME D.SMYTH,COL,GS,DAAG-AM,AUTOVON 223-7688

UNCLASSIFIED

02 03

US ARMY WILL VISIT YOUR INSTALLATION/ORGANIZATION FOR THE PURPOSE OF CONDUCTING A FIELD SEARCH FOR DOCUMENTATION PERTAINING TO THE DESERT ROCK EXERCISES IN THE MID-1950'S.

2. ITINERARY FOLLOWS:

ARRIVAL DATE	LOCATION
25 JUN 78	CAMP MERCURY, LAS VEGAS, NV
27 JUN 78	SANDIA BASE, ALBUQUERQUE, NM
29 JUN 78	LASL, SANTA FE, NM
3 JUL 78	PRESIDIO SF, HQ 6TH ARMY, LAH, CA
5 JUL 78	SACRAMENTO ARMY DEPOT, CA
7 JUL 78	FT ORD, CA
10 JUL 78	FT LEWIS, WA

3. ACTION ADDRESSEES ARE REQUESTED TO PROVIDE LOCAL SUPPORT AND SUCH ASSISTANCE AS REQUIRED TO COMPLETE THE RECORDS SEARCHES. REQUEST THAT POCS BE APPOINTED AND NAMES AND TELEPHONE NUMBERS BE FURNISHED THIS HQS ON RECEIPT OF THIS MSG. POC AT THIS HQS IS MR. R. S. CHRISTIAN, TELEPHONE AUTOVON 223-1847 OR COMMERCIAL 202/ 698-1847, RECORDS MANAGEMENT DIVISION, TAGCEN, FORRESTAL BUILDING, WASHINGTON, DC.

03 03

4. DOD, DOE, AND MACCM INFO ADDRESSEES ARE REQUESTED TO FURNISH CLEARANCES TO VISIT SUBORDINATE ORGANIZATIONS/ACTIVITIES.

UNCLASSIFIED

REQUEST AND AUTHORIZATION FOR TDY TRAVEL OF DOD PERSONNEL
(Reference: Joint Travel Regulations)
Travel Authorized as Indicated in Items 2 through 21.

1. DATE OF REQUEST: 8 June 1978

REQUEST FOR OFFICIAL TRAVEL

2. NAME *(Last, First, Middle Initial)*: HATCHER, John H. SSN: 301-26-6120

3. POSITION TITLE AND GRADE OR RATING: Management Analyst, GS-14

4. OFFICIAL STATION: DA, TAGCEN, WASH DC 20314

5. ORGANIZATIONAL ELEMENT: DAAG-AMR-D

6. PHONE NO.: 693-1847

7. TYPE OF ORDERS: TDY

8. SECURITY CLEARANCE: TOP SECRET (CNWDI)

9. PURPOSE OF TDY: Chief of Staff, U.S. Army Request to conduct field search for nuclear testing documentation.

10a. APPROX NO. OF DAYS OF TDY *(Including travel time)*: 21 Days

b. PROCEED O/A *(Date)*: 25 JUN 78

11. ITINERARY [X] VARIATION AUTHORIZED

WASH DC to Las Vegas, Nevada; Santa Fe, Albuguerque, NM; San Francisco, Monterey, Sacramento, California; Seattle, Washington; Kansas City, Kansas; and St. Louis, MO, and Return to WASH DC.

12. MODE OF TRANSPORTATION

COMMERCIAL				GOVERNMENT		
RAIL	AIR	BUS	SHIP	AIR	VEHICLE	SHIP
X	X	X		X	X	

[ ] AS DETERMINED BY APPROPRIATE TRANSPORTATION OFFICER *(Overseas Travel only)*

PRIVATELY OWNED CONVEYANCE *(Check one)*

RATE PER MILE:

[ ] MORE ADVANTAGEOUS TO GOVERNMENT

[ ] MILEAGE REIMBURSEMENT AND PER DIEM LIMITED TO CONSTRUCTIVE COST OF COMMON CARRIER TRANSPORTATION & RELATED PER DIEM AS DETERMINED IN JTR. TRAVEL TIME LIMITED AS INDICATED IN JTR.

13. [X] PER DIEM AUTHORIZED IN ACCORDANCE WITH JTR
[ ] OTHER RATE OF PER DIEM *(Specify)*

14. ESTIMATED COST

PER DIEM	TRAVEL	OTHER	TOTAL	15. ADVANCE AUTHORIZED
$ 735.00	$ 755.00	$ 50.00	$ 1540.00	$ 500.00

16. REMARKS *(Use this space for special requirements, leave, superior or 1st-class accommodations, excess baggage, registration fees, etc.)*

a. Coml air, is directed and nec to accomp msn.
b. Taxis and pvt rental cars in and around TDY areas is auth and approved.
c. 50 pounds excess baggage authorized.
d. Dr. Hatcher has full access to all records including libraries and locator information.
e. Authorized courier for classified documents.
f. GSA auto authorized (Billing Code: BOAC: 213043)

17. REQUESTING OFFICIAL *(Title and signature)*: GUY B. OLDAKER, Chief, Rec Mgt Div, TAGCEN

18. APPROVING OFFICIAL *(Title and signature)*: ROME D. SMYTH, COL, GS, Dir, Adm Mgt, TAGCEN

AUTHORIZATION

19. ACCOUNTING CITATION

2182020 11-6801 P951212.90007.ABJK-2119,2190 $23185
EOE 2119 $735.00
2190 805.00

R. C. Schober
R. C. SCHOBER,
Fiscal Officer, TAGCEN

20. ORDER AUTHORIZING OFFICIAL *(Title and signature)* OR AUTHENTICATION
FOR THE ADJUTANT GENERAL:
ROME D. SMYTH, COLONEL, GS
Director, Admin Mgt, TAGCEN

21. DATE ISSUED: 13 June 1978

22. TRAVEL ORDER NUMBER: 06-086R (11-977-78)

DD FORM 1 JUN 67 1610

21 01 PP PP UUUU

40

CDRTAGCEN WASHDC //DAAG-AMR//

CDRLBAD LEXINGTON KY

INFO CDRRAD TEXARKANA TX

ZEN CDR DARCOM ALEX VA //DRXAM-AR//

UNCLAS

SUBJECT: SEARCH FOR NUCLEAR TESTING RECORDS

1. DR. JOHN H. HATCHER, GS-14, MANAGEMENT ANALYST, SSN 301-26-6120, TOP SECRET CLEARANCE, REPRESENTING THE OFFICE OF THE CHIEF OF STAFF, US ARMY WILL VISIT YOUR INSTALLATION 19 AND 20 JUN 78 FOR THE PURPOSE OF CONDUCTING A FIELD SEARCH FOR DOCUMENTATION PERTAINING TO THE DESERT ROCK EXERCISES IN THE MID-1950'S.

2. ACTION ADDRESSEE REQUESTED TO PROVIDE LOCAL SUPPORT AND SUCH ASSISTANCE AS REQUIRED TO COMPLETE THE RECORDS SEARCHES. REQUEST THAT POC BE APPOINTED AND NAME AND TELEPHONE NUMBER BE FURNISHED THIS HQS ON RECEIPT OF THIS MSG. POC AT THIS HQS IS MR. R. S. CHRISTIAN, TELEPHONE AUTOVON 223-1847 OR COMMERCIAL 202/696-1847, RECORDS MANAGEMENT DIVISION, TAGCEN, FORRESTAL BUILDING, WASHINGTON, DC.

DAAG-AMR-S ACTION OFFICER (MR. CHRISTI

MR. R. S. CHRISTIAN, MGT ANAL

DAAG-AMR-S,AUTOVON 223-1847,12 JUN 78

ROME D.SMYTH,COL,GS,DAAG-AM,AUTOVON 223-7688

 UNCLASSIFIED

JUN 1978

REQUEST AND AUTHORIZATION FOR TDY TRAVEL OF DOD PERSONNEL

(Reference: Joint Travel Regulations)

Travel Authorized as Indicated in Items 2 through 21.

1. DATE OF REQUEST: 12 June 1978

REQUEST FOR OFFICIAL TRAVEL

2. NAME *(Last, First, Middle Initial)*: HATCHER, John H. SSN: 301-26-6120

3. POSITION TITLE AND GRADE OR RATING: Management Analyst, GS-14

4. OFFICIAL STATION: DA, TAGCEN, WASH DC 20314

5. ORGANIZATIONAL ELEMENT: DAAG-AMR-D

6. PHONE NO.: 693-1847

7. TYPE OF ORDERS: TDY

8. SECURITY CLEARANCE: TOP SECRET

9. PURPOSE OF TDY: Chief of Staff, U.S. Army Request to conduct field search for nuclear testing documentation.

10a. APPROX NO. OF DAYS OF TDY *(Including travel time)*: 2 Days

b. PROCEED O/A *(Date)*: 19 June 1978

11. ITINERARY [X] VARIATION AUTHORIZED

WASH DC to Lexington/Bluegrass Depot Activity, Lexington, KY & Ret to Washington, D.C.

12. MODE OF TRANSPORTATION

COMMERCIAL				GOVERNMENT		
RAIL	AIR	BUS	SHIP	AIR	VEHICLE	SHIP
X	X	X		X	X	

[ ] AS DETERMINED BY APPROPRIATE TRANSPORTATION OFFICER *(Overseas Travel only)*

PRIVATELY OWNED CONVEYANCE *(Check one)*

RATE PER MILE:

[ ] MORE ADVANTAGEOUS TO GOVERNMENT

[ ] MILEAGE REIMBURSEMENT AND PER DIEM LIMITED TO CONSTRUCTIVE COST OF COMMON CARRIER TRANSPORTATION & RELATED PER DIEM AS DETERMINED IN JTR. TRAVEL TIME LIMITED AS INDICATED IN JTR.

13. [X] PER DIEM AUTHORIZED IN ACCORDANCE WITH JTR.

[ ] OTHER RATE OF PER DIEM *(Specify)*

14. ESTIMATED COST

PER DIEM	TRAVEL	OTHER	TOTAL
$ ~~120~~ $70.	$ ~~70~~ $120.	$ 10	$ 200.00

15. ADVANCE AUTHORIZED: $

16. REMARKS *(Use this space for special requirements, leave, superior or 1st class accommodations, excess baggage, registration fees, etc.)*

a. Coml air, is directed and nec to accomp msn.
b. Taxis and pvt rentel cars in and around TDY areas is auth and approved.
c. 50 pounds excess baggage authorized.
d. Dr. Hatcher has full access to all records including libraries and locator information.
e. Authorized courier for classified documents.

17. REQUESTING OFFICIAL *(Title and signature)*: GUY B. OLDAKER, Chief, Rec Mgt Div, TAGCEN

18. APPROVING OFFICIAL *(Title and signature)*: ROME D. SMYTH, COL, GS, Dir, Admin Mgt, TAGCEN

AUTHORIZATION

19. ACCOUNTING CITATION

2182020 11-6801 P951212.90007.ABJK-2119,2190 S23185
EOE ~~2119~~ $ 70.00
2190 130.00

R. C. SCHOBER
Fiscal Officer, TAGCEN

20. ORDER AUTHORIZING OFFICIAL *(Title and signature)* OR AUTHENTICATION

FOR THE ADJUTANT GENERAL:
ROME D. SMYTH, COLONEL, GS
Director, Admin Mgt, TAGCEN

21. DATE ISSUED: 14 June 1978

22. TRAVEL ORDER NUMBER: 06-090R (11-981-78)

DD FORM 1 JUN 67 1610

REQUEST AND AUTHORIZATION FOR TDY TRAVEL OF DOD PERSONNEL

[illegible] 20 June [illegible]

REQUEST FOR OFFICIAL TRAVEL

2. NAME [illegible] SMITH, Robert P. (SSN: 133-30-4422)	3. POSITION TITLE AND GRADE OR RATING Archivist, GS-11
4. [illegible] STATION HQDA (DAAG-AMR-S) WASH DC 20310	5. ORGANIZATIONAL ELEMENT DAAG-AMR-S; 6. PHONE NO. 693-18-7
7. TYPE OF ORDERS TDY; 8. SECURITY CLEARANCE TOP SECRET	9. PURPOSE OF TDY Research Nuclear Testing Records During 1950's.
10. APPROXIMATE OF DAYS OF TDY (Including travel time) 5 Days; 5. PROCEED O/A (Date) 10 July 1978	

11. ITINERARY [X] VARIATION AUTHORIZED

WASH DC to St. Louis, MO & return.

MODE OF TRANSPORTATION

COMMERCIAL				GOVERNMENT			PRIVATELY OWNED CONVEYANCE (Rate per mile)
[illegible]	[illegible]	BUS	SHIP	AIR	VEHICLE	SHIP	RATE PER MILE
	X						[ ] MORE ADVANTAGEOUS TO GOVERNMENT

[ ] AS DETERMINED BY APPROPRIATE TRANSPORTATION OFFICER (Overseas Travel Only)

[ ] MILEAGE REIMBURSEMENT AND PER DIEM LIMITED TO CONSTRUCTIVE COST OF COMMON CARRIER TRANSPORTATION & RELATED PER DIEM AS DETERMINED IN JTR. TRAVEL TIME LIMITED AS INDICATED IN JTR

13. [X] PER DIEM AUTHORIZED IN ACCORDANCE WITH JTR
[ ] OTHER RATE OF PER DIEM (Specify)

14. ESTIMATED COST

PER DIEM	TRAVEL	OTHER	TOTAL	15. ADVANCE AUTHORIZED
$170	$168	$100	$438	$235.00 ~~$400~~ MW

16. REMARKS Use this space for special requirements, leave, superior or 1st-class accommodations, excess baggage, registration [illegible]

Commercial and/or rental car authorized in & around TDY area.

17. REQUESTING OFFICIAL (Title and signature) Guy B. Oldaker GUY B. OLDAKER, Chief, RecMgtDiv, TAGCEN	18. APPROVING OFFICIAL (Title and signature) Rome D. Smyth ROME D. SMYTH, COL, GS, Dir, Admin Mgt, TAGCEN

AUTHORIZATION

19. ACCOUNTING CITATION

2182020 11-6801 P951212.90007.ABJK-2119,2190 S23185
EOE ~~2119~~ $170.00
2190 268.00

R. C. Schober
R. C. SCHOBER
Fiscal Officer, TAGCEN

20. ORDER AUTHORIZING OFFICIAL (Title and signature) OR AUTHENTICATION FOR THE ADJUTANT GENERAL: ROME D. SMYTH, COLONEL, GS Director, Admin Mgt, TAGCEN Rome D. Smyth	21. DATE ISSUED 28 June 1978; 22. TRAVEL ORDER NUMBER 07-011R (11-1049-78)

DD FORM 1 JUN 67 1610

Trip Report of Field Search
for Exercise Desert Rock Documentation
Conducted by Representatives of The Adjutant General
18 June 1978 to 14 July 1978

HQDA Memorandum (DACS-DMC), 12 April 1978, Subject: Nuclear Test Personnel Review Priority of Effort

INCLOSURE #4 to the
Summary Statement

WASHINGTON, D.C. 20310

12 April 1978

DACS-DMC

MEMORANDUM FOR COLONEL McINDOE

SUBJECT: Nuclear Test Personnel Review Priority of Effort

1. Reference is your 24 March 1978 memorandum, subject as above, requesting Service recommendations for priority of effort in developing the required reports.

2. At Inclosure 1 are prioritized recommendations for the various Desert Rock (DR) series at the Nevada Test Site. Supporting rationale for priority assignment is as outlined below:

Priority	Series	Rationale
1	DR VII & VIII (1957) 28 May - 21 Sep	- Largest number of troops involved - Widespread media/public interest, especially in Smoky - Good availability of information - Informal request by NAS
2	DR VI (1955) 18 Feb - 5 May	- Relatively large troop population - Number of shots in the test series - Different types of shots in the test series - Relatively complete data base
3	DR V (1953) 17 Mar - 25 Mar	- Large number of troops involved - Most shots for which potential problems exist - Army responsible (1st instance) for radiation monitoring - Data base initially incomplete, now relatively complete
4	DR I (1951) 1 Nov	- 1st series using troops - Radiation data base (REECO) complete although not in usable form - Potential use as comparison base with other shots

DACS-DMC
SUBJECT: Nuclear Test Personnel Review Priority of Effort

Priority	Series	Rationale
5	DR IV (1952) 28 Nov - 1 Dec	- Fairly sizable troop population in comparison with remaining series - More shots in series than remaining series - Army given more responsibility in radiation monitoring - No potential problems noted
6	DR III (1951) 29 Nov	- Single shot in series - Small yield - High radiation levels reported - Potential problem - Only observers present for shot
7	DR II (1951) 19 Nov	- Single shot - Small yield - No problems reported

Within each test series, shots are arranged first according to potential problems and then according to the reported size of the troop population.

3. Inclosure 2 is submitted as a recommended breakout of volume/series essentially arranged geographically along chronological lines with separate volumes for each year. This format is suggested because of simplicity in treating each shot series and the relative ease in accommodating changes in radiation monitoring procedures that apparently took place from year to year. The grouping/number of volumes may change depending on the overall size of each. The Trinity shot is recommended for separate treatment, preferably in an overview volume.

2 Incl
as

VICTOR J. HUGO, JR.
Colonel, GS
Chief, Coordination, Analysis,
and Reports Division
Management Directorate

2

NUCLEAR TEST PERSONNEL REVIEW

REPORT PRIORITIES BY SHOT SERIES AND SHOT

Priority 1 DESERT ROCK VII/VIII		Priority 2 DESERT ROCK VI		Priority 3 DESERT ROCK V		Priority 4 DESERT ROCK I		Priority 5 DESERT ROCK IV		Priority 6 DESERT ROCK III		Priority 7 DESERT ROCK II	
Shot	Date	Shot	Date	Shot	Date	Shot	Date	Shot	Date	Shot	Date	Shot	Date
Smoky	31Aug57	*Bee	22Mar55	Badger	18Apr53	Dog	1Nov51	Charlie	22Apr52	Uncle	29Nov51	Sugar	19Nov51
*Hood	5Jul57	Apple II	5May55	Nancy	24Mar53			*Dog	1May52				
Galileo	25Sep57	Wasp	18Feb55	Annie	17Mar53			Fox	25May52				
John	19Jul57	Apple	29Mar55	Simon	25Apr53			George	1Jun52				
Priscilla	24Jun57	Tesla	1Mar55	Harry	19May53								
Kepler	24Jul57	ESS	23Mar55	Grable	25May53								
Stokes	7Aug57	Turk	7Mar55	Encore	8May53								
Diablo	15Jul57	Met	15Apr55	Dixie	6Apr53								
Doppler	23Aug57	Moth	22Feb55	Ray	11Apr53								
Wilson	18Jun57	Wasp	29Mar55										
Franklin	30Aug57	Post	9Apr55										
Owens	25Jul57	Hornet	12Mar55										
Boltzman	28May57												
Lassen	5Jun57												
Shasta	18Aug57												
Franklin	2Jun57												
Wheeler	6Sep57												
LaPlace	8Sep57												
Fizeau	14Sep57												
Newton	16Sep57												
Ranier	19Sep57												
Whitney	23Sep57												
Charleston	28Sep57												

*USMC Shot

NTPR FINAL REPORTS

VOL I CONUS 1951			
Nevada	Ranger	(5 shots)	
Nevada	Buster Jangle (DR I-III)	(7 shots)	Troops
VOL II CONUS 1952			
Nevada	Tumbler Snapper (DR IV)	(8 shots)	Troops
VOL III CONUS 1953			
Nevada	Upshot Knothole (DR V)	(11 shots)	Troops
VOL IV CONUS 1955			
Nevada	Teapot (DR VI)	(14 shots)	Troops
VOL V CONUS 1957			
Nevada	Plumbbob (DR VII-VIII)	(24 shots)	Troops
VOL VI CONUS 1958			
Nevada	Hardtack Grizzly	(18 shots)	
VOL VII PACIFIC 1946			
Bikini	Crossroads	(2 shots)	
VOL VIII PACIFIC 1948			
Eniwetok	Sandstone	(3 shots)	
VOL IX PACIFIC 1951			
Eniwetok	Greenhouse	(4 shots)	
VOL X PACIFIC 1952			
Eniwetok	Ivy	(2 shots)	

VOL XI PACIFIC 1954

Bikini	Castle	(5 shots)
Eniwetok	Castle	(1 shot)

VOL XII PACIFIC 1955

Pacific Ocean	Wigwam	(1 shot)

VOL XIII PACIFIC 1956

Eniwetok	Redwing	(11 shots)
Bikini	Redwing	(6 shots)

VOL XIV PACIFIC-ATLANTIC 1958

Eniwetok	Hardtack	(22 shots)
Bikini	Hardtack	(10 shots)
Johnston Island	Hardtack Newsreel	(2 shots)
South Atlantic	Argus	(3 shots)

Trip Report of Field Search
for Exerci. ' Desert Rock Documentation
Conducted by Representatives of The Adjutant General
18 June 1978 to 14 July 1978

United States Atomic Energy Commission, NVOO, Las Vegas, 1 May 1970, Subject: Desert Rock Personnel Exposure

INCLOSURE #5 to the
Summary Statement

UNITED STATES
ATOMIC ENERGY COMMISSION
NEVADA OPERATIONS OFFICE
P. O. BOX 14100
LAS VEGAS, NEVADA 89114

MAY 1 1970

Martin B. Biles, Director
Division of Operational Safety, HQ
ATTN: Roy D. Maxwell, Chief, NEES
Division of Operational Safety, HQ

DESERT ROCK PERSONNEL EXPOSURE

This report is submitted in partial fulfillment of a request by Dr. Roy D. Maxwell, Division of Operational Safety, to research all available records in answer to the following questions:

a. How many troops were exposed during the Desert Rock Exercises?

b. What range of exposures did the participating troops incur?

A meeting was held March 12, 1970 with Col. R. Ray of the Military Liaison Committee, where the decision was made "to only identify military exposures which exceeded the criteria dose". With this decision only the names of military personnel whose exposure was equal to or greater than 5 rem were recorded.

This report is submitted as a preliminary report rather than a final one to allow the reporting of any additional individuals whom may be identified in yet to be located records.

In answer to the questions proposed above, the information was compiled and is reported by year and exercise as follows:

a. 1951, 1952 - Buster Jangle - Tumbler Snapper Series

Because the exercise reports for these series were not located, the exact number of participating personnel is not as yet known. Dosimetry records maintained during this period of time however, appear to be comprehensive with several thousand names identified as Desert Rock with exposures listed. These dosimetry records were obtained from Col. E. Fountain, U. S. Army during a process consolidation of exposure records at the Nevada Test Site. A review of the records indicated only five (5) individuals whose exposure exceeded 5 rem (see Enclosure 1).

b. 1953 - Desert Rock V - Upshot-Knothole Test Series

The number of military personnel who participated in nine (9) events of this series are as follows:

Army - 13,364 Navy and Marine Corps - 2,921

Air Force - 1,273

The dosimetry criteria established for this test series did not provide for individual dosimeters. Dosimetry was accomplished by issuing one film badge and one pocket dosimeter per platoon. Observers were issued one film badge per bus load.

The dosimetry for the participating troops was "apparently" performed by the test site dosimetry organization. This is assumed from a statement made in the conclusions and recommendations section of the Desert Rock V report. The statement in effect suggests that a separate dosimetry unit be assigned and made available for the participating troops in future Desert Rock exercises.

The records as maintained by Reynolds Electrical & Engineering Co., Inc. (REECo) were searched for military exposures exceeding 5 rem during 1953. Forty-one (41) individuals were identified as military personnel in excess of 5 rem (see Enclosure 1). The Desert Rock V report mentions that the 1st Battalion, 8th Marines encountered a highly radioactive area. Dosimeters carried by personnel registered more than 6R. The Battalion was subsequently removed from further test activity. To date no specific names have been identified in the records as belonging to the 8th Marines. Efforts to search the 1953 records to locate individuals as representatives of this group are continuing.

c. 1955 - Desert Rock VI - Teapot Test Series

The total number of military personnel participating in this exercise totaled 8,135. Actual troop observers directly associated with the test events are estimated to be 2,088. The Dosimetry Criteria or the issuance of film badges is as follows:

(1) One badge per permanent party observer.

(2) One badge per VIP.

(3) One badge per squad of official observers.

(4) One badge per tank crew.

(5) One badge per individual not in a group.

There has been no comprehensive dosimetry record of the Desert Rock participants located for exercise Desert Rock VI at this date. In the Desert Rock VI report under the Appendix entitled "Signal Corps", statements are made describing the presence of two photo vans and the processing of 7,500 film badges. Statements were made telling that the photo team also handled the photo dosimetry. From this information, it is believed that the complete record for this exercise is stored somewhere with the records of the Signal group who performed the photo coverage. The list of participating agencies in the Desert Rock VI report makes mention of a [redacted] This group is the likely candidate for possessing the dosimetry records of interest for [redacted] Enclosure 1 lists those military personnel with greater than 5 rem exposure as extracted from the records maintained by REECo.

See Enclosure 3 for the listing of agencies and personnel contacted in attempting to locate the 1955 dosimetry records.

The following exposure summary was extracted from the Desert Rock VI report.

97 persons received >3R < 6R

15 persons received >6R < 20R

2 persons received >20R

d. <u>1957 - Desert Rock VII and VIII - Plumbbob Series</u>

The total number of participating military personnel was 20,103. Actual event related personnel is believed to be closer to 6,218. The dosimetry criteria during these exercises called for film badging of each individual involved in the operation.

The dosimetry support was provided by the Sixth U. S. Army Signal Nucleonics Branch, Lexington Signal Depot, Lexington, Kentucky. The dosimetry records were located at Lexington. The records were retrieved, examined and eleven (11) individuals were listed in excess of 5 rem (see Enclosure 2).

Exposures of military personnel extracted from REECo's dosimetry records for the Plumbbob Series are listed in Enclosure 1. All these individuals were from Kirtland Air Force Base, New Mexico.

Robert E. Miller
Manager

ORB:BMC-353

Enclosures:
1. Individuals Exceeding 5 rem
2. Individuals Exceeding 5 rem for 1957
3. Agencies and Persons contacted

cc: Col. Roger Ray, Military Liaison Comm., HQ, w/encls.

AGENCIES AND PERSONS CONTACTED

AGENCY	INDIVIDUAL	REMARKS
AEC/NV Consultant	Dr. Clinton S. Maupin	No knowledge of dosimetry procedures.
6th Army HQ	Lt. Col. Huot	Directed us to several retired officers whom wer unable to give any useful information. Col. Huot d not find any records of interest.
Chemical Core School Fort McClellan, Ala.	Col. Powell	Dosimetry Records at Fort McClellan contain only exposures received by personnel during training at the school.
Edgewood Arsenal	Mr. Earl Wright	Gave directions to the Lexington Depot.
Evans Signal Lab. Ft. Monmouth, N.J.	Capt. Walden	Looked for the 232nd Sign Company and found they w believed to be in Vietnam Col. R. Ray's office cont ed and they have asked th to try to locate the 232r records.
Los Alamos Scientific Laboratory, Mercury, Nevada	Col. Gordon Jacks (retired)	Provided contacts at Edg wood and Lexington.
Lexington Signal Depot Lexington, Kentucky	Mr. Ed Adney Mr. Joseph King	Provided the 1957 Dosim (400 ft. of 16 mm microf Had no knowledge of effor in dosimetry by other Si Corps organizations.
Sacramento Army Depot Sacramento, California	Mr. Burt Anderson	Sacramento only has reco since the beginning of i existence in 1958.
Sandia Base Albuquerque, N. M.	Col. Service	Directed us to Col. Ed Fountain, he knew of no storage locations of other than Mercury, Neva and Lexington, Kentucky.

AGENCIES AND PERSONS CONTACTED (Con't)

AGENCY	INDIVIDUAL	REMARKS
Walter Reid Army Hospital Washington, D. C.	Maj. Kendall's office, Health Physics officer	Was unable to locate any records of interest.
	Col. Ed Fountain	Gave directions to the Army Lexington Depot
Hospital, Sandia Base	Col. Fitzpatrick	——
DASA, Sandia Base	Col. Gray	——

Trip Report of Field Search
for Exercise Desert Rock Documentation
Conducted by Representatives of The Adjutant General
18 June 1978 to 14 July 1978

ANNEX A
Lexington-Bluegrass Army Depot Activity
Date of Visit: 18-20 June 1978

1. PERSONNEL AND AGENCIES CONTACTED:

a. LTCOL George S. Crawford, Acting Depot Commander
b. Mr. Jerome Flynn, Depot Chief Administrative Officer
c. Mr. Joseph King, Senior Health Physicist, Nucleonics Branch
d. Mr. Edward Abney, Nucleonics Technician (ADP)
e. Mr. Paul Rogers, Nucleonics Technician

2. BACKGROUND:

a. The installation occupied by the US Army Lexington-Bluegrass Depot Activity was established about 15 miles distant from Lexington, Kentucky, at the beginning of World War II, circa 1941-42. It was originally chartered as a Signal Corps Depot and training activity and has performed communications and electronics responsibilities to the present. In recent years, it has performed maintenance, modification and repair functions for electronics equipment. It is now a Department of the Army Readiness Command (DARCOM) installation. A few months ago, the economy axe fell heavily on Lexington. It lost its long-standing depot status and became a "depot activity" under the US Army Red River Depot. It also lost its traditional maintenance function and with this about three-quarters of its normal personnel complement.

b. In 1954, US Army-wide film badge together with radiation exposure dosimetry recording service was assigned to the Lexington depot. Prior to this an ill-defined film badge and dosimetry service was provided by the Evans Signal Corps Laboratory at Fort Monmouth, New Jersey. When Lexington took-over the function from Fort Monmouth, its clientele list consisted of only a few dozen US Army Installations. Within the next four years, this clientele list was expanded to include all radiation sources (less direct control of tactical exposure sources) under Army jurisdiction. For a while this also included to some non-Army clients such as the Veterans Administration on a reimbursement basis.

c. In 1957, Lexington formally entered the nuclear testing aspects of radiation exposure and dosimetry recording. Until this date, it had more or less played a passive role, i. e., recording dosimetry data provided it by on-site exercise radiology safety units. Commencing with EXERCISE DESERT ROCK IV (which appears in AEC history as TUMBLER-SNAPPER), Lexington executed the on-site exercise dosimetry responsibility. To these ends, mobile vans were designed and equipped at Lexington and were patched to the Nevada Test Site together with depot trained technicians. Complete film badge service was, thus, provided in the field and more importantly, the complete record of this service was sent to Lexington on termination of the exercise. This was also

true of EXERCISE DESERT ROCK VIII (AEC Exercises UPSHOT-KNOTHOLE) in 1958. As far as can be determined at this time, DR VII and DR VIII were the only two exercises in the entire series which received this meticulous attention. Lexington currently holds this complete record and has provided microfilm copies to all other affected activities including the Reynolds Electrical and Engineering Company (REECO) which will be discussed in greater detail in a subsequent annex.

d. Decision was taken in 1958 to split the Army-wide dosimetry responsibility mission. This decision probaly stemmed from the "alternate headquarters" concept of the Era of Massive retaliation. The US Army Depot at Sacramento, California was, thereupon, assigned responsibility for film badge and dosimetry service for the western quarter of the United States, i. e., geographical area of responsibility of the 6th US Army, and all United States Army activities in the Pacific. This was later expanded eastward to include the geographical area of the 4th US Army thus roughly dividing the United States along the Mississippi River. Sacramento provided precisely the same services to its assigned western client installations as Lexington continued to provide its eastern clientele. Effective 1 January 1978, the Army-wide film badge and dosimetry service function was restored to Lexington.

e. Sacramento terminated its service on 31 December 1977 and shortly thereafter shipped its accumulated records to Lexington. This collection of dosimetry data consisted of approximately 30 linear feet of hardcopy arranged chronologically by client installation. Since its origin with the Evans Signal Corps Laboratory, dosimetry records have been handled on an installation basis, i. e., the same servicing depot or laboratory providing the film badges to the used installations develops, reads, records and reports its findings back to the client installation. The client installation is responsible for entering the dosimetry in the individual health records. Evans Signal Corps Laboratory retired its dosimetry hardcopy records through normal records management channels until it was relieved of the mission in 1954. Final location of these files was the military organizational records division of the National Personnel Records Center at St Louis. We think that we have been reasonable successful in recovering these records; they will be shipped to Lexington on completion of the current investigation for integration into the Army-wide master dosimetry collection.

f. Accompanying the hardcopy which the Sacramento Depot had shipped to Lexington was an incomplete collection of duplicatory microfilm. The completeness of the microfilm collection is yet to be determined; however, a brief examination at this time indicated that it appeared to be complete except for last few months of the operation at Sacramento. The microform employed by the Sacramento Depot consisted of 16 mm film strips arranged in 5 X 8 inch plastic jackets -- a somewhat primitive forerunner of the microfiche. However, a trial run showed that the reproducible qualities of this fiml was excellent. None of the Sacramento data had been automated prior to shipment to Lexington. Nor at the time of the visit had any plans been formulated or put into action to integrate the Sacramento documentation into the Lexington files.

g. In 1964, Lexington commenced to automate its dosimetry data. None of the 1954-64 data held by Lexington had been computerized at the time of the visit. Nor is automation of the 1964-72 data fully reliable. Lack of an

effective cross-match audit system in the 1964 computer program for loading data, introduced a small degree of error into the data base. Key-punch or original hardcopy error, i. e., discrepancies between names and serial or social security numbers, differing middle initials, missing initials, mis-spelled names, missing digits in serial/social security numbers, etc., makes this portion of the data base unreliable for computer production of individual lifetime dosimetry histories. Each of the errors noted above causes the computer to register a "new individual" or new history instead of combining accumulating entries into the correct individual accounts. In 1972, a name/social security number cross-reference was added to the loading program which causes the computer to reject any incompatible data until manual verification and correction has been made.

3. CURRENT SITUATION:

a. Lexington is capable of producing individual radiation exposure histories on an extremely limited scale. With difficulty, this can be done for a single individual or a small list of individuals. Certainly, for nothing even remotely approaching the scope of the present investigation. First of all, except for the data garnered directly by its own depot techinicians for DR VII and DR VIII, it holds very little other tactical exposure data. As a matter of fact, it holds little if any pre-1954 data from any source. A combination of computer and manual search operations are required in order to produce a lifetime radiation exposure history for any given individual. Moreover, a service history is required for each individual search, e. g., all known dates and places of probable exposure. Otherwise, the manual data banks cannot be searched for possible additions to the known computer produced totals. Not only is individual memory spanning 25-30 years surely faulty, but the probability of survivors of a decedent member possessing reliable data here is remote at best. Full automation of all available data Army-wide is the only workable and realistic solution to this dilemma.

b. While certainly the best that the Army possesses at this time, there is ample evidence that serious gaps exist in the Lexington dosimetry data collection. Part of this discrepancy can be overcome by simple interfile of the Sacramento collection in the Lexington data base. Ideally, this should take the form of automation and integration in a single combined operation. But even then other serious known gaps would still exist. Subsequent to Leximgton's tasking with the Army-wide mission in 1954, provisions came into existence for granting of waivers from mandatory utilization of the Lexington provided dosimetry service. Army installations and activities which possessed dosimetry service capability could request and were granted waivers. Notable among these, for example, were Dugway Proving Ground, the US Army Chemical Center at Edgewood/Aberdeen, MD., and the Chemical Corps School at Fort McClellan, Alabama.

c. Probably most crucial among these waivered activities for present consideration was the US Army Chemical Corps School. The Lexington health physicists expressed grave concern during the course of the visit over certain training techniques and devices employed by the Chemical Corps School during most of the decade of the 1950's. Much of this concern centered on the creation and use of a "cobalt 60 radiation minefield" for certain school training courses.

Estimates ran as high as possibly 3000 individuals for this type of radiation exposure, e.g., computed at the rate of 400 students per year for the 7-8 year period that the Chemical Corps School was in operation at Fort McClellan. The Lexington Depot provided the film badges, but McClellan processed the film and recorded (?) the dosimetry on waiver as a practical school training exercise. Here we lose sight of the dosimetry data accumulated by the school. It was never forwarded to Lexington for integration into the main data bank nor were the lab reports retired to St Louis as in the case of the Evans Signal Corps Lab. Contemporary search for dosimetry data retired to St Louis has failed to locate any such data from McClellan. Further details on this search will be found in ANNEX H (St Louis).

d. Neither Lexington nor Sacramento ever retired any dosimetry records to GSA Federal Records Centers. It is good for immediate considerations that this "hardcopy" was retained by the processing activity as permanent background material substantiating its automated data base. Comparable files which had been retired by the Evans Signal Corps Laboratory in the mid-1950's had been sent to St Louis as "disposable materials." Only by virtue of the fact that GSA was some 25 years behind in its work were these materials still "on the shelves" in the retired organizational records section of the Federal Records Center in St Louis. With this discovery, however, an immediate freeze was placed on any further destruction of these materials or certain other related files in the St Louis Collection pending completion of the current investigation. Further discussion of this action will be found in ANNEX H (St Louis).

e. Dosimetry data collection and management involves far more that the dramatic, colorful and often terrifying publicity connected with the detonation of nuclear devices. Certainly this is the aspect which has captured public attention and has rightly prompted the current investigation. However, mounting concern for voluntary or involuntary troop tactical exposure has allowed very notice to be taken of another aspect of the same problem. It could well be that tactical exposure is but the tip of the iceberg. The other dimension of this problem has to take cognizance of that vast army of calibration, medical treatment, dental and X-ray technicians, storage dump custodians and guards, crews and personnel complements of nuclean-powered ships and submarines, etc., who, routinely day-in and day-out, year after year perform their duties under constant and accumulating dosages of low-yield radiation exposure. The Army as well as its sister services have a 30-year history in this area. Lexington is currently accumulating data here at the rate of roughly 225,000 dosimetry reports per year, i.e., 12-20 readings per year for each of approximately 15,000 individuals.

f. The automated data base dosimetry readings maintained by Lexington is an in-house product. It was designed and developed by the local health physicists, bio-medical technicians and ADP specialists without benefit of formal project management or funding. It was purely the product of local initiative, imagination and ingenuity. Its base funding was opportune or windfall. It was designed to produce individual radiation exposure histories on demand. It is far from perfect, but sufficiently developed to prove its eminent practicality and basic value. Lexington has submitted a formal proposal to DARCOM through Red River for formal funding in order to allow for expansion of the data base at a modest annual to allow for integration of the Sacramento data and re-verification of the pre-1972 data already in the computer. Copies of this proposal and format for computer produced radiation histories are included in the Appendices to this Annex.

4. CONCLUSIONS:

a. The Nucleonics Branch of the US Army Lexington-Bluegrass Depot Activity currently holds the Army's largest and completest collection of individual radiation dosimetrydata (including complete data for EXERCISES DESERT ROCK VII and VIII).

b. The Lexington collection is notably deficient in certain significant areas but possesses flexibility for virtually unlimited expansion.

c. The Lexington Nucleonics Branch has developed a workable, but highly limited, system consisting of manual search of hardcopy files and computer assisted operation for the production of individual radiation exposure dosimetry histories.

d. The Lexington Nucleonics Branch has the expertise and capability for further development and expansion of its in-house automated data base to meet Army-wide tasking in the production of individual radiation exposure dosimetry histories and computer assisted studies.

5. RECOMMENDATIONS:

a. That sufficient funding be made available to the Lexington-Bluegrass Depot Activity Nucleonics Branch immediately to allow for the fullest possible expansion and updating of its individual radiation exposure dosimetry data base.

b. That updating of the Lexington individual radiation exposure dosimetry data base be accomplished simultaneously and combined with creation of the ARMY NUCLEAR TEST PERSONNEL REVIEW (ANTPR) Project.

c. That all raw individual radiation exposure dosimetry data discovered as a result of the present search and investigation be deposited with Lexington for eventual integration into its existing data base.

APPENDICES:
1. LBDA ADP Individual Rad Exposure History
2. LBDA Message 091630Z Jun 78
3. LBDA Funding Proposal, 9 Jun 78
4. US Army Regulatory History of Individual Radiation Exposure

JOHN HENRY HATCHER, PhD
Chief, Declassification Operations Branch

Trip Report of Field Search
for Exercise Desert Rock Documentation
Conducted by Representatives of The Adjutant General
18 June 1978 to 14 July 1978

Lexington-Bluegrass Depot Activity
ADP Format for Reporting Individual
Radiation Exposure Histories

APPENDIX #1 to ANNEX A

T01RH03034W DATE 03/23/78 RECORD OF OCCUPATIONAL EXPOSURE TO IONIZING RADIATION STA NO AAR PAGE 1

EXPOSURE TRANSACTIONS

FILM NR	B C	SSN	NAME	PD FROM	WORN TO	N C	DOSE THIS PERIOD SOFT	DOSE THIS PERIOD X-GAMMA	DOSE THIS PERIOD NEUTRON	DOSE THIS QTR SOFT	DOSE THIS QTR HARD	DOSE THIS YEAR SOFT	DOSE THIS YEAR HARD	DOSE LIFETIME SOFT	DOSE LIFETIME HARD	PERMISSIBLE
0178	S		TEST FILM	78015	78049		000.000	000.014		000.000	000.000	000.000	000.000	000.000	000.000	000.000
0176	S		TEST FILM	78015	78049		000.000	000.000		000.000	000.000	000.000	000.000	000.000	000.000	000.000
0173	S		TEST FILM	78015	78049		000.000	000.003		000.000	000.000	000.000	000.000	000.000	000.000	000.000
0206	S		TEST FILM	78015	78049		000.000	000.000		000.000	000.000	000.000	000.000	000.000	000.000	000.000
0207	S		TEST FILM	78015	78049		000.000	000.000		000.000	000.000	000.000	000.000	000.000	000.000	000.000
0305	S		TEST FILM	78015	78049		000.000	000.000		000.000	000.000	000.000	000.000	000.000	000.000	000.000
0204	S		TEST FILM	78015	78049		000.000	000.000		000.000	000.000	000.000	000.000	000.000	000.000	000.000
0308	S		TEST FILM	78015	78049		000.000	000.000		000.000	000.000	000.000	000.000	000.000	000.000	[illegible]
0374	S		TEST FILM	78015	78049		000.000	000.000		000.000	000.000	000.000	000.000	000.000	000.000	[illegible]
0220	S		TEST FILM	78015	78049		000.000	000.000		000.000	000.000	000.000	000.000	000.000	000.000	000.000
0190	S		TEST FILM	78015	78049		000.000	000.000		000.000	000.000	000.000	000.000	000.000	000.000	000.000
0222	S		TEST FILM	78015	78049	L	000.000	000.067		000.000	000.000	000.000	000.000	000.000	000.000	000.000
0221	S		TEST FILM	78015	78049	J	000.000	000.000		000.000	000.000	000.000	000.000	000.000	000.000	000.000
0204	S		TEST FILM	78015	78049		000.000	000.000		000.000	000.000	000.000	000.000	000.000	000.000	000.000
0203	S		TEST FILM	78015	78049		000.000	000.002		000.000	000.000	000.000	000.000	000.000	000.000	000.000
0179	S		TEST FILM	78015	78049		000.000	000.000		000.000	000.000	000.000	000.000	000.000	000.000	000.000
0304	S		TEST FILM	78015	78049		000.000	000.022		000.000	000.000	000.000	000.000	000.000	000.000	000.000
0307	S		TEST FILM	78015	78049		000.000	000.005		000.000	000.000	000.000	000.000	000.000	000.000	000.000
0373	S		TEST FILM	78015	78049		000.000	000.000		000.000	000.000	000.000	000.000	000.000	000.000	000.000
0177	S		TEST FILM	78015	78049		000.000	000.004		000.000	000.000	000.000	000.000	000.000	000.000	000.000
0202	S		TEST FILM	78015	78049		000.000	000.002		000.000	000.000	000.000	000.000	000.000	000.000	000.000

Trip Report of Field Search
for Exercise Desert Rock Documentation
Conducted by Representatives of the Adjutant General
18 June 1978 to 14 July 1978

Lexington-Bluegrass Message 091630Z
June 1978 to DARCOM, Subject: Establishment of Radiation Exposure History File for Army Personnel

APPENDIX #2 to ANNEX A

JOINT MESSAGEFORM							SECURITY CLASSIFICATION UNCLAS		
PAGE	DRAFTER OR RELEASER TIME	PRECEDENCE ACT	PRECEDENCE INFO	LMF	CLASS	CIC	FOR MESSAGE CENTER/COMMUNICATIONS CENTER ONLY DATE - TIME	MONTH	YR
1 OF 01	091630Z	RR	RR		UU		091800Z	Jun	78

OK NO — MESSAGE HANDLING INSTRUCTIONS

FROM: CDR LBDA LEX KY//SDSRR-LQ//

TO: CDR DARCOM ALEX VA//DRCQA-P (JOHN BOYLE)//

INFO: CDR DARCOM ALEX VA//DRCSF-P (DARWIN TARAS)//

UNCLAS

SUBJ ESTABLISHMENT OF RADIATION EXPOSURE HISTORY FILE FOR ARMY PERSONNEL

1. REFERENCE DISCUSSIONS BETWEEN MR. DARWIN TARAS, DARCOM SAFETY OFFICE, COL VANDY MILLER, DA OFFICE OF THE SURGEON GENERAL, AND PERSONNEL AT THIS ACTIVITY ON ABOVE SUBJECT.

2. THE FOLLOWING INFORMATION IS FURNISHED RELATIVE TO ESTABLISHING COMPUTERIZED RECORDS FROM DOSIMETRY FILES COMPILED BY SACRAMENTO ARMY DEPOT AND LEXINGTON-BLUE GRASS ARMY DEPOT PRIOR TO 1964 WHEN LBAD STARTED EXISTING ADP PROGRAM FOR RADIATION EXPOSURES.

A. ESTIMATED NUMBER OF INDIVIDUAL RECORDS - 1.5 MILLION.

B. TOTAL COST IF ALL WORK PERFORMED IN-HOUSE AT LBDA - $441,626.

C. TOTAL COST IF KEYPUNCHING IS BY CONTRACT - $327,600.

3. IT IS ESTIMATED THAT THE COMPLETION OF THE PROGRAM WILL REQUIRE A MINIMUM OF THREE (3) YEARS, A MAXIMUM OF FOUR (4) YEARS. FUNDING CAN BE SPREAD OVER THE ENTIRE PERIOD WITH 125K FIRST YEAR, AND 125K SECOND YEAR.

4. A MORE DETAILED ESTIMATE CAN BE PROVIDED IF DESIRED WITH BREAKDOWN OF CONTRACT COSTS AND IN-HOUSE COSTS.

DISTR:

DRAFTER TYPED NAME, TITLE, OFFICE SYMBOL, PHONE & DATE	SPECIAL INSTRUCTIONS	
PHILIP G. JACKSON, C, QUAL ASSUR DIV, SDSRR-LQ 3730 9 JUN 78		
TYPED NAME, TITLE, OFFICE SYMBOL AND PHONE: PHILIP G. JACKSON, C, QUAL ASSUR DIV		
SIGNATURE 79	SECURITY CLASSIFICATION UNCLAS	DATE TIME GROUP 091640Z JUN 78

DD FORM 1 DEC 70 173 REPLACES DD FORM 173, 1 JUL 68, WHICH WILL BE USED.

Trip Report of Field Search
for Exercise Desert Rock Documentation
Conducted by Representatives of The Adjutant General
18 June 1978 to 14 July 1978

Lexington-Bluegrass Depot Activity
Estimate for Computerizing Old Dosimetry Records (1954-64) dated 9
June 1978

APPENDIX #3 to ANNEX A

LEXINGTON-BLUE GRASS DEPOT ACTIVITY
LEXINGTON, KENTUCKY 40511

SDSRR-LQ 9 June 1978

MEMORANDUM FOR RECORD

SUBJECT: Estimate for Computerizing Old Dosimetry Records (1954-1964)

1. Number of Individual Records - 1.5 Million.

2. Keypunch Cost - In-house:

   a. Number per M/H - 100.

   b. M/H required - 15,000.

   c. Cost to punch @ 10.35 - $155,250.

   d. Cost to verify @ 10.35 - $155,250.

   e. Purchase/lease of machines - $26,000.

   f. Total cost in-house - $310,526.

3. Keypunch Cost - by Contract:

   a. Cost to keypunch @ .08/card - $120,000.

   b. Cost to prepare hard copy from microfilm to furnish contractor - $76,500.

      (150,000 pages @ .05 - $7,500 3000 M/H @ $23 - $69,000)

   c. Total cost by contract - $196,500.

4. Cost of Programming, Analyzing and Assembling Data:

   a. 3500 M/H clerical to match social security numbers, correct errors, etc.

      3500 x $23 - $80,500

   b. 1750 M/H to analyze and put data in final form.

      1750 x $23 - $40,250

SDSRR-LQ 9 June 1978
SUBJECT: Estimate for Computerizing Old Dosimetry Records (1954-1964)

c. 1000 M/H for revising programs.

1000 x $10.35 - $10,350

5. Total Cost:

a. If keypunched in-house - $441,626.

b. If keypunched by contract - $327,600.

Philip Jackson
PHILIP G. JACKSON
C, Quality Assurance Division

CF:
ADP Terminal Op Br
C, Nucl Sect, QA Div

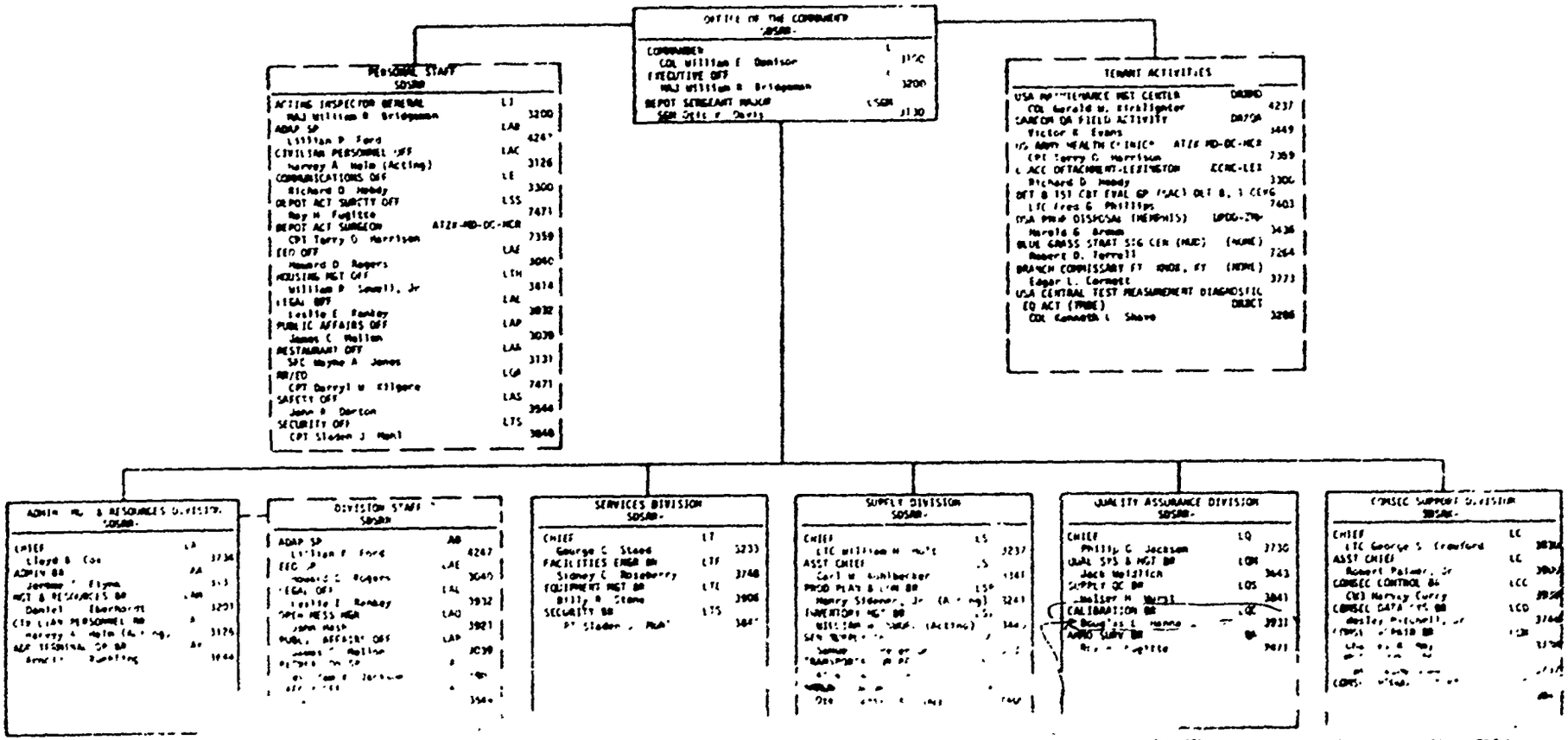
USA DEPOT SYSTEM COMMAND

RED RIVER ARMY DEPOT

LEXINGTON-BLUE GRASS ARMY DEPOT ACTIVITY

ORGANIZATIONAL STAFF DIRECTORY

THIS IS NOT AN OFFICIAL ORGANIZATION CHART



Maintenance Section

Trip Report of Field Search
for Exercise Desert Rock Documentation
Conducted by Representatives of The Adjutant General
18 June 1978 to 14 July 1978

US Army Regulatory History of Individual
Exposure to Ionizing Radiation Exposure

APPENDIX #4 to ANNEX A

SPECIAL REGULATIONS No. 40-1025-66

DEPARTMENT OF THE ARMY
WASHINGTON 25, D. C., 21 April 1953

MEDICAL SERVICE

RECORDS OF EXPOSURE TO IONIZING RADIATION

	Paragraph
Purpose	1
Definition	2
Maintenance of dosimetry records	3
Preparation of individual medical records	4
Film badge inserts	5

1. **Purpose.**—These regulations prescribe the method for recording data pertaining to persons exposed to hazardous ionizing radiation.

2. **Definition.**—The term "dosimetry" as used herein is the accurate and systematic determination of ionizing radiation exposure received from sources of ionizing radiation.

3. **Maintenance of dosimetry records.**—Because of the possible latent residual effects and the cumulative factor involved when persons are subjected to ionizing radiation received from sources of ionizing radiation, the following procedures will govern the maintenance of dosimetry records:

a. Combat exposure.—This type of exposure is that in which the individual is subjected to infrequent exposure as the result of tactical operations in a combat zone. Individual exposure records will not be maintained for personnel exposed under these circumstances.

b. Noncombat exposure.—This type of exposure is that in which the individual is subjected to frequent exposure. Personnel performing research and development activities, laboratory activities, handling of sources of ionizing radiation, and atomic weapons tests or training activities are examples of this group. Individual records will be prepared and maintained for each person in this group. Each record will be prepared and maintained by the personnel officer based upon information received from Signal Corps photographic laboratory facilities, and will show date of exposure, amount of exposure in milliroentgens, duration of exposure in hours and minutes, and a space for remarks such as limitations on assignment because of such exposure. Each record will be signed by the personnel officer, and become a permanent part of the field military 201 file or the civilian personnel 201 file, whichever is applicable, so that a medical officer can evaluate the data from time to time and make such recommendations as may be appropriate.

c. Personnel exposed to X-ray radiation.—Records will be maintained in accordance with TB Med 62.

4. **Preparation of individual medical records.**—Individual medical records as required by AR 40-1025 will be prepared when individuals are treated for a disease or injury incident to or resulting from exposure to hazardous ionizing radiation received from sources of ionizing radiation.

5. **Film badge inserts.**—Processing of film badge inserts is a responsibility of the Signal Corps. Inserts will be processed in accordance with SR 110-50-5.

[AG 730 (26 Mar 53) MEDDD]

BY ORDER OF THE SECRETARY OF THE ARMY:

J. LAWTON COLLINS
Chief of Staff, United States Army

OFFICIAL:
WM. E. BERGIN
Major General, USA
The Adjutant General

DISTRIBUTION:
C

SPECIAL REGULATIONS No. 40-1025-66

DEPARTMENT OF THE ARMY
WASHINGTON 25, D. C., 12 October 1953

MEDICAL SERVICE

RECORDS OF EXPOSURE TO IONIZING RADIATION

	Paragraph
Purpose	1
Definition	2
Maintenance of dosimetry records	3
Preparation of individual medical records	4
Film badge inserts	5

1. **Purpose.**—These regulations prescribe the method for recording data pertaining to persons exposed to hazardous ionizing radiation.

2. **Definition.**—The term "dosimetry" as used herein is the accurate and systematic determination of ionizing radiation exposure received from sources of ionizing radiation.

3. **Maintenance of dosimetry records.**—Because of the possible latent residual effects and the cumulative factor involved when persons are subjected to ionizing radiation, the following procedures will govern the maintenance of dosimetry records:

a. Combat exposure.—This type of exposure is that in which the individual is subjected to infrequent exposure as the result of tactical operations in a combat zone. Individual exposure records will not be maintained for personnel exposed under these circumstances.

b. Noncombat exposure.

(1) *General.*—This type of exposure is that in which the individual is subjected to frequent exposure. Personnel engaged in research and development activities, laboratory activities, handling of sources of ionizing radiation, and atomic weapons tests or training activities are examples of this group.

(2) *Preparation and maintenance of individual records.*—Individual records for each person in this group will be prepared and maintained by the personnel officer. Where film badges are used, Signal Corps photographic laboratory facilities will process the badges and furnish to the unit the record of exposure present on the film badges. For each individual exposed to hazardous ionizing radiation, the record prepared by the personnel officer will show the date of exposure, amount of exposure in milliroentgens, and space for remarks such as limitations on assignment because of such exposure. The

*These regulations supersede SR 40-1025-56, 21 April 1953.

duration of exposure also will be recorded. When possible, the exact period of exposure in minutes, hours, days, etc., will be determined. In some circumstances, it will be possible to record only the approximate period of exposure. Records will indicate whether the time of exposure is "Exact" or "Estimated." Each record will be signed by the personnel officer and will become a permanent part of the field military 201 file or the civilian personnel 201 file, whichever is applicable, so that a medical officer can evaluate the data from time to time and make such recommendations as may be appropriate. In the event the 201 files of personnel who are participating in activities such as atomic weapons tests or training exercises, etc., are not available, the records of exposure to hazardous ionizing radiation will be promptly forwarded to the personnel officer having custody of the 201 files.

c. Personnel exposed to X-ray radiation.—Records will be maintained in accordance with TB Med 62.

4. Preparation of individual medical records.—Individual medical records as required by AR 40-1025 will be prepared when individuals are treated for a disease or injury incident to or resulting from exposure to hazardous ionizing radiation.

5. Film badge inserts.—Processing of film badge inserts is a responsibility of the Signal Corps. Inserts will be processed in accordance with SR 110-50-5.

[AG 730 (28 Sep 53) MEDDD]

BY ORDER OF THE SECRETARY OF THE ARMY:

M. B. RIDGWAY,
General, United States Army,
Chief of Staff.

OFFICIAL:

WM. E. BERGIN,
Major General, United States Army,
The Adjutant General.

DISTRIBUTION:
C

SPECIAL REGULATIONS No. 40-1025-70

DEPARTMENT OF THE ARMY
WASHINGTON 25, D. C., 3 February 1954

MEDICAL SERVICE

CLINICAL RECORD, OPHTHALMOLOGIC CONSULTATION CLINICAL RECORD, VISUAL FIELD EXAMINATION

	Paragraph
General	1
Purpose	2
Instruction for completing forms	3
Availability of forms	4

1. General.—These regulations provide information concerning the use of Clinical Record, Ophthalmologic Consultation (DD Form 741), and Clinical Record, Visual Field Examination (DD Form 742) in Army medical facilities. These forms have been standardized by the Department of Defense for use at medical facilities of the Armed Forces.

2. Purpose.—The Clinical Record, Ophthalmologic Consultation and Clinical Record, Visual Field Examination are records of ophthalmologic examination of a patient to be incorporated in his clinical record file.

3. Instructions for completing forms.—DD Form 741 and DD Form 742 are used by trained examiners and the items requiring completion are self-explanatory.

4. Availability of forms.—These forms will be available on or about 20 March 1954 to all medical treatment facilities through normal publications supply channels.

[AG 201.3 (11 Dec 53) MEDCR]

BY ORDER OF THE SECRETARY OF THE ARMY:

M. B. RIDGWAY,
General, United States Army,
Chief of Staff.

OFFICIAL:
WM. E. BERGIN,
Major General, United States Army,
The Adjutant General.

DISTRIBUTION:
Active Army: D (ConUS); E (OS) plus Lstd (OS) (5)
NG: None
USAR: None.
For explanation of distribution formula, see SR 310-90-1.

AR 40-431
BUMEDINST 6150.18
AFR 160-31

ARMY REGULATIONS No. 40-431
BUMED INSTRUCTION No. 6150-18
AIR FORCE REGULATION No. 160-31

DEPARTMENTS OF THE ARMY, THE NAVY, AND THE AIR FORCE
WASHINGTON 25, D. C., *12 September 1956*

MEDICAL SERVICE

RECORD OF EXPOSURE TO IONIZING RADIATION

	Paragraph
Purpose	1
Definitions	2
General instructions	3
Responsibilities	4
Recording of exposures	5
Supply of forms	6

1. Purpose. These regulations prescribe the method of recording exposure to ionizing radiation of personnel who are employed by, or are members of, the Armed Services. It does not apply to combat exposures incurred by Department of the Army personnel.

2. Definitions. *a. Radiation hazard.* Any situation where individuals may be exposed to radiation in excess of one-quarter of the maximum permissible exposure established for the particular type of radiation involved. On special occasions, the Surgeon General of the military department concerned may specifically waive the requirement for personnel desimetry in areas exceeding this limit, following a radiation protection survey by qualified personnel.

b. Radioactive area. Any area where there is any reasonable possibility that the external weekly radiation intensity would exceed 0.075 rep (75 millirep), or where there is any possibility of deposition of any radioactive material within the body.

c. Roentgen. For the purpose of these regulations, the roentgen is the unit of measurement of x- or gamma radiation.

d. Rep (roentgen equivalent physical) and rad (unit of absorbed dose). For the purpose of these regulatitons, the rep and the rad are units of measurement of all forms of ionizing radiation.

e. Milliroentgen, millirep, and millirad. A submultiple equivalent to one-thousandth ($1/1000$) of a roentgen, a rep, or a rad, respectively.

f. X-ray area. Any area where x-radiation hazard exists.

g. Equivalent units. For the purpose of these regulations, the roentgen, rep, and rad may be considered equivalent units.

3. General instructions. Activities concerned will measure the exposure to ionizing radiation of all personnel who work in a radioactive environment, handle radioactive materials, or enter a radioactive

TAGO 1401B—Sept. 400479°—56

area, and will record the results on DD Form 1141 (Record of Exposure to Ionizing Radiation). (*Exception:* Ionizing radiation incurred by patients undergoing diagnostic procedures and treatments.) DD Form 1141 is a permanent record, which will accompany the individual when he is transferred. It will include any recorded exposures to ionizing radiation from nuclear explosives, except combat exposures incurred by Department of the Army personnel. When an individual is exposed to ionizing radiation at a location other than the one where his medical record is maintained, the dates of exposure total dosage, type of radiation, method of measurement, and place of exposure should be forwarded to the commander responsible for maintaining the medical records for entry on the individual's DD Form 1141.

4. Responsibilities. *a.* The commander of any project dealing with radioactive materials or equipment capable of producing X-rays will see that all personnel who may be exposed to a radiation hazard as defined in these regulations wear a dosimetric device and that their exposures are recorded. (*Exception:* See par. 3.) Periodically, at least once a month, such exposures will be transmitted to the medical service for recording on DD Form 1141. Any record of overexposure is to be transmitted to the medical service immediately.

b. The local medical service is responsible for maintaining DD Form 1141 on each individual exposed to ironizing radiation. (*Exception:* See par. 3.)

5. Recording of exposures. *a.* DD Form 1141 will be initiated immediately and completed to the maximum extent possible for all personnel who have been exposed to ionizing radiation within the past 10 years and are now in assignments where further exposure is probable (*d* (9) below). However, the form will not be initiated solely because personnel are undergoing diagnostic or therapeutic X-ray procedures. For other personnel, DD Form 1141 will be initiated when they are first exposed to ionizing radiation.

b. DD Form 1141 will be part of the individual health record for military personnel. Until an individual health record system is established in the Department of the Army, DD Forms 1141 for Army military personnel will be transferred with their personnel records jackets. DD Forms 1141 for civilian employees will be transferred with the employees.

c. DD Forms 1141 and a copy of these regulations will be included in the records of individuals who are to be assigned to nonmilitary agencies.

d. Method of recording.

(1) Column, "Inclusive Dates." Enter the date or dates of the measured exposure. For example: If an individual is exposed continuously or intermittently throughout the month, make one entry, as "1-31 May 1955." However, if the individual received an overexposure on 18 May 1955, make the entries "1-17 May 1955," "18 May 1955," and "19-31 May 1955." Where a single record of exposure is reported for the month, indicate the date or inclusive dates of the exposure.

(1) Column "Type of Radiation," Enter the type of radiation, as "x-," "gamma," "beta-gamma," "alpha," etc.

(3) Column "Method of Measure." Record the method of measuring the dose. For example: The method might be entered as "film badge," or "pocket chamber." If the dose has been estimated, enter the word "estimated." For Air Force and Navy personnel, enter DT-60 readings only in column, "DT-60 Readings (AF and Navy only)," as explained later.

(4) Column, "Place of Exposure." Enter the name of the facility and its geographical location or other acceptable method of designating the location. For example: "Oak Ridge National Laboratories, Oak Ridge, Tennessee."

(5) Column, "Dose (in rep, rad, or r)." Enter the actual reading in rep, rad, or r. For example: "0.2" would be the recording for an exposure of 200 milliroentgens.

(6) Column, "Accumulative Total Dose." Enter the total dose received, starting from the time records have been kept on the individual. For example: If the first exposure recorded for this individual is 0.2 rad, record "0.2" in column, "Dose (in rep, rad, or r)" and also in column, "Accumulative Total Dose." If on some future date the individual receives a dose of 3.4 rad, enter "3.4" in column "Dose (in rep, rad, or r)," and enter "3.6" in column, "Accumulative Total Dose."

(7) Column, "DT-60 Readings (AF and Navy only)." Enter the DT-60 readings. Since, in many instances, an additional method of measurement may be utilized (such as a film badge), keep DT-60 readings separate in this column so as not to enter the same exposure twice, thereby recording double the actual dose received. Enter all DT-60 readings in this column only. Whenever the DT-60 is read, make a

completely separate entry. On initial issue, record the serial number of the DT-60 in column, "Place of Exposure"; for example, if on initial issue of the DT-60 on 5 January 1955 at the Oak Ridge National Laboratories, the reading was 5 r, make the following entries:

Column, "Inclusive Dates"—Enter "Initial 5 January 1955."
Column, "Type of Radiation"—
Column, "Method of Measure"—
Column, "Place of Exposure"—Enter the serial number of the DT-60.
Column, "Dose (in rep, rad, or r)"—
Column, "Accumulative Total Dose"—
Column, "DT-60 Readings (AF and Navy only)"—Enter "5.0."

If on 10 January 1956 the DT-60 is again read, and the reading is 10 r with no known exposure, make the following entries:

Column, "Inclusive Dates"—Enter "5 January 55 to 10 January 56."
Column, "Type of Radiation"—Enter "Unknown"
Column, "Method of Measure"—
Column, "Place of Exposure"—Enter "Oak Ridge National Laboratories, Oak Ridge, Tennessee."
Column, "Dose (in rep, rad, or r)"—
Column, "Accumulative Total Dose"—
Column, "DT-60 Readings (AF and Navy only)"—Enter "10.0."

(8) In case of a radiation accident, enter on the form the date, external dose in rep, rad, or r, and quality and quantity (estimated) of internal deposition of radioactive substances, and give a brief narrative summary of the accident.

(9) In the case of personnel exposed to ionizing radiation prior to the initiation of DD Form 1141, record the total dose received up to the date the form was initiated. For example: If an individual's first exposure to ionizing radiation was on 12 February 1951 and his last exposure was on 16 June 1955, and the total dosage received during that period was 6.3 rad, make the following entries: In column, "Inclusive Dates," enter "12 February 1951-16 June 1955"; in column, "Dose (in rep, rad, or r)," enter "6.3"; and in column, "Accumulative Total Dose," enter "6.3." You may or may not complete the remaining columns, depending on the amount of information available.

6. Supply of forms. DD Form 1141 will be requisitioned through normal AG publications supply channels.

[AG 73C (5 Jun 56) MEDCE]

BY ORDER OF THE SECRETARIES OF THE ARMY, THE NAVY, AND THE AIR FORCE:

MAXWELL D. TAYLOR,
General, United States Army,
Chief of Staff.

OFFICIAL:
JOHN A. KLEIN,
Major General, United States Army,
The Adjutant General.

B. W. HOGAN,
Chief, Bureau of Medicine and Surgery,
Department of the Navy.

OFFICIAL:
G. L. RUSSELL,
Vice Admiral, United States Navy,
Deputy Chief of Naval Operations,
(Administration).

N. F. TWINING,
Chief of Staff, United States Air Force.

OFFICIAL:
E. E. TORO,
Colonel, United States Air Force,
Air Adjutant General.

DISTRIBUTION:

Army:

Active Army: B.

To be distributed on a need-to-know basis to all units and headquarters down to and including separate battalions (administrative) and to units and headquarters of comparable size and responsibility.

NG: State AG (3).

USAR: None.

Air Force:

X:

Zone of interior and overseas:

Headquarters USAF:

Major air commands	3
except ADC, AMC, ARDC, AU, SAC, TAC	8
Subordinate air commands	3
Bases	3

Miscellaneous:

Air Force Division, National Guard Bureau:

Air surgeon	1
Medical facilities	1

MEDICAL SERVICE

NONCOMBAT PERSONNEL DOSIMETRY

CHANGES No. 1

DEPARTMENT OF THE ARMY
WASHINGTON 25, D. C.

AR 40-414, 16 December 1954, is changed as follows:

4. Maintenance of dosimetry records. When personnel are * * * of dosimetry records:

a. (Superseded) *Noncombat exposure.* The method of recording exposure to ionizing radiation and the responsibilities therefor will be as prescribed in AR 40-431. The records of exposure will be based upon information received from radiac charger-readers or from Signal Corps facilities. Where film badge service is required, the Signal Corps will furnish film badge holders, calibrate, and supply film badge inserts, and process, evaluate, and return information of exposure to using installations or activities for entry on the Record of Exposure to Ionizing Radiation (DD Form 1141). The developed film will be destroyed. The Signal Corps facility will retain a permanent record of exposure readings. Developed film now being retained by using installations or activities may be destroyed.

* * * * * * *

5. Preparation of individual medical records. Individual medical records as required by AR 40-100 will be prepared when individuals are treated for a disease or injury incident to or resulting from exposure to ionizing radiation.

[AG 730 (31 Jan 57) MEDDD]

By Order of *Wilber M. Brucker*, Secretary of the Army:

MAXWELL D. TAYLOR,
General, United States Army,
Chief of Staff.

Official:
HERBERT M. JONES,
Major General, United States Army.
The Adjutant General.

Distribution:
Active Army: C.
To be distributed on a need-to-know basis to all installations, activities located off an installation, and to all units and headquarters down to and including divisions, and units and headquarters of comparable size.
NG: State AG.
USAR: None.

TAGO 4781B—Mar. 400485°—57 U. S. GOVERNMENT PRINTING OFFICE: 1957

ARMY REGULATIONS No. 40-414

DEPARTMENT OF THE ARMY
WASHINGTON 25, D. C., 16 December 1954

MEDICAL SERVICE
NONCOMBAT PERSONNEL DOSIMETRY

	Paragraph
Purpose	1
Definitions	2
Requirements	3
Maintenance of dosimetry records	4
Preparation of individual medical records	5

1. Purpose.—These regulations prescribe Department of the Army policy with respect to radiation detection and recording methods to be utilized by persons exposed to ionizing radiation.

2. Definitions.—For the purpose of these regulations, the following definitions apply:

a. Dosimetry.—The term "dosimetry" as used herein is the accurate and systematic determination of ionizing radiation received from exposure to sources of ionizing radiation.

b. Film badges.—Devices containing inclosed photographic film worn by personnel exposed to radiation to show dosage received.

c. Pocket chambers.—Pencil-size ionization chambers (not self-reading) used to detect and measure an accumulated dosage of radiation.

d. Self-reading dosimeters.—Pencil-size ionization chambers with built-in self-reading electrometer used to detect and measure an accumulated dosage of radiation.

e. Noncombat exposure.—Exposure to ionizing radiation devices and sources to which personnel are subjected incident to their occupation in research and development, industrial, medical, laboratory, field and depot maintenance, training, atomic tests, and similar activities.

f. Combat exposure.—Exposure to which the individual is subjected as the result of combat operations, by either enemy or friendly forces.

g. Class "A" X-ray facility.—A facility determined by The Surgeon General as meeting the prescribed radiological safety standards for such classification.

h. Qualified expert.—A person having the knowledge and training needed to measure radiations and to advise regarding radiation hazards, such as a registered physicist certified by the American Board of Radiology.

3. Requirements.—*a. General requirements.*—All persons, except patients being examined or treated, who are exposed to noncombat ionizing radiation will utilize the radiation and detection methods outlined in these regulations. When film dosimetry only is required,

*These regulations supersede SR 40-1025-46, 12 October 1953.

TAGO 2554B—Dec. 310482°—54

the Signal Corps film badge service will be used except in unusual circumstances as approved by the Chief Signal Officer. Those installations currently receiving film badge service from civilian commercial agencies on a contractual basis will, upon the publication of these regulations, continue such service as required to fulfill the obligations incurred within the provision of the contract, but at the conclusion of said contract an extension or renewal will not be made without the specific approval of the Chief Signal Officer.

b. Specific requirements.—Personnel dosimetry will be accomplished as directed below for all personnel exposed to ionizing radiation.

(1) *Medical facilities in the continental United States engaged in X-ray activities, excluding nonfixed hospitals.*—All personnel will utilize film badge service, except those personnel only infrequently exposed to ionizing radiation. These excepted personnel and those awaiting film badge service, i. e., temporary employees, visiting personnel, and persons for whom film badge service has been requested, will utilize pocket chambers. Radiologists will, in addition to the film badge service, utilize self-reading dosimeters.

(2) *Fixed medical facilities outside the continental United States engaged in X-ray activities.*—All personnel other than radiologists will utilize pocket chambers. Radiologists will utilize self-reading dosimeters.

(3) *Nonfixed hospitals engaged in X-ray activities.*—All personnel will utilize pocketchambers.

(4) *Radioisotope laboratories.*—All personnel will utilize film badge service, self-reading dosimeters, and other special monitoring devices as indicated by the nature of the radiation exposure.

(5) *Industrial radiography.*—All radiographers and other personnel exposed to ionizing radiations will utilize film badge service unless this requirement is waived by The Surgeon General as a result of a protection survey conducted under the direction of a qualified expert, or unless the activity has been classified by The Surgeon General as "Class A."

(6) *Calibration and other radioisotope sources.*—Personnel monitoring will be required where radiation safety depends upon proper operating procedures. A film badge, self-reading dosimeter, or pocket chamber may be used. If a particular operation is routine or repetitive and the hazard slight, i. e., less than 75 milliroentgens per week, the local exposure may be established initially without the necessity of wearing such devices continuously.

TAGO 2784B

4. Maintenance of dosimetry records.—When personnel are subjected to ionizing radiation, the following procedures will govern the maintenance of dosimetry records:

a. Noncombat exposure.—Each record will be prepared on a local form and maintained by the personnel officer based upon the information received from radiac charger-readers or from Signal Corps facilities. Where film badge service is required, the Signal Corps will furnish film badge holders, calibrate and supply film badge inserts, and process, evaluate, and return developed films with record of exposure to using installations or activities for their retention. For each individual who utilizes the radiation detection methods outlined in these regulations, the record prepared by the personnel officer will show the date of exposure, amount of exposure in milliroentgens, and remarks such as limitations on assignment because of such exposure. The duration of exposure also will be recorded. When possible, the exact period of exposure in minutes, hours, days, etc., will be recorded. In some circumstances, it will be possible to record only the approximate period of exposure. Records will indicate whether the time of exposure is "Exact" or "Estimated." Each record will be signed by the personnel officer and will become a permanent part of the field military 201 file or the civilian personnel 201 file, whichever is applicable, so that a medical officer can evaluate the data from time to time and make such recommendations as may be appropriate. In the event the 201 files of personnel who are participating in activities such as atomic weapons tests or training exercises, etc., are not available, the records of exposure to ionizing radiation will be forwarded promptly to the personnel officer having custody of the 201 files.

b. Combat exposure.—Individual exposure records will not be maintained for personnel exposed under these circumstances.

5. Preparation of individual medical records.—Individual medical records as required by AR 40-~~1025~~ will be prepared when individuals are treated for a disease or injury incident to or resulting from exposure to ionizing radiation.

BY ORDER OF THE SECRETARY OF THE ARMY:

M. B. RIDGWAY,
General, United States Army,
Chief of Staff.

OFFICIAL:

JOHN A. KLEIN,
Major General, United States Army,
The Adjutant General.

DISTRIBUTION:

Active Army: C.

To be distributed to all units and headquarters down to and including divisions and to units and headquarters of comparable size (class I and II installations and class II activities located on an installation are included).

NG: State AG (3).

USAR: None.

ARMY REGULATIONS
No. 40-414

HEADQUARTERS,
DEPARTMENT OF THE ARMY
WASHINGTON 25, D. C., 26 November 1957

MEDICAL SERVICE

NONCOMBAT PERSONNEL DOSIMETRY

	Paragraph
Purpose	1
Definitions	2
Dosimetry requirements	3
Dosimetry records	4
Preparation of individual medical records	5

1. Purpose. These regulations prescribe Department of the Army policy with respect to the utilization of dosimeters for the determination of the exposure of persons to ionizing radiation, while engaged in noncombat activities.

2. Definitions. For the purpose of these regulations, the following definitions apply:

a. Dosimetry. The accurate and systematic determination of exposure to ionizing radiation.

b. Dosimeter. A device worn by a person for the purpose of determining his exposure to ionizing radiation from external sources.

c. External source of radiation. A source of radiation not deposited in an organ in the human body.

d. Film packet. One or [illegible] pieces of calibrated film in a light proof envelope. Fits into film [illegible]

e. Film badge. A convenient holder for film packets, usually fastened to the clothing by an alligator, or similar, clip.

f. Photodosimetry. Measurement, by means of exposure on photographic film, of radiation dosage received from beta, gamma, and X-ray emitting sources including radioactive materials, X-ray machines, nuclear reaction equipment, and nuclear bombardment devices.

g. Non-self-reading dosimeter. A pencil size ionization chamber which requires accessory equipment to obtain a reading.

h. Self-reading dosimeter. A pencil size ionization chamber with a built-in self-reading electrometer.

i. Noncombat exposure. Exposure to external sources of ionizing radiation to which persons are subjected incident to their occupation in research and development, industry, medicine, laboratory, field and depot maintenance, training, atomic tests, and similar activities.

j. Combat exposure. Exposure to which persons are subjected as a result of combat operations, by either enemy or friendly forces.

*These regulations supersede AR 40-414, 16 December 1954, including C 1, 6 March 1957.

TAGO 3071B—Nov. 440481°—57

k. Rad. A unit of measurement of radiation.

l. Millirad. One one-thousandth of a rad.

m. Rem. Rad multiplied by relative biological effectiveness. For the purposes of these regulations, X-rays, electrons, and positrons of any specific ionization, the relative biological effectiveness is equal to one. For recommended values of relative biological effectiveness of neutrons, see TB MED 251.

n. Millirem. One one-thousandth of a rem.

o. Qualified expert. A person having the knowledge and training needed to measure radiation and to advise regarding radiation hazards, such as registered physicist, certified by the American Board of Radiology.

3. **Dosimetry requirements.** *a. Personnel.*

(1) All persons, except patients being examined or treated, who are engaged in the use of ionizing radiation for any non-combat purpose will utilize film packet dosimeters. Other dosimeters which will enhance the completeness of the dosimetry problem, will be employed as deemed necessary by competent medical authority.

(2) All persons exposed to ionizing radiation other than therapeutic or diagnostic radiation will utilize dosimeters except when the potential radiation is negligible and exemption from use is authorized by The Surgeon General.

b. Dosimeters.

(1) Only dosimeters capable of measuring a radiation dose with an accuracy of 10 percent or better in the average energy range normally encountered in the use of sources of ionizing radiation in the Army will be used. This includes beta as well as gamma and x-radiation.

(2) The film packet dosimetry service for Army installations is provided by the Signal Corps in accordance with SB 11-206, and will be employed solely except in unusual circumstances as approved by the Chief Signal Officer.

c. Monitoring period.

(1) *Pocket chambers and self-reading dosimeters.* These dosimeters will be charged and read at least every 2 days.

(2) *Film packets.* These will be worn for the periods compatible with the potential hazards involved, but in no case longer than 4 weeks. Exposed film packets will be dispatched by the most direct means to the developing and evaluating agency with the absolute minimum of administrative delay. See SB 11-206.

4. [redacted] Dosimetry records will be maintained in accordance with AR 40-431. The Signal Corps dosimeter film developing and evaluating agency will maintain permanent records of all exposure readings made by that agency and will discard exposed dosimeter film unless an exception is requested by the using installation commander.

b. All entries in column marke[redacted]ll be made in rem units. For the low order of exposure encountered in noncombat dosimetry, the rad, rep (roentgen equivalent physical), and roentgen are considered equivalent. For heavy ionizing particles, an estimate of the relative biological effec iveness (RBE) will be noted. For definitions of terms used in this paragraph, see TB MED 254.

c. Where an entry in the "Dose" column is greater than 0.3 rem in one calendar week, a brief explanation of the probable cause of the overexposure will be attached to DD Form 1141, regardless of whether or not the individual to whom the dosimeter was issued was wearing the badge during the period the dosimeter was overexposed.

[redacted]

5. **Preparation of individual medical records.** Individual medical records as required by AR 40-400 will be prepared when individuals are treated for a disease or injury incident to or resulting from exposure to ionizing radiation.

[AG 730 (18 Nov 57) MEDCA]

By Order of *Wilber M. Brucker*, Secretary of the Army:

MAXWELL D. TAYLOR,
General, United States Army,
Chief of Staff.

Official:
HERBERT M. JONES,
Major General, United States Army,
The Adjutant General.

Distribution:
Active Army: C.
To be distributed on a need-to-know basis to all installations, activities located off an installation, and to all units and headquarters down to and including divisions, and units and headquarters of comparable size.
NG: State AG.
USAR: None.

Army Regulation
No. 40-14
BUMED Instruction
6150.18A
Air Force Regulation
No. 161-8

5/5 1967

BUMEDINST 6150.18A
AFR 161-8

Departments of the Army, the
Navy, and the Air Force,
Washington, D.C.
21 October 1964

Medical Service

Control and Recording Procedures
Occupational Exposure to Ionizing Radiation

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1. Purpose. These regulations prescribe procedures and responsibilities for the control and recording of occupational exposure to sources of ionizing radiation and implement the guidelines promulgated by the Federal Radiation Council. These regulations are applicable to all individuals who are employed by or are members of the Armed Forces. They are not applicable to exposure: (a) to ionizing radiation resulting from the employment of nuclear or thermonuclear weapons in combat military operations, or (b) of personnel being examined or treated for medical or dental purposes. For activities holding U. S. Atomic Energy Commission licenses, the appropriate provisions of Title 10, Code of Federal Regulations also apply except that the DD Form 1141, "Record of Occupational Exposure to Ionizing Radiation," will be used in lieu of AEC Form 4, "Occupational External Radiation Exposure History," and AEC Form 5, Current Occupational External Radiation Exposure."

2. Cancellation. This directive cancels and supersedes AR 40-431/BUMEDINST 6150.18/AFR 160-31 as amended of 12 September 1956, TB MED 254 of 6 May 1957, and AR 40-414 of 26 November 1957.

3. Definitions. Terms used in these regulations are defined as follows:

a. Roentgen, rad, rem, and dose equivalent.--For the practical application of these regulations, one roentgen of X- or gamma-radiation, measured in air at or near the point of delivery to the body, is considered to deliver a Dose Equivalent of one rem to the body tissues. The Dose Equivalent for protons, neutrons, beta and other particles is the dose in rads multiplied by the appropriate modifying factors. For beta particles having an average energy greater than 1.2 MEV, the modifying factor is 1 For neutrons of unknown energies, a modifying factor of 10 shall be used.

