

SPECIAL RE-REVIEW
FINAL DETERMINATION
UNCLASSIFIED, DATE: 8/21/80

MEDICAL HAZARDS OF TR #2

VERIFIED UNCLASSIFIED

JFW 8/21/80
LMR 9/6/79

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T. Hagan
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I. Introduction:

It is the purpose of the Medical Department to anticipate possible dangers to the health of scientific personnel, residents of nearby towns and of casuals; to provide means of detection of these dangers; and to notify proper authorities when such dangers exist.

It is also necessary to obtain records which may have medico-legal bearing for future reference.

The medical group will act in an advisory capacity and avoid direct orders to personnel except in cases of emergency. It is the responsibility of the Project Director (K. T. B.) to confirm or deny activities to scientific personnel which may be hazardous to them. It has been advised that no person should (of his own will) receive more than five (5) r. at one exposure.

Evacuation of towns or inhabited places will be carried out by G-2 personnel if necessary on advice from the Medical Department. Contaminated areas will be adequately marked and guarded until decontaminating procedures can be carried out.

II. Organization of Medical Group (TR 7):

A. Chief of Medical Group:

Hempelmann

Deputy at TR:

Nolan

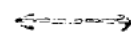
Instruments:



Site Monitorings:



Outside Monitoring:



Consultants:

Warren
Friedell

Surgeon:

Large
Humphries
Lerner



Pd

RG 386 US ATOMIC ENERGY
COMMISSION

Location: Records Center
Collection: MED BOX 27
Folder: 230.61 (Trinity)
Hazards

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BY AUTHORITY OF DOE/OC
J. Hagan 7/12/83
REVIEWED BY DATE

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B. The Duties of Medical Group Personnel:

1) Hempelmann:

Generally in charge of operations. To have no regularly assigned duties, but to be ready at Base Camp for consultation.

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2) Nolans:

To plan for medical personnel and equipment. To acquaint all personnel as to activities of Medical Group. To instruct medical personnel to their duties and responsibilities. To inform Project Director (K. T. B.) as to Medical Hazards.

3) Watts:

To construct and install all monitoring devices. To instruct monitors as to their equipment and duties.

4) Monitors:

To carry out readings and recordings as instructed.

5) Medical Officers:

To be available in case of catastrophe and to act as temporary monitors.

6) Consultants:

To be available at Base Camp for receipt of monitoring reports and to advise as to necessity of evacuation of contaminated areas.

C. Stations of Medical Group Personnel:

1) At Base Camp:

Hempelmann	Warren
Nolan	Large
Watts	Aebersold

2) At 10,000 Yard Shelters:

[Redacted]

3) At Range Camp - Lava Bed:

[Redacted]

4) At Highway 54:

[Redacted]

5) At Highway 285:

[Redacted]

6) At Highway 85:

[Redacted]

7) In Airplane:

Members of [Redacted] Group

8) At Albuquerque:

[Redacted]

Roving Monitor = [Redacted]

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III. Equipment of Medical Group:

A. Transportation:

- 1) Ambulances:
 - a. Panel type
 - b. Field type
- 2) Four-Wheel Drives:
 - a. Command car
 - b. Carry-all
- 3) Sedan
- 4) On loan - 2 contaminated four-wheel drive vehicles for taking scientific personnel into contaminated area. All available four-wheel drive vehicles for evacuating base camp.

B. Protective Clothing:

- 1) Coveralls-for people in shelters, Medical Group, Tanky-group, and in-going personnel. 100
- 2) Caps, surgical 100
- 3) Booties, various 100
- 4) Gloves, cotton 100

C. Gas Masks:

- 1) Positive pressure type - Tank Group. . .12
- 2) Smoke resistant type - in-going group. .30
- 3) Regular gas masks - Shelter group. . .30
- 4) Respirators - all personnel at base. . 400

D. Instruments:

- 1) Portable gamma meters. 15
- 2) Portable alphameters 20
- 3) Filter Queens. 10
- 4) Recording gamma meters 12 (Esterline-Angus)
- 5) Hand and Swipe Counter 1
- 6) Regular pencils. 200
- 7) Chargers. 3
- 8) Resistant pencils. 12
- 9) Film badges - catastrophe. 100
- 10) Film badges - for towns. 200

IV. Plans for Monitoring - Before Shot:

A. Transportation of Material:

- 1) Courier to wear pencil and catastrophe badge
- 2) Container to be checked with small portable gamma and alpha meters.

B. Assembly:

- 1) Dry box maneuvers to be checked with portable gamma meter
- 2) Protective clothing and respirator worn before tamper is in place.

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3) Check hand and nose counts of Pit Man

C. Raising of Material and H. E.:

1) Area to be cleared of unessential personnel before, during, and after this procedure.

