

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:

PRIVATE FUEL STORAGE, LLC
(Independent Spent Fuel
Storage Installation)

)
) Docket No. 72-22-ISFSI

)
) ASLBP No. 97-732-02-ISFSI

)
) July 16, 1999

DECLARATION OF BRONSON W. HAWLEY, Ph.D

1. I, Bronson W. Hawley Ph.D., declare under penalty of perjury and pursuant to 28 U.S.C. § 1746 that the statement contained herein with respect to the documents attached hereto as Exhibit A are true and correct to the best of my knowledge, information and belief.
2. I am employed as an environmental scientist in the Utah Department of Environmental Quality, Division of Solid and Hazardous Waste.
3. Part of my responsibilities involve RCRA compliance for activities associated with Hill Air Force Base, including activities that occur at the Utah Test and Training Range (UTTR).
4. Exhibit A consists of a Memorandum from Hill Air Force Base to Dennis Downs, Division of Solid and Hazardous Waste ("Division"), dated September 8, 1998. It has one attachment, "Composition of C-4 1st, 2nd & 3rd Stage Propellants."
5. Hill AFB submitted the September 8, 1998 Memorandum to the Division as part of its RCRA obligation to obtain approval for the use of a new location of open detonation of hazardous waste, (rocket motors) at UTTR North. I obtained this document from the Division's Hill Air Force Base file and have reviewed the document for purposes of RCRA compliance.
6. Exhibit A also consists of copies of photos #1 through #8 with my handwritten notations, which I took during a rocket motor detonation demonstration test at UTTR North range on an April 7, 1999. The photographs are also referred to in my deposition, taken by counsel for the

Applicant on May 11, 1999 at pp 33-34.

7. The rocket motors are transported from the Alliant Technologies facility located in Magna, which is south east of the Intermodal Transfer Facility (ITF), along Interstate 80 passed the ITF to the UTTR North.

Executed this 16 day of July, 1999.

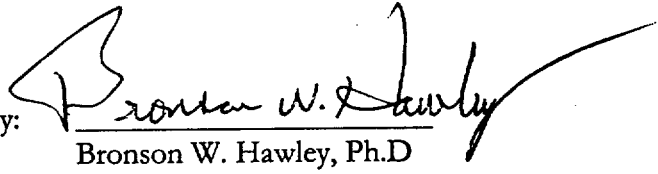
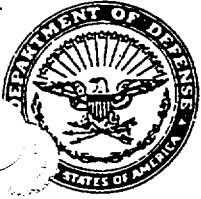
By: 
Bronson W. Hawley, Ph.D

EXHIBIT A

Attachments to Hawley Declaration



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS OGDEN AIR LOGISTICS CENTER (AFMC)
HILL AIR FORCE BASE, UTAH

HAND DELIVERED
DIVISION OF SOLID &
HAZARDOUS WASTE

SEP 09 1998
AM 7 8 9 10 11 12 1 2 3 4 5 6 PM
A 98.03495
08 SEP 1998

MEMORANDUM FOR Mr. Dennis Downs
Dept. of Environmental Quality
Div of Solid and Hazardous Waste
228 North 1460 West
Salt Lake City, UT 84114-8440