Where more definitive definitions are required, those provided in National Bureau of Standards Handbook 84, Radiation Quantities and Units, shall be used.

b. Ionizing radiation.--Electromagnetic or particulate radiation, which may cause ionization within the cells or tissues of the body. For purposes of these

regulations, alpha and beta particles, gamma rays X-rays, and neutrons are examples of types of ionizing radiation.

c. Occupational exposure to ionizing radiation.--An exposure incurred as a result of an individual's employment or duties. Occupational exposure shall not be deemed to include the exposure of an individual to sources of ionizing radiation for the purpose of medical or dental diagnosis or therapy of that individual.

d. Radiation sources.--Materials, equipment, or devices which generate or are capable of generating ionizing radiation, including: (1) naturally occurring radioactive materials, (2) byproduct materials, (3) source materials, (4) special nuclear materials, (5) fission products, (6) materials containing induced or deposited radioactivity, (7) nuclear reactors, (8) radiographic and fluoroscopic equipment, (9) particle generators and accelerators, and (10) radio frequency generators such as certain klystrons and magnetrons which produce X-rays.

e. User.--The activity, section, division, or other organizational unit which has been assigned responsibility for the use, operation or storage of radiation sources.

f. Radiological protection officer.--An individual designated by the commander to provide consultation and advice on the degree of hazards associated with ionizing radiation and the effectiveness of measures to control these hazards. This individual shall be technically qualified by virtue of education, military training, and/or professional experience to assure a capability commensurate with the assignment. The term "Radiological Protection Officer" is a functional title and is not intended to denote a commissioned status or a job classification within the Armed Forces.

4. Responsibilities. The commander of any installation, or activity, which possesses or uses a radiation source or sources is responsible for ensuring that measures are established to control ionizing radiation from such sources so that the radiation dose to individuals under his command or within his jurisdiction will be no greater than the amount prescribed in these regulations. He shall also ensure that the necessary measurements of exposures of personnel are made and the amount of such exposures recorded as herein prescribed.

a. The commander of an installation or activity where there are operations involving the use of multiple radiation sources for purposes of research and development, industrial radiography, or medical or dental diagnosis or therapy shall appoint a radiological protection officer to advise on the control of the hazards to health and safety from the specific materials or devices being used.

b. The commander of an installation or activity licensed by U. S. Atomic Energy Commission to use byproduct materials (unless otherwise specifically exempted) shall appoint an ionizing radiation control committee to review proposals for the use of the licensed radiation sources and to make recommendations to the commander concerning the protective measures to be taken. This committee shall include: (a) the radiological protection officer, (b) the responsible staff medical officer, and (3) other persons as deemed necessary. The commit[illegible] described herein shall not exercise the functions of a clinical board or commit[illegible] radioisotopes in a medical facility, nor shall this committee exercise any function in nuclear reactor or weapons programs which are administered by each of the Armed Forces under the provisions of appropriate Departmental Directives.

5. Radiation Protection Standards. Every effort shall be made to maintain radiation doses as far below the following Radiation Protection Standards as practicable.

Positive efforts shall be carried out to fulfill this objective, and a[illegible]mination of necessity should be weighed against the benefits to be expected.

a. Basic Radiation Protection Standards adopted by the Departments [illegible] the Army, Navy, and Air Force for the control of occupational exposures to [illegible]nizing radiation include:

(1) The accumulated dose of radiation to the whole body, head and trunk, active blood-forming organs, gonads or lens of the eye shall not exceed

(a) 3 rem in any calendar quarter, nor
(b) 5(N-18) rem total lifetime dose, where N equals the present age in years.

(2) The accumulated dose of radiation to the skin of the whole body or the thyroid shall not exceed

(a) 10 rem in any calendar quarter, nor
(b) 30 rem in any calendar year.

(3) The accumulated dose of radiation to the hands and forearms or the feet and ankles shall not exceed

(a) 25 rem in any calendar quarter, nor
(b) 75 rem in any calendar year.

b. Alternate Radiation Protection Standards, less restrictive than those prescribed in paragraph a, may be used in special circumstances, when approved by the Surgeon General of the military department concerned. Proposals for the use of alternate standards will contain complete justification and should describe the means by which the standard will be implemented.

c. No individual under 18 years of age shall be occupationally exposed to ionizing radiation in excess of that allowed to any individual in the population at large.

6. Personnel Dosimetry. An appropriate personnel monitoring device shall be used to measure the exposure of each individual who is likely to receive an accumulated dose of radiation in excess of 10% of the applicable quarterly basic Radiation Protection Standard. Consideration shall be taken of all other occupational exposures the individual may receive during that calendar quarter.

a. Commanders of installations or activities under the jurisdiction of the Department of Defense shall furnish the required exposure information to the appropriate custodian of the medical records of each monitored individual at intervals not to exceed a calendar quarter. The commander need not furnish reports of zero exposures to monitored visitors, unless requested by the visitor or the custodian of his medical records.

b. When a Department of Defense employee or a member of the Armed Forces governed by these regulations is exposed to ionizing radiation at an installation outside the jurisdiction of the Department of Defense, he shall ensure that the required exposure information is furnished to the custodian of his medical record.

c. The separate requirements of the individual military departments with respect to personnel dosimetry are as follows:

(1) Department of the Army.--The primary dosimetric device shall be the film packet, except for field radiography in combat or simulated combat conditions when the direct reading personnel dosimeter (0-200 mr range) has been designated by the command Surgeon as the primary device to be worn by personnel occupationally exposed to X-ray. The film packet dosimetry service for Army installation and units is provided for by SB 11-206, Film Badge (Photodosimetry) Supply and Service for Technical Radiation Exposure Control, and this service will be employed solely for film packet dosimetry, except in unusual circumstances as approved by the Commanding General, U. S. Army Materiel Command.

(2) Department of the Navy.--Navy and Marine Corps activities shall utilize appropriate dosimetric devices in accordance with U. S. Navy Safety Precautions, OPNAV 34P1, and other applicable directives.

(3) Department of the Air Force.--The primary dosimetric device shall be the film badge. The film badge service for Air Force installations is provided by the USAF Radiological Health Laboratory, Wright-Patterson AFB, in accordance with the provisions of AFR 161.11.

7. Recording Procedures. The custodian of the medical records shall prepare and maintain DD Forms 1141 for each person occupationally exposed to ionizing radiation. All exposure entries shall be made in rem.

a. Initial determination of accumulated dose.--In the initial preparation of a DD Form 1141, reasonable efforts should be made to obtain complete reports of all previous exposure based on recorded personnel dosimetry. For each period in which the individual was engaged in activities where occupational exposure to ionizing radiation was probable, and no record, or only an incomplete record, of his exposure during the period can be obtained, it shall be assumed that an occupational exposure of 1.25 rem was incurred per quarter of each calendar year or fraction thereof. In cases where the nature of the radiation is unknown, it shall be assumed to be gamma radiation. If an individual was potentially exposed at more than one facility, the cumulative exposures shall be calculated and recorded in items 7 through 12, as appropriate. The sum of these whole body exposures shall be entered in item 13, and a statement regarding the source of that information shall be entered in item 16, REMARKS.

b. Current record.--Appropriate entries on each individual's DD Form 1141 shall be made periodically, at least quarterly, from the exposure records supplied under the provisions of paragraph 6 above. Separate DD Forms 1141 shall be maintained to record exposures other than whole body, with appropriate descriptions under item 16, REMARKS.

c. Retention and Disposition of DD Forms 1141.

(1) The DD Form 1141 is a permanent component of the individual's medical record and shall not be used for other purposes. All previous copies of this form shall be retained in the individual's medical record. Commanders or commanding officers, authorized inspecting officials, or supervisors of persons occupationally exposed to ionizing radiation, and the individual concerned, may review his DD Form 1141 with the custodian of the medical records.

(2) When a civilian employee of the Armed Forces is not included in a Federal civilian employees health service, a DD Form 1141 will be maintained as a permanent document in his SF 66, "Official Personnel Folder."

(3) The DD Form 1141 shall be retained in the retired medical records of any member of the Armed Forces who has been occupationally exposed to ionizing radiation during his services. Disposition of DD Forms 1141 for retired or separated civilian personnel will be made in accordance with governing civilian personnel directives.

(4) If any member of the Armed Forces is released from active duty, or if a civilian employee terminates employment with a DOD agency, he may be furnished the appropriate information concerning his radiation exposure history.

8. Control Procedures. The custodian of the health records shall evaluate at intervals not to exceed a calendar quarter the DD Form 1141 of each individual engaged in duties involving occupational exposure to ionizing radiation. He shall establish procedures to inform and advise the cognizant commander when action is necessary to limit an individual's exposure to ionizing radiation.

When an individual has received a dose of ionizing radiation in an amount exceeding 3 rem per calendar quarter, he shall be removed from duties involving occupational exposure to ionizing radiation until subsequent exposure limitations are established in consultation with competent medical authority. When an individual has received an accumulated dose of ionizing radiation in excess of 5(N-18) rem, he shall be removed from duties involving occupational exposure to ionizing radiation until his exposure record has been evaluated by the Surgeon General of the military department concerned and subsequent exposure limitations are established as necessary.

Reports of exposures in excess of the limitations, as defined by the Surgeon General of each of the Armed Forces, shall be made in accordance with applicable directives.

9. Supply of Forms. DD Form 1141 will be available through normal supply channels.

AR 40-14
BUMEDINST 6150.1EA
AFR 161-8

BY ORDER OF THE SECRETARIES OF THE ARMY, THE NAVY, AND THE AIR FORCE:

OFFICIAL:

HAROLD K. JOHNSON,
General, United States Army,
Chief of Staff.

J. C. LAMBERT,
Major General, United States Army,
The Adjutant General.

E. C. KENNEY,
Rear Admiral, MC, U.S. Navy,
Chief, Bureau of Medicine and Surgery.

OFFICIAL:

CURTIS E. LeMAY,
Chief of Staff,
United States Air Force.

R. J. PUGH,
Colonel, United States Air Force,
Director of Administrative Services.

Distribution:
Army: To be distributed in accordance with DA Form 12-9 requirements for Medical Services: Active Army: A. NG: C. USAR: A.
Navy: All Ships and Stations. (Navy: SNDL Parts 1 and 2. Marine Corps: MARCORPS Lists "H" and "I." Additional copies may be obtained by Navy/Marine Corps addressees from Supply & Fiscal Dept., U.S. Naval Station, Wash. NAVSD, Code 514.32, Washington, D.C. 20390.)
Air Force: S.

*AR 40-14
*BUMEDINST 6150.18B
*AFR 161-8
DSAR 4145.24

ARMY REGULATION No. 40-14
BUMED INSTRUCTION 6150.18B
AIR FORCE REGULATION No. 161-8
DEFENSE SUPPLY AGENCY
REGULATION No. 4145.24

DEPARTMENTS OF THE ARMY, THE NAVY, AND THE AIR FORCE AND THE DEFENSE SUPPLY AGENCY,
WASHINGTON, D.C. [redacted]

MEDICAL SERVICE

CONTROL AND RECORDING PROCEDURES OCCUPATIONAL EXPOSURE TO IONIZING RADIATION

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1. Purpose. These regulations prescribe procedures and responsibilities for the control and recording of occupational exposure to sources of ionizing radiation and implement the guidelines promulgated by the Federal Radiation Council. These regulations are applicable to all individuals who are employed by or are members of the Armed Forces. They are not applicable to exposure: (a) To ionizing radiation resulting from the employment of nuclear or thermonuclear weapons in combat military operations, or (b) of personnel being examined or treated for medical or dental purposes. For activities holding U.S. Atomic Energy Commission licenses, the appropriate provisions of Title 10, Code of Federal Regulations also apply except that the DD Form 1141, "Record of Occupational Exposure to Ionizing Radiation," will be used in lieu of AEC Form 4, "Occupational External Radiation Exposure History," and AEC Form 5, "Current Occupational External Radiation Exposure."

2. Cancellation. This directive cancels and supersedes AR 40-14/BUMEDINST 6150.18A/AFR 161-8, 21 October 1964.

3. Definitions. Terms used in these regulations are defined as follows:

a. *Roentgen, rad, rem, and dose equivalent.*—For the practical application of these regulations, one roentgen of X- or gamma-radiation, measured in air at or near the point of delivery to the body, is considered to deliver a Dose Equivalent of one rem to the body tissues. The Dose Equivalent for protons, neutrons, beta and other particles is the dose in rads multiplied by the appropriate modifying factors. For beta particles having an average energy greater than 1.2 MEV, the modifying factor is 1. For neutrons of unknown energies, a modifying factor of 10 shall be used.

Where more definitive definitions are required, those provided in National Bureau of Standards Handbook 84, *Radiation Quantities and Units*, shall be used.

b. *Ionizing radiation.*—Electromagnetic or particulate radiation, which may cause ionization within the cells or tissues of the body. For purposes of these regulations, alpha and beta particles, gamma rays, X-rays, and neutrons are examples of types of ionizing radiation.

c. *Occupational exposure to ionizing radiation.*—An exposure incurred as a result of an individual's employment or duties. Occupational exposure shall not be deemed to include the ex

*Supersedes AR 40-14/BUMEDINST 6150.18A/AFR [redacted] 21 October 1964.

posure of an individual to sources of ionizing radiation for the purpose of medical or dental diagnosis or therapy of that individual.

d. *Radiation sources.*—Materials, equipment, or devices which generate or are capable of generating ionizing radiation, including: (1) naturally occurring radioactive materials, (2) byproduct materials, (3) source materials, (4) special nuclear materials, (5) fission products, (6) materials containing induced or deposited radioactivity, (7) nuclear reactors, (8) radiographic and fluoroscopic equipment, (9) particle generators and accelerators, and (10) radio frequency generators such as certain klystrons and magnetrons which produce X-rays.

e. *User.*—The activity, section, division, or other organizational unit which has been assigned responsibility for the use, operation, or storage of radiation sources.

f. *Radiological protection officer.*—An individual designated by the commander to provide consultation and advice on the degree of hazards associated with ionizing radiation and the effectiveness of measures to control these hazards. This individual shall be technically qualified by virtue of education, military training, and/or professional experience to assure a capability commensurate with the assignment. The term "Radiological Protection Officer" is a functional title and is not intended to denote a commissioned status or a job classification within the Armed Forces.

4. Responsibilities. The commander of any installation, or activity, which possesses or uses a radiation source or sources is responsible for ensuring that measures are established to control ionizing radiation from such sources so that the radiation dose to individuals under his command or within his jurisdiction will be no greater than the amount prescribed in these regulations. He shall also ensure that the necessary measurements of exposures of personnel are made and the amount of such exposures recorded as herein prescribed.

a. The commander of an installation or activity where there are operations involving the use of multiple radiation sources for purposes of research and development, industrial radiography, or medical or dental diagnosis or therapy shall appoint a radiological protection officer to advise on the control of the hazards to health and safety from the specific materials or devices being used.

b. The commander of an installation or activity licensed by U.S. Atomic Energy Commission to use byproduct materials (unless otherwise specifically exempted) shall appoint an ionizing radiation control committee to review proposals for the use of the licensed radiation sources and to make recommendations to the commander concerning the protective measures to be taken. This committee shall include: (a) the radiological protection officer, (b) the responsible staff medical officer, and (c) other persons as deemed necessary. The committee described herein shall not exercise the functions of a clinical board or committee on radioisotopes in a medical facility, nor shall this committee exercise any function in nuclear reactor or weapons programs which are administered by each of the Armed Forces under the provisions of appropriate Departmental Directives.

5. Radiation Protection Standards. Every effort shall be made to maintain radiation dose as far below the following *Radiation Protection Standards* as practicable. Positive efforts shall be carried out to fulfill this objective, and determination of necessity should be weighed against the benefits to be expected.

a. *Basic Radiation Protection Standards* adopted by the Departments of the Army, Navy, and Air Force and the Defense Supply Agency (DSA) for the control of occupational exposures to ionizing radiation include:

(1) The accumulated dose of radiation to the whole body, head, and trunk, active blood-forming organs, gonads, or lens of the eye shall not exceed:
   (a) 3 rem in any calendar quarter, nor
   (b) 5(N-18) rem total lifetime dose, where N equals the present age in years.

(2) The accumulated dose of radiation to the skin of the whole body or the thyroid shall not exceed:
   (a) 10 rem in any calendar quarter, nor
   (b) 30 rem in any calendar year.

(3) The accumulated dose of radiation to the hands and forearms or the feet and ankles shall not exceed:

(a) 25 rem in any calendar quarter, nor

(b) 75 rem in any calendar year.

b. *Alternate Radiation Protection Standards*, less restrictive than those prescribed in paragraph a, may be used in special circumstances, when approved by the Surgeon General of the military department concerned. Proposals for the use of alternate standards will contain complete justification and should describe the means by which the standard will be implemented.

c. No individual under 18 years of age shall be occupationally exposed to ionizing radiation in excess of that allowed to any individual in the population at large.

6. Personnel Dosimetry. An appropriate personnel monitoring device shall be used to measure the exposure of each individual who is likely to receive an accumulated dose of radiation in excess of 10 percent of the applicable quarterly basic *Radiation Protection Standard*. Consideration shall be taken of all other occupational exposures the individual may receive during that calendar quarter.

a. Commanders of installations or activities under the jurisdiction of the Department of Defense shall furnish the required exposure information to the appropriate custodian of the medical records of each monitored individual at intervals not to exceed a calendar quarter. The commander need not furnish reports of zero exposures to monitored visitors, unless requested by the visitor or the custodian of his medical records.

b. When a Department of Defense employee or a member of the Armed Forces governed by these regulations is exposed to ionizing radiation at an installation outside the jurisdiction of the Department of Defense, he shall ensure that the required exposure information is furnished to the custodian of his medical record.

c. The separate requirements of the individual military departments with respect to personnel dosimetry are as follows:

(1) *Department of the Army.*—The primary dosimetric device shall be the film packet, except for field radiography in combat or simulated combat conditions when the direct reading personnel dosimeter (0–200 mr range) has been designated by the command Surgeon as the primary device to be worn by personnel occupationally exposed to X-ray. The film packet dosimetry service for Army installation and units is provided for by SB 11-206, *Film Badge (Photodosimetry) Supply and Service for Technical Radiation Exposure Control*, and this service will be employed solely for film packet dosimetry, except in unusual circumstances as approved by the Commanding General, U.S. Army Materiel Command.

(2) *Department of the Navy.*—Navy and Marine Corps activities shall utilize appropriate dosimetric devices in accordance with NAVMED P-5055, Radiation Health Protection Manual, and other applicable directives.

(3) *Department of the Air Force.*—The primary dosimetric device shall be the film badge. The film badge service for Air Force installations is provided by the USAF Radiological Health Laboratory, Wright-Patterson AFB, in accordance with the provisions of AFR 161-11.

(4) *Defense Supply Agency.* The primary dosimetric device shal be the film packet. The film packet dosimetric service for DSA field activities will be prescribed by HQ DSA (DSAH-W).

7. Recording Procedures. The custodian of the medical records shall prepare and maintain DD Forms 1141 for each person occupationally exposed to ionizing radiation. All exposure entries shall be made in rem.

a. *Initial determination of accumulated dose.*—In the initial preparation of a DD Form 1141, reasonable efforts should be made to obtain complete reports of all previous exposure based on recorded personnel dosimetry. For each period in which the individual was engaged in activities where occupational exposure to ionizing radiation was probable, and no record, or only an in

complete record of his exposure during the period can be obtained, it shall be assumed that an occupational exposure of 1.25 rem was incurred per quarter of each calendar year or fraction thereof. In cases where the nature of the radiation is unknown, it shall be assumed to be gamma radiation. If an individual was potentially exposed at more than one facility, the cumulative exposures shall be calculated and recorded in items 7 through 12, as appropriate. The sum of these whole body exposures shall be entered in item 13, and a statement regarding the source of that information shall be entered in item 16, REMARKS.

b. *Current record.*—Appropriate entries on each individual's DD Form 1141 shall be made periodically, at least quarterly, from the exposure records supplied under the provisions of paragraph 6 above. Separate DD Forms 1141 shall be maintained to record exposures other than whole body, with appropriate descriptions under item 16, REMARKS.

c. *Retention and Disposition of DD Forms 1141.*

(1) The DD Form 1141 is a permanent component of the individual's medical record and shall not be used for other purposes. All previous copies of this form shall be retained in the individual's medical record. Commanders or commanding officers, authorized inspecting officials, or supervisors of persons occupationally exposed to ionizing radiation, and the individual concerned, may review his DD Form 1141 with the custodian of the medical records.

(2) When a civilian employee of the Armed Forces is not included in a Federal civilian employees health service, a DD Form 1141 will be maintained as a permanent document in his SF 66, "Official Personnel Folder."

(3) The DD Form 1141 shall be retained in the retired medical records of any member of the Armed Forces who has been occupationally exposed to ionizing radiation during his services. Disposition of DD Forms 1141 for retired or separated civilian personnel will be made in accordance with governing civilian personnel directives.

(4) If any member of the Armed Forces is released from active duty, or if a civilian employee terminates employment with a DOD agency, he may be furnished the appropriate information concerning his radiation exposure history.

8. Control Procedures. The custodian of the health records shall evaluate at intervals not to exceed a calendar quarter the DD Form 1141 of each individual engaged in duties involving occupational exposure to ionizing radiation. He shall establish procedures to inform and advise the cognizant commander when action is necessary to limit an individual's exposure to ionizing radiation.

a. When an individual has received a dose of ionizing radiation in an amount exceeding 3 rem per calendar quarter, he shall be removed from duties involving occupational exposure to ionizing radiation until subsequent exposure limitations are established in consultation with competent medical authority. When an individual has received an accumulated dose of ionizing radiation in excess of 5(N-18) rem, he shall be removed from duties involving occupational exposure to ionizing radiation until his exposure record has been evaluated by the Surgeon General of the military department concerned or by authorized personnel in HQ DSA and subsequent exposure limitations are established as necessary.

b. Reports of exposures in excess of the limitations, as defined by the Surgeon General of each of the Armed Forces or by authorized personnel in HQ DSA, shall be made in accordance with applicable directives.

9. Supply of Forms. DD Form 1141 will be available through normal supply channels.

AR 40-14
BUMEDINST 6150.18B
AFR 161-8
DSAR 4145.24

By Order of the Secretaries of the Army, the Navy, and the Air Force and the Director, Defense Supply Agency:

HAROLD K. JOHNSON,
General, United States Army,
Chief of Staff.

Official:
KENNETH G. WICKHAM,
Major General, United States Army,
The Adjutant General.

R. B. BROWN,
Vice Admiral, MC, United States Navy,
Chief, Bureau of Medicine and Surgery.

J. P. M[illegible]NELL,
General, United States Air Force,
Chief of Staff.

Official:
R. J. PUGH,
Colonel, United States Air Force,
Director of Administrative Services.

E. M. TEETER,
Colonel, United States Army,
Executive, Defense Supply Agency.

Official:
WILLIAM PAULE,
Colonel, United States Air Force,
Staff Director, Administration.

Distribution:

Army: Active Army, NG and USAR: To be distributed in accordance with DA Form 12-9 requirements for Medical Services—A.

Navy: All Ships and Stations. (Navy: SNDL Parts 1 and 2. Marine Corps: MARCORPS Lists "H" and "I." Additional copies may be obtained by Navy/Marine Corps addressees from Supply and Fiscal Department (Code 514.32), Naval Station, Washington, D.C. 20390.)

Air Force: S.

Defense Supply Agency: C.

Change No. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, *27 August 1975*

MEDICAL SERVICES

CONTROL AND RECORDING PROCEDURES FOR OCCUPATIONAL EXPOSURE TO IONIZING RADIATION

Effective 27 September 1975

This change implements the Privacy Act of 1974 (5 U.S.C. 552a) by adding Privacy Act Statements for forms prescribed in this publication that are covered under the act.

AR 40-14, 20 May 75, is changed as follows:

1. The following form(s) (colm b) will be reproduced locally on 8 x 10½ inch paper and made available on and after 27 September 1975 to the individual supplying data on form(s) in column a.

Column a	Column b
DD Form 1952	DD Form 1952, Privacy Act Statement

2. File this change sheet in front of the publication for reference purposes. 10/2/75

The proponent agency of this publication is the Office of the Surgeon General.
(Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) direct to HQDA (DASG-HCH-E) WASH DC 20314.

By Order of the Secretary of the Army:

FRED C. WEYAND
General, United States Army
Chief of Staff

Official:
VERNE L. BOWERS
Major General, United States Army
The Adjutant General

DISTRIBUTION: To be distributed in accordance with DA Form 12-9A requirements for AR, Medical Services - Applicable to all Army Elements. Active Army, ARNG, & USAR: B (Qty rqr block no. 4).

DATA REQUIRED BY THE PRIVACY ACT OF 1974
(5 U.S.C. 552a)

TITLE OF FORM	PRESCRIBING DIRECTIVE
Film Badge Application and Record of Occupational Radiation Exposure	

AUTHORITY: 5 U.S.C. 301 - Departmental Regulations; 42 U.S.C. Social Security; 10 U.S.C 1071 - Medical and Dental Care, Purposes; 44 U.S.C. 3101 - Records Management by Agency Heads, General Duties

PRINCIPAL PURPOSE(S)

To establish qualifications for film badge and document previous exposure history.

ROUTINE USES

In order to become a radiation worker, regulations requires each individual to wear a film badge in order to record their radiation exposure. This form will be used to gather personal information which is required before becoming a film badge wearer.

MANDATORY OR VOLUNTARY DISCLOSURE AND EFFECT ON INDIVIDUAL NOT PROVIDING INFORMATION

Voluntary. However, if information is not furnished, individual may not become a radiation worker.

DD FORM 1952 Privacy Act Statement - 26 Sep 76 | GPO 693-707

ARMY REGULATION No. 40-14
DEFENSE SUPPLY AGENCY
REGULATION No. 4145.24

DEPARTMENT OF THE ARMY AND
DEFENSE SUPPLY AGENCY
WASHINGTON, DC, *20 May 197*

MEDICAL SERVICES

CONTROL AND RECORDING PROCEDURES FOR OCCUPATIONAL EXPOSURE TO IONIZING RADIATION

This is a complete revision of AR 40-14 and DSAR 4145.24. AR 40-27 (rescinded by DA Cir 310-70, 28 Feb 75) has been incorporated into this regulation. This regulation is applicable to Federal and non-Federal agencies (including civilian contractors) when their personnel are occupationally exposed to ionizing radiation on or at a military installation or activity. This revision requires that the individual responsible for maintaining the DD Form 1141, Record of Occupational Exposure to Ionizing Radiation, be appointed on orders. Additionally, it describes how the film badge is to be worn; and the care and handling of dosimeter film and film badges. Sample DD Forms 1141 are included for whole-body and wrist badges to provide guidance for the proper posting and maintenance of such records. Local supplementation of this regulation by an Army element is prohibited.

* Supersedes AR 40-14/DSAR 4145.24, 29 September 1966.

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1. **Purpose.** This regulation prescribes procedures and responsibilities for the control and recording of occupational exposure to sources of ionizing radiation and implements the guidelines promulgated by Title 10, Code of Federal Regulations (CFR), Part 20 and Title 29, CFR, Part 1910. In addition, the provisions of this regulation are based in part on the recommendations of the National Council on Radiation Protection and Measurements (NCRP) Report No. 39, Basic Radiation Protection Criteria; the International Commission on Radiological Protection (ICRP) Report No. 9, Recommendations of the ICRP and ICRP Report No. 12, General Principles of Monitoring for Radiation Protection of Workers.

2. **Applicability.** This regulation is applicable to all individuals who are employed by or are members of the Department of the Army (DA) and Defense Supply Agency (DSA). In addition, this regulation is applicable to Federal and non-Federal agencies (including civilian contractors) when their personnel are occupationally exposed to ionizing radiation on or at an installation or activity of the DA or DSA, except as specified by agreement. This regulation is not applicable to the exposure of (a) personnel to ionizing radiation resulting from the employment of nuclear or thermonuclear weapons in combat military operations or (b) personnel being examined or treated for medical or dental purposes. For DA and DSA installations or activities holding US Nuclear Regulatory Commission (NRC) licenses, the appropriate provisions of Title 10, CFR, also apply, except that the DD Form 1141, Record of Occupational Exposure to Ionizing Radiation, and DD Form 1952, Film Badge Application and Record of Occupational Radiation Exposure, will be used in lieu of Form NRC-4, Occupational External Radiation Exposure History, and Form NRC-5, Current Occupational External Radiation Exposure.

3. **Definitions.** Terms used in this regulation are defined as follows:

a. Absorbed dose. The energy imparted to matter in a suitably small element of volume by ionizing radiation divided by the mass of that element of volume. It is commonly expressed in rads. Rad: A unit of absorbed dose. (1 rad = 10^{-2} joule per kilogram equals 100 ergs per gram).

b. Bioassay. The determination of kinds, amounts or concentrations, and locations of radioactive materials in the human body, whether by in vivo counting (whole-body counting, selected organ counting, etc.) or by analysis and evaluation of materials excreted or removed from the human body.

c. Calendar quarter. Is a period of not less than 12 consecutive weeks nor more than 14 consecutive weeks. The first calendar quarter

of each year will begin in January and subsequent calendar quarters will be such that no day is included in more than one calendar quarter or omitted from inclusion within a calendar quarter (10 CFR 20.3).

d. Controlled area. A defined area in which the exposure of personnel to ionizing radiation is under the supervision of an individual in charge of radiation protection.

e. Dose. A general term denoting the quantity of radiation or energy absorbed. For special purposes, it must be appropriately qualified.

f. Dose equivalent. The product of absorbed dose, quality factor, distribution factor, and other modifying factors necessary to obtain an evaluation of the effects of radiation received by exposed persons, so that the different characteristics of the exposure are taken into account. It is commonly expressed in rems.

g. Exposure.

(1) For x-ray or gamma radiation in air, the sum of the electrical charges of all of the ions of one sign produced in air when all electrons liberated by photons in a suitably small element of volume of air are completely stopped in air, divided by the mass of the air in the volume element. It is commonly expressed in roentgens.

(2) The incidence of radiation on living or inanimate material by accident or intent.

h. High radiation area. Any area, accessible to personnel, in which there exists radiation at such levels that a major portion of the body could receive in any 1 hour a dose equivalent in excess of 100 millirem.

i. Ionizing radiation. Electromagnetic or particulate radiation capable of producing ions, directly or indirectly, in its passage through matter. Alpha and beta particles, gamma rays, x-rays, and neutrons are examples of ionizing radiation.

j. Occasionally exposed individual. An individual whose work is not normally performed in a controlled area and whose duties do not normally involve exposure to ionizing radiation; however, these individuals may have reason to enter a controlled area in the performance of their duties (messengers, deliverymen, maintenance workers, etc.). (These individuals will not receive an exposure to ionizing radiation in excess of that allowed to any individual in the population at large. See paragraph 6a(6).)

k. Occupational exposure to ionizing radiation. Exposure to ionizing radiation that is incurred as a result of an individual's employment or duties, which are in direct support of the use of radioactive materials or equipment, capable of producing ionizing radiation. Occupational exposure will not be deemed to include the exposure of an individual to sources of ionizing radiation for the purpose of medical or dental diagnosis or therapy of that individual.

l. Occupationally exposed individual. An individual whose work is performed in a controlled area and whose duties might involve exposure to ionizing radiation. The term "occupationally exposed individual" is synonymous with the term "radiation worker."

m. Radiation area. Any area, accessible to personnel, in which there exists radiation at such levels that a major portion of the body could receive in any 1 hour a dose equivalent in excess of 2 millirem or in any 5 consecutive days a dose equivalent in excess of 100 millirem.

n. Radiation sources. Materials, equipment, or devices which generate or are capable of generating ionizing radiation, including naturally occurring and accelerator produced radioactive materials; byproduct materials; source materials; special nuclear materials; fission products; materials containing induced or deposited radioactivity; nuclear reactors; radiographic and fluoroscopic equipment; particle generators and accelerators; klystron, magnetron, rectifier, cold-cathode tubes, and other electron tubes operating above 10 kV; x-ray diffraction and spectrographic equipment; electron microscopes; and electron-beam welding and melting devices.

o. Radiation work permit. A locally developed form which is completed prior to the start

of any work that is to be performed in a controlled area and describes the potential radiation hazards and protective equipment requirements for a given job. It should also provide a running record of radiation exposures received during a given job.

p. Radiation worker. The term "radiation worker" is synonymous with the term "occupationally exposed individual." A radiation worker is an individual who might be exposed to more than 10 percent of the basic radiation protection standards as established in paragraph 6*a*(1), (2), (3), (4), and (5) of this regulation as a result of his employment or duties in a controlled area.

q. Radiological protection officer. An individual designated by the commander to provide consultation and advice on the degree of hazards associated with radiation and the effectiveness of measures to control these hazards. In addition, he is tasked with the supervision of the radiation protection program. This individual will be technically qualified by virtue of education, training, and professional experience to assure a capability commensurate with the assignment. (The term "Radiological protection officer" is not intended to denote a commissioned status.)

r. Rem. The dose equivalent (H) in rems is numerically equal to the absorbed dose (D) in rads, multiplied by the quality factor (Q), and any other necessary modifying factors (N). *Rem:* A unit of dose equivalent (H=DQN). (1 rem = 10^{-2} joule per kilogram equals 100 ergs per gram.)

s. Roentgen. A unit of exposure. (1R = 2.58×10^{-4} coulomb per kilogram equals 7.7×10^{2} electrostatic units per gram.)

t. Units of roentgen, rad, and rem. For practical application of this regulation, the exposure of 1 roentgen of gamma radiation, is equal to an absorbed dose of 1 rad and a dose equivalent of 1 rem. The dose equivalent for protons, neutrons, beta, and other particles is the absorbed dose in rads multiplied by the quality factor and the appropriate modifying factors. (The product of all modifying factors (N) is assigned a value of 1 for all irradiations by external sources.) The quality factor for beta, gamma, and x-rays is 1. For alpha particles and neutrons of unknown energies and for protons having energies up to 10 MeV, a quality factor of 10 will be used. Where more exact definitions are required, those provided in International Commission on Radiation Units and Measurements (ICRU) Report No. 19, Radiation Quantities and Units, and Supplement to ICRU Report No. 19, Dose Equivalent, will be used.

u. User. An individual assigned to an activity, section, division, or other organizational unit which has been delegated the responsibility for the use, operation, or storage of radiation sources.

4. Responsibilities. *a.* The Surgeon General's (TSG) responsibilities are delineated in AR 10-5. Additionally, TSG will—

(1) Approve alternate radiation protection standards which are less restrictive than those prescribed in paragraph 6*a*.

(2) Provide a copy of the results of investigations concerning the alleged overexposure of individuals, including appropriate recommendations to the Army depot furnishing the photodosimetry service (SB 11-206).

b. The US Army Materiel Command's (AMC) responsibilities are delineated in AR 10-11. Additionally, AMC will—

(1) Provide the film holder and film packet for the Army in accordance with SB 11-206.

(2) Establish a repository for the external ionizing radiation exposure history for each individual who is issued a film badge within DA and DSA.

c. DSA Headquarters (DSAH-KH) will be responsible for—

(1) Approving alternate radiation protection standards which are less restrictive than those prescribed in paragraph 6*a*.

(2) Providing a copy of the results of investigations concerning the alleged overexposure of individuals, including appropriate recommendations, to the Army depot furnishing the photodosimetry service (SB 11-206).

d. Commander of an installation or activity—

(1) Which possesses or uses a radiation source or sources, is responsible for insuring that measures are established to control ionizing radiation from such sources so that the radiation dose equivalent to individuals under his command or within his jurisdiction will be as low as practicable. He will also insure that the necessary monitoring of exposures of personnel is conducted and that the amount of such exposures is recorded as herein prescribed.

(2) Where there are operations involving exposure to radiation sources for purposes of research and development, repair and maintenance, storage, calibration, industrial radiography, medical and dental diagnosis, or medical therapy, will appoint on orders a radiological protection officer and an alternate to advise on the control of the hazards to health and safety from the radioactive materials or radiation-producing devices being used and to supervise the radiation protection program. If the assignment as radiological protection officer is an additional duty, then this assignment should be given priority over other functions to be performed by that person.

(3) Which possesses radioactive material under an NRC license or DA Authorization, will appoint on orders an Ionizing Radiation Control Committee (unless otherwise specifically exempt) to review proposals for the use of ionizing radiation sources and to make recommendations to the commander concerning the protective measures to be taken. This committee will include: (a) the radiological protection officer; (b) a representative of the staff medical officer; (c) a representative of the safety officer; and (d) other persons as deemed necessary. The committee described herein will not exercise the functions of a clinical board, nor will this committee exercise any function in nuclear reactor or weapons programs, which are administered by DA or DSA under the provisions of the applicable Army/Agency directives.

(4) Should establish procedures for the centralized issue and control of dosimetric devices.

(5) Will provide adequate resources to implement an effective radiation protection program in accordance with applicable Federal directives.

(6) Will insure that all individuals working in or frequenting a radiation controlled area are informed of the occurrence of radioactive materials or equipment capable of producing ionizing radiation. These individuals will be instructed in the safety precautions and procedures necessary to minimize their exposure. The extent of these instructions will be commensurate with the potential radiological health protection problem in the radiation controlled area (10 CFR 19.12 and 29 CFR 1910.96).

5. Medical Surveillance. *a.* Preplacement and termination medical and ophthalmological examinations will be given to all radiation workers. This examination should include a review of prior occupational exposure and a description of any unusual exposure resulting from previous occupations, accidents incidents, or therapeutic procedures, for the purpose of evaluating the individual's acceptability into the occupational program. Base-line blood counts (white cell with differential and hemoglobin) should be performed. For more information concerning medical examinations, see AR 40-501, Standards of Medical Fitness, for DA organizations; and DSAR 1000.7, DSA Occupational Health Program, for DSA organizations.

b. Periodic medical and ophthalmological examinations for military and civilian personnel will be performed at times and periods designated by the medical commander or staff medical officer. These medical examinations will be scheduled commensurate with potential radiation hazards, but at least once every 3 years. For DA, see AR 40-501 and DSA, see DSAR 1000.7.

c. If an individual is suspected of having been overexposed to ionizing radiation, he will be referred to a physician for such examination as determined by the local medical authority. This examination will include those tests which are deemed necessary by the medical com-

mander or staff medical officer to evaluate any injuries received or treatment necessary.

d. A reported overexposure to ionizing radiation does not necessarily indicate the need for a physical examination. The background related to this reported overexposure must be evaluated to determine the need for such an examination and the tests necessary for proper evaluation. Factors to be considered are total reported dose; type and energy of ionizing radiation; whole-body exposure; length of wearing period for dosimetric device used to measure this radiation; and other appropriate factors. For DA, see AR 40-5.

6. Radiation protection standards. Every effort will be made to maintain the radiation dose equivalent as far below the following radiation protection standards as practicable. It is not desirable to maintain the highest radiation doses to individuals to some fraction of the radiation protection standards if this involves exposing additional personnel and significantly increases the sum of radiation doses received by all involved individuals. Positive efforts will be carried out to fulfill these objectives and determination of necessity will be weighed against the benefits to be expected.

a. Basic radiation protection standards adopted by DA and DSA for the control of occupational exposures to ionizing radiation include—

(1) The accumulated dose equivalent of radiation to the whole-body, head and trunk, active blood-forming organs, gonads, or lens of the eye will not exceed—

(*a*) 1.25 rems in any calendar quarter, nor

(*b*) 5 rems in any 1 calendar year.

(2) The accumulated dose equivalent of radiation to the skin of the whole-body (other than hands and forearms), cornea of the eye, and bone will not exceed—

(*a*) 7.50 rems in any calendar quarter, nor

(*b*) 30 rems in any 1 calendar year.

(3) The accumulated dose equivalent of radiation to the hands and wrists or the feet and ankles will not exceed—

(*a*) 18.75 rems in any calendar quarter, nor

(*b*) 75 rems in any 1 calendar year.

(4) The accumulated dose equivalent of radiation to the forearms will not exceed—

(*a*) 10 rems in any calendar quarter, nor

(*b*) 30 rems in any 1 calendar year.

(5) The accumulated dose equivalent of radiation to the thyroid, other organs, tissues, and organ system will not exceed—

(*a*) 5 rems in any calendar quarter, nor

(*b*) 15 rems in any 1 calendar year.

(6) Individual(s) under 18 years of age, females known to be pregnant, and occasionally exposed individual(s) will not be exposed to a whole-body dose equivalent of more than—

(*a*) 2 millirems in any 1 hour, nor

(*b*) 100 millirems in any 7 consecutive days, nor

(*c*) 500 millirems in any 1 calendar year,

(*d*) nor more than 10 percent of the values in (2), (3), (4), and (5) above, for other areas of the body.

(7) Individuals over 18 years of age, but who have not yet reached their 19th birthday, may be occupationally exposed to ionizing radiation provided that they do not exceed 1.25 rems dose equivalent to the whole-body in any calendar quarter, nor 3 rems in the 12 consecutive months prior to their 19th birthday.

b. It is the responsibility of the female employee to advise her employer of the fact that she is pregnant.

c. Radiation protection standards adopted by DA and DSA for the control of planned occupational exposures to ionizing radiation under emergency situations include—

(1) *Life saving*—this applies to search for and removal of seriously injured persons, or entry to prevent conditions that would probably injure a number of people.

(*a*) The accumulated dose equivalent of radiation to the whole-body should not exceed 100 rems.

(*b*) The accumulated total dose equivalent of radiation to the hands and forearms should not exceed 300 rems.

(2) *Less severe*—this applies when it is desirable to enter a hazardous area to protect property, minimize the release of effluents, or to control fires.

(*a*) The accumulated dose equivalent of radiation to the whole-body should not exceed 25 rems.

(*b*) The accumulated total dose equivalent of radiation to the hands and forearms should not exceed 100 rems.

d. Radiation protection standards adopted by DA and DSA for the control of nonoccupational exposures to ionizing radiation include limiting the use of sources of ionizing radiation such that—

(1) The accumulated dose equivalent of radiation to the whole-body for an individual in the general population (exclusive of natural background and medical and dental exposures) will not exceed 0.5 rems in any 1 calendar year.

(2) The accumulated dose equivalent of radiation to the whole-body for the population as a whole from all sources of ionizing radiation (exclusive of natural background and medical and dental exposures) will not exceed a yearly average of 0.170 rems per person.

e. Alternate radiation protection standards, less restrictive than those prescribed in paragraph *6a* above, may be used in special circumstances, when approved by The Surgeon General (DASG-HCH) or DSA Headquarters (DSAH-KH).

(1) Proposals for the use of alternate standards will contain complete justification and will describe the procedures by which the alternate standards will be implemented.

(2) Alternate radiation protection standards will not be considered for individuals under 19 years of age, females known to be pregnant, occasionally exposed individuals, or nonoccupational exposure to ionizing radiation.

7. Personnel monitoring. *a.* An appropriate personnel monitoring device will be used to monitor the exposure of each individual who is occupationally exposed to sources of ionizing radiation or those who periodically enter a controlled area (occasionally exposed individual) and are likely to receive an accumulated dose equivalent of radiation in excess of 10 percent of the applicable quarterly basic radiation protection standard as specified in paragraph *6a*(1), (2), (3), (4), (5) and (6) above. Consideration will be taken of all other occupational exposures the individual may receive during that quarter. The monitoring of personnel who work only with soft beta emitters (tritium, carbon-14, calcium-45, and sulfur-35) will be as prescribed by the radiological protection officer.

b. An appropriate personnel monitoring device will be used to monitor the exposure of each individual under 18 years of age who enters a radiation controlled area under such circumstances that he or she receives, or is likely to receive, an accumulated dose equivalent of radiation in excess of 5 percent of the applicable quarterly basic radiation protection standard as specified in paragraph *6a*(1), (2), (3), (4), and (5) above.

c. An appropriate personnel monitoring device and either a pocket chamber, a self-reading pocket dosimeter, or thermoluminescent dosimeter will be used, in close proximity, to monitor the whole-body exposure of each individual who enters a high radiation area.

d. Commanders of installations or activities under the jurisdiction of DA and DSA, will appoint, on orders, an individual to be responsible for preparing and maintaining the exposure records (DD Form 1141). This individual may be the custodian of the health records, the custodian of the civilian employee medical files, the individual who prepares the photodosimetry report and who normally controls the issuance and recovery of the personnel dosimetry devices, or the radiological protection officer. This individual will post these records in accordance with instructions on the reverse side of the DD Form 1141, Record of Occupational Exposure to Ionizing Radiation, at least once each calendar quarter. The results of each wearing

period for the personnel dosimetry device will be posted on this record. The wearing period should not exceed 1 month for DA and DSA personnel.

e. The Commander need not furnish reports of zero exposure to monitored visitors, unless requested by the visitor or the custodian of his health record or the custodian . 'he civilian employee medical file.

f. When a DA or DSA employee or a member of DA or DSA governed by this regulation is exposed to ionizing radiation at an installation outside the jurisdiction of DA or DSA, the employee will ensure that the required exposure information is furnished to the individual responsible for maintaining his DD Form 1141.

g. The separate requirements of DA and DSA with respect to personnel dosimetry are as follows:

(1) *Department of the Army.* The primary dosimetry device will be the film badge, except for field radiography in combat or simulated combat conditions when the low energy direct reading personnel dosimeter (0-200 mR range) has been designated by the command surgeon as the primary device to be worn by personne' occupationally exposed to x-rays. The photodosimetry service for Army installations and activities is provided for by SB 11-206, Film Badge (Photodosimetry) Supply and Service for Technical Radiation Exposure Control; and this service will be employed solely for photodosimetry, except in unusual circumstances as approved by the Commander, USAMC. This requirement in no way precludes the use of supplemental or additional personnel monitoring devices when the particular operation makes such use desirable.

(2) *Defense Supply Agency.* The primary dosimetric device will be the film badge. All DSA field activities will use the Film Badge Service provided by the US Army, as outlined in Department of the Army Supply Bulletin (SB 11-206), except for those DSA activities that have tenant status at a military installation, activity, or base with a film badge program, where they will be included in that program. This service will be employed solely for photodosimetry, except in unusual circumstances as approved in DSA Headquarters (DSAH-KH). This requirement in no way precludes the use of supplemental or additional personnel monitoring devices when the particular operation makes such use desirable.

8. **How film badge is worn.** *a.* In routine situations in which monitoring of external whole-body radiation exposure is the critical assessment, the film badge will be worn below the shoulders, above the hips, and on the outside of clothing. In relation to the film badge clip, the film badge window must face outward from the body.

b. When a lead apron or similar protective garment (*c* and *d* below) is worn during ionizing radiation exposure, the film badge will be worn on the outside of the basic clothing, but beneath the protective garment.

c. In certain situations, such as fluoroscopy, it may be desirable to measure localized exp sure to ionizing radiation, e.g., exposure of t. head and neck, hands, or forearms. In these cases, multiple film badges will be worn in such location and manner as to permit assessment of the localized exposure. This assessment will be n addition to, but never in lieu of, routine film badge procedures, i.e., assessment of whole-body exposure. An individual's regular whole-body film badge will never be used on other areas of the body during any given reporting period. Conversely, a regular film badge, used to record a specific localized exposure, will never be used to record exposures at other body sites unless the film packets are changed. See paragraph 10*d* for recording procedures.

d. The wrist badge will be worn when an individual is likely to receive 10 percent of the radiation protection standard in paragraph 6*a*(4). When a wrist badge is worn, it will be worn on the wrist which is closest to the radiation source. Consideration will be given to proper orientation of the wrist badge in relation to the radiation source.

e. Personnel who may be exposed to ionizir

radiation at other installations or activities may wear film badges isued for that purpose by the radiological protection officer at their duty station, in addition to the film badge(s) that may be provided by that installation or activity being visited; however, only the highest value will be recorded.

9. Care and handling of dosimeter film and film badges. *a.* When not being worn, film badges will be stored in a designated area located conveniently close to, but outside of, the controlled area. The control film badge for this controlled area will be stored in the same location. To assure that each individual wears only his own badge, film packet holders will contain some individual identification. Under no circumstances will the film badge holder be permanently inscribed with a name, number, or other identifying device. The recommended procedure is to type the individual's name on an embossing tape or on a small square of paper and attach it to the front or back of the film badge holder with transparent tape. The small window on the front of the film badge will never be covered with tape or any part of an identification device.

b. Upon leaving the controlled area at the end of the work day or upon leaving the installation or activity, the individual will remove his film badge and place it in the specific storage area designated by the radiological protection officer.

c. Stocks of unissued dosimeter film should be stored at temperatures below 70°F and preferably between 35°F and 46°F. Film packets should never be subjected to physical stress. Physical stress could result in sensitization of the film. The storage area for unissued film will be as remote from ionizing radiation sources as is practical. Further, this storage area will never be in close proximity to chemical fumes, since certain chemicals, such as mercury and formaldehyde, can cause fogging or sensitization, which will result in premature expiration of the film.

10. Recording procedures. The DD Form 1141 will be prepared and maintained on each person occupationally exposed to ionizing radiation. The DD Form 1141 may be prepared and maintained by an individual other than the custodian of the health records or custodian of the civilian employee medical files (see para 7*d* above). When the DD Form 1141 is maintained separately from the health record or civilian employee medical file, a locator card will be placed in each record by the custodian of these records. (AR 40-403).

a. When the DD Forms 1141 are prepared by an individual other than the custodian of the health record or custodian of the civilian employee medical file, it will be the responsibility of this individual to advise the custodian of this fact and furnish the locator card.

b. Upon transfer, if the DOD Form 1141 is not present in the individual's health record or civilian employee medical file, then the custodian of the health record or civilian employee medical file is required to write to the installation or activity identified on the locator card and request that the DD Form 1141 be forwarded for inclusion into the individual's health record or civilian employee medical file.

c. In the initial preparation of a DD Form 1141, reasonable efforts will be made to obtain complete reports of all previous occupational exposure based on recorded personnel dosimetry. DD Form 1952, Film Badge Application and Record of Occupational Radiation Exposure, will be used to record the occupational exposure history information and relevant health physics information. For each period in which the individual was engaged in activities where occupational exposure thereof. In cases where the individual was potentially exposed to ionizing radiation at more than one facility, the cumulative exposures will be calculated and recorded in items 7 through 12 of DD Form 1141, as appropriate. The sum of these whole-body exposures will be entered in item 13 of DD Form 1141 and a statement regarding the source of this information will be entered in item 16 of DD Form 1141, REMARKS. If there were no previous occupational exposures, the statement "no previous

occupational exposure" will be entered on the first line of the DD Form 1141.

d. Separate DD Forms 1141 will be maintained to record exposures other than whole-body or skin of the whole-body, with appropriate descriptions under item 16 of DD Form 1141, REMARKS, i.e., thyroid, head and neck, wrist, forearm, etc. These forms will be cross-referenced with the whole-body record. Results of bioassay and in vivo counting are considered as laboratory studies and are filed accordingly in the individual's health record or civilian employee medical file. Reference to such studies will be entered under item 16 of DD Form 1141, REMARKS (AR 40-403). The DD Form 1141 may be used to record the results of bioassays, e.g., total activity in organ, concentration in a biological specimen, or internal dose.

e. A sample DD Form 1141 is provided in figure 1 as guidance for the proper posting and maintenance of a whole-body record. Also, a sample DD Form 1141 is provided in figure 2 as guidance for the proper posting and maintenance of a wrist badge record.

f. When radiation work permits are used, exposures received should be recorded on the permits. For DA, these records will be retained in accordance with AR 340-18-6.

11. Retention and disposition of DD Form 1141.

a. The DD Form 1141 is a permanent component of the individual's health record or civilian employee medical file and will not be used for other purposes. All previous copies of this form will be retained in the individual's health record or civilian employee medical file. Commanders will authorize inspecting officials or supervisors of persons occupationally exposed to ionizing radiation and the individual concerned to review his form. If this form is being maintained in the health record or civilian employee medical file of the individual concerned, the custodian will withdraw the DD Form 1141 from the health record or civilian employee medical file for review by the individuals indicated above. The entire health record or civilian employee medical file will not be available for review by the individuals indicated above (AR 40-42, AR 40-403, AR 50-5, AR 340-1, and AR 340-17).

b. When a civilian employee of the DA or DSA is not included in a Federal civilian employee health service, a DD Form 1141 will be maintained as a permanent document in his SF 66, Official Personnel Folder. The DD Form 1141 will be subject to review by authorized inspecting officials.

c. The DD Form 1141 will be retained in the health record of any member retired from DA or DSA who has been occupationally exposed to ionizing radiation during his service. Disposition of DD Form 1141 for retired or separated civilian personnel will be made in accordance with governing civilian personnel directives.

d. If any member of DA or DSA is released from active duty or if a civilian employee terminates employment with these agencies, he will, upon request, be furnished the appropriate information concerning his radiation exposure history. This information will be reques from the radiological protection officer at employee's last duty station in accordance with 14 below.

e. The disposition of "stray" DD Forms 1141 for military personnel will be in accordance with AR 40-403.

12. Control procedures. The radiological protection officer will review and evaluate, at intervals not to exceed a calendar quarter, DD Forms 1141 of each individual engaged in duties involving occupational exposure to ionizing radiation. The radiological protection officer will establish procedures to inform and advise the cognizant commander and medical officer when action is necessary to limit an individual's exposure to ionizing radiation. When an individual is reassigned or terminates his employment at an installation or activity, the custodian of the health record or the custodian of the civilian employee medical file will determine if the individual has a DD Form 1141 or a locator card in his health record or civilian employee medical file (AR 40-403).

a. When an individual has received a dose equivalent of ionizing radiation in an amount exceeding the radiation protection standards in paragraph 6*a*, or bioassay results indicate excessive internal exposure, the individual will be removed from duties involving occupational exposure to ionizing radiation until subsequent exposure limitations are established (AR 40-5). When an individual has received an accumulated dose equivalent of ionizing radiation in excess of 5(N-18) rems, where "N" equals the individual's age in years at his last birthday, the individual will be removed from duties involving occupational exposure to ionizing radiation until the individual's exposure record has been evaluated by The Surgeon General (DASG-HCH) or by DSA Headquarters (DSAH-KH) and subsequent exposure limitations are established.

b. Reports of overexposures to ionizing radiation, as defined by The Surgeon General (DASG-HCH) or DSA Headquarters (DSAH-KH), will be made in accordance with applicable directives (AR 40-5 and AR 385-40). All abnormal exposures or overexposures to ionizing radiation will be investigated (AR 40-5).

c. When an individual has lost, failed to return, damaged beyond usefulness, or otherwise rendered his primary dosimetric device in a fashion which precludes determination of his dose equivalent for the wearing period, the individual will be assigned an administrative dose for each month during the period in question. There are several methods which can be employed when determining the administrative dose:

(1) Calculate the individual's exposure based on occupancy information and exposure levels.

(2) Assign 00.416 rem for each month during the period in question. This value is based on an averaging of 5 rem over 12 months for whole-body dose equivalents.

(3) Assign dose from supplemental monitoring device, if such was worn during this period.

The method of determining the administrative dose will be annotated in the REMARKS Section of the DD Form 1141 and the form will also be annotated to indicate an "administrative dose."

13. Personnel radiation exposure, RCS NRC-1007. *a.* These required reports apply to NRC licensees conducting industrial type activities which involve the handling of substantial quantities of radioactive material (10 CFR 20.407 and 20.408). The categories are as follows:

(1) Operators of Army nuclear reactors designed to produce electrical or heat energy, research and testing facilities—normally incorporated into annual operating report in accordance with requirements of AR 385-80;

(2) Installations or activities that use or possess byproduct materials for radiographic purposes;

(3) Installations or activities that possess or use at any one time, for the purpose of fuel processing, fabrication, or reprocessing, special nuclear material in a quantity exceeding 5,000 grams of contained uranium-235, uranium-233, or plutonium or any combination thereof;

(4) Installations or activities that possess or use at any one time, for processing or manufacturing for distribution, pursuant to 10 CFR, Parts 30, 32 or 33, byproduct material in quantities exceeding any one of the following amounts:

Radionuclide	*Quantity in Curies*
Cesium-137	1
Cobalt-60	1
Gold-198	100
Iodine-131	1
Iridium-192	10
Krypton-85	1,000
Promethium-147	10
Technetium-99m	1,000

b. Each licensee described above will, within the first quarter of each calendar year, submit a report (Personnel Radiation Exposure RCS NRC-1007) for the previous calendar year to The US Nuclear Regulatory Commission, Wash, DC 20555. Department of the Army licensee will forward information copies to HQDA (DASG-HCH-E), WASH DC 20310.

c. The report indicated in paragraph 13*b* above will contain the following information:

(1) Either the total number of individuals for whom personnel monitoring was required or the total number for whom personnel monitoring was furnished during the calendar year, provided that such totals include at least the number of individuals required to wear personnel monitoring devices.

(2) A statistical summary report of personnel monitoring information recorded for individuals for whom personnel monitoring was either required or provided pursuant to this paragraph, indicating the number of individuals whose total whole-body exposure recorded during the previous calendar year was in each of the following dose equivalent ranges:

Estimated Whole-body dose equivalent range (rems)	*Number of individuals*
No measurable	
Measurable less than 0.10	
0.10 to 0.25	
0.25 to 0.50	
0.50 to 1.00	
1.00 to 2.00	
2.00 to 3.00	
3.00 to 4.00	
4.00 to 5.00	
5.00 to 6.00	
6.00 to 7.00	
7.00 to 8.00	
8.00 to 9.00	
9.00 to 10.00	
10.00 to 11.00	
11.00 to 12.00	
greater than 12.00	

Note: Individual values exactly equal to the values separating dose equivalent range will be reported in the next higher range.

d. When an individual terminates employment with a licensee or an individual assigned to work in a licensee's facility, described in paragraph 13*a* above, the licensee will furnish to the US Nuclear Regulatory Commission, Washington, DC 20555, a report of the individual's exposure to radiation and radioactive materials, incurred during the period of employment or work assignment in the licensee's facility. Copies of these reports will be forwarded to HQDA (DASG-HCH) WASH DC 20314. Such report will be furnished within 30 days after exposure of the individual has been determined or 90 days after the date of termination of employment or work assignment, whichever is earlier. A copy of this report will also be provided the individual concerned.

14. **Report of personnel exposure on termination of employment or work.** When an individual terminates employment at an installation or activity where he has been occupationally exposed to ionizing radiation, the radiological protection officer will, upon request of the former employee, provide a report of the former employee's exposure to ionizing radiation as shown in the records maintained by the installation or activity. Such reports will be furnished within 30 days from the time the request is made and will cover each quarter of the individual's employment involving exposure to ionizing radiation or such lesser period as may be requested by the employee. The report will also include the results of any calculations and analyses of radioactive material deposited in the body of the employee. The former employee's request will include appropriate identifying data, such as Social Security Number and dates of employment. The report will be in writing and contain either of the following statements.

a. For a licensee (10 CFR 19.13): "This report is furnished to you under the provisions of Nuclear Regulatory Commission Regulations (10 CFR, Part 19). You will preserve this report for future reference."

b. For others (29 CFR 1910.96): "This report is furnished to you under the provision of the Department of Labor Regulations (29 CFR, Part 1910). You will preserve this report for future reference."

15. **Supply of forms.** DD Form 1141 and DD Form 1952 will be available through normal supply channels.

RECORD OF OCCUPATIONAL EXPOSURE TO IONIZING RADIATION

FOR INSTRUCTIONS, SEE REVERSE OF SHEET.

1. IDENTIFICATION NUMBER	2. NAME (Last, first, middle initial)	3. SOCIAL SECURITY NUMBER	4. RANK/RATE TITLE OF POSITION	5. DATE OF BIRTH (Day, month, year)
074	JARVIS, WHITNEY N.	777-07-3400	TDR	15 Apr 42

PLACE WHERE EXPOSURE OCCURRED	PERIOD OF EXPOSURE		DOSE THIS PERIOD (rem) 1. Method of monitoring is presumed to be film badge reading unless otherwise specified under item 15, "REMARKS."				ACCUMULATED DOSE (rem)		INITIAL
Whole-Body									
ACTIVITY	FROM (Day-Mo-Yr)	TO (Day-Mo-Yr)	SKIN DOSE (Soft)	GAMMA AND X-RAY	NEUTRON	TOTAL THIS PERIOD	TOTAL LIFETIME	PERMISSIBLE LIFETIME 5(N-18)	PERSON MAKING ENTRY
6	7	8	9	10	11	12	13	14	15
Previous Exposure[1]	Aug 66	Apr 68				00.107	00.107		CED
Admin Exposure[2]	Apr 68	Apr 69				05.000	05.107	45.000	CED
Edgewood Arsenal	3 May 69	4 Jun69	NR	00.000	NU	00.000	05.107	45.000	CED
do	5 Jun69	4 Jul69	00.003	00.010	NU	00.010	05.117	45.000	CED
do	5 Jul69	7 Aug69	NR	00.078	NU	00.078	05.195	45.000	CED
do	8 Aug69	6 Sep69	Film Badge Lost[3]		NU	00.416	05.611	45.000	CED
do	7 Sep69	4 Oct69	NR	00.064	NU	00.064	05.675	45.000	CED
do	5 Oct69	4 Nov69	NR	00.075	NU	00.075	05.750	45.000	CED
do	5 Nov69	6 Dec69	00.016	00.070	NU	00.070	05.820	45.000	CED
do	FILM BADGE SERVICE DISCONTINUED 6 Dec 69								CED
Fort Pluckett	2 Jan70	3 Feb70	NR	00.000	00.000	00.000	05.820	45.000	RKC
do	4 Feb70	3 Mar70	NR	00.178	00.062	00.240	06.060	45.000	RKC
do	4 Mar70	2 Apr70	00.052	02.504[4]	00.126	02.630	08.690	45.000	RKC
do	3 Apr70	4 May70	RELIEVED FROM DUTIES				08.690	50.000	RKC
do	5 May70	3 Jun70	INVOLVING EXPOSURE TO RADN[5]				08.690	50.000	RKC
do	4 Jun70	2 Jul70	00.017	00.100	00.043	00.143	08.833	50.000	RKC
Fort Ord	Aug 70	Jul 71	NO FILM BADGE WORN OR EXPOSURE RECEIVED				08.833	55.000	MJM
			SAMPLE						

16. REMARKS (Continue on additional sheet if necessary)

1. Nuclear Services, Inc, Shickshinny, PA
2. Rosewater Univeristy, Portland, OR
   No film badge records (AR 40-14)

NR = None Reported NU = Not Used
Has Wrist Badge Record No. 086

3. Admin Dose = $\frac{5 \text{ Rem}}{12 \text{ months}}$ = 0.416 rem
4. Alleged overexposure
5. Pending investigation in accordance with AR 40-5.

TO BE RETAINED PERMANENTLY IN INDIVIDUAL'S MEDICAL RECORD

DD FORM 1 MAY 67 1141 PREVIOUS EDITIONS ARE OBSOLETE

Figure 1. Sample DD Form 1141, For Whole-Body Exposure.

INSTRUCTIONS FOR PREPARATION OF DD FORM 1141

ITEM

1. Enter file, service, badge, check, or clock number by which individual is currently identified.

2. Enter last name, first name, and middle initial. If the combination of last name and first name exceeds 19 spaces, enter last name and initials only.

3. Enter Social Security number.

4. Enter in not more than 10 spaces, rank, rate, grade, title or position that the individual is currently holding. Use standard service abbreviations, e. g., CAPT; MC; HMCS; HM1, SSGT; LCPL, etc. Abbreviate civilian occupation titles as necessary, e. g., Radiological Physicist to Rad Physic; Radiation Physiologist to Rd Physiol; Electrical Welder to Elec Wldr; etc.

5. Enter date of birth by day, month, and year, e. g., 21 Sep 1918.

6. Enter name of activity or unit.

7 and 8. "Period of Exposure." Enter the day, month, and year, e. g. 1 Oct 62.

7. Enter the day, month, and year exposure period began.

8. Enter day, month, and year exposure period ended.

9 through 12. "Dose This Period." Enter radiation dose received this period to three decimal places, e. g., 02.345 rem. All entries shall be made using five digits including zeros as necessary.

9. Enter skin dose *(soft)* which includes low energy gamma and x-ray of less than 20 KEV effective energy and beta radiation. Total skin dose is the visual addition of columns 9 and 12.

10. Enter gamma and x-ray dose greater than 20 KEV effective energy in rem.

11. Enter Neutron dose in rem.

12. Enter sum of items 10 and 11.

13. Add item 12 to previous item 13; enter total in item 13.

14. Enter permissible dose calculated from the age formula 5(N-18) rem, where N equals the present age in years.

15. Recorder certify entries by initialling.

16. Enter other pertinent information such as known exposure from internally deposited radioactive material or from any external radioactive sources. Describe briefly any activity or assignment bearing a potential for exposure and estimate dose-time relationships, if feasible. If this form is used for other than whole body and skin of whole body, specify the use; i. e., hands and forearms, feet and ankles, thyroid, etc. When recorded dose is not obtained from film badge readings, specify whether estimates were obtained from pocket dosimeters, area or air monitoring, bioassay, etc.

NOTE:

This record is required on all individuals who are employed by or are members of the Armed Forces and who have been or are being occupationally exposed to ionizing radiation. It shall be the responsibility of each activity of the Department of Defense having personnel so exposed to initiate and maintain this record in accordance with AR 40-14/EUMEDINST 6150.18 series/AFR 161-8/DSAR 4145.24.
(29 Sept. 1966)

Figure 1. Sample DD Form 1141, For Whole-Body Exposure—Continued.

RECORD OF OCCUPATIONAL EXPOSURE TO IONIZING RADIATION

FOR INSTRUCTIONS, SEE REVERSE OF SHEET.

1. IDENTIFICATION NUMBER	2. NAME (Last, first, middle initial)	3. SOCIAL SECURITY NUMBER	4. RANK/RATE TITLE OF POSITION	5. DATE OF BIRTH (Day, month, year)
086	JARVIS, WHITNEY N.	777-07-3400	TDR	15 Apr [illegible]

PLACE WHERE EXPOSURE OCCURRED Wrist Badge Record[1]	PERIOD OF EXPOSURE		DOSE THIS PERIOD (rem) 1. Method of monitoring is presumed to be film badge reading unless otherwise specified under item 16, "REMARKS."				ACCUMULATED DOSE (rem)		INITIAL
ACTIVITY	FROM (Day-Mo-Yr)	TO (Day-Mo-Yr)	SKIN DOSE (Soft)	GAMMA AND X-RAY	NEUTRON	TOTAL THIS PERIOD	TOTAL LIFETIME	PERMISSIBLE LIFETIME (N-18)	PERSON MAKING ENTRY
6	7	8	9	10	11	12	13	14	5
Previous Exposure[2]	Aug 66	Apr 68				00.204	00.204		[illegible]
Admin Exposure[3]	Apr 68	Apr 69				75.000	75.204		[illegible]
Edgewood Arsenal	3 May69	4 Jun69	NR	00.009	NU	00.009	75.213		[illegible]
do	5 Jun69	4 Jul69	00.007	00.018	NU	00.018	75.231		[illegible]
do	5 Jul69	7 Aug69	NR	00.159	NU	00.159	75.390		[illegible]
do	8 Aug69	6 Sep69	FILM BADGE 4 LOST		NU	06.250	81.640		[illegible]
do	7 Sep69	4 Oct69	NR	00.143	NU	00.143	81.783		[illegible]
do	5 Oct69	4 Nov69	NR	00.162	NU	00.162	81.945		[illegible]
do	5 Nov69	6 Dec69	00.032	00.150	NU	00.150	82.095		[illegible]
do	FILM BADGE SERVICE DISCONTINUED 6 Dec 69								[illegible]
Fort Pluckett	2 Jan70	3 Feb70	NR	00.015	NU	00.015	82.110		[illegible]
do	4 Feb70	3 Mar70	NR	00.420	NU	00.420	82.530		[illegible]
do	4 Mar70	2 Apr70	00.140	18.125[5]	NU	18.125	100.655		[illegible]
do	3 Apr70	4 May70	RELIEVED FROM DUTIES				100.655		[illegible]
do	5 May70	3 Jun70	INVOLVING EXPOSURE TO RADN[6]				100.655		[illegible]
do	4 Jun70	2 Jul70	00.025	00.200	NU	00.200	100.855		[illegible]
Fort Ord	Aug 70	Jul 71	NO FILM BADGE WORN OR EXPOSURE RECEIVED				100.855		[illegible]
			SAMPLE						

16. REMARKS (Continue on additional sheet if necessary)

1. Wrist Badge Record (Whole-Body Record No. 074)
2. Nuclear Services, Inc., Shickshinny, PA
3. Rosewater University, Portland, OR

No Film Badge Records (AR 40-14)
NR = None Reported NU = Not Used

4. Admin Dose = $\frac{75 \text{ rem}}{12 \text{ months}}$ = 06.25[illegible] rem
5. Accidental Exposure (Case documented for OTSG)
6. Necessary action to avoid exceeding 18.75 rem in any 3 month period (AR 40-14)

TO BE RETAINED PERMANENTLY IN INDIVIDUAL'S MEDICAL RECORD

DD FORM 1 MAY 67 1141 PREVIOUS EDITIONS ARE OBSOLETE

Figure 2. Sample DD Form 1141, For Wrist Badge Exposure.

The Army office of primary interest in this joint publication is the Office of The Surgeon General. Army users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) direct to HQDA (DASG-HCH-E) WASH DC 20310.

By Order of the Secretary of the Army and the Director, Defense Supply Agency:

FRED C. WEYAND
General, United States Army
Chief of Staff

Official:
VERNE L. BOWERS
Major General, United States Army
The Adjutant General

G. L. HEASLEY
Captain, SC, USN
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Defense Supply Agency: 2

RECORD OF OCCUPATIONAL EXPOSURE TO IONIZING RADIATION

FOR INSTRUCTIONS, SEE REVERSE OF SHEET.

1. IDENTIFICATION NUMBER	2. NAME *(Last, first, middle initial)*	3. SOCIAL SECURITY NUMBER	4. RANK/RATE TITLE OF POSITION	5. DATE OF BIRTH *(Day, month, year)*

PLACE WHERE EXPOSURE OCCURRED	PERIOD OF EXPOSURE		DOSE THIS PERIOD *(rem)* *1. Method of monitoring is presumed to be film badge reading unless otherwise specified under item 16, "REMARKS."*				ACCUMULATED DOSE *(rem)*		INITIAL
ACTIVITY	FROM *(Day-Mo-Yr)*	TO *(Day-Mo-Yr)*	SKIN DOSE *(Soft)*	GAMMA AND X-RAY	NEUTRON	TOTAL THIS PERIOD	TOTAL LIFETIME	PERMISSIBLE LIFETIME *5(N-18)*	PERSON MAKING ENTRY
6	7	8	9	10	11	12	13	14	15

16. REMARKS *(Continue on additional sheet if necessary)*

TO BE RETAINED PERMANENTLY IN INDIVIDUAL'S MEDICAL RECORD

DD FORM 1 MAY 67 1141

131 PREVIOUS EDITIONS ARE OBSOLETE.

INSTRUCTIONS FOR PREPARATION OF DD FORM 1141

ITEM

1. Enter file, service, badge, check, or clock number by which individual is currently identified.

2. Enter last name, first name, and middle initial. If the combination of last name and first name exceeds 19 spaces, enter last name and initials only.

3. Enter Social Security number.

4. Enter in not more than 10 spaces, rank, rate, grade, title or position that the individual is currently holding. Use standard service abbreviations, e. g., CAPT; MC; HMCS; HM1; SSGT; LCPL; etc. Abbreviate civilian occupation titles as necessary; e. g., Radiological Physicist to Rad Physic; Radiation Physiologist to Rd Physiol; Electrical Welder to Elec Wldr; etc.

5. Enter date of birth by day, month, and year, e. g., 21 Sep 1918.

6. Enter name of activity or unit.

7 and 8. "Period of Exposure." Enter the day, month, and year, e. g. 1 Oct 62.

7. Enter the day, month, and year exposure period began.

8. Enter day, month, and year exposure period ended.

9 through 12. "Dose This Period." Enter radiation dose received this period to three decimal places, e. g., 02.345 rem. All entries shall be made using five digits including zeros as necessary.

9. Enter skin dose *(soft)* which includes low energy gamma and x-ray of less than 20 KEV effective energy and beta radiation. Total skin dose is the visual addition of columns 9 and 12.

10. Enter gamma and x-ray dose greater than 20 KEV effective energy in rem.

11. Enter Neutron dose in rem.

12. Enter sum of items 10 and 11.

13. Add item 12 to previous item 13; enter total in item 13.

14. Enter permissible dose calculated from the age formula 5(N-18) rem, where N equals the present age in years.

15. Recorder certify entries by initialling.

16. Enter other pertinent information such as known exposure from internally deposited radioactive material or from any external radioactive sources. Describe briefly any activity or assignment bearing a potential for exposure and estimate dose-time relationships, if feasible. If this form is used for other than whole body and skin of whole body, specify the use: i. e., hands and forearms, feet and ankles, thyroid, etc. When recorded dose is not obtained from film badge readings, specify whether estimates were obtained from pocket dosimeters, area or air monitoring, bioassay, etc.

NOTE:

This record is required on all individuals who are employed by or are members of the Armed Forces and who have been or are being occupationally exposed to ionizing radiation. It shall be the responsibility of each activity of the Department of Defense having personnel so exposed to initiate and maintain this record in accordance with AR 40-14/BUMEDINST 6150.18 series/AFR 161-8/DSAR 4145.24.
(29 Sept. 1966)

FILM BADGE APPLICATION AND RECORD OF OCCUPATIONAL RADIATION EXPOSURE

Print legibly or type all information requested. Use reverse if required.

1. FULL NAME (Last, First, Middle)	2. DATE OF BIRTH (Yr, Mo, Day)	3. SOCIAL SECURITY NO

4. DUTY SECTION (Dept., Ward, Unit, etc.)	5. DUTY PHONE

6. GRADE/RANK		7. HAVE YOU WORN A FILM BADGE ISSUED BY THIS COMMAND IN THE PAST	8. DATE OF RADIATION PHYSICAL
CIVILIAN	MILITARY	☐ YES ☐ NO	

9. DUTY STATUS

☐ PERMANENT ☐ TRANSIENT 6 WEEKS OR LESS (*If transient, show mailing address of location of health records*)

EXPOSURE INFORMATION (*ITEMS 10 THROUGH 18 FOR HEALTH PHYSICS USE ONLY*)

10. CLASSIFICATION OF EXPOSURE	11. BADGES REQUIRED	12. BIOASSAYS REQUIRED
☐ EXTERNAL	☐ WHOLE-BODY	WHOLE-BODY COUNT ☐ YES ☐ NO
		THYROID UPTAKE ☐ YES ☐ NO
☐ NEUTRON	☐ WRIST	URINALYSIS ☐ α ☐ β ☐ β-γ
		☐ MONTHLY ☐ QUARTERLY ☐ ANNUALLY
☐ INTERNAL	☐ NEUTRON	

GIVE DATES FOR ITEMS 13 THROUGH 18

13. FILM BADGE(S) ISSUED	14. DD FORM(S) 1141 INITIATED	15. FILM BADGE(S) DISCONTINUED
16. LAST FILM BADGE(S) RETURNED	**17. LOCATOR CARD TO HEALTH RECORD**	**18. DD FORM(S) 1141 TO MEDICAL RECORDS**

OCCUPATIONAL EXPOSURE HISTORY

NOTE This section only applies to the individual who has worked with radiation-producing devices or radioisotopes in a permanent status. List only those employers for whom you worked with radiation.

19. NAME AND ADDRESS OF EMPLOYER	FROM		TO		*Do not write in this space*
	MO	YR	MO	YR	
TOTAL EXPOSURE DATA					

CERTIFICATION

I hereby certify that the exposure history listed above is correct and complete to the best of my knowledge and belief.

STATEMENT

Under the provisions of 10CFR19.13 and 29CFR1910.96 I authorize the release of, and request that all of my radiation exposure records be furnished to the Radiological Protection Officer.

(Signature) (Date)

DD FORM 1 SEP 74 1952

PHOTODOSIMETRY REPORT
EXPOSURE TO IONIZING RADIATION

For use of this form, see SB 11-206; the proponent is United States Army Materiel Command.
(SEE REVERSE SIDE FOR PREPARATION INSTRUCTIONS.)

TO BE FILLED IN BY USING INSTALLATION

1. NAME AND ADDRESS *(Include ZIP Code)*	2. ADDRESS CODE
	3. PERIOD LTR

4. DATE FILM RETURNED	5. FILM USE DATES	
	FROM	TO

TO BE FILLED IN BY PROCESSOR

DATE RECEIVED	NUMBER RETURNED	NUMBER USED	EMULSION	CLERK
DATE MAILED	NUMBER SHIPPED	DEV / READ	EVAL	DENS NUMBER

TYPED	DATE SHIPPED	RACK CONTROL	CONTROL FILMS	
			NUMBER	DENSITY

6. NAME, GRADE, AND SOCIAL SECURITY ACCOUNT NUMBER	7. FILM NO.	8. TYPE AND ENERGY OF RADIATION	DOSE *(rem)*		FILTERS				COMMENTS *(If more space is needed, use plain sheet of paper)*
			SKIN DOSE *(soft)*	GAMMA AND X-RAY	1	2	3	4	

DA FORM 1 APR 63 3484

INSTRUCTIONS FOR PREPARATION OF PHOTODOSIMETRY REPORT *(DA FORM 3484)*
(NOTE: SUBMIT IN TRIPLICATE. PLEASE PRINT OR TYPE ALL INFORMATION.)

ITEM 1. Enter name, address, and office symbol of using installation.

ITEM 2. Enter the address code which has been assigned to the using installation by either Lexington Blue Grass or Sacramento Army Depot The address code is a two or three letter code which is stenciled at the top of each film packet.

ITEM 3 Enter the wearing period code. The wearing period code is either a capital or lower case single letter. stenciled at the top of each film packet

ITEM 4 Enter the day, month, and year the films were returned either to Lexington-Blue Grass or Sacramento Army Depot for processing

ITEM 5. Enter the dates during which the films were used.

ITEM 6 Enter the name, grade, and Social Security Account Number of each individual using a film.

ITEM 7. Enter the three digit film number exactly as it appears on the upper edge of the film packet which was used by the individual.

ITEM 8. Enter the type and energy of radiation to which the individual was exposed *(e.g., X-Ray - 90 KV. CS-137, Beta and Gamma, .66 Mev Gamma, etc.).*

All remaining spaces will be completed by either Lexington-Blue Grass or Sacramento Army Depot.

The film packets and Photodosimetry Report should be returned for processing in accordance with SB 11-206 Any films which are unused or not returned should be so marked on the Photodosimetry Report.

Lexington-Blue Grass or Sacramento Army Depot will evaluate the films, record the doses in the columns titled "DOSE *(rem)*", and return the Photodosimetry Report to the user. The dose column titled " SKIN DOSE *(soft)*" indicates the amount of exposure in rem due to gamma or X Ray of less than 20 KEV effective energy and beta radiation. The dose column titled "GAMMA and X-RAY" gives the amount of exposure in rem due to X or gamma radiation of greater than 20 KEV effective energy. The doses in these two columns may be recorded in the similarly titled columns on the individual's DD Form 1141 *(Record of Occupational Exposure to Ionizing Radiation)* following the instructions contained on the reverse of DD Form 1141.

☆ U S GOVERNMENT PRINTING OFFICE -260-810/8187

609 INDIVIDUAL RADIATION PROTECTION FILES

These files result from efforts to minimize the hazards of ionizing radiation to individual personnel.

File No.	Description	Disposition
609-01	**User listing files.** Documents reflecting the training, experience, and certification of individuals authorized to handle sources of ionizing radiation. They are posted to official personnel files. Included are listings of approved users and their experience and training and similar or related documents.	Destroy 5 years after transfer or separation of the individual concerned.
[redacted]	[redacted]ocuments related to recording and reporting *external exposures* of individuals to ionizing radiation. Included are calibration control badge films and all films processed for evaluation, dosimeter logs, consolidated reports of film badge readings, [redacted]en not included in medical records, and similar or related documents.	Office performing dosimetry film evaluation service: Processed film indicating abnormal exp[redacted] unusual exposure pattern[redacted] Processed film indicating normal exposure: Destroy after 5 years. Offices of the radiological protection officers: [redacted] Transfer with medical record upon transfer or separation of individual concerned. *Other documents:* Destroy after 2 years.
★609-03	**Film badge control files.** Documents reflecting the issue and control of dosimetry film badges. Included are requests for issue and turn-in of badges, documents used to record issues and turn-ins, and similar or related documents.	Destroy after 1 year.
609-04	**Personnel bioassay files.** Documents related to recording and reporting *internal exposures* of individuals to radioactive materials. Included are analysis of biological specimens, whole-body counts, and similar or related documents.	Laboratory performing bioassay service: Permanent. Offices of radiological protection officers: *Documents required for filing in individual medical records.* Permanent. *Other documents:* Destroy after 2 years.

HSE-RH (30 Mar 78) 1st Ind LTC Lodde/tla/584-3526
SUBJECT: System Notice A0609.01aDASG, Individual Radiation Protection Files

DA, USAEHA, Aberdeen Proving Ground, MD 21010 17 APR 1978

TO: HQDA (DASG-PSP), WASH DC 20310

Subject document has been reviewed and comments are provided on inclosed DD Form 2028, Recommended Changes to Publications and Blank Forms.

FOR THE COMMANDER:

signed by

2 Incl
Added 1 Incl
as

ROBERT T. WANGEMANN, Ph.D.
LTC(P), MSC
Director, Radiation and Environmental Sciences

CF:
Cdr, HSC (HSPA-H)
HQDA (DAAG-AMR-R)

DEPARTMENT OF THE ARMY
OFFICE OF THE ADJUTANT GENERAL AND THE ADJUTANT GENERAL CENTER
WASHINGTON D.C. 20314

DAAG-AMR-R 30 March 1978

SUBJECT: System Notice A0609.01aDASG, Individual Radiation Protection Files

Commander
US Army Environmental Hygiene Agency
ATTN: HSE-RE (LTC Lodde)
Aberdeen Proving Ground, MD 21010

1. The revision of System Notice A0609.01aDASG, coordinated with Mrs. Eckels of this office, is forwarded for your concurrence/comments prior to publication in the Federal Register.

2. The revised notice adds the routine use of radiation data by agencies external to the Department of Defense and the maintenance of the centralized automated dosimetry system at the Lexington Blue Grass Depot Activity. Ancillary changes have been made to describe the storage and safeguarding of automated media.

3. Radiation Protection Officer certification files maintained at the US Army Communications and Electronics Materiel Readiness Command have not been included in the revision of A0609.01aDASG because of their incompatibility with the purpose for which personnel dosimetry records are maintained. These records will be addressed as a separate Privacy Act system notification action in coordination with the US Army Materiel Development and Readiness Command.

FOR THE ADJUTANT GENERAL:

1 Incl
as

ROME D. SMYTH
Colonel, GS
Director, Admin Mgt

+ID-MANUAL A0609.01aDASG

+SYSNAME

$609.01 Individual Radiation Protection Files

+SECURITY U

+LOCATION

$Primary System: Army installations which use or store radioactive materials or byproducts.

$Decentralized Segment: Nucleonics Section, Quality Assurance Division, Lexington Blue Grass Depot Activity, Lexington, KY.

+INDIVIDUAL-CATEGORY

$All Army personnel, civilian and military, occupationally exposed to hazards of ionizing radiation and occasionally exposed and monitored visitors.

+RECORD-CATEGORY

$Installation personnel and Radiation Protection Committee files contain documents, DD Forms 1952, DD Forms 1141, DA Forms 3484, exposed dosimetry film, and related papers reflecting the training, experience, and certification of individual radiation workers to handle specific sources of ionizing radiation; summary listings of certified individuals; external exposures to ionizing radiation, including personnel dosimetry results and reports of film badge readings; and internal exposures to radioactive materials, including analysis of biological specimens and whole-body counts.