V. Plans for Monitoring - Time of Shot:

A. At 10,000 yd. Shelters:

- 1) All persons to remain inside shelters
- 2) One member of Medical Group at each shelter
- 3) Instruments and equipment
 - a. portable gamma meter. 1
 - b. portable alpha meter. 1
 - c. Pencil chambers or film badges for each person
 - d. ordinary gas mask for each person
- 4) All personnel to leave for base camp within 30 minutes using gas masks.
- 5) a. Evacuate before 30 minutes if gamma reading outside shelter reaches 0.1 r/hr.
b. Put on gas masks and evacuate if alpha reading reaches 5 c/m.
- 6) Adequate transportation to be checked by member of Medical Group.

Shapiro
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B. At Base Camp:

- 1) All persons to be outside of buildings.
- 2) Observers of shot to wear protective goggles and avoid direct vision.
- 3) To stay at Base until contaminated area is ascertained -- 6 hours.
- 4) Member of Medical Group to be in communication with town monitors by phone and with plane monitors by radio.
- 5) Equipment and instruments:
 - a. portable gamma meter
 - b. portable alpha meter
 - c. respirators
 - d. adequate transportation for all personnel for evacuation
 - e. tolerances - same as in V - A - 5)

Anderson
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C. At Range Camp (Lava Bed):

- 1) Observe cloud and trail with radar and direct vision
- 2) Instruments and equipment:
 - a. Portable gamma meter
 - b. Portable alpha meter
 - c. Respirators
 - d. Transportation
- 3) Tolerances - same as in V - A - 5)
- 4) Communications - radio to Base Camp

D. Member of Medical Group at Highway 54:

- 1) Check recording meters (alpha and gamma) at:
Corrizozo, Oscura, Three Rivers, Tularossa
- 2) Observe cloud visually and record course
- 3) Observe readings of portable alpha meter beneath cloud

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- 4) Follow cloud towards east and continue with meter readings.
- 5) Communicate with Albuquerque by phone as to course, intensity of readings, etc.

E. Member of Medical Group at Highway 285:

- 1) Check recording meters (alpha and gamma) at Carlsbad and Roosevelt.
- 2) Observe cloud visually and record course.
- 3) Observe readings of portable alpha meter beneath cloud
- 4) Follow cloud towards east and continue meter readings
- 5) Communicate with Albuquerque by phone, as to course, intensity of readings, etc.

F. Member of Medical Group at Highway 85:

- 1) Check recording meters (alpha and gamma) at San Antonio
- 2) Observe cloud visually and record course
- 3) Observe readings of portable alpha meter beneath cloud
- 4) Follow cloud towards east and continue meter readings
- 5) Communicate with Albuquerque by phone, as to course, intensity of readings, etc.

G. Roving Town Monitor: [REDACTED]

- 1) Station himself Corrizozo at time of shot.
- 2) Follow cloud visually and with portable meters.
- 3) Direct station and activities of ground monitors.
- 4) Confer with Albuquerque (W. Friedell) in case of need of evacuation at any point.

VI. Plans for Monitoring - After Shot:

A. At Shelters 10,000 yards:

- 1) Evacuate area as soon as possible returning all personnel to Base Camp.
- 2) Check wearing of gas masks and pencil chambers.
- 3) Report on meter readings.

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B. At Base Camp:

- 1) Receive reports from plane and surface monitors
- 2) Send consultation group to dangerous areas if need be
- 3) Check equipment, calculate dosage, instructions to personnel entering contaminated area to retrieve equipment. This is to be done by a Board consisting of K. T. B., V. T., and J. F. N. with the aid of information obtained by Tank Team and from gamma sentinels of Moon. Men to wear coveralls, caps, boots, smoke masks, film badges and direct reading electrosopes.
- 4) Record gamma and alpha readings at Base Camp and evacuate if necessary. This must continue until all of Base Camp can be evacuated after 4 - 7 days.
- 5) Check equipment of Tank Team - before and after their activities.
- 6) Map out area of gamma contamination to tolerance limit (0.1 r/8hrs.)
- 7) Map out area of alpha contamination to tolerance limit (five c/m on ground)
- 8) Set up wind-socks at various locations for ground wind direction.

Nolan

SL data

C. At Highways and Lava Bed:

- 1) To report at Base after recording devices are secured and after cloud and trail have passed. Be prepared to proceed in direction of cloud if necessary.

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Return to Base when advised to watch for and retrieve film badges dropped through cloud by plane.

D. Plane:

- 1) This to be performed by members of Alvarez's group and to be instrumented to carry out the following measurements:
 - a. size of cloud
 - b. shape of cloud
 - c. course of cloud
 - d. gamma intensity by direct reading at distance
 - e. gamma intensity by dropping film through cloud at intervals.

E. Additional Measures:

- 1) Film to be sent to post offices of surrounding towns and be picked up by G-2 man and recorded.

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