FROM: OO-ALC/EM
7274 Wardleigh Rd.
Hill AFB, UT 84056-5137

SUBJECT: Demonstration Tests at Thermal Treatment Unit-2

1. This letter is to notify you that Hill AFB is preparing to perform demonstration tests at the Thermal Treatment Unit - 2 (TTU-2) preferred location, Doyle's gulch. The demonstration tests will support our request for installation and operation of the new TTU. Hill AFB would like to conduct the demonstration tests during the fall of 1998 and spring of 1999.
2. The overall purpose of the demonstration tests is to determine the suitability of the new TTU for treatment operations. The first goal is to "dry run" the treatment of the Trident I motors at the proposed new TTU. Operations procedures used at the existing TTU will be used for the demonstration tests. Modifications will be made as necessary. The second goal is to demonstrate that up to 80,000 LB NEW (the equivalent of two Trident I first stage motors) can be treated by OD without adverse noise or air emissions impacts.
3. The first event will involve two detonations of two each 2nd stage rocket motors this fall. Since each second stage motor has a NEW of 17,000 LB, the total NEW for each detonation will be 34,000LB. In the spring of 1999, additional tests of 2nd stage motors are planned for. These will test three and four stage two motors in each demonstration event. One additional demonstration event will involve the detonation of two first stage Trident I rocket motors. Each motor has an NEW of 40,000 lbs, giving an overall NEW of 80,000 lbs. Composition of the both stages is approximately 21% Nitroglycerin (NG), 19 % Aluminum (AL), 40 % Cyclotetramethylenetetranitramine (HMX), 8% Ammonium Perchlorate (AP), and 6% Polyglycol adipate.