$Lexington Blue Grass Depot Activity automated dosimetry file contains data elements reflecting individual name, social security number, film

badge number, coded cross-reference to place of assignment at time of exposure, from-to dates of exposure and radiation dose, cumulative quarterly, annual and life-time dose, type of measuring device, and coded cross-reference to qualifying data regarding exposure readings.

+AUTHORITY

$10 CFR 35; 10 CFR 20; Title 44 U.S.C., Section 3101; Title 5 U.S.C., Section 301.

+ROUTINE USES

$To insure individual qualifications to handle radioactive materials; to monitor, evaluate, and control the risks of individual exposures to ionizing radiation or radioactive materials by comparison of both current (short-term) and long-term exposures; to provide radiation data to other Federal agencies, academic institutions, and non-governmental agencies, such as the National Council on Radiation Protection and Measurement and the National Research Council, authorized to conduct radiation research, evaluation, and monitorship.

+STORAGE

$File folders, film packets, magnetic tape/disk.

+RETRIEVABILITY

$Filed alphabetically by name; automated data retrievable by name, social security number, or automatic data processing parameters.

+SAFEGUARDS

$Buildings employ security guards. Records are maintained in areas accessible only to authorized personnel who are properly screened and trained; access to computer operations room is controlled by card key

system, which requires positive identification and authorization.

+RETENTION

$Certified user listing files: Retained 5 years after reassignment, transfer or separation of individual.

$Personnel Dosimetry files: Permanent. Processed film indicating normal exposure is retained 5 years after evaluation and recorded on permanent records.

$Personnel Bioassay files: Permanent medical records.

+SYSMANAGER

$The Surgeon General, Headquarters, Department of the Army (HQDA), The Pentagon, Washington, DC 20310.

+NOTIFICATION

$Information may be obtained by written request to:

%HQDA (DASG-AOM)

%Room 2D453

%The Pentagon

%Washington, DC 20310

+ACCESS

$Requests should be addressed to: Office of The Surgeon General, HQDA (DASG-AOM), Room 2D453, The Pentagon, Washington, DC 20310.

$All requests should be written since files are not stored in HQDA. If telephone conversation is desired, at the expense of the inquirer, area code and telephone number will be furnished.

$Personal visits by the individual requesting access may be arranged only with the official assigned to respond to a written request.

+CONTEST

$The Army's rules for contesting content and appealing initial determination may be obtained from the SYSMANAGER.

+SOURCE

$Monitored individuals and exposed dosimetry film.

+EXEMPTION

$None.

For use of this form, see AR 310-1, the proponent agency is the US Army Adjutant General Center.

Catalogs/Supply Manuals (SC/SM)

TO: (Forward to proponent of publication or form) (Include ZIP Code)

FROM: (Activity and location) (Include ZIP Code)

PART I - ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS

PUBLICATION FORM NUMBER	DATE	TITLE
System Notice A0609.01aDASG		Individual Radiation Protection Files

ITEM NO.	PAGE NO	PARAGRAPH	LINE NO*	FIGURE NO.	TABLE NO	RECOMMENDED CHANGES AND REASON (Exact wording of recommended change must be given)
1	1	Location	4-3			Delete: "Army installations ..... byproducts." Add: Army installations/activities which possess, use, or store radiation producing devices or radioactive materials. Reason: The terms radioactive materials or byproducts do not include medical, dental, veterinary or industrial x-ray equipment which are classified as radiation producing devices. In most cases radiation producing devices and radioactive materials are possessed, used or stored by tenant activities not under the command and control of the installation commander.
2	3	Notification	2			Delete: "(DASG-AOM)" Add: (DASG-PSP) Reason: To provide the appropriate office symbol for the Office of The Surgeon General having primary responsibility for coordination for radiation protection.
3	3	Access	2			Delete: "(DASG-AOM)" Add: (DASG-PSP) Reason: See Item 2.

*Reference to line numbers within the paragraph or subparagraph.

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON PLUS EXTENSION	SIGNATURE

DA FORM 1 FEB 74 2028 REPLACES DA FORM 2028 1 DEC 68, WHICH WILL BE USED

Trip Report of Field Search
for Exercise Desert Rock Documentation
Conducted by Representatives of The Adjutant General
18 June 1978 to 14 July 1978

ANNEX 8
Las Vegas Nevada Operations Office, Dept of Energy (NVOO)
Mercury Nevada Test Site, Reynolds Electrical & Engineering Co (REECO)
Dates of Visit: 25-27 June 1978

1. PERSONNEL AND AGENCIES CONTACTED:

a. Mr John Marooney, Department of Energy (NVOO)
b. Mr William J (Jay) Brady, Senior Health Physicist (REECO)
c. Mr Robert Friedrich, Bio-medical Technician (REECO)
d. Miss Sherry Holdaway, Archivist (REECO)

2. BACKGROUND:

a. The Reynolds Electrical & Engineering Company, Inc., is a subsidiary of EG&G, Inc., and has been associated with the Nevada Test Site at Mercury, Nevada since 1952. Gradually expanding its role in the nuclear testing activity in continental United States, it became a prime contractor in 1955. By 1957 it was virtually responsible for the complete operation of the Mercury Test Site including dosimetry. These expanding roles and contracts were administered by the Atomic Energy Commission which maintained its main Nevada offices in Las Vegas. A DOD liaison function was also located with the Nevada Operations Office (NVOO) in Las Vegas. With creation of the Department of Energy both the Las Vegas office and the Mercury Test Site were assigned to the new federal agency.

b. Operators of the Mercury Test Site did not assume general responsibility for radiation exposure dosimetry until 1957 at which date the Desert Rock Exercises effectively ended. Hence, The Reynolds Electrical & Engineering Company, inc., (REECO) played very little role in creation of the general dosimetry records and data which it holds at this time pertaining to the years 1947-1957. For the most part, what little direct dosimetry service that it provided was limited to scientific and contractor personnel, i.e., its own employees or the employees of sub-contractors. The Atomic Enery Commission provided dosimetry service for all participating personnel (DOD included) in Exercises Desert Rock I, II and III ending in 1951. Commencing with Exercise Desert Rock IV in 1952, DOD assumed this function and tasked the Army for its execution.

c. To carry out this function, the Army created the 1st Radiological Safety Support Unit. The organizational structure was provided by the TDA 9778th Technical Support Unit (TSU) of the US Army Chemical Corps School at Fort McClellan, Alabama. A skeleton manning cadre was taken from the 216th Chemical Service Company also from Fort McClellan. Other specialist and technicians were drawn from the Rocky Mountain Arsenal, the 17th Chemical Technical Intelligence Detachment (of the US Army Chemical Center at Edgewood Arsenal, MD), and the 995th Quartermaster Laundry Company of Fort Devens, Massachusetts. Aside from USAF

Lt Colonel Philip S. Gwynn commanding the unit, it has not been possible to determine whether or how many other USAF or USN personnel were committed to the augmen staff of the Radiological Safety Unit. For field exercise purposes, this parture from AEC procedure seems to have been very successful. It processed approximately 65,000 film badge exposure readings and provided the organizational format for the following Desert Rock Exercises V and VI.

d. From the time of its creation in 1951/52 until termination of atmospheric testing in 1958 and subsequent signing of the nuclear test ban treaty with the Soviets, the Radiological Safety Support Unit stayed more or less in continuous existence. During non-exercise periods or when test activity centered in the Pacific, it was reduced to a manned, standby-basis with a personnel complement of one officer and one non-commissioned officer. When continental United States atmospheric testing resumed in Nevada, the 1st RSSU was beefed-up with a full scale complement. For Exercise Desert Rock V (AEC Exercises UPSHOT and KNOTHOLE), e.g., the USA 9778th TSU contributed 26 officers and 144 enlisted men to the RADSAFE Group which was commanded by Colonel Clinton S. Maupin, USA-MC (duty assignment with the Armed Forces Special Weapons Project). USA Chemical Corps Artillery Officer Lt Colonel Tom D. Collison was the Radiological Safety Officer. In addition to the Army complement, this RAD SAFE unit also had 5 USN Officers 5 USN Enlistedmen; 5 USAF Officers, 13 USAF Enlistedmen. It also had an off-site group with a Los Alamos Scientific Laboratory (LASL) civilian in charge of 15 Public Health Officers, 2 other LASL Civilians, one USA Chemical Corps Officer and 10 Enlistedmen.

e. The same organizational and operational pattern was maintained for Exercise Desert Rock VI. Commencing with Exercises Desert Rock VII and VIII, the RAD SAFE Unit was augmented by a team from the Lexington-Bluegrass Signal Depot. This team came equipped with itsown vans for processing and recording film badges. The success of this innovation has been previously discussed in ANNEX A. With the exception of Exercises Desert Rock VII and VIII, the film badge processing and dosimetry records created at the Mercury Test Site or in the various tent cities that sprang-up at Camp Desert Rock during exercise periods were left at Mercury and became the basis of the collection which REECO presently holds. Dosimetry hardcopy for DR VII and DR VIII eventually made its way into the files of the Lexington-Bluegrass Signal Depot. However, evidence is strong at this time that it followed a roundabout trail over a period of years from Mercury to Presidio (6th US Army G-3) and finally to Lexington. This, too, tends to support the recollections of several members of various Desert Rock Exercise staffs as to the handling of exercise records. Additional discussion on general administration during and following the various Desert Rock Exercises will be found in ANNEX F (Fort Ord) following.

f. Evidence is strong at this time to indicate that standing records management procedures in effect during the 1950's were not followed. Almost without exception, all other significant exercises involving the United States Army durin the decade of the 1950's followed the procedure of retiring exercise records clearly identified as such, e.g., BLUE BOLT, BIG BLAST, SAGEBRUSH, INDIAN RIVER, etc. However, to date we have not been able to find any such central collection dealing with DESERT ROCK. More discussion on possible explanations for this glaring discrepancy in the retired records inventory of the United States Army will be found in ANNEX H (St Louis National Personnel Records Center, Military Organizational Records) following.

h. The only Exercise Desert Rock records which appear to have been generated on-site and to have weathered the ravages of time are the radiation exposure dosimetry records which over the years were left with REECO. Minute examination of REECO's total records inventory failed to reveal any other general or administrative records generated on site by the various participating DOD activities. This examination included the REECO Archives which are maintained at Mercury; retired GOCO (government-owned, contractor-operated) records held in Records Group 430 at the Federal Archives and Records Center-Los Angeles (located at Laguna-Niguel, California); and approximately 188 linear feet of previously retired RG 430 records which REECO had withdrawn from the FARC-Los Angeles within the past year. More discussion on the GOCO records held by the Federal Archives and Records Center-Los Angeles will be found in ANNEX G (FARC Los Angeles at Laguna Niguel) following.

i. As a prime contractor doing business with the federal government, virtually all of REECO's records are technically the property of the federal government regardless of present or past agency of primary jurisdiction. In REECO's case, this has ranged from the Atomic Energy Commission to the Department of Energy with strong Department of Defense collateral interest. The close working relationship between the AEC and DOD during the years 1947-57 produced a commonality of certain record keeping practices which came to be reflected in REECO records. Unfortunately, none of REECO's general administrative, personnel or housekeeping records appear capable of yielding much of the data sought in the current investigation. The REECO Archives are limited to internal matters of site maintenance as are most of the retired materials held by the FARC-Los Angeles. For all of this, REECO has been unsparing in its efforts to further the investigations of the Army as well as other affected DOD activities.

j. The main focus of the Army's investigation and primary objective of the field search are the troop packets which participated in the various Desert Rock Exercises. These complements are identified only as "Composite Unit, 1st Army," "Composite Unit, 2nd Army," etc., in the official after action reports. Presumption is that they were drawn from the total troop resource of each numbered army participating in a given Desert Rock Exercise during the 1950's. To date personnel rosters of these "composite Units" have not been located. A manual search of Morning Reports is impractical,if not impossible, in this case. For this procedure to be productive, we must have the identification of the military units contributing the personnel. We have this information for units which were committed wholly to the exercises from the after action reports; we have no central identification of units which merely contributed varying numbers of troops on a temporary duty basis to the exercises.

k. Institutional memory from a number of quarters including long-time REECO employees maintains that identification of the troops making-up the composite units AND WHO ACTUALLY PARTICIPATED IN THE EXERCISES OR WERE ACTUALLY EXPOSED TO RADIATION can come from another source. The Armed Forces Special Weapons Project (forerunner of the Defense Atomic Support Agency and currently, the Defense Nuclear Agency) exercised overall control of surface movement into and out of the exercise blast areas or radiation zones. Army convoys moving into the test areas after a shot were required to deposit a complete roster of all convoy personnel with the security checkpoints controlling such movement. These rosters were prepared in quintuplicate for various administrative requirements; one complete set was prepared for and presumably preserved by the security officers of the Armed Forces Special Weapons Project (AFSWP, DASA, etc)

Field Command at Sandia Base, Albuquerque, New Mexico. This information was provided by Mr. Jay Brady who was a Security Officer performing these control duties as early as 1952. Unfortunately, none of these rosters have been discovered to date in the retired records of the Armed Forces Special Weapons Project, Field Command, held by the National Archives and Records Service, and presumed to cover the period 1947-71. See ANNEX C (Field Command, Defense Nuclear Agency, Kirtland Air Force Base, Albuquerque, New Mexico) following for further discussion and new archival leads developed along these lines.

3. CURRENT SITUATION:

a. REECO responded immediately to DOD requirements for meeting the Nuclear Test Personnel Review (NTPR) Program by withdrawing all known pertinent retired materials from the Federal Archives and Records Center-Los Angeles. Unfortunately, a shipping mishap delayed effective use of this resource for some months. When this collection of some 188 linear feet arrived at Mercury from Laguna Niguel, it was in complete disarray. Faulty palletizing had allowed the shipment to break loose in transit. When the seals were broken on the commercial van containing the withdrawn collection, the van was discovered not to contain 188 FRC boxes of records but one large mass of shifting paper . Some months were then lost in re-arranging and re-ordering the collection in an effort to restore a semblance of its original provenance. While not completely successful in this respect, an acceptable archival order was realized.

b. As soon as archival order had been restored to these materials, REECO commenced a massive microfilming project which was designed to reproduce its entire collection of dosimetry materials, i.e., the 188 linear feet withdrawn from FARC-Los Angeles plus approximately 200 additional feet of REECO held materials. The microform selected for this project was 16mm 3M casette. At the time of the field search, five cassettes had been completed and distributed in quintuplicate to DOD activities. Work continued on the microfilming as well as a master, hardcopy index to the entire collection. Estimated completion date for the entire project was 1 September 1978. REECO's primary interest in this collection was dosimetry data which might not have been included in its computerized data bank. Personnel lists, per se, lacking dosimetry data, were of no immediate interest to REECO health physicists and technicians. On the otherhand, such lists are almost desperation objectives of the Army's field search. Consequently, close scrutiny of the entire REECO Collection takes high priority in our current investigation.

c. During the course of the visit to the Mercury Test Site some hardcopy previously included in the first five casettes of the REECO Microfilm was examined directly. This included Boxes No. 11 and No. 12 for the years 1952 and 1953 for Exercises Desert Rock IV (AEC: Tumbler-Snapper) and Desert Rock V (AEC: Upshot-Knothole). Of particular interest was one 141-page document which had been prepared by the 9778th RAD SAFE Support Unit containing approximately 2000-3000 names and purported to be a complete list of DOD personnel participating in Desert Rock V during the spring of 1953. Poor quality of the sole surviving copy made its microfilm virtually unreadable. A combination of photo-offset-Xeroxophy produce usable copies of the document. Also located in this collection was what appeared to be a simple name list of the personnel complement of the 369th Amphibious Engineer Regiment (and its support elements) from Fort Worden, Washington. This list did not contain military ranks or

serial/social security numbers, but appeared to be a complete listing of the personnel complement which moved as a unit from Fort Worden (on Washington's Puget Sound) to Camp Desert Rock for the 1952 Exercise. Copies of both documents along with other personnel lists were dispatched via registered mail from Mercury to Washington for key-stroking into the NTPR data bank.

d. Another genre of intriguing documents found in the REECO hardcopy collection was tri-service lists of names arranged in annual blocks, i.e., 1951, 1952, 1953, etc., and seemingly identifying troop participation in the entire AEC series of tests. The only captions appearing on what obviously were computer produced lists were "USAF ADP Project 1952, 1953, etc." First impression was that these lists might have been developed from raw data or hardcopy not readily recognized as existing in the REECO Archives or previously retired records. Subsequent exploration of this possibility with REECO Senior Health Physicist Jay Brady and USAF NTPR Project Manager Lt Colonal George S Kush revealed, however, that these lists were merely early products of the REECO computerized dosimetry data base. The USAF designation was in deference to the source of original funding to commence computerization of the REECO data. USAF provided this funding largely in keeping with its overriding role in the Airdrop aspects of the continental tests. Because of surface vessel involvement, the US Navy has taken the primary lead in the Pacific tests.

e. Divergent US Air Force and US Navy interests in the various test exercises also produced a split in contractor involvement. The AFSWP partnership came into existence in 1947 as a working accord between the Secretary of War and the Chief of Naval Operations. From this arrangement, REECO became the land-based prime contractor for continental tests; Narver and Holmes, Inc., became the prime contractor for surface vessel and seaborne operations in the Pacific tests. As AFSWP was succeeded by DASA and DNA and as AEC was succeeded by the Department of Energy (DOE), the original contractors and geographical division of contractual responsibilities remained constant. Interjection of a possible interest (and, hence, records !) of the Narver and Holmes organization in the continental tests opened new possibilities of search. Both contractors had consistently retired their GOCO records to the FARC-Los Angeles. This possibility mandated a change in itinerary to include the FARC-Los Angeles. More discussion on the results of this decision will be found in ANNEX G.

f. At the same time, decision was taken to eliminate Fort Lewis from the original itinerary. The original decision to include Fort Lewis in the field search was predicated on the fact that Fort Worden, traditional Puget Sound home of the 369th Amphibious Engineers, was a satellite of Fort Lewis in 1952. Shortly thereafter, both the 369th Engineers and Fort Worden, were deactivated. As no retired records of the 369th Engineers pinpointing its role in Desert Rock IV -- identification of the participating personnel complement -- had been located in normal records retirement channels, it was reasoned that an archival trail to such materials might be picked-up at the parent installation-Fort Lewis. Location of the 369th personnel rosters in the REECO collection at Mercury eliminated any further need to vist Fort Lewis. While a number of excellent leads were picked-up from REECO sources at Mercury, further direct exploitation of the REECO resources to meet Army needs appear limited.

g. The possibility of name lists possibly lacking dosimetry data still exists in the REECO assets. This will reveal itself when the microfilming of the

entire REECO Collection has been completed and distributed for Army NTPR Team examination. Another possibility lies in the current project of REECO to incorporate dosimetry data held by the Los Alamos Scientific Laboratory, Sandia Laboratory and Lawrence Livermore Scientific Laboratory into the REECO data bank. Part of this project is still in the discussion stage. No date is available at this time as to when this will be completed. Army interest in this project lies chiefly in the area of Army personnel who have performed tours of duty with AFSWP, DASA, DNA, LASL, Sandia and Lawrence Livermore since 1947 and whose dosimetry records may never have been added to the known bases maintained by REECO or the Lexington Depot. More discussion on the role of the "scientific laboratories" in the general context of nuclear testing and NTPR will be found in ANNEX D (LASL: Los Alamos Scientific Laboratory) following.

4. CONCLUSIONS:

a. REECO has never been officially tasked for any overall radiation exposure dosimetry responsibility so far as DOD participation in nuclear test exercises are concerned. However, REECO has executed a limited dosimetry responsibility for scientific and contractor personnel involved in the continental United States nuclear tests.

b. In its role as prime contractor for operation of the Mercury Test Site, REECO has come into possession of considerable dosimetry data which probably was generated originally by DOD activities. This includes AFSWP, DASA, DNA and the United States Army. It now appears that these materials were left at the test site as various AEC nuclear tests and Desert Rock Exercises were completed.

c. REECO has performed an invaluable public service in its handling, use and preservation of the dosimetry data that has come into its custody since 1954 from DOD sources as well as that data which it generated in its role as prime contractor.

d. The REECO dosimetry data collection possesses unique value to the Army's current investigation in connection with the NTPR Project. It is not certain at this time that the fullest value of this collection has been realized nor can this be determined until microfilming of the entire hardcopy collection has been microfilmed and studied by the Army NTPR Team.

e. In much the same manner as the REECO hardcopy and microfilm collections, the computerized collection of dosimetry data holds unique value to the Army's current investigations. This value will grow as additional data -- especially that which will be contributed by the Sandia, Los Alamos and Lawrence Livermore Scientific Laboratories -- is added to the existing base.

5. RECOMMENDATIONS:

a. That the Army NTPR Program and field search for Desert Rock documentation be held open until all known REECO resources have been exploited as fully as possible.

b. That the microfilm copy of the REECO hardcopy collection of dosimetry data be studied carefully for name lists or other personnel rosters which may have been passed over by REECO researchers as not containing usable dosimetry

data but which may possess unusual value in identifying Army personnel who participated in the Desert Rock Exercises.

c. All archival leads furnished by REECO personnel as to identification of additional Army Desert Rock Exercise participants should be followed-up on a priority basis.

d. That a technical inquiry be opened immediately to examine the feasibility of a computer link between existing dosimetry data bases maintained by REECO, the Army and other DOD participants in the NTPR Project with a view to ultimate pooling of all known data.

APPENDICES:

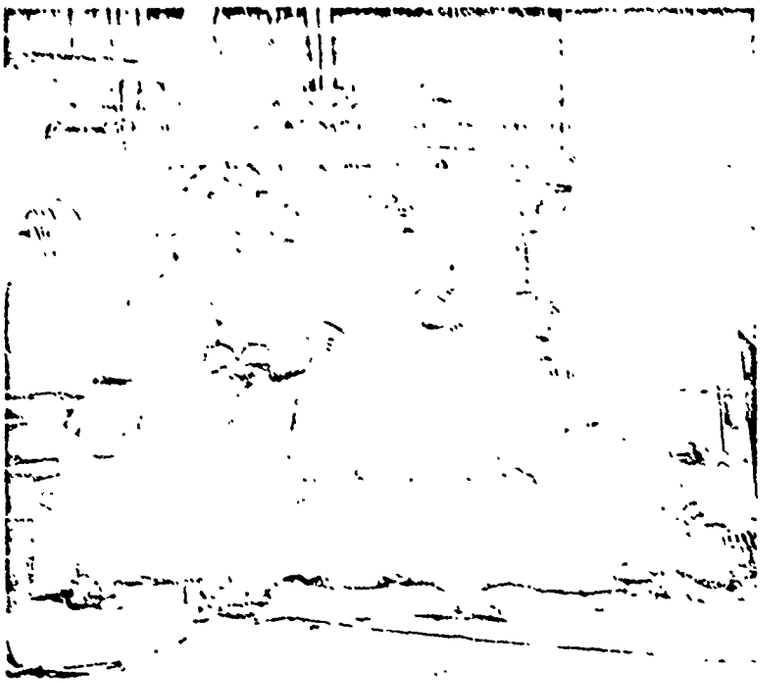
1. Brief REECO History of the Nuclear Test Series
2. Inventory of the REECO Dosimetry Data Collection
3. DA Pamphlet No. 39-3, The Effects of Nuclear Weapons, April 1962, Appendix B, "Announced Nuclear Detonations, pp. 671-678.

JOHN HENRY HATCHER, PHD
Chief, Declassification
Operations Branch

Trip Report of Field Search
for Exercise Desert Rock Documentation
Conducted by Representatives of The Adjutant General
18 June 1978 to 14 July 1978

Brief History of the Reynolds Electrical & Engineering Company, Inc., and its involvement in Nuclear Tests Conducted by the United States Government.

APPENDIX #1 to ANNEX B



Rotary drill used to dig big holes

Nuclear Industry

REECo's test support operations, prime [redacted] DOE contractor at NTS

Drilling, tunneling, mining, electrical engineering, medical care, and construction—it's all in a day's work

Up with the sun and out on the desert highway is a routine operation for the majority of the REECo employees at the [redacted] Nevada Test Site Mercury, who travel by car and bus more than 130 miles a day from Las Vegas to the site. For those who prefer to live on the base, REECo operates a complete city, with movie theater, steak house, library, and swimming pool. About half of the employees work at base camp, and the rest are spread out over the huge testing grounds, which cover an area larger than the state of Rhode Island.

REECo, an acronym for Reynolds Electrical and Engineering Company, is the prime [redacted] contractor for support services at the Nevada Test Site.

Its work involves drilling, tunneling, mining and miscellaneous construction; maintenance and operations; limited architect-engineering services; and health, medicine, and safety. The estimated annual cost for these services is around $115 million. Indicative of the size and character of the operation, REECo employs over 5000 people on the site (including a medical staff of 10 doctors and 52 nurses), operates a fleet of 3000 motor vehicles, digs holes up to 160 inches in diameter, and lays hundreds of miles of wire and cable every year.

• *Drilling.* Since the signing of the Limited Test Ban Treaty in 1963, all nuclear testing by the United States has been underground. To meet the emplacement requirements for this kind of testing, REECo must drill "big

holes" (defined as a hole larger than 36 inches in diameter), and several hundred big holes have been drilled during the 16 years the company has provided services for the [redacted] nuclear test operations. The first big holes were drilled with auger- or bucket-type drill rigs, but rotary drills are now used routinely on holes up to 160 inches in diameter. The new techniques developed in these operations have contributed substantially to major advances in drilling technology.

• *Mining and Tunneling.* Since 1962, REECo has completed nearly 100,000 linear feet of tunnel or horizontal excavation. Prior to that, over 20 tunnels and drifts of varying sizes, with an aggregate length of 45,000 feet were constructed. Tunneling work at NTS has involved such things as constructing telescoped transitions in drifts at the bottom of a 1300-foot vertical shaft, excavating complexes using combined mining methods to produce large underground chambers, and placing new and unusual concrete mixes and stemming materials in exotic tunnel configurations and locations.

Left: Thousands of feet of coaxial cable and signal wire are being made ready for a test.

Below: REECo's Rad-Safe trained monitors in the process of decontamination after returning from a test area.

In one tunnel system, REECo excavated two large and closely proportioned cavities shaped like saucers balanced on edge. The top of each was approximately 150 feet from the tunnel floor. Because of the tremendous size of these cavities, entirely new excavation techniques had to be developed, and REECo, in conjunction with consulting and manufacturing firms, designed specialized equipment and employed new mining methods to meet the unique construction problems and a very tight schedule.

Communications. The huge test site is made up of rolling hills, rugged mountains, dry lakes, and mesas as high as 7000 feet. To tie this complex together, REECo has developed an extensive communications system of direct-line, closed-circuit television and some 30 radio networks. Using closed-circuit TV, scientists and technicians can view nuclear test events from many strategic points, including ground zero. Special mobile TV units that can be controlled remotely and operated from battery banks charged by generators in the vehicles have been designed. Television cameras are also mounted on remotely controlled helicopters, and these give a close-up view of very large events that can cause considerable ground motion and could knock out ground systems.

• *Cabling.* All the miles of tunnels and the thousands of feet of drilled holes would be of little use without the direct links from the testing areas to the scientific instruments that record the effects and the results of the tests. The success of these sophisticated nuclear events, with investments ranging up to several millions of dollars, rests on the integrity and reliability of the multiconductor and coaxial cable systems. These intricate and complex networks are expected to be 100 percent reliable, for they actuate and measure the scientific experiments.

In a typical two-year period, REECo installed over 600 miles of various types of signal and coaxial cable and more than 1400 miles of field wire. Lengths of runs varied from a few feet to several thousand, and cables were placed in every conceivable configuration and angle of repose. A

single test may require as many as 2000 cables.

• *Radiological Safety.* Nuclear testing requires a very high degree of radiological safety, and to meet this requirement, REECo maintains and operates a Radiological Sciences Department Rad-Safe, as it is commonly called at NTS, has as its function the calibration and maintenance of survey meters, remote monitoring systems, and other instruments used in weapons testing and post-shot operations. Health physicists direct programs for measurements and control of personnel exposure, for control of radioactive sources and contaminated waste, for collection and analysis of environmental and biological samples, for data evaluation and recording, and for the maintenance and quality of personal protective equipment.

In the years of specialized participation in the varied nuclear programs, REECo has expanded its radiological sciences capabilities to include engineering of equipment and health physics techniques to support activities at site, and the Rad-Safe Department has designed a film-badge-holder recognized throughout the United States as an advanced dosimetric device.

• *Vehicles and Fire Department.* Vehicles of all sizes and shapes are required to cover the vast expanses and terrain of the test site—more than 3000, in fact. They range from compact sedans to huge trucks and trailers and from pickups and buses to field ambulances equipped for off-road travel. Because of climatic variations (temperatures range from −10 to 120°F), rugged terrain, and the unusual requirements for getting men and materials into remote areas, REECo has developed a preventive maintenance program especially designed to meet the demands unique to the operation. As an example, the airborne dust prevalent in the area is extremely damaging to the intake system of combustion engines. Conventional oil bath filters did not prove satisfactory, so dry filters with precleaners have been installed in all systems.

Fire protection is a major function at NTS, where more than 1200 buildings and structures plus storage yards and special equipment are valued in the hundreds of millions of dollars. To provide adequate fire protection and prevention, REECo operates seven fire stations around the clock, seven days a week. This department is also called on to provide special protection when explosives or highly flammable materials are brought onto the site.

• *Other Support Operations.* Construction work at NTS includes jobs and services that might normally be done by 20 or more separate companies. A few of the tasks performed almost daily include, heavy rigging, moving, and hauling, steel fabrication and erection, excavation and roadwork; framing, forming, general carpentry, and mill work, electrical construction of all types, including transmission lines and substations, secondary power systems, multi-conductor signal installation, complete coaxial cable systems, and sophisticated control devices; sheet metal fabrication and installation; plumbing, piping, and refrigeration systems of various types; fabrication, installation, and checkout of intricate and unique pressure and vacuum systems; special purpose line-of-sight piping and radiological-chemistry containment systems; operation of aggregate production and stemming material and concrete batching plants; transportation and placement of concrete; heavy equipment operation; and repair, maintenance, and painting.

The Company

Reynolds Electrical & Engineering Company, Inc., was established in 1932 in El Paso, Texas, by Mr. L. J. Reynolds, Sr., and a few associates. REECo was a depression baby and was obliged at the start to face the rigors of fierce competition in the electrical-construction industry. To offset its initial disadvantages, the newly formed company sought supplemental means of support and elected to enter the electrical wholesale business. This combination proved successful throughout the bad years of the 1930s. The company won its first contract outside El Paso in 1935, and today it has jobs in process in 37 states plus Guam, Puerto Rico, and Japan. In 1967 REECo was acquired by EG&G—a company with which it had worked shoulder-to-shoulder on the NTS programs. EG&G performed timing, firing, and other scientific functions, and REECo did the drilling, mining, construction, and support operations.

The introduction of engineers into the electrical-construction industry was an original concept adopted by REECo. This concept accounts for the word "Engineering" in the company name, and it represented an unheard-of deviation from the conventional electrical contracting at that time. The complex installations encountered today confirm the soundness of an early start in this direction and provide a firm foundation on which to build an organization capable of meeting the requirements of the rapidly expanding electrical-construction field.

By the beginning of World War II, REECo had work contracts throughout the United States and in Hawaii, where the underground power distribution system on Hickham Field had just been completed when the field was bombed on December 7, 1941. Thereafter, the company became involved in repairing the extensive damage incurred. During the war, REECo was selected to perform the electrical construction requirements for the Manhattan District Project at Los Alamos, in the development of the atomic bomb.

Following the war, REECo was awarded classified contracts scattered all over the country; these contracts during a five-year period amounted to $14 million. Sandia Base and other installations in the Albuquerque area accounted for a part of this work. In 1953, REECo and the Newberry Electric Company, Los Angeles, were selected by the AEC to accomplish the electrical installation on the mammoth Gaseous Diffusion Plant, Portsmouth, Ohio. This joint venture received the largest single contract ever awarded up to that time—$153 million. The work required four years to complete and involved the employment of 4000 people.

When the AEC decided to conduct weapons tests within the continental United States and selected the site in Nevada for its first venture, it selected REECo to provide construction support services for the first shot. Later, additional test shots were scheduled, and these have resulted in contracts with REECo for complete support services lasting over the past 16 years.

Following the acquisition by EG&G in July 1967, the REECo corporate headquarters were moved from El Paso to Tempe, Arizona, and district operations were consolidated into three regional offices at Atlanta, El Paso, and Tempe.

NEWARK, N.J. (AP) — The U.S. Government has agreed to turn over the names of Army officers in command 25 years ago when soldiers were ordered to be present at the site of nuclear bomb explosions.

In a hearing on a suit by a former Army corporal suffering from breast cancer, the Army conceded in federal court Monday that soldiers witnessed the test explosions but said no connection had been established between watching a bomb blast and developing cancer.

Justice department attorney Elizabeth Gere Whitaker told District Judge Herbert J. Stern that it would "reluctantly" turn over the names of Army officers it had determined were involved in the explosion. A 1971 fire destroyed some records and all the names may not be available, she said.

Whitaker promised to hand over the names to the plaintiff's attorneys after Stern refused to dismiss allegations against "unnamed government officials."

Stern did dismiss one count of the suit, which asked that the government be ordered to warn the hundreds of thousands of soldiers who may have been exposed to radiation during the experiments and to treat those suffering from cancer.

"In my view ... I don't think you can sue the government under sovereign immunity unless they agree to it," Stern said.

Stern let stand the rest of the suit pending an appeal of his decision to the third circuit.

The only way the United States can be sued, Stern noted, would be if the complaint was amended to comply with the Tort Claims Act.

The $13 million negligence suit was filed in May by Stanley Jaffee, 47, of River Edge.

8/3/78

Trip Report of Field Search
for Exercise Desert Rock Documentation
Conducted by Representatives of The Adjutant General
18 June 1978 to 14 July 1978

Inventory of the Reynolds Electrical & Engineering Company, Inc., Archival Collection of Radiation Exposure Dosimetry Data, 1947 to 1962

APPENDIX #2 to ANNEX B

SOURCE DOCUMENTS

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1945 - 1962
SOURCE DOCUMENTS

Box 1

Continent 1945-1947: Trinity: DTL Alamogordo NM, Trinity source data accession book series 7000-7628. Trinity exposures for July, August, and October.

Report on exposure received during the Trinity experiment of July 16, 1945. Exposures of the personnel in H. L. Anderson's group. Monitoring excavation of tower footings at Trinity.

Report on exposures at Trinity, October 08, 1945 - October 10, 1945.

Report on exposures of people visiting Trinity and of personnel stationed at the site.

Report on exposures sent by Sgt. Lernor November 8, 1945.

Report for exposures at Trinity, film badges worn for about 2-1/2 hours October 02, 1945.

Exposures received at Trinity by the following members of the Mounted Patrol from October 27, 1945 to November 01, 1945. Report on exposures of Guard Patrol at Trinity 500 yards from crater.

Report on exposures of Guard Patrol at Trinity November 27, 1945.

Handwritten documents containing exposures. R-exposures of old Trinity X-ray film badges August 29, 1945 (IBM run). Trinity hard copy for 1945. Trinity 1945 AF report corrected copy. Trinity 1945 exposures January 05, 1945 - November 31, 1945.

1946: Exposures from Trinity Guard Patrol January, February, and March. Exposures of badges worn at Trinity from March 11, 1946 to March 22, 1946. Report on exposures of personnel visiting Trinity crater.

Exposures of construction workers at Trinity September 16 & 15, 1946.

Report of badges found at Trinity when members of Health Group made a trip April 17, 1946. Exposures of Naval officers working with Health-Physics section. Exposures received by civilian workers erecting "man-proof" fence 500 yards from crater at Trinity.

Handwritten document exposures for May, June, and September, 1946. Trinity 1946 hard copy (IBM run).

1947: R-exposures of X-ray film badges worn during monitoring of Trinity February 10, 1947.

Handwritten document with exposures January and August, 1947. Trinity, 1947 hard copy (IBM run).

Box 2

Pacific 1946: Crossroads: DTL Bikini, 5 x 8 white cards, reporting gamma and beta exposures (IBM run), Crossroads, 1946 for index cards only. Crossroads calibration results on films 5301 and 5302, also film badge dose exposures and overdoses.

Four unlettered green books:

Book #1, Du Pont film type 552 calibrations;
Book #2, Eastman Kodak film from No. 2767 to 4484;
Book #5, personnel 10861-13650 with doses;
Book #7, personnel 8090-10860 film badge doses.

Box 3

Pacific 1946: Crossroads: DTL Bikini, Black books (23):

#1, Casualty badges, 1-413;
#2, Casualty badges, 414-834;
#3, Casualty badges, 835-1257;
#4, Casualty badges, 1258-1679;
#5, Casualty badges, 1680-2092;
#6, Casualty badges, 2093-2505;
#7, Casualty badges, 2506-2918;
#8, Casualty badges, 2919-3331;
#9, Casualty badges, 3332-3744;
#10, Casualty badges, 3745-4171;
#11, Casualty badges, 4172-4584;
#12, Casualty badges, 4585-4997;
#13, Casualty badges and calibration data.

Book #1, Tablet counting data book; key to ships and sample No. approximate point of detonation Test Able.

Book #2, Tablet counting, method of calculating total neutrons from $Ca_3(PO_4)$ 2 pills. Methods 5 pills. 1 log book; record of film and pill units issued for Test Able-Baker. Photometry, B-1 film badges.

Book I 1-1357 personnel type K film.
Book II 1358-2668 personnel type K film.
Book III 2669-4025 personnel type K film.
Book IV 4026-5382 personnel type K film.
Book V 5382-6739 personnel type K film.
Book VI 6740-8089 personnel type K film.

5 green record books:

"A" series, K type film, listing of ships and doses.

"B" series, listing of ships and doses.

"C" series, special monitor assignments September-October, listing of ships and doses.

"E" series, listing of ships and doses.

"F" series, ship security (KWAJ) listing of ships and doses.

USAF-ADP project Pacific alpha listing with exposures, punched and verified 10-03-67. Hard copy USAF-ADP project Pacific alpha listing with exposures, punched and verified 2-06-76. Letter: Operation Bikini, 1946 LC-1 (L-327) craft yearly total of mrem and mrad. Test Able film badge data 27 sheets gamma dosage.

Box 4

Pacific 1948: Sandstone: DTL Eniwetok, physical examinations, alpha order.

Box 5

Pacific 1948: Sandstone: DTL Eniwetok, Operation Sandstone roster with exposures. White 5 x 8 index cards with individual exposures.

Box 1 of 3, alphabetical order A-P.

Box 2 of 3, Q-Z and ships, dosimeter and instrument use.

Box 6

Pacific 1948: Sandstone: DTL Eniwetok, white 5 x 8 index cards, box 3 of 3 ships, dosimeter and instrument use. Density of film developed for N.B.S. Tests sheets 2-356. Pacific print-out including military and civilian alpha order with doses. USAF ADP project, alpha order both military and civilian 01-25-67, 09-17-67, 10-03-67.

April 1948 Sandstone, EPG exposures in excess of 100 mR in any 24-hour period.

Headquarters Task Group 7.6 Joint Task Force Seven; roster of officers: U.S. Army, Air Force, Navy, Marine Corps; enlisted men: U.S. Army, Navy, civilians, U.S. Public Health Service Officers.

CTU 7.6.5 U.S.S Bairoko, (CVE 115) exposure data for U.S. Army and U.S. Air Force received during Operation Sandstone 05-28-48. Exposures of 7.6 personnel. Tabulation of personnel exposure data. CTU 7.6.5 report on exposures during Test Zebra. Commander Task Group 7.6 medical records status of Task Group 7 photographic personnel. Headquarters Task Group 7.6 Joint Task Force Seven U.S.S. Bairoko (CVE-115) 05-20-48, Radiological exposure report, memorandums (2) from CTU 7.6.5, personnel exposure data for X-ray day 16 April and 17 April 1948.

Late records Sandstone not recorded in regular records (monitor's data sheet cards), density of films developed on June 16, 1948.

1. History of TU 7.6.5 and samples of forms from Sandstone (spring).
2. History of Photo-Dosimetry Section of TU 7.6.4.
3. Correspondence.
4. Daily monitor status report on exposures of TG 7.6 personnel.
5. Calibration dosimeter readings.
6. Eniwetok film badges distribution lists (in lieu of monitor cards).
7. Alphabetical list with doses.
8. Calibration curves.

Document 52 pages; operation plan number 1-48 Commander Task Group 7.6. Assignments for Task Group 7.6 duties AA. Test Zebra radiation injuries U.S. Naval communications service mailgram from CTG 7.6.

Headquarters Joint Task Force Seven: Document 5 pages on Radiological Safety Plan. Document 3 pages, hazards resulting from Atomic Bomb explosions.

Task Group 7.6 technical report on Radiological Safety at Operation Sandstone. Report on Northwest Island perimeter Dukw. Document Engebi Island survey data. Task Group 7.6 Withdrawal and Roll-Up plan. Radiological safety during Roll-Up and Post Roll-Up Garrison operations at Eniwetok. Report Estimate of Results obtained Text X-ray (Gamma Radiation vs. Distance). Critique of Test X-ray (BuY&D Structures). Reports of all Naval and Marine Corps personnel physical exams. Radiological activity in Engebi Crater. Radiological Safety - physical examinations. Test Director Opt. Order No. 2. Released by CMDR F. I. Winant exposures in excess of 100 milliroentgens. Dosimeter readings Y day also Zebra Day Drone Opt.

Fallout data for X-Ray Test. CTG 7.1 memorandum radiological safety plan. Commander Task Group 7.1 responsibility for effecting radiological safety within AEC shops and laboratories on the U.S.S. Curtiss and Albemarle. CTU 7.6.5 report on exposures during the period 2 May to 14 May. Fallout data for X-Ray Test. Overlay to accompany map No. 6033 of Eniwetok Atoll. X-7 Day Engebi Crater survey. Correspondence.

Box 7

Pacific 1951: Greenhouse: DTL Eniwetok, index cards 5 x 8 (white) individual exposures, box 1 of 3 and 2 of 3.

Box 8

Pacific 1951: Greenhouse: DTL Eniwetok, index cards 5 x 8 (white) individual exposures, box 3 of 3. USAF ADP project (EPG) alphabetical listings with exposures:

01-25-67, 10-03-67, and 09-17-67. 1951 Pacific alpha listing with exposures. 07 Greenhouse Test personnel total exposures, 04-01-51 - 05-30-51.

Office memorandum (Greenhouse) personnel exposures listed on cards. LASL-AEC report with exposures (researched from previous report). Report Headquarters Task Unit 3.1.5 Washington 25, D.C. Records of cumulative radiation doses following the fallout after Dog and Item shots. Greenhouse accumulated fallout dose - mR graph from April to May.

Box 9

Continent 1951: Buster-Jangle: DTL NTS, USAF-ADP Project NTS (3 listings) alpha order with exposures generated 08-01-67, 09-17-67, and 10-03-67. 1951 Nevada alpha listing with exposures. Accumulative dosage received by U.S. Naval Radiological Defense Laboratory personnel, exposed to ionizing radiation during Operation Buster-Jangle.

[illegible] Buster-Jangle the following report is a resume of the records of [illegible]-Jangle Operation held at NTS October and November 1951:

1. Number of personnel film-badged
2. Daily badge issues for Operation Buster
3. Daily badge issues for Surface shot
4. Daily badge issues for Underground shot
5. Film badges issued to USAF for entire operation
6. Film badges issued for project work
7. Recapitulation of all film badges issued
8. Project personnel with exposures in excess of 2.0 r
9. Total exposures of all Rad-Safe monitoring personnel
10. LASL personnel with exposures in excess of 2.0 r
11. Haddock, Newbery and Asbury personnel with exposures in excess of 1.0 r
12. USAF personnel with exposures in excess of 2.0 r
13. Recapitulation - all exposures over 2.0 r

Ranger personnel gamma exposures January-February 1951. Two reports exposures of personnel film badges from NTS, Operation Ranger 03-01-51 and 03-06-51. Headquarters III Corps (Camp Desert Rock) Las Vegas, NV: Form for recording film badge issue and processing results Operation Buster-Jangle completed rosters for the fall of 1951. Also platoon number, platoon commander, and platoon MP. Letter: Technical Branch the Chemical Corps School, Ft. McClellan, Alabama, request for film badge dosage information. Scratch paper, no record of film badges.

Box 9A

Continent 1951: DTL NTS, Operation Buster-Jangle, October-November, white 5 x 8 cards with film badge accumulated dosimeter exposures. Box 1 of 2 and box 2 of 2.

Box 10

Pacific 1952: Ivy: DTL Eniwetok, USAF ADP project, alpha listing with exposures generated 10-03-67. Two books JTF 132 consolidated list of exposures to radiation of personnel participating in Operation Ivy.

1. Roster of all personnel exposed to radiation at the PPG from 11-21-52 - 10-03-53.

2. Roster of personnel exposed to radiation at PPG from 11-21-52 - 03-30-53 probit tables.

Sixth Army Project Ivy Flats alpha listing. Operation Ivy 10 PPG (2 shots) 10-31-52 - 11-21-52, name, organization, test number, amount of exposure, mR dose and activity number. 5 x 8 white cards (H&N) individual radiation exposures.

Box 10A

Pacific 1952: DTI. Eniwetok Operation Ivy, white 5 x 8 cards film badge accumulated dosimeter with exposures. Box 1 of 2 and box 2 of 2. 5 x 8 document including personnel information, task unit, project, rad-safe physical exam with dose.

Box 11

Continent 1952: DTL NTS, Desert Rock, Tumbler-Snapper, USAF-ADP project NTS Tumbler-Snapper and Desert Rock alpha listing with exposures generated 09-17-67 (military ranks are Desert Rock troops). USAF-ADP project NTS with Desert Rock additions alpha listing with exposures generated 10-03-67. 1952 Nevada alpha listing with exposures generated 08-01-67 without Desert Rock additions.

Personnel Rosters Exercise Desert Rock and additions of Daily Record of Radiation Exposure in Milliroentgens Accumulative Dosages for Personnel during Tumbler-Snapper Series.

369th Engineer Amphibious Support Regiment Camp Desert Rock, Las Vegas, NV (Snapper). No doses listed May 1952. Report Headquarters and Service Co. 369th Engineer Amphibious Support Regiment Camp Desert Rock June 2, 1952, with rank, name, ASN and film badge number. Report 1[illegible]2 NV with number of exposures accumulated dosage and activity both civilian and military.

Headquarters Test Command Armed Forces Special Weapons Project Nevada Proving Grounds Mercury, NV, Official Observer Roster for Shot 3.

Exposures - Tumbler-Snapper with exposures and accumulated dosages. Report July 8, 1952, from Phillip S. Gwynn, Lt. Colonel, USAF Director. Rad-Safe Group Tumbler-Snapper personnel exposures received in Operation Tumbler-Snapper with name and accumulated dose in milliroentgens (measured gamma only). Listing same as above except organization included.

Tumbler-Snapper 04-01-52 - 06-31-52 report with name, activity name, test #9. Number of exposures, amount dosage mR activity code. Also exposure data (all activities operation 09 mR dosage in hundreds). Calibration F.B. data with film and technical file data.

Box 12

Continent 1953: Upshot-Knothole: DTL NTS, daily records of radiation exposures. Folders from March - May 1953.

Box 13

Continent 1953: Upshot-Knothole: DTL NTS, daily record of radiation exposures May 29-19, 1953. Army personnel dosage report 53 Test Series. Compiled Dosage Report for Department of Defense personnel 53 Test Series. Navy & Marine Personnel Dosage Report. Air Force Personnel Dosage Report. Accumulative Radiation Dosages received by personnel in the 9778th P.S.S.U. USAF-ADP project alpha listing with exposures.

Roster with film badge numbers Exercise Desert Rock (both military and civilian cards with no badge numbers.

Accumulative radiation dosages for non-DOD, also included Upshot-Knothole exposures of DOD personnel participating in spring 1953 tests at NV Proving Grounds, 141 pages.

Dosage report DOD personnel October-December. Interim exposures from NPG for Joint TAsk Force Seven personnel November 25, 1953. DOD personnel during interim period July 1 to September 30. Nevada 1953 alpha listing with exposures. Test #11 alpha listing with exposures March 10 to June 31, Upshot-Knothole. Test #12 alpha listing with exposures. Test #16 alpha listing with exposures June 7 to June 30 (included in Upshot-Knothole). Test #17 alpha listing with exposures October 1 to December 31.

Special School Test #18 alpha listing with exposures November 2 to November 6.

Box 14A

Continent 1953: Upshot-Knothole: DTL NTS. Individual accumulative radiation exposures white cards 5 x 8 form 102R alpha order A-M.

Box 14B

Continent 1953: Upshot-Knothole: DTL NTS. Individual accumulative radiation exposures white cards 5 x 8 form 102R alpha order N-Z. Accumulated weekly mR dosage after Tumbler-Snapper and Upshot-Knothole, alpha order.

1953 Nevada alpha listing with exposures. Standards calibration data from 9778 TSU Rad-Safe Support Unit Mercury, NV.

Box 14C

Continent Film Badge issue envelopes 1953-1957.

Box 15

Pacific 1953: Quarterly exposure reports for gamma radiation at PPG; November 21, 1952 - March 30, 1953; April 01, 1953 - July 04, 1953; July 05, 1953 - October 03, 1953; October 04, 1953 - December 31, 1953. Ivy "2" corrections on H&N personnel, January 15, 1953 - March 20, 1953 with exposures. Ivy No. 14 "3" & "4" PPG April 1, 1953 - July 4, 1953; July 5, 1953 - October 3, 1953, with exposures. Ivy Test No. 14, second quarter, PPG April 1, 1953 - July 4, 1953, with activity name, accumulative mR dosage and code number. Ivy Test No. 15, third quarter, PPG July 5, 1953 - October 3, 1953 with activity name, accumulatived mR dosage and code number.

USAF-ADP project - Pacific 1953 alpha listing with exposures generated October 3, 1967. Personnel exposure sheets with film badge number, gamma, rank both civilian and military, white 5x8 cards showing calibrations for personnel exposure sheets. H&N 5x8 white cards alpha order individual accumulative radiation exposure.

Box 16

Pacific 1954: Castle: DTL Bikini: Folders, personnel exposure sheets, March 11 to May 16. Personnel exposure sheets, March 7 to March 10. TG 7.2 exposure sheets, March 10. Personnel exposure sheets, March 4 to March 6.

TG 7.4 rosters and final dosage. Laboratory development work sheets (Bairoko). Laboratory development work sheets (Elmer). Personnel roster TG 7.1. personnel exposures March 1 to March 3. 7.2 & 7.4 roster list.

USNS Ainsworth alphabetical roster of all personnel. Personnel exposure sheets for Test 1.

USS Apache TG 7.3 exposure sheets. Roster of personnel 7.3 EODU-1 and UDU. Roster of personnel USS LST 762. Roster of personnel attached to USS LST 1157 CTE 7.3 7.4. USS LST 1157 personnel exposure sheets. Roster of officers and crew of the USS Mender (ARSD-2) as of 30 April, TG 7.3 with personnel exposure sheets.

Roster of personnel attached to USS Molala (ATF-106). TG 7.3 with personnel exposure sheets. JTF 7, CTG 7.3 Op Plan 1-53, roster of Patrol Squadron 29 with personnel exposure sheets.

USS Reclaimer (ARS-42). Miscellaneous folder, Rad-Safe "Iceberg" personnel gone to "Tare" without film badges. Film badge numbers with exposures. List of badges that cannot be matched with issue cards. Unclaimed badges. Lost badges. Unreturned list, March 9. USS Philip TG 7.3 personnel sheets; roster of ship's personnel.

USS PC 1546 TG 7.3 personnel exposure sheets. USS Nicholas (DDE-449) personnel exposure sheets; roster of officers USS Nicholas (DDE-449). Final report of accumulated radiation exposures for Operation Castle TG 7.5 personnel exposure sheets 18,001 - 19,000 final file. Final file 17,000 - 18,000. Final file 16,001 - 17,000. Final file 20,000 - 20,999. Final file 19,000 - 20,000. Final file 21,000 - 21,999. File 30,001 - 31,000. NRDL file 24,000 - 25,000. Final File 15,001 - 16,000. H&N 23,000 - 24,000. Personnel exposure sheets 22,000 - 22,999.

Box 17

Pacific 1954: Castle: DTL Bikini, USS Tawakoni (ATF-114), roster of officers and enlisted personnel. TG 7.3 personnel exposure sheets.

USS Sioux TG 7.3 roster of personnel; personnel exposure sheets.

USS Bairoko (CVE-115) Roster of personnel; personnel exposure sheets. Personnel exposure sheets (badges issued prior 18 May 1954 - developed after 18 May 1954.

USS Gypsy TG 7.5 roster of personnel with personnel exposure sheets.

USS Shea (DM-30) personnel roster of who wore film badges; personnel exposure sheets.

USS Epperson (DDE-719) roster of personnel officers and enlisted roster; personnel exposure sheets.

USS Estes (AGC-12) roster of officers, personnel exposure sheets: Personnel exposure sheets 01001 to 02000; personnel exposure sheets 02001 to 03000; personnel exposure sheets 17001 to 18000; personnel exposure sheets 18001 to 19000; personnel exposure sheets 19001 to 20000; personnel exposure sheets 20001 to 21000; personnel exposure sheets 21001 to 22000; personnel exposure sheets 22001 to 2300; personnel exposure sheets 23001 to 24000; personnel exposure sheets 24001 to 25000; personnel exposure sheets 25001 to 26000; personnel exposure sheets 26001 to 27000; personnel exposure sheets 28001 to 29000, personnel exposure sheets 27001 to 28000; personnel exposure sheets 29001 to 30000; personnel exposure sheets 30001 to 31000; personnel exposure sheets 31001 to 32000; personnel exposure sheets 32001 to 33000; personnel exposure sheets 33001 to 34000; personnel exposure sheets 34001 to 35000; personnel exposure sheets 35001 to 36000; personnel exposure sheets 36001 to 37000; personnel exposure sheets 37001 to 38000; personnel exposure sheets 38001 to 39000; personnel exposure sheets 39001 to 40000; personnel exposure sheets 40001 to 41000; personnel exposure sheets 45001 to 4600; personnel exposure sheets 48001 to 49000; personnel exposure sheets 49001 to 50000.

Box 18

Pacific 1954: Castle: DTL Bikini, personnel exposure sheets, FRED TG 7.4 0001 to 3000; personnel exposure sheets 3000 to 5000: personnel exposure sheets 5000 to 6000.

USS Estes personnel exposure sheets 6000 to 7000. USS Bairoko personnel exposure sheets 7000 to 8000, personnel exposure sheets 8000 to 9000, personnel exposure sheets 9000 to 10000. Final file 10,001 to 11,000, personnel exposure sheets. Final file 11,001 to 12,000, personnel exposure sheets. Final file (lab copy) 12,001 to 13,000, personnel exposure sheets. Final file (lab copy) 13,001 to 14,000, personnel exposure sheets. Final file (lab copy), personnel exposure sheets, 14,001 to 15,000. Final file (____ to 14,000), personnel exposure sheets.

Personnel exposure sheets, H&N 33001 to 34000, personnel exposure sheets 34001 to 35000, personnel exposure sheets 35001 to 36000, personnel exposure sheets 36001 to 37000, personnel exposure sheets 37001 to 38000, personnel exposure sheets 38001 to 39000, personnel exposure sheets HMR-3C2 39001 to 40000, personnel exposure sheets Taft to 44000, personnel exposure sheets 48000 to 49000, personnel exposure sheets, finished file action book.

Personnel roster for JTF 7, 7.4, 7.4, 7.4, 7.4, TG 7.3, 7.3, 7.3, 7.3, 7.3, 7.3, August 19-20, 1954; personnel exposure sheets. Film badge records by chronological order, personnel exposure sheets. Fallout film badge readings, personnel exposure sheets, USS Mender (ARSD-2) LSU decontamination crew; fallout badges, Elmer placed out after shot #2; fallout badges on URSULA April 7, miscellaneous notes, personnel issue sheets Headquarters Task Group 7.1, phase-out personnel.

Box 19

Pacific 1954: Castle: DTL Bikini, USS Bellgrove TG 7.3, roster of officer personnel, muster list of Task Group 7.3 boat pool, personnel exposure sheets.

USS Cocopa TG 7.3, personnel exposure sheets, roster of all personnel attached to USS Cocopa (ATF-101).

USS Renshaw TG 7.3, personnel exposure sheets: Personnel exposure sheets 09001 to 10000; personnel exposure sheets 10001 to 11000; personnel exposure sheets 11001 to 12000; personnel exposure sheets 12001 to 13000; personnel exposure sheets 13001 to 14000; personnel exposure sheets 14001 to 15000; personnel exposure sheets 15001 to 16000; personnel exposure sheets 16001 to 17000; personnel exposure sheets YAG 39 & 40; personnel exposure sheets, YAG, NRDL, H&N, 32001 to 33000; personnel exposure sheets, USS Bairoko, Appendix pages 1 to 99 inclusive. Personnel exposure sheets 00001 to 01000; personnel exposure sheets 03001 to 04000; personnel exposure sheets 04001 to 05000; personnel exposure sheets 05001 to 06000; personnel exposure sheets, 06001 to 07000; personnel exposure sheets 06001 to 07000; personnel exposure sheets, 07001 to 08000; personnel exposure sheets 08001 to 09000; personnel exposure sheets, USS LST 551; roster of enlisted and officers: Personnel exposure sheets USS LST 1146; personnel exposure sheets 7.3 boat pool; list of critical personnel of Task Group 7.3 boat pool; Task Group 7.3 boat pool/officers and enlisted personnel.

USS Curtiss TG 7.3 personnel exposure sheets, roster of officers, ship, station, or activity; Staff of Commander Task Group 7.3 March 1, 1954. Enlisted muster list of TG 7.3, USS Curtiss (AV-4) enlisted roster January 28, 1954. Roster of officers: ship, station, or activity USS Curtiss (AV-4) March 1, 1954. Roster of Estes personnel. Marine Detachment, USS Curtiss (AV-4): Headquarters, First and Second Platoon; first, second, third squad. Roster for Staff Commander TG 7.3, roster for Marines, USS Curtiss (AV-4). USS Curtiss (AV-4) officer roster.

Box 20

Pacific 1954: Accumulative Radiation Exposures (H&N) white cards 5x8 form 529 10m 1153 102's, alpha A to Mc.

Box 21

Pacific 1954: Accumulative Radiation Exposures (H&N), white cards 5x8 form 529 10m 1153 102's alpha M to Z.

Box 22

Pacific 1954: EPG: Consolidated list of Radiological Exposures at Castle, Joint Task Force Seven (7.2 Army, 7.3 Navy, 7.4 Air Force), February 28, 1954, to May 17, 1954.

1954 Pacific (Castle) alpha listing. USAF-ADP project - Pacific 1954, alpha listing; generated October 3, 1967. Roster of personnel, quarterly exposure reports to Gamma Radiation at P 2 (H&N) Ivy "6" July 1, 1954, to September 30, 1954. Ivy "7" October 1, 1954, to December 31, 1954.

Two rosters of personnel exposed to radiation at PPG (cumulative) for civilians and military. Exposure report to gamma radiation for personnel at PPG accrued during the period May 18, 1954, to July 1, 1954.

Large envelopes personnel exposure sheets for: USS Shea, TG 7.3 boat pool, USS Belle Grove, USS Belle Graove, Boat pool TG 7.3, USS Nickolas (DDE-449), USS Epperson (DDE 719), USS Estes (AGC-12), USS Apache (ATF-67), TG 7.3 (Staff) USS Curtiss (AV-4), USS Renshaw (DDE-449), USS (LST-551), USS (LST-1157), USS Reclaimer (ARS 42), USS Tawakoni (AFT-114), USS Philip (DDE-498), TG 7.3 Boat pool USS Belle Grove, USS Estes (AGC-12), personnel exposure sheet, H&N.

Letter from R. W. Rinehart to Lt. Armand R. Nice, Subject: USNRDL Personnel, radiation dosage incurred by personnel involved in December 1954 and January and February 1955 trips to Marshall Islands. Letter: Special Orders #87 June 4, 1954, Headquarters Joint Task Force Seven personnel listed below have increased by waiver from 3900 milliroentgens (mR to the values indicated (in mR) for Operation Castle. Report from Photodosimetry Section, U.S. Naval Radiological Defense Laboratory, exposures received by NRDL personnel at Operations Castle, during the period 15 February 1954 and ending 18 May 1954. U.S. Naval Radiological Defense Laboratory alpha listing with accumulative exposures. Report: Total exposure and accumulated total with alpha listing and badge number, Task Group 7.3, 7.4, and 7.5, USS Bairoko (HMK-362). Alpha listing with authorized exposures (including: Boat pool, USS Philip, USS Molala, YAG 40, and USS Estes. Report USS YAG-40, Radiation History, 17 February with exposures. H&N 5x8 white cards (A-Z) with exposures.

Box 23

Box 23 has been deleted.

Box 24

Continent 1954: USAF - ADP project NTS 1954, alpha listing with exposures, generated October 3, 1967.

1954 Nevada, alpha listing with exposures. Records of radiation exposures with film badge exposures (101's). Form R104, Dosimetry and Records Section 9778 TSU Rad-Safe Support Unit, Mercury, NV, Film Badge Calibration data sheet, June 15 and 16, 1954. Radiological situation map, 4 January 1954. Map 3 March 1954, resurvey.

Radiation exposure rosters for Department of Defense and non-Department of Defense personnel participating in Operation at NTS during the periods of 1 January to 31 March 1954, 1 July to 30 September 1954, and 1 October to 31 December 1954.

Gamma radiation received by personnel First Radiological Safety Support Unit, Fort McClellan, Alabama. Gamma radiation received week 25 Janaury to 1 February. Gamma radiation received during the week of 1 February to 8 February. Dosages of gamma survey week of 8 February to 15 February. Gamma radiation received during week of 15 February to 22 February. Gamma radiation received during week of 22 February to 1 March. Gamma received during week of 8 March to 15 March NPG. Gamma received during 15 March to 22 March. Gamma received 22 March to 29 March, and 1 January to 29 March. Gamma received NPG during the week of 5 April to 12 April. Gamma received during week 12 April to 19 April. Gamma received during week 19 April to 26 April. Gamma radiation received during week 26 April to 3 & 1 April to 3 May. Dosages received during week 17 May to 24 May 1954. Dosages received during 1 June to 7 June 1954 (also included are the total exposures received since the beginning of the present quarter.) Gamma radiation received during week of 7 September to 13 September. Gamma radiation received during the week of 27 September to 4 October. UCRL exposures to gamma radiation at NPG during 15 to 22 November; also included are the total cumulative dosages since the beginning of the present quarter. First Rad-Safe Support Unit, Detachment One, Mercury, NV; amount of radiation received during period of 8 November to 2 December 1954.

Quarterly Reports: January 1, 1954 to December 31, 1954, for First Radiological Safety Support Unit (DOD personnel, non-DOD personnel), (REECo). NTS 5x8 white cards, individual accumulative radiation exposure records.

Box 25

Pacific 1954-1958: DTL EPG, H&N 5x8 cards, alpha A-P (previously microfilmed).

Box 26

Pacific 1954-1958: DTL EPG, H&N 5x8 cards, alpha Q-Z (previously microfilmed).

Box 27

Pacific 1953-1958: DTL EPG, H&N 5x8 cards, alpha A-O (previously microfilmed).

Box 28

Pacific 1953-1958: DTL EPG, H&N 5x8 cards, alpha P-Z (previously microfilmed).

Box 29

Continent 1952-1959: Individual accumulative radiation exposure records, form R-9, 5x8 cards per quarter (mR) dose. Note: No (mR) dose in 1957, 1958, and 1959.

Box 30

Continent 1955: Teapot: DTL NTS, USAF-ADP Project - NTS, alpha listing with exposures.

DOD and non-DOD Operation Teapot master rosters of personnel final dosage report 13 February to 16 May. Roster of personnel participating in Operation Teapot who received zero dosage, 17 May 1955.

Records of radiation exposures (101's and 102's) Operation Teapot Offsite Film Badge Records, Spring 1955. Mason & Hanger-Silas Mason, Inc., exposure to radiological contamination (May-August). Roster set #1 DOD dosage records for Operation Teapot personnel with cumulative dosage of over 2,000 mR, 3,000 mR, and 3,900 mR, for February to May. Total cumulative exposures to gamma for June to July. Report of personnel exceeding 3.9 R cumulative dosage.

NTS exposures to gamma radiation, weekly, quarterly, and cumulative dosages:

Weekly: 9 January to 15 January, 16 January to 22 January, 17 May to 31 May, 1 June to 6 June, 6 June to 13 June, 13 June to 20 June, 21 June to 1 July, 1 July to 11 July, 22 August to 29 August, 29 August to 5 September, 5 September to 12 September, 12 September to 26 September, 26 September to 30 September, 1 October to 10 October, 10 October to 17 October, 17 October to 24 October, 24 October to 31 October, 31 October to 7 November, 7 November to 14 November, 5 December to 19 December, 19 December to January 1956.

Semiquarterly: 1 January to 12 February.

Quarterly: 1 July to 1 October, 1 October to 1 January 1956.

Calibrations taken from film badge curves (Los Alamos, 10 February, 10 February, and 25 April) ANSCO MacBeth, 25 April, 2 May. R-101 chrono file for Operation Teapot and film badge calibration data sheets. Standard Operation Procedure for Issue, Receipt, and Processing of Personal Dosage Devices at Nevada Test Site, 1 February 1955.

Box 31

Continent 1955: Teapot: DTL NTS, 5x8 white index cards, box 1 of 2 and box 2 of 2, alpha order A-M and N-Z.

Box 32

Pacific 1955: EPG: USAF-ADP Project, alpha listing with exposures.

EPG: USAF-ADP project - 1955 Pacific, alpha listing with exposures, A-M.

USNRDL, roster of ships officers and men and radiological dosages received (1954-1955).

Holmes & Narver, Inc., roster of personnel exposed to radiation, 1 January to 31 March, 1 April to 30 June, 1 July to 30 September, 1 October to 31 December. Roster of personnel exposed to radiation 1 January to 31 March, 1 April to 30 June, 1 July to 30 September, 1 October to 31 December. H&N, 5x8 white cards, alpha A thru Z.

Box 33

Pacific 1956: H&N, Individual radiation exposure records, form 102-P, white 5x8 cards, box 1 of 4, alpha order D thru K (no A, B or C).

Box 34

Pacific 1956: H&N, individual radiation exposure records, form 102-P, white 5x8 cards, box 2 of 4, alpha order L thru P.

Box 35

Pacific 1956: H&N, individual radiation exposure records, form 102-P, white 5x8 cards, box 3 of 4, alpha order Q thru V.

Box 36

Pacific 1956: H&N, individual radiation exposure records, form 102-P, white 5x8 cards, box 4 of 4, alpha order, W thru Z.

Box 37

Pacific 1956: Redwing: The following roster of 52 pages includes all personnel from Task Group 7.1 and dose of whole-body ionizing radiation received by them during the period 13 April through 6 August 1956; roster also includes film badge calibration curve.

Roster of 33 pages includes all personnel from Task Group 7.2 and the dose of whole-Body ionizing radiation received by them during the period 13 April through 6 August 1956 with film badge calibration curve.

Master Personnel Dosage Report: Rosters - The following roster of 2 pages includes all personnel from the USS Abnaki (ATF-96) and the dose of whole-body ionizing radiation received by them during the period 13 April through 6 August 1956.

Roster of 3 pages from USNS Fred C. Ainsworth Tap 181 and dose of whole-body ionizing radiation received by them during the period 13 April to 6 August 1956.

Roster of 12 pages, personnel from Bado Eng. Strait CVE-116 and the dose of whole-body ionizing radiation received by them during the period 13 April to 6 August 1956.

Roster 4 pages, personnel from the Boat Pool and the dose of whole-body ionizing radiation received by them during 13 April to 6 August 1956.

Roster of 1 page, personnel from 7.3 Boat Pool (Fred) and the dose of whole-body ionizing radiation by them during the period 13 April to 6 August 1956.

Roster of 4 pages, personnel from USS Caliente (AO-53) and the dose of whole-body ionizing radiation received by them during the period 13 April to 6 August 1956.

Roster of 5 pages, personnel from USS Catamount (LSD-17) and the dose of whole-body ionizing radiation received by them during 13 April to 6 August 1956.

Roster of 2 pages, personnel from USS Chickasaw (ATF-83) and the dose of whole-body ionizing radiation received 13 April to 6 August 1956.

Roster of 2 pages, personnel from USS Crook County (LST-611) and the dose of whole-body ionizing radiation received during 13 April to 6 August 1956.

Roster of 9 pages, personnel from USS Curtiss (AV-4) and the dose of whole-body ionizing radiation received by them during 13 April to 6 August 1956. USS George Eastman (YAG-39) and the dose of whole-body ionizing radiation received by them 13 April to 6 August 1956.

Roster of 1 page, personnel from USS Granville S. Hall (YAG-40) and the dose of whole-body ionizing radiation received 13 April to 6 August 1956.

Roster of 3 pages, personnel from USS Knudson (APD-101) and the dose of whole-body ionizing radiation received 13 April to 6 August 1956.

Roster of 4 pages, personnel from USS James E. Kyes (DD-787) and the dose of whole-body ionizing radiation received 13 April to 6 August 1956.

Roster of 1 page, personnel from USS Lipan (ATF-85) and the dose of whole-body ionizing radiation received 13 April to 6 August 1956.

Roster of 3 pages, personnel from the USS McGinty (DE-365) and the dose of whole-body ionizing radiation received 13 April to 6 August 1956.

Roster of 9 pages, personnel from USS Mount McKinley (AGC-7) and the dose of whole-body ionizing radiation received during 13 April to 6 August 1956.

Roster of 1 page, personnel from USS Navasota (AO-10) and the dose of whole-body ionizing radiation received 13 April to 6 August 1956.

Roster of 1 page, personnel from the Nausta Kwajalein N#824, and the dose of whole-body ionizing radiation received during 13 April to 6 August 1956.

Roster of 6 pages, personnel from Patrol Squadron One, and the dose of whole-body ionizing radiation received during 13 April to 6 August 1956.

Roster of 4 pages, personnel from the USS Shelton (DD-790) and the dose of whole-body ionizing radiation received during 13 April to 6 August 1956.

Roster of 3 pages, personnel from USS Silverstein (DE-534) and the dose of whole-body ionizing radiation received during 13 April to 6 August 1956.

Roster of 2 pages, personnel from USS Sioux (ATF-75) and the dose of whole-body ionizing radiation received 13 April to 6 August 1956.

Roster of 3 pages, personnel from the HMR-363 and the dose of whole-body ionizing radiation received during 13 April to 6 August 1956.

Roster of 2 pages, personnel from 7.3 Staff, and the dose of whole-body ionizing radiation received during 13 April to 6 August 1956.

Roster of 1 page, personnel from the T-LST 306, and the dose of whole-body ionizing radiation received during 13 April to 6 August 1956.

Roster of 1 page, personnel from the USNS T-LST 618, and the dose of whole-body ionizing radiation received during 13 April to 6 August 1956.

The following roster of 66 pages, personnel from Task Group 7.4 and the dose of whole-body ionizing radiation received during 13 April to 6 August 1956, also film badge calibration curves.

The following roster of 25 pages includes all personnel from Task Group 7.5 and the dose of whole-body ionizing radiation received during 13 April to 6 August 1956. Unless otherwise noted, personnel are Holmes & Narver, Inc., employees; also calibration curves.

The following roster of 9 pages includes all personnel from Headquarters JTF Seven and the dose of whole-body ionizing radiation received during 13 April to 6 August 1956, also film badge calibration curve.

Radiation exposure report for PPG, (Redwing), covering period January 1 to April 15, 1956.

Radiation exposure for military and civilian personnel at EPG (Task Group 7.2), 7 August to 30 September 1956.

Roster of personnel exposed to radiation (Task Group 7.4), 7 August to 19 October 1956.

Roster of personnel exposed to radiation (H&N) 7 August to 30 September 1956.

Roster of personnel (H&N) exposed to radiation 1 October to 31 December 1956.

Roster of personnel (AEC 7.5, TG 7.1) 6 August to 30 September 1956.

1956 (Pacific) alpha listing with exposures.

USAF-ADP project - Pacific 1956, alpha listing with exposures.

Folder #6: Roster of personnel exposed to radiation 1 January to 31 December 1956. Roster of personnel exposed to radiation at EPG (total accumulated exposure through 31 December 1956).

Folder #9: H&N administrative personnel October 6. The following listed personnel have accumulated dosages which exceed the 1,000 mR during the quarter ending 30 September. Amended dosage report, August 27. Roster of personnel exposed during Redwing by more than 2,000 mR, 18 August 1956. Roster accumulated radiation dosage report of changes and additions, not previously listed, of exposures which exceed 3,900 mR, 9 August. Changes and additions 6 August, not previously listed, of exposures which exceed 3,900 mR. Changes and additions 6 August, not previously listed, exceed 3,900 mR. Changes and additions 7 August, exposures which exceed 3,900 mR.

Accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 3,000 mR for the individual's current 13-week period.

Accumulated radiation dosage report 4 August, changes and additions not previously listed to the accumulated dosage report dated 28 July 1956. 3 August, changes and additions not previously listed to the accumulated dosage report dated 28 July.

2 August, changes and additions, not previously listed on accumulated radiation exposures of all 7.5 personnel at PPG which exceed 3,000 mR for the individual's current 13-week period.

1 August, changes and additions, dated 28 July 1956. 31 July, changes and additions to the accumulated dosage report dated 28 July 1956. 30 July, changes and additions to accumulated dosage report dated 28 July 1956.

28 July, exposures of all TG 7.5 personnel at PPG exceed 3,000 mR for the individual's current 13-week period.

27 July, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 3,900 mR for the individual's current 13-week period.

26 July, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for the individual's current 13-week period.

25 July, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for the individual's current 13-week period.

24 July, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for the individual's current 13-week period.

23 July, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for individual's current 13-week period.

July 21, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for the individual's current 13-week period.

20 July, accumulated radiation exposures of all 7.5 personnel at PPG which exceed 2,000 mR for the individual's current 13-week period.

19 July, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for the individual's current 13-week period.

18 July, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for the individual's current 13-week period.

17 July, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for the individual's current 13-week period.

16 July, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for the individual's current 13-week period.

14 July, accumulated radiation exposures of all 7.5 personnel at PPG which exceed 2,000 mR for the period 15 April through 13 July 1956.

13 July, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for the period 15 April to 12 July 1956.

12 July, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for the period 15 April to 11 July 1956.

11 July, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for the period 15 April to 10 July 1956.

10 July, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for the period 15 April to 9 July 1956.

9 July, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for the period 15 April to 8 July 1956.

7 July, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for the period 15 April to 6 July 1956.

6 July, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for the period 15 April to 5 July 1956.

5 July, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for the period 15 April to 4 July 1956.

4 July, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for the period 15 April to 3 July 1956.

3 July, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for the period 15 April to 2 July 1956.

2 July, Accumulated radiation exposure of all TG 7.5 personnel at PPG which exceed 2,000 mR for the period 15 April to 1 July 1956.

30 June, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for the period 15 April to 29 June 1956.

29 June, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for the period 15 April to 28 June 1956.

28 June, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for the period 15 April to 27 June 1956.

27 June, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for the period 15 April to 26 June.

26 June, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for the period 15 April to 25 June 1956.

25 June, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for the period 15 April to 24 June 1956.

23 June, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for the period 15 April to 22 June 1956.

22 June, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for the period 15 April to 21 June 1956.

21 June, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for the period 15 April to 20 June 1956.

20 June, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for the period 15 April to 19 June 1956.

19 June, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for the period 15 April to 18 June 1956.

18 June, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 2,000 mR for the period 15 April to 17 June 1956.

16 June, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 1,500 mR for the period 15 April to 15 June 1956; these exposures are accumulated only in RADEX areas and are not necessarily indicative of total exposures.

15 June, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 1,500 mR for the period 15 April to 14 June 1956.

14 June, accumulated radiation exposures of all TG 7.5 personnel at PPG which eed 1,500 mR for the period 15 April to 13 June 1956.

13 June, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 1,500 mR for the period 15 April to 12 June 1956.

12 June, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 1,500 mR for the period 15 April to 11 June 1956.

11 June, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 1,500 mR for the period 15 April to 10 June 1956.

9 June, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 1,500mR for the period 15 April to 8 June 1956.

8 June, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 1,000 mR for the period 15 April to 7 June 1956.

7 June, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 1,000 mR for the period 15 April to 6 June 1956.

6 June, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 1,000 mR for the period 15 April to 5 June 1956.

5 June, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 1,000 mR for the period 15 April to 4 June 1956.

4 June, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 1,000 mR for the period 15 April to 3 June 1956.

2 June, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 1,000 mR for the period 15 April to 1 June 1956.

1 June, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 1,000 mR for the period 15 April to 31 May 1956.

31 May, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 1,000 mR for the period 15 April to 30 May 1956.

30 May, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 1,000 mR for the period 15 April to 29 May 1956.

29 May, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 1,000 mR for the period 15 April to 28 May 1956.

28 May, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 1,000 mR for the period 15 April to 27 May 1956.

26 May, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 1,000 mR for the period 15 April to 25 May 1956.

25 May, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 1,000 mR for the period 15 April to 24 May 1956.

24 May, accumulated radiation exposures of all TG 7.5 personnel a PPG which exceed 1,000 mR for the period 15 April to 23 May 1956.

23 May, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 1,000 mR for the period 15 April to 22 May 1956.

22 May, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 1,000 mR for the period 15 April to 21 May 1956.

21 May, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 1,000 mR for the period 15 April to 20 May 1956.

19 May, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 1,000 mR for the period 15 April to 18 May 1956.

18 May, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 1,000 mR for the period 15 April to 17 May 1956.

17 May, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 1,000 mR for the period 15 April to 16 May 1956.

16 May, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 1,000 mR for the period 15 April to 15 May 1956.

15 May, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 1,000 mR for the period 15 April to 14 May 1956.

14 May, accumulated radiation exposures of all TG 7.5 personnel at PPG which exceed 1,000 mR for the period 15 April to 13 May 1956.

12 May, accumulated radiation exposures of TG 7.5 personnel for the period 15 April to 11 May 1956; these exposures are accumulated only in RADEX areas and are not necessarily indicative of total accumulated exposure.

11 May, accumulated radiation exposures of all TG 7.5 personnel recorded as of 0600 hours 11 May 1956.

10 May, accumulated radiation exposures of all TG 7.5 personnel recorded as of 0600 hours 10 May 1956.

9 May, accumulated radiation exposures of all TG 7.5 personnel. These dosages are based on mission film badges recorded as of 0600 hours 9 May 1956.

7 May, TG 7.5 accumulated radiation dosage report No. 3.

7 May, the following dosages were received by H&N and AEC personnel on 6 May 1956.

6 May, the following dosages were received by H&N and AEC personnel on 5 May 1956.

Letter, 5 May 1956, 1200 hours, to General Supr. Administration, Job 942, from Sr. Rad-Safe Electronic Tech., RE: Radiation Situation at Site Yvonne - Entire camp area has been thoroughly monitored and found to be free of contamination and hot spots.

Letter from T. A. Hardison, August 7, 1956, (ETE:RWT:M-2014) Subject: Radiation exposure to Evan C. Evans III, Reference: 3-730-128, WGN:ams. Above employee received 50 mR of gamma at PPG during the month of February.

Dark room log book (Bikini); H&N radiological counting data sheets, December - January 1956. 5x8 white cards alpha order: H&N Eniwetok 1956, Redwind and beta dose.

Box 38

Continent 1956: USAF-ADP project - NTS, alpha listing with exposures. Nevada alpha listing with exposures (Quarterly Reports January 1 to December 31, 1956).

30 January 1956, listed below are exposures to gamma radiation received by personnel of your organization working at NTS on January 18, 1956: REECo; Los Alamos Scientific Lab, Los Alamos, New Mexico; 8452nd DU Sandia Base, New Mexico.

20 January 1956, listed below are exposures to gamma radiation received by personnel of LASL on 19 January 1956 at the NTS.

5 January, listings of total cumulative exposures to gamma radiation received by personnel of various organizations working at NTS during quarter of 1 October 1955 to 1 January 1956. Maximum allowable dosage for this quarter was 3,900 mR: Los Alamos Scientific Lab; AEC Santa Fe Operations Office, Albuquerque, New Mexico; University of California Rad Lab, Livermore, California; AEC Las Vegas Branch Office, Las Vegas Nevada; REECo, mercury, Nevada; Wright Air Development Center, Wright-Patterson Air Force Base, Ohio; Chemical Research Lab, Army Chemical Center, Aberdeen Proving Ground, Maryland; Sandia Corp., Albuquerque, New Mexico; Public Health Service, Las Vegas Branch Office, Las Vegas, Nevada; Bureau of Yards and Docks, Washington, DC; Headquarters Field Command AFSWP, Albuquerque, New Mexico; Department of Defense, Mercury, Nevada; 1352nd Motion Picture Squadron, Lookout Mountain Lab, Hollywood, California; Engineering Reserach & Development Lab, Fort Belvoir, Virginia; University of Illinois, Urbana, Illinois; 8459th Du Sandia Base, New Maxico; Ballistics Research Lab, Aberdeen Proving Ground, Maryland; Stanford Research Institutde, Stanford, California; Oak Ridge National Lab, Oak Ridge, Tennessee; Navy Research & Development, San Francisco, California; Office Chief Engineers, Washington, DC; EG&G, Las Vegas, Nevada; Armour Research Foundation, Chicago, Illinois; 8452nd Du Sandia Base, New Mexico; Braodview Research & Development, Burlingame, California; Lookout Mountain Lab, Hollywood, California; Robert L. Corsbie Division of Biology & Medicine, AEC, Washington, DC.

5 January 1956, listed below are exposures to gamma radiation received by personnel of your organization working at NTS during the two-week period 19 December 1955 to 1 January 1956: University of California, Rad Lab, Livermore, California; EG&G, Las Vegas, Nevada; REECo, Mercury, Nevada.

1 Janaury, listed below are the total cumulative exposures to gamma radiation received by personnel of your organization working at NTS during the month of December 1956 and for the period October 1 to January 1, 1957: REECo, Mercury, Nevada; H&N, Los Angeles, California; Lembke, Clough and King, Las Vegas, Nevada; Polk Construction Co., Las Vegas, Nevada; Federal Services, Inc., AEC, LVBO, Las Vegas, Nevada; University of California Radiological Lab, Livermore, California; UCLA-AEP, Los Angeles, California; EG&G, Las Vegas, Nevada; Sandia Corp., Albuquerque, New Mexico; U.S. Geological Survey, Washington, DC; U.S. Weather Bureau, Washington, DC: AFSWP, Lowry Field, Denver, Colorado.

8 February 1956, listed below are the total cumulative exposures to gamma radiation received by personnel of your organizations working at the NTS during the month 1 January to 1 February: Los Alamos Scientific Lab, Los Alamos, New Mexico; University of California Radiation Lab, Livermore, California; REECo, Mercury, Nevada.

5 April, total cumulative exposures to gamma radiation received by personnel of your organizations working at the NTS during the month of March and for the quarter ending 31 March 1956: Los Alamos Scientific Lab, Los Alamos, New Mexico; REECo, Mercury, Nevada; University of California Radiation Lab, Livermore, California; EG&G, Las Vegas, Nevada; U.S. Public Health Service, Las Vegas, Nevada; AEC, Las Vegas, Nevada; Engineering Research & Development Lab, Fort Belvoir, Virginia; Sandia Base, New Mexico; Division of Biology & Medicine, AEC, Washington, DC; Federal Civil Defense Administration, Battle Creek, Michigan; Federal Services, Mercury, Nevada.

2 April 1956, listed below are the total cumulative exposures to gamma radiation received by personnel of your organizations working at the NTS during the month of March 1956 and for the quarter ending 31 March: Los Alamos Scientific Lab,

Los Alamos, New Mexico; University of California Radiation Lab, Livermore, California; EG&G, Las Vegas, Nevada, U.S. Public Health Service, AEC-LVB.