4. In order to conduct the demonstration tests, a road will be built to transport the motors to the detonation area and the detonation area will be cleared of vegetation and leveled. The NEPA process is being followed and will be completed for the TTU-2 primary and alternate locations. In addition, a Notice of Intent (NOI) will be sent to the Division of Air Quality for the demonstration tests.

5. We have finalized our Test Plan for the Demonstration Tests at TTU-2 and have attached a copy for you. Also attached is a copy of our revised Part A permit to conduct the demonstration tests.

6. We would appreciate it if you could provide us with any comments you have on this matter. We are preparing to conduct the demonstration test starting 21 Sept 1998 and would like to receive your comments as soon as possible. For questions or comments contact Mr. Michael Petersen, EMC, 775-6904.



E. ALLAN DALPIAS
Director of Environmental Management

Attachment:
Revised ~~Part A~~ permit
Test Plan

TABLE 2-1

~~1-801-261-2196~~

PRECEDENT 1

JAN 6, 1998

COMPOSITION OF (C-4) 1ST, 2ND & 3RD STAGE PROPELLANTS

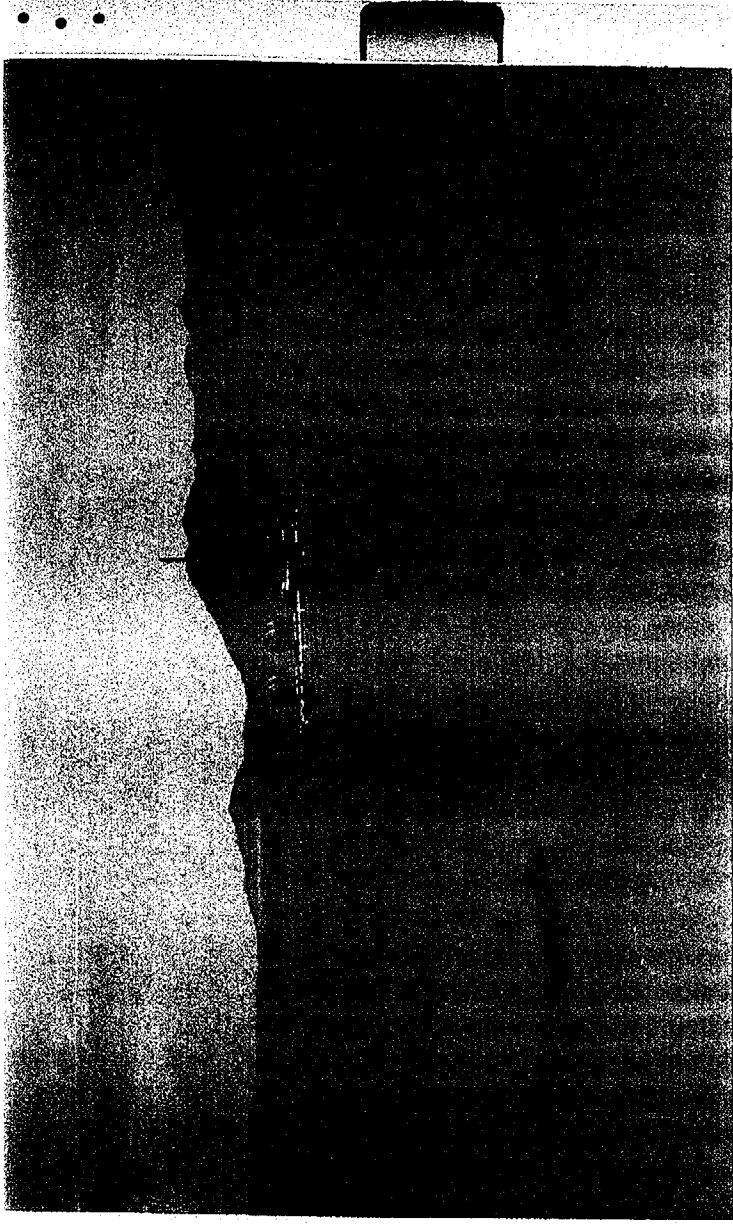
<u>Ingredients</u>	<u>1st Stage</u> <u>% Ingredient</u>	<u>2nd Stage</u> <u>% Ingredient</u>	<u>3rd Stage</u> <u>% Ingredient</u>
Nitrocellulose (12.6%N)	0.2	0.2	0.2
Nitroglycerin (NG)	21.3	21.3	17.7
2-Nitrodiphenylamine (2-NDPA)	0.2	0.2	0.2
Aluminum	19.0	19.5	18.0
Ammonium perchlorate (AP)	8.0	10.0	4.0
Cyclotetramethylenetetranitramine (HMX)	43.2	40.7	53.0
Polyglycol adipate	6.5	6.5	5.5
N-methyl-p-nitroaniline (MNA)	0.6	0.6	0.5
Triisocyanate (N-100)	1.0	1.0	0.9