3 March 1956, listed below are the total cumulative exposures to gamma radiation received by personnel of your organization working at the NTS during the month of March 1956 and for the quarter ending 31 March: Los Alamos Scientific Lab, Los Alamos, New Mexico; University of California Radiation Lab, Livermore, California; REECo, Mercury, Nevada; AEC-Las Vegas Branch, Las Vegas, NV; 8452nd Du Sandia Base, New Mexico; EG&G, Las Vegas, Nevada.

9 May 1956, listed below are the total cumulative exposures to gamma radiation received by personnel of your organizations working at the NTS during the month of April 1956: REECo, Mercury, Nevada; University of California Radiation Lab, Livermore, California; EG&G, Las Vegas, Nevada; Oak Ridge National Lab, Tennessee; AEC, Las Vegas, Nevada; AEC, Albuquerque, New Mexico.

6 June 1956, listed below are the total cumulative exposures to gamma radiation received by personnel of your organizations working at the NTS during the month of May: REECo, Mercury, Nevada; University of California Radiation Lab, Livermore, California; AEC-Albuquerque Office, New Mexico; AEC-Las Vegas Branch; EG&G, Las Vegas, Nevada; Oak Ridge Radiation Lab, Tennessee.

5 July 1956, listed below re the total cumulative exposures to gamma radiation received by personnel to gamma radiation received by personnel of your organization working at NTS during the month of June 1956: REECo, Mercury, Nevada; University of California Radiation Lab, Livermore, California; AEC, Albuquerque, New Mexico; AEC, Las Vegas, Nevada; Oak Ridge Radiation Lab, Tennessee.

6 August 1956, listed below are the total cumulative exposures to gamma radiation received by personnel of your organization working at NTS during the month of July: REECo, Mercury, Nevada; University of California, Livermore, California; AEC, Las Vegas, Nevada; EG&G, Las Vegas, Nevada; H&N, Los Angeles, California.

7 September 1956, listed below are the total cumulative exposures to gamma radiation received by personnel of your organization working at NTS during the month

of August: REECo, Mercury, Nevada; University of California, Livermore, California; H&N, Los Angeles, California; AEC, Las Vegas, Nevada; EG&G, Las Vegas, Nevada; U.S. Geological Survey, Armed Forces Special Weapons Project, Armour Research Foundation, Urbana, Illinois; civilians (miners), 23 Arizona Way, Henderson, Nevada.

5 October 1956, listed below are the total cumulative exposures to gamma radiation received by personnel of your organization working at NTS during the month of September and for the quarter ending 30 September: REECo, Mercury, Nevada; University of California, Livermore, California; H&N, Los Angeles, California; AEC, Las Vegas, Nevada; EG&G, Las Vegas, Nevada; U.S. Geological Survey, Washington, DC; Armed Forces Special Weapons Project, Armour Research, Urbana, Illinois.

15 November 1956, radiological exposures of personnel working at NTS during the month of October and for quarter ending December 31, 1956: REECo, Mercury, Nevada; H&N, Los Angeles, California; University of California, Livermore, California; EG&G, Las Vegas, Nevada; U.S. Geological Survey, Washington, DC; UCLA AEP, Los Angeles, California.

7 December 1956, radiological exposures of personnel working at NTS during the month of November and for the period of October 1 to November 30, 1956: REECo, Mercury, Nevada; H&N, Los Angeles, California; University of California, Livermore, California; UCLA-AEP, Los Angeles, California; Lembka, Clough and King, Las Vegas, Nevada; Federal Services Inc., Las Vegas, Nevada; USGS, Washington, DC; U.S. Weather Bureau, Washington, DC; EG&G, Las Vegas, Nevada; Bell Telephone Co., Las Vegas, Nevada.

/
Monthly Report (REECo) dosage mR, November 1-30, and cumulative dosage, October 1 to November 30. Also H&N, UCRL, UCLA, LC&K, Polk Construction Co., FSI, USGS, U.S. Weather Bureau, EG&G, and Bell Telephone Co.

Report accumulative dosage on the following personnel (Date Hired and Terminated) 1953, 1954, 1956, dated May 11, 1956, to John Elmgren from Tom Morgan, letter and report August 8, 1956 (NTS-7419-m): Information is forwarded in explanation

of certain personnel radiation exposures shown on the Rad Exposure Report 6 August 1956, William Poe and Paul Stephenson, UCRL.

Yellow paper, final monthly and quarterly report, October, November, and December, 1956, for: REECo, H&N, LC&K, POLK, FSI, AEC, UCRL, UCLA, EG&G, Sandia, Bell Tel, USGS, and AFSWP.

Personnel log, Areas 7 to 9, dated December 7, 1956, (Station BJY) with nose swipe results. Personnel log sheets, Areas 3, 7 and 9 dated December 6, 5, and 4 (Station BJY) with nose swipe results. Personnel log sheets Areas 3, 7, 9 and odd outfits, dated December 13, 12, 10, and 26 (Station BJY) with nose swipe results.

Record of Radiation Exposure sheets, form R-105A (102's) January-December 1956. Cumulative dosage report for personnel on decontamination work in Areas 1, 2, 3, 3A, 4, 7, 9B, 9C from August 25, 1956, to October 1, 1956.

Correspondence by D&R Section, January 1 to February, 1956: January 31, 1956, University of California, Los Alamos, New Mexico, to J. B. Sanders from W. S. Johnson, personnel who worked without film badges 18 January 1956. EG&G, 25 January 1956 to W. R. Jones from W. R. Mitchell, requesting new film. Six letters from Dosimetry and Records Radsafe Laboratory, Mercury, Nevada, dated 20 January, February 29, February 28, February 15, February 10, and 8 February, listing film numbers with their corresponding dosages as compared with a ^{60}Co standard.

Film Calibration Data: Los Alamos, July 5, 1956, film numbers 60001 to 61499 and 601500 to 604999, Du Pont type film packet 559, and UCRL curve calibration.

Film Calibration Data: Los Alamos film densitometer 17 May 1956 for film series 32,000 - 33,000, 37,000 - 38,000, Du Pont film 559___ film component 502.

Box 39

Pacific 1956: H&N film badge issue envelopes, TG 7.4 and 7.5

Box 39A

Pacific 1956: Form 103-ps, 3x5 white cards: Film badge number with dose, numerical order.

Box 39B

Pacific 1954, 1955, 1956: Badge issue records; filed by numerical badge number A1, B1, C1, D, E1, F1, G1, H1, J1, K1, L1, M1, N1, R1.

Box 39C

Pacific 1956: Badge issue records, by numerical badge number.

Box 39D

Pacific 1956: Badge issue records, by numerical badge number.

Box 39E

Pacific 1956: Badge issue records, by numerical badge number.

Box 39F

Pacific 1956: Badge issue records by numerical badge number.

Box 39G

Pacific 1956: Badge issue records, by numerical badge number.

Box 39H

Pacific 1956: White 5x8 cards, alpha order, cumulative personnel exposure records.

Box 40

Continent 1957: DTL NTS, summary 1957 alpha listing with exposures, USAF-ADP Project - NTS, alpha listing with exposures.

1957, Quarterly report - first quarter and April by organization; Plumbbob quarterly personnel gamma radiation summary report for the period April 25, 1957 to July 31, 1957; Appendix I: discussion of the reporting system; Appendix II: List of organization code numbers; Appendix III: total to date 2R exposure list; Appendix IV: is the total report, currently contains dosage information on 8,353 individuals.

Plumbbob quarterly personnel radiation report, August 1 to October 9, 1957.
Alpha, NTS dosage report, October to December, inclusive, 1957.

Monthly radiological exposure reports by organization, May thru June 1957.

Monthly radiation exposure report by organization for July.

Monthly radiation exposure report by organization for August.

Monthly radiation exposure report by organization for October 14, 1957, to December 31, 1957.

Monthly radiation exposures by organization for November 7 to December 31, 1957.

Box 41

Continent 1957: DTL NTS, Daily personnel gamma radiation exposure report, by organization, May 15 to June 15, 1957.

Daily personnel gamma radiation exposure report, by organization, June 15 to June 30, 1957.

Daily personnel gamma radiation exposure report, by organization July 1 to July 15, 1957.

Daily personnel gamma radiation exposure report, by organization, July 16 to July 31, 1957.

Daily personnel gamma radiation exposure report, by organization, August 1 to August 15, 1957.

Daily personnel gamma radiation exposure report, by organization, August 2 to August 15, 1957.

Daily personnel gamma radiation exposure report, by organization, August 15 to August 31, 1957.

Box 42

Continent 1957: DTL NTS, Daily personnel and doses in excess of 2R, gamma radiation exposure report, by organization, August 19 to August 31, 1957.

Daily personnel gamma radiation exposure report, by organization, September 1 to September 15, 1957.

Daily personnel gamma radiation exposure report, by organization, September 15 to September 30, 1957.

Daily personnel gamma radiation exposure report, by organization October 1 to October 10, 1957.

Summary, personnel gamma radiation exposure report, by organization, May 1 to December, 1957.

Summary, personnel gamma radiation exposure report, by organization, July 8 to July 22, 1957, with the exception of REECo; exposures listed under "This YR mR" are accrued from January 1, 1957. Summary and total to date 2R list, personnel gamma radiation exposure report, by organiation, September 7 to September 16, 1957. Summary, personnel gamma radiation exposure report, by organization, September 23, to October 2, 1957.

Box 43

Continent 1957: DTL, NTS, 2 hard copies, Alpha, 1952-1957, REECo, total dosages. Alphabetical listing for non-returned film badges. Accumulation dosages for all Rad-Safe personnel for March, April, and May.

Estimated dose to offsite population Operation Plumbbob (Roscoe H. Geoke).

Special dosage report, December thru July with name, organization, film badge number, dosage mR, and batch number. Special dosage report, September thru July, with name, organization, film badge number, dosage mR, and batch number. Also report radiological safety exposure questionnaire/dosimeter and/or film badge mishap. Dosage correction and assignments (radiological safety exposure questionnaire), July thru September. Reocrd of radiation exposures (film badge exposure), form R-101.

Area 11 personnel log (nose swipes), April thru February. Areas U3J, 13, 3, 7, and 9 personnel log, nose swipes. Area 11 personnel face and nose swipes, May, March, and April. Areas 13, 7, and 9, personnel swipes (nose), April and May. Project 57, personnel nose swipes, May and June. Areas 13 and Project 57, personnel nose swipes, September thru February.

Miscellaneous file 1957: Special processing request helicopter mission badges 97 TAU 3 September 1957. Radiological Survey Rad-Safe Division, Mercury, Nevada. RE telecom, Allaire to AEC Duty Officer: Two incidents involving possible internal exposure of personnel to pu occurred August 30. Sandia Corp. (letter) radiation exposure accruals in personnel qualified as Rad-Safety monitors for Operation Plumbbob, the following personnel have accrued exposures as stated below during the period of January 1, 1957. Letter August 29, 1957: The following personnel with high dosages are suggested for the body fluid samples to be sent to Walter Reed Hospital. Special assignments justification of time over the basic work week.

Box 44

Continent 1957: DTL NTS Calibrations:

August 15, master and duplicate curves 502/606, 555, SX -262. (Change-over to Du Pont process solutions), August 10 data and curves for 750,000 to 775,000 series; 502/606 - fourth shipment. August 10 data and curves for re-evaluation of Du Pont - 55 film and Du Pont - 834 film.

April 1, 1957, data and curves for 700,000 series 502/606 (first shipment - 5,000). May 13, 1957, data and curves for 700,000 series 502/606, second shipment - 20,000. August 1, 1957, data and curves for 725,000 - 750,000 series, 502-606 (third shipment). February 1, 1957, calibration curves and charts for 70,000 series 502/606. Original data and curves for Du Pont type 553 film evaluation program, February 1, 1957. Original and copies data and curves of Eastman Type 2 Du Pont type 555 evaluation program November 23, 1956, to January 17, 1957. Original data and curves for Du Pont type 559 - 502/606 response check program December 21, 1956, to January 17, 1957. Copies data and curves of Du Pont type 559 - 502/606 response check program December 21, 1956, to January 17, 1957.

LASL-NTS data exchange. Experiment with Du Pont chemicals.

September 25, 1957, Sandia-NTS data comparison. Data Du Pont type 555 field evaluation. May 13, 1957, evaluation Du Pont SX 260, 261, 262. Experimental directional shielding absorbtion, May 25, 1957. September 23, 1957, data and curves for 502/606 film numbers 775.00 to 999.999, combined with LASL/NTS evaluation data for 502/606 and 555/834. Original data and curves of Eastman type 2 Du Pont type 555 film, evaluation program November 23, 1956, to January 17, 1957. Office memorandums calibration in process.

Correction curves: (5 gray notebooks) 100 mR - 500 mR, 200 mR - 1,000 mR, 500 mR - 1,000 mR, 1,000 mR - 2,000 mR, 2,000 mR - 3,000 mR.

High Density calibration chart for Los Alamos film densitometer, model FD-2, serial no. 203, Mercury Nevada, May 13, 1957. Calibration chart for Los Alamos film densitometer, model FD-2, serial no. 203, Mercury, Nevada, July 30, 1957. Low density calibration chart for Los Alamos film densitometer, model FD-2, serial no. 203, Mercury, Nevada, August 18, 1957. Low density calibration chart for Los Alamos film densitometer, model FD-2, serial no. 203, Mercury, Nevada, September 26, 1957. Calibration chart for Los Alamos film densitometer, model FD-2, serial no. 203, Mercury, Nevada, September 26, 1957.

Miscellaneous File: Office memo, June 24, 1957, official observers assigned numbers. Personnel Dosimetry Branch report, shot (Boitzman) film badges May 28, 1957. Dosimeters information with name and dose. (Note) Film type used during "Smoky" by NTS-badged personnel Du Pont 301-4, 508 - low range, 534 - high range. Office memorandum August 21, 1957, to Floyd W. Wilcox from Jack S. Coogan, subject, George Chant Injury. Report General Monitoring Dosage Record. Quarterly dosage (13 week) 5/25 - 8/25. Certification of lost dosage device. Identification (ID) Application. Supplemental film badge issue slip. Office memorandum film badges/not turned in on Wilson 0-Day. Special dosage report.

Box 45

Pacific 1957: Alpha listing with exposure. Roster of personnel exposed to radiation (fourth quarter and total exposure).

Quarterly radiation exposure reports from Eniwetok Branch (Redwing 1957 H&N).

RADEX area pre-entry data form (1A-50) H&N January 7, 1957 to March 9, 1957, entry record events: PEARL, TILDA, JANET, SALLY, URSULLA, YVONNE, VERA, BIKINI, RUBY, LUCY, MARY, OLIVE.

RADEX area pre-entry data form (1A-50) H&N, March 11, 1957, to August 31, 1957, entry record events: IRENE, ALICE, GENE, HELEN, YVONNE, URSULLA, KATE, VERA, WILMA, RUBY, PEARL, SALLY.

Radiologlical counting data sheets, January to December, H&N form (1A-58) sample data from fish.

Box 46

Pacific 1957: H&N, film badge issue envelopes, boxes 1, 2, 3, 4, of 10 (badge number order).

Box 47

Pacific 1957; H&N, film badge issue envelopes, boxes 5, 6, 7, 8, of 10 (badge number order).

Box 47A

Pacific 1957: H&N, film badge issue envelopes, boxes 9 and 10 of 10. 1957, H&N 5x8 white cards, cumulative personnel exposure records.

Box 47B

Pacific 1957: 5x8 white cards, personnel exposure records.

Box 48

Continent 1958: DTL NTS, Alpha USAF-ADP Project - NTS listing with exposures. Alphabetical listing with exposures. Summary of NTS-REECo, exposures 1952 thru 1958. NTS, Annaul gamma radiation exposure summary 1958 by organization. NTS personnel gamma radiation exposures summary (the dosages are derived from film badges issued and processed during the period Dcember 26, 1957, to August 31, 1958; also personnel dosage alert listing in excess of 2R per calendar quarter or 4R per calendar year, December 26, 1957, to August 31, 1958.

Two books, Daily radiological exposure records Operation Hardtack Phase II for the months of September and October, also personnel dosage alert listing.

Radiological exposure reports, monthly, January - July 1958. Radiological exposure reports summary October, November, and December.

Dosage report NTS, first quarter, December 26, 1957, thru March 31, 1958, by organization.

Dosage report NTS, second quarter, December 26, 1957, thru June 30, 1958, by organization; third quarter, December 26, 1957, thru September 30, 1958, by organization.

REECo Rad-Safe Counting Room log and laboratory data nasal and wound swabs.

Box 49

Pacific 1958: Five books, radiation dosage roster Operation Hardtack Phase I.

Book 1, May 5 - May 20, 1958. Book 2, May 21 - May 31, 1958. Book 3, June 2 - June 18, 1958. Book 4, June 19 - July 15, 1958. Book 5, July 17 - August 1, 1958.

Box 50

Pacific 1958: "Dose roster of personnel exposed to whole-body ionizing radiation." This report covers exposures to personnel at EPG for both the fourth quarter and the year 1958 (January 1, 1958, thru March 31, 1958, and last quarter 1957).

Hardtack Phase I, TG 7.5 dose roster of personnel exposed to whole-body ionizing radition, April 1, 1958, thru June 30, 1958. Hardtack Phas I, TG 7.5 dcse roster of personnel exposed to whole-bdcy ionizing radiation, April 1, 1958, thru September 4, 1958.

Total dose report, 7.5 radiation record for Hardtack I, May 1958, by organization.

Total dose report 7.5 by organization June 3, 1958.

Total dose report 7.5 Hardtack I by organization July 2, 1958.

Total dose report 7.5 Hardtack I by organization, August 6, 1958.

Total dose report 7.5 Hardtack I by organization, September 4, 1958.

Total dosage roster Operation Hardtack I, June 16, 1958 (organization).

Total dosage roster Operation Hardtack I, June 27, 1958 (organization).

Total dosage roster Operation Hardtack I, July 15, 1958 (organization).

Total dosage roster Operation Hardtack I, August 1958.

Box 51

Pacific 1958. Total dosage roster Operation Hardtack I, Headquarters JTF-7 (TG 7.6) & Task Group 7.1. Total dosage roster Operation Hardtack I, Task Group 7.2 and Task Group 7.4. Total dosage roster Operation Hardtack I, TG 7.1, August 6, 1958. Total dosage roster Operation Hardtack I, TG 7.2, August 6, 1958. Total dosage roster Operation Hardtack I, TG 7.3. Total dosage roster Operation Hardtack I, TG 7.4, August 6, 1958. Total dosage roster Operation Hardtack I August 6, 1958, TG 7.6. Radiation record for Hardtack I, all organizations except TG 7.5.

Box 52

Pacific 1958: Total Dose report, Hardtack Phase I (supplement October 1, 1958). Master dosage report Operation Hardtack Phase I, April 1, 1958, thru August 31, 1958, for TG 7.1 thru 7.6. Final dose roster for TG 7.1, 7.2, and 7.3, July 3, 1958. Total dose roster, TG 7.1 thru 7.6, August 5, 1958.

Box 53

Pacific 1958: Entire box. RADEX area pre-entry data f rm:

Location TG 7.1, Tu 6, April 29, 1958 to May 10, 1958.

Location TG 7.1, Tu 6, May 7, 1958 to June 12, 1958.

Location TG 7.1, Tu 6, May 13, 1958 to May 17, 1958.

Location TG 7.1, Tu 6, May 18, 1958 to May 24, 1958.

Location TG 7.1, Tu 6, May 25, 1958 to May 31, 1958.

Location TG 7.1, Tu 6, June 1, 1958 to June 6, 1958.

Location TG 7.1, Tu 6, June 13, 1958 to June 19, 1958.

Location TG 7.1, Tu 6, June 20, 1958 to June 26, 1958.

Location TG 7.1, Tu 6, June 28, 1958 to July 5, 1958.

Location TG 7.1, TU 6, July 7, 1958 to July 12, 1958.

Location Yvonne, Irene, August 8, 1958 to August 11, 1958.

Location TG 7.1, Tu 6, August 12, 1958 to August 13, 1958.

Location TG 7.1, Tu 6, July 13, 1958 to July 19, 1958.

Location TG 7.1, Tu 6, July 21, 1958 to July 26, 1958.

Location TG 7.1, Tu 6, July 27, 1958 to August 1, 1958.

Location Janet, Wilma, Helen, Yvonne, August 2, 1958 to August 9, 1958.

Box 54

Pacific 1958: Alpha listing with exposures, Pacific 1958. Radiation exposure records H&N, January 1, 1958 thru March 31, 1958. H&N roster of personnel radiation exposure report exposed to whole-body ionizing radiation; also fourth quarter September 1, 1958 thru December 31, 1958. H&N roster of personnel exposed to whole-body ionizing radiation (April 1 thru June 30, 1958), Operation Hardtack. Roster of personnel exposed to whole-body ionizing radiation (January 1, 1958 thru March 31, 1958). H&N Radiological Counting data sheets. H&N counting data sheets. Headquarters TG 7.1 Joint Task Force Seven, Monitor Training Program Tests. Joint Task Force Seven Telephone Director Eniwetok Proving Ground May 1958.

Qualified monitors - Bikini. Source file - Sources on hand at Bikini. Copies of work requests (Bikini), correspondence (Bikini): Report of probable "Deep Sixing" of Gold Leaf. Incident of high exposures on Site William, on Site Tare, on Site Charlie; memo on radsafe activities during roll-up. Mission dosage lists to Mr. Curlett (Bikini) radiation mission dosages in excess of 200 milliroentgens. Headquarters TG 7.1 JTF 7, recovery data and additional roll-up requirements, UCRL Phonex stations.

Miscellaneous - Bikini, roster of officers U.S. Army Chemical Corps Training Command. Bikini Radsafe Situation map. Instructions for Bikini roll-up. 1958 issue cards, filed by identification number.

Box 55

Pacific 1958: H&N Radiolgoical counting sheets, book 1: Samples Tu-6. H&N radiological counting sheets, book 2: Samples Public Health and miscellaneous.

Box 56

Pacific 1958: H&N (Hardtack) cumulative personnel exposure records, white 5x8 cards, alpha order. A thru I.

Box 57

Pacific 1958: H&N (Hardtack) cumulative personnel exposure records, white 5x8 cards, alpha order, J thru S.

Box 58

Pacific 1958: H&N (Hardtack) cumulative personnel exposure records, white 5x8 cards, alpha order, T thru Z.

Box 59

Pacific 1958: H&N film badge issue envelopes (badge number order) 0200 thru 03900.

Box 60

Pacific 1958: H&N film badge issue envelopes (badge number order) 04000 thru 07000.

Box 61

Continent 1958: Previous exposure histories. Office memorandum: July and August, dosimeter readings area cleanup. Urinalysis data. Special incidents (accidents) and cases requiring monitoring. Radiological safety exposure questionnaire (dosimeter and/or film badge mishap). Certification of lost dosage device.

Correction curves 200 mR to 1,000 mR.
February 13, 1958, data and curves for 502 film periodic calibration film numbers 784.000 thru 790.000.

July 9, 1958, data and curves for 502 film periodic calibration film numbers 784000 - 790000.

October 12, 1958, calibration curves. Film calibration log.

Miscellaneous file and correspondence. Radiolgoical survey report. Office memorandum dated 06/13/58, dose information on ORNL personnel assigned to CETG for Project 58-1.

Special dosage report: personnel of Area U-12-B received the following dosage on September 5, 1958.

Office memo: Attached list for Upshot Knothole exposures for UCRL, total gamma radiation dated 12/18/58. Report on Area 3 decontamination and underground site exploration.

Office memo: FC AFSWP and TAU received greater than 5R for Hardtack - Phase II, dated 11/26/58. Rough drafts on additional reports. Incoming and received communications messages.

Drawing, radiation telemetering system. Letters of acknowledge receipt of letters from various organizations. Letters to REECo from various organizations requesting and stating past histories of exposures and releases.

Box 62

Continent 1959: USAF-ADP project NTS, alpha listing with exposures. NTS, alphabetical, annual radiation exposure summary. NTS annual radiation exposure summary, organizational. NTS, personnel radiation exposure quarterly summary, January to July. NTS, personnel radiation exposure quarterly summary August to December.

Laboratory data nasal or wound swabs. Total internal exposures. Laboratory data. Urine data from LRL or LASL, 1958 - 1959. Laboratory data urine. Bioassay data. REECo R/S counting room log, nasal and swipe December 11, 1958 to June 23, 1959 (Area 12). Previous exposure histories.

Box 63

Continent 1959: Missing Source Cards, 900,000 - 930,373. Non-returns. Calibration of ^{60}Co sources for use in Film Dosimetry by A. N. Tschaeche, February 1959. U.S. Department of Commerce Washington National Bureau of Standards Report on Calibration of Radioactive Cobalt-60, Department of the Army, Armed Forces Special Weapons Project, Sandia Base, Albuquerque, New Mexico.

Old calibration curves for 800,000 series 502 & 834 film. Comparison between FD-I and FD-II density readings. Calibration data, March 31, 1959. Personnel dosimetry (processing). Certification of lost dosage device. Acknowledge receipt of exposure histories letters.

Exposure history of John Van Derbeck. Exposure data (radioiodine).

Neutron badge cards (IBM). Summary of laboratory data for week ending June 28, 1959.

Correspondence: Acknowledge receipt of letters from various organizations requesting and stating past histories of exposures and personnel history releases.

Box 64

Pacific 1959: EPG, alpha listing with exposures. H&N quarterly radiation exposure report, first quarter January 1, 1959 to March 3, 1959. Task Group 7.5, exposed to whole-body ionizing radiation during the period January 1 thru March 31, 1959. Task Group 7.2 and 7.3 personnel exposed to whole-body ionizing radiation during January 1 thru March 31, 1959.

Report: H&N exposed to whole-body ionizing radiation during the period of April 1 thru June 30, 1959.

Report: TG 7.1, 7.2, 7.3, 7.5 (personnel other than H&N) exposed to whole-body ionizing radiation during April 1 thru June 30, 1959.

Report: H&N, TG 7.1, 7.2, 7.3, 7.4, 7.5 personnel (other than H&N) exposed to whole-body ionizing radiation during July 1 thru September 30. 1959.

Report: All personnel exposed to whole-body gamma radiation at EPG for the period October 1 thru December 31, 1959 (fourth quarter), and also total for 1959: H&N, JTF 7, TG 7.1 - University of Dayton, 7.1 - University of Hawaii, TG 7.1 - University of Michigan, TG 7.1 - Sandia Corp., TG 7.1 - University of Texas, TG 7.1 - University of Washington, TG 7.2, TG 7.3, TG 7.4, and TG 7.5.

Radiological counting data sheets. RADEX area pre-entry data form: October 1958 thru February 1959; Yvonne, Leroy, Ursulla, Glen, Mary, Wilma, Janet, Irene, David, Bruce, Tilda. February 1959 thru October 1959, Janet, Wilma, Mary, Yvonne, Pearl, Ursulla, Tilda, Sally, Oscar, Peter. October 1959 thru November 1959, Alice, Belle, Mary, Clara, Edna, Mack, Janet, Tilda, Yvonne, Leroy, Irene, Glen, Helen.

H&N Pacific 1959, 5x8 white cards, cumulative personnel exposure records, box 1 of 2 and 2 of 2, alpha order.

Box 65

Pacific 1960: H&N, report includes all personnel who were exposed to whole-body ionizing radiation at EPG during the period April 1 thru June 30, 1960. 1960 alpha listing with exposures (Pacific).

Box 66

Continent 1960: 1960 Nevada, alpha listing with exposures. Summary dosage report (organization). Summary dosage report (alphabetical). NTS, personnel radiation exposure interim report, during the period December 21, 1959 thru July 22, 1960. NTS, personnel radiation report, December 21, 1959 thru July 31, 1960. NTS, personnel radiation exposure summary report, December 21, 1959 thru October 31, 1960. Monthly dosage report December 21, 1959 thru July.

Two monthly dosage reports, August 31, 1960 for alpha and organization. Monthly dosage report, September 30, 1960, organization. Monthly dosage report, October 1960, organization (30 mR or higher). Dosage report for November and December, alpha. Dosage report for December 1960, alpha.

Three radiation exposure reports, first quarter 1960, alpha, organization, and identification number listings. Two radiation exposure reports, second quarter 1960, organization and identification number listings.

Box 66A

Continent 1960: First quarter non-returned film badges. First quarter damaged badges. Non-returned film badges.

Film calibration log, Du Pont #502 film June 8, 1960. Film calibration log, Du Pont type SX-301, components 508-834, September 1, 1960. Film calibration log, high range film calibration #2/3, September 19-21, 1960. Film calibration log #4, October 15, 1960. Density-dosage conversion calibration #2, September 1, 1960, FD-11, Serial #100 densitometer. Density-dosage conversion from October 17, 1960 for 508 film, read on FD-11 densitometer, serial #100. Density-dosage conversion from calibration #1, June 8, 1960, for 502 film, read on FD-11 densitometer, serial #104.

Effects of temperature on dosimetry film 1960 study. Bioassay Data. Lab data urine.

Certification of lost devices. Previous exposure histories. 5x8 white cards, lab Pu tracks.

Box 67

Continent 1961: Nevada, alpha listing with exposures. Annual summary dosage report, alpha. Annual summary dosage report, organization. 1961 NTS personnel listing alpha by organization with additions. New master list, alpha, February 8, 1961 Rad-safe master file versus FSI master file, October 18, 1961. Unmatched rad-safe listing October 18, 1961. Unmatched FSI listing, October 18, 1961.

Monthly dosage report: two alpha and organization for January.

Monthly dosage report: two alpha and organization for February.

Monthly dosage report: two alpha and organization for March.

Monthly dosage report: three alpha and two organization for April.

Montnly dosage report: two alpha and organization for May.

Monthly dosage report: two alpha and organization for June.

Monthly dosage report: two alpha and organization for July.

Monthly dosage report: two alpha and organization for August.

Monthly dosage summary, January thru October 27, 1961, alpha. Monthly dosage summary, January thru November 30, 1961.

Box 68

Continent 1961: Weekly summary dose report: two alpha and organization for September 16, 22, 29. Weekly summary dose report: two alpha and organization for October 6, 13, 20. Weekly summary dose report: two alpha and organization for November 3, 11, 17, 24, 31. Weekly summary dose report: two alpha and organization for December 1, 7, 9, 15, 22, 29.

First daily dose report, December 13 thru 27, 1961.

Laboratory data - urine. Rad-safe lab urine analysis records. Lab data - surface swipes. Lab swipes nose.

Special dosage report (Book #1).

Box 69

Continent 1961: REECo NTS, Radiological Safety Division, permission sheets to obtain from past employers personal medical history relative to past radiation exposures. REECo Rad-Safe questionnaire (average liquid per day).

Film exchange and non-returns. Exposures over 100 mR, exposure assignments and experimental film. LASL/NTS data exchange, Du Pont 834 film. Du Pont 508 film. Du Pont 555 film. LASL/NTS data exchange, H-8 badge type 544 film (555 & 834) type 556-3 film (508 & 834) September 1961.

Density-dosage conversion for Du Pont 555 film (LASL - H-8) December 19, 1961, from calibration #10 FD-11, serial # 103 densitometer. Du Pont 508 film density-dosage conversion FD-11 densitometer, serial #103, calibration No. 11, October 14, 1961.

Master curve individual curves from Kodak type "A" neutron film calibrations. Polaroid and other commercial film experiments.

11-point calibration check June (film # 000001 to 020000). Calibration #5, April 15, 1961. Calibration #6, June 20, 1961. Calibration #6A, August 23, 1961. Calibration #6B, August 29, 1961. Calibration #7A, September 25, 1961. Calibration #9, 508 film, September 25, 1961. Calibration #10 LASL - H-8 badge, Du Pont 555 film.

^{60}Co source calibration August 1961. ^{60}Co source calibration August 1961 (file copy). Ansco densitometer, 508 film calibration.

Miscellaneous, density-dosage conversions.

Box 70

Continent 1961: Preliminary rate and distance calculation for modified UDM-1 source fixture. Density-dosage conversion calibration #5, April 15, 1961, Du Pont 508 film, FD-11 densitometer #104. Calibration #6, June 20, 1961, Du Pont 508 film, FD-11 densitometer #104. Calibration #7A, September 25, 1961, Du Pont 834 film, FD-11 densitometer, serial #103. Calibration #9, September 26, 1961, Du Pont 508 film, FD-11 densitometer, serial #104. Calibration #11, October 14, 1961, Du Pont 508 film, FD-11 densitometer, serial #103. Calibration #11, October 14, 1961, Du Pont 508 film, FD-11 densitometer serial #104. Calibration #11, October 14, 1961, Du Pont 508 film, #30,000-50,000, FD-11 densitometer, serial #104. Calibration #11, October 14, 1961, Du Pont 508 film, FD-1 stand-by densitometer. Calibration #12, November 27, 1961, Du Pont 508 film, FD-11 densitometer, serial #103. Calibration #14, February 26, 1961, Du Pont 508 film, #100,000-125,000 FD-11 densitometer, serial #100.

Area access dosage register Carlsbad 1961 thru 1964.

Correspondence and miscellaneous reports: Tritium exposure calculation from urinalysis data (handwritten on various scrap paper).

Special dosage report: Externals, internals, plus estimates of dosages fourth quarter.

Miscellaneous IBM print-out sheets.

Mesa 1961 handwritten report on yellow scrap paper.

U.S. Department of Commerce, Weather Bureau computation and tabulation sheets.

Process damaged neutron film. Results on experimental film badge and results.

Dosage report on LASL - H-8 film badges from KIWI BLA run December 7, 1961.

Indian Springs Air Force Base film badges worn December 22 and 03, 1961.

Master changes for organizational coding May 22, 1961. Dosage corrections memorandums, also assigned dosages. Letters sent to REECo acknowledging various requests for past medical and radiation history. Misplaced issue cards memo.

Doses special process batches 1-282, 1-284, 1-285, 1-286.

Information on ove burden and blowers for B Tunnel.

Current dosimetry procedures NTS, memorandums. Current dosimetry procedures.

Radiation safety master work cards (IBM - no punch).

Box 71

Continent 1962: Daily, personnel radiation exposure report, Alpha, January thru May.

Box 72

Continent 1962: Daily, personnel radiation exposure report, alpha, June thru August.

Box 73

Continent 1962: Daily, personnel radiation exposure report, alpha, September thru November 14, 1962.

Box 74

Continent 1962: Daily, personnel radiation exposure report, alpha, November 15 thru December and including January 2, 1963.

Weekly, personnel radiation exposure report, alpha, January 5, January 12, January 19; alpha and organization, January 26; alpha and organization, February 2; alpha, February 9; alpha and organization, February 16; alpha, February 23; alpha and organization, March 2; alpha and organization, March 9; alpha, March 16; alpha, March 20; alpha and organization, March 23; organization, March 30.

Box 75

Continent 1962: Weekly, personnel radiation exposure report, alpha and organization, April 6; alpha and organization, April 13; alpha and organization, April 20; alpha and organization, April 27; alpha and organization, May 4; alpha and organization, May 12; alpha and organization, May 18; alpha, May 25; alpha and organization, June 1; alpha and organization, June 8; alpha and organization, June 15; alpha and organization, June 22; alpha and organization, June 29 and June 30; alpha and organization, July 6; alpha, July 13; organization, July 15; organization, July 19; alpha, July 20; alpha and organization, July 27.

Box 76

Continent 1962: Weekly, personnel radiation exposure report, alpha and organization, August 2; alpha and organization, August 9; alpha and organization, August 16; alpha and organization, August 23; alpha and organziation, August 30; alpha and organization, September 6; alpha and organization, September 13; alpha and organization, September 20; alpha and organization, September 27; alpha and organization, October 4; alpha and organization, October 11; alpha and organization, October 18; alpha and organization, October 25.

Box 77

Continent 1962: Weekly personnel radiation exposure reports: alpha and organization, November 1; alpha and organization, November 8; alpha and organization, November 16; alpha and organization, November 23; alpha and organization, November 29; alpha and organization, December 6; alpha and organization, December 13; alpha and organization, December 20; alpha and organization, December 28;

Annual summary (organization). Annual summary (alpha). Nevada alpha listing with exposures.

Special reports: H&N personnel radiation exposure July 14, from NTS. Personnel radiation exposure report, March 5, 2400 hours, 2R/quarter and 4R/quarter.

Box 78

Continent 1962: Permission letters to obtain past employers personal medical history relative to past radiation exposures.

Activity	Radio Corp. of America, Defense Electronics Products	- May 26, Oct. 13.
Activity	USS Fortify (MSO-446)	- October 24.
Activity	USS Impervious (MSO-449)	- October 19.
Activity	USNS Point Barrow (T-AKDI)	- May 19, October 3.
Activity	USS Safeguard (ARS-25)	- October 9, November 4.
Activity	USNS Harris County (T-LST 822)	- June 30, July 23.
Activity	Abnaki (ATF-96)	- November 1.
Activity	USS Walker (DDE 517)	- May 14.
Activity	Commanding Officer, Patrol Squadron 9	- September 17.
Activity	USNS Sunnyvale	- May 16.
Activity	USS Henry County (LST-824)	- October 5.
Activity	USS Taylor (DD-468)	- May 7.
Activity	Airborne Early Warning Barrier Squadron Pacific	- May 1.
Activity	USS John S. McCain (DL-3)	- April 28, July 2.
Activity	VP-28 Navy #14	- April 22.
Activity	HMM-364	- May 23, September 22.
Activity	USS Chipola (AO-63)	- May 4, June 30.
Activity	USS Summit County (LST-1146)	- Sept. 20, Oct. 10.
Activity	USS Chickasaw (ATF 83)	- July 22.
Activity	USS Lansing (DER-388)	- September 28.
Activity	USS Forster (DER-334)	- April 26, September 9.
Activity	Tuscumbia (YTB 762) Navy	- October 31.
Activity	USS Gurke (DD 738)	- April 3.
Activity	Army Film (Patron Six)	- _____
Activity	USAS American Mariner (Mathiasen's Tanker Ind. Film Badges attached to vessel)	- October 11.
Activity	Patrol Squadron Eight Seven Two	- April 19.
Activity	RCA Service Company	- May 26, October 13.
Activity	USNS Alatna	- April 29, May 30, June 30, October 15.
Activity	USS Princeton	- September 22.

Activity	USS Agerholm (DD-826)	- May 9.
Activity	USC & GSS Pioneer (OSS-31)	- May 11.
Activity	USS Gannet MSC 290	- May 6.
Activity	USS Iwo Jima (LPH-2)	- May 22.
Activity	USS Fort Marion (LSD-22)	- May 18.
Activity	USS Hassayampa (AO-145)	- July 18, November 5.
Activity	USS Finch (DER-328)	- April 5, July 3.
Activity	USS Takelma (ATF-113)	- May 25, Oct. 4, Nov. 2.
Activity	USS Reclaimer (ARS-42)	- May 28.
Activity	USS Tolovana (AO-64)	- June 8.
Activity	USS Newell (DER-322)	- March 30, July 17.
Activity	USS Falgout (DER-324)	- April 27, July 18.
Activity	USS Carbonero (SS 337)	- May 6.
Activity	USS Oak Hill (LSD-7)	- July 26.
Activity	USS Medregal (SS)	- May 5.
Activity	Naval-Civilian Works & CTU 8.3.9	- May 10, June 29.
Activity	USS Lipan (ATF-85)	- June 2.
Activity	USS Maddox (DD 731)	- April 30.
Activity	USS Samuel N. Moore (DD 747)	- May 6.
Activity	Commander Fleet Air Wing Two	- April 4, July 19.
Activity	USS O'Bannon (DD-450)	- Oct. 23, April 25, May 22.
Activity	USS Preston (DD-795)	- May 3.
Activity	USS Chemung (Ao-30)	- April 27.
Activity	USS Hitchiti (ATF-103)	- October 6.
Activity	USS Brush (DD-745)	- May 3.
Activity	USS Mataco (ATF-86)	- June 1.
Activity	USS Loyalty (MSO 457)	- May 4.
Activity	USS Grapple (ARS-7)	- April 12, May 16, June 13, July 7.
Activity	USS Snohomish County (LST 1126)	- April 28, August 4.
Activity	USS Southerland (DDR 743)	- April 14, May 28.
Activity	USS Monticello (LSD-35)	- May 8.
Activity	USS Tawakoni (ATF-114)	- May 3.
Activity	USNS Range Tracker (T-AGM 1)	- May 28.
Activity	USS Inflict (MSO-456)	- April 22, June 11, July 11.

Box 82

Pacific 1962; Personnel exposure to ionizing radiation NAVM 1432 (1-62), folders:

Activity	USS Marshal (DD 676)	- April 17.
Activity	LCU Division 13 DET B	- April 21.
Activity	Commander Task Unit 8.3.6	- May 18.
Activity	ACB-1 Division DET Z	- April 16.
Activity	Cabildo (LSD-16)	- April 25, June 14.
Activity	USS Halsey Powell (DD-686)	- May 2, June 15.
Activity	Marine Barrack NAS Barber Points	- April 1.
Activity	USNS Pvt. Frank J. Petrarca T-AK 250	- September 27.
Activity	JTF 8.3.9.7 (Roster of enlisted personnel)	- April 16.
Activity	USS Conserver (ARS-39)	- April 25, July 5.
Activity	USS Munsee (ATF-107)	- April 19, May 5.
Activity	ACB-1 USNAB	- April 26, May.
Activity	USS Ponchatoula (AO-148)	- April 25.
Activity	USS Moctobi (ATF-105)	- May 12.
Activity	USS Norton Sound (AVM-1)	- April 30.
Activity	USS Yorktown	- April 30.
Activity	USS Sioux (ATF-75)	- May 11, July 24.
Activity	Molala (ATF-106)	- May 7.
Activity	USS Razorback (SS-394)	- May 6.
Activity	VAP - G2 (DET-35)	- May 10.
Activity	USS Cree (ATF-84)	- May 5.
Activity	VP-46 NAS NORIS	- May 12.
Activity	USS Bausell (DD 845)	- May 7.
Activity	USS Commander Destroyer Squadron 7	- April 2.
Activity	USS Polk County (LST 1084)	- May 16, July 2.
Activity	USS Page County (LST-1076)	- April 28.
Activity	USNS ALATNA (T-AOG-81)	- April 29.
Activity	USS Jerome County (LST 848)	- April 25.
Activity	Naval Ordnance Laboratory	- May 9.
Activity	NRDL/AEC Project 2.1	- May 9.
Activity	USS Richard B. Anderson (DD-786)	- May 7.
Activity	USS Hopewell (DD-681)	- May 11.

Box 81

Pacific 1962: Dominic radiation exposure report, alpha listing with total rem exposures. Dominic radiation exposure report, organization (hard copy 1 and 2) with total rem. Index of organizations (Dominic PPG).

Miscellaneous listing (Dominic hardcopy 1, 2 and 3). Radiation exposure reports, alpha and organizations, with organization index, U.S. Air Force, Surgeon General.

Radiation exposure report, alpha and organization, with organization index, Army, Surgeon General.

Radiation exposure report, alpha and organization, with organization index, Navy, Surgeon General.

Miscellaneous correspondence to: Surgeon General, Department of Army, Air Force, and Navy.

Box 80

Continent 1962: Personnel radiation exposure assignments. Batch, standard records. Office memorandums (Dosimetry) correspondence. Correspondence received from various organizations. Radiation exposure information (mailed out). Correspondence sent out.

Laboratory data (nasal). 5x8 white cards (Pu tracks). Bioassay calibration for Pu.

Special reports: Detail dose report for ACFI personnel. Results of experimental film used at Indian Springs. Experimental film - dose report.

U.S. AEC, occupational external radiation exposure history. Carlsbad dose reports. Experimental film reports from Carlsbad. Project Coach radiation exposure reports and Gnome.

box 79

Continent 1962: Du Pont 834 film, density-dosage conversion for FD-11 densitometer, serial # 100, calibration No. 15, March 14, 1962. Du Pont 834 film, density-dosage conversion for FD-11 densitometer, serial #100, calibration No. 15C, June 8, 1962.

[illegible]ation and density of reversal of Du Pont type 508 film. Neutron film [illegible] try, current calibration and processing data. First and second experiment with shielded Kodak personal neutron monitoring film, type A. Calibration of Kodak personal neutron monitoring film, type A, by Health Physics Section, Sandia Corp. Du Pont 508 film, emulsion No. 39, film number 75000 - 100000, calibration No. 13, January 4, 1962. Du Pont 508 film, density-dosage conversion for FD-11 densitometer, serial # 100, calibration number 13, January 29, 1962.

Density-dose conversion calibration No. 16, April 27, 1962, Du Pont 508 film, numbers 125,000 - 175,000 read on FD-11 densitometer, serial #100.

Special calibration LASL H-8, type 555 film, FD-11 densitometer, serial #100, June 25, 1962.

Du Pont 508 film, number 175,000 - 250,000 calibration number 17, FD-11 densitometer, serial #100, June 28, 1962. Corrected density-dose conversion for calibration number 16, April 27. Density-dose conversion calibration number 16, May 24, Du Pont 508 film numbers 125,000 - 175,000, FD-11 densitometer, serial #104. Density-dose conversion calibration number 17, June 28, Du Pont 508 film numbers 175,000 - 250,000, FD-11 densitometer, serial #100. Density-dose conversion, FD-11 densitometer, serial #104, Du Pont 508 film, September 25. Density-dose conversion, FD-11 densitometer, serial #104, Du Pont 508 film, November 21.

Dose/time calculation procedure for calibration work by W. Horn. Projected decay calculation for ^{60}Co source based on calibrated value of 1.647 R/hr @ 1 meter on August 17. USWB-Cs-137 pressure temperature 18°C.

Laboratory data activity - urine. Laboratory data activity - drierice samples. Laboratory analysis and records.

Box 83

Pacific 1962: Personnel exposures to ionizing radiation, NAVM 1432 (1-62), Folders:

Activity	Pacific Missile Range Facility Hawaiian Area	- April 24, May 15, June 14, July 11.
Activity	USS Arikara (ATF-98)	- April 26, May 12, June 11, July 1, August 3.
Activity	JTF 8 (Bldg. 605)	- April 1, May 12.
Activity	JTF 8.3.7.2 (APO 86 c/o Postmaster)	- May 10, May 25.
Activity	Marine Aircraft Group 36	- May 9.
Activity	EOD Swimmers (Officer in Charge, Explosive Ordnance Demolition Units No. 1	- May 9.
Activity	Buships	- May 9.
Activity	Nuclear Weapons Training Center Pacific	- May 5
Activity	BOO-SAM	- May 29.
Activity	Commander Destroyer Division 232	- April 30.
Activity	Pacific Fleet Mobile Photo Unit	- May 5.
Activity	NOTS	- May 9.
Activity	ONR, Washington, D.C.	- May 9.
Activity	Edgerton, Germeshausen & Grier, Inc.	- May 9.
Activity	NAVAIRDEVCEN	- May 11.
Activity	General Atronics Corp.	- May 9.
Activity	Barnes Engineering Company	- November 2.
Activity	VP-28 CTU 8.3.2	- June 12.
Activity	VP-872 8.3.7.2	- May 21.
Activity	CJTG 8.9	- May 10.
Activity	Task Unit 8.3.9	- May 25.
Activity	JTU 8.4.3	- April 26.
Activity	CJTU 8.3.4	- May 9.
Activity	CJTG 8.9	- May 10.
Activity	Joint Task Group 8.3 & Roster of Enlisted Personnel TG 8.3	- April 28, May 4.
Activity	U.S. Army Ordnance Missile Command	- May 18, May 26, Oct. 13.

Thirty pages, Activity was not recorded.

Activity USS Rowan (DD-782) List of Officers

Activity Coast Guard, List of Personnel

Activity Test Services Element, TG 8.4.3.1, USAF - May 16.

Activity List of Exposed Film Badges, Sailing List - MS0433

Activity Engage 0623 043300 Officers/Enlisted 5217.

Activity Headquarters, Joint Task Force Eight - Command Section personnel with Duty Station on Christmas Island - April 12.

Activity Muster Roster for Capt. D. St. Clair, Reconnaissance - June 14.

Activity AFTAC Element - April 26.

Activity Badges issued to LASL at NAS Barkers Point - April 4.

Activity Badges issued to EG&G at NAS Barkers Point - April 9.

Activity Badges issued to Sandia at NAS Barkers Point - April 10.

Activity HQ JTG 8.7 - Nuclear Safety Warning to Individuals - April 20.

Activity Miscellaneous List of Film Badges

Activity EPG Dominic Dosimetry Log Book

Activity Log Book for all 8.5 - H&N Reconnaissance

Element Tu 8.42, Report: Change to Radiation Dose of A. C. Taylor.

Box 84

Pacific 1962: White 5x8 cards, accumulated dosage, alpha order, A thru Dk.

Box 85

Pacific 1962: White 5x8 cards, accumulated dosage, alpha order, Do thru He.

Box 86

Pacific 1962: White 5x8 cards, accumulated dosage, alpha order, He thru L.

Box 87

Pacific 1962: White 5x8 cards, accumulated dosage, alpha order, M thru Potter.

Box 88

Pacific 1962: White 5x8 cards, accumulated dosage, alpha order from Potts thru Taylor.

Box 89

Pacific 1962: White 5x8 cards, accumulated dosage, alpha order, from Taylor thru Zwemke. 3x5 cards: Film Badge Data:

Box 1 of 9 = 02150 - 12971.

Box 90

Pacific 1962: IBM cards (handwritten) and 3x5 cards: Film Badge Data.

Box 2 of 9 = 12972 - 17999
Box 3 of 9 = 18000 - 20212
Box 4 of 9 = 20213 - 28195
Box 5 of 9 = 28196 - 53999
Some numbers are missing.

Pacific 1962: IBM cards (Handwritten) and 3x5 cards: Film Badge Data

Box 6 of 9 = 54000 -56402

Box 7 of 9 = 56403 -171141

Box 8 of 9 = 171142 - 173067

Box 9 of 9 = 173068 - 174988

Trip Report of Field Search
for Exercise Desert Rock Documentation
Conducted by Representatives of The Adjutant General
18 June 1978 to 14 July 1978

Department of the Army Pamphlet No. 39-3, The Effects of Nuclear Weapons, Appendix B, "Announced Nuclear Detonations," pp. 671-678 (Washington, DC: April 1962 Edition).

APPENDIX 3 to ANNEX B

APPENDIX B

ANNOUNCED NUCLEAR DETONATIONS

This appendix contains information concerning all announced nuclear detonations carried out by the United States, the U.S.S.R., the United Kingdom, and the Republic of France prior to January 1964.

The dates and times given in the list of U.S. shots are Greenwich Civil Time (GCT). The heights of burst are heights above the surface; the heights of the cloud and tropopause refer to mean sea level (MSL). The abbreviations T, KT, and MT are used to express the explosion yields in tons, kilotons (1,000 tons), and megatons (1,000,000 tons) TNT equivalent, respectively. The term "nominal" implies a yield of approximately 20 kilotons TNT equivalent.

The approximate latitudes and longitudes of the various test sites are as follows:

UNITED STATES	
Nevada Test Site, U.S.A.	37° N. 116° W.
Eniwetok Proving Grounds, Pacific:	
Eniwetok	11° N. 162° E.
Bikini	11° N. 165° E.
Johnston Island, Pacific	17° N. 169° W.
Christmas Island, Pacific	2° N. 157° W.
UNITED KINGDOM	
Monte Bello Islands, Australia	20° S. 115° E.
Woomera, Australia	31° S. 137° E.
Maralinga Proving Ground, Australia	30° S. 131° E.
Christmas Island, Pacific	2° N. 157° W.
Nevada Test Site, U.S.A.	37° N. 116° W.
U.S.S.R.	
Arctic Test Site	75° N. 55° E. (Novaya Zemlya).
Siberian Test Site	52° N. 78° E.
U.S.S.R.	Denotes the explosion was in Soviet territory, but the test site was not identified.
REPUBLIC OF FRANCE	
Reggan, Algeria	27° N. 0°.
In Ekker, Algeria	24° N. 5° E.

ANNOUNCED UNITED STATES NUCLEAR DETONATIONS

Name	Date (GCT)	Time (GCT)	Location of Shot	Height of Burst (Feet)	Type of Burst	Mean Sea Level (Feet)			Yield	Remarks
						Cloud Top	Cloud Base	Tropopause		
TRINITY:										
Trinity	16/7/45	1230	Alamogordo, N.M.	100	Tower	35,000			19 KT	First test of an A-bomb.
WORLD WAR II	6/8/45	2316	Hiroshima, Japan	~1,880	Air				Nominal	First combat use.
	9/8/45	0158	Nagasaki, Japan	~1,850	Air				Nominal	Second combat use.
CROSSROADS:										
Able	30/6/46	2201	Bikini	520	Air	35,000			Nominal	
Baker	24/7/46	2135	Bikini	−90	UW	8,000			Nominal	
SANDSTONE:										
X ray	14/4/48	1817	Eniwetok	200	Tower	56,000	45,000	56,000	37 KT	
Yoke	30/4/48	1809	Eniwetok	200	Tower	55,000	35,000	54,000	49 KT	
Zebra	14/5/48	1504	Eniwetok	200	Tower	28,000	20,000	54,000	18 KT	
RANGER:										
Able	27/1/51	1345	Nevada	1,060	Air	17,000		33,000	1 KT	
Baker	28/1/51	1352	Nevada	1,080	Air	35,000		32,000	8 KT	
Easy	1/2/51	1347	Nevada	1,080	Air	12,000		35,000	1 KT	
Baker-2	2/2/51	1349	Nevada	1,100	Air	36,000		38,000	8 KT	
Fox	6/2/51	1347	Nevada	1,435	Air	42,000		40,000	22 KT	
GREENHOUSE:										
Dog	7/4/51	1834	Eniwetok	300	Tower			55,000		
Easy	20/4/51	1827	Eniwetok	300	Tower	40,000	30,000	54,000	47 KT	
George	8/5/51	2130	Eniwetok	200	Tower			55,000		
Item	24/5/51	1817	Eniwetok	200	Tower			55,000		
BUSTER-JANGLE:										
Able	22/10/51	1400	Nevada	100	Tower	8,000	6,700		<0.1 KT	
Baker	28/10/51	1520	Nevada	1,118	Air	29,000	23,000	39,000	3.5 KT	
Charlie	30/10/51	1500	Nevada	1,132	Air	40,000	32,000	38,000	14 KT	
Dog	1/11/51	1530	Nevada	1,417	Air	40,000	27,000	38,000	21 KT	
Easy	5/11/51	1630	Nevada	1,314	Air	45,000	31,000	35,000	31 KT	
Sugar	19/11/51	1700	Nevada	4	Surface	16,000	11,000		1.2 KT	
Uncle	29/11/51	2000	Nevada	−17	UG	11,000			1.2 KT	

TUMBLER-SNAPPER										
Able	1/4/52	1700	Nevada	793	Air	16,000		42,000	1 KT.	
Baker	15/4/52	1730	Nevada	1,060	Air	16,000	10,000	38,000	1 KT.	
Charlie	22/4/52	1730	Nevada	3,447	Air	42,000	31,000	38,000	31 KT.	
Dog	1/5/52	1630	Nevada	1,040	Air	42,000	28,000	38,000	19 KT.	
Easy	7/5/52	1215	Nevada	300	Tower	34,000		41,000	12 KT.	
Fox	25/5/52	1200	Nevada	300	Tower	41,000		37,000	11 KT.	
George	1/6/52	1155	Nevada	300	Tower	37,000		37,000	15 KT.	
How	5/6/52	1155	Nevada	300	Tower	41,000		40,000	14 KT.	
IVY										
Mike	31/10/52	1915	Eniwetok		Surface	~100,000		56,000	10.4 MT.	Experimental thermonuclear device.
King	15/11/52	2330	Eniwetok	1,480	Air	~70,000		55,000	High yield.	
UPSHOT-KNOTHOLE										
Annie	17/3/53	1320	Nevada	300	Tower	41,000	28,000	36,000	16 KT.	
Nancy	24/3/53	1310	Nevada	300	Tower	42,000	26,000	40,000	24 KT.	
Ruth	31/3/53	1300	Nevada	300	Tower	14,000	11,000	36,000	0.2 KT.	
Dixie	6/4/53	1530	Nevada	6,020	Air	43,000	33,000	36,000	11 KT.	
Ray	11/4/53	1245	Nevada	100	Tower	13,000	8,000	38,000	0.2 KT.	
Badger	18/4/53	1235	Nevada	300	Tower	35,000	23,000	39,000	23 KT.	
Simon	25/4/53	1230	Nevada	300	Tower	45,000	31,000	38,000	43 KT.	
Encore	8/5/53	1530	Nevada	2,425	Air	41,000	29,000	39,000	27 KT.	
Harry	19/5/53	1205	Nevada	300	Tower	43,000	27,000	42,000	32 KT.	
Grable	25/5/53	1530	Nevada	624	Gun	38,000	22,000	33,000	15 KT.	Fired from 280 mm gun.
Climax	4/6/53	1115	Nevada	1,334	Air	43,000	35,000	39,000	61 KT.	
CASTLE										
Bravo	28/2/54	1845	Bikini		Surface	114,000	65,000	55,000	15 MT.	Experimental thermonuclear device.
Romeo	26/3/54	1830	Bikini		Barge			55,000		
Koon	6/4/54	1820	Bikini		Surface			53,000	~100 KT.	
Union	25/4/54	1810	Bikini		Barge			57,000		
Yankee	4/5/54	1810	Bikini		Barge			55,000		
Nectar	13/5/54	1820	Eniwetok		Barge			56,000		
TEAPOT										
Wasp	18/2/55	2000	Nevada	762	Air	22,000	15,000		1 KT.	
Moth	22/2/55	1345	Nevada	300	Tower	25,000	18,000		2 KT.	
Tesla	1/3/55	1330	Nevada	300	Tower	30,000	18,000	38,000	7 KT.	
Turk	7/3/55	1320	Nevada	500	Tower	44,000	36,000	40,000	43 KT.	
Hornet	12/3/55	1320	Nevada	300	Tower	38,000	27,000	38,000	4 KT.	
Bee	22/3/55	1305	Nevada	500	Tower	40,000	29,000	37,000	8 KT.	
Ess	23/3/55	2030	Nevada	−67	UG	12,000		39,000	1 KT.	

ANNOUNCED UNITED STATES NUCLEAR DETONATIONS - Continued

Name	Date (GCT)	Time (GCT)	Location of Shot	Height of Burst (Feet)	Type of Burst	Mean Sea Level (Feet) Cloud Top	Cloud Base	Tropopause	Yield	Remarks
TEAPOT -Continued										
Apple-1	29/3/55	1255	Nevada	500	Tower	32,000	22,000	39,000	14 KT	
Wasp Primo	29/3/55	1800	Nevada	740	Air	32,000		40,000	3 KT	
HA	6/4/55	1800	Nevada	36,620 (MSL)	Air	55,000		31,000	3 KT	
Post	9/4/55	1230	Nevada	300	Tower	16,000	13,000		2 KT	
Met	15/4/55	1915	Nevada	400	Tower	40,000	31,000	37,000	22 KT	
Apple 2	5/5/55	1210	Nevada	500	Tower	43,000	34,000	41,000	29 KT	
Zucchini	15/5/55	1200	Nevada	500	Tower	35,000	25,000	44,000	28 KT	
WIGWAM:										
Wigwam	14/5/55	2000	29° N. 126° W	−2,000	UW				30 KT	
REDWING:										
Lacrosse	4/5/56	1825	Eniwetok		Surface			53,000		Kiloton range.
Cherokee	20/5/56	1751	Bikini	4,320	Air			53,000		Several megatons. First air drop by U.S. of a thermonuclear weapon.
Zuni	27/5/56	1756	Bikini		Surface			51,000		
Flathead	30/5/56	1815	Eniwetok	300	Tower			54,000		
Seminole	6/6/56	0055	Eniwetok		Surface			52,000		
Flathead	11/6/56	1826	Bikini		Barge			50,000		
Blackfoot	11/6/56	1826	Eniwetok	200	Tower			52,000		
Osage	16/6/56	0114	Eniwetok	680	Air			52,000		
Dakota	25/6/56	1806	Bikini		Barge			54,000		
Apache	8/7/56	1806	Eniwetok		Barge			52,000		
Navajo	10/7/56	1756	Bikini		Barge			50,000		
Tewa	20/7/56	1748	Bikini		Barge			52,000		
Huron	21/7/56	1816	Eniwetok		Barge			51,000		

PLUMBBOB										
Boltzmann	28/6/57	1155	Nevada	800	Tower	33,000	22,000	41,000	12 KT	
Franklin	2/8/57	1155	Nevada	300	Tower	17,000	14,000		100 T	
Lacrosse	5/8/57	1145	Nevada	500	Balloon	7,000		43,000	0.5 T	
Wilson	18/8/57	1145	Nevada	500	Balloon	36,000	28,000	40,000	10 KT	
Priscilla	24/8/57	1230	Nevada	700	Balloon	43,000	24,000	49,000	37 KT	
Hood	5/7/57	1100	Nevada	1,500	Balloon	48,000	34,000	53,000	74 KT	
Diablo	15/7/57	1130	Nevada	500	Tower	32,000	25,000	43,000	17 KT	
John	19/7/57	1400	Nevada	20,000	Rocket	54,000		48,000	~2 KT	
Kepler	24/7/57	1150	Nevada	900	Tower	38,000	20,000	34,000	96 KT	
Owens	25/7/57	1230	Nevada	500	Balloon	35,000	20,000	49,000	5.7 KT	
Stokes	2/8/57	1225	Nevada	1,000	Balloon	37,000	27,000	47,000	19 KT	
Shasta	18/8/57	1200	Nevada	500	Tower	32,000	16,000	40,000	17 KT	
Doppler	23/8/57	1130	Nevada	1,500	Balloon	38,000	23,000	43,000	11 KT	
Franklin Prime	30/8/57	1240	Nevada	750	Balloon	32,000	21,000	32,000	4.7 KT	
Smoky	31/8/57	1230	Nevada	700	Tower	38,000		34,000	44 KT	
Galileo	2/9/57	1240	Nevada	500	Tower	37,000	17,000	39,000	11 KT	
Wheeler	6/9/57	1245	Nevada	800	Balloon	17,000	14,000	50,000	197 T	
Laplace	8/9/57	1300	Nevada	750	Balloon	30,000	14,000	44,000	1 KT	
Fizeau	14/9/57	1445	Nevada	500	Tower	40,000	27,000	43,000	11 KT	
Newton	16/9/57	1250	Nevada	1,500	Balloon	32,000	19,000	52,000	12 KT	
Builder	19/9/57	1700	Nevada	−700	UG				3.7 KT	There was no tunnel venting.
Whitney	23/9/57	1230	Nevada	500	Tower	30,000	18,000	53,000	19 KT	
Charleston	25/9/57	1300	Nevada	1,500	Balloon	32,000	30,000	41,000	12 KT	
Morgan	7/10/57	1300	Nevada	500	Balloon	40,000	26,000	37,000	8 KT	
HARDTACK PHASE I										
Yucca	28/4/58	0240	12° 37′ N., 162° 01′ E.	86,000	Balloon			83,000		
Cactus	5/5/58	1815	Eniwetok		Surface			51,000		
Fir	11/5/58	1750	Bikini		Barge			54,000		
Butternut	11/5/58	1815	Eniwetok		Barge			53,000		
Koa	12/5/58	1830	Eniwetok		Surface			57,000		
Walnut	16/5/58	0130	Eniwetok	−500	UW			50,000		
Holly	20/5/58	1830	Eniwetok		Barge			62,000		
Nutmeg	27/5/58	2120	Bikini		Barge			54,000		
Yellowwood	26/5/58	0500	Eniwetok		Barge			56,000		
Magnolia	26/5/58	1800	Eniwetok		Barge			54,000		
Tobacco	30/5/58	0215	Eniwetok		Barge			55,000		
Sycamore	31/5/58	0300	Bikini		Barge			56,000		

ANNOUNCED UNITED STATES NUCLEAR DETONATIONS—Continued

Name	Date (GCT)	Time (GCT)	Location of Shot	Height of Burst (Feet)	Type of Burst	Mean Sea Level (Feet)			Yield	Remarks
						Cloud Top	Cloud Base	Tropopause		
HARDTACK PHASE I—Continued										
Rose	2/6/58	1845	Eniwetok		Barge			57,000		
Umbrella	8/6/58	2315	Eniwetok	−180	UW			54,000		
Maple	10/6/58	1730	Bikini		Barge			53,000		
Aspen	14/6/58	1755	Bikini		Barge			57,000		
Walnut	16/6/58	1830	Eniwetok		Barge			54,000		
Linden	18/6/58	0300	Eniwetok		Barge			54,000		
Redwood	27/6/58	1730	Bikini		Barge			52,000		
Fir	27/6/58	1830	Eniwetok		Barge			52,000		
Oak	29/6/58	1930	Eniwetok		Barge			50,000		
Hickory	29/6/58	0000	Bikini		Barge			51,000		
Sequoia	1/7/58	1830	Eniwetok		Barge			52,000		
Cedar	2/7/58	1730	Bikini		Barge			51,000		
Dogwood	5/7/58	1830	Eniwetok		Barge			52,000		
Poplar	12/7/58	0330	Bikini		Barge			55,000		
Juniper	22/7/58	0420	Bikini		Barge			61,000		
Oliver	22/7/58	2030	Eniwetok		Barge			48,000		
Pine	26/7/58	2030	Eniwetok		Barge			52,000		
Teak	1/8/58	1050	Johnston Island	252,000	Rocket					Megaton range
Orange	12/8/58	1030	Johnston Island	141,000	Rocket					Megaton range.
HARDTACK PHASE II										
Eddy	19/9/58	1400	Nevada	500	Balloon	11,000	7,500	48,000	83 T	
Mora	29/9/58	1405	Nevada	1,500	Balloon	18,500	10,000	40,000	2 KT	
Tamalpais	8/10/58	2200	Nevada	−330	UG	Low diffuse cloud			72 T	Slight venting.
Quay	10/10/58	1430	Nevada	100	Tower	10,000	7,500		79 T	
Lea	13/10/58	1320	Nevada	1,500	Balloon	17,000	12,000		1.4 KT	
Hamilton	15/10/58	1800	Nevada	80	Tower	6,000	4,500		1.2 T	
Logan	16/10/58	0900	Nevada	−830	UG				5 KT	No venting.
Dona Ana	16/10/58	1420	Nevada	480	Balloon	11,000	6,500	49,500	37 T	

Rio Arriba	18/10/58	1425	Nevada	72.6	Tower	13,800	11,000		80 T	
Socorro	22/10/58	1330	Nevada	1,400	Balloon	26,000	20,000		6 KT	
Wrangell	22/10/58	1650	Nevada	1,800	Balloon	10,000	7,800		116 T	
Rushmore	22/10/58	2340	Nevada	500	Balloon	11,800		42,000	186 T	
Sanford	26/10/58	1020	Nevada	1,500	Balloon	26,000	12,800		4.9 KT	
De Baca	26/10/58	1000	Nevada	1,800	Balloon	17,800	10,000		2.2 KT	
Evans	29/10/58	0000	Nevada	−848	UG				65 T	Venting.
Humboldt	29/10/58	1445	Nevada	25	Tower	7,800	6,000		7.8 T	
Santa Fe	30/10/58	0300	Nevada	1,800	Balloon	18,000	13,000	30,000	1.3 KT	
Blanca	30/10/58	1500	Nevada	−835	UG	7,700			19 KT	Slight venting.
ARGUS										
Argus I	27/8/58		South Atlantic (38° S 12° W)	~300 miles	Rocket				1-2 KT	
Argus II	30/8/58		South Atlantic (50° S 8° W)	~300 miles	Rocket				1-2 KT	
Argus III	6/9/58		South Atlantic (50° S 10° W.)	~300 miles	Rocket				1-2 KT	

ANNOUNCED U.S. NUCLEAR DETONATIONS, 1961-63

NEVADA SERIES

Name	Date (GCT)	Time (GCT)	Depth[1] (feet)	Type	Medium	Depression[1] (Diam. & Depth, feet)	Yield[1] (KT)	Remarks
Antler	15/ 9/61	1700	1,219	Underground	Tuff	None	2.4	Tunnel.
Shrew	16/ 9/61	1945	372	Underground	Alluvium	None	Low	
Chena	10/10/61	1800	853	Underground	Tuff	None	Low	Tunnel
Mink	20/10/61	1830	630	Underground	Alluvium	None	Low	
Fisher	3/12/61	2304	1,193	Underground	Alluvium	600, 14	13.5	
Mad	12/12/61	1800	594	Underground	Alluvium	None	0.43	
Ringtail	17/12/61	1636	1,191	Underground	Alluvium	778; 2.17	Low	
Feather	22/12/61	1630	512	Underground	Tuff	None	Low	Tunnel
Stoat	9/ 1/62	1630	592	Underground	Alluvium	602, 7.3	4.5	
Agouti	18/ 1/62	1800	856	Underground	Alluvium	604; 40	5.9	
Dormouse	30/ 1/62	1800	1,191	Underground	Alluvium	547; 14.4	Low	
Stillwater	8/ 2/62	1800	625	Underground	Alluvium	406; 39	2.7	
Armadillo	9/ 2/62	1800	786	Underground	Alluvium	590, 29	6.6	
Hardhat	15/ 2/62	1800	943	Underground	Granite	None	5.9	
Chinchilla	19/ 2/62	1630	492	Underground	Alluvium	302; 27	1.5	
Codtaw	19/ 2/62	1750	896	Underground	Tuff	230; 11	Low	
Cimarron	23/ 2/62	1800	1,000	Underground	Alluvium	484; 34	11.2	
Platypus	24/ 2/62	1630	190	Underground	Alluvium	None	Low	
Danny Boy	5/ 3/62	1815	110	See remarks	Basalt		0.42	Cratering test; crater diam. 386 ft, depth 84 ft.
Ermine	6/ 3/62	1630	240	Underground	Alluvium	None	Low	
Brazos	8/ 3/62	1800	841	Underground	Alluvium	466; 31	7.6	
Hognose	15/ 3/62	1630	789	Underground	Alluvium	478; 68	Low	
Hoosic	28/ 3/62	1800	614	Underground	Tuff	294; 20	3	
Chinchilla II	31/ 3/62	1800	445	Underground	Alluvium	235; 11	Low	
Dormouse II	5/ 4/62	1800	856	Underground	Alluvium	538; 96	10	
Passaic	6/ 4/62	1800	764	Underground	Tuff	512, 63	Low	
Hudson	12/ 4/62	1800	480	Underground	Tuff	None	Low	
Platte	14/ 4/62	1800	580	Underground	Tuff	None	1.7	Tunnel.
Dead	21/ 4/62	1840	684	Underground	Tuff	266; 11	Low	

Black	27/ 6/62	1800	714	Underground	Tuff	[illegible], 0[illegible]	Low	
Pace	7/ 6/62	1928	848	Underground	Alluvium	[illegible], 0[illegible]	Low	
Aardvark	12/ 6/62	1800	1,024	Underground	Tuff	[illegible], 72	30	
Fox	13/ 6/62	1600	714	Underground	Tuff	[illegible], 11	Low	
White	26/ 6/62	1600	428	Underground	Tuff	[illegible], 00	Low	
Harrison	1/ 6/62	1700	636	Underground	Alluvium	[illegible], 36	Low	
Parkin	6/ 6/62	1700	300	Underground	Alluvium	[illegible], 44	Low	
Dot Mulvaney	13/ 6/62	2000	635	Underground	Tuff	None	Low	Tunnel
Danny J	21/ 6/62	1300	854	Underground	Alluvium	[illegible], 30	Low	
Haymaker	27/ 6/62	1900	1,240	Underground	Alluvium	974, 107	30	
Marmalade	28/ 6/62	1700	900	Underground	Tuff	None	Low	Tunnel.
Barracuda	30/ 6/62	2130	600	Underground	Alluvium	300, 42	Low	
Little Feller II	7/ 7/62	1900		Surface		None	Low	Slightly above ground.
Johnny Boy	11/ 7/62	3445	2	Surface	Alluvium		0.6	Slightly below ground
Mistletoe	13/ 7/62	1000	1,300	Underground	Alluvium	692, 30	Low	
Small Boy	14/ 7/62	1930		Surface		None	Low	Slightly above ground
Little Feller I	17/ 7/62	1700		Surface		None	Low	Slightly above ground Troop participation
Nevada	27/ 7/62	2100	600	Underground	Alluvium	300, 30	Low	
York	28/ 8/62	1000	744	Underground	Tuff	900, 30	Low	
Bolne	29/ 8/62	1700	670	Underground	Alluvium	420, 40	Low	
Hymar	30/ 8/62	1730	720	Underground	Alluvium	470, 100	Low	
Pete	30/ 8/62	1700	718	Underground	Alluvium	600, 30	Low	
Albatross	29/ 9/62	1700	402	Underground	Tuff	300, 30	Low	
Mistletoe	1/10/62	1700	1,000	Underground	Tuff	420, 120	Intermediate	
Kwanda	12/10/62	1900	600	Underground	Tuff	80, 6	Low	
Bourbon	19/10/62	1600	300	Underground	Alluvium	300, 300	Low	
Buster	23/10/62	1000	1,000	Underground	Alluvium	600, 30	Low	
Jangle	12/11/62	1700	1,300	Underground	Tuff	None	Low	Tunnel.
Nutmeg	12/12/62	1745	776	Underground	Alluvium	300, 00	Low	
Commanche	8/ 2/63	1600	1,000	Underground	Alluvium	400, 70	Intermediate or less	
Aruma	8/ 2/63	1830	864	Underground	Alluvium	300, 00	Intermediate or less	
Cornus	21/ 2/63	1947	630	Underground	Alluvium	None	Low	
Gerbil	26/ 2/63	1646	921	Underground	Alluvium	900, 40	Low	
Ferret Prime	6/ 4/63	1762	792	Underground	Alluvium	400, 300	Low	
Stone	22/ 6/63	1640	1,296	Underground	Alluvium	900, 30	Intermediate	
Yuma	6/ 8/63	1300	718	Underground	Tuff	None	Low	
Hula	8/ 8/63	1600	642	Underground	Alluvium	300, 30	Low	

ANNOUNCED U.S. NUCLEAR DETONATIONS, 1961-63 Continued

NEVADA SERIES - Continued

Name	Date (GCT)	Time (GCT)	Depth[1] (feet)	Type	Medium	Depression[2] (Diam. & Depth, feet)	Yield[3] (KT)	Remarks
Mafaco	14/ 6/63	1410	642	Underground	Alluvium	300, 50	Low	
Kermelee	25/ 6/63	2300	740	Underground	Alluvium	200, 30	Low	
Pekan	12/ 8/63	2345	997	Underground	Alluvium	550; 90	Low	
Barsoi	15/ 8/63	1300	738	Underground	Alluvium	300, 40	Low	
(4)	20/ 8/63							
Kobleton	23/ 8/63	1320	852	Underground	Alluvium	None	Low	
Antimony	13/ 9/63	1352	740	Underground	Alluvium	None	Low	
Bilby	13/ 9/63	1700	2,413	Underground	Tuff	1800, 80	~200	
[illegible]	11/10/63	1400	856	Underground	Alluvium	550, 90	Low	
[illegible]	16/10/63	1700	1,793	Underground	Tuff	None	Intermediate	
Anchovy	14/11/63	1800	853	Underground	Alluvium	600, 68	Low	
Mustang	17/11/63	1600	644	Underground	Alluvium	125, 18	Low	
Greys	22/11/63	1730	998	Underground	Alluvium	470, 42	Low	
Berline	4/12/63	1638	856	Underground	Alluvium	550, 80	Low	
Eagle	12/12/63	1802	841	Underground	Alluvium	440; 80	Low	

[1] Depth is distance to nearest point at the earth's surface.

[2] Depression is subsidence of earth into underground cavity, as distinguished from crater formed by throw-out of earth.

[3] Low yield means less than 20 kilotons; intermediate means 20 to 999 kilotons inclusive, low megaton means one to several megatons.

[4] For purposes of totaling announced detonations, add 23 underground U.S. weapons-related tests at the Nevada Test Site as having been conducted between September 18, 1961, and August 20, 1963. No other data on the 23 tests are available for public use.

VELA UNIFORM SEISMIC DETONATION

Name	Date	Depth	Medium	Yield	Location	Remarks
Shoal	10/26/63	1,205	Granite	About 12 KT	Near Fallon, Nev.	Nuclear test detection-research experiment.

PACIFIC SERIES

Name	Date (GCT)	Time (GCT)	Location	Height	Type of burst	Yield [1]	Remarks
Adobe	25/ 4/62	1546	Christmas Island area		Air	Intermediate	
Aztec	27/ 4/62	1602	Christmas Island area		Air	Intermediate	
Arkansas	2/ 5/62	1802	Christmas Island area		Air	Low megaton	
Questa	4/ 5/62	1905	Christmas Island area		Air	Intermediate	
Frigate Bird	8/ 5/62	2330	Christmas Island area		Air		Warhead in missile launched from Polaris submarine
Yukon	8/ 5/62	1801	Christmas Island area		Air	Intermediate	
Mesilla	9/ 5/62	1701	Christmas Island area		Air	Intermediate	
Muskegon	11/ 5/62	1637	Christmas Island area		Air	Intermediate	
Swordfish	11/ 5/62	2002	Eastern Pacific		UW	Low	Antisubmarine rocket (ASROC) system proof test.
Encino	12/ 5/62	1703	Christmas Island area		Air	Intermediate	
Swanee	14/ 5/62	1622	Christmas Island area		Air	Intermediate	
Chetco	19/ 5/62	1537	Christmas Island area		Air	Intermediate	
Tamana	25/ 5/62	1609	Christmas Island area		Air	Low	
Nambe	27/ 5/62	1703	Christmas Island area		Air	Intermediate	
Aztec	8/ 6/62	1703	Christmas Island area		Air	Intermediate	
Truckee	9/ 6/62	1637	Christmas Island area		Air	Intermediate	
Yeso	10/ 6/62	1601	Christmas Island area		Air	Low megaton	
Hatchet	12/ 6/62	1537	Christmas Island area		Air	Intermediate	
Rincon-ada	15/ 6/62	1601	Christmas Island area		Air	Intermediate	
Dulce	17/ 6/62	1601	Christmas Island area		Air	Intermediate	
Petit	19/ 6/62	1501	Christmas Island area		Air	Low	
Otowi	22/ 6/62	1601	Christmas Island area		Air	Intermediate	

PACIFIC SERIES—Continued

Name	Date (GCT)	Time (GCT)	Location	Height	Type of burst	Yield	Remarks
Bighorn	27/ 6/62	1519	Christmas Island area		Air	Megaton range	
Bluestone	30/ 6/62	1521	Christmas Island area		Air	Low megaton	
Starfish Prime	9/ 7/62	0900	Johnston Island area	400 km	High altitude	1.4 megatons	
Sunset	20/ 7/62	1633	Christmas Island area		Air	Intermediate	
Fallico	11/ 7/62	1637	Christmas Island area		Air	Low megaton	
Androscoggin	2/10/62	1614	Johnston Island area		Air	Intermediate	
Bumping	6/10/62	1603	Johnston Island area		Air	Low	
Chama	18/10/62	1601	Johnston Island area		Air	Low megaton	
Checkmate	20/10/62	0830	Johnston Island area	Tens of km	High altitude	Low	
Bluegill Triple Prime	26/10/62	1000	Johnston Island area	Tens of km	High altitude	Submegaton	
Calamity	27/10/62	1546	Johnston Island area		Air	Intermediate	
Housatonic	30/10/62	1602	Johnston Island area		Air	Megaton range	
Kingfish	1/11/62	1210	Johnston Island area	Tens of km	High altitude	Submegaton	
Tightrope	4/11/62	0730	Johnston Island area	Tens of km	High altitude	Low	

PLOWSHARE NUCLEAR DETONATIONS[1]

Name	Date (GCT)	Time (GCT)	Depth (ft)	Medium	Yield	Location	Remarks
Gnome	10/12/61	1900	1,184	Salt	3.1 KT	Near Carlsbad, N. Mex.	Multiple-purpose experiment; formed hemispheric cavity, 160-170 ft diameter, 60-80 ft high.
Sedan	6/7/62	1700	635	Alluvium	100 KT	Nevada Test Site	Excavation experiment; formed crater about 1,280 ft diameter, 320 ft max depth; displaced about 6.5 million cu yd or 10.4 million tons of earth
Anacostia	27/11/62	1800	750	Tuff	Low	Nevada Test Site	Plowshare Device Development Test.
Kawesh	21/ 2/63	1947	750	Alluvium	Low	Nevada Test Site	Plowshare Device Development Test.
Tornillo	11/10/63	2100	800	Alluvium	Low	Nevada Test Site	Plowshare Device Development Test.

[1] For the development of peaceful uses of nuclear explosives.

SAFETY EXPERIMENTS

Since 1955, the U.S. Atomic Energy Commission has conducted a number of safety experiments at the Nevada Test Site to determine the safety of nuclear weapons in case of accident. The following list includes those experiments which resulted in a measurable nuclear yield.

Name	Date (GCT)	Time (GCT)	Location of Shot	Height of Burst (Feet)	Type of Burst	Mean Sea Level (Feet)			Yield	Remarks
						Cloud Top	Cloud Base	Tropopause		
1956	18/1/56	2130	Nevada		Surface					
PLUMBBOB										
Pascal A	26/7/57	0900	Nevada		UG	6,000				Slight nuclear yield.
Coulomb B	6/9/57	2015	Nevada		Surface	18,000		60,000	0.3 KT	
1957										
Pascal C	6/12/57	2015	Nevada		Vertical shaft					Slight yield.
Coulomb C	9/12/57	2000	Nevada		Surface				0.5 KT	
HARDTACK PHASE II:										
Otero	12/9/58	2000	Nevada	−400	UG	9,000			34 T	
Bernalillo	17/9/58	1930	Nevada	−456	UG	7,800	8,500		15 T	
Luna	21/9/58	1900	Nevada	−484	UG	Low diffuse cloud			1.8 T	
Valencia	26/9/58	2000	Nevada	−484	UG	5,500			2 T	
Mars	28/9/58	0000	Nevada		UG	Low diffuse cloud			13 T	Shot vented through tunnel.
Hidalgo	8/10/58	1410	Nevada	377	Balloon	12,000	8,000		77 T	
Colfax	8/10/58	1615	Nevada	−230	UG	8,300	4,800		8.5 T	
Neptune	14/10/58	1800	Nevada	−98.5	UG	11,000			115 T	Shot vented.
Vesta	17/10/58	2300	Nevada		Surface	10,000			24 T	
Calron	24/10/58	1500	Nevada	72.5	Tower	8,800	8,000		21 T	
Juno	24/10/58	1601	Nevada		Surface	8,500			1.7 T	
Ceres	26/10/58	0400	Nevada	26	Tower	6,000			0.7 T	
Chavez	27/10/58	1430	Nevada	52.8	Tower	6,800			0.6 T	
Titania	30/10/58	2034	Nevada	26	Tower	6,000			0.2 T	

UNITED KINGDOM NUCLEAR DETONATIONS

Name	Date	Type of Burst	Yield	Location	Remarks
HURRICANE	3/10/52	Ship	Kiloton range	Monte Bello Islands	
TOTEM	14/10/53	Tower	Kiloton range	Woomera	Test held at Emu Field, 300 miles NW of Woomera
	26/10/53	Tower	Kiloton range	Woomera	Test held at Emu Field, 300 miles NW of Woomera
MOSAIC	16/5/56	Tower	Kiloton range	Monte Bello Islands	
	19/6/56	Tower	Kiloton range	Monte Bello Islands	
BUFFALO	27/9/56	Tower	Kiloton range	Maralinga	
	4/10/56	Surface	Low yield	Maralinga	
	11/10/56	Air	Low yield	Maralinga	First air drop
	22/10/56	Tower	Kiloton range	Maralinga	
GRAPPLE	15/5/57	Air	Megaton range	Christmas Island area	
	31/5/57	Air	Megtaon range	Christmas Island area	
	10/6/57	Air	Megaton range	Christmas Island area	
ANTLER	14/9/57	Tower	Low yield	Maralinga	
	25/9/57	Tower	Kiloton range	Maralinga	
	9/10/57	Balloon	Kiloton range	Maralinga	
GRAPPLE	8/11/57	Air	Megaton range	Christmas Island area	
GRAPPLE 1958 SERIES	28/4/58	Air	Megaton range	Christmas Island area	
	22/8/58	Balloon	Kiloton range	Christmas Island area	
	2/9/58	Air	Megaton range	Christmas Island area	
	11/9/58	Air	Megaton range	Christmas Island area	
	23/9/58	Balloon	Kiloton range	Christmas Island area	

JOINT UNITED KINGDOM-UNITED STATES NUCLEAR DETONATIONS

Date	Type of Burst	Yield	Location	Remarks
1/3/62	Underground	Low	Nevada Test Site	Announced by AEC as a joint United States-United Kingdom test of a British nuclear device
7/12/62	Underground	Low	Nevada Test Site	Announced by AEC as a joint United States-United Kingdom test of a British nuclear device.

Trip Report of Field Search
for Exercise Desert Rock Documentation
Conducted by Representatives of The Adjutant General
18 June 1978 to 14 July 1978

ANNEX C
Field Command, Defense Nuclear Agency, Kirtland AFB, Albuquerque, New Mexico
United States Air Force Special Weapons Laboratory, Kirtland AFB, NMex
Kirtland Air Force Base Technical Library, N Mex
Dates of Visit: 28 June - 1 July 1978

1. PERSONNEL AND AGENCIES CONTACTED:

a. Mr William Isengard, Field Command, Defense Nuclear Agency, Kirtland AFB
b. Dr Ward A Minge, Historian, USAF Special Weapons Laboratory, Kirtland AFB
c. Mrs Anna DeBlassie, Installation Records Management Officer, Kirtland AFB

2. BACKGROUND:

a. In 1937 Albuquerque, New Mexico, had a small municipal airport which possessed the potential for immediate nd immense expansion. World War II saw this realized. Using a common runway system, Kirtland Air Force base came into existence during World War II. With the Manhattan Project and later Armed Forces Special Weapons Project, a small adjoining enclave named for the nearby Sandia Mountains was created. This was Sandia Base. A few miles further into the Sandia Mountains, the Manzano Tunnel Complex was created as a secured storage & extension of Sandia Base. Thus, three separate and distinct military installations were created in the environs of Albuquerque's original municipal airport.

b. All three installations still exist as operating activities, however, they have been consolidated into a single huge sprawling United States Air Force reservation. The Sandia Base and Manzano names have disappeared and all are now simply referred to as "East" or "West" areas of Kirtland Air Force Base. The only change in their original functions is the addition of the newly created Department of Energy. Both the Defense Nuclear Agency Field Command as successor to the original Armed Forces Special Weapons Project and the Department of Energy interests occupy tightly controlled compounds on Kirtland Air Force Base. A USAF Air Base Wing controls the installation and provides normal housekeeping support to all DOD and DOE activities located there. This move toward consolidation at the DOD level has had both good and bad effects.

c. Certain common functions have been consolidate; others have not. Prominent examples here of immediate concern to the field search were the records management functions and operation of the technical library. Records management functions as pertains to USAF and AFSWP/DASA/DNA activities have always been separate and are still separate today. Operation and maintenance of the technical libraries at Kirtland until recently were separate functions, i.e., the USAF Special Weapons Center operated its own technical library as did the Field Command of AFSWP/DASA/DNA. With consolidation of other installation support functions, both technical libraries were combined. This had both good

and bad effects as will be noted in the paragraphs following which deal separately with the Kirtland Technical Library.

3. CURRENT SITUATION:

a. Field Command, Defense Nuclear Agency. Despite change in the name of the agency, i.e., AFSWP, DASA, DNA, ETC., its operation at Sandia Base and more recently Kirtland Air Force Base has always been the Field Command. It is and has always been a tri-service headquarters. Manning has been on a pro rata basis divided between the military departments. In addition to the uniformed staff, it has a large and fairly stable civilian personnel complement of administrators, technicians, specialists and scientists. Since creation of the original parent organization (AFSWP) in 1947 by joint agreement between the Secretary of War and the Chief of Naval Operations, it has been equally concerned with tests within continental United States as well as the Pacific. It has generally taken the lead in the scientific and theoretical aspects of the test series leaving for the most part the purely military application of the test series to the military departments.

(1) Due largely to the more critical logistical demands, joint task forces were organized to conduct the Pacific tests. The most notable of these joint task forces were JTF-3, JTF-7, and JTF-132. Each figured repeatedly in the test series and the scientific leadership as well as much of the tactical direction came from the Los Alamos Scientific Laboratory. The joint task forces were organized internally into joint task groups identified in the following manner: JTF-3 was organized as JTG-3.1 (Scientific group); JTG-3.2 (Army group) JTG-3.3 (US Navy group); JTG-3.4 (US Air Force group); JTG-3.5 (Contractor group, e.g., Narver & Holmes, REECO, etc.). Each of the joint task forces were organized in the same manner.

(2) The Directorate for Weapons Effects Tests (DWET) of the Field Command generally took the scientific lead in the test series from the DOD point of view. Matters of purely Departmental interest were largely left to the appropriate military department. Thus, the Air Force took the lead in the development and testing of air doctrine, tactics and techniques for nuclear weapon employment; the Army for ground operations; and, the Navy for surface and underwater application. This probably worked well for the many diverse groups involved in the entire series of tests; it did not work well for the orderly creation and maintenance of any central radiation exposure dosimetry service. As with other scientific, ordnance or doctrinal interests, each major task group tended to do its own dosimetry. Hence, Field Command's approach to the NTPR Project is purely parochial. The Field Command Project Officer is tasked only to identify former Field Command personnel for dosimetry study !

(3) Despite this somewhat narrow view, Mr Isengard, the DNA NTPR Project Officer, has extended his explorations productively far afield. He had no data per se which would provide individual identification or dosimetry histories for Desert Rock Army troop participants, but he had carefully screened the assets of the Kirtland Combined Technical Library for materials germane to the overall NTPR Project. The results emerged as a splendid bibliography of technical publications held by the Kirtland Technical Library which are central to the end results of the Nuclear Test Personnel Review Project. The bibliography is arranged alphabetically by topic for general studies including a

reference section and concluding section dealing with reports and studies which are specifically identified with particular shots in the entire series by AEC code names, i.e., Tumbler-Snapper, Teapot, Hardtack, etc. The section on OPERATION PLUMBOB is especially impressive. A copy of this bibliography is appended to this Annex.

b. Kirtland Air Force Base Technical Library. It was not clear at the time of the visit if the total assets of the Sandia Laboratories Technical Library had been integrated into the combined Kirtland AFB Technical Library. In any event, Mr Isengard had included Sandia Laboratory Technical Library publications in a separate section of his bibliography. Even if not physically located in the Combined Library, these publications were thus identified and located for easy reference and use. For lack of formal title, Mr Isengard's bibliography will be referred to hereinafter as the DNA NTPR Bibliography.

(1) The DNA NTPR Bibliography had been constructed largely as a blueprint of studies, reports and publications dealing with the technical aspects of the nuclear test series. Of course, many were wholly concerned with military applications. This concern, however, was from a tactical, strategic or doctrinal overview for national interests of the United States. Troop involvement and employment per se had not been a primary focus in the construction of the DNA NTPR Bibliography. This, then, became the primary topic of our lines of investigation in the Kirtland ABF Combined Technical Library. From the Army viewpoint, this was a very disappointing line of inquiry. Rarely were more that the names of primary exercise staff or test directorory names found in the many technical publications which were reviewed. For the United States Air Force involvement, the resources of the Kirtland Technical Library were a veritable goldmine for positive troop participation identification.

(2) Contrary to Army practice during the Desert Rock Exercises, the Air Force committed what appear to be regular TO&E units as exercise participants. It was the Army practice during these years to commit a few regular TO&E support units (some up to the battalion or regimental levels but mostly at the unit, platoon, detachment and company levels) to the exercises. The vast majority of the Army troop participants were drawn from the unmbered US continental Armies, e.g., from the organizations which were assigned geographically to each of the six numbered continental armies. Selection was largely left to unit command discretion in keeping with other mission requirements. These selected troops were then organized into Composite Units on arrival at the exercise site and subsequently appeared in the official after action reports as "Composite Unit, 1st Army," Composite Unit, 2nd Army," etc. To date reliable and complete personnel rosters or name lists identifying the troops comprising these composite units have not been located. Air Force reliance on regular TO&E organizations (for the most part at the Air Force Wing level) completely avoided the monumental problem now faced by the Army.

(3) A simple Morning Report search of the Air Force units known to have participated in the nuclear test exercises could guarantee almost 100% accuracy in personnel identification. This would be far more complete that the Army's present search along these lines because t . Air Force list of known unit participation is far more accurate. Then, . the Air Force program of periodic historical reporting now greatly eases its search operations. These historical reports are quarterly, semi-annual and annual; required of all Air Force organizations and normally consolidated at the Wing or Base level.

They are essentially operational in nature. Many of the Air Force organizations participating in the nuclear test series were committed from Kirtland Air Force Base. Copies of the historical reports prepared by the participating Air Force organizations from Kirtland and elsewhere are on file with the Kirtland Technical Library. Some are complete to the point of identification of participating unit personnel. While splendid for Air Force exploitation in support of the current NTPR Project, they are of no help to the Army. As a matter of fact, there are no Army-counterpart publications of this nature in the Kirtland AFB Combined Technical Library.

(4) The Kirtland Air Force Base Combined Technical Library is "on-line" with the search bibliography computer of the Defense Documentation Center at Cameron Station. While at Kirtland, a routine computer search was made of DDC assets which might be contributory to the Army's search. These trial computer runs were limited to the Tumble-Snapper and Upshot-Knothole Exercises (Desert Rock IV and V). The results were unimpressive. They yielded only a few general studies held by DDC with cross-references to these descriptors and identifiers. One AEC publication dated 31 January 1971 was identified which provides an excellent index to the entire test series. This is the USAEC Publication (TID-9534), "Status of Nuclear Test Reports." It lists all known test reports developed in connection with the entire test series and arranges them in order of test shot by AEC designation, Trinity, Castle, Ivy, Dominic, Tumbler, etc. While extremely valuable to the overall NTPR Project, its SRD security classification makes it a bit awkward to work with in the absence of adequate safeguards.

c. <u>USAF Special Weapons Laboratory</u>. Throughout the period of the 1950 nuclear test series, the USAF Special Weapons Laboratory was known as the USAF Special Weapons Center. Despite changes in designation, its traditional home has been and continues to be Kirtland Air Force Base. It is the Air Force focus of air drop aspects of nuclear device employment. When Kirtland, Sandia and Manzano were consolidated, the USAF Special Weapons Laboratory Technical Library was consolidated with that of the Field Command of the Defense Nuclear Agency. Librarians from both activities are still indignant over this decision and some of the "purging of duplicatory matter" which followed. There may be some justification for the criticism which followed this action. While some convenience of arrangement might have been lost, it is highly doubtful that any real loss actually occurred.

(1) The Historian of the USAF Special Weapons Laboratory seized upon this opportunity to vastly augment his holdings of historical background materials by picking up most of this "purged duplication." Consequently, Dr Ward A Minge and his staff hold what undoubtedly is the world's second finest collection of materials dealing with nuclear device development and employment doctrine. Most of this, naturally, is keyed to the mission activity of the USAF Special Weapons Center/Library through the years. There are, in addition, considerable holdings in general materials dealing with overall DOD interests as opposed to purely Air Force interests. The exact size of this collection is not known. It currently occupies most of the ground floor and vault space of the headquarters building of the USAF Special Weapons Laboratory -- certainly, running some hundreds or thousands (?) of linear feet. Largely a one-man operation, we made no effort to unravel the arcane mysteries of its arrangement, indexing and finding aids but rather entrusted our search requests to its chief architect !

(2) Dr Minge immediately extended the Army's field search every professional courtesy. He suspended all other research activity and pressed his entire staff into a massive search of his holdings for materials bearing on the Army's personnel and troop participation in the Desert Rock Exercises. The results were negative. At the end of a full day, it became obvious that the materials he held which dealt with organizational and troop participation in the nuclear test were limited to Air Force units. Again, this is a veritable treasure trove for the USAF NTPR Project Officer, but of little immediate application to Army interests.

d. Kirtland Air Force Base Records Staging Area. At this point in the Kirtland Air Force Base phase of the field search for documentation dealing with the Desert Rock Exercises, we turned to the traditional apparatus for handling retired records. Devolving from the Army system, the Air Force has created a parallel installation-level collection, holding and shipping function for the handling of inactive, cut-off, and retired records. In view of other functional consolidations which had taken place at Kirtland, it was reasoned that records management might also have been handled in this manner in the near or distant past. Specifically, permission was requested to examine the control records of the Kirtland AFB Records Staging Area in an effort to determine whether or not it might have handled Army exercise, AFSWP Field Command, or DASA records due to its geographical proximity to the exercise test sites.

(1) Permission was readily granted for access to the Kirtland Air Force Base Records Staging Area's transmittal and shipping files. These files revealed a continuous operation since 1957 following traditional shipping lanes in being at that time, i.e., shipment of retired Air Force records to St Louis until roughly 1967 at which time they were directed to the newly constructed Washington National Records Center at Suitland, Maryland. Content of these shipments were limited solely to Air Force generated materials. At no time in the history of this activity's operation did it perform any records handlings services for any non-Air Force organizations. This, then, finally eliminated the possibility of shipment of either AFSWP/DASA/DNA or Army materials through Air Force channels with possible erroneous diversition into Air Force Records Groups on arrival at GSA federal records centers.

(2) The materials which the Kirtland AFB RSA had handled were rich in references to nuclear test activity of the 1950's. Most of this appeared to have been put into records retirement channels by the USAF Special Weapons Center during and after conclusion of the atmospheric test series. Again, this appeared to be a marvelous collection of materials for Air Force interest and current exploitation, but of no real significance to Army interests. Particularly intriguing from the Air Force viewpoint were the transmittal documents for the following shipments to St Louis: 1087-57/23; 187-58/4; 770-60/29; 231-61/13; 62A682/9 and 63A1363/12 !

4. CONCLUSIONS:

a. None of the records and materials physically located at Kirtland Air Force Base, whether in the hands of the Defense Nuclear Agency Field Command, the USAF Special Weapons Laboratory, the Kirtland AFB Records Staging Area, the Kirtland AFB Combined Technical Library or the Sandia Laboratory, are helpful to the Army's present search for troop participation identification data.

b. That USAF, DNA and DOE activities located at Kirtland Air Force Base hold a vast amount of technical data which will of great asistance to later phases of the Nuclear Test Personnel Review Project.

c. That no Army or AFSWP/DASA/DNA Desert Rock Exercise materials were processed by or shipped through Air Force records handling channels to GSA federal records centers for retirement and/or storage.

d. That records of the AFSWP/DASA/DNA Field Command already accesioned into the National Archives for the years 1947-71 are incomplete; that significant blocks of the Field Command's records are not accounted for in those materials held by the National Archives.

RECOMMENDATIONS:

a. That no further search be made of materials presently held by USAF, DNA and DOE activities at Kirtland Air Force Base for missing Army troop participation data.

b. That bibliographies of nuclear test data held at Kirtland Air Force Base be made available to all service teams participating in the NTPR Project.

c. That leads developed as to location of the AFSWP/DASA/DNA data missing from the 1947-71 collection held by the National Archives be pursued immediately in the St Louis National Personnel Records Center and Washington National Records Center.

APPENDICES:
1. DNA NTPR Bibliography

JOHN HENRY HATCHER, PHD
Chief, Declassification
Operations Branch

Trip Report of Field Search
for Exercise Desert Rock Documentation
Conducted by Representatives of The Adjutant General
18 June 1978 to 14 July 1978

Nuclear Test Personnel Review Project
Bibliography of Holdings of the Kirtland Air Force Base Combined Technical Library, Albuquerque, New Mexico, compiled by Mr. William Isengard, Defense Nuclear Agency, Field Command

APPENDIX #1 to ANNEX C

GENERAL REFERENCE DOCUMENTS

The following classified references provide basic data (e.g., device design, purpose, location, time, sponsor, name [shot], detonation environment [tower, balloon, air drop], maps, results [yield],etc.) for the time periods shown;

DASA-1220 Trinity to Hardtack 1945-1958

DASA-1211 Nougat to Dominic II

DASA-1212 Storax (1 July 62-30 June 63)

DASA-1213 Niblick (1 July 63-30 June 64)

WT-1445 Technical Summary of Military Effects. Programs 1-9.

Pg-23 Table of events, devices, yields, coordinates, height of burst.

Pg-24 Table of Meteorological Conditions

Pg-25 Table of Project Participation

Pg 26-29 Organizational Charts

Pg 77-80 Description of Radiation Experiments & Summary

Pg 81-86 Results of Radiation Experiments

AIR SAMPLING and SAMPLING, SAMPLE COLLECTION

TITLE	LIBRARY LOCATION
AFCRL - Natural Aerosols and Nuclear Debris Studies	AFCRC/NANDS PR
AFSWC - Operation Nougat	SWC SWOP 1-2134
CONVAIR - Fission Product Field Release Program for Evaluation of Nuclear Aircraft Hazards	CVC NARF 58-13R
CONVAIR - Fission Products Field Release Test-I	SWC TR 59-44
AFCRC - Preliminary Report on Particle Analysis of Debris from Ivy, Mike, and King	AFCRC 7
AFCRC - Preliminary Report on Radiochemical Analysis of Upshot-Knothole	AFCRC 8
AFCRC - Report on Studies of Particulate Debris from Shots Tumbler-3 and Snapper-3	AFCRC TR 53-4 AWD
AFSWC - A Study of the Fission Product Gamma Spectra of a Nuclear Cloud at Early Times	SWC TR 58-44
AFSWC - Support of the AEC for Cloud Sampling	SWC TN 56-34
AFSWC - Technical Air Operations, Operation TEAPOT	WT-1206
Chem & Rad Labs - Fallout & Cloud Particle Studies, Op. Ivy	WT-617
DOD - Scientific Director's Summary Report, ROLLER COASTER	DASA- 1644
Isotopes - Fallout Collection, Op. ROLLER COASTER	POR 2503
Lamont Geol. Obs. - Radiological Hazards from Contaminated Aircraft	SWC SWR TM 59-4
LRL - Teapot Preoperational Report, Sample Collection	UCRL 4415
LASL - The Turquoise Book, Operation Ivy	OI TB

AIR SAMPLING and SAMPLING, SAMPLE COLLECTION (Cont'd)

TITLE	LIBRARY LOCATION
NRDL - Characteristics of the Radioactive Cloud from Underwater Bursts, HARDTACK	WT-1621
NRDL - Fall-Out & Airborne Activity in Op. WIGWAM	WT-1017
NRDL - Radiological Effects from an Underwater Nuclear Explosion	POR-2004
NRDL - Some Radiochemical and Physical Measurements of Debris from an Underground Nuclear Detonation	PNE 229F
NRDL - Spectrometric Analysis of Gamma Radiation from Fallout from Operation REDWING	NRDL-TR-146
Nuc. Def. Lab - Residual Alpha Contamination from Very-Low-Yield Detonations	NDL-TR-60
Scripps Inst. - Collection of Early Water Samples for Radiochemical Analysis & Yield Determination, WIGWAM	WT-1039
Weath. Bur - PROJECT Stemwinder, DOMINIC	WT-2060

ARGUS

TITLE	LIBRARY LOCATION
SWC-TR - Radiation From Argus Electrons	SWC-TR-59-35
AFSWC - Personnel Hazards Associated with Argus Electrons	SWC-TR-61-92
AFSWC - Project Jason Final Report	SWCSWR MP-1
DASA - Report of the Commander	WT-1665

APACHE BURST

TITLE	LIBRARY LOCATION
EG&G - Composite Cloud Data - Operations IVY, CASTLE, REDWING	EG&G-TM-B-357

ASROC

TITLE	LIBRARY LOCATION
NOTS - Operation Sailor Hat; ASROC	POR-4062
NOL - Surface Phenomena	POR-2001
DTMB - Scientific Directors Summary Report	POR-2007

ATMOSPHERIC BURSTS

TITLE	LIBRARY LOCATION
AFSWP - HARDTACK Summary Report	AFSWP-OH-SR
DASA - Technical Summary of Military Effects, Programs 1-9, Op. TEAPOT	WT-1153
LASL - CROSSROADS Handbook of Explosion Phenomena (includes Safety, Health, Gamma, & Neutron)	LA-550
USA-NDL - Effects of the DAVY CROCKETT Type Nuclear Weapons (LITTLE FELLER I & II)	NDL/TR-64

ATOMIC CLOUD-SAMPLE COLLECTION

TITLE	LIBRARY LOCATION
AFSWC - History of AF Atomic Cloud Sampling	SWC SWEH 2-0034
LRL - Buggy: Special Cloud Content Studies	PNE 330
LRL - Distribution of the Radioactivity from a Nuclear Cratering Experiment	WT-1817
LFE Corp. - Special Particulate Analysis of Debris Samples from Airbursts	DNA 4038F
UCRL - Estimate of the Radioactivity Released in the BANEBERRY Event	UCRL 51095
EG&G - Analysis of Grable Nuc. Cloud Motions	EG&G/LAD/8566

ATOMIC WEAPONS TESTS

TITLE	LIBRARY LOCATION
Boeing & WADC - B-52D Operation HARDTACK Data, Vols I thr	WADC TN 59-106
AFSWC - Final Report of Op. PLUMBBOB	SWC-HIST. OP FR-67 (4950)
DASA - Nuclear Weapons Effects Test Summary	DASA 625

BALL OF FIRE

TITLE	LIBRARY LOCATION
Army Signal Research Lab - Radar Determination of Fireball Phenomena (includes U.S. destroyers)	WT-1639
Columbia Univ N.Y. Electronics Res. Labs - Microwave Attenuation Final Report (aircraft flying behind fireball)	POR-2043
G.E. TEMPO - BLUE GILL Third Report of the Fish Bowl Rapid Interpretation Group (includes Ship & Aircraft locations, eyewitness accts.)	DASIAC rpt. 8
G.E. TEMPO - King Fish Fourth Report of the Fish Bowl Rapid Interpretation Groups (includes ship and aircraft locations and eyewitness account)	DASIAC rpt. 9
DASIAC - Atmospheric Effects, Bibliography	DASIAC/B-AE
NOL - Blast Pressures and Shock Phenomena Measurements by Photography (includes aerial photo)	WT-902
Wright Air Development Center - IBDA Phenomena and Techniques (Operation Upshot-Knothole- three radar equipped aircraft)	WT-751
Air Force Cambridge Research Center/Mass and Technical Operations Inc. - Thermal Flux and Albedo Measurements From Aircraft (four aircraft)	WT-1333
Bureau of Naval Weapons - Narrow-Band Infrared Spectral Irradiance of High Altitude Bursts (Operation Hardtack - airborne station)	WT-1651-2
SRI - Radar Clatter Measurements--Optical (ships)	POR-2028 Vol 4&5
Air Force Cambridge Res. Labs.et al - High Altitude Nuclear Detonation Optical Infrared Effects (aircraft)	POR-2035 Vol 1

BASE SURGE

TITLE	LIBRARY LOCATION
AFSWP - Blast & Shock Measurements, Op. Jangle	WT-368
LRL - Pre. Summary Report of A Nuclear Cratering Experiment	POIR-1833
NOL - Base Surge Measurements by Photography, CASTLE	WT-903
NOL - Surface Phenomena, DOMINIC (Environment)	POR 2001
NOL - Upwind Extent of Base Surge at Test Baker, CROSSROADS	NOL TR 66-151

BOLTZMAN BURST

TITLE	LIBRARY LOCATION
Oak Ridge Nat. Lab. - Neutron Dosimetry by Threshold Detector	WT-1417

BRAVO BURST

TITLE	LIBRARY LOCATION
SRI - Crater Survey. Op. CASTLE	WT-920
NRDL - Chemical, Physical & RadioChemical Characteristics of the Contaminant	WT-917
ASEL - Gamma Rate vs Time	WT-913
NRDL - Nature & Extent of Internal Radioactive Contamination of Human Beings, Plants & Animals Exposed to Fallout	WT-936

BUSTER

TITLE	LIBRARY LOCATION
AFOAT-1 Transport of Radioactive Debris from Op. Buster Jangle	WT-308
SWC-Special Weapons Command Participation in Op. Buster Jangle	SWC/HIST/OBS/1951
AWS-Air Weather Service Participation in Op. Buster	WT-342
AFSWP-Operation Buster	WT-412
LASL-Gamma Radiation Exposure as a Function of Distance	WT 408
NMRI-Radiation Dosimetry	WT-315
LASL-Radiological Safety	WT-125
LASL-Summary of Information on Gamma Radiation from Atomic Weapons	LA-1620
LASL-Measurement of Gamma Ray Intensity.vs Time	WT-356
LASL-Staff Reports - Op. Buster Jangle	WT-421

BUTTERNUT BURST

TITLE	LIBRARY LOCATION
Bu. Naval Weapons - In-Flight Structural Response of a 4D-1 Aircraft	WT-1635
Bu. Aeronautics - In-Flight Structural Response of FJ-4 Aircraft	WT-1636

CASTLE

TITLE	LIBRARY LOCATION
AFOAT - Nuclear Calibration Analysis of Atomic Debris	WT-932
AFSWC - History of Task Group 7.4 Participation in Op. Castle	SWC-TG7.4-1
ARDC - Radiation Hazards During Atomic Warfare	ARDC-C4-23676
AFSWP - Fallout Symposium	AFSWP-895
AFSWP - Summary RPT of the Commander, Task Unit 13.	WT-934
Chemical & Radiological Lab - Radiochemical Analysis of Fallout	WT-918
Chemical Corps - Fallout Studies	WT916
Cook Electric Co. - Thermal Effects on B-47 Aircraft in Flight	WT-926
OCA - TG7.4 - Final RPT of the Commander Air Task Group 7.4	OCA TG7.4 (FR)
Tracer Lab - Particle Analysis of Nuclear Debris From Surface and near Surface Bursts 20 QTLY RPT	TRL TB 66-113
LASL - RPT of the Commander TG 7.1	LA/JO-11
LASL - External Neutron Measurements	WT-952
LASL - Radiological Safety	WT-942
LASL - RPT of the Commander TG 7.1	WT-940
E, G&G - Communications - Operations CASTLE -	WT-941

CHECKMATE BURST

TITLE	LIBRARY LOCATION
NDL - Alpha Contamination Monitoring (Resulting from Warhead Destruct)	POR-2052
SRI - Airborne Radar Observations Durng FISHBOWL (Incl. Aircraft Used)	SRI/4-1767
DAS - Organizational, Operational, Funding, Logistic & Scientific Summary - Op. DOMINIC	POR-2053

CMOS

TITLE	LIBRARY LOCATION
RIT - Transcient Surface Damage, Final Report	RTI-43-U-812

COAXIAL CABLES

TITLE	LIBRARY LOCATION
SCDR - Sioux Vulnerability Experiments in the Platt Event, Nougat Series -	SCDR 165-62

COBALT ISOTOPES

TITLE	LIBRARY LOCATION
DASA - Metabolic Changes in Humans Following Total Body Irraadiation -	DASA - 1633
SAM - Radiation - Induced Central Netrons System Death	SAM-59-58
DASA - Neurophysiological and Behavioral Effects of Incidental Irradiation of "Normal" Humans, Final Report.	DASA-2378

CONTAMINATION

TITLE	LIBRARY LOCATION
AFSWC - Technical Air Operations, Op. TEAPOT	WT-1206
AFSWP - HARDTACK Summary Report	AFSWP OH SR
AFSWP - Tests of Service Equipment & Operation, Op. JANGLE	WT-376
AFSWP - Shots Wahoo & Umbrella, Op. HARDTACK Prelim Report	ITR-1658
AEC - Radioactive Contamination of Certain Areas in the Pacific Ocean from Nuclear Tests	AEC RCPO
Bkr. Sci. Resurvey - Tech. Report, Bikini Scientific Resurvey	XRD-212
Chem. War. Labs - Decontamination & Protection, Op. REDWING	WT-1312
Chem. War. Labs - A Historical Discussion of Contaminating Events Occurring During US Atomic Test Operations	CWLR-2176
AWRE - Op. TOTEM Decontamination of Radioactive Clothing	FWE-56
Nav. Med. Res. Inst. - Exposure of Marshall Islanders & Military Personnel to Fallout, Op. CASTLE	WT-938
NRDL - Protection & Decontamination of Land Targets & Vehicles	WT-400
RAND - Long Term Fallout Contamination from Surface Burst Nuclear Weapons	RAND RM-2393
Sandia - The Extent of Close-In Fallout From an Underground Nuclear Burst	SC-DR-64-1770
Sandia - Plutonium Contamination from One-Point Detonation of an XW-25, Op. PLUMBBOB	WT-1510
Eberline - Alpha Survey, Op. ROLLER COASTER	POR 2505

CROSSROADS

TITLE	LIBRARY LOCATION
Technical report of AAF Instrumentation, Crossroads Project	OC/TG/ 1.5/TR
JTF-1, Atomic Bomb Tests, Final Report, Army Ground Task Group 1.4	OC/AG-
JTF-1 Historical Report: Atomic Bomb Tests A&B	OC/FR/7
JTF-1 Operational Report on Atomic Bomb Tests A&C	OC/CJTF-1/xrd/OP
JTF-1 Overall Summaries of Target Vessels: Tests A&B, ZV,	OC/BG/S10
JTF-1 Photogrammetric Plot of F-13&C-54 A/C Orbit Positions...	OC/MR-2
CJTF-1 Report of the Technical Director, Opn. Crossroads	OC/CJTF-1/xrd
JTF-1 Technical Report of Opn. Crossroads	OC/CJTF-1/xrd/TR
JTF-1 Tests A&B, Opn. Crossroads, Final Report, 5V, Buord Material Croup	OC/OG
JTF-1 Test A&B, Op. Crossroads, Final Report, 2V., Final Report	OC/BG/S2
JTF-1 Test A&B, OPN. Crossroads, Final Report, ., 2 Vol, Final Report	OC/BG/S1
JTF-1 Test A, Opn. Crossroads, Final Report. BU Supplies and Accounts Gp.	
JTF-1 Tests A&B, Opn Crossroads, Final Report, BU. Yards & Docks	OC/FR/2
JTF-1 Tests A&B, Opn. Crossroads, BU. Aeronautics Gp.	OC/BG/S2a
JTF-1 USS Independence (CVL 22) Test A, 4V,	OC/BG/A15
Nav. Ord. LAB, Upwind Extent of the Base Surge, Test B,	NOL/TR/66-151

JTF-1 - Indices to & Sources of Basic Data for BUSHIPS Group Reports OC/BG/5-14

CROSSTIE

TITLE	LIBRARY LOCATION
AFWL - Air Force Experiment	POR 6264
AFWL - Air Force Experiment	POR 6279
DASA - Technical Directors Summary Report (DOORMIST)	POIR 6269
LMSC - Navy Experiments	POR 6262
LASL - Operation CROSSTIE	LA 4197
SW Rad. Health Lab - Off-Site Environimental Surveillance	PNE-327

BOWLINE

TITLE	LIBRARY LOCATION
LASL - Operation Bowline	LA 4441

DANNY BOY BURST

TITLE	LIBRARY LOCATION
UCRL - Cratering & Radioactivity Results from Nuclear Cratering Detonation in Basalt	UCRL-6999
Nuc. Defense Lab. - On-Site Fallout from a Partically Contained Nuclear Burst in a Hard Medium	POR 1819

DIAGONAL LINE

TITLE	LIBRARY LOCATION
BRL - Neutron - Fluence and Gamma Exposure Measurements, Final Report.	POR-6489

DIAMOND DUST

TITLE	LIBRARY LOCATION
DASA - Final Summary Report	POR-6435

DIAMOND SCULLS

TITLE	LIBRARY LOCATION
AFWL - Minute Gun Series, Final Reports	POR-6714
AFWL - Rigid Body Momentum, Final Reports	POR-6717

DIANA MIST

TITLE	LIBRARY LOCATION
AFWL - DIANA MIST Interim Summary Report	WL/OM/POISR

DOMINIC I

TITLE	LIBRARY LOCATION
JTF8 - Technical Nuclear Safety Study of Project DOMINIC	SWC SWVNA 2-17
SWC - Analysis of Preliminary Results of 1961-1962 Nuclear Tests and Implications on USAF Systems	SWC SWOP 2-0445
Cook - Thermal Radiation from Air Burst Nuclear Weapons Incident on Low Altitude Aircraft	CEC P-3861 FR
DASIAC - BLUEGILL Phenomenology Rapid Interpretation	DASIAC SR-8
DASIAC - CHECK MATE Phenomenology Rapid Interpretation	DASIAC SR-7
DASIAC - KING FISH Phenomenology Rapid Interpretation	DASIAC SR-9
DASIAC - Operation FISH BOWL Technical Summary	DASIAC SR-6
DASIAC - TIGHT ROPE	DASIAC SR-10
D. Taylor Model Basin - Scientific Director's Summary Report	POR 2007
DASA - Flashblindness & Chorioretinal Burn Research	DASA-544
DASA/FC - Organizational, Operational, Funding, Logistic and Scientific Summary	POR-2053
JTF8 - Report by Commander JTF8 on the 1962 Pacific Nuclear Tests (Operation DOMINIC)	JTF-8/DOMINIC W.enc A-N
JTF8 - Report by Commander JTF8 to Chairman, USAEC, and Chairman, JCS, on 1962 Pacific Nuclear Tests	
LASL - The CHAMA Test of Follow-on Portion of Operation DOMINIC	LAMS-2804
LASL - Operation DOMINIC, CHECKMATE Preliminary Field Report	LA J-10 990
LASL - "Quick Look" at the Technical Results of BLUEGILL TRIPLE PRIME	LA JO-641
LASL - A Quick & Cursory Summary of the Christmas Island Portion of Operation DOMINIC	LAMS-2757
Nuc. Def. Lab, Edgewood - Gamma Radiation Measurements	POR 2013

DOMINIC I (Cont'd)

TITLE	LIBRARY LOCATION
6570th Aerospace Med. Res. Lab - Production of Chorioretinal Burns by Nuclear Detonations & Tests of Protective Devices & Phototropic Materials	POR-2014 vol 1&2
SLL - CHETCO Event, Operation Dominic	SCDR 169-62
Tracerlab - Analysis of Particulate Debris from Pacific Air Shots	TRL TLW 5235
AFSWC - History of Air Force Participation in Operation DOMINIC	SWC HIST OD

DOMINIC II (SUNBEAM)

TITLE	LIBRARY LOCATION
ASD/WPAFB F-100F/GAM 83B Simulation, Operation SUNBEAM includes A/C position	POR-2249
AFSWP Initial Gamma Rate Measurement	POR-2292
AFWL Radioisotope & Partice Size Characteristics of a Low Yield Surface Nuclear Detonation (includes A/C Cloud Penetration)	POR-2291
AFWL Tissue Dosimetry	POR-2270
AERDL - Measurement of Fast Neutron Dose Rate As A Function of Time	POR-2210
AERDL - Measurement of Gamma Dose Rate as a Function of Time	POR-2229
BRL - Shielding Effectiveness of Enclosure Shields in a Fallout Field (includes Fallout Measurements For 48 HRS (SMALL BOY)	POR-2221
EG&G - Aero Radioactivity Survey (SMALL BOY)	EG&G-1183-2060
AERDL - Residual Radiation in the Crater & Crater up Area of Low yield Nuclear Devices (LITTLE FELLER II & JOHNIE BOY)	POR-2267
NDL - Initial Radiation Measurements (SMALL BOY)	POR-2209
NRDL - Fallout Collection & Gross Sample Analysis (SMALL BOY)	POR-2215
NRDL - Fallout Sampling & Analysis: Radiation Dose Rate & Doserate Histories at 16 Locations (JOHNIES BOY)	POR-2289
NRDL - Gamma Radiation Characteristics-Angular Distribution Over a Desert Terrain Fallout Field	NRDL-TR-856
NRDL - Ionization Rate Measurements (SMALL BOY)	POR-2217
NRDL - Neutron Flux Measurements (includes flux vs ground Range)	POR-2264
NRDL - Radiological Surveys, Final Report	POR-2266

DOMINIC II (SUNBEAM) (CON'T)

TITLE	LIBRARY LOCATION
AMDL - Transit Radiation Dose Rate (JOHNIE BOY & LITTLE FELLER II)	POR-2269
DASA - Organizational, Operational, Funding, & Logistic Summary (NOUGAT & SUNBEAM)	POR-2293

DESTROYERS-CONTAMINATION

TITLE	LIBRARY LOCATION
NRDL - Shipboard Contamination Ingress from Underwater Bursts (includes WAHOO & UMBRELLA DATA)	WT-1620
NRDL - Shipboard Radiation From Underwater Bursts (Op. Hardtack)	WT-1619

DESTROYERS-EFFECTS OF ATOMIC EXPLOSIONS

TITLE	LIBRARY LOCATION
BUSHIPS - Ship Damage Assessment & Technical Support of Test Elements, Op. DOMINIC	POR-2006
DTMB - Shock Loading in Ships from Underwater Bursts and Response of Shipboard Equipment (Identifies Target Ships) Op. Hardtack	WT-1627

DISCUS WHEEL

TITLE	LIBRARY LOCATION
SLA - Scientific Director's Summary (Ferris Wheel Series)	POR-3000
SLA - Technical Directors Summary RPT. (Includes TINY TOT FERRIS WHEEL Series)	POR-3021
SLA - Technical Director Summary RPT. (Includes Shot RED HOT)	POR-3034

DOSAGE, DOSAGE RATES

TITLE	LIBRARY LOCATION
AFCRC - The Radiation Hazards to Personnel Within an Atomic Cloud: UPSHOT-KNOTHOLE	WT-743
AF - Nuclear Readiations from Atomic Bombs, Effects & Shielding USAF	OA WP-10
AFSWC - Early Cloud Penetrations: REDWING	WT-1320
AERE (Harwell) - Nuclear Accident Dosimetry	AERE R 7485
AFSWC - Initial Gamma Radiation from an Atomic Weapon Air Burst in a Standard Atmosphere	SWC TN 53-2SWR
AFSWC - Prompt Doses & Dose Rates from Nuclear Weapons	SWC TR 58-13
AFSWC - Radiation Effects from New-Type Low-Yield Weapons	SWC TDR 62-58
AFSWC - Safe Levels of Contamination from Fission Products	SWC TN 56-2
AFSC - Systems Applications of Nuclear Technology: Initial Radiation Calculations and Effects on Personnel	AFSC M500-4
AFWL - Biological Dosimetry of Ionizing Radiation as Applied to Triage of Casualties Following a Thermonuclear Detonation	RTD TDR 63-3049
ARDC - Impact of Fallout on AF Operations	ARDC TR 56-1
ARDC - Radioactive Fallout from Contact Burst Megaton Bombs	ARDC C4-18098
Armour - Neutron Data Evaluation	ARF 1181-9
Boeing - Time Behavior of the Early Gamma Radiation from Surface Contact Nuclear Weapon Detonations	BOAC D290365
Army Chem. & Rad. Labs. - Maximum Allowable Concentrations of Fission Products in the Air as a Function of Exposure Time After Detonation	CRLIR-81

DOSAGE, DOSAGE RATES (Cont'd)

TITLE	LIBRARY LOCATION
Army CRL - Radiological Estimation of Total Activity included within Dose-Rate Contours for BRAVO Shot: Op. CASTLE	CRLR 636
Army Chem. Warfare Labs - External Neutron Measurements 1952 thru 1958	CWLR2377
CWL - Gamma Dose from Very Low Yield Bursts	WT-1677
CWL - Neutron Flux from Large Yield Bursts	WT-1622
CWL - Neutron Flux from Selected Nuclear Devices: PLUMBBOB	WT-1412
CWL - Neutron Flux from Very Low Yield Bursts	WT-1679

DOSAGE RATES

TITLE	LIBRARY LOCATION
DASA - Predicted Blast, Thermal, and Prompt Radiation Effects for the DAVY CROCKETT (includes Fig data)	DASA FC/09590643
LASL - Radiation Contours from Nuclear Weapons Detonations	LA-4220
NRDL - Early Dimensions and Radiation Intensities of the Radioactive Pool Resulting from Shot SWORDFISH	NRDL-7R-770
NRDL - Radiation Hazards to Aircrews Exposed to the Atomic Cloud of an Atomic Bomb Detonation	NRDL-379
NDL - Effects of the DAVY CROCKETT Type Nuclear Weapons (includes Ivy Flats Tactical Troop Orientation)	NDL-TR-64
Oak Ridge Lab - Radiation Dosimetry for Human Exposures, Op. PLUMBBOB	WT-1504
RAND - Residual Gamma Radiation from Surface Nuclear Explosions (includes JANGLES & IVY Shot Data)	RM-1177
RAND - Transport and Early Deposition of Radioactive Debris from Atomic Explosions (includes TUMBLER-SNAPPER and IVY Tests)	R-265
Army Chem. Corps. NDL - Bibliography, with Abstracts, of Reports of Nuclear Defense Lab and its Predecessors	NDL-TR-25
AFWL - Aircraft Ionizing Doses and Dose Rates from Radioactive Clouds & Fallout Final Report	WL/TR/75-214
Army Signal R&D Lab - Operations of the Fallout Group of Project 50.3 (includes PLUMBBOB Data)	SRDL-TR-2088
DASA - Base Surge Radioactivity from Underwater Shots WAHOO & UMBRELLA	DASA-533TAR

DOSIMETRY

TITLE	LIBRARY LOCATION
AFSWC - Initial Nuclear Radiation Information for Calculating Biological Dosage from Low Yield Nuclear Weapons	SWC TN 59-37
AFSWC - Nuclear Radiation Environment Resulting from Underground Detonations	SWC-TDR 62-150
AFSWP - Military Aspects of the Biological Effects of Radiation	AFSWP-611
AEC - Physical Measurements of Gamma & Neutron Radiation in Shelter & Instrumentation Evaluation	WT-789
Harwell - Nuclear Accident Dosimetry	AERE R 7485
UCLA - Measurement of Initial & Residual Radiations by Chemical Methods: Op. TEAPOT	ITR-1171
DASA - Technical Summary of Military Effects, Programs 1-9; Op. PLUMBBOB	WT-1445
NBS - Delayed Gamma-Ray Measurements: Op. GREENHOUSE	WT-81
Nav. Med. Res. Inst. - Gamma Depth Dose Measurement in Unit-Density Material: Op. SNAPPER	WT-529
Nav. Med. Res. Inst. - Radiation Dosimetry: Op. BUSTER	
NRDL - Physical Factors & Dosimetry in the Marshall Island Radiation Exposures: Op. CASTLE	WT-939
REIC - Dose-Rate Effects in Radiation Damage	RECI Memo 3C

DOSIMETRY (Cont'd)

TITLE	LIBRARY LOCATION
AF School Av. Med. - Radiation Measurements Utilizing the USAF Chemical Dosimeters. Op. PLUMBBOB	
SRI - Beta Dosimetry for Fallout Hazard Evaluation	SRI EGU 8013
SRI - Beta Radiation Dosimetry for Fallout Exposure Estimates	SRI 7402
ANDL - Integrated Gamma Dose Measurements: SUNBEAM	POR 2265
DASA - Interim Summary Report: ROLLER COASTER	POIR-2500

EASY BURST-FALLOUT

TITLE	LIBRARY LOCATION
NRDL - Interpretation of Survey Meter Data, Annex 6.5, Scientific Directors Report - Op. Greenhouse	WT-26

EASY BURST-GAMMA RADIATION

TITLE	LIBRARY LOCATION
NRL. - Prompt Gamma-Ray Measurements, Part II, Prompt Gamma vs Time, Annex 1.1, Scientific Directors Report, Op. Greenhouse	WT-36

EFFECTS OF ATOMIC BLAST

TITLE	LIBRARY LOCATION
WADC - Airplane F-101-Effects of Atomic Blast	WADC/TN-56-523
WADC - In-Flight Participation of an F-101A Aircraft	WT-1332
NRDL - Measurement of Thermal Radiation Incident on USAF Aircraft in flight, Op. REDWING	NRDL-TR-330

EFFECTS EXPERIMENTS

TITLE	LIBRARY LOCATION
AFWSP - Final Report - Operation SNAPPER	WT-564

FALLOUT

TITLE	LIBRARY LOCATION
AFSWC - Contamination of Water Supplies by Radioactive Fallout	SWC TN 58-7
AFSWC - Water Contamination in Fallout Areas	SWC TN 59-1
Army Chem. Corps Nuc. Def. Lab - Particle Studies of Fallout from a Very Low Yield Weapon, HARDTACK	NDL-TR-39
AEC - Radioactive Fallout - A Two Year Summary Report	TID 5550
AEC - Radioactive Fallout from Nuclear Detonation of February and April 1960	TID 6235
AEC - Remote Radiological Monitoring, PLUMBBOB	WT-1509
AEC - Some Effects of Ionizing Radiation on Human Beings	TID 5358
BRL - Electron Microprobe Analysis of Fallout Particles from 4 US Nuclear Detonations	BRL-1611
BUSHIPS - Standard Recovery Procedure for Tactical Decontamination of Ships	WT-1323
UCLA - Distribution, Characteristics and Biotic Availability of Fallout, Op. PLUMBBOB	WT-1488

FALLOUT (Cont'd)

TITLE	LIBRARY LOCATION
Chem. & Rad Labs - Maximum Allowable Concentrations of Fission Products in Air as a Function of Exp. Time After Detonation	CRLIR-81
Chem. & Rad Labs - Radiological Estimation of Total Activity Included with Dose-Rate Contours, Op. CASTLE	CRLR-636
Chem. War. Labs - Alpha Contamination Studies PLUMBBOB & HARDTACK	CWLR 2385
CWL - Land Fallout Studies, Op. REDWING	WT-1319
DASA - Fallout Phenomenology, CROSSROADS	DASA 2003
DASA - Radioactive Fallout from Nuclear Explosions	DASA 1188
DASA - Tech. Summary of Military Effects Programs, REDWING	WT-1344
EG&G - Ecological and Environmental Effects for Local Fallout from Schooner	PNE-526
Ford - Contributions to Fallout from Neutron Activated Soil	DASA-1562
AWRE - Gamma Radiation Studies & Decontamination Experience	FWE-7
AWRE - Op. BUFFALO: The Aerial Survey of Radioactivy Deposited on the Ground	FWE-147
AWRE - Fallout Surveys	FWE-173
NIH - Nature & Distribution of Residual Contamination, JANGLE	WT-386
LASL - Activities of the Special Weather Advisor Service TUMBLER-SNAPPER	WT-552
LASL - Activities of the Special Weather Advisor Service UPSHOT-KNOTHOLE	WT-705

FALLOUT (Cont'd)

TITLE	LIBRARY LOCATION
LASL - Report of Fallout Study of January 1956	LAMS-2033
LASL - Report of the Advisory Personnel to the Air-Sampling Program, TUMBLER-SNAPPER	WT-566
LASL - A Summary of Test Results, Op. RANGER	LAMS-1240
NRDL - Analysis of Fallout Data; CASTLE	NRDL TR-223
NRDL - Analysis of Gamma Radiation from Fallout: TEAPOT	NRDL-TR-106
NRDL - Contamination Patterns at Op. JANGLE	NRDL-399
NRDL - Distribution & Intensity of Fallout, CASTLE	WT-915
NRDL - Distribution & Intensity of Fallout from the Underground Shot, TEAPOT	WT-1154
NRDL - Fallout Studies & Assessment of Radiological Phenomena PLUMBBOB	WT-1465
NRDL - Gamma Radiation Field Above Fallout Contaminated Ground, TEAPOT	WT-1225
NRDL - Local Fallout from Nuclear Test Detonations	DASA 1251
NRDL - Nature, Intensity & Distribution of Fallout from MIKE, Op. IVY	WT-615
NRDL - Predicted Radiological Effects for 3 Underwater Nuclear Detonations (HARDTACK)	NRDL-TM-69

FALLOUT (Cont'd)

TITLE	LIBRARY LOCATION
AEC-NYO - Measurements of Beta & Gamma Ray Characteristics of Shot Debris & Fall-out of Nuclear Weapons, TEAPOT	ITR-1185
OFF of Spec. Weap. Dev. - Prediction of Radioactive Fallout	OSWDD 55-19-W/C1
RAND - Catalog of Fallout Patterns	RAND RM-1676 AEC
RAND - Close-in Fallout	RAND R-309
Sandia - Residual Contamination from Nuclear Bursts	SC-3465 (TR)
Sandia - Summary Report TG57, Op. PLUMBBOB	ITR-1515
Scripps - Distribution of Radioactive Fallout by Survey Analysis of Sea Water: CASTLE	WT-935
Scripps - Fallout Studies by Oceanographic Methods: REDWING	WT-1316
Army Sig. Eng. Labs - Gamma Radiation Exposure: CASTLE	WT-912
SRI - Beta Dosimetry for Fallout Hazard Evaluation	SRI EGU 8013
SRI - Mass Contour Ratio for Fallout & Fallout Specific Activity of SHOT SMALLBOY	NRDL TRC 68-15
URS - Some Properties of Radioactive Fallout: PRISCILLA	URS 757-4
URS - Some Properties of Radioactive Fallout: COULOMB C	URS 757-5
URS - Some Properties of Radioactive Fallout: DIABLO & SHASTA	URS 757-3
Weath. Bur. - Fallout Patterns from Op. HARDTACK	WB-LA-3

FLASH BLINDNESS

TITLE	LIBRARY LOCATION
Aerospace Med. Res. Lab - Analysis of the First Thermal Nuclear Pulse and Associated Eye Effects	AMRL/TR/67-214
Continental Army Comd - Effect of Light from Very Low Yield Nuclear Detonations on Vision of Combat Personnel, Op. HARDTACK.	WT-1664
Nat. Cash Register Co - Nuclear Flash Early Time Histories, Op. DOMINIC (C-54 and C-118 Aircraft)	AMRL-TDR-63-73
School of Aviation Medicine - Flash Blindness (personnel with and without Protection), Op. BUSTER	WT-341
School of Aviation Medicine - Flash Blindness (personnel Exposed to Flash) Op. SNAPPER	WT-530
School of Aviation Medicine - Ocular Effects to Thermal Radiation from Atomic Detonations (12 persons exposed) Op. UPSHOT-KNOTHOLE	WT-745

FLATHEAD BURST

TITLE	LOCATION	LIBRARY
Sig. Eng. Labs - Ionospheric Effects of Nuclear Detonations (A/C Flying under Radiation Cloud)		WT-1337
BU AIR-NAVY - Airborne High Resolution Spectral Analysis, Op. REDWING (Aircraft Participation)		WT-1342

GAMMA RADIATION

SC - Residual Contamination from Nuclear Bursts	SC-3466 (TR)

GREENHOUSE

TITLE	LIBRARY LOCATION
Atmospheric Conductivity (includes magnitude, direction & velocity of fallout).	WT-71
Radiological Safety, Greenhouse Scientific Directors Report Annex 9.3	WT-89
Staff Reports, Parts I-IV (includes Personnel & Admin.)	WT-98
Summary of Visible Damage to a/c During Op. Greenhouse (manned a/c)	MIT-AE-97
Contamination - Decontamination Studies	WT-27
Fallout Phenomenology.	WT-4
Radiation Hazards to Aircrews Exposed to the Atomic Cloud...	NRDC-379
Transport & Early Deposition of Radioactive Debris...	R-265
Part IV TV 3.1.4, Part VII Admin	WT-39
Sandia Corp. Proving Ground Group	WT-102
History of Opn. Greenhouse	WT-47
History of Opn. Greenhouse	WT-48
Operation Greenhouse - Meteorology	WT-49
Neutron Measurements, Annex 1.5 Scientific Directors Report	WT-68
Prompt Gamma-ray Measurements, Annex 1.1 of Scientific Directors Report	WT-66

HARD TACK I

TITLE	LIBRARY LOCATION
AFSWC - Gamma Radiation and Induced Activity from Very Low Yield Bursts	WT-1681
AFSWP - Hard Tack Summary Report	AFSWP OH/SR
AFSWP - Two Underwater Nuclear Test Detonations	ITR-1658
ASRDL - X-Band Radar Determination of Nuclear Cloud Parameters	WT-1640
ACWL - Residual Radiation From A Very Low Yield Burst	WT-1678
DASA - Base Surge Radioactivity From Underwater Shots	DASA-533 TAR
JTF.7 - Report of the Commander TG 7.1	WT-1682
NRDL - Fallout Measurements By Aircraft and Rocket Sampling	WT-1625
SANDIA CORP - Fallout Contamination From A Very Low Yield Burst	WT-1602
DASA - Technical Summary of Military Effects Programs 1-9.	ITR-1660
UCID - Composite Yields. Radiochemistry Ratios and Efficiencies.	UCID-4290

HARD TACK II

UCID - Composite Yields. Radiochemistry Ratios And Efficiencies	UCID-4291

INDIRECT BOMB DAMAGE ASSESSMENT

TITLE	LIBRARY LOCATION
Advance Industries Inc. - Airborne Antennas and Photo Tubes for Determination of Nuclear Weapon Yield, Op. REDWING (A/C Participation)	WT-1352
BUAIR - Test of Airborne Naval Radars for IBDA, Op. TEAPOT (AJ-2 and R4D-5Q Aircraft Participation)	WT-1142
WADC - Operational Test of Radar and Photgraphic Techniques for IBDA, Op. SNAPPER (A/C Participation)	WT-534
WADC - Test of IBDA Equipment, Op. TEAPOT (B-50, B-17, F-94 Aircraft)	WT-1141

IMPLOSION WEAPONS

TITLE	LIBRARY LOCATION
Aerospace Corp. - Gamma Radiation Incident on a Weapon System During Fly-through of Debris Cloud	SAMSO/TR/71-74

INDUCED RADIOACTIVITY

TITLE	LIBRARY LOCATION
Army Sig. R&D Lab - Initial Gamma Radiation Intensity and Neutron Induced Gamma Radiation, Op. PLUMBBOB (Aircraft & Armored Tanks)	WT-1414
NOL - Blast Measurements Part IV (includes Scientific Dir's RPT) Op. Greenhouse.	WT-53

INFRARED RADIATION

TITLE	LIBRARY LOCATION
DASIAC - Fishbowl Rapid Interpretation Group (includes Locations of Ships, Aircraft)	DASIAC SR-2
BU NAV WEAPONS - Narrow Band Spectral Irradiance of High Altitude Bursts, Op. HARDTACK (P2-V Aircraft Participation)	WT-1651-1

IVY

TITLE	LIBRARY LOCATION
SWC-Task Group 132.4, Final Report, Operation IVY	01/TG132.4/FR
Fallout Gamma Ray Intensity, Operation IVY	WT-649
LASL-Gamma Radiation as a Function of Distance, Op. IVY	WT-643
RAND-Transport & Early Deposition of Radioactive Debris from Atomic Explosives	R-265
JTF-132-Radiological Safety, Op. IVY.	WT-614
LASL-Personnel & Administration, Op. IVY.	WT-636
JTG132.1 Report of the Commander JTG 132.1, Op. IVY	WT-608
LASL- Gamma Radiation vs Time	WT-634

IVY PROJ 5.1 AND 5.2

TITLE	LIBRARY LOCATION
LASL - Gamma Radiation vs Time, Op IVY	WT-634

IVY ADMIN AND ORGANIZATION

TITLE	LIBRARY LOCATION
LASL - Report of the Commander, Op. IVY	WT-605

JANGLE

TITLE	LIBRARY LOCATION
AFOAT-1 Aerial Survey of Distant Contaminated Terrain	WT-330
AFOAT-1 Radiochemical, Chemical, & Physical Analysis of a Bomb Debris	WT-320
AWS-Air Weather Service Participation in Op. Jangle	WT-361
AFSWP-Monitor Survey of Ground Contamination	WT-381
AFSWP- Summary Report - Weapons Effects Tests - Op. Buster Jangle	WT-414
BUAIR/WADC-Aerial Survey of Local Contaminated Terrain, Op. Jangle	WT-370
Dept. of Agric.-Analysis of Test Site & Fallout Material, Op. Jangle	WT-371
ERDC- Foxhole Shielding of Gamma Radiation, Op. Jangle	WT-370
NRDL-Analysis of Fallout Data, Part I.	NRDL/TR/220
NRDL Analysis of Fallout Data, Part II,	NRDL/TR/221
NRDL Analysis of Fallout Data, Part III.	NRDL/TR/222
NRDL-Beta-ray & Gamma-ray of Residual Contamination	WT-372
NRDL-Nature & Distribution of Residual Contamination II, Op. Jangle	WT-373
Signal Corps-Total Dosage, Op. Jangle-	WT-331
ARDC-Radiation Hazards during Atomic Warfare,	ARDC/C4/23676
AFOAT-1-Transport of Radioactive Debris, Op. Buster Jangle	WT-308

JOHNNIE BOY BURST

TITLE	LIBRARY LOCATION
Calif. Res & Technology Inc. - Early Lofted Cloud Characteristics and Gamma Source Distributions for two Shallow-Buried Bursts	DNA-4256F

LACROSSE BURST-GAMMA RADIATION

TITLE	LIBRARY LOCATION
Army Sig. Engineering Labs - Gamma Exposure vs Distance, Op. REDWING	WT-1310

LASSEN BURST-GAMMA RADIATION

TITLE	LIBRARY LOCATION
Army Sig. R&D Lab - Initial Gamma Radiation Intensity & Neutron-Induced Gamma Radiation of NTS Soils.	WT-1414

LIGHT (VISIBLE RADIATION)

TITLE	LIBRARY LOCATION
WASC - Instrumentation for Measurement of Thermal Radiation, Op. IVY (Airborne Instruments)	WADC TR 53-210
School of Aviation Medicine - Flash Blindness, Op. BUSTER (test subjects with and without protective Devices)	WT-341
Naval Applied Science Lab - Spectral Irradiance and Radiant Exposure Histories of BLUE GILL, Op. FISHBOWL (5 Aircraft Stations)	NASL/9400-12TM3
NRL - Thermal Radiation Measurements Parts I, II, III (of Scientific Directors Report) Op. GREENHOUSE.	WT-120
KOLLSMAN Inst. Corp. - Radiance Measurement of KINGFISH, Op. FISHBOWL (aircraft stations)	KIC/GAD-ER 10 22880

MIGHTY SKY

TITLE	LIBRARY LOCATION
AFSWC - AFSWC Support of Project BLUE ROCK, Test Report	SWC/SWT/TR/66-1
DASA - BLUE ROCK	DASA-25270
DASA - BLUE ROCK Final Report	DASA 1974

MIKE BURST

TITLE	LIBRARY LOCATION
RAND - Residual Radiation from Surface Nuclear Exposions	RM-1177
AFOAT-1 - Radiochemical and Physical Analysis of Atomic Debris	WT-645

NOUGAT

TITLE	LIBRARY LOCATION
AFSWC - Neutron Spectrum and Total Gamma Dose	POR-1848
AFSWC - Operation Nougat	SWC SWOP- 1-2134
AFSWC - X-Ray Counter Measures, Final Report	POR-1854
UNIV OF CALIF - Some Radiological Observations and Characteristics of Fallout Debris - Danny Boy	POR-1818
DOD - DOD participation in AARDVARK EVENT	VESIAC-C76-VU
DOD - DOD participation in AARDVARK EVENT	VESIAC-C66-VU
DOD - DOD participation in AMADILLO EVENT	VESIAC-C28-VU
DOD - DOD participation in BLACK EVENT	VESIAC-C68-VU
DOD - DOD participation in CHINCHILLA EVENT	VESIAC-C33-VU
DOD - DOD participation in CIMMARON EVENT	VESIAC-C29-VU
DOD - DOD participation in CODSAW EVENT	VESIAC-C32-VU
DOD - DOD participation in DEAD EVENT	VESIAC-C36-VU
DOD - DOD participation in EEL EVENT	VESIAC-C58-VU
DOD - DOD participation in ERMINE EVENT	VESIAC-C31-VU
DOD - DOD participation in HOOSK EVENT	VESIAC-C35-VU
DOD - DOD participation in MINK EVENT	VESIAC-C2110-VUO
DOD - DOD participation in PACA EVENT	VESIAC-C67-VU
DOD - DOD participation in PLATPUS EVENT	VESIAC-C30-VU
DOD - DOD participation in SACRAMENTO EVENT	VESIAC-C77-VU
LASL - Summary of Yield Data Operation Nougat	LA-3145-MS
ARMY CHEMICAL CORPS - On-site Fallout from a Partially Contained Nuclear Burst in a Hard Medium	POR-1819
Reynolds, Elec & Eng - On Site Ras-Safe Report	WT-1832
DASA - Organizational, Operational, Funding & Logistics Summary	POR-2293

NAVAJO BURST GAMMA RADIATION

TITLE	LIBRARY LOCATION
LASL - Gamma Radiation as a Function of Distance, Op. REDWING	WT-1361
Army Sig. R&D Lab - Gamma Exposure Rate vs Time	WT-1311

NOUGAT-VETA UNIFORM PROGRAM

TITLE	LIBRARY LOCATION
DOD - DOD Participation in Chinchilla II Event	VESIAC-C34

OPERATION REPORTS (ATOMIC WEAPON TESTS - ADMIN & ORG.)

TITLE	LIBRARY LOCATION
LASL - GREENHOUSE HANDBOOK of Nuclear Explosions	WT-103
LASL - Report of the Test Director: Op. TEAPOT	LA 1966

PACIFIC PROVING GROUND

TITLE	LIBRARY LOCATION
WADC - B-57B Operation REDWING Data, Vol 1,	WADC-TN-56-465

PALAQUIN BURST

TITLE	LIBRARY LOCATION
REECO - On Site Radiological Survey Report	PNE-911F

PARTICLE INHALATION

TITLE	LIBRARY LOCATION
Naval Medical Research. Inst. - Study of Response of Human Beings Accidentally Exposed to Significant Fallout Radiation, Op. CASTLE	WT-923

PERSONNEL DECONTAMINATION

TITLE	LIBRARY LOCATION
Office Quartermaster Gen. - Protective Clothing and Clothing and Personnel Decontamination, Op. GREENHOUSE ANNEX 6.9, Sci. Directors Report	WT-12

PLUMB BOB

E, G&G - Gamma Dosimentry By Film-Badge Techniques Project 39.1a	WT-1466

WEAPONS TEST REPORTS-OPERATION PLUMBBOB

	AGENCY	WT/POR	P/O
1.1	BRL	1401	E. J. Bryant
1.2	NOL	1402	P. Hanlon
1.3	SRI	1403	L. M. Swift
1.4	SRI	1404	L. M. Swift
1.5	SANDIA	1405	WM. R. Perret
1.7	AFSWC	1406	W. H. Bultmann
1.8a,c	BRL	1407	E. J. Bryant L. M. Swift
1.8b	BRL	1408	E. J. Bryant
1.8c	SRI	Included in 1407	L. M. Swift
1.9	AFBMO	1487	J. F. Halsey
2.1	CWL	1410	Philip W. Krey
2.2	NRDL	1411	C. S. Cook
2.3	CWL	1412	David L. Rigotti
2.4	CWL	1413	Robert C. Tompkins
2.5	SCEL	1414	G. Carp
2.6	SCEL	1415	A. E. Cohen
2.7	NRL	1416	T. R. Hanscome
2.8	NML	1417	E.J. Dilanni
2.9	AFSWC	1418	Kermit C. Kaericher
2.10	AFSWC	1419	E. N. York
PROG 2	NOT AVAILABLE	1514	John A. Chiment
3.1	WES	1420	W. J. Flathau
3.2	BUDOCKS	1421	G. H. Albright

WEAPONS TEST REPORTS-OPERATION PLUMBBOB (CON'T)

	AGENCY	WT/POR	P/O
3.3	NCER & EL	1422	G. H. Albright
3.4	AFSWC	1423	E. H. Bultmann, Jr
3.5	SRI	1424	R. B. Vaile, Jr
3.6	AFSWC	1425	E. H. Bultmann, Jr
3.7	BRL	1426	J. J. Meszaros
3.8	WES	1427	T. B. Goode
4.1	WRAIR	1428	G. M. McDonnel
4.2	WADC	1429	Wayne E. Gulley
5.1	BUAIR	1430	J. H. Walls
5.2	BUAIR	1431	D. A. Gilstad
5.3	BUAIR	1432	A. M. Julian
5.4	BUAIR	1433	J. H. Walls
5.5	WADC	1434	G. Stack
6.1	ERDL	1435	F. E. Deeds
6.2	DOFL	1436	P. H. Haas
6.2a	DOFL	1489	P. H. Haas
6.3	NADC	1437	William S. Lee
6.4	AFCRC	1438	Richard A. Noughten
6.5	WSPG	1439	G. W. Elder
8.1	QMRDC	1440	Frank H. Babers
8.2	NML	1441	W. L. Dirksen
8.3a	NRDC	1442	William B. Plumb

WEAPONS TEST REPORTS-OPERATION PLUMBBOB (CON'T)

	AGENCY	WT/POR	P/O
8.3b	WADC	1443	Charles J. Cosenza
Summary Report of Dir.		1445	
PROG 9	LML, EG&G		

PLUMBBOB WEAPON TEST REPORTS

The following Weapon Test Reports (WT) give references to useful information about each DOD Experiment as may be helpful in the NTPR:

WT-1401, Project 1.1 — Basic Airblast Phenomena
E. J. Bryant
J. H. Keefer

1 - A blast and shock experiment that participated on 10 shots: Franklin, Wilson, Priscilla, Hood, John, Kepler, Owens, Sotkes, Shasta, Gallileo.

2 - No radiation was measured but recovery of records from close-in gages probably resulted in small exposures to project personnel.
pg.31 gives gage locations on Priscilla - (most heavily instrumented.
pg.96 " " " on all events.

WT-1402, Project 1.2 — Field Test of a System for Measuring Blast Phenomena by Airborne gages.
P. Halon, J.S. Ives, U.S. Naval Ordnance Lab.
S. E. Cooper, G. S. Scholl

1 - Involved rocket & balloon borne pressure instruments and photo stations to triangulate gage positions on balloon tethers.

2 - Station layouts given in NTS coordinates-gages recovered after shot.

3 - Participated on two shots: Kepler and Owens.

WT-1403, Project 1.3 — Airblast Phenomena in the High Pressure Region

L.M. Swift	SRI	Field Party- V. E. Krakow
D.C. Sachs		C.M. Westbrook
A.R. Kriebel		R.V. Ohler
Field Supervisor-	W.M. Wells	H.C. Waner
" Chief	- L.H. Inman	R.E. Aumiller
		J. Milless

1 - Project participated on one event - Priscilla

2 - Gage layout given - gages hard-wired to recorders.

WT-1404, Project 1.4 — Ground Acceleration, Stress, and Strain at High Incident Overpressures.
L.M. Swift — Field Chief= L.H. Inman — J. Milless

D.C. Sachs	Asst. Field Chief= W.M. Wells	R.V. Ohler
F.M Sauer	Field Party: R.E. Aumiller	C.M. Westbrook
	V.E. Krakow	H. Wuner

1 - Part of report included in WT-1407.

2 - Project participated on one event - Priscilla.

3 - Various stress & strain gages were hard-wired to central station.

4 Report gives gage layout from 450ft to 1350ft.

WT-1405, Project 1.5 Ground Motion Studies at High Incident Overpressure.
W.R. Perret and Sandia Labs personnel.

1 - Participated on one event - Priscilla.

2 - Report gives gage range from GZ and depth.

WT-1406, Project 1.7 Loading on Simulated Buried Structures at High Incident Overpressures.

E.H. Bultmann ARDC

1 - Project participated on one event - Priscilla.

2 - Used buried instrument drums - no manned stations.

3 - Drums were recovered for data.

WT-1407, Project 1.8a and 1.8c Effects of Rough and Sloping Terrain on Airblast Phenomena.
E. J. Bryant BRL/SRI
L. M. Swift

1 - Project participated on one event-Smoky.
pg.6 gives list of BRL personnel

Fig 2.5 gives field layout of gages relative to GZ.

pg.201-208 Photos of tower and gage lines

pg 131 - Map.

WT-1408, Project 1.8b Effects of Rough Terrain on Drag-Sensitive Targets
E.J. Bryant BRL

1 - Project participated on one event-Smoky.

2 - Involved deployment of vehicles-layout given in report.

WT-1487, Project 1.9 Spectra of Ground Shocks Produced by Nuclear Detonations
J.F. Halsey - ARDC

1 - Project participated on Stokes, Smoky, Newton, Whitney, & Charleston.

2 - Used reed gages for shock spectra

3 - pg.13 Describes gage placement.

WT-1410, Project 2.1 Soil Activation by Neutrons

Philip W. Krey	Radiological Division
Edward G. Wilsey	U.S. Army Chemical Warfare Lab.
John H. McNeilly	
Doris D. Peterson	
Ernest W. Blooze	

1 - Project participated on Franklin, Lassen, Wilson, Priscilla, & Owens.

2 - Core samples removed post shot by a 1000' cable.

3 - Report gives flux, levels, and decay rates - also gamma scattering data, gage locations for all 5 events.

WT-1411, Project 2.2 Neutron Induced Activity in Soil Elements

C.S. Cook	R.L. Mather	U.S. Naval Radiological
W.E. Thompson	J.M. Ferguson	Laboratory
F.M. Tomnovec	P.R. Howland	

1 - Project participated on Wilson, Hood, Owens, LaPlace.

2 - Pg.17 gives details of device environment

3 - Pg 23-24 details of helicopter and ground crew sample recovery.

4 - Pg.24 some samples removed 16 min. after event by ground crews.

5 - Pg.38 gives results.

WT-1412, Project 2.3 Neutron Flux from Selected Nuclear Devices

David L Rigotti	Herbert O. Funsten	U.S. Army Chemical
John W. Kinds	Benjamin B. Binkowski	Warfare Laboratory

1 - Project participated on Franklin, Lassen, Wilson, Priscilla, Hood, John, Owens, Smoky, LaPlace.

2 - Pg.16 gives procedure for recovery of detectors from radex field.

3 - Pg 17-19 gives location of detectors for each of nine events.

4 - Pg.21 gives map of detector layout-Smoky

5 - Pg.34 gives results.

PLUMBBOB WEAPON TEST REPORTS (CON'T)

WT-1413, Project 2.1 Neutron and Initial Gamma Shielding

Robert C. Tompkins — U.S. Army Chemical Warfare Laboratory
Clayton F. Weaver
Gerald A. Peterson

1 - Project participated on: Franklin, Lassen, Wilson, Priscilla, Hood & Owens.

2 - Measured Shielding afforded by trenches & shelters in NTS soil.

3 - Responsibilities: Ordnance Equipment - Edward J. Bryant-BRL
Field Fortifications- William H. Van Horn-ERDL/Desert Rock
Gamma Measurements-Gerald W. Carp-ESL
Chemical Dosimetry-Sanford C. Sigoloff-SAM

4 - Project Personnel- Joseph C. Maloney — 2nd LT. H. Craig Miller-ERDL
Carl Crisco — Pfc. L. Neil MacKinnon-BRL
Capt. David W. Einsel, Jr. (CWL)

5 - Pg.15 gives shot participation & area of NTS.

6 - Pg.63 gives description of fortifications & shelters.

WT-1414, Project 2.5 Initial Gamma Radiation & Neutron-Induced Gamma Radiation of NTS Soil.

C. Carp — B. Markow — U.S. Army Signal Research & Development Laboratory
O. Johnson — F. Lavicka
T. Baldwin — W. McAfee
R. Larrick

1 - Project participated on: Boltzman, Franklin, Lassen, Wilson, Hood, John & Owens

2 - To determine initial gamma intensity vs time and distance from 1 msec to 20 Sec. Also to measure neutron-induced gamma as a function of time. Initial gamma on John shot is included

3 - Pg 15-87 = Initial gamma data.

4 - Pg 85-93 = Neutron-induced gamma data.

WT-1415, Project 2.6 Evaluation of New Types of Radiac Instruments

A.W. Cohen — W.J. Ramm — U.S. Army Signal R&D Laboratory
M.H. Jachter — H.J. Reilly
LT. D. K. Koehler, USA — C.R. Siebentritt
H.M. Murphy

1 - Project participated on Franklin, Lassen, Wilson, Priscilla & Hood.

2 - Pg 19-20 describes recovery of dosimeters at H + 4Hrs. on all events-gives locations.

3 - Pg.31 -describes post-Hood Surveys using the IM-123 meter.

WT-1416, Project 2.7 Investigation of Effects of Nuclear Detonations on Electromagnetic Wave Propogation & Nuclear Radiation Detector Design.

T.D. Hanscome	W.E. Kunz	U.S. Naval Research Lab.
P.A. Caldwell	C.A. Pearse	
S.G. Gorbics	C.M. Stout	
E.C. Jones		

1 - Project participated on : Boltzman, Lassen, Wilson, Priscilla, Hood, Diablo, Kepler, Owens.

2 - Pg.29 gives instrument plan.

3 - Pgs 48, 59-63, 68-72 gives gamma ray data.

4 - Note-Should not have exposed project personnel to Radex areas.

WT-1417, Project 2.8 Evaluation of Military Radiac

E.J. DiIanni	U.S. Naval Material Laboratory
F.C. Riggin	

1 - Project participated on: Wilson, Priscilla, Hood, Diablo.

2 - Involved placement of instrumented masonite phantoms in high radiation fields (50 R/hr).

WT-1418, Project 2.9 Nuclear Radiation Received by Aircrews Firing the MB-1 Rocket

Capt. Kermit C. Kaericher, USAF	Air Force Special Weapons Center
Capt. Iedd P. Martin, USAF	
1st LT. James E. Banks, USAF	

1 - Project participated on the John shot.

2 - a/c instrumented for gamma & neutron dose.

3 - Crew received less than 5 Rep Neutrons & 3R Gamma.

WT-1419, Project 2.10 Initial Neutron & Gamma Air-Earth Interface Measurements

Capt. E.N. York, USAF	Air Force Special Weapons Center
Capt. R.E. Boyd, USAF	
1st LT. J.A. Blaylock, USAF	

1 - Project participated on: Boltzman, Lassen, Wilson, Hood, Diablo, John, Kepler, Owens, Laplace.

2 - Pg.16 gives summary of gages & distances (and altitudes) from bursts.

3 - Personnel should not have been in radex areas.

WT-1420, Project 3.1 Blast Loading & Response of Underground Concrete-Arch Protective Structures

W.J. Flathaw	U.S. Army Engineer Waterways Experiment
R.A. Breckenridge	U.S. Naval Civil Engineering Laboratory
C.K. Wiehle	

1 - Project participated on Priscilla only.

2 - Although a structures experiment, effects of radiation on film and recording paper was measured in the 50-200 psi range of Priscilla.

3 - pg.123 gives table of results

4 - pg.18 gives project plot plan.

WT-1421, Project 3.2 Evaluation of Buried Conduits as Personnel Shelters

LT. JG. G.H. Albright, USN	Bureau of Yards & Docks
LCDR J.C. LeDoux, USN	&
LTJG R.A. Mitchell, USN	U.S. Naval Civil Engineering Lab.

1 - Project participated on Priscilla.

2 - Although a structures Experiment, buried conduits were instrumented with gamma film packets, chemical neutron dosimeters, and neutron threshold devices - pg.28.

3 - Results are tabulated on pg.66.

WT-1442, Project 3.3 Evaluation of Buried Corrugated Steel Arch Structures and Associated Components.

LTJG. G.H. Albright, USN	Bureau of Yards & Docks
LCDR J.C. LeDoux, USN	&
LTJG. R.A. Mitchell, USN	U.S. Naval Civil Engineering Lab.

1 - Project participated on Priscilla.

2 - Primarily a structures Experiment but buried structures were also instrumented for prompt gamma & neutron radiation.

3 - Pg.12 gives a plot plan for the structures.

4 - Pg 100-106 describes interior and free-field radiation and summarize results.

WT-1423, Project 3.4 Blast Effects on Existing Upshot-Knothole and Teapot Structures.

Capt. E.H. Bultmann, Jr., USAF	Armor Research Foundation
Eugene Sevin	Structures Div., Research Directorate
T.H. Schiffman	AFSWC

1 - Project participated on Priscilla.

2 - Test of existing structures-no useful data on radiation.

WT-1424-1, Project 3.5a Isolation of Structures from Ground Shock

R.B. Vaille, Jr.	Stanford Research Institute

1 - Project participated on Priscilla.

2 - No useful information for NTPR.

WT-1425, Project 3.6 Full-Scale Field Tests of Dome & Arch Structures

Capt. E.H. Bultmann Jr, USAF	Mechanics Research Division
T.G. Morrison	American Machine & Foundry
M.R. Johnson	AFSWC

1 - Project participated on Priscilla.

2 - No useful NTPR information.

LTR-1426, Project 3.7 Instrumentation of Structures for Air-Blast and Ground-Shock Effects

J.J. Meszaros	Ballistics Research Laboratory
H.S. Burden	
J.D. Day	

1 - Project participated on Priscilla.

2 - Provided Air-blast and ground shock instrumentation in support of other structures experiments. No radiation measurements made.

3 - No useful NTPR data.

WT-1427, Project 3.8 Soil Survey & Backfill Control in Frenchman Flat.

T.B. Goode	R.W. Cunny	U.S. Army Engineer
W.G. Shockley	W.E. Strohm Jr.	Waterways Experiment Station

1 - This project participated on Priscilla.

2 - Project was in support of underground structures of Programs 1, 3, and 6, to assure that the backfill procedures assured pre-shot soil conditions.

3 - No data useful to the NTPR.

WT-1428, Project 4.1 Effects of Nuclear Detonations on a Large Biological Specimen

Lt.Col G. M. McDonald
Col William H. Crosby
Col Carl F. Tessmer
Lt.Col William H. Moncrief, Jr.
Lt.Col Hinton J. Baker
Capt Harry A. Claypool
Lt.Col Joseph T. Goldstein
Maj Kent Woodward
Maj James N. Shively
Capt Harry W. Daniell
Capt Alexander Horava

Walter Reed Army Institute of Research

1 - Project participated on: Lassen, Wilson, Priscilla.

2 - Pgs 24-30 gives radiobiology detail

3 - Station locations are scattered throughout the report. Free-field and internal dosimetry was performed.

4 - Substantial numbers of personnel recovered specimens from Radex areas-dressed in Rad-safe gear.

WT-1429, Project 4.2 Evaluation of Eye Protection Afforded by an Electro-mechanical Shelter

Capt. Wayne E. Gulley, USAF
Capt. Robert D. Metcalf, USAF
Maj. Mathew R. Wilson, USAF
Capt. Jerome A. Hirsch, USAF
Aeromedical Laboratory, Wright Patterson AFB

1 - Project participated on Boltzman, Wilson, Priscilla, Hood, Diablo.

2 - Project personnel not subjected to radiation-nor was it measured.

WT-1430, Project 5.1 In-flight Structural Response of an HSS-1 Helicopter to a Nuclear Detonation

J.H. Walls — BuAir
N.C. Heslin — Sikorsky Aircraft Div., United Aircraft Corp.

1 - Project participated on Boltzman, Franklin, Wilson, Priscilla, Diablo, Kepler, Owens, Stokes.

2 - Report mentions no exposure of crew to radiation-nor was any ionizing radiation measured.

WT-1431, Project 5.2 Structural Response and Gas Dynamics of an Airship Exposed to a Nuclear Detonation.

D.A. Gilstad	BuAir
Christian G. Weeber	Aeronautical Structures Lab
Arnold Kviljord	U.S. Naval Material Center
Gordon W. Woods	

1 - Project participated on Franklin, Stokes

2 - Pg 62 gives distances from GZ, and were such as to receive little or no radiation. None was measured.

WT-1432, Project 5.3 In-flight Structural Response of the Model A4D-1 Aircraft to a Nuclear Detonation

J.H. Walls	Douglas Aircraft Co.

1 - Project participated on Boltzman, Priscilla, Hood, Diablo, Shasta, Doppler, Smoky.

2 - pg.18 gives description of radiation data collection.

3 - pg.61 gives method used to interpret radiation data.

4 - pg.62 Gives radiation results for each event.

WT-1434, Project, Project 5.5 In-flight Structural Response of an F-89D Aircraft to a Nuclear Detonation

Capt. G. Stalk, USAF	Wright Air Development Center
1st LT. R.E. Gee, USAF	and Northrop Aircraft Co.
1st LT. J.P. Bednar, USAF	

1 - Project participated on: Boltzman, Franklin, Wilson, Priscilla, Hood, Diablo, John, Kepler, Owens, Stokes, Shasta, Doppler, Franklin, Smoky.

2 - Pg 15-16 Gives method of calculating radiation dose to aircrew and permitted dose to crew.

3 - Pg. 33 Gives table of radiation received per each of the events.

WT-1435, Project 6.1 Mine-Field Clearance by Nuclear Weapons

Capt. F.E. Deeds, USA
Felix W. Fleming
Robert K. Stamp

Midwest Research Institute
and
U.S. Army Engineering R&D Lab.

1 - Project participated on Priscilla.

2 - No radiation measurements were made.

3 - pg.24 gives project laycut drawing.

4 - Since the minefield was as close as 920ft, recovery operations could have been within the Radex field.

WT-1436, Project 6.2 Measurement of the Magnetic Component of the Electromagnetic Field Near a Nuclear Detonation.

P.H. Haas
F.N. Wimenitz
J.C. Hoadley
J.S. Wicklund

Diamond Ordnance Fuse Lab.

1 - Project participated on: Lassen, Wilson, Priscilla, Hood, Diablo, Owens.

2 - Pg.28 Gives station location and range for the events.

3 - No radiation data were recorded.

WT-1489, Project 6.2a Effect of a Nuclear Detonation on Semiconductor Devices.

P.H. Haas
J.M. Schaull
W.V. Behrens

Diamond Ordnance Fuse Lab.

1 - Project participated on same events as Project 6.2.

2 - Pg 12 gives diagram of instrument placement and flux levels.

3 - Components Exposed to 4×10^{14} n/cm^2 and 0.1-100,000 R of gamma.

WT-1437, Project 6.3 Attenuation of Electromagnetic Radiation Through an Ionized Medium.

William S. Lee
Howard D. Krumboltz
George A. Gimber

U.S. Naval Air Development Center Johnsville, Pa.

PLUMBBOB WEAPON TEST REPORTS (CON'T)

1 - Project participated on: Franklin, Lassen, Wilson, Priscilla.

2 - Pg 17-19 gives flight track of a/c, GZ, and ground stations.

3 - No radiation was measured.

WT-1438, Project 6.4 Accuracy and Reliability of a Short Baseline Naval System.
Maj. Richard A. Houghten, USAF Air Force Cambridge Research Center
Richard B. Harvey

1 - Project participated on all shots but Shasta, Whitney, and Morgan.

2 - This was an off-site project and should not have received any ionizing radiation.

WT-1439, Project 6.5 Effects of Nuclear Detonations on Nike Hercules.
G.E. Elder Electro-Mechanical Labs, Ordnance Mission, WSMR

1 - Project participated on Boltzman, Franklin, Lassen, Wilson, Hood, Diablo, Kepler, Owens, Charleston.

2 - To study effects of neutron/gamma on N-H Guidance systems in high fluence areas.

3 - Pg. 14 gives layout of stations.

4 - Pg. 27 gives table of neutron & gamma flux at each station.

5 - Recovery of forms & data should have produced radiation exposure to project personnel.

WT-1440, Project 8.1 Thermal Protection of the Individual Soldier
Frank H. Babers U.S. Army Quartermaster R&E Command.
Allan J. McQuade

1 - Project participated on Priscilla

2 - Pg 17 gives station designations & expected thermal Energy levels.

3 - Pg 18 gives recovery & ionizing radiation levels.

WT-1441, Project 8.2 Prediction of Thermal Protection of Uniforms, and Thermal Effects on a Standard Reference Material.
W.H. Dirksen
T.L. Monahan Naval Material Laboratory
J. Bracciaventi
J.A. Carter
A. Hirshman

1 - Project participated on: Lassen, Wilson, Priscilla, Hood.

2 - Pg 13 gives distance of stations from GZ.

3 - Pg 22-24 gives thermal flux results.

4 - No ionizing radiation measured.

LTR 1442, Project 8.3a Performance of a High Speed Spectrographic System

William A. Plum	W.J. Parker	U.S. Naval Radiological
E.C.Y. Inn	R.J. Jenkins	Defense Laboratory

1 - Project participated on: Lassen, Wilson, Priscilla, Diablo, John Kepler.

2 - Report gives little data on instrument location-but implication is that the distance was 10 miles.

WT-1443, Project 8.3b Instrumentation for Measuring Effects Phenomena Inside the Fireball.

Charles J. Cosenza	Aircraft Lab., WADC
Richard G. Coy	University of Dayton Research Institute
Donald A. Kahle	" " " " " "
Thomas E. Pascoe	Allied Research Associates Inc., Boston, Ma.
Paul C. Iving	" " " " " " "

1 - Project participated on Priscilla and Smoky.

2 - Pg. 57 Gives recovery & radiological data.

WT-1445, Project 9.1 Support Photography

Included in WT-1445-No individual report issued-No personnel listed.

Contractors-Lookout Mountain Laboratory-USAF
Edgerton, Germeshausen, & Grier, Inc.

1 - Project participated in all events of Plumbbob.

2 - Project provided technical photography on: Franklin, Lassen, Wilson, Priscilla, Hood, John, Owens, Smoky, Stokes

3 - Project performed documentary still & motion picture photography from manned stations on all events.

PLUMB BOB

TITLE	LIBRARY LOCATION
AFSWC - Nuclear Radiation Received By Aircrews Firing the MB-1 Rocket	WT-1418
ASROL - Operations of the Fallout Group of Project 50.3	SRDL TR-2088
CWLR - Alpha Contamination Studies At Operations Plumb Bob and HardTack	CWLR-2385
DASA - Neutron and Gamma Radiation from Shot Laplace	WT-1541
DASA - Operational Summary	WT-1444
EROL - Solubility Characteristics of Radioactive Bomb Debris in Water and Evaluation of Selected Decontamination Procedures	EROL-1569-TR
H&N - Post-Shot Analysis For Project 3.1	HN-80-1020C
UCRL - Test Director's Report on Opn. Plumb Bob	UCRL-5166

PROMPT GAMMA RADIATION

TITLE	LIBRARY LOCATION
NDL - Initial Gamma Data from Nuclear Weapon Tests, 1948 Through 1962.	NDL-TR-53

RADIOACTIVE CONTAMINATION

TITLE	LIBRARY LOCATION
USAF - Preliminary Study of the Comparative Effectiveness of Atomic Weapons Under Different Burst Conditions (BUSTER-JANGLE Contamination)	USAF-OA-WP-31
AFSWC - Aicraft Contamination from Residual Stratospheric Nuclear Weapon Debris	SWC TN 59-5
AFSWC - Evaluation of Some Factors Influencing Radiation Dosage From Penetration of an Atomic Cloud by Manned Aircraft	SWC-TN-56-30
AFSWC - Radioactive Contamination of Aircraft	SWC-TN-56-26
ARDC - Radioactive Fallout from Atomic Bombs (TUMBLER-SNAPPER & UPSHOT-KNOTHOLE)	ARDC-C3-36417
CWL - Alpha Contamination Studies at Operations PLUMBBOB and HARDTACK	CWLR 2385

RADIATION MONITORING

TITLE	LIBRARY LOCATION
Army Combat Devs. Comd - Organization for Radiological Survey, 1965-1970,	ACDC/CBRA/648
Food & Drug Admin - Measuring & Monitoring Training Exercise: Foodstuffs, Op. PLUMBBOB (includes participation)	WT-1498
LASL - Radiological Safety, Op. HARDTACK (Task unit 6, JTF)	WT-1685
Naval Med. Res. Inst - Sea-water Radiological Monitoring Methods	WT-1689

RADIATION EXPOSURE i.e. IRRADIATION

TITLE	LIBRARY LOCATION
AEC - Operational Accidents & Radiation Exposure Within the U.S.	WASH 1192
Cinn. Univ - Radiation Effects in Man: Manifestations & Therapeutic Efforts	DNA 2751T
ERDA - Radiation Exposures for AEC & AEC Contractor Employees 1974 -	ERDA-RE
LBL - Bioassay Laboratory Report 1973 -	LBL BL
Nav. Rad. Def. Lab - Radiant Exposures from Air & Surface Nuclear Bursts	NRDL TR 69-53

RANGER

TITLE	LIBRARY LOCATION
Program Reports - Gross Weapons Measurements, Vol 4, (includes gamma measurements Vol 4, radiological Safety)	wt-201
Program Reports - operational vol 5 (includes preliminary report on activities of rad-sage group)	wt-204
Administrative Summary Report, Vol 6,	wt-205
Report of the Deputy Test Director, vol 1, (Ranger Test Group Org)	wt-206
LASL Operation Ranger, vol 2, Handbook for Operation Ranger & Summary of test results	OR/wt-202
LASL External Neutron measurements 1946 thru 1956	wt-9004
LASL Gamma Radiation Exposure as a Function of Distance	LA-1228
LASL A Summary of Test Results, Opn. Ranger.	LAMS-1240

REDWING

TITLE	LIBRARY LOCATION
Naval Medical Research Inst - Evaluation of Standard Navy Dosimeters ST-60/PD and IM-1071/PD in Residual Radiation Fields Abcard Ships	WT-1350
Cook Electric Co - In Flight Participation of F-84F ACFT	WT-1331
SEC - History of Task Group 7.4 in Redwing	SWC/TG 7.4/2
ORW - JTF7. Final Report of the Commander	ORW/TG 7.4/(FR)
SWC - Radiological Hazards From Contaminated ACFT	SWC SWR TM 59-4
NRDL - Characterization of Fallout	WT-1317
NRDL - Shipboard Radiological Counter Measure Methods	WT-1322
AEC - Fallout Location and Delineation By Aerial Surveys	WT-1318
LASL - Radiological Safety	WT-1366
LASL - Report of the Commander TG 7.1	WT-1359
AFSWC - Contact Radiation Hazard Associated with Aircraft Contamination by Early Cloud Penetrations	WT-1368
Cook Electric Co. - Thermal and Blast Load Effects on a B-47E Aircraft in Flight, Op. REDWING (A/C Participation)	WT-1327
McDonald Aircraft Co - F-101A Operation REDWING Effects Test (includes aircraft participation)	WADC TR 57-733
Martin Co - B-57B Operation REDWING Data (includes aircraft participation)	WADC TM 56-465
NRDL - Measurement of Thermal Radiation Incident on Naval Aircraft in Flight at Operation REDWING, PLUMBBOB, & HARDTACK	NRDL-TR-331
WADC - In-Flight Participation of B-66 Aircraft, Op. REDWING	WT-1329
ERDL - Crater Measurements	WT-1307
UCRL - Post-Operational Report-Program 22	UCRL-6283

SAMPLE COLLECTION-FALLOUT

TITLE	LIBRARY LOCATION
Eberline - Soil Deposition; Op. ROLLER COASTER	POR-2501
Army Chem. & Rad. Labs. - Cloud Phenomena: Study of Particulate & Gaseous Matter, Op. GREENHOUSE	WT-72
Scripps Inst. Rad. - Techniques & Instruments Used for the Oceanographic Survey on Op. WIGWAM	WT-106
Isotopes - Sampling & Analysis for Gaseous Radionuclides at the NTS 1966 thru 1968	OSOTOP IWL 1300-169

SANDSTONE

TITLE	LIBRARY LOCATION
Dept. Of AF Radiation Hazard From an Atomic Cloud	USAF/OA/WP-28
CJTF-7 Analyses of Experimental Results, Vol II,	OS/8
JTF-7 Narrative Report of Opn. Sandstone, Cdr. JTF-7	OS/1
JTF-7 Atomic Weapons Test, Enewetak Atoll, Cdr JTF-7 VOL 1, Annex, Partl	OS/2
JTF-7 Atomic Weapons Test, Enewetak Atoll, Cdr JTF-7 VOL 1, Annex 1, Part 2	OS/3
JTF-7 Atomic Weapons Test, Enewetak Atoll, Cdr JTF-7 VOL 1, Annex 1, Part 3	OS/4
JTF-7, Reports to the U.S. Atomic Energy Committee on Opn. Sandstone, Pt 1 VOL 1, Test Dir. Rpt	OS/5
JTF-7 Reports to the U.S. Atomic Energy Committee on Opn. Sandstone, Pt 1, VOL 2. Test Dir. pt	OS/6
JTF-7 Scientific Directors Report, of Atomic weapon Tests Vol 1, General Report.	OS/7
JTF-7 Sandstone Handbook of Nuclear Explosions, Vol III, Scientific Directors Report	OS/9
JTF-7 Opn. Sandstone Measurements by NRL, Annex 2, Part I, Scientific Directors Report	OS/11
JTF-7 Opn. Sandstone Measurements by NRL, Annex 2, Part II, Scientific Directors Report	OS/12
JTF-7 Opn. Sandstone Measurements by NRL, Annex 2, Part III, Scientific Directors Report	OS/13
JTF-7 Blast Measurement Summary Report, Annex 5, Part I, Scientific Directors Report	OS/20
JTF-7 Participation by Bureau Yards&Docks, Scientific Director, Annex 6, Part II, Section 1 Scientific Directors Report	OS/25
JTF-7 Gamma Ray Measurements, Annex 8, Parts FV, Scientific Directors Report	OS/29

SANDSTONE, CONTINUED

JTF-7 Contamination Studies, Annex 9, Parts FV, Scientific Directors Report	OS/30
JTF-7 Thermal Effects & Decontamination Studies, Annex II, Parts 1, II, III Scientific Directors Report	OS/32
JTF-7 Studies of Misc, Phenomena, Annex 13, Parts 1, II, III Scientific Directors Report	OS/34
JTF-7 Scientific Meteoroligal Info., Annex 14, Scientific Directors Report	OS/35
JTF-7 General Organzation w/staff Responsibilities, Annex 17, Parts II & III	OS/41
JTG 7.6 Operations phases A - E	OS/43
JTF-7 Operation Sandstone Nuclear Explosions 1948	OS/Bib.

STORAX

TITLE	LIBRARY LOCATION
DOD - DOD Participation in BOBAC Event	VESIAC-C92 VU
DOD - DOD Participation in CAVY Event	VESIAC-C93 VU
DOD - DOD Participation in COLUMBIA Event	VESIAC-C97 VU
DOD - DOD Participation in WICHITA Event	VESIAC-C70 VU
DOD - DOD Participation in YORK Event	VESIAC-C91 VU
Pub. Health Service - Final Off-Site Report of the Project SEDAN Event	PNE-200F
REECo - The Sedan Event. On-Site Radiological Safety Report	PNE-203F
LASL - Release of Radioactivity from Los Alamos Events in Operations Nougat, Storax, & Niblick	LA-3269-MS

SUNBEAM

TITLE	LIBRARY LOCATION
NRDL - Physichemical and Radiochemical Analysis	POR-2216
BRL - Radiochemical Interpretation of SMALL BOY FALLOUT	BRL-1623

TEAPOT

TITLE	LIBRARY LOCATION
AFSWC - Contact Radiation Hazard Associated with Contaminated Aircraft	WT-1122
AFSWC - Manned Penetration ofs Atomic Clouds	WT-1156
AFSWC - Operational Summary Report	C-9751
AEC - Gamma & Neutron Radiation Measurements	WT-1174
UNIV OF CALIF - Distribution & Characterization of Fallout and Airborne Activity from 10 to 160 Miles From GD zero	WT-1178
UNIV OF CALIF - Evaluation of the Acute Inhalation Hazard from Radioactive Fall-out Materials By Analysis of Results from Field Opns and Controllec Inhalalations Studies in the Lab.	WT-1172
UNIV OF CALIF - Beta Skin-Dose Measurements by Specially Designed Film Pack Dosimeters	WT-1178A
Edgerton, Germeshausen and Grier, Inc - Accumlated Physical Effects For NTS zero Sites.	EX-59.15 (PT.A)
FCDA - Indoctrination and Training of Radiological Defense Personnel	WT-1165
UNIV OF CALIF - Teapot Post Operational Report-TURKTEST	WT-1211
UNIV OF CALIF - Teapot Post Operational Report-Project 21.2	UCRL-4416
UNIV OF CALIF Medical Research Inst - Radiation Energy Absorbed By Human Phantoms in a Fission Fall-out Field.	WT-1120
UNIV OF CALIF - Research Lab - Hot Spot Experiment - Apple II Preliminary Report on Operations	NRL-4556
AFSWC - FTG-SP Operations Plan 1-54 For Opn. Teapot	SWC OP-1-54
AFSWC - Report on Operation Teapot	OTP-R. 299
AFSWP - Operational & Summary, Operation Teapot	WT-1158
AFSWP - Radiological Safety	WT-1166
LASL - Report of the Test Director	LA-1966

TUMBLER

TITLE	LIBRARY LOCATION
SWC-History of the Air Force Special Weapons Center Participation in Op. Tumbler Snapper vols 1 & 2	SWC/HIST/OTS
AFSWP-Final Summary Report - Op. Tumbler	WT-514

TUMBLER SNAPPER

TITLE	LIBRARY LOCATION
SWC-Technical Air Operations, Op. Tumbler Snapper	WT-568
AROC-Radioactive Fall-out from Atomic Bombs-	ARDC/C3/36417
AWS-Air Weather Service Participation - Op. Tumbler Snapper	WT-506
LASL-Emissions from the Tumbler IV/Snapper 1 Tests	LA/6331/MS
LASL-Gamma Radiation Exposure as a Function of Distance Op. Tumbler Snapper	WT-
LASL-Radiation Monitoring Measurements, Op. Tumbler Snapper	WT-507
LASL-Staff Reports, Op. Tumbler Snapper (includes personnel, admin, plans & ops)	WT-553
AFSWP-Radiological Safety, Op. Tumbler Snapper	WT-558
LASL-Report of the Advisory Personnel to the Air Sampling Program	WT-556
SCEL - Gamma Ray Energy Spectrum of Residual Contamination	WT-523

UPSHOT-KNOTHOLE

TITLE	LIBRARY LOCATION
AFCRC-Preliminary Report on Radiochemical Analysis, Op. Upshot Knothole	C-393
AFCRC-Radiation Hazards to Personnel Within an Atomic Cloud, Op. Upshot Knothole	NT-743
SWC-Aircraft Participation, Op. Upshot Knothole	WT-825
SWC-History of AFSWC Participation in Op Upshot Knothole	SWC/HIST/UK
SWC-Operational Summary, Op. Upshot Knothole	SWC-15
AFSWP-Summary Report of the Technical Director, Op. Upshot Knothole	NT-782
AMSGS-Beta-Gamma Skin Hazard in Postshot Contaminated, Op. Upshot Knothole	WT-746
CALF UNIV-Comparison & Eval of Dosimetry Methods Appl. to Gamma Radiation, Upshot Knothole	WT-802
CALF UNIV-Dist & Characteristics of Fallout at Distances Greater than 10 Mi. FM GN Zero Upshot Knothole	WT-811
CALIF UNIV-Environmental & Biological Fate of Fallout From Nuclear Detonations in Area Adjacent to the NEV PROVING GROUND Upshot Knothole	WT-812
Chemical and Radiological Labs - Protection Afforded by Smoke Screens Against Thermal Radiation Op. UK	WT-812
Chemical and Radiological Labs-Radioactive Particle Studies Inside an Aircraft Op. UK	WT-717
Fed Civil Def Admin-Eval of TDG Program For Radiological Defense Personnel Op. UK	WT-808
Radiation Lab, Univ of Calif-Preoperational RPT on Upshot Op. UK	NCRL-4011 (REV)
CALIF UNIV, Radiation Lab-Radiochemistry Results. Op. UK	WT-823
LASL - Gamma Radiation as a Function of Distance Op. UK	WT-827
LASL - Report of the Deputy Test Director Op. UK	WT-816
Naval Air Material CTR - Atomic Weapons effects on AD Type Aircraft in Flight Op. UK	wt-748

UPSHOT-KNOTHOLE (CONT)

Rand Corp-Transport and Early Detonation, of Radioactive Debris From Atomic Explosions	R-265
Signal Corps Eng Labs - Initial Gamma Exposure vs Distance Op. UK	WT-756
TAC - Indoctrination of Tactical Air CMD Air Crews in the Delivery and Effects of Atomic Wpns. Op. UK	WT-759
Wright Patterson Development CTR-Atomic Wpns Effects on B-50 Type Aircraft in Flight Op. UK	WT-749
Wright Patterson Development CTR-BLAST EFFECTS on - B-36 Type Aircraft in Flight Op. UK	WT-750
AFSWC - Air Weather SWC Participation Op. UK	WT-703
AFSWC - Project Summaries Op. UK	OUK/PS
AFSWP - Radiological Safety Operation Op. UK	WT-817
LASL - Staff Reports Part I Pers & Admin, Plans & Opns Op. UK	WT-822
AFSWP - Operations Summary Op. UK	OUK/OS
AF/AEC - Calibration Analysis of Close-in Bomb Debris Op. Uk	WT-765
LASL - Activities of the Special Weather Advisory SVC Op. UK	WT-705
Signal Corps Engineering Lab - Gamma Radiation Spectrum of Residual Contamination OP. UK	WT-718
LASL - Analysis of Grable Nuclear Cloud Motions Op. UK	EGG/LAD/8566

WAHOO BURST

TITLE	LIBRARY LOCATION
BUSHIPS - Assessment of Ship Damage (includes target ships)	WT-1632
DTMB - Loading & Response of Submarine Hulls	WT-1629
DASA - Base Surge Radioactivity from Underwater Shots (WAHOO & UMBRELLA)	DASA-533 TAR

WALNUT BURST

TITLE	LIBRARY LOCATION
LASL - Dose Rate vs Time for WALNUT & YELLOW WOOD	LAMS-2374

WASP BURST

TITLE	LIBRARY LOCATION
Army Signal R&D Lab - Gamma Dose Rate vs Time & Distance, Op. TEAPOT	WT-1118

WASP PRIME BURST

TITLE	LIBRARY LOCATION
Army Signal R&D Lab - Gamma Exposure vs Distance - Op. TEAPOT	WT-1115
LASL - Gamma Radiation As a Function of Distance - Op. TEAPOT	WT-1208
NRL - Neutron Flux Measurements - Op. TEAPOT	WT-1116

WIGWAM

TITLE	LIBRARY LOCATION
UNIV OF CALIF - Scientific Director's Summary Report	WT-1003
NRDL - Determination of Radiological Hazard to Personnel	WT-1012
NRDL - Radiological Safety for Wigwam	WT-1001
JTF-7 - Report of Commander TG-7.3	WT-1000
Naval Research Lab - Radiochemical Analysis of Wigwam Debris	WT-1010

SANDIA LABORATORIES TECHNICAL LIBRARY

TITLE	LIBRARY LOCATION
AEC - Planning Directive (NTS-21-3-63) FERRIS WHEEL - Initial Shot Series	RS-3446/7235
COMFIRSTFLT - COMFIRSTFLT Operations Order #214-62, Op. WEAPON, Sys. Test. DEEP DIVE	RS-3446/4852
HQ TASK GP 8.5 - OP PLAN 2-1-62 for Op. DOMINIC (Organization, Personnel)	RS-3446/4758
JTF-8 - OP PLAN 2-62, for Op. DOMINIC	RS-3446/2590
CJFT-7 - Administrative Plan 1-58	JTF-AP-1-58

Trip Report of Field Search
for Exercise Desert Rock Documentation
Conducted by Representatives of The Adjutant General
18 June to 14 July 1978

ANNEX D
Los Alamos Scientific Laboratory, New Mexico
Date of Visit: 30 June 1978

1. PERSONNEL AND AGENCIES CONTACTED:

a. Mr. James Lawrence, Senior Health Physicist, Los Alamos Scientific Lab
b. Mr. George Littlejohn, Chief, Dosimetry and Records Section, LASL
c. Mr. Karl Lyon, Chief Administrative Officer, J-Division, LASL

2. BACKGROUND:

a. Since the Manhattan Project, three scientific laboratories have been dedicated to the evolution of the Atomic Age by American scientists. These are the Lost Alamos Scientific Laboratory at Los Alamos, New Mexico; the Lawrence Livermore Scientific Laboratory at Livermore, California; and, the Sandia Scientific Laboratory at (the former Sandia Base) Albuquerque, New Mexico. All three have continuous operation since at least the formation of the Armed Forces Special Weapons Project and Atomic Energy Commission. The same symbiotic partnership which existed between the AFSWP and AEC for the operation, supervision and funding of these activities is still reflected in the current accords between the Department of Defense and the Department of Energy.

b. These laboratories were originally chartered as quasi-public, non-profit corporations. The moral aspects of making a monetary profit from nuclear development were not acceptable to corporate American thinking at the close of World War II; hence, the non-profit, public corporation character of the primary developers of nuclear energy for both war and peace applications. The Sandia Laboratories were created and operated by Western Electric; Los Alamos and Lawrence Livermore by the University of California. This basic corporate concept has not changed through the years. All three laboratories operate today as government-owned, contractor-operated (GOCO) installations. In this context, the term "laboratory" is somewhat misleading. The traditional preception of a small, cluttered room filled with sinks, tables, test tubes and Bunsen Burners is quickly dispelled on first view of the physical setting of these laboratories. Each is a massive installation in its own right with a full-blown complement of the paraphanalia normally associated with a small municipality, military post or industrial complex.

c. The mission relationship between these three laboratories is also highly sophisticated. While the term "think-tank" may be a simplistic application, it certainly applies with respect to the working relationship of the Los Alamos and Lawrence Livermore Scientific Laboratories to the Sandia Laboratory ! Los Alamos and Lawrence Livermore work in the theoretical area of nuclear research and development. Their concepts and theoretical blueprints are then

turned over to Sandia for manufacture of the prototype device for testing. According to one of the Los Alamos scientists, Sandia's prototype models are often held together by " . . . little more than Elmer's Glue and Scotch tape, but they usually get the job done !" The resulting tests determine the practicality of the conceptualized device. Favorable tests, of course, result in stockpiling in the United States nuclear inventory or the generation of precise specifications for subsequent manufacture. Stockpile manufacture is not done by Sandia; this is accomplished by contract with qualified and certified American industrial interests.

d. In addition to the civilian corporation employees who compose the vast majority of the personnel complements of the scientific laboratories, uniformed members of the military departments regularly perform tours of liaison duty at Los Alamos, Sandia and Lawrence Livermore. The scientific observers at the Nevada tests and the scientific complement of the joint task forces in the Pacific are drawn from this source. Consequently, a small but significant number of Army personnel who have been assigned to tours of duty with the scientific laboratories during the past 25 years possess radiation dosimetry histories which are not currently reflected in either the general data banks of Lexington or REECO. As with other agencies and activities, the scientific laboratories provided their own dosimetry service

3. CURRENT SITUATION:

a. GOCO records generated by the Los Alamos Scientific Laboratory are retired to the Federal Archives and Records Center-Denver. Prior to the date of this visit, the LASL Records Manager, Mr. George Littlejohn, had identified LASL retired records dealing with the nuclear tests of the 1950's. These materials had been withdrawn from the Denver FARC and were available for examination. As would be expected, the content of these materials was generally limited to purely LASL matters. Such personnel identification data that they contained reflected only indigenous LASL or LASL-administered contractor employees. The LASL records transmittal documents reflecting all transactions with the Denver FARC were also audited but failed to produce any additional leads to materials not already withdrawn and returned to Los Alamos.

b. The LASL "J-Division" has been responsible for field testing activities of LASL developed concepts. Some long time employees who had had personel experience with some if not all of the test exercises -- continental as well as the Pacific -- were still on active service at Los Alamos. Their institutional memory supported the conclusion that LASL's dosimetry records were good but limited to direct LASL employees, military personnel on liaison duty with LASL, and employees of contractors directly administered by LASL. LASL's handling of dosimetry service and record keeping generally mirrors the system pioneered and administered by REECO. Central files of hardcopy data were maintained in more or less chronological order. Individual dosimetry reports and histories were filed in the health/employee/pay records of employees or of military personnel if held by LASL. For those employees, contractor personnel, or liaison military personnel whose health records were held by other organizations or at other geographical locations, the LASL dosimetry data was forwarded on a regular basis to the known custodians of those files. This was no more successful then as it currently is at this time. Quite often, this "forwarded dosimetry data" is returned via postal channels as "not deliberable." REECO, too, experiences the sa

c. REECO has taken the lead in the past few weeks to integrate the dosimetry data held by the scientific laboratories into its data banks. At the time of the visit, negotiations had been completed with Sandia and LASL for computerization of their individual dosimetry data into a program that would be compatible with REECO's existing base. Presumably this base is also compatible with Lexington's. No estimate was available at the time of the visit as to when this project would be completed; negotiations with Lawrence Livermore were still pending at that time. On completion of the planned computerization of the data held by the three scientific laboratories (and presumably that also held by the Field Command, DNA), REECO will realize control of all known dosimetry data not directly generated or maintained by the military departments. REECO will make this data available to DOD in due course.

4. CONCLUSIONS:

a. The dosimetry procedures followed by the Los Alamos Scientific Laboratory are typically representative of all three of the scientific laboratiries and are generally limited to indigenous, military liaison and contractor personnel associated with the laboratories.

b. That the dosimetry records of the scientific laboratories are conclusive for their limited scope of applicability, but are of no assistance to the present search for troop participation identification.

c. That the current REECO sponsored project to computerize dosimetry data of the three scientific laboratories and to integrate it into the REECO dosimetry data base will provide conclusive identification of all Army personnel who have been assigned to such liaison duties since 1947.

5. RECOMMENDATIONS:

a. That records of the scientific laboratories be considered non-productive for any further identification of Army Troop personnel participating in the Desert Rock Exercises.

b. That effort to identify Army personnel performing liaison duties with the scientific laboratories who might have dosimetry histories be deferred until completion of the current REECO Project to automate and integrate the dosimetry data of the scientific laboratories into the REECO dosimetry data base.

JOHN HENRY HATCHER, PHD
Chief, Declassification
Operations Branch

Trip Report of Field Search
for Exercise Desert Rock Documentation
Conducted by Representatives of The Adjutant General
18 June to 14 July 1978

ANNEX E
USA Letterman Army Medical Center, The Presidio of California
Headquarters, 6th United States Army, The Presidio of California
Post Headquarters, The Presidio of California
Federal Archives and Records Center-San Francisco (at San Bruno)California
Dates of Visit: 2 July to 5 July 1978

1. PERSONNEL AND AGENCIES CONTACTED:

a. Mr Jack Loohoo, Command Records Administrator, 5th US Army
b. Mr Harold Elliott, Director, GSA FARC-San Francisco
c. Major Edward J Boland, MSC, Letterman AMC, Chief Administrative Officer

2. BACKGROUND:

a. Commanding General, 6th United States Army, with headquarters at the Presidio of (San Francisco) California, was Exercise Director for the entire series of Desert Rock Exercises, I through VIII, 1951 through 1958. While command emanated from the Presidio, day to day management of the exercise was performed by the on-site deputy Exercise Director from Camp Desert Rock a few miles distant from the Mercury, Nevada, test site. Over an eight-year period, a rotating exercise staff appears to have been institutionalized. How much of this exercise was drawn from the field and how much came from the 6th Army staff at Presidio is unclear at this time.

b. The question which arose immediately with the Army portion of the NTPR Project was: "What happened to the Army's records of the Desert Rock Exercises ?" They were not retired through regular records management channels although the field generated records of other exercises conducted by Army elements during the decade of the 1950's and 1960's were properly retired to the St Louis federal records center and may be found there today. Logic would dictate that the administrative apparatus of the 6th United States Army and the Presidio would have in some manner been concerned with the records that a more or less 8-year long exercise would create.

3. CURRENT SITUATION:

a. Telephonic inquiries to 6th Army Headquarters which included the Command Records Administrator, G-3 Records Management Officer, and the Presidio Post Records Holding Area had not been satisfactory. It was then determined that an on-site investigation would be necessary. Following the initial notification that a representative of The Adjutant General on loan to the Chief of Staff's NTPR Project Task Force would visit the Presidio, the 6th Army Command Records Administrator conducted a survey of the headquarters. Focus of the survey was operational records of the Desert Rock Exercise series that might have been retained by action officers and never formally committed to normal records retirement channels. The results of this survey were negative. Nor was institutional memory of any assistance. All of the 'oldtimers" were gone. No current

members of the staff had had any personal involvement in the original exercise series.

(1) During the course of the visit,a careful audit was conducted of the records retirement transmittal documentation (SF 135 files) still retained by the headquarters. Special emphasis was placed on the DCS/Operations (G-3) files. Despite the fact that these files are probably the single set of papers which should be retained "Permanently" by any records generating activity, the 6th Army files barely reached back to the early 1960's ! None of the documentation examined contained any leads to the Desert Rock Exercise Series. As a matter of fact, none of the documentation examined gave any indication that the 6th US Army had ever had any involvement with the Desert Rock Exercise Series. In view of the paramount role which the 6th US Army played in direction and execution of this exercise,this become very difficult to explain.

(2) Institutional memory from other sources had produced rumors of an indeterminate quantity of records, variously described as a "roomful," a "wall stacked solid," and marked "Desert Rock-Do Not Destroy," which as late as the early 1970's had occupied office/storage space in the 6th Army G-3 area. However,no one currently assigned to the G-3 staff had any recollection of this. Careful re-construction from other sources now indicates that these materials may have been dosimetry materials which were shipped to Lexington. Positive of what these materials may have been and what actually happened to them is still up for conjecture. Other rumors that this collection was finally retired to an " . . . archives or records depository." The identification of this elusive destination has never been determined. Independent investigations of West Coast GSA regional federal archives and records centers by REECO employees as well as HQDA Records Management personnel have failed to trace or identify these materials positively there or in Washington.

b. On conclusion of the Headquarters 6th US Army phase of the investigation, attention was turned to the Presidio Records Holding Area. Here again telephonic inquiries from Chief of Staff's NTPR Project Task Force had not produced satisfactory responses. At the time of the visit, the Post Records Manager was on annual leave. He had only recently been transferred to this post as a priority DOD (USAF) placement on closing of Hamilton Air Force Base at nearby San Rafael, California. As such, he had no institutional memory reaching back to the Desert Rock Exercise series of the 1950's. As a matter of fact evidence was strong that Mr Staveli (Sp ?) was still in the job orientation stage of learning Army records management procedures.

(1) Presidio Post Adjutant personnel familiar with operation of the Records Holding Area were available and assisted with our inspection of the available documentation. Here, again, the records shipping documentation (SF 135 files) were found to be inadequate and disappointing. The earliest extant records of operation of the Presidio Records Holding Area dated from 1959. In view of The Presidio's long and illustrious history as a major Army western installation, this is very difficult to explain. It becomes even more discouraging when point is made of the fact that the HQDA Records Management Division has better documentation in Washington on the records management operations of the 6th US Army and the Post Presidio than either of those activities have in the field. Clearly, long-standing Army records management procedures have not been followed. More discussion on this point will be found in Annex H (National Personnel Records Center, St Louis) following.

c. On the outside chance of possible involvement due to command and geographical relationship, the search for Exercise Desert Rock documentation was extended to Letterman Army Medical Center (also located at The Presidio). Discussion with medical administrators of Letterman revealed, however, that despite the 6th US Army role, Letterman itself had had no general or overall tasking for the nuclear test series. Its only official involvement to date arose from general media announcements of the JAYCOR portion of the NTPR Project. Letterman medical officers had received and passed on some 4-5 responses from individuals claiming troop participation in the exercises. This closed the Headquarters 6th US Army and Presidio phases of the field search for Desert Rock Exercise documentation

d. The sole remaining agency to be contacted in the San Francisco area was the GSA Federal Archives and Records Center at San Bruno. In connection with Phase III of the Master Survey of US Army Records Held by Regional Federal Records Centers (March-May 1976), all US Army field command records held by the FARC-San Francisco had been inventoried. None of these inventiries revealed any Desert Rock Exercise documentation retired to the FARC-San Francisco. Primary focus of the current search was non-Army retired records. With prior authorization of the controlling agencies, Records Group 181 (US Navy), Records Group 342 (US Air Force), Records Group 374 (Defense Nuclear Agency) and Records Group 430 (GOCO Contractor) documentation and records held by the FARC-San Francisco were examined.

(1) The results of this examination were generally negative. Some references were found to dosimetry data and radiological studies in Records Group 181. These were materials retired by the US Naval Radiological Defense Laboratory to FSRC-San Francisco and dealt with the 1950 nuclear test series from the Navy viewpoint. Physical examination of these materials revealed them to very general in nature and of no moment to the Army's present search. Some of these materials had been withdrawn or loan by the Air Force Surgeon General's NTPR Project Officer (Lt Colonel George S Kush) and were available for further study in his Forrestal Building offices.

4. CONCLUSIONS:

a. That no significant Desert Rock Exercise documentation or leads to the identification and location of such documentation exists either in Headquarters 6th US Army or in The Presidio Post Records Holding Area.

b. That no Exercise Desert Rock documentation of any moment to the Army's current field search presently is held by the FARC-San Francisco. This includes records retired into Records Groups 181, 342, 372 and 430.

c. That the records management program of the Headquarters 6th Army and the Post Presidio revealed glaring historical weaknesses which have been allowed to develop over a 25-year period and which institutional memory cannot satisfactorily explain away at this time.

d. That Letterman Army Medical Center at The Presidio played no operational or after action role in the Desert Rock Exercise series and neither holds currently or has retired previously any such documentation central to the Army's field search.

5. RECOMMENDATIONS:

a. That the San Francisco phase of the field search for Exercise Desert Rock documentation be closed negatively.

b. That maintenance and preservation of historical records processing, storage, holding and retirement documentation of Army Records Holding Areas be may a standing item on future field surveys conducted by the HQDA Records Management Division.

JOHN HENRY HAICHER, PHD
Chief, Declassification
Operations Branch

Trip Report of Field Search
for Exercise Desert Rock Documentation
Conducted by Representatives of The Adjutant General
18 June 1978 to 14 July 1978

ANNEX F
Headquarters 7th Infantry Division and Fort Ord, Monterey, California
Dates of Visit: 6 July 1978

1. PERSONNEL AND ORGANIZATIONS CONTACTED:

a. Mr George Ausderau, Post Records Management Officer
b. Mr. Robert Richards, Force Development, 7th Infantry Division
c. Mr. John Robotti, Directorate of Maintenance, 7th Infantry Division

2. BACKGROUND:

a. A complex of mid-California US Army forts and installations acted as staging areas and contributed massive numbers of participation troops to the 1950 nuclear tests and Desert Rock Exercise series. Most important among these installations were Camp Irwin, Fort MacArthur and Fort Ord. As the atmospheric nuclear test series ended and Army operational need changed, closure and consolidation eliminated this connected complex. In addition to the troop personnel contributed and staged by the Army Infantry Training Center then operating there, Fort Ord was also the home of the short-lived US Army Combat Developments Command Experimentation Center.

b. Known retirements of records created by the Experimentation Center dealt with various phases of Desert Rock. This however was largely in an after-action fashion wherein data collected during the exercise series was later studied and exploited by the Experimentation Center. This made the record audit trail sufficiently clear to view Fort Ord as a possible starting point for search for the missing documentation. Moreover, the consolidation of Camp Irwin with Fort MacArthur as Irwin closed and the subsequent consolidation of MacArthur with Ord on MacArthur's closure made the possibilities of this audit trail even brighter.

3. CURRENT OPERATIONS:

a. Fort Ord is now the home of the 7th United States Infantry Division; both the former Infantry Training Center and USACDC Experimentation Center have long since disappeared via re-organization and consolidation. The Records management function at Ord has successfully escaped the ravages of time and holds a consistent, continuous history of operation pre-dating the 1950 test and exercise series. As both Irwin and MacArthur closed, their records holding areas together with control documentation and stored records were consolidated and eventually were merged with the Ord function. This is a splendid example of how the historical control function should operate in the field in stark contrast as to how it happened at The Presidio. Unfortunately, no significant mention of Desert Rock was found in any of this documentation.

b. There were references to claims and litigation arising from the test exercises in the Fort MacArthur documentation. Though not examined physically at the time as not being responsive to the immediate thrust of the search, this documentation still exists and could be of assistance in possible legal

actions arising from later phases of the NTPR Project. If required, this trail may be pursued directly with the Fort Ord Records Management Officer. The real significance of the audit of the Fort Ord Records Holding Area was again to verify the suspicion and tentative conclusion that Desert Rock Exercise records generated in the field and at Camp Desert Rock did not move through normal records retirement channels.

c. In the area of institutional memory, contributions to the field search by Fort Ord personnel were far more promising. Several present members of the 7th Infantry Division staff had been directly involved in several of the different shots and exercises. Mr Ausderau, Hq 7th Infantry Division and Post Fort Ord Records Management Officer, arranged an informal seminar which many of these oldtimer staff members attended and made valuable contributions. Most helpful along these lines were Mr Robotti's remarks and explanations as to how certain administrative details were handled.

d. Early in the exercise series, the practice developed of requiring the exercise staff to remain in place at Camp Desert Rock and the Mercury Test Site until the After-Action Reports had been completed and final drafts had been approved. Drafting and final typing were accomplished at the exercise site. The finished masters for printing were then sent to the post printing and reproduction facility at The Presidio for printing and distribution. Mr Robotti was certain that few of the exercise records per se ever left the site -- at least, not within the scope of his experience and memory. This might well explain the gradual erosion and dissipation of the Desert Rock record collection over an 8-10 year period of administration by a rotating and constantly shifting exercise staff. As the exercise series continued, older materials still on-site which had been used to prepare the official record of the exercises -- the all-important After Action Reports -- would gradually lose importance in the eyes of each succeeding crop of exercise staffers.

e. Moreover, much of the material generated in the field was disposable. Disposal standards even then allowed for destruction of much of this material in the current files area -- which in this case could have easily been the tents of Camp Desert Rock. The inference is strong that a great deal of disposal took place in the field. This could have been in the shape of destruction of clearly identified disposable materials and the donation of other materials, such as the dosimetry data, to the contractor operating the AEC (Camp Mercury) Test Site. Mr Robotti had no personal knowledge of any of this actually happening nor did he make any such positive statement. However, the evidence at hand certainly leads to such a conclusion.

4. CONCLUSIONS:

a. That neither directly nor on the basis of consolidation and succession to other closed post functions Fort Ord has had no involvement in handling, processing, storing or retirement of Exercise Desert Rock documentation.

b. That institutional memory of the working of the administrative apparatus developed to manage the Desert Rock Exercise series is excellent at Fort Ord and has contributed valuable leads and inferences to the current field search for long-missing Exercise Desert Rock documentation.

c. That the historical continuity of the internal management files and documentation of the Fort Ord Post Records Holding Area is excellent and that it currently enjoys superior management under the present Records Management Officer and Staff.

5. RECOMMENDATIONS:

a. That the Fort Ord portion of the current field search for Exercise Desert Rock documentation be closed negatively, but that certain leads developed at Fort Ord be pursued in the St Louis collection of retired US Army field commands records.

b. That the Post Records Management Officer for Hq 7th US Infantry Division and Fort Ord be officially commended for excellence of his management of this function.

JOHN HENRY HATCHER, PHD
Chief, Declassification
Operations Branch

Trip Report of Field Search
for Exercise Desert Rock Documentation
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ANNEX G
Federal Archives and Records Center-Los Angeles (at Laguna Niguel, CA)
Dates of Visit: 7 July to 8 July 1978

1. PERSONNEL AND AGENCIES CONTACTED:

a. Mr Robert Cornell, Director, FARC-Los Angeles
b. Mr James Mouat, Chief Accession/Disposal Branch, FARC-Los Angeles

2. BACKGROUND:

a. The Federal Archives and Records Center-Los Angeles is located in the Laguna Niguel hills about 40 miles south of the Los Angeles International Airport. It current occupies space in the former Rockwell Industries building which was acquired by GSA under the Nixon Administration when planned NASA and aerospace expansion never took place. The FARC-Los Angeles had previously been located at Bell, California; it was probably moved to Laguna Niguel in thinly-disguised justification for the government bail-out of Rockwell Industries ! Its present location certainly offers little regional or geographical convenience to its clients.

b. While located at Bell, California, the FARC-Los Angeles had been designated as the regional federal records center to receive and service the retired GOCO records of both the Reynolds Electrical & Engineering Company, Inc., and Narver and Holmes, Inc. This center has served both of these clients since approximately 1957. Except for possibly the withdrawal and shipment mishap noted in Annex A, this arrangement has been generally mutually satisfactory. US Army assets held by the FARC-Los Angeles were completely inventories in connection with Phase III of the Master Survey of US Army Records Held by Regional Federal Records Center, March-May 1976. This inventory failed to identify any records generated as a result of participation in the Desert Rock Exercises by Army field commands.

c. No effort was made during the Master Survey of USA Records to examine other assets held by the Los Angeles FARC in Records Groups 181 (USN); 342 (USAF); 374 (DNA); or 430 (GOCO). In connection with complete prosecution of the field search for Desert Rock documentation, arrangements were made with the affected agencies to examine these holdings in much the same manner as had been done at the San Francisco FARC.

3. CURRENT OPERATIONS:

a. All records held by the Los Angeles are now administered under the computerized NARS-5 control system. This made possible a double audit of the assests of the Records Groups under consideration. In this manner, computer runs for each records group were manually screened against the hardcopy files

of original transmittal documents on which retired the records from the generating-shipping activity to the depository. While the controls were excellent, the audit failed to reveal any additional documentation germane to Army interests.

b. The USN, USAF and DNA records held by the Los Angeles FARC were exclusively of fairly recent origin and all generally disposable. Certainly, nothing from the decade of the 1950's was discovered in these retired collections. Records Group 430 for Government-owned,contractor-operated assets told a different story. Both Narver and Holmes and REECO had retired several hundred feet of records over the years dealing with the atmospheric tests of the 1950's. The division again was fairly clear-cut throughout: REECO's retired records dealt with continental US testing; Narver and Holmes were concerned with the Pacific Test Sites and results. Nothing in the Narver and Holmes retired collection appeared to be of significance to the Army's current field search.

c. On the otherhand, the REECO retired collection held paramount concern for the Army ! These records were withdrawn from the Los Angeles FARC by REECO about one year ago as detailed in Annex A. Since this withdrawal action had been accomplished by telephone and correspondence from the Mercury Test Site, a definite possibility of inadvertent ommission or failure to ship existed. Accordingly, a careful audit was made of the REECO account, i.e., the bookkeeping records of what REECO had requested compared with what the Center files showed to be onhand at the time of the shipment and the balances remaining in the FARC-Los Angeles after the shipment. This procedure brought one significant block of 1947-55 dosimetry records to notice which appeared not to have been requested by REECO or shipped by FARC-Los Angeles.

d. Unfortunately, this turned-out to be a bookkeeping error -- of the sort that we were not looking for ! When we went to the shelves to withdraw these records for examination, we found the shelves bare. This collection had, in fact, been shipped to REECO and had been included in the 188-box shipment which arrived at the Mercury Test Site in such discouraging disarray. REECO later verified that these materials had been shipped, had been received, had been included in the microfilm project, and were currently in process of being listed in the hardcopy inventory of the microfilmed collection. FARC-Los Angeles accounting records were subsequently corrected to show this transaction.

4. CONCLUSIONS:

a. The FARC-Los Angeles currently holds no Desert Rock Exercise documentation in Records Groups 181, 338, 342, 374 and 430 of any significance to the Army's present needs. GOCO records in RG 430 deposited by Narver and Holms are largely limited to Pacific Test Sites, but could be of marginal utility to later aspects of the NTPR Project.

b. All materials previously deposited with the FARC-Los Angeles by REECO and of significance to current Army interests have been withdrawn and returned to the Mercury Test Site. A complete microfilm of this collection along with a hardcopy index will be made available to the Army by REECO in due course.

5. RECOMMENDATIONS:

a. That the field search for Desert Rock Exercise documentation in the holdings of the GSA Federal Archives and Records Center-Los Angeles be closed negatively.

b. That complete copies of the microfilm of the REECO Dosimetry data collection along with the hardcopy index thereto be procured at the earliest possible date for exploitation by the Army NTPR Project Task Force.

JOHN HENRY HATCHER, PHD
Chief, Declassification
Operations Branch

Trip Report of Field Search
for Exercise Desert Rock Documentation
Conducted by Representatives of the Adjutant General
18 June 1978 to 14 July 1978

ANNEX H
National Personnel Records Center, St Louis, Missouri
Dates of Visit: 9 July to 14 July 1978

1. PERSONNEL AND AGENCIES CONTACTED:

a. Mr Warren Griffin, Director, National Personnel Records Center
b. Mr J D Kilgore, Chief, Military Records Division
c. Mr Thomas Helfrich, Chief, Military Operations Branch
d. Mr Arnold Essenpreiss, Archives Technician
e. Mr Eugene Herbig, Archives Technician

2. BACKGROUND:

a. Contrary to implications of its name, the National Personnel Records Center at St Louis holds considerable organizational as well as personnel records. After passage of the Federal Records Act of 1950, lengthy negotiations between the Army and the General Services Administration resulted in the Army ceding its records, facilities and trained personnel at St Louis, Kansas City and Alexandria to the National Archives and Records Service. Specifically, these functions and assets were placed in the custody of the Assistant Archivist of the United States for Federal Records Centers. Steady and unilateral erosion of these services over the past 23-24 years finally resulted in the Army's all but complete loss of intellectual control over its retired records inventory.

b. This process commenced circa 1955-56, when the first shipments of Army field command records arrived at St Louis with consignment to the GSA federal records center instead of the Army records center. The GSA center continued to operate in former Army space and initially followed procedural handling patterns developed by Army Records managers. Kansas City ceased Army-wide records center operations and became a regional federal records center. The HQDA Departmental Records Branch suspended operations in the old WWI torpedo factory in Alexandria and became the forerunner of the GSA Washington National Records Center. The Kansas City records center virtually went out of business and shipped the vast majority of its military holdings to Alexandria. This point assumes great importance in later tracing and locating the retired records of the Armed Forces Special Weapons Project. St Louis continued its normal functions associated with the administration of official personnel files for both military personnel and civilian employees following long-standing Army procedures.

c. From the period 1956 through 1968 -- at which date the Washington National Records Center building was completed at Suitland, Maryland -- all Army field command records were shipped to St Louis. After 1967-68, instructions were issued to Army field commands to re-direct their retired records to the Washington National Records Center at Suitland, Maryland. Naturally, this word never got to everybody in the field at the same time. Further complicating the handling of the records of the Army field commands was an esoteric division

in the handling of organizational records. All personnel jackets would go to St Louis; all organizational records of a personnel supportive nature, i.e., personnel orders, clinical hospital records, special orders, courts-martial documentation, etc., would go to St Louis; and, finally, all other organizational records would go to Suitland, Maryland. For some years, mixed shipments continued to arrive at both St Louis and Suitland. When this happened, GSA Center personnel segregated the shipments and automatically forwarded the misshipped materials to the proper center.

d. This practice continued through the period of the Vietnam War but not with 100% consistency. Consequently, some mixing of these materials still exists in both GSA Centers. This introduces another confusion factor in the records management picture at the Army Departmental level which results in considerable lost motion and duplication of effort. This service is no longer even partially furnished by the federal records centers. Currently, shipments which arrive from the field at any of the GSA federal records centers which do not meet Center arrangement standards precisely are simply refused and returned to the shipper -- quantity notwithstanding -- at the original shipper's expense. Moreover, at the close of the Vietnam War, the GSA federal records centers completed their transformation from a records service center to a records storage warehouse. No longer did they perform any appreciable reference service for any of their clients -- the Army included.

e. Faced with the enormous burden of overnight responsibility for reference, research and retrieval service on its entire retired records inventory, a project was launched in 1974 to enable the Army to regain intellectual control of its retired records inventory. A one-year trial project which used the Vietnam War retired records collection (40,000 linear feet) as a pilot model was used to develop the techniques which might later be used to control the total Army inventory. The pilot model was successful. The Vietnam War Collection was brought under sufficient intellectual control to allow for effective research and retrieval service by Army personnel -- unassisted by GSA personnel -- old agreements notwithstanding ! The same techniques were then applied to the Master Survey of Retired US Army Records Held by Federal Records Centers.

f. Fortuitously, Phase II and Phase IV of the Master Survey concerned themselves with the Army's organizational records held by the National Personnel Records Center at St Louis. Both phases had been completed at the time the NTPR Project demanded a field search for Desert Rock Exercise documentation. Consequently, when tasked with the field search requirement, the Records Management Division had a better inventory in hand of the St Louis Collection than had been preserved in the field by the original shipping and creating activities. Headquarters 6th US Army is a prime example of this. However, real depth of this condition was not known until on-site surveys and visits to the field had been completed. The Master Survey inventories showed only scattered references to Exercise Desert Rock. It also identified appreciable blocks of exercise records of the late 1950's and early 1960's which had been retired as EXERCISE RECORDS BY EXERCISE DIRECTORS. Such was not the case with Desert Rock.

g. Knowledge of this situation shaped the nature of the field search for Desert Rock Exercise documentation. Emphasis throughout the field search was on positive identification of military organizations which played any role in the exercises either in direct support or troop participatory activities. It

was reasoned that in the absence of an identifiable, discrete collection of retired Desert Rock Exercise documentation, such a collection might be pulled together even at this late date from the individual retirements of involved and participating organizations. The Master Survey had relied to a major degree on extant control and transmittal documentation (DD 111, DA 2172, SF 135 Files, etc.) with only some sampling examination of the records. This was mainly to test the reliability of the control documentation. Hence, the hidden existence of a piecemeal collection scattered through the St Louis holdings offered a most attractive line of inquiry for testing when the field search again centered on the St Louis collection.

3. CURRENT SITUATION:

a. On completion of the more westward portions of the field search, a special ad hoc search team was formed at the National Personnel Records Center in St Louis. Dr Hatcher was joined by Dr Robert P. Smith from the HQDA Records Management Division in Washington and Mr. Arnold Essenpreiss, Archives Specialist, Military Organizational Records, National Personnel Records Center, St Louis. Immediate attention of the search team was a re-check of all Desert Rock Exercise primary and cross-references contained in the Military Organizational Records Index. These records were then examined physically for content and applicability to immediate requirements of the Army NTPR Project Team. This had been done previously by other searchers at an earlier stage of the quest for Desert Rock Exercise troop participation data. No discrepancies were noted from the earlier search; no new data was located.

b. Search was then centered on the retired records of the special list of involved organizations which had been developed during the first two weeks of the field search. Identification of these organizations and units came from two main sources: (1) Institutional memory of individuals located at various points of the field search itinerary who had firsthand knowledge of or who had participated in various Desert Rock Exercises; and, (2) from study of various technical publications and studies held by the Combined Technical Library of Kirtland Air Force Base. A representative list of these organizations follows:

(1) US Army Chemical Center
(2) US Army Edgewood Arsenal
(3) US Army Chemical Corps School, Fort McClellan, Alabama
(4) Armed Forces Special Weapons Project
(5) Camp Irwin, California
(6) Fort MacArthur, California
(7) US Army Dugway Proving Ground
(8) US Army Evans Signal Corps Laboratory
(9) US Army III Corps
(10) US Army 1st Armored Division
(11) US Fourth Army
(12) US Second Army
(13) US Sixth Army
(14) US Army 1st Radiological Safety Support Unit
(15) US Army 9778th Technical Support Unit, Fort McClellan
(16) US Army Armor and Desert Training Center, Fort Irwin
(17) US Army Combat Developments Command Experimentation Center
(18) US 16th Armored Group

(19) US Army 84th Engineer Battalion
(20) US Army 26th Truck Transportation Battalion
(21) US Army 43rd Medical Group
(22) US Army Redstone Arsenal
(23) US Army Post Fort Polk
(24) US Army Post Fort Sam Houston
(25) US Army Post Camp Roberts
(26) US Army Post Camp Desert Rock
(27) US Army Post Fort McClellan
(28) US Army Post Fort Ord
(29) US Army Post Fort Monmouth
(30) US Army Post Presidio of California
(31) US Army 216th Chemical Service Company
(32) US Army 232nd Signal Company
(33) US Army Signal Corps Research and Development Laboratory
(34) US Army Signal Corps Engineering Laboratory
(35) US Army Signal Corps Center

c. Extensive and conclusive search of the retired records of each of these organizations held by the National Personnel Records Center failed to produce more than scattered, fragmentary and general references to Desert Rock. Because of their overriding importance, decision was taken at that time to extend the field search for three of these organizations into the Washington National Records Center. These were the Armed Forces Special Weapons Project, Headquarters Sixth United States Army, US Army Post Presidio of California. Results of this extended search are discussed below. Search then centered on the units and military organizations known to have participated in the Desert Rock Exercises. Identification of these units was taken from the official after action reports and for the purposes of this search were limited to Desert Rock IV and Desert Rock V.

d. Desert Rock IV and Desert Rock V were singled out due to relative paucity of troop participation data which had been located from other sources for them up until this search. Two lines of archival investigation were followed. The first of these was the traditional identification of all known retired records from each of these organizations from the St Louis Index. All mission records located in this manner were then "pulled off the shelf" and examined physically. This failed to produce any Desert Rock data of consequence. The second line involved the Special Orders of each of these organizations which would logically document all temporary duty assignments. This was a difficult and complex procedure. Many of the participating military organizations did not have special orders issuance authority; hence, the next superior element in the chain of command with such authority AT THAT TIME had to be identified and the special Orders which it issued had to be manually screened.

e. While tedious and time-consuming, identification of superior special orders issuing authority could usually be determined by content of the retired records of the unit under investigation. A trial block of Special Orders for one participating organization was examined and found to contain multiple references to "Desert Rock TDY's." All existing record sets of such publications for all known participating organizations in Desert Rock IV and Desert Rock V were then ordered for permanent withdrawal and shipment to Washington for detailed examination. This amounted to some six linear feet of material. The

rationale here was that if this exercise proved fruitful, then similar orders would be given the National Personnel Records Center to pull and ship the appropriate annual record sets of special orders for ALL PARTICIPATING ORGANIZATIONS IN ALL EIGHT DESERT ROCK EXERCISES. Recent handling of this series of orders raises grave doubt, however, as to the bottom line value of such a line of inquiry.

f. Three things happened in the past five years whose combined weight drastically impairs the integrity and value of this series of records. First came the disastrous 1973 fire in the National Personnel Records Center which resulted in complete loss of its 6th floor. This contained about 25% of the Center's available storage space and probably 85% of the Army's World War II vintage personnel records. Space became a pressing problem for the Center. Coincidentally, an Army Records Management study in the area of personnel related records indicated that existing disposal standards for the special orders series were unrealistic. This standard was then reduced from "Permanent" to FIVE YEARS which was quite in keeping with GSA-NARS desires but which was later discovered to be entirely too liberal for Army requirements. This standard has since been revised to require retention for 15 years, but too late to halt the damage to probable NTPR Project utility.

g. In 1973, the National Personnel Records Center was about 25 years behind in its disposal work. The fire and loss of storage space propelled GSA into a drastic effort to catch up on its long-overdue disposal and thus free up critically needed storage space. The Army's change in disposal standard placed all Army special orders held by the National Personnel Records Center in an overage category and thus eligible for immediate destruction. Still, the impact would not have been too severe if normal GSA inventory procedures had prevailed. Special Orders record sets would have been routinely distroyed as they were located by the on-going systematic inventory -- a process which would probably run some 3-5 years. Unfortunately, some items contained in Army Special Orders assumed transcendent importance in reconstructing official personnel files destroyed by the fire. Prominent among these were announcements of enlisted discharges, officer appointments, resignations, promotions, etc. Any of these personnel actions have the legal weight of establishing proof of military service -- at least, so far as the Veterans Administration and claims for benefits are concerned.

h. Commencing in 1976 a concerted effort was made by the NPRC Reconstitution Unit to located ALL record sets of Army Special Orders held in the St Louis collection. As these blocks of records were located, they were withdrawn and manually screened by the Reconstruction Unit. All special orders which announced personnel action that tended to establish proof of military service were withdrawn from the record sets. In many cases, these single pieces of paper became the entire "201 File" of an effected former service member. Those special orders which were devoid of this type of personnel action (which did not include temporary duty assignments) were routinely destroyed. Thus, the vast majority of these record sets of Army Special Orders were deliberately mined-out of the main collection by GSA personnel legally and for good purpose. Unfortunately this just happens to run counter to the needs of the NTPR Project at this time. However, some undisturbed sets of these orders still exist; some were located and shipped to Washington; and a contingency freeze was placed on any further destruction during the field search. Again, the fates seem to have smiled on

the Air Force. The Air Force record sets of Special Orders are still held on permanent retention at St Louis and theoretically have never been disturbed. Hence, Air Force NTPR Project investigators might well follow this line of inquiry with conclusive results. This might also serve US Navy ends very well. For Army needs, it is at best only a possible contributory source of data.

i. As a result of information received from the Lexington-Bluegrass Army Depot Activity health physicists, a special investigation was opened into the availability of student and class records of the US Army Chemical Corps School at Fort McClellan. Here the picture is much brighter. Service school records have traditionally been considered as supportive of the individual personnel records and as such are shipped to the National Personnel Records Center as either "Permanent" or for long retention periods. At this time, it appears that the National Personnel Records Center holds a virtually mint-set of individual academic records with class and faculty files for the total operation of the school at Fort McClellan. A name list was located which appears to identify a large number of students who completed Radiological Defense training. This roster is appended to this Annex for record purposes in the event the NTPR Project investigation dictates action along this channel. For safety, a contingency freeze was placed on all known retired records of the Chemical Corps School until final decisions are forthcoming.

j. An extremely promising line of investigation was opened at St Louis into the records of the Armed Forces Special Weapons Project. A single transmittal document was located in the St Louis Index which described a 44-linear foot shipment of the 1950-53 AFSWP records. This document was found mis-filed with some other minor "Armed Forces" activity indices. It was unclear whether these materials had ever been to St Louis or whether they might have been handle through Kansas City. Hand annotation on the transmittal document indicated shipment to Alexandria probably sometime after 1962. Previously examined AFSWP records held by the National Archives did not account for the materials described by this document. However, by matching pages of the St Louis transmittal document with Washington National Records Center files, this shipment was located. It was part of approximately 600 linear feet of AFSWP materials which are still retained in federal records center channels in Records Group 374. This collection appeared to account for most of the missing AFSWP materials from the fragmentary collection held by the National Archives. Arrangements were made immediately with the Defense Nuclear Agency to examine this material for Army interests. Air Force and Navy NTPR Project officers were invited to join in this effort. A computer inventory of these materials along with a NARS inventory of other DNA materials already in the National Archives are appended to this Annex.

k. An essential extension of the overall NTPR Tasking assigned to The Adjutant General involves the US Army Reserve Components and Personnel Administration Center. USARCPAC coincidentally is located in the same building in St Louis as the National Personnel Records Center. On conclusion of essential search activities in the St Louis Collection of field command retired records, a brief orientation visit was paid the USARCPAC NTPR Unit. The primary concern of this unit is correlation of troop identification data developed by the HQDA NTPR Project Team with extant official personnel files held by the National Personnel Records Center. Discussions centered on current operations plans for the future, and other problems of mutual interest. It was an invaluable sidelight of the field search for the HQDA representatives.

4. NPRC RESEARCH NOT RELATED TO THE NTPR PROJECT:

a. There are no disposal standards for official personnel files at this time. This not only affects the Army but all OSD activities as well as the entire federal government -- military as well as civilian employees. Theoretically, personnel records, once created for whatever period of federal service, become "Permanent" records. The proliferation and growth of such record collections is unbelievable. Already, this collection has grown beyond the holding capacity of the National Personnel Records Center main building on Page Avenue in St Louis. Several years ago, a division was made between military and civilian personnel records by the National Personnel Records Center. Military records were retained in the Page Avenue building and civilian records were re-located in a second building on Winnebago Street in another section of St Louis. Currently, both of these buildings are commencing to strain at the seams in their struggle to cope with the burgeoning volume.

b. Obviously some device or standard is urgently required to allow for more effective management of these files. All of these records possess one common characteristic and justification for retention FOR A PERIOD. This period should be a statistical measurement as to how long such files should be preserved in order to guarantee earned benefits and entitlements under the law to the service member and his immediate dependents. This period should be definitely stated in term of years, i.e., 25 years, 56 years, 75 years, etc. After individual entitlements had been fully met, disposal standards could then come into play. This is not viewed as a serious or insurmountable problem. Moral and legal agreement on a specific term of years for retention could put this ever-mounting volume on a manageable and programmatic basis. This, however, is but one aspect of the problem.

c. Aside from the purely intrinsic value to the individual to which it pertains and specifically for whom it was created, there is also an extrinsic value to be considered. This takes the form of archival and historical interest. Some official personnel files are clearly more important to the history of the nation and the American people than others. Here the decision is not so clear cut or obvious. The military career, i.e., OPF, of General Henry A. (Hap) Arnold is far more important to the history of American airpower than the OPF of a World War II Army Air Corps recruit who didn't make it through basic training. Yet both files are currently considered permanent. Nor does adequate administrative machinery exist for doing anything with each file except to store it in St Louis. Separation of the famous from the unsung is not the only problem. What is to be done with the infamous ? The Lee Harvey Oswalds ? The Private Eddie Sloviks ? Certainly the famous bad guys as well as the famous good guys have their measured impact on American history. Who is to make the decision of which OPF's are added to the National Archives and which are sent to the paper re-cycling mills ?

d. Up until this time, GSA officials of the National Personnel Records Center have made a decision of sorts in this area. Using selection criteria based broadly on rank, position and newspaper notoriety, certain OPF's have been segregated at the National Personnel Records Center. This "VIP Section" is maintained under special security conditions to prevent idle perusal or pilfering by the general work force of the Center. Internal GSA memoranda defining the selection criteria for OPF addition to the VIP File is appended

to ıs Annex along with a computer list of the OPF's currently included in th VIP File.

e. A broad sample of OPF's from the VIP File were examined during the field search both for content as well as condition. Many were found to be fire and water damaged from the 1973 file. None are maintained under controlled humidity conditions;all show increasing ravages of normal deterioration. Many are in desperate need of preservation at this time. Special projects were recently mounted to attend to the OPF's of General Eisenhower and General Patton. While the end results were eminently satisfactory, these projects were too narrowly conceived to be of general utility and value. A broad, general, systematic preservation program should be iniated at once which would attend to the damages resulting from the 1973 fire as well as normal storage deterioration.

f. The term OPF as applied in its present context to these files is very mis-leading. This is especially true of the "Big Name" files of World War II and earlier vintage. The files examined revealed an overriding preponderance of non-personnel related papers. Probably less than 10% of the general content of these files consist of forms, qualification statements, personal, health, financial or family data normally associated with personnel administration. The far larger portion of these files deals with day-to-day matters, decisions, actions, operations, etc., that the individual was involved in in pursuit of his official duties. Hence, a relatively small part of these files might be considered closed to historical inquiry under Privacy Act implications. And even this is questionable. The larger portion of these files would be more correctly characterized as "personal papers." And here again is a question as to whether or not many of these "personal papers" might not in fact be official federal records. The fact remains that a considerable amount of national history is contained in these files which may be missing from the National Archives.

5. CONCLUSIONS:

a. That the general collection of retired field command records held by the National Personnel Records Center at St Louis contains no appreciable concentrations of Desert Rock Exercise documentation.

b. That the surviving record sets of Special Orders still available in the St Louis Collection may contain contributory increments of troop participation data from the Desert Rock Exercises.

c. That leads to the missing AFSWP retired records of the 1950's which were developed in connection of examination of the St Louis collection may be the most valuable find of the entire field search.

d. That retention and disposal standards could be developed which would cope effectively with the ever-increasing volume of official military and civilian personnel records being retired to the National Pe· ·nnel Records Center.

e. That the Army portion of the VIP Personnel File maintained by the National Personnel Records is urgently in need of preservation and might well be used as the vehicle for developing OPF disposal standards.

6. RECOMMENDATIONS:

a. That the field search for Desert Rock Exercise documentation in the National Personnel Records Center US Army Field Command retired records collection be closed negatively except for possible further screening of surviving record sets of special orders.

b. That the approximately 600 linear feet of Armed Forces Special Weapons Project retired records discovered in the Washington National Records Center as a result of leads from St Louis be manually examined immediately for troop participation data required by the Army NTPR Project Team.

c. That the Army portion of the VIP Personnel File maintained by the National Personnel Records Center be offered to the National Archives for permanent accessioning thus precipitating a record appraisal which may lead to formal disposal standards for official personnel files throughout the federal government.

APPENDICES:

1. Description of RG 374 Holdings in the National Archives
2. ADP Inventory of AFSWP Records in Frc Channels at WNRC
3. Inventory of the Retired Records of the USA Chemical Corps School
4. ADP Inventory of the VIP File
5. GSA/NARS/NPRC Memoranda for Maintenance of the VIP File

JOHN HENRY HATCHER, PHD
Chief, Declassification
Operations Division

Trip Report of Field Search
for Exercise Desert Rock Documentation
Conducted by Representatives of The Adjutant General
18 June 1978 to 14 July 1978

Records of the Defense Atomic Support
Agency (and the Armed Forces Special
Weapons Project) Held by the National
Archives in Record Group 374

APPENDIX #1 to ANNEX H

RECORDS OF THE DEFENSE ATOMIC SUPPORT AGENCY

(RECORD GROUP 374)

The Defense Atomic Support Agency (DASA) succeeded on May 6, 1959, the Armed Forces Special Weapons Project (AFSWP) that, in turn, had replaced the Manhattan Engineer District in 1947. DASA is an interservice agency whose director is responsible to the Secretary of Defense through the Joint Chiefs of Staff. DASA administers Defense Department nuclear weapons policy and programs and the nuclear stockpile, coordinates policy with the Atomic Energy Commission and advises the Joint Chiefs of Staff on nuclear weapons matters, performs research and testing, inspects installations associated with nuclear activities, and conducts training and educational programs. DASA also maintains and operates the Joint Nuclear Accident Coordinating Center and provides support for the Joint Atomic Information Exchange Group. The agency maintains a headquarters in Washington, a joint task force, a test command, a field command in Albuquerque, N. Mex., an Armed Forces Radiobiology Research Institute in Bethesda, Md., and military units at certain storage locations.

There are 456 cubic feet of records dated between 1943 and 1971 in this record group.

GENERAL RECORDS. 1947–55. 181 lin. ft.

Almost all general records are in classified decimal correspondence files, 1947–55, and relate to policy and programs for organization, administration, and operation of nuclear weapons programs. The files consist of issuances, intraoffice communications, reports of investigations and inspections, correspondence, and reference material.

RECORDS OF OFFICES, DIVISIONS, AND BRANCHES. 1943–55. 45 lin. ft.

These include a subject correspondence file, 1945–54, of the Office of the Deputy Chief; records of the Office of the Technical Director, including minutes, reports, and correspondence of the Armed Forces-Atomic Energy Commission Panel on Radiological Warfare and the Ad Hoc Committee on underwater atomic weapons testing, 1947–54; reports concerning the evaluation and analysis of research and development projects, 1943–48, of the Office of the Historian; the special projects file of the Analysis Branch, Weapons Effects Division, consisting of correspondence and other records relating to the collection of atomic weapon effects and the development of radiological defense procedures, 1950–53; logs and journals of the Radiation Branch, 1947–54; technical publications of the Technical Library Branch, 1946–50; records of the Security Division, consisting of the counterintelligence investigative file, 1947–52, and material relating to security clearances and the exchange of information with foreign countries, 1952–54; a Budget and Fiscal Division subject file of correspondence relating to budget estimates and justifications, 1947–55, and the subject file of reports, contracts, correspondence, and other records relating to construction of facilities at test sites, 1948–51; records of the Plans Division, consisting of the organizational planning records of the Manpower and Organization Branch, 1952–55; records of the Special Field Projects Division, consisting of reports, budgetary records, correspondence, and records relating to Operation Wigwam, 1953–55; records of the Test Division, consisting of the special operations file of orders, reports, and correspondence relating to special atomic weapons test operations, 1948–53; and records of the Weapons Development Division, relating to development, production, and administrative practices concerning nuclear and thermonuclear weapons, 1948–53.

RECORDS OF SPECIAL DETACHMENTS. 1943–52. 4 lin. ft.

AFSWP personnel served on occasion in facilities of the Atomic Energy Commission to collaborate on matters relating to military application of Commission work. Records of special detachments consist of the file of general and special orders relating to military personnel assigned to the detachment at Oak Ridge, Tenn., 1943–52, and the administrative subject decimal file of the 8453d Antiaircraft Unit, Special Weapons Detachment, 1946–52.

RECORDS OF JOINT TASK FORCES. 1946–55. 230 lin. ft.

For each AFSWP nuclear test operation a specific joint task force was established, composed of a task group from each service. The groups were identified by a decimal added to the number designating the task force. Special technical groups associated with a specific operation were also identified in this manner.

Records of Joint Task Force 1 relate chiefly to Operation Crossroads and subsequent followup activities. The records include a numeric-subject correspondence file, 1946–47, the numeric file of the Bikini Scientific Resurvey Group, 1947–48, and records of the Office of the Director of Ship Material relating to the planning, preparation, and execution of all nonscientific matters in the operation. Other records include incoming and outgoing messages, 1946, civilian and military orders, 1946, personal history data, 1946, a commendation file,

1945–46, and letters, formal petitions, and other records relating to protests against the testing, 1946. Records of the Army Ground Group at Bikini consist of Operation Plan 1–46 with attached organization charts, annexes, appendixes, and photographs, 1946; a reading file relating to quartermaster activities during the operation, 1946; and test crew reports on the effects of radioactivity, heat, pressure, and blast on certain equipment, 1946.

Records of Joint Task Force 3 relate to Operation Greenhouse and include general correspondence relating to organization and administration, 1949–51; a personal name file of orders and other records relating to the assignment, travel, and relief of personnel, 1950–51; cost control reports relating to expenditures, 1949–51; a general topic file of orders, memorandums, reports, and journals; and a supply administrative file, 1950–52. Records of Task Group 3.2 (Army) consist of incoming messages, 1950–51. Records of Task Group 3.3 (Navy) consist of correspondence logs and copies of outgoing messages, 1950–51, and a numeric file of correspondence relating to the Navy's role in the operation, 1950–52. Records of Task Group 3.4 (Air Force) consist of a decimal correspondence file, 1950–51; a general file of orders, plans, and diaries, 1950–51; transcripts of teleconferences, 1950–51, and reports, summaries, and procedural instructions.

Joint Task Force 7 participated in both Operation Sandstone and Operation Castle. Records of this joint task force consist of the general records, with index, of Operation Sandstone, 1947–48; the decimal correspondence file of the Intelligence and Security Section of the Intelligence Division, 1947–48; and correspondence and other records relating to participation of the joint task force in Operation Castle, 1952–54. Records of Task Group 7.2 (Army) consist of the decimal administrative correspondence file, 1953–55, and memorandums, letters, and court-martial orders, 1953–55. Records of Task Group 7.3 (Navy) consist of messages, 1952, a numeric-subject file relating to Operation Ivy, 1952–53, and histories, 1948–53. Records of Task Group 7.6 (Joint Radiological Safety Group) consist of a subject file relating to conduct of radiological safety operations performed as part of Operation Sandstone, 1947–48.

Joint Task Force 132 participated in Operation Ivy and in Operation Windstorm. The records include general decimal correspondence relating to Operation Windstorm, 1950–52, and histories and other papers of previous operations, 1949–52, of Task Group 132.2 (Army); and the decimal file, 1952, and general file, 1951–52, relating to the participation of Task Group 132.4 (Air Force) in Operation Ivy.

AUDIOVISUAL RECORDS. 1947–71. 122 items.

Training films (20 reels), used by the Nuclear Weapons School, 1969–71, made by the U.S. Air Force during the period 1954–62, pertain to various phases of atomic weaponry, including inspection, safety precautions, radiological detection, shipping, prefiring preparation, firing, and radiological anticontamination procedures.

Photographic prints (102 items) of Operation Sandstone (A-Bomb tests at Eniwetok Atoll, 1947–48).

Trip Report of Field Search
for Exercise Desert Rock Documentation
Conducted by Representatives of The Adjutant General
18 June 1978 to 14 July 1978

Washington National Records Center
NARS-5 Computer Inventory of the
Armed Forces Special Weapons Project
Retired Records Still in Federal Re-
cords Center Storage Channels

APPENDIX #2 to ANNEX H

FRC	ACCESSION NUMBER	SUB GRP	VOLUME	SP	LOCATION	RSTR	CONT TYPE	AUTO DISP	DISPOSAL AUTHORITY		DISP DATE	SERIES DESCRIPTION	BLOG	COA
W	374-59A1673		9		02-67-03-7-0	S	A	N	340-18/204/01	M	U	JT TASK FORCE56		673
W	374-59A2546		19		02-67-17-4-0	C	A	N	340-18/204/01	M	U	JTF1950-58		673
W	374-59A2644		4		02-67-17-3-0	S	A	N	340-18/204/01	M	U	JTF1949-53		673
W	374-60A1016		5		02-67-31-1-0	S	A	N	340-18/204/01	M	U	AFSWP55 BX1-5		673
W	374-60A1168		2		02-66-51-3-0	S	A	N	340-18/201/05		U	PROPULSION CO*57		673
W	374-60A1194		3		02-66-51-1-0	C	Z	N	340-18/204/01	M	U	JTF ADM RECS57		673
W	374-60A1338		4		02-67-29-7-0	S	A	N	340-18/208/01	M	U	AFSWP53-56		673
W	374-60A1429		5		02-80-23-5-0	S	A	N	340-18/208/01	M	U	AFSWP57		673
W	374-61A1433		7		02-80-23-7-0	S	A	N	340-18/208/01	M	U	JT TASK FORCE59		673
W	374-61A1434		6		02-66-43-7-0	C	A	N	340-14/204/01	M	U	JT TASK59 BX1-5		673
W	374-61A1434		17		08-54-55-4-0	P	A	N	340-14/308/04	M	U	JT TASK59 BX6-22		077
W	374-61A1435		3		08-51-25-7-0	R	A	N	340-18/228/01	M	U	59 BX1-2 & JTF7		673
W	374-61A1439		44		02-67-19-1-0	S	Z	N	340-18/208/01	M	U	DECIMALEPUB52-54		673
W	374-61A1440		6		02-67-17-7-0	S	A	N	340-18/208/01	M	U	SANDIA AFSWP52		673
W	374-61A1441		1		02-67-21-5-0	S	A	N	340-18/227/01	M	U	CLARKSVILLE52-54		673
W	374-61A1446		5		08-56-17-6-0	P	A	N	340-18/207/01	M	U	AFSWP52 BX2-7		673
W	374-61B1446		3		08-56-17-6-0	R	A	N	340-18/207/01	M	U	AFSWP53 BX9-11		673
W	374-61C1446		1		08-56-17-6-0	R	A	N	340-18/227/01		U	AFSWP53 BX13		673
W	374-61D1446		14		08-56-17-6-0	P	A	N	340-18/1012/03		U	AFSWP53 BX14-27		077
W	374-61E1446		3		08-56-17-6-0	R	A	N	340-18/207/01	M	U	AFSWP54 BX28-30		673
W	374-61F1446		20		08-56-17-6-0	P	A	N	NC/330/76/1/141		U	AFSWP54 BX32-51		077
W	374-61G1446		13		08-56-17-6-0	R	A	N	340-18/1012/03		U	AFSWP54 BX52-64		077
W	374-61H1446		1		08-56-17-6-0	P	A	N	340-18/227/01		U	AFSWP54 BX65		673
W	374-61J1446		24		08-56-17-6-0	R	A	N	340-18/1012/03		U	AFSWP52 BX66-89		673

FRC	ACCESSION NUMBER	SUB GRP	VOLUME	SP	LOCATION	RSTR	CONT TYPE	AUTO DISP	DISPOSAL AUTHORITY		DISP DATE	SERIES DESCRIPTION	BLDG	COA
W	374-61K1446		1		08-56-17-6-0	R	A	N	340-18/227/01		U	AFSWP52 BX90		673
W	374-61A1447		3		08-56-23-3-0	R	A	N	340-18/227/01		U	CLARKSVILLE52-56		673
W	374-61A1524		42		02-22-05-1-0	C	Z	N	340-18/208/01	M	U	JT TASK FORCE61		673
W	374-61A1525		6		02-80-23-6-0	S	Z	N	340-14/204/01	M	U	JT TASK FORCE60		673
W	374-61A1740		20		02-67-13-3-0	S	A	N	340-18/208/01		U	TASK GROUP50-59		673
W	374-62A1431		1		02-67-27-1-0	S	B	N	340-18/208/01	M	U	CLARKSVILLE55-58		673
W	374-62A1442		1		02-67-35-5-0	R	B	N	340-18/227/01	M	P72	PUBL-61		076
W	374-62A1443		12		02-67-27-1-0	S	A	N	340-18/227/01	M	P72	PUBL-56		076
W	374-62A1444		1		02-67-35-5-0	S	B	N	340-18/224/02	M	U	INSPEC-56		076
W	374-62A1445		3		02-67-35-6-0	S	A	N	340-18/227/01		U	56 BOX 12-14		177
W	374-62A1502		6		08-56-47-5-0	R	Z	N	340-18/227/01	M	P72	BX1-5A PUBL-55		076
W	374-62B1502		16		08-56-47-5-0	R	A	N	340-18/227/01	M	P72	BX18-33 PUBL-56		076
W	374-62A1503		1		08-56-49-5-0	R	Z	N	340-18/227/01	M	P72	BX6 PUBL-55		076
W	374-62B1503		11		08-56-49-5-0	R	A	N	340-18/1012/03		U	BX7-17 TRNG-55		077
W	374-62A1504		1		08-56-49-7-0	R	B	N	340-18/227/01		P72	BX17A PUBL-55		076
W	374-62A1505		1		08-56-49-2-0	R	B	N	340-18/227/01	M	P72	BX33 PUBL-56		076
W	374-62A1506		1		08-56-49-2-0	R	B	N	340-18/505/01		P72	BX33B SEC-57		076
W	374-62B1507		1		08-56-49-2-0	R	A	N	340-18/227/01		P72	BX36 PUBL-56		076
W	374-62C1507		5		08-56-49-2-0	R	A	N	340-18/1012/03		U	BX37-41 TRNG-56		077
W	374-62D1507		1		08-56-49-2-0	R	A	N	340-18/227/01	M	P72	BX42 PUBL-57		076
W	374-62F1507		5		08-56-49-2-0	R	A	N	340-18/1012/03		U	BX43-47 TRNG-57		077
W	374-62A1564		15		02-67-21-6-0	S	A	N			U	GEN ADM FILES55		076
W	374-62A1565		14		02-67-35-1-0	S	A	N	340-18/227/01	M	P72	PUBL-57		076
W	374-[illegible]1468		12		02-67-3[illegible]-2-0	S	A	N	340-18/208/01	M	U	DECIML&PUB54-58		077

FRC	ACCESSION NUMBER	SUB GRP	VOLUME	SP	LOCATION	RSTR	CONT TYPE	AUTO DISP	DISPOSAL AUTHORITY		DISP DATE	SERIES DESCRIPTION	BLDG	FOA
W	374-63A1469		2		08-56-21-6-0	R	A	N	340-18/227/01	M	U	BX1-2 PUBL-58		077
W	374-63C1469		10		08-56-21-6-0	R	A	N	340-18/227/01	M	P73	BX6-15 PUBL-58		076
W	374-63D1469		6		08-56-21-6-0	R	A	N	340-18/1012/03		199	BX16-21 TRNG-58		076
W	374-63E1469		3		08-56-21-6-0	R	A	N	340-18/227/01	M	P73	BX22-24 PUBL-58		076
W	374-63A1481		1		02-67-27-6-0	S	A	N	340-18/207/01	M	P73	ORG PLNG-60		076
W	374-63A1783		3		02-67-31-4-0	C	A	N	340-18/201/08		P73	SUBJ-58		076
W	374-63A1784		2		02-67-31-5-0	C	A	N	340-18/201/08		P73	SUBJ-59		076
W	374-63A1785		3		02-67-31-5-0	C	A	N	340-18/201/08		P73	SUBJ-60		076
W	374-63A1826		3		02-67-31-3-0	S	A	N	340-18/201/08		P73	SUBJ-58		076
W	374-63A1900		1		08-56-51-6-0	R	A	N	340-18/227/01		P73	PUBL-61		076
W	374-64A2032		13		02-67-31-6-0	R	A	N	340-18/227/01	M	P74	PUBL-59		076
W	374-64A2040		17		08-56-47-2-0	R	A	N	340-18/227/01	M	P74	PUBL-59		076
W	374-64A2066		1		02-67-33-1-0	C	A	N	340-18/228/09	M	P74	DAILY JRNL-60		076
W	374-64A2069		1		02-67-33-7-0	S	B	N	340-18/208/03	M	P74	OPER PLNG-60		076
W	374-64A2393		1		08-51-27-4-0	R	A	N	340-18/228/09		P74	DAILY JRNL-60		076
W	374-65A3046		25		02-67-21-1-0	S	A	N	340-18/207/01	M	P75	ORG PLNG-60		076
W	374-65A3047		11		08-55-19-4-0	R	A	N	340-18/227/01	M	U	60 BX1-5 7 9-13		673
W	374-65B3047		1		08-55-19-4-0	R	A	N	340-18/901/08	M	U	60 BX6		674
W	374-65C3047		3		08-55-19-4-0	R	A	N	340-18/208/01	M	U	60 BX14-16		673
W	374-65D3047		2		08-55-19-4-0	R	A	N	340-18/1012/03		U	60 BX17-18 SCHOL		077
W	374-65E3047		2		08-55-19-4-0	R	A	N	340-18/308/02	M	U	60 BX19-20		477
W	374-65A3063		1		02-67-31-5-0	S	A	N	340-18/227/01		U	CLARKSVILLE61		673
W	374-65A3065		5		02-67-31-2-0	C	A	N	340-18/204/01	M	U	CENTRL DECIMAL61		673
W	374-65A3066		2		02-67-31-6-0	S	A	N	340-18/204/01	M	U	CENTRL DECIMAL59		673

NATIONAL ARCHIVES AND RECORDS SERVICE
ACCESSION NUMBER MASTER LIST (01)
WASHINGTON NATIONAL RECORDS CENTER

12/01/77

FRC	ACCESSION NUMBER	SUB GRP	VOLUME	SP	LOCATION	RSTR	CONT TYPE	AUTO DISP	DISPOSAL AUTHORITY		DISP DATE	SERIES DESCRIPTION	BLOC	DOA
W	374-65A3091		2		02-67-35-1-0	S	A	N	340-18/227/01	M	P75	PUBL-61		076
W	374-65A3052		1		02-67-33-7-0	S	A	N	340-18/207/01	M	P75	ORG PLNG-61		076
W	374-65A3101		13		02-67-27-4-0	C	A	N	340-18/201/08		P75	SUBJ-62		076
W	374-65A3131		12		02-67-27-6-0	S	A	N	340-18/201/08		P75	SUBJ-60		076
W	374-65A3365		2		02-67-29-7-0	S	A	N	340-18/204/01	M	U	CENTRL DECIMAL60		673
W	374-65A3377		12		08-56-51-2-0	R	A	N	340-18/227/01	M	P75	PUBL-61		076
W	374-65A3378		13		02-67-29-1-0	S	A	N	340-18/227/01	M	P75	PUBL-61		076
W	374-65A3385		2		02-67-29-6-0	S	A	N	340-18/208/01		U	JT TASK FORCE62		673
W	374-65A3450		1		02-67-35-1-0	S	A	N	340-18/227/01		P75	PUBL-62		076
W	374-65A3536		3		02-67-29-6-0	S	A	N	340-18/204/01	M	U	CENTRL DECIMAL61		673
W	374-65A3537		5		02-67-29-5-0	S	A	N	340-18/204/01	M	U	CENTRL DECIMAL62		673
W	374-65A3538		1		02-67-29-5-0	C	A	N	340-18/227/01		U	PUBS1962		673
W	374-66A3037		1		08-56-23-4-0	R	A	N	340-18/224/02		U	DASA63 BX1		673
W	374-66A3264		7		02-67-29-3-0	S	A	N	340-18/208/01		U	JT TASK FORCE61		673
W	374-66A3334		3		02-23-22-4-0	C	A	N	[illegible]-18/227/01	M	P76	PUBL-63		076
W	374-66A3360		12		02-67-35-3-0	S	A	N	18/227/01	M	P76	PUBL-62		076
W	374-66A3488		11		08-56-25-1-0	R	A	N	340-18/227/01	M	P76	PUBL-62		076
W	374-67A4569		1		02-67-29-6-0	S	B	N	340-18/1403/15		P77	TECH REPT-63		076
W	374-67A5051		15		08-56-23-5-0	R	A	N	340-18/227/01		P77	PUBL-63		[illegible]
W	374-67A5053		20		02-67-33-4-0	S	A	N	340-18/227/01	M	P77	PUBL-63		176
W	374-67A5206		2		02-67-33-7-0	S	A	N	340-18/227/01	M	P77	PUBL-65		[illegible]
W	374-67A5219		1		08-56-51-6-0	R	B	N	340-18/227/16		P77	PERM ORD 62-66		076
W	374-67A5268		1		02-67-31-6-0	C	A	N	340-18/1510/05		U	CASE 62		077
W	374-[illegible] 59		1		02-67-33-7-0	C	A	N	40-18/505/15	M	P77	SEC CASE-64		76

Trip Report of Field Search
for Exercise Desert Rock Documentation
Conducted by Representatives of The Adjutant General
18 June 1978 to 14 July 1978

Retired Records of the US Army
Chemical Corps School, Fort Mc-
Clellan, Alabama, 1953-1969

APPENDIX #3 to ANNEX H

DEPARTMENT OF THE ARMY
OFFICE OF THE ADJUTANT GENERAL AND THE ADJUTANT GENERAL CENTER
WASHINGTON, D.C. 20314

DAAG-AMR-D

12 July 1978

Director
National Personnel Records Center
Attn: Mr Kilgore
St Louis, Mo 63132

Dear Mr. Kilgore:

As a result of our current investigation of possible radiation over-exposure of military personnel in the 1950's, the USA Chemical Corps School at Fort McClellan has been identified as a highly probable source.

Please freeze all disposal action on records of this organization that you presently hold. It may be necessary for us to conduct a similar search for graduates of this school as is currently underway for EXERCISE DESERT ROCK participants.

We will advise you as soon as possible as to our search requirements into the class records of the Chemical Corps School.

Sincerely,

JOHN HENRY HATCHER, PhD
Chief, Declassification
Operations Branch

rmy Records Center, TAGO
Page Boulevard
Louis 14, Missouri

RECORDS SHIPMENT LIST

(SR 345 215-5 and AFM 181-5)

4. DESIGNATION OF CREATING AGENCY
~~US Army~~
Chemical Corps School

3. DATE OF APPROVED RECORDS CONTROL OR RECORDS DISPOSITION SCHEDULE
June 1957

5. LOCATION
Fort McClellan, Alabama

(Stamper):
lding Area, Ft McClellan, Ala.

...TRATIVE ...VISION 6	RCS OR RDS ITEM NO. 7	TITLE OR DESCRIPTION AND INCLUSIVE DATES OF RECORDS 8	DISPOSITION AUTHORITY 9	DISPOSAL DATE 10	LINEAR FEET 11	SHIPMENT BOX NUMBER 12	DO NOT USE 13
...ice	1	Central General Adm Files - 1953 (Filed by decimal number and date)	Para 18d(2) AR 345-220	Permanent	9/12	73-2210 31/38	7-263-3
	2	Publications Record Sets - 1953 (Filed by type and date)	Para 6c AR 345-250	Permanent	3/12	31/38	7-263-
	10	Training Administrative Files - 1953 (Filed by subject and date)	Para 6b(1) AR 345-268	Permanent	1	73-2211 32/38	7-264-
	5	Faculty Academic Training Record Files ~~1953~~ (Filed by class and date) 1951-1954	Para 10b(1) AR 345-268	Permanent	73-2212 4	73-2215 33-36/38	7-265-3 ~~7-263-3~~

...ORICAL BACKGROUND INFORMATION

...emical Corps School redesignated US Army Chemical Corps School per ... #3, Office of the Chief Chemical, dated 7 February 1957.
... change in mission or function.

404

15. SIGNATURE
Ruby W. Finley

16. TYPED NAME AND TITLE
RUBY W. FINLEY, Records Mgt Officer

17. DATE PREPARED
20 June 1957

(SEE REVERSE SIDE FOR INSTRUCTIONS)

.S. Army Records Center, TAGO
700 Page Boulevard
t Louis 14, Missouri

(Shipper):
Holding Area, Ft McClellan, Ala.

RECORDS SHIPMENT LIST

(SR 345-215-5 and AFM 131-5)

3. DATE OF APPROVED RECORDS CONTROL OR RECORDS DISPOSITION SCHEDULE
May 1957

4. MILITARY DESIGNATION OF CREATING AGENCY
US Army Chemical Corps School

5. LOCATION
Fort McClellan, Alabama

ISTRATIVE DIVISION 6	RCS OR RDS ITEM NO. 7	TITLE OR DESCRIPTION AND INCLUSIVE DATES OF RECORDS 8	DISPOSITION AUTHORITY 9	DISPOSAL DATE 10	LINEAR FEET 11	SHIPMENT BOX NUMBER 12	DO NOT USE 13
ry's Office	8	Training Administrative Files - 1954 (Filed by subject and date)	Para 15, AR 345-268	Perm	1 6/12	29-30/34	8-114-5 115
	3	Publications Record Sets - 1954 (Filed by type and date)	Para 6 AR 345-250	Perm	6/12	30/34	115
	6	Faculty Acedemic Training Record Files - 1954 (By Course and date)	Para 10 AR 345-268	Perm	1	31/34	116
	7	Individual Acedemic Training Record Files - 1954 (By name of student	Para 8 AR 345-268	Perm	2	32-33/34	8-156-5 157
		[illegible]					
		[illegible]					

ORICAL BACKGROUND INFORMATION

15. SIGNATURE
Ruby W. Finley

16. TYPED NAME AND TITLE
RUBY W. FINLEY, Records Mgt Officer

17. DATE PREPARED
25 April 1958

(SEE REVERSE SIDE FOR INSTRUCTIO

221-11

U.S. Army Records Center 9700 Page Boulevard St Louis 14, Missouri	2. MILITARY DESIGNATION AND LOCATION OF CREATING AGENCY U.S. Army Chemical Corps School Fort McClellan, Alabama
OM (Shipper) cords Holding Area rt McClellan, Alabama	4. DATE RECORDS TO BE SHIPPED 20 Feb 59 — 5. TRANSFERRING OR RETIRING AGENCY Same as item 2

ADMINISTRATIVE SUB-DIVISION	7. TITLE OR DESCRIPTION, INCLUSIVE DATES OF RECORDS AND FILING ARRANGEMENT	8. DISPOSITION AUTHORITY	9. DISPOSAL DATE	10. LINEAR FEET	11. SHIPMENT BOX NO	12. DO NOT USE
cretery's Office	Training Admin Files (1955) Filed by subject and date	Par 4 AR 345-268	59-25 12 Perm	1	9/16	28-128-5
	Publishing Activities Adm Files (1955) Filed by subj and date	Par 11 AR 345-250	59-25 13 Perm	1	10/16	129
	Indv Academic Tng Rec Files (55) (Filed alphabetically) *	Par 6 AR 345-268	59-25 14 Perm	1	11/16	130
	Publications Records Set (1955) Filed by type and date therein	Par 6c AR 345-250	59-25 16 Perm	1	12/16	28-131-5
	General Orders # 1 - 27 Memorandums # 1 - 22					
	Special Orders # 1 - 58					
	* LIST ATTACHED					

STORICAL BACKGROUND INFORMATION

TE PREPARED Feb 59	13. TYPED NAME AND TITLE RUBY W. FINLEY, Records Management Officer	14. SIGNATURE Ruby W. Finley

FORM 1 NOV 58 2172 — REPLACES DD FORM 111, WHICH IS OBSOLETE FOR ARMY USE — GPO 1958 O—488264

RECORDS SHIPMENT LIST
(AR 345-222 and AR 345-292)

~~618-60~~

Army Records Center 9700 Page Boulevard St. Louis 32, Missouri	2. MILITARY DESIGNATION AND LOCATION OF CREATING AGENCY U.S. Army Chemical Corps School
OM (Shipper) Commanding Officer, Fort McClellan, Alabama	4. DATE RECORDS TO BE SHIPPED: 4 April 60 5. TRANSFERRING OR RETIRING AGENCY: Fort McClellan, Alabama

6. ADMINISTRATIVE SUB-DIVISION	7. TITLE OR DESCRIPTION, INCLUSIVE DATES OF RECORDS AND FILING ARRANGEMENT	8. DISPOSITION AUTHORITY	9. DISPOSAL DATE	10. LINEAR FEET	11. SHIPMENT BOX NO	12. DO NOT USE
60-F-6104	Training Admin Files (1956)	05-27-34-4-1	05-27-34-4-3			48-1684
Secretary's Office	Filed by subject and date	269/4	Perm.	2-6/12	10-11/24	~~229~~ 1688
60-G-6104	Publications Record Set	05-27-34-4-5				
	Filed by type and date	250/6	Perm	6/12	12/24	~~230~~ 1689
	General Orders # 1 - 24					
	Memo's # 1 - 21					
	Special Orders # 1 - 53					
	Lesson Plans					
60-H-6104	Ind Academic Tng Rec Files (1954-55)	05-27-34-5-1 268/6	Perm	1	13/24	~~231~~ 1690
	" " " " "	05-27-34-5-3	05-27-34-6-1			~~232~~ 1691
	(Non-Resident) (1955)	268/6	Perm	4	14-16/24	~~233~~ 1692
60-A-6119		06-23-23-9-3	06-23-23-9-5			~~235~~ 1693
	Faculty Academic Tng Record Files	268/8	Perm	2	17-18/24	~~236~~ 1694
	(1954-55)					
	Faculty Academic Tng Record Files					
	(1955)	268/8	Perm	1		
	Faculty Academic Tng Record Files	06-23-24-F-1			19/24	237/1696
	(1956)	"	"	1		
		06-23-24-F-3			20/24	238/1697

HISTORICAL BACKGROUND INFORMATION

14. DATE PREPARED	15. TYPED NAME AND TITLE		16. SIGNATURE
March 1960	RUBY J. FINLEY, Records Management Off	407	Ruby J. Finley

2172 REPLACES DD FORM 111, WHICH IS OBSOLETE. FOR ARMY USE

RECORDS SHIPMENT LIST

485-

U.S. Army Records Center 9700 Page Boulevard St. Louis 32, Missouri	2. MILITARY DESIGNATION AND LOCATION OF CREATING AGENCY Chemical Corps School Fort McClellan, Alabama	
OM (Shipper) Commanding Officer, Fort McClellan, Alabama	4. DATE RECORDS TO BE SHIPPED 24 Mar 61	5. TRANSFERRING OR RETIRING AGENCY Fort McClellan, Alabama

ADMINISTRATIVE SUB-DIVISION	7. TITLE OR DESCRIPTION, INCLUSIVE DATES OF RECORDS AND FILING ARRANGEMENT	8. DISPOSITION AUTHORITY	9. DISPOSAL DATE	10. LINEAR FEET	11. SHIPMENT BOX NO.	12. DO NOT USE
etary Office	Training Administrative Files 1957	268/4	Perm	4/12	10/14	69-2806 10-386-3
	Filed by subject and date					
"	Faculty Acedemic Record Files 1957	268/8	Perm	8/12	10-10/14	2806 386 + 387
"	(Filed by class number)					2807
	Individual Acedemic Traning Files (1955) Filed Alphabetically	268/6	Perm	1	12/14	388 2808

STORICAL BACKGROUND INFORMATION

408

TE PREPARED	15. TYPED NAME AND TITLE	16. SIGNATURE
March 1961	RUBY W. FINLEY, Records Management Officer	Ruby W. Finley

REPLACES DD FORM 111 WHICH IS OBSOLETE FOR ARMY USE

RECORDS SHIPMENT LIST
(AR 345-222 and AR 345-292)

U.S. Army Records Center 9700 Page Boulevard St. Louis 32, Missouri	2. MILITARY DESIGNATION AND LOCATION OF CREATING AGENCY Chemical Corps School Fort McClellan, Alabama
1. (Shipper) Commanding Officer, Fort McClellan, Alabama	4. DATE RECORDS TO BE SHIPPED 10 Apr 63 — 5. TRANSFERRING OR RETIRING AGENCY Fort McClellan, Alabama

6. ADMINISTRATIVE SUB-DIVISION	7. TITLE OR DESCRIPTION, INCLUSIVE DATES OF RECORDS AND FILING ARRANGEMENT	8. DISPOSITION AUTHORITY	9. DISPOSAL DATE	10. LINEAR FEET	11. SHIPMENT BOX NO.	12. DO NOT USE
Secretary Office	Traning Administrative Files 1958 Filed By Subject and date.	268/4	Perm	1	13/20	61-2542 ~~35-43-2~~
"	Individual Academic Tng Records (1956) Filed Alphabetically	268/6	Perm	1	14/20	61-42543
"	Faculty Academic Tng Records 1958 Filed by class number	268/8	Perm	1	15/20	~~35-115-2~~ 61-2544

HISTORICAL BACKGROUND INFORMATION

17. DATE PREPARED	18. TYPED NAME AND TITLE	19. SIGNATURE
April 62	RUBY G. FINLEY, Records Management Officer	Ruby G. Finley

FORM 1 NOV 172 — REPLACES DD FORM 111, WHICH IS OBSOLETE FOR MY USE 09 — GPO 1958 O—488284

RECORDS SHIPMENT LIST
(AR 345-222 and AR 345-292)

TO: U.S. Army Admin Center 9700 Page Blvd., St Louis, Mo. 63132	2. MILITARY DESIGNATION AND LOCATION OF CREATING AGENCY U.S. Army Chemical Center and School Fort McClellan, Ala., 36201
FROM (Shipper) Commanding Officer Fort McClellan, Ala	4. DATE RECORDS TO BE SHIPPED 26 Jan 66 5. TRANSFERRING OR RETIRING AGENCY Records Management Office Fort McClellan, Ala., 36201

ADMINISTRATIVE SUB-DIVISION	7. TITLE OR DESCRIPTION, INCLUSIVE DATES OF RECORDS AND FILING ARRANGEMENT	8. DISPOSITION AUTHORITY	9. DISPOSAL DATE	10. LINEAR FEET	11. SHIPMENT BOX NO.	12. DO NOT USE
I Div	Individual Acad Training Rec Files Ext Courses, Arr Alpha, 1960	AR 345-210 1003-13	Perm	1	5 of 7	67-2379
I Secty Office	Faculty Acad Records Files 1962	1003-05	Perm	1/12	6 of 7	67-2380
I Div	Training Admin Files 1962	1003-09	Perm	3/12	6 of 7	
h Secty Office	Organization & Planning Files 1962	201-45	Perm	1/12	6 of 7	
h Secty Office	Claims Officer's Report of Investigation Files 1960	401-11	Jan 71	1/12	6 of 7	

HISTORICAL BACKGROUND INFORMATION

DATE PREPARED	15. TYPED NAME AND TITLE	16. SIGNATURE
17 Jan 1966	W. W. McShorter, Records Management Officer	W. W. McShorter

A FORM 1 NOV 55 2172 REPLACES DD FORM 111, WHICH IS OBSOLETE FOR ARMY USE

GPO : 16-77645-1

RECORDS SHIPMENT LIST
(AR 345-222 and AR 345-29?)

1. TO:	2. MILITARY DESIGNATION AND LOCATION OF CREATING AGENCY
ational Personnel Records Center (Mil) 9700 Page Blvd., St Louis, Mo 63132	U.S. Army Chemical Center and School Ft McClellan, Ala 36201

3. FROM (Shipper)	4. DATE RECORDS TO BE SHIPPED	5. TRANSFERRING OR RETIRING AGENCY
CO, US army Sch/Tng Cen, Ft McClellan, Ala	11 Mar 1968	Same

6. ADMINISTRATIVE SUB-DIVISION	7. TITLE OR DESCRIPTION, INCLUSIVE DATES OF RECORDS AND FILING ARRANGEMENT	8. DISPOSITION AUTHORITY	9. DISPOSAL DATE	10. LINEAR FEET	11. SHIPMENT BOX NO	12. DO NOT USE
r of Instruction	Individual Academic Training 1953 Rec Files (Ext) Filed Alpha	AR 345-210 1003-13	1 Jan 04	3	3,4,5of5	13-2697 13-2698 13-2699
Management Office	Organization Plng Files 1964	201-45	Perm	Neg	5 of 5	VINF

13. HISTORICAL BACKGROUND INFORMATION

14. DATE PREPARED	15. TYPED NAME AND TITLE	16. SIGNATURE
20 FEB 1968	W. W. McWhorter, Records Management Office	W. W. McWhorter GR-A-2632

DA FORM 2172 REPLACES DD FORM 111, WHICH IS OBSOLETE FOR ARMY USE

GPO 1958 O—[illegible]

RECORDS SHIPMENT LIST
(AR 345-222 and AR 345-292)

INSTRUCTIONS
Send original and two copies to appropriate Federal Records Center.

[illegible]

FROM: (Name and address of Agency transferring records)
U.S. Army School/Training Center
Ft McClellan, Alabama 36201

TO: Federal Records Center, GSA
National Personnel Records Center (MH)
9700 Page Blvd.
St. Louis, Missouri 63132

SECURITY CLASSIFICATION AND/OR RESTRICTION ON USE OF RECORDS, IF ANY
Unclassified

SQUARE FEET OF SPACE CLEARED		3 FILING EQUIPMENT EMPTIED			4 CUBIC FEET OF RECORDS TRANSFERRED
A	B STORAGE	A FILE CABINETS (No.)	B TRANS FILES (No.)	C SHELVING (Lin. Ft.)	
	X			X	10

5 NAME OF AGENCY CUSTODIAN OF RECORDS: [illegible] McMORRAN
6 BUILDING AND ROOM NO.:
7 TELEPHONE NO.:

DO THE RECORDS BE DESTROYED AS SCHEDULED WITHOUT FURTHER AGENCY CONCURRENCE? ☒ YES ☐ NO

8 AGENCY OFFICIAL (Signature): W. Mitchell
10 TITLE: Records Mgmt Officer
11 DATE: 6 Feb 71

BOX NUMBERS: RC ONLY	BOX NUMBERS: AGENCY	13 DESCRIPTION OF RECORDS WITH INCLUSIVE DATES (Show organizational component creating records)	14 DISPOSAL AUTHORITY (Schedule and Item No.)
		Hdqts, U.S. Army School/Training Center, Ft McClellan, Alabama 36201	
		Adjutant, US Army Sch/Tng Cen	AR 340-18 Series
-969	1-2/10	227-02, Personnel Type Order Files Jan-Dec 1967	Dest Jan
-1072	1-2/10	Special Orders 1 - 307	Dest Jan 83
	2/10	Letter Orders 1 - 1243	Dest Jan 78
		Spl CM Appt Ord 1 - 21	Dest Jan 78
		Summ CM Appt Ord 1 - 6	Dest Jan 78
		Spl CM Orders 1 - 73	Dest Jan 78
		Summ CM Orders 1-6	Dest Jan 78
		Aviation Detachment, US Army Sch/Tng Cen	AR 340-18 Series
		227-02 Personnel Type Order Files Jan Dec 1967	
		Filed numerically Unit Orders 1 - 77	Dest Jan 78
		1420 Ordnance Det, US Army Sch/Tng Cen	AR 340-2
		2-03 Personnel Type Oder Files Jan Dec 1967	
		Filed numerically Unit Orders 1 - [illegible]	Dest Jan 78
		4th Surgical Hospital, US Army Sch/Tng Cen	AR 340-2
		2-03 Personnel Type Order Files Jan Dec 1967	
		Filed numerically	
		Special Orders 1 - 44	Dest Jan 83
		Unit Orders 1 - 23	Dest Jan 78

CONTENTS NOT VERIFIED

ARD FORM 135
1961 EDITION

(Use Standard Form 135A for continuation sheets)

135-103

FRC ONLY	AGENCY	DESCRIPTION OF RECORDS WITH INCLUSIVE DATES	DISPOSAL AUTHORITY
		100th Chemical Group (Prov), Ft McClellan, Ala Unit reduced to provisional unit per G097, this hq, dtd 28 Jun 67, was inactivated 28 Mar 69 per GO 23, this hq, dtd 12 Mar 69	
5-1075	5/10	Hq, 100th Cml Gp 2-03 Personnel Type Order Files Jan Jun 1967 Filed numerically Special Orders 1 - 110 Spl Ct Mar Appt Orders 1 - 13 Spl Ct Mar Orders 1 - 34 Summ Ct Mar Orders 1 - 19	AR 340-2 Dest Jan 83 Dest Jan 78 Dest Jan 78 Dest Jan 78
		Hq Det, 100th Cml Gp 2-03 Personnel Type Order Files Jan Jun 1967 Filed numerically Unit Orders 1 - 30	AR 340-2 Dest Jan 78
		61st Cml Co., 100th Cml Gp 2-03 Personnel Type Order Files Jan Dec 1967 Filed numerically Unit Orders 1 - 33	AR 340-2 Dest Jan 78
		112th Cml Det., 100th Cml Gp 2-03 Personnel Type Order Files Jan Dec 1967 Filed numerically Unit Orders 1 - 4	AR 340-2 Dest Jan 78
		613th Field Svc Co. (GS) (FWD), 100th Cml Gp 2-03 Personnel Type Order Files Jan Dec 1967 Filed numerically Unit Orders 1 - 72	AR 340-2 Dest Jan 78
		Hq, 2D Cml Batt, 100th Cml Gp 2-03 Personnel Type Order Files Jan Dec 1967 Filed numerically Special Orders 1 - 73 Unit Orders 1 - 13	AR 340-2 Dest Jan 83 Dest Jan 78
		Hq Det, 2D Cml Batt, 100th Cml Gp 2-03 Personnel Type Order Files Jan Dec 1967 Filed numerically Unit Orders 1 - 28	AR 340-2 ~~Jan~~ Dest Jan 78
		Dir of Instruction, US Army Chemical Center & School 1012-03 Individual Academic Record Files 1965 (Extension Courses) Filed alphabetically	AR 340-18 Serie
5-1076	6/10	Abr thru Gla	Dest Jan 2006
5-1077	7/10	Gle thru Pes	Dest Jan 2006
5-1406	8/10	Pet thru Zyw	Dest Jan 2006
5-1664	9-10/10	Resident Courses FY 67, Filed by course number	Dest Jul 2007

STANDARD FORM 135-A

STANDARD FORM 135
JULY 1961 EDITION
GENERAL SERVICES ADMIN.
IR (41 CFR) 101-11.4

RECORDS TRANSMITTAL AND RECEIPT

TO BE COMPLETED AT FEDERAL RECORDS CENTER

ACCESSION NO. 73-A-785

RECORD GROUP NO

SIGNATURE Reutter

DATE RECORDS RECEIVED 3/29/73

TITLE

INSTRUCTIONS
Send original and two copies to appropriate Federal Records Center.

FROM: (Name and address of Agency transferring records)
Hq, US Army School/Training Center
Fort McClellan, AL 36201

TO: ~~Federal Records Center, GSA~~
National Personnel Records Center (MIL)
9700 Page Blvd
St Louis Mo 63132

1 CITE SECURITY CLASSIFICATION AND/OR RESTRICTION ON USE OF RECORDS, IF ANY
Unclassified

2. SQUARE FEET OF SPACE CLEARED		3 FILING EQUIPMENT EMPTIED			4 CUBIC FEET OF RECORDS TRANSFERRED
A. OFFICE	B. STORAGE	A. FILE CABINETS (No.)	B. TRANS. FILES (No.)	C. SHELVING (Lin. Ft.)	
	x			x	14

5 NAME OF AGENCY CUSTODIAN OF RECORDS	6 BUILDING AND ROOM NO.	7 TELEPHONE NO.
W. W. MCWHORTER	Bldg 143B	(205)238-3123

8 MAY THE RECORDS BE DESTROYED AS SCHEDULED WITHOUT FURTHER AGENCY CONCURRENCE? [X] YES [ ] NO

9 AGENCY OFFICIAL (Signature)	10 TITLE	11. DATE
W. W. McWhorter	Records Mgmt Officer	12 Mar 73

12. BOX NUMBERS FRC ONLY	AGENCY	13 DESCRIPTION OF RECORDS WITH INCLUSIVE DATES (Show organizational component creating records)	14 DISPOSAL AUTHORITY (Schedule and Item No.)
		US Army Chemical Center & School	
		Office of School Secretary	AR 340-18 Series
49-19	9/14	227-02 Personnel Type Order Files 1969	
		Arr numerically Special Orders 1-250	Dest Jan 1985
05-26-12-8-5		Letter Orders 1-147	Dest Jan 1980
		HHC Troop Comd, USACMLCS	AR 340-18 Series
		227-02 Personnel Type Order Files 1969	
		Arr numerically Unit Orders 1-54	Dest Jan 1980
		Enlisted Student Co. Trp Comd, USACMLCS	AR 340-18 Series
		227-02 Personnel Type Order Files 1969	
		Arr numerically Unit Orders 1-82	Dest Jan 1980
		Field Support Co., Trp Comd, USACMLCS	AR 340-18 Series
		227-02 Personnel Type Order Files 1969	
		Unit Orders 1-65	
05-26-12-9-1		Director of Instruction, USCMLCS	AR 340-18 Series
49-20	10-11/14	1012-03 Individual Academic Record Files FY 69	Dest Jul 2009
49-21		Arr by course No., alphabetically within course	
05-26-12-9-3		Chemical Courses (Resident)	

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STANDARD FORM 135
JULY 1961 EDITION

(Use Standard Form 135A for continuation sheets)

135-105

STANDARD FORM 135-A JULY 1961 EDITION GENERAL SERVICES ADMIN FPMR (41 CFR) 101-11.4	RECORDS TRANSMITTAL AND RECEIPT (CONTINUATION)	AGENCY Hq, US Army Sch/Tng Cen Ft McClellan, AL 36201	DATE 12 Mar 19

BOX NUMBERS FRC ONLY	BOX NUMBERS AGENCY	DESCRIPTION OF RECORDS WITH INCLUSIVE DATES	DISPOSAL AUTHORITY
		US Army Chemical Center & School	
		Non-Resident Instruction Div, DOI, USACMLCS 1012-03 Individual Academic Record Files 1967 Chemical Courses (Extension) Arr alphabetically	AR340-18 Series Dest Jan 2008
49-21	11/14	A thru H 05-26-12-9-3	
49-22	12/14	I thru T 12-9-5	
49-23	13/14	U thru Z 05-26-13-F-1	

RETIREMENT OF RECORDS 53-54
Radiological Defense Series

A's

Abel, Samuel E.	Lt Col	AO 286377
Adams, William C.	1st Lt	AO 1853081
Alberts, Henry C.	2nd Lt	AO 2233826
Allen, Donald R.	1st Lt	0-1560477
Allen, Frank M.	Major	AO 223042
Anderson, Lester L	1st Lt	AO 1904306
Arner, Rodney D.	Captain	AO 881078

B's

Banks, Lester	1st Lt	AO 17888
Barber, Earle H.	1st Lt	AO 1846581
Barton, Robert T.	A/3C	AF 18268874
Belanger, Durell	1st Lt	AO 2071429
Belkoff, Mark L.	A/3C	AF 16394122
Berla, Arthur W.	2nd Lt	AO 933047
Blunt, Percy D.	2nd Lt	AO 1849088
Brafman, Fred	1st Lt	AO 2235358
Braschwitz, Harold J.	2nd Lt	0-998538
Bryant, Lane E.	Captain	AO 782151
Burch, Byron F. Jr.	1st Lt	0-2201016
Burns, Harold W.	Captain	AO 706690
Burt, Robert L.	Captain	AO 746931

C's

Calabrese, Fred C.	1st Lt	AO 2077722
Carpenter, Richard H.	2nd Lt	AO 1865091
Celick, Arnold J.	1st Lt	AO 875968
Cleveland, William R., Jr.	Captain	AO 437689
Connes, Gregory A.	Major	0-1289049
Costanzo, Tony	Cpl	US 52083642
Courtney, Cy D.F.	1st Lt	AO 2075123
Cowden, Robert O.	2nd Lt	AO 2222711
Craig, David J.	1st Lt	AO 2084808

D's

Darden, Edgar B. Jr.	1st Lt	0-494022
Davis, Carlton M.	1st Lt	AO 2072659
Dawson, James K.	Major	0-350993
Del Ponte, Harold A.	Captain	AO 855999
Demkowski, Walter V.	1st Lt	0-507840
Derby, Stanley K.	1st Lt	0-875290
Dickinson, Harry L. Jr.	Captain	AO 2068968
Di Fiore, John M. Jr.	2nd Lt	0-2264514
Di Mattia, Samuel P.	Captain	0-453462
Drdla, Stanley	Major	0-346530
Dukes, Francis B.	2nd Lt	AO 1859019

25-131-5

95-159

E's

Early, Seaborn C.	2nd Lt	AO 1866191
Eberle, Charles R.	1st Lt	AO 591332
Edwards, James D.	Civilian	---------
Ehrenpreis, Stanley N.	2nd Lt	AO 1854103

F's

Fagan, Arnold F.	A/1C	AF 31036398
Fiske, William A.	2nd Lt	AO 185[illegible]418
Fleming, John H.	Captain	AO 0682842
Flowers, Presley B. Jr.	Captain	0-1185740
Fong, Peter K.	A/1C	AF 19384538
Forrest, William B.	2nd Lt	AO 2075165
Frasik, Andrew H.	Civilian	CV 00000554
Fried, Arthur N.	Captain	AO 863763
Fuchs, Sheldon J.	A/3C	AF 21812461
Fuson, Roger B.	Captain	AO 1036533

G's

Gage, William R. Jr.	S/Sgt	AF 19364975
Griffiths, James C.	Captain	AO 2065541

H's

Haas, Wendall M.B.	Major	CP 0914643
Haertling, Kenneth G.	1st Lt	AO 2094683
Halstead, James R.	1st Lt	AO 726230
Hart, David A.	Captain	AO 1039377
Hecht, Adolph	Captain	AO 577871
Hill, Rodney F.	2nd Lt	AO 2218081
Holbrook, Charles R. Jr.	1st Lt	0-954716
Hollin, Shelby W.	1st Lt	AO 938628
Hurd, Donald E.	2nd Lt	AO 2229689

J's

Jenkinson, Wallace H. Jr.	1st Lt	AO 572154
Joganich, Rudolph	2nd Lt	AO 1910892
Johnson, Zach A.	Major	AO 854264
Jolliff, Harry	1st Lt	AO 2015296
Jones, Cyril D.	2nd Lt	AO 1858369

K's

Karas, Aaron B.	2nd Lt	AO 2232829
Kern, Donald G.	Sgt	ER 56092041
Kerr, Joseph M.	A/1C	AF 12347517
Kindschy, Emil O., Jr.	Captain	0-539204
Kleck, Peter G.	1st Lt	AO 968490
Kommel, Sanford	Lt Col	0-310397
Konecci, Eugene B.	1st Lt	AO 2213260
Kuhre, Calvin J.	1st Lt	0-1560552

28-130-3

L's

Lanier, James A.	1st Lt	0-974580
Lastrapes, James A.	1st Lt	AO 1910621
Lenco, William C.	1st Lt	AO 693290
Leoshko, George	2nd Lt	AO 2215106
Lindemann, Richard E.	Civilian	----------
Lowrey, John E.	1st Lt	AO 2064284

M's

McCauley, Andrew W.	1st Lt	AO 0717736
McClanahan, Fred C.	Captain	AO 659833
McComb, Walter D.	2nd Lt	AO 1861178
McCormick, Archie TE	1st Lt	AO 550051
McDonnell, John J.	Captain	AO 776752
McKinney, Lee B.	Captain	0-1298897
Magaro, Francis S.	Captain	AO 823401
Maginnis, James F.	2nd Lt	AO 841352
Marsh, William A.	Captain	AO 590426
Marshall, Elmer P.	Colonel	0-484151
Martin, Roger M.	Sgt	US 54026249
Masters, Jay W.	1st Lt	AO 1173699
Mateer, Charles Q.	1st Lt	AO 2060057
Mazak, Edward P. Jr.	2nd Lt	22875A
Meyers, John H.	Captain	AO 759644
Miatech, Gerald J.	Captain	AO 561684
Miller, Louis V.	1st Lt	18478A
Minton, Roy H.	Cpl	RA 12337001
Moody, Horace R.	Captain	AO 769304
Moore, Emory D.	2nd Lt	AO 2222521
Morrow, George E.	Captain	AO 769358
Moss, Robert G.	Captain	0-1000270
Mousel, Paul P.	T/Sgt	AF 39714772
Mueller, Clyde L.	2nd Lt	AO 1855633
Murnin, John J.	2nd Lt	AO 2234580
Mustafa, Marvin	2nd Lt	AO 1854569

N's

Nelson, Thomas A.	Captain	AO 8611981
Neumann, Richard K.	1st Lt	AO 2101316
Nevels, Kenneth H.	2nd Lt	AO 1854899
Ney, Luman F.	Lt Col	0-3645109
Numbers, Richard S.	2nd Lt	AO 2234328

O's

Oppenheim, Peter K.	2nd Lt	AO 2211347
Osthoff, Robert Earl	Captain	0-1044055

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P's

Paonessa, Anthony J.	2nd Lt	AO 935083
Patton, William M.	1st Lt	AO 2038961
Pence, James M.	2nd Lt	AO 2232668
Pope, John B. III	1st Lt	0-669428
Provost, Virgil R.	1st Lt	0-956777

R's

Rapp, Keith A.	Captain	AO 805114
Reeb, Richard L.	Captain	AO 863307
Reid, Robert P.	1st Lt	AO 744865
Reilly, Robert M.	1st Lt	AO 809724
Rheney, Theodore B.	1st Lt	AO 833247
Richards, Ernest F.	Captain	0-1039525
Riggsby, Ernest D.	1st Lt	AO 1857133
Ritter, Kenneth J.	2nd Lt	AO 2213928
Ross, Leroy E. Jr.	1st Lt	AO 2217080
Rowland, Marvin O.	Captain	22744A
Rucker, Benjamin A.	Major	AO 313748
Rullo, Eugene E.	Cpl	US 52037258
Ruppelt, Edward J.	1st Lt	AO 709976

S's

Sapp, Eli F.	2nd Lt	0-959724
Schayes, S.	Lt	AO 232180
Schmidt, John D.	1st Lt	AO 679320
Schnell, Harry J.	Civilian	----------
Scimeca, Sam	1st Lt	AO 833426
Semanick, Pete E. Jr.	S/Sgt	AF 15412596
Semonian, Albert P.	Captain	AO 664066
Sharp, Richard C.	1st Lt	AO 1860793
~~Shaston, Charles L.~~	~~Lt Col~~	~~0-364075~~
Smith, Clark J.	Major	Unknown - AF, USAFR
Smith, George R.	Captain	AO 881044
Stebbins, Albert K. III	Captain	AO 0016804
Stec, Casimer. V.	2nd Lt	AO 944903
Stefan, George R.	Captain	0-876420
Stehman, Robert M.	Captain	AO 443177
Sterner, John	Lt Col	0-312361
Stevens, Russell E., Jr.	Lt Col	AO 378089
Stiling, Stewart E.	1st Lt	AO 1859910
Stout, Donald W.	T/Sgt	AF 15331477
Surowitz, Philip	1st Lt	AO 2233466
Switzer, James R.	1st Lt	AO 1059303

T's

Tarpinian, Mardiros	Captain	AO 875080
Teel, Rodney B.	1st Lt	AO 822978
Thorp, Larry J.	Captain	AO 720365

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V's

Van Hoeck, Arthur F.	1st Lt	AO 857910

W's

Wantland, Fred T.	S/Sgt	AF 18327661
Warburton, F. W.	Colonel	AO 9256833
Weesner, James M.	2nd Lt	AO 1865881
Wentzler, Herman L.	1st Lt	AO 1861453
Wheeler, August E.	Major	AO 857226
Wiley, Clarence B.	Captain	0-1039618
Williams, Nathan	Lt Col	0-381487
Wilson, Henry M.	1st Lt	AO 826338
Woodward, John C. II	Captain	AO 2066427

Z's

Zortman, Henry E. Jr.	1st Lt	AO 938351

*Additional:

Dahnke, John E.	Cpl	US 55079245
McCarthy, John J.	Col	0-256199
Saltsman, Thomas H.	1st Lt	20334 A
Sharp, Rollins H.	1st Lt	0-966759
Sipos, Frank	Capt	0-360724
Wickes, William H.	Capt	AO 333074

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Radiological Defense Series

A's

Acker, Lewis Franklin	Col	0-171535

B's

Barrett, James C.	Capt	AO 824360
Beard, Orville S.	1st Lt	0-63255
Bernstein, Benjamin	Major	AO 1035198
Bierman, Roy J.	Capt	AO 433295
Black, Read L.	Major	0-390213
Blair, James F.	Cpl	AF 18077259
Blake, John III	1st Lt	AO 860168
Bolson, Harry B.	Lt Col	0340270
Bostrom, William H.	Capt	0-522584
Briggs, Robert A.	Major	AO 385006
Brothers, George J., Jr.	2d Lt	AO 1853006
Brousseau, Robert J.	Lt Col	0-442503
Bruggink, Raymond Jr	1st Lt	AO 2079266
Bryant, Robert L	1st Lt	0-58164
Bubsey, Frank J.	2d Lt	0-1536154
Burke, Edward A.	2d Lt	AO 2239890
Butler, William A.	Capt	AO 874203

C's

Callahan, John J.	civilian	
Calvin, Daniel W.	Lt Col	AO 338968
Campbell, Stanley J.	Capt	23862 A
Carrol, James G.	Lt Col	AO 417185
Cawthorne, Templar S.	Lt Col	0-199928
Clay, Robert G.	Major	AO 355429
Cline, Earle M.	Major	AO 918950
Collins, George J.	1st Lt	0-1335913
Courtenay, Justin A.	Col	0168722
Cowart, Robert P.	Captain	14100 A
Crawford, Robert L.	2d Lt	AO 1853658
D's Crutchfield, Ralph L.	Capt	AO 567804
Dean, Robert Y.	Major	AO 856344
Dempsey, Stephen B.	1st Lt	AO 868867
Dommes, Sidney F., Jr.	Major	0467428
Duame, Donald D.	Major	AO 563894
Dye, Donald W.	Lt Col	0-215028

F's

Fay, Bernard P.	civilian	

G's

Galfo, Armand J.	2d Lt	AO 2217733

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B1-54

Gemoets, Martin J.	Capt	0-10[illegible]37
Giles, John E., Jr.	Lt Col	0-396702
Giesel, William [illegible]	Lt Col	0-3[illegible]411[illegible]
Goebel, Robert J.	1st Lt	0[illegible]79
Granton, James, Jr.	1st Lt	0-1950874
Green, William C.	1st Lt	0-1587289
Green, William [illegible]	Major	AO 361[illegible]
Greendale, Allen [illegible]	Captain	0-103[illegible]116
Gregory, James F.	Captain	0-509844
Gullans, Oscar	Lt Col	0291[illegible]52

H's

Hale, Rader C.	2d Lt	AC 2232836
Hansen, William L.	Lt Col	0-334305
Harber, James F.	Major	0-1775396
Hartsig, Richard D.	Capt	AC 072340
Hatcher, Abram W.	1st Lt	0-984[illegible]35
Hempel, Robert E.	2d Lt	AC 1904085
Hewson, William M.	2d Lt	AC 1854096
Hill, Henry E.	Lt Col	0-262189
Hodges, Ralph D.	Lt Col	0-236762
Holmes, Frederick E.	Major	0-351313
Homin, John F.	1st Lt	AC 2001597
Horn, William E.	2d Lt	AC 1854403

J's

Jackson, Roger A.	Lt Col	AC 1699259
Jacobs, Ray T.	Major	AC 427274
Jellison, James L.	2d Lt	0-982539
Jones, Harry G., Jr.	Lt Col	0-384253
Jones, James O.	Capt	0-803632

K's

Kane, Vincent T.	Capt	0-344089
Keenan, George F., Jr.	Cpl	AF 17295139
Ketelhohn, Jack V.	1st Lt	AO 714120
Kramer, Stanley R.	Major	0371172

L's

Lane, Edward E.	Capt	22731 A
Lauthers, Charles W.	Lt Col	0-179968
Leddy, Charles P.	Capt	0-372277
Lento, John A.	Pvt	US 51006595
Leong, Hubert	1st Lt	AC 707944
Lewis, Orville R.	1st Lt	AC 2066374
Little, Harold C.	Lt Col	0-335013
Longenecker, William H., Jr.	1st Lt	AO 967327
LePresti, Daniel A.	Capt	AC 221[illegible]201
Luckenbach, Guenther E.	2d Lt	AC 927955
Ludwig, Llewellyn G.	Col	0-246406

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Mc's

McEwen, Eugene R.	Major	0-413793
McKeever, James J.	2d Lt	AO 1863087
McKinley, Phillip R.	Capt	AO 588514
McMillin, Herbert W.	Capt	AO 863684
McQuigg, James D.	Capt	AO 857141

M's

Manildi, Ralph L.	S/Sgt	AF 28191110
Mariolis, Michael	Capt	AO 867250
Martin, John E.	Capt	0-336691
Meador, Robert J.	Major	0408260
Merrill, William L	Capt	16362 [illegible]
Miller, John R.	Major	0-339262
Milly, Nancy J.	civilian	
Misenheimer, Harvey M.	Col	0222236
Mitchell, Joseph A.	1st Lt	AO 2212624
Mitchell, William A.	Capt	0-985777
Moore, Herbert S., Jr.	Capt	0-60677
Morence, Leonard J.	1st Lt	AO 680262
Morgan, Leon E.	Capt	0-968133
Munzer, Louis F.	Major	AO 312399

N's

Nadler, Marion R.	Capt	AO 874906
Neiser, Donald L.	1st Lt	AO 2061408
Nelson, Chester A.	Capt	AO 572793
Newman, Stanley F.H.	Capt	AO 825438
Noggle, John W. G.	2d Lt	AO 2218989
Nuler, Ernest M.	Capt	AO 563936
Nussbaum, Allen	Major	AO 426306

O's

Olson, Roy I.	Major	052117
O'Neal, James H.	Capt	0-1053288
Osgood, Joseph	Capt	0-446583
Owen, Robert H.	2d Lt	AO 1857497

P's

Pack, Douglas R.	1st Lt	AO 870974
Perkins, Philip	1st Lt	01336461
Pershing, Don J.	Pfc	AF 18373194
Pierce, John R.	Capt	0-480517
Polansky, Clinton B.	civilian	
Pool, Felen F.	Capt	AO 1865815

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R's

Rocco, Albert F.	1st Lt	AO 982755
Ross, Franklin J.	Capt	AO 548683
Rowland, David A.	1st Lt	AO 383066
Rugge, George F., Jr.	Capt	AO 591546

S's

Samsky, Abraham	Capt	0-1047763
Schlenoff, Maurice	Capt	AO 1037281
Schmidt, Wayne J.	1st Lt	20512 A
Schmidt, Herbert F.	2d Lt	0-2208768
Schneider, Ralph P.	Pfc	38780236
Seidenfeld, Morton A.	Col	0246681
Shero, Ronald D.	1st Lt	20345 A
Shimanski, Edward J	1st Lt	AO 828801
Slack, Richard C.	Lt Col	0404096
Slattery, John J	Lt Col	0910785
Smallwood, Gerald E.	2d Lt	AO 1862424
Smith, David C., Jr.	Lt Col	0-43394
Smith, Henry G.	Capt	0-541584
South, Victor W.	Major	AO 48642
Southern, John A.	Major	0-360774
Spicer, Gordon C	1st Lt	AO 2068880
Stellpflug, John R.	2d Lt	AO 2085132
Still, Percy C	Lt Col	0-335707
Surak, John G.	Capt	AO 911877

T's

Tankins, Edwin S	2d Lt	01862019
Tanner, Herbert C	Lt Col	0-917044
Tapp, John G.	Lt Col	0-329067
Taylor, John P	Lt Col	8381 A
Toups, Stanford S.	Capt	AO 433933
Tramontana, Joseph S., Jr.	Pvt	ER 12385616
Travis, Darryl W.	Major	0-286121
Tribbett, Louis W.	Lt Col	AO 306766

U's

Utermohle, George E., Jr.	Capt	01116876

V's

Verbuch, Robert L	1st Lt	AO 943483
Verket, Lloyd J.	Capt	AO 360308

W's

Wadley, Chester P.	Capt	0-1321353
Ward, Lynwood M.	2d Lt	AC 1912346
Waters, John A.	Major	0-1036075
Weber, William J.	1st Lt	02017155
Wechsler, Monroe S.	1st Lt	0-1650797
White, Roy D.	Capt	AC 405563
Williams, Charles H.	M/Sgt	38370942
Williams, Thomas J.	Capt	AC 783470
Wilson, Jack L.	civilian	
Wright, Donald D.	Capt	01038906

Z's

Zickert, Carl F.	1st Lt	AC 546279

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RETIREMENT OF RECORDS [illegible]

A's

Ackis, Kenneth W.	Capt	0-327030
Alberto, Charles [illegible]	1st Lt	0985248
Anastasia, Peter F.	2d Lt	0-993826
Anderson, Jack H.	Lt Col	0-[illegible]2782
Arndt, Joseph E.	Capt	0-1038214
Arvanites, James	2d Lt	0984027
Askins, Mitchell L.	A/2c	AF 123[illegible]268
Aspden, Robert F	Pvt	RA 11225282
Atkins, Robert A.	Pfc	US 51075251
Avery, Raymond A	Capt	0-289532

B's

Bailey, E. J.	civilian	
Baker, Harold W.	Sgt	27726667
Barber, Burton E.	M/Sgt	ER 11019018
Barillo, Joseph	2d Lt	0-986008
Barr, John L	Sgt	NG 228[illegible]304
Barrett, Donald H.	2d Lt	0973746
Belissary, Constantine G.	1st Lt	0-10[illegible]
Belknap, Donald C.	Pfc	AF 1[illegible]099[illegible]68
Benner, James R.	Capt	0-461220
Bennett, William	Cpl	AF 12[illegible]17787
Bowman, Harold E.	Major	0409031
Bowles, Alvin H.	Capt	0-10[illegible]
Boykin, Charles S.	M/Sgt	AF 6[illegible]71
Breading, Louis H.	Capt	0-10[illegible]
Breen, Robert E.	1st Lt	0-1[illegible]361[illegible]0
Brisendine, Wilford H.	Sgt	RA 14296[illegible]
Bristow, J. C.	M/Sgt	ER 18369238
Brumfield, Philip E.	Capt	0-376029
Bryant, Howard B.	Cpl	AF 14[illegible]1[illegible]82
Bunch, Billy J	Capt	0-10[illegible]924
Burnison, James E.	M/Sgt	AF 19020724
Burt, Daniel C.	Major	0-10[illegible]22

C's

Caan, Herbert F.	Cpl	ER 571[illegible]5016
Carlson, Eugene C.	Capt	0-4[illegible]9
Carlson, Robert C.	Sfc	11117089
Carter, Norman C	Capt	0-370348
Christensen, Howard L	Sgt	AF 27027258
Christy, Robert R	Sgt	33718517
Clarke, Watts R.	Major (M/Sgt)	0-278199 (RA [illegible])
Cocke, Lee P	M/Sgt	AF 20[illegible]2736
Collins, Howard J.	Lt Col	0-2[illegible]
Collins, Richard B.	Pfc	510201[illegible]1
Concino, Frank J.	Capt	0-10[illegible]
Cooper, Robert H.	Major	0-1035228

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Cornett, Christopher C., Jr.	Lt Col	0-308545
Covert, James E	Pfc	AF 15443253
Covey, Oliver T.	Cpl	ER 13369257
Crane, Paul B.	M/Sgt	AF 33746420
Cranor, Forrest C	Pfc	AF 14205254
Crossley, Arthur W	Col	0286585
Crowl, Robert J	2d Lt	0-985359

D's

Davey, Merlin B	2d Lt	0-986607
Davis, Jack C.	1st Lt	0-989730
Davis, Marvin R.	Capt	AC 705345
Davis, Romie [illegible], Jr.	Major	0409550
DeLuca, Daniel J.	Pfc	US 51072295
Dockmejian, C. B.	Col	AC 2[illegible]
Doelger, Leon C.	1st Lt	AC 1996227
Drapeau, John P.	1st Lt	0-982257
Drummond, John [illegible]	Capt	AC 716[illegible]1
Duke, Lewis D., Jr.	T/Sgt	AF 14203542
Durer, Guy W., Jr.	1st Lt	0-975647

E's

Edelbaum, David M.	civilian	
Edness, Milton A.	Cpl	ER 32602192
Elliott, Jack F.	Captain	0465478
Enyeart, Roger T.	Sgt	RA 1934[illegible]067
Ernest, Paul B.	Pvt	ER 11229689
Esary, James D.	1st Lt	0976758
Eshleman, Henry C.	1st Lt	0-1038606
Evans, Hugh S.	Pvt	ER 14308405
Even, Howard J.	Pvt	ER 16349335

F's

Fague, Paul M.	Capt	AC 752111
Faiia, Alfredo A.	2d Lt	0979305
Fasbinder, Walter F.	Capt	AC 700512
Fenig, Sidney	ROTC	
Fernley, Edward R.	Pfc	US 56058524
Fisher, Chester L, Jr	Col	AC 306857
Fisher, Roland T.	Major	AC 885680
Flach, Francis H., Jr.	1st Lt	0-2206062
Flynn, Robert	Cpl	RA 12334530
Fox, William C., Jr.	Sgt	AF 16247589
Frady, Robert G.	1st Lt	0-543279
Frederick, John W.	Pfc	RA 17321399
Freeman, Gene R.	S/Sgt	AF 12[illegible]09726
Fricke, Cedric Valjean	Pfc	US [illegible]1906
Friend, James A.	2d Lt	0-983[illegible]30
Fuller, [illegible]	[illegible]	0-[illegible]

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G's

Gafney, Claud A.	Major	ASTC-650536
Gallagher, James E.	Sfc	RA 32520033
Gasper, Vernon A.	Cpl	RA 16301571
Gaucher, Robert	Sgt	RA 11193690
Gaugnan, John R.	S/Sgt	AF 15410309
Gillespie, John W.	2d Lt	0984553
Gilliam, Darrell K	Pfc	US 52063501
Good, William F.	1st Lt	0-548452
Gorby, Charles M., Jr.	Cpl	RA 15430594
Gordon, Maurice D.	Capt	0-1038385
Goss, Matthew R.	Cpl	RA 32107218
Grant, Truett K.	Major	0-1037013
Gray, Parker W.	2d Lt	0-2200862

H's

Halloran, James J.	2d Lt	AC 871198
Hamilton, Elmer I.	Pfc	US 52039146
Hanzalik, Joseph J.	S/Sgt	AF 12291755
Hatcher, H. J.	Lt Col	0-327179
Haughwout, Frederick E.	Lt Col	0-320049
Hebel, Roy B.	1st Lt	AC 1909305
Henry, William L., Jr.	2d Lt	0992953
Hilton, Harold B.	Col	0-235847
Himmelsbach, Leo F.	Pvt	19421704
Hirshman, Julius	Cpl	AF 21913012
Hodgens, Harold F.	Pfc	US 53027775
Hogue, William M.	S/Sgt	AF 27054948
Honig, Robert B.	Pfc	US 51112098
Howe, Don R.	T/Sgt	AF 15230987
Hubertz, David E.	Sgt	US 52041192
Hughes, Wesley E.	Capt	01036574
Hund, William O.	Pfc	RA 13355769

I's

Ivey, William L	2d Lt	0-978383

J's

Jackson, Jesse W.	M/Sgt	37001060
Johnson, Emmett H.	Cpl	US 37900127
Johnston, Willard A.	Col	0172869
Jones, Lester V.	Sgt	23320137 AF
Joseph, Arthur	S/Sgt	AF 31445186

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K's

Kahan, Sidney	Capt	0-1335484
Kansky, Eli	Capt	0-1038024
Karnavas, James A.	Sgt	US 55049183
Kelly, Hubert J.	1st Lt	0960734
Keith, Francis C.	Lt Col	0-162319
Keller, Owen V.	Lt Col	0218309
Kennedy, Paul M.	1st Lt	AC 1909327
Kern, Kenneth R.	2d Lt	0-980869
Kirby, Arthur F.	2d Lt	0969136
Kirk, Robert S.	Capt	0-1036229
Klenk, Merl A.	Sgt	15329311
Konieczka, Daniel J.	Capt	AC 795265
Krause, William M.	S/Sgt	AF 36188107
Krieg, John W.	Pvt	US 5103566
Krumsiek, Howard F.	Capt	0-1033864

L's

Lacy, Thomas W., Jr.	2d Lt	0-1976568
Langley, Robert M.	Capt	0-415331
Lambert, Ronald T.	2d Lt	AC 1904172
Larkin, David M.	Pfc	21753790
LaRiviere, Raymond C.	Pfc	ER 11230201
Lemaire, Henry	Capt	0-446620
Leming, Otis L.	Sfc	34815074
Lent, Richard	T/Sgt	AF 39150787
Lesker, Kurt J., Jr.	1st Lt	0549108
Leventhal, Allan A.	2d Lt	AC 824518
Levy, Alan I	civilian	
Lewis, Sidney S.	Pfc	US 55043232
Lieder, LeRoy H.	Pfc	12354492
Lilienfeld, Sydney M.	Capt	AC 585090
Litke, Alvin C.	Sgt	12113434
Longo, Domenic F.	2d Lt	0990528
Loomis, William R.	1st Lt	AC 782923
Lotz, Albert T., Jr.	T/Sgt	AF 13141490
Luly, Joseph W.	Sfc	RA 16055733
Lyman, William C., Jr.	2d Lt	01536275

Mc's

McBride, James M., Jr.	A/1c	AF 13379573
McCarty, Warren K., Jr.	1st Lt	01536454
McCullen, Davis J.	A/1c	AF 28724925
McFarland, Robert D.	M/Sgt	AF 6367437
McGee, James S.	Cpl	ER 13095697
McGhee, William M.	Capt	0-1038135
McLaughlin, Herman W., Jr.	M/Sgt	RA 13218235

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M's

Mangan, James J.	Pfc	US 55192187
Manker, Raymond C.	Major	0-103[illegible]23
Manny, Benjamin L.	1st Lt	0-1337593
Manos, George P.	M/Sgt	35591740
Marshall, Foster H	Cpl	US 23113101
Martin, William	M/Sgt	ER 32101382
Maskell, Roger C.	S/Sgt	AF 11170461
Mason, William B.	2d Lt	0-986558
Mathe, Clarence E., Jr.	Lt Col	0-400168
Matter, Theodore S.	Capt	01038129
Meehling, Richard A.	Sgt	AF 35306260
Meirowitz, William I.	Pfc	US 51074939
Merrill, Halvor S.	Capt	AO 579575
Meyer, John H.	Major	0-447255
Meyer, Lesly H.	1st Lt	0-1536489
Meyer, William A., Jr.	Pfc	US 52010981
Milone, Nicholas A.	Major	0-366117
Milosis, Constantine P	Pvt	ER 12372987
Mohr, Donald P.	A/1c	AF 16337107
Monn, Donald A.	1st Lt	01535945
Moore, James R.	Pvt	16349315
Morris, John C., Jr.	Pfc	US 56079844
Myers, Roy	Cpl	RA 18376229

N's

Nelson, William	1st Lt	0-953094
Newman, David F.	Pfc	US 55038044
Noll, Paul D.	2d Lt	AO 1854570

O's

O'Brien, John L.	A/3c	21921153

P's

Palenchar, Andrew Edward	M/Sgt	RA 13298841
Paradiso, Aldo M.	Sgt	US 55025410
Parker, James E., III	Sgt	14391942
Paterson, John C.	1st Lt	0-1039839
Patterson, John R.	1st Lt	0-153672
Pawlikowski, Daniel F.	1st Lt	0-1536506
Penney, James W.	Major	0294555
Perpall, Frederick V.	Sgt	42117291
Peters, William T.	Sgt	AF 17269200
Petta, James R.	Pfc	AF 16199302
Petty, Johnny [illegible]	M/Sgt	AF 17275745
Pollard, Thomas B., Jr.	1st Lt	AO 672199
Pomykata, Joseph M.	Lt Col	AO 324426
Powers, Troy A.	Sfc	ER 33660034

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R's

Rauschkolb, Joseph F.	2d Lt	0-99[illegible]701
Reenstjerna, Robert L	Major	03[illegible]191[illegible]
Reich, Melvin	civilian	
Renner, John W.	1st Lt	0-967514
Repony, Walter C.	Capt	0-36[illegible]072
Reynolds, Earl [illegible].	1st Lt	0378241
Ricketts, John L.	Sfc	US [illegible]031799
Roberts, Eugene [illegible].	Sgt	AF 11198[illegible]87
Rolig, Dean [illegible].	Capt	0-10[illegible]95[illegible]
Romano, Joseph E.	Pvt	AF 21297057
Rosenthal, Arnold J.	1st Lt	0-92[illegible]72[illegible]
Ross, Carter T.	Sgt	AF 1727622[illegible]
Rountree, Joseph [illegible].	2d Lt	0[illegible]89032

S's

Sallade, Howard [illegible].	M/Sgt	AF [illegible]2[illegible]02
Sanders, Samuel [illegible]., Jr.	1st Lt	0-[illegible]70[illegible]6
Savins, Joseph C.	2d Lt	0[illegible]7[illegible]2
Saxe, John F.	2d Lt	0-1[illegible]76939
Scheible, James [illegible].	Pfc	US [illegible]10[illegible]4[illegible]5
Schnetzinger, Richard W.	Pfc	US [illegible]1031[illegible]9
Schrank, John W.	Major	0-3[illegible]4186
Schroeder, Larry J.	2d Lt	AC 2228[illegible]94
Scott, James W., Jr.	Capt	AC 701652
Scott, Joseph L.	Major	0[illegible]61485
Sharp, Eugene P.	Sgt	US [illegible]2001[illegible]84
Shatto, James E.	Sfc	RA 17231166
Sheridan, James [illegible].	Pvt	11224[illegible]3
Sherman, Eugene T.	Pvt	US [illegible]10[illegible]858
Shirk, Malcolm L.	2d Lt	01536466
Shourds, Sherry	Major	AC 917475
Sibum, Herman H.	Sgt	RA [illegible]3942516
Silver, Seymour D.	Major	096[illegible]0
Smith, James B.	Capt	0-[illegible]99187
Smith, Lewis C.	Capt	0-10[illegible]9221
Smith, Richard C.	2d Lt	0976[illegible]13
Soloway, Michael [illegible].	Pvt	ER 12[illegible]72990
Stinemetz, Richard B.	2d Lt	0-2202067
Stone, Robert W., Jr.	Pvt	27014401
Stovall, Edwin A.	1st Lt	02204057
Struthers, James [illegible]., Jr.	2d Lt	02210718
Stuever, Albert L.	Pfc	US [illegible]18[illegible]837
Stumpf, Phillip [illegible]., Jr.	Pfc	[illegible] 12383700
Sumida, Toshio	Cpl	ER 50000051
Sutto, Anton H.	Pfc	US [illegible]1031[illegible]
Swanson, Victor E.	2d Lt	AC 209[illegible]91[illegible]

25-130-5

T's

Tatom, Keith K., Jr.	Pfc	US 39015289
Taylor, Hubbard W., Jr.	T/Sgt	AF 31284527
Thomas, Daniel J.	2d Lt	0-2203836
Townsend, Albert T.	1st Lt	AO 790189
Trampier, Charles A., Jr.	2d Lt	0-966115
Trumble, Manley H.	Capt	0-1017814
Tufts, Thomas C.	Major	0-266215
Turner, Alan M.	2d Lt	0-2101035
Tyszkowski, Walter	1st Lt	AO 584132

V's

Van de Erve, Jerome	Lt Col	0-291423
Van Vleck, Dennison V.	Capt	AO 790739
Vodicka, Vincent	2d Lt	0-970030
Volberg, Fred J.	1st Lt	0929079
Von Der Lohe, Robert K	1st Lt	0-980219
Vreeland, Warren F.	Cpl	AF 31470901

W's

Wagner, Ellwood	Major	0-352187
Walker, James F.	Capt	AO 799874
Walsh, James R.	Sgt	32693275
Walsh, Thomas	S/Sgt	AF 16011016
Watson, Sims C., Jr.	1st Lt	0-1535194
Waugh, Robert J.	T/Sgt	AF 16047330
Weaver, Lawrence C.	Capt	AO 771172
Weight, Herbert C.	Major	0-315404
Weir, William F.	2d Lt	0991057
West, George L., Jr.	M/Sgt	RA 13305885
Wheeler, William G.	2d Lt	0973744
Whieldon, William J.	Capt	0-103612
Whitaker, Billie L.	Sgt	ER 38500775
Willever, Albert C.	1st Lt	0-1097776
Williams, Thomas A.	Capt	AO 963438
Williamson, Ira A.	Major	0-316151
Willson, Virgil A.	Lt Col	0-173594
Wilson, Gordon, Jr.	Cpl	US 52018449
Winterbourne, Clarence A., Jr.	Cpl	US 51009941
Wold, Eugene V.	M/Sgt	AF 6567009
Wyckoff, Robert G.	Sgt	39461798
Wyckoff, Russell M.	Pfc	ER 12372780
Wynne, Forrest F.	Capt	0-1039986

Y's

Young, Clarence J.	Capt	AO 1716[illegible]0
Young, James E.	Pfc	US 5[illegible]031103

25-13-6-5

Z's

Zabielski, Chester V.	1st Lt	01533852
Zeigler, Robert A.	Pfc	AF 37311936
Zenk, Thomas L.	Pfc	[illegible] 17290711
Zeresky, Sidney W.	Capt	0-1053447

RETIREMENT OF RECORDS 53-54

A's

Allen, Joseph G.	Pvt	ER 51067418

B's

Balano, Phillip R.	Sfc	US 55088569
Barker, Carl K.	T/Sgt	AF 35240948
Bassett, Thomas M.	Cpl	US 51038135
Beamer, Henry G.	Lt Col	0-197734
Bennett, Earl R. Jr.	M/Sgt	AF 38519086
Bertotto, Joseph D.	Sgt	US 52072800
Besson, George G.	M/Sgt	20907609
Blow, Gordon	Sfc	RA 13234366
Blunt, Frank N.	2nd Lt	0-2207700
Boruszkowski, Edward J.	2nd Lt	0-1882927
Bogart, William M.	Pvt	RA 17324032
Bovankovich, John C.	Pfc	US 52107123
Bozeka, Carl G.	Pfc	US 52150092
Brosman, Thomas J.	M/Sgt	AF 32061580
Brown, Kenneth E.	S/Sgt	AF 13306740
Brown, Winton	Captain	0-317377
Bush, Edward H.	Major	0-466000

C's

Carlisle, Reed K.	Sgt	US 56058620
Carpenter, William	1st Lt	0-1338917
Chapman, James W.	Cpl	NG 27341719
Charles, Thomas R.	Capt	0-1755368
Cherry, Joseph R.	Capt	0-1035435
Clark, Bernard E.	Pfc	US 55115367
Clark, George	Pfc	US 54023966
Clark, Richard S.	Capt	0-388198
Clifton, Silas W.	1st Lt	0-1036825
Clow, Robert B.	1st Lt	AO 938308
Cohen, Eli	2d Lt	0-2201452
Cohn, Oscar M.	1st Lt	0-1035651
Cone, Julian S.	Cpl	ER 14248667
Cox, James H. Jr.	Cpl	AF 18375045
Crysel, Douglas	2nd Lt	AO 1846857
Curtiss, Theodore B.	2d Lt	0-9911110

D's

Davis, Roger R.	2d Lt	0-965276
Davis, William A.	Sgt	AF 33095959
Delin, Lawrence W.	Cpl	US 52003917
Dentes, Arthur R. T.	Major	0-335912
Dewey, George D.	1st Lt	0-1996892
Di Clemente, Armand M.	Sgt	US 52072913
Dougherty, Joseph A.	Pfc	US 52126390
DuVal, Eugene H.	Capt	0-376051

25-130 S

E's

Edwards, Charles A.	Sfc	RA 18329544

F's

Fast, Charles G.	Captain	AO 936532
Ferris, Elliott H. Jr.	Cpl	ER 42030591
Finley, Robert C.	Captain	AO 1053599
Fitzgibbons, John E.	Captain	0-1035767
Fitzsimmons, Willard A.	Pfc	US 52120701
Forte, William A.	2nd Lt	0-1892739
Fuchs, Otto	Cpl	US 51064219
Furst, William C.	Pvt	12353775

G's

Garrison, Milton	Sgt	12353771
George, Warren R.	Sgt	ER 37826075
Gneshin, Stanley	Pfc	US 51116774
Goetz, Victor J.	Cpl	US 52036226
Graziano, Dominic James	Pvt	ER 12383906
Green, Richard E.	Pfc	ER 11229712
Greene, Robert F.	2nd Lt	0-1882989
Griffith, Charles N.	1st Lt	0-1535764
Grove, Bert E.	Captain	0-983805
Guiton, Donald K.	Cpl	US 52006008

H's

Haeger, Edward J.	Pfc	ER 16378070
Hanger, Oliver W.	2nd Lt	AO 1905295
Harber, Henry T.	S/Sgt	AF 12339615
Harer, Howard W.	Captain	0-1039345
Hartley, Henry A. Jr.	Captain	0-1037038
Hayslip, Joseph W. Jr.	Sgt	ER 12261311
Head, Robert L.	1st Lt	0-975996
Hegwood, William L. Jr.	2nd Lt	0-990240
Henrich, Joseph A.	1st Lt	0-553166
Herman, Thomas J.	2nd Lt	0-978855
Hicks, Walter D.	Sfc	RA 18306666
Hinckley, Robert C.	Lt Col	0-321742
Hoffmann, John N.	1st Lt	0-1535477
Hoffman, Kenneth F.	Pfc	US 55100273
Holden, Jack V.	Pvt	27014423
Hunter, George W.	T/Sgt	AF 12287103

I's

Itsell, David Q.	Pvt	27014421

J's

Jackson, Richard L.	Pvt-2	27014403
Jacobsen, Alvin R.	Civilian	-------
Janssen, Willard G.	Cpl	US 52052825
Johnson, James E. Jr.	WOJG	RA 6996227
Johnson, Robert L. Jr.	Pfc	US 51033231
Jones, Willard V.	Major	AO 432987

K's

Kaigler, Charles Thomas	Captain	0-1036216
Karrel, Maurice G.	Captain	AO 204060
Keeney, Frederick, C.	Captain	0-531759
Kleiss, Louis D.	Captain	0-290408
Klepser, Robert J.	Pvt	ER 12416669
Klie, Robert E.	2d Lt	0-992940
Klotz, Ralph R.	Pfc	ER 16375675
Kondas, Kenneth S.	Pfc	US 52053190
Kramer, Francis R.	Pvt	US 561035538
Kunkel, Gerald F.	Sgt	ER 33909165

L's

LaFalce, John C.	Pfc	ER 12383817
Laski, Joseph S.	Captain	23869A
Latimer, Joseph M.	Major	0-321432
Lawson, John	Captain	0-1036599
Levert, Lee J.	Major	AO 1851900
Lewis, Don K.	Pfc	US 52085513
Lewis, Stephen M.	Cpl	12311392
Liggons, Woster	M/Sgt	33093032
Lovett, Robert E.	1st Lt	0-1536453
Lowery, Grady M.	Pvt	14378829

M's

McAtee, William T.	Pfc	RA 15448868
McGinnis, Bryan J.	Pvt	ER 18388332
McKenzie, James E.	1st Lt	0-1283104
Madden, Lloyd W.	Captain	AO 873295
Magee, Culley Jr.	Captain	0-1036286
Manfredi, William F.	Cpl	US 51055014
Marks, Theodore	Captain	0-388494
Markiewitz, Kenneth H.	2nd Lt	0-2200562
Mercer, Daniel H.	S/Sgt	AF 20503914
Miller, Jack E.	Sgt	US 53060873
Morrison, Ned	M/Sgt	RA 6891203
Morrow, Homer N. Jr.	Captain	0-316504
Morse, James E.	Pfc	26337127
Mulligan, Rex P.	Major	AO 246612

N's

Neuwirth, Samuel	Captain	0-1037649
Norman, Fred L.	Cpl	US 52021602

O's

Oberstein, Maurice L.	1st Lt	0-1917652
O'Brien, William A.	Sfc	RA 31155758
Olsen, Edward E.	1st Lt	0-1536100
Oppenheim, Gordon A.	Pfc	ER 11229713
Orr, Chalres H.	1st Lt	0-1535610

P's

Parizeau, Douglas G.	2nd Lt	0-976590
Peckham, Robert C.	Captain	AO 1039155
Peiliker, Rolf G.	2nd Lt	0-2200816
Pigott, George M.	2nd Lt	0-2211089
Plyler, Robert A. Jr.	Pvt	RA 14366044
Prescott, John M.	1st Lt	AO 874958
Purcell, Stanley R.	Captain	0-382122

Q's

Quinn, Herman L.	Captain	0-1038795

R's

Redinger, Ralph J.	Pvt-2	27014419
Robbins, Augustus III	1st Lt	0-935953
Roemer, Joseph J.	Civilian	---------
Rollinson, Samuel M.	2nd Lt	0-2204679

S's

Sanders, Hiram R.	1st Lt	C-2203109
Schneider, Nathan	Pvt	ER 19381961
Schomburg, F. A.	A/1C	AF 12091941
Segger, John F.	Captain	AO 584102
Shafer, Charles W.	Pfc	37829031
Shiple, Robert T.	Pfc	US 52144564
Smith, Stephen P.	Pvt	27010441
Stamler, Alvin	Pvt	US 51139328
Stumpo, Anthony J.	Pvt	ER 13438249
Sundling, Joseph E.	Pfc	16375678

T's

Tetta, Patrick P.	Pfc	US 51111670
Thalheimer, Robert C.	Cpl	ER 5102358[illegible]
Thimmes, Leonard M.	1st Lt	0-1036058
Travers, George C. Jr.	1st Lt	0-973192

V's

Van Denburgh, Leland W. Jr.	Captain	0-1035022
Vazquez, Louis Raymond	Pfc	ER 12385571
Veal, Marshall J.	2nd Lt	0-2004747
Visconti, Charles E.	Major	0-373094

W's

~~Walton, Robert P.~~	~~2nd Lt~~	~~0-981903~~
Warner, Mary B.	Major	L-89
Weinmann, Clare O.	1st Lt	0-468524
White, Henry B. Jr.	Sgt	ER 18372516
Williams, Eliot C. Jr.	Major	0-1038150
Willson, Clarke S.	1st Lt	AO 876370
Winchester, Henry T.	Major	0-1036434
Wingate, William H.	Captain	AO 698503
Wolfson, Herbert L.	2nd Lt	0-1892759
Wool, Marvin S.	Pfc	US 55082555
Wysocky, Theodore J.	M/Sgt	27850397

Z's

Zweifel, Kenneth G.	2nd Lt	0-973923

Additional:

Diner, Paul D.	Sgt	US 56074723
Erith, Joel A.	Capt	0-1037114
Nelson, Harry, Jr.	Cpl.	US 55030932

Trip Report of Field Search
for Exercise Desert Rock Documentation
Conducted by Representatives of The Adjutant General
18 June 1978 to 14 July 1978

National Personnel Records Center
NARS-5 Computer Inventory of the
Composition of the VIP Personnel
File at St Louis (February 1977)

APPENDIX #4 to ANNEX H

VIP NAME	SN/SSN	SVC	REG NF
AECUREZK JAMES G	CC31812C5	NP	V CCCCCCC252 2 8 MAR 1979
AECUREZK JAMES G	CC31812C5	NP	V CCCCCCC251 3/28/79
AEAMS ARLIN N	CCC158955	NP	V CCCCCCC681
AEAMS ARLIN N	CCC158955	NP	V CCCCCCC682
AEAMS BROCKMAN	CCC742723	NP	V CCCCCCC752
AEAMS BROCKMAN	CC7342723	NP	V CCCCCCC751
AEERS ROBERT O	CCC499956	NP	V CCCCCCC536
AEERS ROBERT O	CCC499956	NP	V CCCCCCC535
AGNEW SPIRO T	CC1C1C416	AR	V CCCCCCC226
AGNEW SPIRO T	C33C67213	AR	V CCCCCCC226
ALEXANDER CLIFFORD	C21954919	AR	V CCCCCCC708
ALEXANDER WILLIAM	C54139738	AR	V CCCCCCC372
ALLEN JAMES P	CCC281758	NP	V CCCCCCC755
ALLEN JAMES P	CCC281758	NP	V CCCCCCC756
ALSTON PHILIP H	CCC158910	NP	V CCCCCCC749
ALSTON PHILIP H	CCC158910	NP	V CCCCCCC750
AMBRO JEROME A	C51C81CC6	AR	V CCCCCCC522
ANDERSON GLEN M	C39253126	AR	V CCCCCCC373
ANDERSON JOHN R	C161C1654	AR	V CCCCCCC374
ANDERSON WENDELL R	CC4C618C1	AR	V CCCCCCC706
ANDREWS IKE F	C34857C83	AR	V CCCCCCC375
ANDREWS IKE F	C34857988	AR	V CCCCCCC634
ANDRUS CECIL D	CC4238690	NP	V CCCCCCC762
ANDRUS CECIL D	CC4238690	NP	V CCCCCCC761
ANNENBERG WALTER H	CCC534CC7	NP	V CCCCCCC654
ANNENBERG WALTER H	CCC534CC7	NP	V CCCCCCC655
ARBECA PHILLIP E	CC3C441CC	AF	V CCCCCCC515
ARENDS LESLIE C	CC1CC832C	NP	V CCCCCCC206

..VIP..NAME.....	SN/SSN	SVC	REG NR
ARENCS LESLIE C	CC1CC832C	NN	V CCCCCCC207
ARMSTRONG NEIL A	CCC5C5129	NN	V CCCCCCC552
UU ARMSTRONG WILLIAM	CC23CC276	AR	V CCCCCCC376
ARNOLD HENRY H	CCCCC2255	AF	V CCCCCCCCC2
ASHBRCOK JOHN M	C0571C862	NP	V CCCCCCC759
ASHBRCOK JOHN M	CC571C862	NN	V CCCCCCC76C
ASHLEY THOMAS W	C11CC2346	AR	V CCCCCCC377
ASPIN LESLIE	3914C1823	AR	V CCCCCCC378
UU ASPINALL WAYNE N	CCC53C489	AR	V CCCCCCC301
ATHERTON ALFRED L	CCC536917	AR	V CCCCC01C06
AUCOIN WALTER L	54C5CC154	AR	V CCCCCCC298
AUSTAD MARCUS J	C39826755	AR	V CCCCCCC363
BACHAM ROBERT E	CCC544272	NP	V CCCCCCC917
BACHAM ROBERT E	CCC544272	NN	V CCCCCCC916
UU BACHAM ROBERT E	573322705	NN	V CCCCCCC916
BACHAM ROBERT E	573322705	NP	V CCCCCCC917
BAFALIS LOUIS A	417244585	AR	V CCCCCCC379
BAILAR BENJAMIN F	CCC54654C	NP	V CCCCCCC808
BAILAR BENJAMIN F	CCC54654C	NN	V CCCCCCC809
BAKER EDWARD L	CCC567146	AR	V CCCCCCC302
UU BAKER HOWARD H	CCC4322C8	NP	V CCCCCCC805
BAKER HOWARD H	CCC4322C8	NN	V CCCCCCC806
BAKER HOWARD H	CC6416522	NP	V CCCCCCC805
BAKER HOWARD H	CC6416522	NN	V CCCCCCC806
BAKER JAMES A	CCCC57723	NC	V CCCCCCC510
BAKER JAMES A	CCCC57723	NN	V CCCCCCC511
UU BAKER NEWTON D	CCC1C8826	AR	V CCCCCCCC03
BARCCY WILLIAM J	CCC6CC8C1	NP	V CCCCCCC104

PAGE 2

28 MAR 1979

..VIP..NAME.....	SN/SSN	SVC	REG NR
BARODDY WILLIAM J	000600801	NM	V 0000000105
BARTLETT DEWEY F	000021945	MC	V 0000000898
BARTLETT DEWEY F	000021945	NM	V 0000000899
BARTLETT DEWEY F	004041128	NP	V 0000000897
BARTLETT EDWARD L	000533677	AR	V 0000000586
BAYH BIRCH E	013210586	AR	V 0000000380
BEARD EDWARD P	022791415	AR	V 0000000370
BEARD ROBIN L	000084560	NM	V 0000000152
BELCHER PAGE	001192572	AR	V 0000000303
BELCHER TAYLOR G	000161700	NM	V 0000000544
BELCHER TAYLOR G	000161700	NP	V 0000000592
BELL ALPHONZO E	019167030	AR	V 0000000381
BELL GRIFFIN B	001578159	AR	V 0000000625
BELL GRIFFIN B	034195217	AR	V 0000000625
BELLMON HENRY L	000017582	MC	V 0000000774
BELLMON HENRY L	000401066	MC	V 0000000774
BENJAMIN ADAM	000083125	AR	V 0000000938
BENJAMIN ADAM	000083125	NP	V 0000000996
BENJAMIN ADAM	000083125	NM	V 0000000997
BENNETT CHARLES E	001300916	AR	V 0000000382
BENNETT DOUGLAS P	077346094	AR	V 0000000989
BENNETT WALLACE F	00X111398	AR	V 0000000333
BENTSEN LLOYD M	000564794	AF	V 0000000227
BERMAN SHELDON	007265505	NM	V 0000000951
BERMAN SHELDON	007265505	NP	V 0000000961
BESSOLO GEORGE	039567434	AR	V 0000001054
BINGHAM JONATHAN B	000529472	AR	V 0000000383
BIRCH JOHN M	000889028	AR	V 0000000940

28 MAR 1979

28 MAR 1979

	..VIP..NAME.....	SN/SSN	SVC	REG AF
	BLACKBURN BENJAMIN	CCC5CC377	NN	V CCCCCCC117
	BLACKBURN BENJAMIN	CCC5CC377	NP	V CCCCCCC118
UU	BLCOMFIELD RICHARD	CCC553882	CG	V CCCCCCC836
	BLCOMFIELD RICHARD	CC2218431	AF	V CCCCCCC837
	BLCOMFIELD RICHARD	C13229612	AF	V CCCCCCC837
	BLCUNT WINTON M	CCC752473	AF	V CCCCCCCC04
	BOGART HUMPHREY D	CCC682516	NN	V CCCCCCC950
	BOLAND EDWARD P	CC1637379	AR	V CCCCCCC384
UU	BOLLING RICHARD W	CC2C34391	AR	V CCCCCCC385
	BOLLING RICHARD W	C89242591	AR	V CCCCCCC385
	BOND LANGHORNE M	C243C6658	AR	V CCCCCCC845
	BONIOR DAVID E	369467577	AF	V CCCCCCC528
	BONKER DONALD L	CCC318879	CG	V CCCCCCC890
	BOSTER DAVIS E	297123485	NP	V CCCCC01C27
UU	BOSTER DAVIS E	297123485	NN	V CCCCC01C28
	BOURNE PETER G	CC5711565	AR	V CCCCCCC721
	BOURNE PETER G	255668731	AR	V CCCCCCC721
	BOWEN DAVID R	427566992	AR	V CCCCCCC386
	BOWSHER CHARLES A	C55434591	AR	V CCCCCCC336
	BOYATT THOMAS D	2813C1321	AF	V CCCCCCC593
UU	BRADEMAS STEPHEN J	CC98242C3	NN	V CCCCCCC748
	BRADEMAS STEPHEN J	CC98242C3	NP	V CCCCCCC747
	BRADLEY WILLIAM W	492487592	AF	V CCCCC01C59
	BREWSTER KINGMAN	CCC156465	NP	V CCCCCCC799
	BREWSTER KINGMAN	CCC156465	NN	V CCCCCCC80C
	BREWSTER KINGMAN	CC4C41471	NP	V CCCCCCC799
UU	BREWSTER KINGMAN	CC4C41471	NN	V CCCCCCC80C
	BREWSTER ROBERT C	CCC258377	NN	V CCCCCCC539

28 MAR 1973

..VIP..NAME.....	SN/SSN	SVC		REG. NF
BREWSTER ROBERT C	CCC258377	NF	V	CCCCCCC540
BRINKLEY JACK T	CC3CC6249	AF	V	CCCCCCC368
BRITTCN THEODORE R	CCC9256E6	NN	V	CCCCCCC659
BRITTCN THEODORE R	CCC9256E6	NC	V	CCCCCCC635
BROCK WILLIAM E	CCC573499	NN	V	CCCCCCC151
BROMFIELD WILLIAM	C16C65354	AR	V	CCCCCCC387
BROTZMAN DONALD G	CC1327093	AR	V	CCCCCCC305
BROWN CLARENCE J	CCC499185	NN	V	CCCCCCC134
BROWN CLARENCE J	CCC499185	NF	V	CCCCCCC133
BROWN GARRY E	CC1341396	AR	V	CCCCCCC388
BROYHILL JOEL T	CC125265C	AR	V	CCCCCCC304
BRUCE DAVID K	CCC9CC883	AR	V	CCCCCCCC05
BRUCKER WILBER M	CCC16654C	AR	V	CCCCCCCC06
BUCHANAN JOHN H	CC5816427	NN	V	CCCCCCC531
BUCHANAN JOHN H	CC5816427	NF	V	CCCCCCC532
BUCKLEY JAMES L	CCC332451	NN	V	CCCCCCC158
BUFFUN WILLIAM B	C12139662	AR	V	CCCCCCC525
BUMPERS DALE L	CCC921013	NC	V	CCCCCCC201
BUMPERS DALE L	CCC921013	NN	V	CCCCCCC354
BURGENER CLAIR	CC2C79272	AF	V	CCCCCCC704
BURKE J F	CC2C51858	AR	V	CCCCCCC389
BURKE JAMES A	C11C49886	AR	V	CCCCCCC39C
BURKE JOHN R	CCC387265	NF	V	CCCCCCC913
BURKE JOHN R	CC8887231	NF	V	CCCCCCC913
BURLESON OMAR T	CCC254721	NF	V	CCCCCCC265
BURLESON OMAR T	CCC254721	NN	V	CCCCCCC264
BURTON HAROLD F	CCC1CC435	AR	V	CCCCCCCC07
BUSH GEORGE F	CCC173464	NF	V	CCCCCCCC52

28 MAR 1979

..VIP..NAME.....	SN/SSN	SVC	REG NR
BUSH GEORGE F	CCC173464	NP	V CCCCCCCC53
BUTLER MANLEY C	CCC4226CC	NP	V CCCCCCC734
BUTLER MANLEY C	CCC4226CC	NP	V CCCCCCC557
BUTLER MANLEY C	CC55C27S5	NP	V CCCCCCC734
BUTLER MANLEY C	CC55C27S5	NP	V CCCCCCC557
BUZHARDT JOSEPH F	CCCC2835C	AR	V CCCCCCC116
BYRD HARRY F	CCC111354	NP	V CCCCCCC136
BYRD HARRY F	CCC111354	NP	V CCCCCCC135
BYRON GOODLOE E	CC2274788	AR	V CCCCCCC391
BYRON GOODLOE E	5774232C8	AR	V CCCCCCC391
CALIFANO JOSEPH A	CCC6C2416	NP	V CCCCCCC630
CALIFANO JOSEPH A	CCC6C2416	NP	V CCCCCCC631
CALLAWAY HOWARD H	CCCC591C6	AR	V CCCCCCC392
CALLEY WILLIAM L	2627264C5	AR	V CCCCCCC361
CAMP JOHN N	CCXC511C8	AR	V CCCCCCC588
CAMPBELL JAMES F	CCC127023	NP	V CCCCCCCC55
CAMPBELL JAMES F	CCC127023	NP	V CCCCCCCC54
CANNON CLARENCE A	CCXC41175	CP	V CCCCCCC187
CANNON HOWARD W	CCC38317C	AF	V CCCCCCC297
CARGO WILLIAM I	CCC366835	NP	V CCCCCCC813
CARGO WILLIAM I	CCC366835	NP	V CCCCCCC812
CARLUCCI FRANK C	CCC518635	NP	V CCCCCCC113
CARLUCCI FRANK C	CCC518635	NP	V CCCCCCC112
CARSWELL ROBERT	CCC558337	NP	V CCCCCC1C18
CARSWELL ROBERT	CCC558337	NP	V CCCCCC1C17
CARTER JAMES E	CCC485C15	NP	V CCCCCCC537
CARTER JAMES E	CCC485C15	NP	V CCCCCCC538
CARTER JAMES E	CC1342448	AR	V CCCCCC1C16

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..VIP..NAME.....	SN/SSN	SVC	REG AF
CARTER JOHN W	CC8336493	NN	V CCCCCCC632
CARTER JOHN W	CCB336493	NP	V CCCCCCC699
CARTER JOHN W	CCC1C1244	NP	V CCCCCCC699
CARTER JOHN W	CCC1C1244	NN	V CCCCCCC632
CARTER JOHN W	258781162	NP	V CCCCCCC699
CARTER JOHN W	258781162	NN	V CCCCCCC632
CARTER TIM L	CCC36C564	AR	V CCCCCCC393
CASEY WILLIAM	CCC2E2581	NP	V CCCCCCC826
CEDERBERG ELFORD A	C012E696C	AR	V CCCCCCC394
CELEBREZZE ANTHONY	CC95C2665	NN	V CCCCCCC781
CELEBREZZE ANTHONY	CC95C2665	NP	V CCCCCCC78C
CHAFEE JOHN H	CCCC39C83	NN	V CCCCCCC542
CHAFEE JOHN H	CCCC39C83	NC	V CCCCCCC530
CHAPPELL WILLIAM V	CCC363921	NN	V CCCCCCC161
CHENNAULT CLAIRE L	CCC01C09C	AF	V CCCCCCCC08
CHILES LAWTON M	265364818	AR	V CCCCCCC395
CHRISTOPHER WARREN	CCC440335	NN	V CCCCCCC901
CHRISTOPHER WARREN	CC7357271	NP	V CCCCCCC90C
CHRISTOPHER WARREN	CC7357271	NN	V CCCCCCC901
CLANCY DONALD D	C15317288	AR	V CCCCCCC396
CLARK BENNETT C	CCXC1C89C	AR	V CCCCCCCC1C
CLARK RICHARD C	C55C67152	AR	V CCCCCCC366
CLARK RICHARD C	479269988	AR	V CCCCCCC366
CLAUSEN DONALD H	CCC4145C3	NN	V CCCCCCC906
CLAUSEN DONALD H	CC5555484	NP	V CCCCCCC905
CLAUSEN DONALD H	CC5555484	NN	V CCCCCCC906
CLAY WILLIAM L	C5542687C	AR	V CCCCCCC397
CLAYTOR WILLIAM G	CCCC87157	NN	V CCCCCCC758

..VIP..NAME.....	SN/SSN	SVC	REG NF
CLAYTOR WILLIAM G	CCCCE7157	NP	V CCCCCCC757
CLEVELAND JAMES C	CC1167863	AR	V CCCCCCC398
CLIFFORD CLARK M	CCC376325	NP	V CCCCCCC289
CLIFFORD CLARK M	CCC376325	NP	V CCCCCCC359
COFFIN FRANK M	CCC173255	NP	V CCCCCCC736
COFFIN FRANK M	CCC173255	NP	V CCCCCCC735
COLE KENNETH R	CCC651434	NP	V CCCCCCC285
COLLINS JAMES M	CCC515108	AR	V CCCCCCC399
COLNER WILLIAM M	CC157695E	AR	V CCCCCCC309
CONABLE BARBER B	CCCC23455	NP	V CCCCCCC824
CONABLE BARBER B	CCC516122	NC	V CCCCCCC825
CONLAN JOHN B	363308500	AR	V CCCCCCC400
CONTE SILVIO O	CC6CC3684	NP	V CCCCCCC753
CONTE SILVIO O	CC6CC3684	NP	V CCCCCCC754
CONYERS JOHN J	CC1E9663C	AR	V CCCCCCC401
COOKE GOODWIN	CCCC62886	NC	V CCCCCC1C14
COOKE GOODWIN	CCCC62886	NP	V CCCCCC1C15
COOPER JOHN S	CC1758336	AR	V CCCCCCC306
CORMAN JAMES C	CCCC2CCC4	NP	V CCCCCCC288
CORNWELL DAVID L	307468734	AR	V CCCCCCC937
CORRIGAN ROBERT F	CCCCE37C4	NP	V CCCCCCC782
CORRIGAN ROBERT F	CCCCE37C4	NP	V CCCCCCC783
COSBY WILLIAM H	CC4823834	NP	V CCCCCCC583
COSBY WILLIAM H	CC4823834	NP	V CCCCCCC737
COSTLE DOUGLAS M	534363430	AR	V CCCCCCC846
CRAIG MALIN	CCCCCCCE6	AR	V CCCCCCCC09
CRANSTON ALAN M	C3375252C	AR	V CCCCCCC402
CRAVENS JAMES B	CCC129737	NP	V CCCCCCC679

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VIP NAME	SN/SSN	SVC	REG NR
CRAVENS JAMES B	CCC139737	NN	V 00CCC00680
CRAWFORD WILLIAM R	CCC513371	NP	V 00CCC00056
CRAWFORD WILLIAM R	CCC513371	NN	V 00CCC00057
CROSBY OLIVER S	CCC171057	NP	V 00CCC00891
CROSBY OLIVER S	CCC171057	NN	V 00CCC00892
CULVER JOHN C	CCCC69839	MC	V 00CCC00591
CULVER JOHN C	CCCC69839	NN	V 00CCC00371
CURLIN WILLIAM P	C15536103	AR	V 00CCC00792
CURTIS THOMAS B	CCC136583	NP	V 00CCC00344
CURTIS THOMAS B	CCC136583	NN	V 00CCC00350
DALE FRANCIS L	CCC269553	NN	V 00CCC00061
DALE FRANCIS L	CCC269553	NP	V 00CCC00060
DAMOURS NORMAN E	C11433780	AR	V 00CCC00715
DANIEL WILBUR C	CC9353467	NN	V 00CCC01001
DANIEL WILBUR C	CC9353467	NP	V 00CCC01000
DANIELSON GEORGE E	CCC318088	NN	V 00CCC00059
DANIELSON GEORGE E	CCC318088	NP	V 00CCC00058
DAVIS JOHN W	C34355712	AR	V 00CCC00307
DAWES CHARLES G	CCXC82765	AR	V 00CCC00051
DECAIR THOMAS P	C54973752	AR	V 00CCC00740
DECAIR THOMAS P	36944554C	AR	V 00CCC00740
DECONCINI DENNIS W	CC5703944	AR	V 00CCC00629
DELAGARZA ELIGIO	CC2207734	AR	V 00CCC00403
DELLENBACK JOHN R	CCC133778	NP	V 00CCC00238
DELLENBACK JOHN R	CCC133778	NN	V 00CCC00159
DELLUMS RONALD V	CC15C56C5	NN	V 00CCC00267
DELLUMS RONALD V	CC15C56C5	MC	V 00CCC00266
DEMARA FERINAND W	CC2244724	NN	V 00CCC00994

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..VIP..NAME.....	SN/SSN	SVC	REG NE
DENNIS DAVID W	002052629	AR	V 000000312
DENT FREDERICK B	000256493	NP	V 000000062
DENT FREDERICK B	000256493	NP	V 000000063
DENT JOHN H	000196314	NC	V 000000548
DENT JOHN H	000196314	NN	V 000000549
DICKINSON WILLIAM	002235726	AF	V 000000557
DICKINSON WILLIAM	007456156	NP	V 000000555
DICKINSON WILLIAM	007456156	NN	V 000000556
DIGGS CHARLES C	000586611	AR	V 000000404
DINGELL JOHN D	001339853	AR	V 000000405
DODD CHRISTOPHER J	046360225	AR	V 000000840
DONOHUE HAROLD D	000210041	NP	V 000000261
DONOHUE HAROLD D	000210041	NN	V 000000260
DORN WILLIAM J	014074457	AR	V 000000311
DORNAN ROBERT X	003038271	AF	V 000001009
DUNCAN JOHN J	014105608	AR	V 000000406
DUNCAN ROBERT B	000173586	NP	V 000000823
DUNCAN ROBERT B	000173586	NN	V 000000810
DUNCAN ROBERT B	331187181	NN	V 000000810
DUPONT PIERRE S	000617382	NN	V 000000219
DUPONT PIERRE S	000617382	NP	V 000000218
DURKIN JOHN A	000551955	NN	V 000000869
DWYER FREDERICK E	006074597	NP	V 000000968
DWYER FREDERICK E	006074597	NN	V 000000969
EAGLETON THOMAS F	003401653	NP	V 000000771
EARLY JOSEPH D	000562984	NN	V 000000515
EARLY JOSEPH D	000562984	NP	V 000000514
EARLY STEPHEN T	000170445	AR	V 000000011

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	..VIP..NAME.....	SN/SSN	SVC	REG NB	
	EBERLE WILLIAM D	C0037033C	NP	V CCCCC00778	28 MAR 1979
	EBERLE WILLIAM D	C0037033C	NN	V CCCCC00779	
	EBERLE WILLIAM D	C05556828	NP	V CCCCC00778	
	EBERLE WILLIAM D	C05556828	NN	V CCCCC00779	
	ECKERD JOHN M	C0049896C	AR	V CCCCC00351	
	ECKHARDT ROBERT C	C38515321	AR	V CCCCC00407	
	EDWARDS JACK	CCC928885	NC	V CCCCC00587	
	EDWARDS JACK	CCC928885	NN	V CCCCC00586	
	EGAN JOHN J	CCCC136C1	NN	V CCCCC01C41	
	EGAN JOHN J	CCCC136C1	NC	V CCCCC01C40	
	EGER JOHN	CC5210857	AR	V CCCCC00716	
	EGER JOHN M	33432C41C	AR	V CCCCC00716	
	EHRLICHMAN JOHN D	CCC7199C5	AF	V CCCCC00228	
	EILBERG JOSHUA	CCC188665	NP	V CCCCC00141	
	EILBERG JOSHUA	CCC188665	NN	V CCCCC00142	
	EISENHOWER DWIGHT	CCCCC3822	AR	V CCCCC00C12	
	EISENHOWSER MILTON	CC4543312	AR	V CCCCC00C13	
	ELIOT THEODORE L	CCC129C5C	NP	V CCCCC01C29	
	ELIOT THEODORE L	CCC129C5C	NN	V CCCCC01C30	
	ERLENBORN JOHN N	C07665315	NN	V CCCCC00551	
	ERLENBORN JOHN N	CC7665315	NP	V CCCCC00550	
	ERTEL ALLEN E	CCC59241C	NP	V CCCCC00518	
	ERTEL ALLEN E	CCC59241C	NN	V CCCCC00519	
	ERTEL ALLEN E	206309672	NP	V CCCCC00518	
	ERTEL ALLEN E	206309672	NN	V CCCCC00519	
	ERVIN SAMUEL J	CCC307581	AR	V CCCCC00308	
	ESCH MARVIN L	C15218693	AR	V CCCCC00408	
	EVANS FRANK E	CC5637974	NN	V CCCCC00611	

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..VIP..NAME.....	SN/SSN	SVC	REG NR
EVANS FRANK E	C05627974	NP	V CCCCCCC876
EVERS MEDGAR W	C34874245	AR	V CCCCCCCC14
EXCN JOHN J	C17C78802	AR	V CCCCCCIC55
FARLAND JOSEPH S	CCC4C8928	NP	V CCCCCCC291
FARLAND JOSEPH S	CCC4C8928	NP	V CCCCCCC505
FASCELL DANTE B	C01573192	AR	V CCCCCCC409
FIELD JOHN A	CCC376798	NP	V CCCCCCC671
FIELD JOHN A	CCC376798	NP	V CCCCCCC644
FINDLEY PAUL A	CCC316849	NP	V CCCCCCC255
FINDLEY PAUL A	CCC316849	NP	V CCCCCCC254
FIRESTONE LEONARD	CCC126598	NP	V CCCCCCCC65
FIRESTONE LEONARD	CCC126598	NP	V CCCCCCCC64
FISH HAMILTON	C07134418	NP	V CCCCCCC744
FISH HAMILTON	C07134418	NP	V CCCCCCC743
FITHIAN FLOYD J	CCC557C24	NP	V CCCCCCC811
FITHIAN FLOYD J	CC318794C	NP	V CCCCCCC811
FITHIAN FLOYD J	CC318794C	NP	V CCCCCCC868
FITHIAN FLOYD J	505483751	NP	V CCCCCCC811
FLAHERTY PETER F	CC2C57888	AR	V CCCCCCC703
FLAHERTY PETER F	C13169467	AR	V CCCCCCC703
FLANIGAN PETER M	CCC363467	NP	V CCCCCCC210
FLANIGAN PETER M	CCC363467	NP	V CCCCCCC211
FLORIO JAMES J	CCC674331	NP	V CCCCCCC832
FLORIO JAMES J	CC474C486	NP	V CCCCCCC832
FLORIO JAMES J	126281912	NP	V CCCCCCC832
FLOWERS WALTER W	423404432	AR	V CCCCCCC41C
FONG HIRAM L	CCC27C478	AF	V CCCCCCCC5C
FONG HIRAM L	CCC27C478	AR	V CCCCCCC411

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..VIP..NAME.....	SN/SSN	SVC	REG NF
FORD GERALD R	CCC141329	NP	V CCCCCC0147
FORD GERALD R	CCC141329	NP	V CCCCCC0146
FORD WENDELL H	C35815535	AR	V CCCCCC0521
FORD WILLIAM D	CC1858572	AF	V CCCCCC0290
FORD WILLIAM D	CC3143001	NP	V CCCCCC0287
FOX RICHARD K	CC874191C	NP	V CCCCCC0862
FOX RICHARD K	CC874191C	NP	V CCCCCC0863
FRASER DONALD M	CCC338044	NP	V CCCCCC0908
FRASER DONALD M	CCC338044	NP	V CCCCCC0907
FRASER DONALD M	CC7C39932	NP	V CCCCCC0907
FRASER DONALD M	CC7C39932	NP	V CCCCCC0908
FRELINGHUYSEN PETE	CCC168723	NP	V CCCCCC0259
FRELINGHUYSEN PETE	CCC168723	NP	V CCCCCC0258
FRENZEL WILLIAM E	CCC354199	NP	V CCCCCC0217
FRENZEL WILLIAM E	CCC354199	NP	V CCCCCC0216
FREY LOUIS	CCC6C2598	NP	V CCCCCC0145
FULTON JAMES G	167C15131	NP	V CCCCCC0200
FULTON JAMES G	167C15131	NP	V CCCCCC0199
FULTON RICHARD H	CC9768936	NP	V CCCCCC0546
FULTON RICHARD H	CC9768936	NP	V CCCCCC0547
FUQUA JOHN C	266SC6537	AR	V CCCCCC0412
GAMBRELL DAVID H	CCC968419	AR	V CCCCCC0310
GANDAL ALVIN F	CC2266667	AR	V CCCCCC0590
GARDNER JAMES C	C53225106	AR	V CCCCCC0793
GARDNER JOHN W	CCCC30567	NP	V CCCCCC0870
GARDNER JOHN W	CCCC30567	NP	V CCCCCC1024
GARN EDWIN J	CCC559656	NP	V CCCCCC0293
GARN EDWIN J	CCC559656	NP	V CCCCCC0245

	..VIP..NAME.....	SN/SSN	SVC	REG NR
	GAYDOS JOSEPH M	C02516959	NP	V 000000616
	GAYDOS JOSEPH M	C02516959	NP	V 000000617
UU	GEPHARDT RICHARD A	C27538737	AF	V 000000927
	GETTYS THOMAS S	C00139956	NP	V 000000137
	GETTYS THOMAS S	C00139956	NP	V 000000138
	GIAIMO ROBERT N	C01997399	AR	V 000000413
	GILLIGAN JOHN J	C00227088	NP	V 000000904
	GILLIGAN JOHN J	C00227088	NP	V 000000982
UU	GILLIGAN JOHN J	C07001225	NP	V 000000904
	GLENN JOHN H	C00021149	NP	V 000000153
	GODFREY ARTHUR M	C00008385	NP	V 000000949
	GODFREY ARTHUR M	C00008385	NP	V 000000962
	GOODLEY GEORGE N	C00002858	NP	V 000000541
	GOREEN ROBERT F	C01283413	AR	V 000000707
UU	GOLDBERG ARTHUR J	C00924186	AR	V 000000877
	GOODELL CHARLES E	C02252830	AF	V 000000015
	GOODLING WILLIAM F	C13221904	AR	V 000000520
	GRAHAM PIERRE R	C00009978	NP	V 000000081
	GRAHAM PIERRE R	C00009978	NP	V 000000080
	GRAVEL MAURICE R	C01935945	AR	V 000000414
UU	GRAY KENNETH J	C36741389	AR	V 000000314
	GREEN MARSHALL	C00236722	NP	V 000000098
	GREEN MARSHALL	C00236722	NP	V 000000099
	GRIFFIN ROBERT P	C16144770	AR	V 000000415
	GRONOUSKI JOHN A	C00703735	AF	V 000000847
	GROSS HAROLD R	C01432380	AR	V 000000315
UU	GUDE GILBERT	C33549491	AR	V 000000416
	HAGAN GEORGE E	C02310690	AR	V 000000331

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..VIP..NAME.....	SN/SSN	SVC	REG NF	
HAGEDORN THOMAS M	005926366	NM	V 0000000872	28 MAR 1979
HAGEDORN THOMAS M	005926366	NP	V 0000000871	
HALABY NAJEEB E	000306728	NM	V 0000000971	
HALABY NAJEEB E	000306728	NP	V 0000000970	
HALEY JAMES A	000679214	AR	V 0000000417	
HALLECK CHARLES A	000168141	AR	V 0000000016	
HALSEY WILLIAM F	000005035	NP	V 0000000959	
HALSEY WILLIAM F	000005035	NM	V 0000000983	
HAMILTON JOHN	000022085	NM	V 0000000975	
HAMILTON JOHN	000022085	MC	V 0000000974	
HANLEY JAMES M	032545385	AR	V 0000000418	
HANNA RICHARD T	006327635	NM	V 0000000804	
HANNA RICHARD T	006327635	NP	V 0000000803	
HANNAFORD MARK W	035138769	AR	V 0000000517	
HANNAFORD MARK W	303245153	AR	V 0000000517	
HANSEN GEORGE V	019345414	AF	V 0000000225	
HANSEN ORVAL H	005543250	NP	V 0000000614	
HANSEN ORVAL H	005543250	NM	V 0000000615	
HARKIN THOMAS R	000656660	NM	V 0000000653	
HARRIS HERBERT E	000486363	NM	V 0000000727	
HARRIS HERBERT E	007570807	NP	V 0000000726	
HARRIS HERBERT E	007570807	NM	V 0000000727	
HARTKE RUPERT V	000276871	NP	V 0000000241	
HARTKE RUPERT V	000276871	NM	V 0000000240	
HARTKE RUPERT V	000528417	CG	V 0000000239	
HARTMANN ROBERT T	000107371	NP	V 0000000828	
HARTMANN ROBERT T	000107371	NM	V 0000000829	
HARTMANN ROBERT T	545249487	NP	V 0000000828	

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..VIP..NAME.....	SN/SSN	SVC	REG NF
HARTMANN ROBERT T	545249487	NM	V 00000000829
HASKELL FLOYD K	001010732	AR	V 00000000236
HASTINGS JAMES F	008057278	NM	V 00000000613
HASTINGS JAMES F	008057278	NP	V 00000000612
HATFIELD MARK O	000370021	NM	V 00000000286
HATFIELD MARK O	000370021	NP	V 00000000343
HATHAWAY WILLIAM D	000702114	AR	V 00000000733
HATHAWAY WILLIAM D	011068961	AR	V 00000000733
HAYNSWORTH CLEMENT	000141685	NP	V 00000000561
HAYNSWORTH CLEMENT	000141685	NM	V 00000000562
HAYNSWORTH CLEMENT	248052021	NP	V 00000000561
HAYS WAYNE L	000308306	AR	V 00000000419
HEINZ HENRY J	013771269	AF	V 00000000526
HELMS JESSE A	006563972	NF	V 00000000294
HELMS JESSE A	006563972	NM	V 00000000295
HELMS RICHARD M	000170590	NP	V 00000000821
HELMS RICHARD M	000170590	NM	V 00000000822
HELSTOSKI HENRY	032762477	AR	V 00000000420
HENDERSON DAVID N	000442621	AF	V 00000000229
HENDRIE JOSEPH M	036853782	AR	V 00000000882
HILLIS ELWOOD F	001338464	AR	V 00000000421
HINSHAW ANDREW J	005629920	NP	V 00000000801
HINSHAW ANDREW J	005629920	NM	V 00000000802
HITCH CHARLES J	000886328	AR	V 00000000337
HODGSON JAMES D	000252729	NM	V 00000000115
HODGSON JAMES D	000252729	NP	V 00000000114
HOLLINGS ERNEST F	000461134	AR	V 00000000422
H[illegible]QUIST RICHARD	000216647	NP	V 00000000509

..VIP..NAME.....	SN/SSN	SVC	REG NR
HOLMQUIST RICHARD	000216647	NN	V 0000000508
HORVITZ WAYNE L	000961672	AR	V 0000000887
HORVITZ WAYNE L	032521026	AR	V 0000000887
HOSMER CHESTER C	000097960	NN	V 0000000590
HOWARD JAMES J	007151584	NP	V 0000000773
HUBBARD CARROLL	400485208	AR	V 0000001037
HUBER ROBERT J	001559094	AR	V 0000000791
HUBER ROBERT J	036889027	AR	V 0000000791
HUGHES HAROLD E	037651588	AR	V 0000000423
HULL CORDELL	00X100271	CN	V 0000000026
HUNGATE WILLIAM L	037624609	AR	V 0000000424
HURD JOHN G	000073192	NN	V 0000000672
HURD JOHN G	000073192	NP	V 0000000645
HUTCHINSON JESSE E	036150700	AR	V 0000000992
HYDE HENRY J	000386437	NP	V 0000000912
HYDE HENRY J	000386437	NN	V 0000000911
ICHORD RICHARD H	003388245	NP	V 0000000534
ICHORD RICHARD H	003388245	NN	V 0000000533
INGERSOLL ROBERT S	000080044	NN	V 0000000607
INGERSOLL ROBERT S	000080044	NP	V 0000000000
INGERSOLL ROBERT S	000080044	NP	V 0000000606
INOUYE DANIEL K	575183613	AR	V 0000000425
INOUYE KEN	030102884	AR	V 0000000017
IRVING FREDERICK	007006528	AF	V 0000000852
IVES GEORGE S	000312220	NN	V 0000000815
IVES GEORGE S	000[illegible]222[illegible]	NP	V 0000000816
IVES GEORGE S	006662822	NP	V 0000000816
JACKSON HENRY M	002270233	AR	V 0000000426

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VIP NAME	SN/SSN	SVC	REG NF
JARMAN JOHN F	C18C84677	AR	V CCCCCCC427
JEFFORDS JAMES M	CCC56C234	NP	V CCCCCCC647
JENKINS EDGAR L	CCC297415	CG	V CCCCC01C33
JENRETTE JOHN W	CCXC51936	AR	V CCCCC01C31
JENRETTE JOHN W	251CC0779	AR	V CCCCC01C31
JENRETTE JOHN W	251CC0779	AR	V CCCCC01C31
JOHNSON JAMES P	CCCC57156	NC	V CCCCCCC139
JOHNSON JAMES P	CCCC57156	NP	V CCCCCCC140
JOHNSON LYNDON B	CCCC86243	NP	V CCCCCCC019
JOHNSON LYNDON B	CCCC86243	NP	V CCCCCCC237
JOHNSON MARILYN P	CCC417536	NP	V CCCCC01C48
JOHNSON MARILYN P	CCC417536	NP	V CCCCC01C49
JOHNSON MARILYN P	CC74CC343	NP	V CCCCC01C48
JOHNSON MARILYN P	CC74CC343	NP	V CCCCC01C49
JONES JAMES R	CC5412443	AR	V CCCCCCC835
JONES ROBERT E	CCC222973	NP	V CCCCCCC262
JONES ROBERT E	CCC222973	NP	V CCCCCCC263
JORDAN BENJAMINE E	CC3778CSS	AR	V CCCCCCC313
JOSEPH JAMES A	CC4C713C6	AR	V CCCCCCC709
JOVA JOSEPH J	CCC135C51	NP	V CCCCCCCC87
JOVA JOSEPH J	CCC135C51	NP	V CCCCCCCC86
JUDD WALTER F	CCC131941	AR	V CCCCCCC18
KAHN SARA J	CC82C7C64	AR	V CCCCCCC299
KAHN SARA J	235425245	AR	V CCCCCCC299
KARTH JOSEPH E	C3755C572	AR	V CCCCCCC428
KASTEN ROBERT W	C2758176C	AR	V CCCCCCC873
KASTENMEIER ROBERT	CC133C434	AR	V CCCCCCC429
KAZEN ABRAHAM	CCC8723C1	AR	V CCCCCC1C57

VIP NAME	SN/SSN	SVC	REG NF	
KEATING KENNETH B	CCC9C1848	AR	\ CCCCCCC563	28 MAR 1979
KEATING KENNETH B	C05139199	AR	\ CCCCCCC563	
KEATING KENNETH B	C9818833C	AR	\ CCCCCCC563	
KEATING WILLIAM J	CC28C1456	NN	\ CCCCCCC253	
KEE JAMES	C357EC272	AR	\ CCCCCCC316	
KELLY CHARLES E	C13CE5671	AR	\ CCCCCCCC25	
KELLY COLIN P	CCCC2C811	AR	\ CCCCCCCC2C	
KEMP JACK F	557460519	AR	\ CCCCCCC43C	
KENNDEY ROBERT F	CC7487727	NF	\ CCCCCCC249	
KENNEDY EDWARD M	C112339EC	AR	\ CCCCCCC431	
KENNEDY JOHN F	CCC116C71	NF	\ CCCCCCC257	
KENNEDY JOHN F	CCC116C71	NN	\ CCCCCCC256	
KENNEDY ROBERT F	C07487727	NN	\ CCCCCCC25C	
KERNER OTTO	CCC35853C	AR	\ CCCCCCC552	
KIRK ROGER	CC2221194	AF	\ CCCCCCC545	
KISSINGER HENRY A	CCC956049	AR	\ CCCCCCCC21	
KLEPPE THOMAS F	CC2118752	AR	\ CCCCCCC432	
KLUCZYNSKI JOHN C	CC136C212	AR	\ CCCCCCC317	
KNOWLES WARREN P	CCC150937	NN	\ CCCCCCC579	
KNOWLES WARREN P	CCC150937	NP	\ CCCCCCC578	
KNOX FRANK	CCC184152	AR	\ CCCCCCCC22	
KOCH NOEL C	C13626296	AR	\ CCCCCCC56C	
KOCH NOEL C	177307160	AR	\ CCCCCCC56C	
KREBS JOHN H	C56128139	AR	\ CCCCCCC519	
KREBS JOHN H	546405746	AR	\ CCCCCCC519	
KREBS MAX V	CC2114295	AR	\ CCCCCCC738	
KRYZA ELMER G	CCC486968	NF	\ CCCCCCC1C5C	
KRYZA ELMER G	CCC486968	NN	\ CCCCCCC1C51	

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..VIP..NAME.....	SN/SSN	SVC	REG NF
KRYZA ELMER G	C07C23164	NP	V CCCCC01C51
KRYZA ELMER G	C07C23164	NP	V CCCCC01C50
KUBISH JACK B	CCC188954	NP	V CCCCCCCC92
KUBISH JACK B	CCC188954	NP	V CCCCCCCC93
KUNZIG ROBERT L	CCC4C4982	AR	V CCCCCCCC24
KURTZ JEROME	C52412453	AR	V CCCCCCC711
KUYKENDALL JEROME	CCC399735	NP	V CCCCCCC785
KUYKENDALL JEROME	CCC399735	NP	V CCCCCCC784
KYROS PETER N	CCC498265	NP	V CCCCCCC172
KYROS PETER N	CCC498265	NP	V CCCCCCC173
LABERGE WALTER B	CCC34C917	NP	V CCCCCCC864
LABERGE WALTER B	CCC34C917	NP	V CCCCCCC865
LABERGE WALTER B	C07CC3897	NP	V CCCCCCC864
LAFALCE JOHN J	C05C10461	AR	V CCCCCCC717
LAGOMARSINO ROBERT	C0565981C	NP	V CCCCCCC667
LAGOMARSINO ROBERT	C0565981C	NP	V CCCCCCC640
LAINGEN LOWELL B	C07C2C997	NP	V CCCCCCC695
LAINGEN LOWELL B	C07C2C997	NP	V CCCCCCC696
LAIRD MELVIN R	CCC331C64	N	V CCCCCCC271
LAIRD MELVIN R	CCC331C64	NP	V CCCCCCC345
LANDON ALFRED M	CCCCC1C85	AR	V CCCCCCCC23
LANDRUM PHILLIP M	CCC575281	AR	V CCCCCCC433
LATTA DELBERT L	C2C5C4814	AR	V CCCCCCC434
LAXALT PAUL C	C15152611	AR	V CCCCCCC523
LAY DONALD P	CC3222C32	NP	V CCCCCCC639
LAY DONALD P	CC3222C32	NP	V CCCCCCC666
LEGGETT ROBERT L	CC7557475	NP	V CCCCCCC690
LEGGETT ROBERT L	CC7557475	NP	V CCCCCCC691

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VIP NAME	SN/SSN	SVC	REG NR
LEMELLE WILBERT J	C542CC714	AR	V CCCCCCC122
LEMELLE WILBERT J	433323425	AR	V CCCCCCC722
LENT NORMAN F	CCC557759	NP	V CCCCCCC221
LENT NORMAN F	CCC557759	NP	V CCCCCCC220
LEPPERT CHARLES	CCCC668SC	NP	V CCCCCC1C39
LEPPERT CHARLES	CCCC668SC	NC	V CCCCCC1C38
LEPPERT CHARLES	CC139132C	NC	V CCCCCC1C38
LEPPERT CHARLES	CC139132C	NP	V CCCCCC1C39
LEPPERT CHARLES	CC139132C	NP	V CCCCCC1C39
LEVENTHAL HAROLD	CCCC35362	CG	V CCCCCCC578
LEVITAS ELLIOTT H	2563888CC	AF	V CCCCCCC851
LINDBERGH CHARLES	CCC215724	AF	V CCCCCCC834
LINOWES DAVID F	CC1649374	AR	V CCCCCCC886
LINOWITZ SOL M	CCC352817	NP	V CCCCCCC741
LINOWITZ SOL M	CCC352817	NP	V CCCCCCC742
LITTLE EDWARD S	CCC143557	NP	V CCCCCCC110
LITTLE EDWARD S	CCC143557	NP	V CCCCCCC111
LLOYD JAMES F	CCC378434	NP	V CCCCCCC839
LLOYD JAMES F	CC7335177	NP	V CCCCCCC839
LODGE JOHN C	CCCC8462C	NP	V CCCCCCC723
LONG CLARENCE D	CCC3C8344	NP	V CCCCCCC175
LONG CLARENCE D	CCC3C8344	NP	V CCCCCCC174
LONG GILLIS W	CCC531119	AR	V CCCCCCC435
LONG RUSSELL B	CCC1863C2	NP	V CCCCCCC162
LONG RUSSELL B	CCC1863C2	NP	V CCCCCCC198
LOW STEPHEN	C15239742	AR	V CCCCCCC705
LOWENSTEIN ALLARD	C53249720	AR	V CCCCCCC878
LOWENSTEIN JAMES G	CCC5C46C7	NP	V CCCCCCC888

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	VIP NAME	SN/SSN	SVC		REG NF
	LOWENSTEIN JAMES G	CC9115786	NP	V	CCCCCCC888
	LUCAS SCOTT W	CCC12CCC8	AR	V	CCCCCCCC27
UU	LUERS WILLIAM H	CCC554179	NP	V	CCCCCC1C44
	LUERS WILLIAM H	CCC554179	NN	V	CCCCCC1C45
	LUERS WILLIAM H	CC72548C8	NP	V	CCCCCC1C44
	LUERS WILLIAM H	CC72548C8	NN	V	CCCCCC1C45
	LUGAR RICHARD G	CCC617563	NN	V	CCCCCC1C20
	LUGAR RICHARD G	CCC617563	NP	V	CCCCCC1C19
UU	LUKEN THOMAS A	CCCC46521	NC	V	CCCCCCC921
	LUKEN THOMAS A	CCCC46521	NN	V	CCCCCCC922
	LUKEN THOMAS A	CCC532575	NC	V	CCCCCCC921
	LUKEN THOMAS A	CCC532575	NN	V	CCCCCCC922
	LYNN JAMES T	CC2862813	NP	V	CCCCCCC596
	LYNN JAMES T	CC2862813	NN	V	CCCCCCC603
UU	MACARTHUR DOUGLAS	CCCCCCC57	AR	V	CCCCCCCC28
	MACDONALD TORBERT	CCC128159	NP	V	CCCCCCC163
	MACKINNON GEORGE E	CCC128513	NP	V	CCCCCCCC84
	MACKINNON GEORGE E	CCC128513	NN	V	CCCCCCCC85
	MACOMBER WILLIAM B	CCC4CC913	NN	V	CCCCCCC665
	MACOMBER WILLIAM B	CCC4CC913	NC	V	CCCCCCC638
UU	MAGNUSON WARREN G	CCCC78144	NP	V	CCCCCCC164
	MAGNUSON WARREN G	CCCC78144	NN	V	CCCCCCC197
	MAILLIARD WILLIAM	CCCC82891	NP	V	CCCCCCC165
	MANSFIELD MICHAEL	CCC114834	NN	V	CCCCCCC272
	MANSFIELD MICHAEL	CCC17C433	NC	V	CCCCCCC358
	MANSFIELD MICHAEL	CC1412624	NP	V	CCCCCCC357
UU	MANSFIELD MICHAEL	CC65C8512	AR	V	CCCCCCC436
	MARVEY EDWARD J	C21361736	AS	V	CCCCCCC536

..VIP..NAME.....	SN/SSN	SVC	REG NR	
MARKS EDWARD	C52428657	AR	V CCCCCCC879	28 MAR 197
MARSHALL ANTHONY D	CCCC36853	NN	V CCCCCCC566	
MARSHALL ANTHONY D	CCCC36853	NC	V CCCCCCC569	
MARSHALL ANTHONY D	CCC537892	NC	V CCCCCCC569	
MARSHALL ANTHONY D	CCC537892	NN	V CCCCCCC566	
MARTIN TONY	C0662231C	NN	V CCCCCCC548	
MARTIN TONY	C35549073	AR	V CCCCCCC1C07	
MATHEWS FORREST D	CC53C4027	AR	V CCCCCCC558	
MATHEWS FORREST C	418CCC679	AR	V CCCCCCC558	
MATHIAS CHARLES N	CCC41C433	NN	V CCCCCCC273	
MAYNE WILEY E	CCC328518	NN	V CCCCCCC209	
MAYNE WILEY E	CCC328518	NP	V CCCCCCC208	
MAZZOLI ROMANO L	401564314	AR	V CCCCCCC437	
MCCLELLAN JOHN L	CCXC22596	AR	V CCCCCCC438	
MCCLORY ROBERT	CCC23922C	NN	V CCCCCCC597	
MCCLORY ROBERT	CCC23922C	NC	V CCCCCCC598	
MCCLOSKEY PAUL N	CCCC5C232	NC	V CCCCCCC571	
MCCLOSKEY PAUL N	CC1141513	NC	V CCCCCCC572	
MCCLOSKEY PAUL N	CC7365885	NP	V CCCCCCC570	
MCCLOSKEY PAUL N	CC7365885	NN	V CCCCCCC573	
MCCLOSKEY ROBERT J	CCC45288C	NN	V CCCCCCC725	
MCCLOSKEY ROBERT J	CCC45288C	NC	V CCCCCCC724	
MCCLLISTER JOHN Y	CCC268504	NP	V CCCCCCC157	
MCCORMACK CLAUDE G	CC1329028	AR	V CCCCCCC439	
MCCULLOCH WILLIAM	CCC535545	AR	V CCCCCCC318	
MCDONALD ALONZO L	CC1C87422	NC	V CCCCCCC859	
MCDONALD ALONZO L	CC1C87422	NN	V CCCCCCC525	
MCDONALD LAWRENCE	CCC612451	NN	V CCCCCCC658	

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	..VIP..NAME.....	SN/SSN	SVC		REG NE
	MCDONALD LAWRENCE	CCC612451	NP	V	COCCCOC657
	MCEWEN ROBERT C	C1214C31C	AR	V	COCCCOC440
UU	MCFALL JOHN J	C39399632	AR	V	COCCCOC441
	MCGOVERN GEORGE S	CCC721153	AR	V	COCCCOC442
	MCGOWAN CARL E	CCC193620	NP	V	COCCCCCC96
	MCGOWAN CARL E	CCC193620	NP	V	COCCCOCC97
	MCGUIRE RALPH J	CCC173522	NP	V	COCCCCCC91
	MCGUIRE RALPH J	CCC173522	NP	V	COCCCOCC90
UU	MCKESSON JOHN A	CCC235884	NP	V	COCCCOC676
	MCKESSON JOHN A	CCC235884	NP	V	COCCCOC675
	MCKINNEY STEWART B	C11231364	AF	V	COCCCOC584
	MCKNEALLY MARTIN B	CC1CCC416	AR	V	COCCCOC585
	MCLUCAS JOHN L	CCC255048	NP	V	COCCCOC528
	MCLUCAS JOHN L	CCC255048	NP	V	COCCCOC529
UU	MCMICHAEL GUY F	C55745738	AR	V	COCCCOC660
	MCNAIR LESLEY J	CCCCC1891	AR	V	COCCCOCC29
	MCNUTT PAUL V	CCC122CC1	AR	V	COCCCOCC32
	MCSPADDEN CLEM R	CCC48891C	NP	V	COCCCOC576
	MCSPADDEN CLEM R	CCC48891C	NP	V	COCCCOC574
	MCSPADDEN CLEM R	CC8851996	NP	V	COCCCOC576
UU	MCSPADDEN CLEM R	CC8851996	NP	V	COCCCOC574
	MEEDS EDWIN L	CC3876658	NP	V	COCCCOC772
	MELCHER JOHN D	485123920	AR	V	COCCCOC443
	MELOY FRANCIS E	CCC126428	NP	V	COCCCCCC92
	MELOY FRANCIS E	CCC126428	NP	V	COCCCCCC93
	MENDENHALL JOSEPH	C331C15C2	AR	V	COCCCCC731
UU	METCALF LEE	CC1824855	AR	V	COCCCOC444
	METCALFE RALPH H	CC1947513	AR	V	COCCCOC445

..VIP..NAME.....	SN/SSN	SVC	REG NR
MICHEL ROBERT H	036447708	AR	V 0000000446
MIDDENDORF JOHN W	000475177	NM	V 0000000910
MIDDENDORF JOHN W	000475177	NP	V 0000000909
MIDDENDORF JOHN W	008020836	NP	V 0000000909
MIDDENDORF JOHN W	008020836	NM	V 0000000910
MIKVA ABNER J	002090603	AR	V 0000000518
MILFORD HOMER D	001341564	AR	V 0000000296
MILLER EDWARD B	000252369	NP	V 0000000674
MILLER GEORGE P	000207671	AR	V 0000000300
MINETA NORMAN Y	358223482	AR	V 0000000506
MINISH JOSEPH G	020302075	AR	V 0000000447
MINSHALL WILLIAM E	000454447	AR	V 0000000319
MINTON SHERMAN	000119273	AR	V 0000000031
MITCHELL DONALD J	000363885	NP	V 0000000176
MITCHELL DONALD J	000363885	NM	V 0000000177
MITCHELL JAMES L	000670553	NM	V 0000000146
MITCHELL JOHN N	000324736	NM	V 0000000292
MITCHELL JOHN N	000324736	NP	V 0000000339
MITCHELL PARREN J	001323855	AR	V 0000000448
MITCHELL WILLIAM C	000000063	AF	V 0000000030
MIZELL WILMER D	053209732	AR	V 0000000320
MOAKLEY JOHN J	007618463	NM	V 0000000664
MOAKLEY JOHN J	007618463	NP	V 0000000701
MONDALE FRITZ W	055146358	AR	V 0000000449
MOORE SARA J	008207064	AR	V 0000000299
MOORE SARA J	235425245	AR	V 0000000299
MOORE WILLIAM H	436563738	AR	V 0000000338
MOOREHEAD WILLIAM	000338804	NP	V 0000000346

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	..VIP..NAME.....	SN/SSN	SVC		REG NR
	MCCRER THOMAS H	420528147	NN	V	000000230
	MCCRER THOMAS H	420528147	NP	V	000000245
UU	MCCREAD WILLIAM S	000338804	NN	V	000000268
	MORSE FRANK B	001950019	AR	V	000000321
	MOSS FRANK E	528421763	AF	V	000000232
	MOSS JOHN E	008868853	NP	V	000000364
	MOSS JOHN E	008868853	NN	V	000000365
	MOSS JOHN E	035414277	AR	V	000000362
UU	MOSS JOHN E	565102794	AR	V	000000450
	MOYNIHAN DANIEL P	000486532	NN	V	000000843
	MOYNIHAN DANIEL P	000486532	NP	V	000000844
	MOYNIHAN DANIEL P	007965442	NN	V	000000843
	MOYNIHAN DANIEL P	007965442	NP	V	000000844
	MURPHY AUDIE L	001692509	AR	V	000000039
UU	MURPHY MORGAN F	000069302	NN	V	000000274
	MURROW EDWARD R	000640057	NP	V	000000953
	MURTHA JOHN P	000059862	NN	V	000000920
	MURTHA JOHN P	001333625	NN	V	000000920
	MURTHA JOHN P	001333625	NC	V	000000035
	MUSKIE EDMUND S	000187778	NP	V	000000178
UU	MUSKIE EDMUND S	000187778	NN	V	000000179
	MYERS GARY A	013711206	AF	V	000000842
	NASSIKAS JOHN N	000168583	NP	V	000000819
	NASSIKAS JOHN N	000168583	NN	V	000000820
	NATCHER WILLIAM H	000223707	NP	V	000000160
	NATCHER WILLIAM H	000223707	NN	V	000000196
UU	NEZZI LUCIEN N	036469754	AR	V	000000451
	NELSON GAYLORD A	399108375	AR	V	000000452

VIP NAME	SN/SSN	SVC		REG NR
NEWSON DAVID D	000150971	NN	V	000000099
NEWSON DAVID D	000150971	NP	V	000000088
NICKERSON HERMAN	000005128	NN	V	000000807
NICKERSON HERMAN	575388901	NN	V	000000807
NIMITZ CHESTER W	000005502	NP	V	000000998
NIMITZ CHESTER W	000005502	NN	V	000001021
NIX ROBERT C	005123430	AR	V	000000453
NIXON RICHARD M	000169340	NN	V	000000275
NIXON RICHARD M	000169340	NP	V	000000342
NORLAND RONALD R	000385198	NN	V	000000796
NORLAND RONALD R	000385198	NP	V	000000795
NORLAND RONALD R	007037591	NN	V	000000796
NORLAND RONALD R	007037591	NP	V	000000795
NOWAK HENRY J	004085703	AR	V	000000827
NUTTER GILBERT W	000960841	AR	V	000000454
OBRIEN GEORGE M	000354220	AR	V	000000702
OHARA JAMES G	016177281	AR	V	000000455
OLSON JACK B	000354373	NN	V	000000694
OLSON JACK B	000354373	NP	V	000000693
OLSON JACK B	006227549	NP	V	000000693
OLSON JACK B	006227549	NN	V	000000694
OSBORN DAVID L	000236732	NN	V	000000673
OSBORN DAVID L	000236732	NP	V	000000646
OSWALD LEE H	001653230	MC	V	000000188
OSWALD LEE H	001653230	NN	V	000000189
OSWALD ROBERT L	001344985	MC	V	000000985
OSWALD ROBERT L	001344985	NN	V	000000984
OWENS HUGH F	000128945	NN	V	000000861

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	..VIP..NAME.....	SN/SSN	SVC		REG NR
	OWENS HUGH F	CCC128945	NP	V	CCCCCCC860
	PANETTA LEON E	57254897C	AR	V	CCCCCCC934
UU	PARKER RICHARD B	CCC551272	AR	V	CCCCCC01C36
	PARKER RICHARD B	C17C83459	AR	V	CCCCCC01C36
	PASSMAN OTTO E	CCC2C9755	NP	V	CCCCCCC167
	PASSMAN OTTO E	CCC2C9755	NN	V	CCCCCCC195
	PATMAN JOHN W	CCC841016	AR	V	CCCCCCC456
	PATTERSON JERRY M	CCC31C932	CG	V	CCCCCCC839
UU	PATTISON EDWARD W	CC4C2C143	AR	V	CCCCCCC507
	PATTON GEORGE S	CCCCC26C5	AR	V	CCCCCCC33
	PEABODY EDWIN E	CCCC74338	NN	V	CCCCCCC954
	PEABODY EDWIN E	CCCC74338	NP	V	CCCCCCC963
	PEARSON JAMES B	CCC263422	NN	V	CCCCCCC276
	PEARSON JAMES B	CCC263422	NP	V	CCCCCC01C58
UU	PEARSON ROBERT A	C352C1718	AR	V	CCCCCCC96C
	PERITONE BYRON V	141C5C41C	AF	V	CCCCCCC101
	PEPPER CLAUDE D	CC446432E	AR	V	CCCCCCC34
	PERCY CHARLES H	CCC237288	NN	V	CCCCCCC120
	PERCY CHARLES H	CCC237288	NP	V	CCCCCCC119
	PEREZ FRANK H	CC1536211	AR	V	CCCCCCC933
UU	PERKINS CARL D	C35776873	AR	V	CCCCCCC458
	PERRY LOWELL W	CC3C2C221	AF	V	CCCCCCC739
	PETTERSON DONALD K	CC56511C5	NP	V	CCCCCC1C1C
	PETTERSON DONALD K	CC56511C5	NN	V	CCCCCC1C11
	PEYSER PETER A	CCC955538	AR	V	CCCCCCC459
	PICKERING THOMAS R	CCC6C72C4	NP	V	CCCCCCC833
UU	PICKERING THOMAS R	CC4881C2C	NN	V	CCCCCCC833
	PICKLE JAMES J	CCC17C219	NN	V	CCCCCCC155

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PICKLE JAMES J	CCC17C21S	NC	V	CCCCCCC154
PIKE JAMES A	CCC236023	NP	V	CCCCCCC947
PIKE JAMES A	CCC236023	NP	V	CCCCCCC964
PIKE OTIS G	CCCC26587	NC	V	CCCCCCC902
PIKE OTIS G	CC4C42529	NP	V	CCCCCCC903
PLUMMER CHESTER M	C13825147	AR	V	CCCCCCC582
PLUMMER CHESTER M	5776C8474	AR	V	CCCCCCC582
POAGE WILLIAM R	CC35C81C6	NP	V	CCCCCCC637
POAGE WILLIAM R	CC35C81C6	NP	V	CCCCCCC663
POCELL BERTRAM L	CC9C9532C	NP	V	CCCCCCC565
POCELL BERTRAM L	CC9C9532C	NP	V	CCCCCCC564
PRESLEY ELVIS A	C5331C761	AR	V	CCCCCCC539
PRESSLER LARRY L	CC5251248	AR	V	CCCCCCC712
PRESSLER LARRY L	5C3485386	AR	V	CCCCCCC712
PREYER LUNSFORD R	CCC118283	NP	V	CCCCCCC122
PREYER LUNSFORD R	CCC118283	NP	V	CCCCCCC121
PRICE CHARLES M	C13142030	AR	V	CCCCCCC460
PROXMIRE EDWARD W	117129969	AR	V	CCCCCCC461
PURSELL CARL D	CC55C4245	AR	V	CCCCCCC535
PYNE JOSEPH E	CCC452876	NC	V	CCCCCC1C25
PYNE JOSEPH E	CCC452876	NP	V	CCCCCC1C26
QUIE ALBERT H	CCC471075	NP	V	CCCCCCC277
QUIE ALBERT H	CCC471075	NP	V	CCCCCCC341
QUILLEN JAMES H	CCC235897	NP	V	CCCCCCC124
QUILLEN JAMES H	CCC235897	NP	V	CCCCCCC123
RAILSBACK THOMAS F	328260753	AR	V	CCCCCCC462
RANDALL WILLIAM J	C37513699	AR	V	CCCCC 0463
RANGEL CHARLES B	C57156282	AR	V	CCCCCCC464

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..VIP..NAME.....	SN/SSN	SVC		REG NF
RARICK JOHN R	CCC97C6C8	AR	V	COCCCOO322
RAY JAMES E	C16163129	AR	V	CCCCCOO591
UU REAGAN RONALD W	CCC3574C3	AR	V	COCCCOCC35
REED JOHN H	CCC297943	NN	V	CCCCCOO831
REED JOHN H	CCC297943	NP	V	COCCCOO83C
REED THOMAS C	CC3C67345	AF	V	COCCOOO369
REES THOMAS N	C397C1595	AR	V	COCCOOO465
REHNQUIST WILLIAM	C1536C333	AR	V	COCCCOO588
UU REID OGDEN R	CC1328638	AR	V	COCCCOO332
REATICAN WILLIAM F	1563C9674	AR	V	COCCCOO652
REINELANDER JOHN B	C513727S1	AR	V	COCCCOO524
RECCES JOHN J	CCC3632C6	AR	V	COCCCO1C32
RICHARDSON ELLIOT	CC1545552	AR	V	COCCCOO466
RICHMCNC FREDERICK	CC7C5733E	NP	V	COCCCOO636
UU RICHMCNC FREDERICK	CC7C5733E	NN	V	CCCCCOO662
RICKENBACKER EDWAR	CCC263812	AR	V	COCCCOOC36
RICKLES DONALD J	CC7131949	NN	V	COCCCOO546
RICKLES DONALD J	CC7131948	NP	V	COCCCOO567
ROBINSON CHARLES W	CCC189102	NP	V	CCCCOOOC94
ROBINSON CHARLES W	CCC189102	NN	V	CCCCOOOC95
UU ROBISON HOWARD W	C3247C12E	AR	V	CCCCCOO323
ROEINC PETER W	CC2C407C9	AR	V	COCCCOO467
RCCERS PAUL C	CCC462815	AR	V	COCCCOO468
RCCERS WILLIAM P	CCC149104	NP	V	CCCCCOO247
RCGERS WILLIAM P	CCC149104	NN	V	CCCCCOO248
RCNCALIC TENC	CC1298441	AR	V	CCCCCOO469
UU RCONEY FRED F	C33E36678	AR	V	CCCCCOO47C
RCCSEVELT FRANKLIN	CCCCC134C	GN	V	CCCCCOOC37

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VIP NAME	SN/SSN	SVC	REG NF	
ROOSEVELT FRANKLIN	000083685	NN	V 0000000831	28 MAR 1979
ROOSEVELT FRANKLIN	000083685	NP	V 0000000880	
ROOSEVELT JOHN A	001005312	NN	V 0000000579	
ROOSEVELT JOHN A	001005312	NP	V 0000000580	
ROOSEVELT KERMIT	000188985	AR	V 0000000038	
ROOSEVELT THEODORE	000139726	AR	V 0000000040	
ROOT JOHN F	033101502	AR	V 0000000732	
ROOT JOHN F	205102587	AR	V 0000000732	
ROSENMAN SAMUEL I	000021392	AR	V 0000000042	
ROSENTHALL BENJAMI	012149429	AR	V 0000000471	
ROSS THOMAS B	005514003	NP	V 0000001052	
ROSS THOMAS B	000551403	NN	V 0000001053	
ROSTENKOWSKI DANIE	016228849	AR	V 0000000472	
ROTH WILLIAM V	000536330	AR	V 0000000473	
ROURKE RUSSELL A	000065903	NN	V 0000000790	
ROURKE RUSSELL A	001380952	NN	V 0000000790	
ROURKE RUSSELL A	100249631	NN	V 0000000790	
ROYALL KENNETH C	000472978	AR	V 0000000041	
ROYBAL EDWARD R	039743674	AR	V 0000000474	
RUBENSTEIN JACK	036666107	AR	V 0000000700	
RUDMAN WARREN B	001893245	AR	V 0000000720	
RUMSFELD DONALD H	000536268	NN	V 0000000214	
RUNNELS HAROLD L	018242153	AR	V 0000000475	
RUPPE PHILIP E	000502271	NN	V 0000000126	
RUPPE PHILIP E	000502271	NP	V 0000000125	
RUTH EARL B	000149241	NP	V 0000000212	
RUTH EARL B	000149241	NN	V 0000000213	
RYAN LEO J	008020342	NP	V 0000000745	

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..VIP..NAME.....	SN/SSN	SVC		REG NP
RYAN LEO J	CC8C2C342	NN	V	CCCCCCC746
RYAN WILLIAM F	CCC548477	AR	V	CCCCCCC324
UU SAINTGERMAIN FERNA	C111E9272	AR	V	CCCCCCC476
SALZMAN HERBERT W	CCCC99367	NN	V	CCCCCCC856
SALZMAN HERBERT W	CCCC99367	NP	V	CCCCCCC855
SAMPSON DAVID M	CCC55C828	NP	V	CCCCCCC98C
SAMPSON DAVID M	CCC55C828	NN	V	CCCCCCC981
SANDMAN CHARLES W	CCC127622	AR	V	CCCCCCC325
UU SANDMAN CHARLES W	CC4C54975	NP	V	CCCCCCC334
SANDMAN CHARLES W	CC4C54975	NN	V	CCCCCCC335
SANTINI JAMES D	CC57C3993	AR	V	CCCCCCC841
SARASIN RONALD A	CC4641835	NN	V	CCCCCCC764
SARASIN RONALD A	CC4641835	NP	V	CCCCCCC763
SASSER JAMES R	CC1545261	NN	V	CCCCCC1C43
UU SASSER JAMES R	CC1545261	NC	V	CCCCCC1C42
SATTERFIELD DAVID	CCC146143	NN	V	CCCCCCC278
SAWYER HAROLD S	CCC264472	NC	V	CCCCCCC849
SAWYER HAROLD S	CCC324344	NP	V	CCCCCCC848
SAWYER HAROLD S	CCC324344	NN	V	CCCCCCC850
SAYLOR JOHN P	CCC3C7961	NN	V	CCCCCCC279
UU SAYLOR JOHN P	CCC3C7961	NP	V	CCCCCCC995
SCHEUER JAMES H	521309566	AR	V	CCCCCCC477
SCHNULTS EDWARD C	CCCC62791	NC	V	CCCCCCC156
SCHNEEBELT HERMAN	179C336CC	AR	V	CCCCCCC478
SCHULZE RICHARD T	C52C99896	AR	V	CCCCCCC516
SCHULZE RICHARD T	19222C539	AR	V	CCCCCCC519
UU SCHWARTZ WILLIAM B	CCC185283	NP	V	CCCCCCC895
SCHWARTZ WILLIAM B	CCC185283	NN	V	CCCCCCC896

28 MAR 1979

..VIP..NAME.....	SN/SSN	SVC	REG NR
SCHWARTZ WILLIAM B	C06562593	NP	V CCCCC00895
SCHWARTZ WILLIAM B	C06562593	NN	V CCCCC00896
SCHWEIKER RICHARD	CC2466516	NP	V CCCCC00765
SCHWEIKER RICHARD	CC2466516	NN	V CCCCC00766
SCOTT HUGH D	CCCC86355	NN	V CCCCC00190
SCOTT HUGH D	CCCC86355	NP	V CCCCC00168
SCOTT ROBERT W	C53189396	AR	V CCCCC00883
SCOTT WILLIAM L	C33992383	AR	V CCCCC00479
SCRANTON WILLIAM W	CCC79C413	AR	V CCCCC00527
SEIBERLING JOHN F	299C39353	AR	V CCCCC00480
SELDEN ARMISTEAD I	CCC187148	NN	V CCCCC00543
SELDEN ARMISTEAD I	CC4C79459	NN	V CCCCC00543
SELDEN ARMISTEAD I	CC4C79459	NP	V CCCCC00543
SELDEN ARMISTEAD I	CC4C79459	NF	V CCCCC00814
SELDEN ARMISTEAD I	417107954	NN	V CCCCC00543
SELDEN ARMISTEAD I	417107954	NN	V CCCCC00543
SHLAUDEMAN HARRY W	CCC5494CE	NN	V CCCCC00858
SHLAUDEMAN HARRY W	CCC5494CE	NC	V CCCCC00857
SHCUP RICHARD G	CCC583558	AR	V CCCCC00326
SHRIVER GARDNER E	C37524324	AR	V CCCCC00481
SHUSTER ELMER G	CC4CC4945	AR	V CCCCC00482
SIRACUSA ERNEST V	CCC425479	NP	V CCCCC00788
SIRACUSA ERNEST V	CCC425479	NN	V CCCCC00789
SLACK JOHN M	C35778533	AR	V CCCCC00483
SLOVIK EDDIE D	C36856415	AR	V CCCCCCC043
SMITH DOUGLAS J	CCC55138C	NF	V CCCCC01C46
SMITH DOUGLAS J	CCC55138C	NN	V CCCCC01C47
SMITH ROBERT S	CCC369125	NF	V CCCCCCCC66

28 MAR 1979

..VIP..NAME.....	SN/SSN	SVC		REG NF
SMITH ROBERT S	CCC369125	NN	V	CCCCCCCC67
SOCHOWSKI CLARENCE	C3676C078	AR	V	CCCCCCC591
UU SPENCE FLOYD D	CCC516431	NN	V	CCCCCCC215
SPENCE FLOYD D	251366718	NN	V	CCCCCCC215
SPIERS RONALD I	CCC435893	NN	V	CCCCCCC798
SPIERS RONALD I	CCC435893	NP	V	CCCCCCC797
SPIERS RONALD I	CC7332C9C	NP	V	CCCCCCC797
SPIERS RONALD I	CC7332C9C	NN	V	CCCCCCC798
UU SPOCK BENJAMIN M	CCC362636	NN	V	CCCCCCC545
SPONG WILLIAM B	C33126145	AR	V	CCCCCCC327
SPRINGER WILLIAM L	CCC158887	NN	V	CCCCCCC2SC
SPRINGER WILLIAM L	CCC158887	NP	V	CCCCCCC347
STAFFORD ROBERT T	CCC149115	NN	V	CCCCCCC128
STAFFORD ROBERT T	CCC149115	NP	V	CCCCCCC127
UU STAGGERS HARLEY O	CCC155906	NN	V	CCCCCCC284
STAGGERS HARLEY O	CCC155906	NP	V	CCCCCCC348
STANTON JOHN W	CCC439159	AR	V	CCCCCCC484
STASSEN HAROLD E	CCC134875	NN	V	CCCCCCC367
STASSEN HAROLD E	CCC134875	NP	V	CCCCCCC512
STEDMAN WILLIAM P	CCC266371	NN	V	CCCCCCC73
UU STEDMAN WILLIAM P	CCC266371	NP	V	CCCCCCC72
STEED THOMAS J	CC1C569CC	AR	V	CCCCCCC485
STEIGER SAMUEL	CC2266178	AR	V	CCCCCCC486
STEIGMAN ANDREW L	C51367267	AR	V	CCCCCCC605
STENNIS JOHN C	CCC176134	AR	V	CCCCCCC487
STEPHENS ROBERT G	252624447	AR	V	CCCCCCC488
UU STETSON JOHN C	CCC4CC792	NN	V	CCCCCCC768
STETSON JOHN C	CCC4CC792	NP	V	CCCCCCC767

28 MAR 1979

..VIP..NAME.....	SN/SSN	SVC	REG NP
STETSON JOHN C	CC94589C1	NP	V CCCCCC0768
STETSON JOHN C	CC94589C1	NP	V CCCCCC0767
STEVENS JOHN P	CCC131765	NP	V CCCCCC0355
STEVENS THEODORE F	CCCC70062	AR	V CCCCCC0269
STEVENSON ADLAI E	CCCC58578	NC	V CCCCCC0224
STEVENSON ADLAI E	CC2131036	NP	V CCCCCC0204
STEVENSON ADLAI E	CC2131036	NP	V CCCCCC0205
STEVENSON ADLAI E	CC41EC934	NP	V CCCCCC0223
STEVENSON ADLAI E	CC41EC934	NP	V CCCCCC0222
STEVENSON ROBERT A	CCC259455	NP	V CCCCCC0C74
STEVENSON ROBERT A	CCC259455	NP	V CCCCCC0C75
STEWART POTTER	CCC16C532	NP	V CCCCCC0C78
STEWART POTTER	CCC16C533	NP	V CCCCCC0C79
STOKES LOUIS	C35912081	AR	V CCCCCC0489
STOLTZFUS WILLIAM	CCC466482	NP	V CCCCCC0786
STOLTZFUS WILLIAM	CCC466482	NP	V CCCCCC0787
STOLTZFUS WILLIAM	CC87C1321	NP	V CCCCCC0786
STRATTON SAMUEL S	CCC169670	NP	V CCCCCC0281
STRAUSZHUPE ROBERT	CCC985275	AR	V CCCCCC0718
STUBBLEFIELD FRANK	CCC4C4463	NP	V CCCCCC0282
STUBBLEFIELD FRANK	CCC4C4463	NP	V CCCCCC0340
SULLIVAN JOHN M	CCC485632	NP	V CCCCCC0866
SULLIVAN JOHN M	CCC485632	NP	V CCCCCC0867
SULLIVAN WILLIAM H	CCC267695	NP	V CCCCCC0C70
SULLIVAN WILLIAM H	CCC267695	NP	V CCCCCC0C71
SYMINGTON JAMES W	CCC582940	NP	V CCCCCC0203
SYMINGTON JAMES W	CCC582940	NC	V CCCCCC0202
SYMINGTON STUART	C37624752	AR	V CCCCCC0C44

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VIP	NAME	SN/SSN	SVC		REG NR
	SYMINGTON WILLIAM	CCC119331	AR	V	CCCCCCC490
	SYMMS STEVEN D	CCCC8CC71	NC	V	CCCCCCC143
UU	SYMMS STEVEN D	CCCC8CC71	NN	V	CCCCCCC144
	TABOR JOHN K	CCC226714	NN	V	CCCCCCCC77
	TABOR JOHN K	CCC226714	NP	V	CCCCCCCC76
	TAFT ROBERT	CCC128548	NN	V	CCCCCCC132
	TAFT ROBERT	CCC128548	NP	V	CCCCCCC131
	TALMADGE HERMAN E	CCC1C7727	NP	V	CCCCCCC180
UU	TALMADGE HERMAN E	CCC1C7727	NN	V	CCCCCCC181
	TANN EDWARD A	CC12858C4	NN	V	CCCCCCC692
	TARR CURTIS W	C35414163	AR	V	CCCCCCC491
	TAYLOR ROY A	CCC327985	NP	V	CCCCCCC129
	TAYLOR ROY A	CCC327985	NN	V	CCCCCCC130
	TEAGUE OLIN E	CCC294931	AR	V	CCCCCCC710
UU	TERRY JOHN F	CCC975451	AR	V	CCCCCCC328
	THEONE GAYLE C	CC1328415	AR	V	CCCCCCC492
	THOMAS JERRY	CCCC57133	NN	V	CCCCCCC513
	THOMAS JERRY	CCCC57133	NC	V	CCCCCCC514
	THOMPSON FRANK	CCC117707	NP	V	CCCCCCC169
	THOMPSON FRANK	CCC117707	NN	V	CCCCCCC193
UU	THOMPSON JOHN M	CCC552685	NP	V	CCCCCCC972
	THOMPSON JOHN M	CCC552685	NN	V	CCCCCCC973
	THORNBERRY WILLIAM	CCC166874	NN	V	CCCCCCC656
	THORNBERRY WILLIAM	CCC166874	NP	V	CCCCCCC661
	THORNHILL CLAUDE M	CC7C75276	NN	V	CCCCCCC944
	THORNHILL CLAUDE M	CC7C75276	NP	V	CCCCCCC966
UU	TIMM ROBERT C	CCC466782	NN	V	CCCCCCC599
	TIMM ROBERT C	CCC466782	NC	V	CCCCCCC600

462m

--VIP--NAME--------	SN/SSN	SVC	REG NF
TOCMAN TERENCE A	C01342133	AR	V 0CCCC00714 28 MAR 1979
TONE PHILIP W	CCC537957	AR	V 0CCCC00719
TOON MALCOLM	CCC1263C6	NP	V 00CC000817
TOON MALCOLM	CCC1263C6	NN	V 0CCCC00818
TOWELL DAVID G	C28767598	AF	V 0CCCC00233
TOWER JOHN G	C05746375	NN	V 0CCCC00270
TOWER JOHN G	C05746375	NF	V 00CC000356
TREEN DAVID C	CC1866247	AF	V 0CCC000234
TRUMAN HARRY S	CCC129865	AR	V 00CC000C45
TUCKER JAMES G	CC2C53688	MC	V 0CCCC01C22
TUCKER JAMES G	CC2C53688	NN	V 0CCCC01C23
TUNNEY JOHN V	C031C3267	AF	V 0CCCC00360
TURNER STANSFIELD	CCC485667	NN	V 0CCCC00853
TURNER STANSFIELD	C0666535	NP	V 0CCCC00854
TWEED GEORGE R	CC3927093	NN	V 0CCCC01C03
TWEED GEORGE R	CC3927093	NP	V 0CCCC01C02
TWINAM JOSEPH W	CCC56C125	NF	V 0CCCC00106
TWINAM JOSEPH W	CCC56C125	NN	V 0CCCC00107
TYDINGS MILLARD E	CCC213527	AR	V 0CCCC00C46
UDALL MORRIS K	CC1846542	AR	V 0CCCC00353
UDALL MORRIS K	527209951	AR	V 0CCCC00353
ULLMAN ALBERT C	CCC2C1051	NN	V 0CCCC00160
UNDERHILL FRANCIS	CCC256627	NN	V 0CCCC00C69
UNDERHILL FRANCIS	CCC256627	NP	V 0CCCC00C68
UPSTON JOHN E	C12555021	AF	V 0CCCC00602
UTT JAMES B	CC578895 4	AR	V 0CCCC00608
VANCE CYRUS R	CCC160345	NP	V 0CCCC00628
VANDERLIN LIONEL	C37C19194	AR	V 0CCCC00493

	VIP NAME	SN/SSN	SVC		REG NR	
	VANDUSEN FRANCIS L	CCC126321	NN	V	CCCCCCC678	28 MAR 1979
	VANDUSEN FRANCIS L	CCC126321	NP	V	CCCCCCC777	
DU	VANHOLLEN CHRISTOP	CCC372711	NN	V	CCCCCCC670	
	VANHOLLEN CHRISTOP	CCC372711	NP	V	CCCCCCC643	
	VANIK CHARLES A	CCC143955	NP	V	CCCCCCC170	
	VANIK CHARLES A	CCC143955	NN	V	CCCCCCC192	
	VAUGHN HARRY H	CCC2C51C1	AR	V	CCCCCCC047	
	VELIOTES NICHOLAS	C19258537	AR	V	CCCCCC1C08	
DU	VICORITO JOSEPH P	CCC449490	AR	V	CCCCCCC494	
	VOLKMER HAROLD L	C174318C4	AR	V	CCCCCCC929	
	VOLPE JOHN A	CCC2515C4	NN	V	CCCCCCC838	
	VONMARBOD ERIC F	53324C25C	AR	V	CCCCCCC495	
	WAGGONNER JOE D	CCC12CC87	NP	V	CCCCCCC182	
	WAGGONNER JOE D	CCC12CC87	NN	V	CCCCCCC183	
DU	WALDIE JEROME R	C3913446C	AR	V	CCCCCCC329	
	WALKER HENRY M	CCCC6C585	NP	V	CCCCCCC576	
	WALKER HENRY M	CCCC6C585	NN	V	CCCCCCC577	
	WALLACE GEORGE C	C14123081	AR	V	CCCCCCC496	
	WALLOP MALCOLM	C05C36645	AR	V	CCCCCCC930	
	WALSH WILLIAM F	C321814EE	AR	V	CCCCCCC497	
DU	WALSH WILLIAM F	C863C2C53	AF	V	CCCCCCC955	
	WANPLER WILLIAM C	CC4775283	NN	V	CCCCCCC776	
	WANPLER WILLIAM C	CC4775283	NP	V	CCCCCCC775	
	WARNER JOHN W	CCCC5C4EE	NC	V	CCCCCCC729	
	WARNER JOHN W	CCCC5C4EE	NN	V	CCCCCCC73C	
	WARNER JOHN W	CC1CE5C95	NN	V	CCCCCCC73C	
DU	WARNER JOHN W	CC1CE5C95	NC	V	CCCCCCC729	
	WARNER JOHN W	CC256924C	NP	V	CCCCCCC728	

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..VIP..NAME.....	SN/SSN	SVC		REG NB
WARNER JOHN W	CC256924C	NP	V	COCCC00730
WARNKE PAUL C	CCCC37278	CG	V	CCCCC01C34
WARREN GERALD L	CCC516929	NP	V	OOCCCOC648
WARREN GERALD L	CCC516929	NP	V	COCCCOO794
WARREN GERALD L	CC4315381	NP	V	COCCCOO794
WEAVER ARTHUR V	CCC485689	NP	V	OOCCCOC526
WEAVER ARTHUR V	CCC485689	NP	V	COCCCOO965
WEAVER JAMES H	CC3326854	NP	V	OOCCCOO875
WEAVER JAMES H	CC3326854	NP	V	OOCCCOO874
WEBSTER WILLIAM H	CCC369476	NP	V	OOCCCOO697
WEBSTER WILLIAM H	CCC369476	NP	V	COCCCOO698
WEICKER LOWELL P	C79263422	AR	V	COCCCOO498
WEINBERGER CASPAR	CC1284251	AR	V	COCCCOC559
WEINBERGER CASPAR	C39011486	AR	V	COCCCOO559
WEISS THEODORE S	C12271480	AR	V	COCCCOC931
WEISSMAN MARVIN	C35863215	AR	V	COCCCOO885
WELD WILLIAM E	CCC154CC7	NP	V	COCCCOO554
WELD WILLIAM E	CCC154CC7	NP	V	COCCCOO553
WELSH WILLIAM B	C15362866	AR	V	COCCCC1C56
WHALEN CHARLES W	CC1554357	AR	V	COCCCOO499
WHITAKER JOHN C	C07551216	NP	V	COCCCOO642
WHITAKER JOHN C	C07551216	NP	V	OOCCCOO669
WHITE BYRON R	CCC143733	NP	V	COCCCOO243
WHITE BYRON R	CCC143733	NP	V	COCCCOO242
WHITE RICHARD C	CCC479980	NP	V	COCCCOO593
WHITE RICHARD C	CCC479980	MC	V	COCCCOO601
WHITE ROBERT F	CC5798062	NP	V	COCCCOO894
WHITE ROBERT F	CC5798062	NP	V	COCCCOO893

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	VIP	NAME	SN/SSN	SVC		REG NR
		WHITE RODNEY	CC8753452	NP	V	CCCCCC1C04
		WHITE RODNEY	CC8753452	NN	V	CCCCCC1C05
UU		WHITEHEAD CLAY T	CC52138C1	AR	V	CCCCCCC713
		WHITEHEAD CLAY T	5C53437CC	AR	V	CCCCCCC713
		WHITEHOUSE CHARLES	CCCC25465	NN	V	CCCCCCC523
		WHITEHOUSE CHARLES	CCCC25465	NC	V	CCCCCCC524
		WHITEHURST GEORGE	CC8353498	NP	V	CCCCCCC769
		WHITEHURST GEORGE	CC8353498	NN	V	CCCCCCC770
UU		WIGGINS CHARLES E	5543C0548	AR	V	CCCCCCC50C
		WILDEROTTER JAMES	CC6611466	NP	V	CCCCCCC65C
		WILDEROTTER JAMES	CC6611466	NN	V	CCCCCCC651
		WILEY MARSHALL W	CCC47C743	NP	V	CCCCCC1C12
		WILEY MARSHALL W	CCC47C743	NN	V	CCCCCC1C13
		WILEY MARSHALL W	C07C44995	NN	V	CCCCCC1C13
UU		WILEY MARSHALL W	C07C44995	NP	V	CCCCCC1C12
		WILEY RICHARD E	CC2297437	AR	V	CCCCCCC587
		WILLIAMS HARRISON	CCC337432	NP	V	CCCCCCC184
		WILLIAMS HARRISON	CCC337432	NN	V	CCCCCCC185
		WILLIAMS THEODORE	CCCC37773	NN	V	CCCCCCC599
		WILLIAMS THEODORE	CCCC37773	NC	V	CCCCCCC598
UU		WILSON CHARLES H	C39246761	AR	V	CCCCCCC501
		WILSON CHARLES N	CCC6C441C	NP	V	CCCCCCC108
		WILSON CHARLES N	CCC6C441C	NN	V	CCCCCCC109
		WILSON ROBERT C	CCCC72CCC	NN	V	CCCCCCC283
		WILSON ROBERT C	C39748963	AR	V	CCCCCCC502
		WILSON RUFUS H	CCC9CC1CC	NN	V	CCCCCCC619
UU		WILSON RUFUS H	CCC9CC1CC	NC	V	CCCCCCC618
		WINER DAVID J	54C4C1696	AF	V	CCCCCCC10C

..VIP..NAME.....	SN/SSN	SVC	REC NR
WINCHELL WALTER	CCCC73816	NM	V CCCCCCC942
WINCHELL WALTER	CC1338373	NM	V CCCCCCC943
WINTERS JONATHAN H	CCC554727	NM	V CCCCCCC941
WIRTH TIMOTHY E	C11352856	AR	V CCCCCCC503
WOODRING HARRY H	CC1731413	AR	V CCCCCCC48
WRIGHT JAMES F	C339C1396	AR	V CCCCCCC894
WRIGHT JAMES S	CCXC11411	CG	V CCCCCCC589
WYMAN LOUIS C	CCC172878	NM	V CCCCCCC150
WYMAN LOUIS C	CCC172878	NP	V CCCCCCC149
YATES SIDNEY R	CCC343487	NP	V CCCCCCC171
YATES SIDNEY R	CCC343487	NM	V CCCCCCC191
YORK ALVIN C	CC191C421	AR	V CCCCCCC49
YOUNG CHARLES W	186220C13	AR	V CCCCCCC504
YOUNG JOHN A	CCC1C5485	NM	V CCCCCCC194
YOUNG JOHN A	CCC1C5485	NP	V CCCCCCC235
YOUNG SAMUEL H	CCC54C237	AR	V CCCCCCC330
ZABLOCKI CLEMENT J	389102717	AF	V CCCCCCC956
ZEFERETTI LEO C	CC7152922	NP	V CCCCCCC641
ZEFERETTI LEO C	CC7152922	NM	V CCCCCCC668
ZORINSKY EDWARD	CCC956227	AR	V CCCCCCC932
ZUMWALT ELMO R	567C75549	NM	V CCCCCCC231
ZUMWALT ELMO R	567C75549	NP	V CCCCCCC246

28 MAR 1979

TOTAL VAULT RECORDS CCCC1142

TOTAL VAULT FLAGS CCCCCCCC

TOTAL SVC CODE QS CCCCCCCC

TOTAL SVC CODE QC CCCCCCCC

Trip Report of Field Search
for Exercise Desert Rock Documentation
Conducted by Representatives of The Adjutant General
18 June 1978 to 14 July 1978

National Archives and Records Service
Maintenance Instructions for the VIP
Personnel File of the National Personnel Records Center, St Louis

APPENDIX #5 to ANNEX H

GENERAL SERVICES ADMINISTRATION
National Personnel Records Center
St. Louis, Missouri 63132

NPRC 1864.99A
June 20, 1975

NPRC MEMORANDUM

SUBJECT: Civilian and military records of VIP's

1. Purpose. This memorandum contains instructions designed to insure the preservation of the records of any person achieving the status of VIP before, during, or after his or her recorded dates of service. These VIP records shall include certain government officials, celebrities, and persons receiving notoriety or adverse publicity. These records are to be withdrawn from the open files and stored in the NPRC vaults, at CPR or MPR as appropriate, to protect them from possible destruction or compromise.

2. Cancellation. NPRC 1864.99 is canceled.

3. Applicability. The provisions of this memorandum are applicable to all NPRC employees.

4. Background. Presently at NPRC only MPR has an established policy for handling such records. The revised policy and procedures established herein are published with the approval and at the direction of the Assistant Archivist for Federal Records Centers and apply to both CPR and MPR.

5. When records are to be placed in the vault. The Civilian and/or Military personnel and medical records of an individual will be placed in the vault when the government official takes office or when the records meet other applicable criteria contained in this memorandum.

6. Retention period. All records placed in the vault under the provisions of this memorandum will remain there on a permanent basis (or until the records are transferred or required elsewhere).

7. Procedures.

a. President of the United States. A silver negative master microfilm copy and one diazo microfilm copy of the civilian and/or military service records will be prepared. The diazo service copy will be retained in the appropriate MPR or CPR vault; the silver negative master microfilm copy will be placed in the National Archives; and the original record will be deposited in the appropriate Presidential Library or manuscript depository. A request will be submitted to NC in order to obtain permission from the appropriate Military Service prior to the microfilming of the military records.

Distribution: M, O, P, Q

b. Vice President of the United States. The original records will be retained in the appropriate MPR or CPR vault and a silver negative master microfilm copy will be placed in the depository chosen to house the Vice Presidential papers. A request will be submitted to NC in order to obtain the permission of the Vice President; when military records are involved, the consent of the appropriate Military Service also will be obtained prior to microfilming.

c. Government officials. The records of government officials holding any of the following offices will be placed in the appropriate MPR or CPR vault:

(1) Legislative Branch

(a) U. S. Senators

(b) U. S. Representatives

(2) Judicial Branch

(a) Justices of the Supreme Court of the United States

(b) Judges of the U. S. Court of Appeals

(3) Executive Branch

(a) Secretaries, Deputy Secretaries, and Under Secretaries of each cabinet department

(b) All staff members of the White House Office listed in the GOVERNMENT ORGANIZATION MANUAL

(c) Members of the Council of Economic Advisors

(d) Director and Deputy Director of the Central Intelligence Agency

(e) Director and Deputy Director of the Office of Management and Budget

(f) Special Representative and Deputy Representative for Trade Negotiations

(g) Members of the Council on Environmental Quality

(h) Director and Deputy Director of the Office of Telecommunications Policy

(i) Chairman and members of the Joint Chiefs of Staff

(j) Top official of each independent agency, commission and board

(k) All ambassadors requiring confirmation by the United States Senate

d. Persons other than government officials. It is not possible to formulate definitive guidelines for determining which individuals are celebrities or persons of note deserving to have their records placed in the vaults at NPRC. Examination of the various news media may help to identify persons considered currently as celebrities or those who receive significant notoriety. Since the selection process will often be based on subjective criteria, special judgment will be required in each case. Every effort should be made to keep this group to a minimum consistent with insuring compliance with the provisions of this memorandum.

8. Responsibilities. The above procedures will be achieved through the mutual efforts of personnel at CPR and MPR. Any information that will aid in the identification and location of any VIP record should be made available for use at either MPR or CPR.

a. Librarians (MPR & CPR).

(1) The MPR librarian will identify all government officials currently holding the positions listed in par. 7, and prepare GSA Form 7208, VIP Control Card (Figure 1) in duplicate for each selected individual. The librarian will continue this process as new appointments of government officials are made, ensuring that all reference information used is noted in the "Remarks" section of the control card. This information appears in various sources such as the WEEKLY COMPILATION OF PRESIDENTIAL DOCUMENTS. One copy of the prepared GSA Form 7208 will be forwarded to the MPR vault attendant and the second copy will be sent to the CPR librarian.

(2) Upon receiving GSA Forms 7208 from the MPR librarian, the CPR librarian will fill in any additional information needed to complete each card. The CURRENT BIOGRAPHY YEARBOOKS, as well as various other source documents, will be helpful in providing this information. A duplicate should be made of each completed card. The original card should be kept in an alphabetic index, and the copy forwarded to the Chief, Civilian Operations Branch.

b. Key operating official (MPR & CPR). Key operating officials at all levels constantly should be aware of the responsibility for recommending vault storage for the records of VIP's (other than Government officials). When a key operating official has located the record of a potential VIP, he should transmit the record directly to the branch chief with the suggestion that the record be sent to the vault for storage. When a key official does not have physical access to a record he considers deserving of VIP treatment, he will furnish his branch chief the name, position, status, etc., of the individual, with a suggestion that action be taken to remove the record from open storage.

c. Branch Chiefs (MPR & CPR). Each branch chief, after determining that a record concerning a VIP (other than Government officials listed in par. 7) is in the branch's files, shall prepare an appropriate search request, including a charge-out and GSA Form 7208, as shown in Figure 1. These records, along with the completed control card should be forwarded to the vault attendant (MPR) or the Chief, Civilian Operations Branch, as appropriate. When information concerning civilian or military service is not available and a record cannot readily be located, the branch chief shall complete as much of the control card as possible, and submit it to the Chief, Military Operations Branch (MPR), or the Chief, Civilian Operations Branch, as appropriate, for necessary action. These officials should discuss any doubtful cases with their respective Assistant Director, who will make the final decision in such cases.

NAME: DOE, John Q
DATE OF BIRTH: Sept 1, 1925
SERIAL NUMBER(S): 565 818 52
SOCIAL SECURITY NO.: 329-41-5110
BRANCH AND DATES OF MILITARY SERVICE: Sept 1, 1943 thru October 14, 1946 (ARMY)
AGENCY AND DATES OF FEDERAL SERVICE: July 1951 thru March 1962 (General Services Administration)
VIP STATUS: Current member of White House Staff
REMARKS: Source Data - Weekly Compilation of Presidential Documents December 8-12, 1975 Page 47

GENERAL SERVICES ADMINISTRATION VIP CONTROL CARD GSA FORM 7208

Figure 1. Example of completed GSA Form 7208, VIP Control Card

(2) Twice each year, on or about January 1, and July 1, request the Director, Federal Data Processing Center, St. Louis, Missouri, to prepare a new computer prepared list of the records in vault storage. A separate list shall be prepared in original and four copies for records in vault storage at each location.

(3) Distribute one copy of the computer prepared lists to each of the following: MPR List - NC; NCP; NCPM; MPR Vault Attendant; and MPR Librarian. CPR List - NC; NCP; NCPC; NCPCO; and CPR Librarian.

WARREN B. GRIFFIN
Director

d. Vault Attendant (MPR) and Chief, Civilian Operations Branch. The vault attendant (MPR) and the Chief, Civilian Operations Branch are responsible for receiving VIP records for deposit in the vault at their respective buildings and administering the documentation involved.

When either official receives control cards without records attached, he first will determine if the individual's record is already in the vault. If it is not, he will prepare and circulate a search request to determine whether the record is still in the open files. Records located in the open files will be charged-out to the vault on a permanent basis. If evidence of military service (MPR) or civilian service (CPR) cannot be found, the control card will be maintained in an alphabetic file to avoid repetitious searching.

As control cards with records attached are received, the records will be placed in the vault and the corresponding control card will be forwarded for keypunching either to the Chief, Data and Records Input Section (MPR) or to the Chief, Request Data and Records Input Section (CPR), who will also receive control cards for any individual known to have had military service (MPR) or civilian service (CPR) but for whom records have not been received.

These cards will be keypunched with a combination index-flag input card. In both instances, the control cards will be returned after keypunching either to the vault attendant (MPR) or the Chief, Civilian Operations Branch who will retain the cards until verification appears on the computer print-out, at which time they may be destroyed.

e. Chief, Military Office Services and Disposal Branch and Chief, Civilian Operations Branch. When information concerning military and/or civilian service is not available and a record of service cannot be located readily, these officials will establish whether or not a person has either past or present civilian or military service.

f. Chief, Data and Records Input Section (MPR) and Chief, Request Data and Records Input Section (CPR): These officials will:

(1) Insure that identifying information contained on control cards (figure 1) for VIP records has been keypunched properly. These cards will be keypunched to identify either a record in vault storage or a vault index-flag, and entered into the computer index using a special header card ("Vault") to identify specifically this records collection. He shall also arrange for the necessary keypunching of cards to delete, for this special VIP "vault" series, all index references to those NPRC record groups to which these special records formerly belonged before their removal to vault storage.