~~Call me if you have any questions. I am looking up the other information.~~

~~Phone 1-301-743-4356 (fax 1-301-743-4693)~~

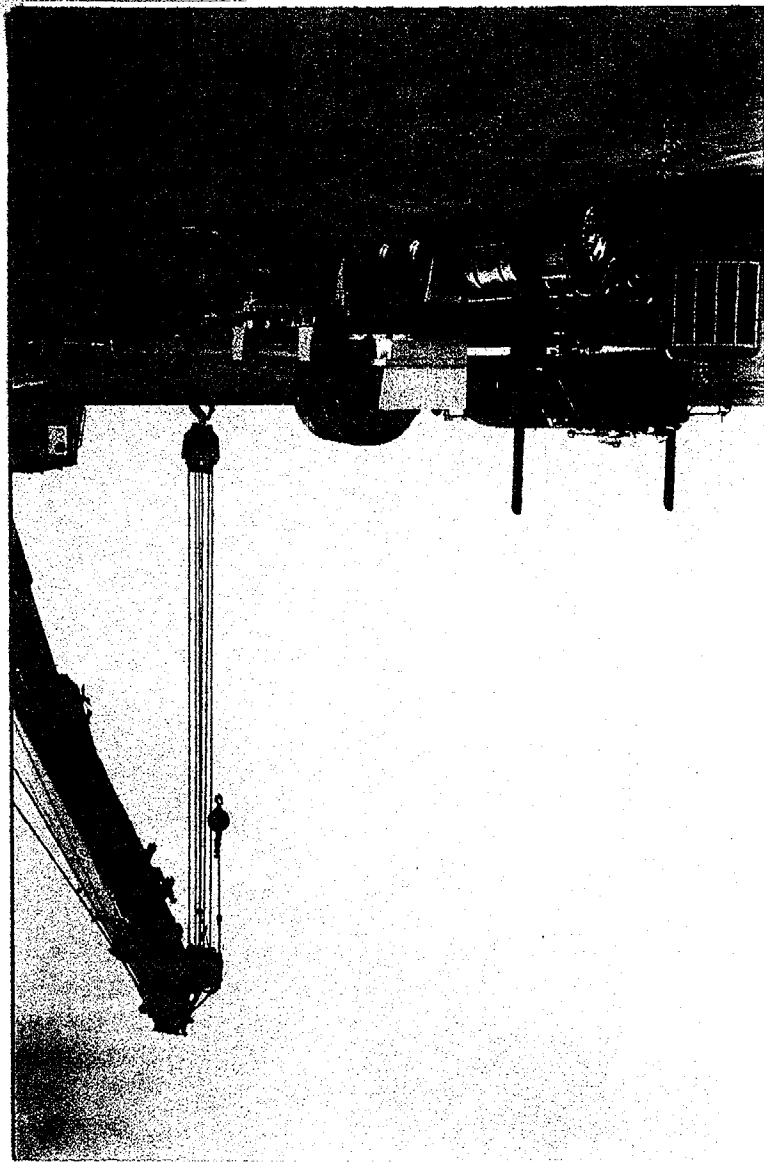
~~Edward E. Baroody~~

UT-40677



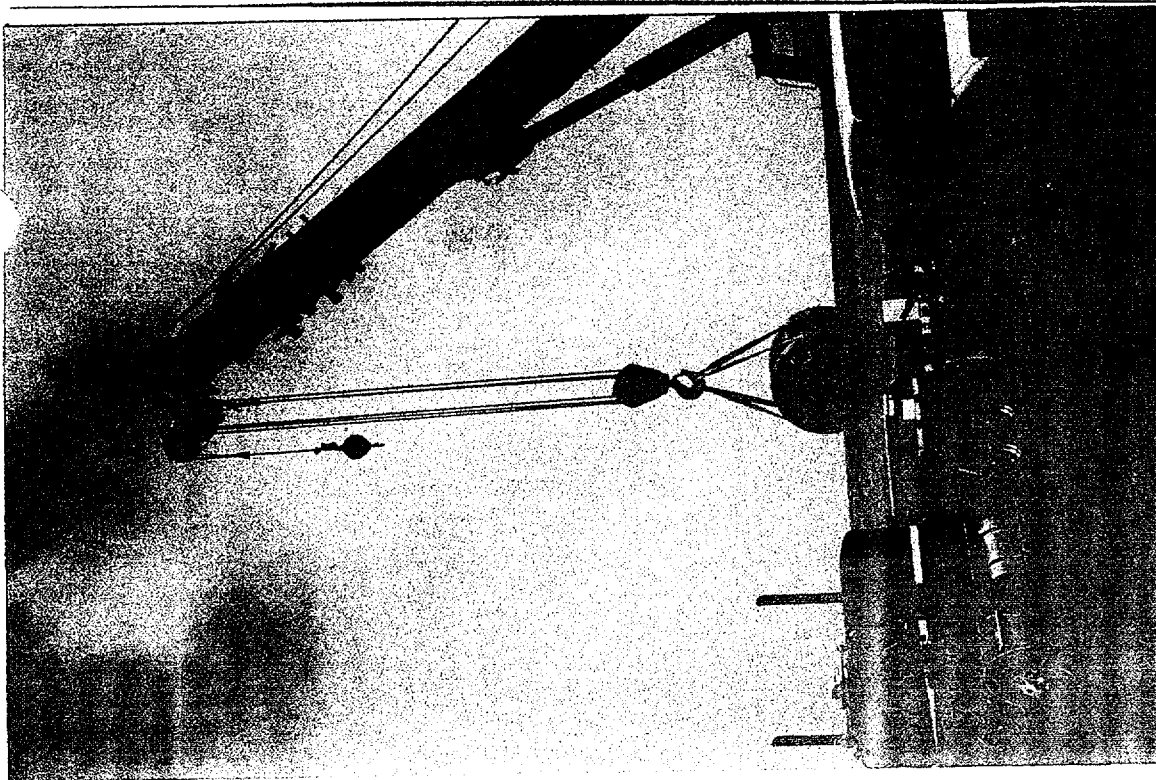
Two Trident C-4 motors at holding area
just outside main gate at VTPR

PHOTO # 1



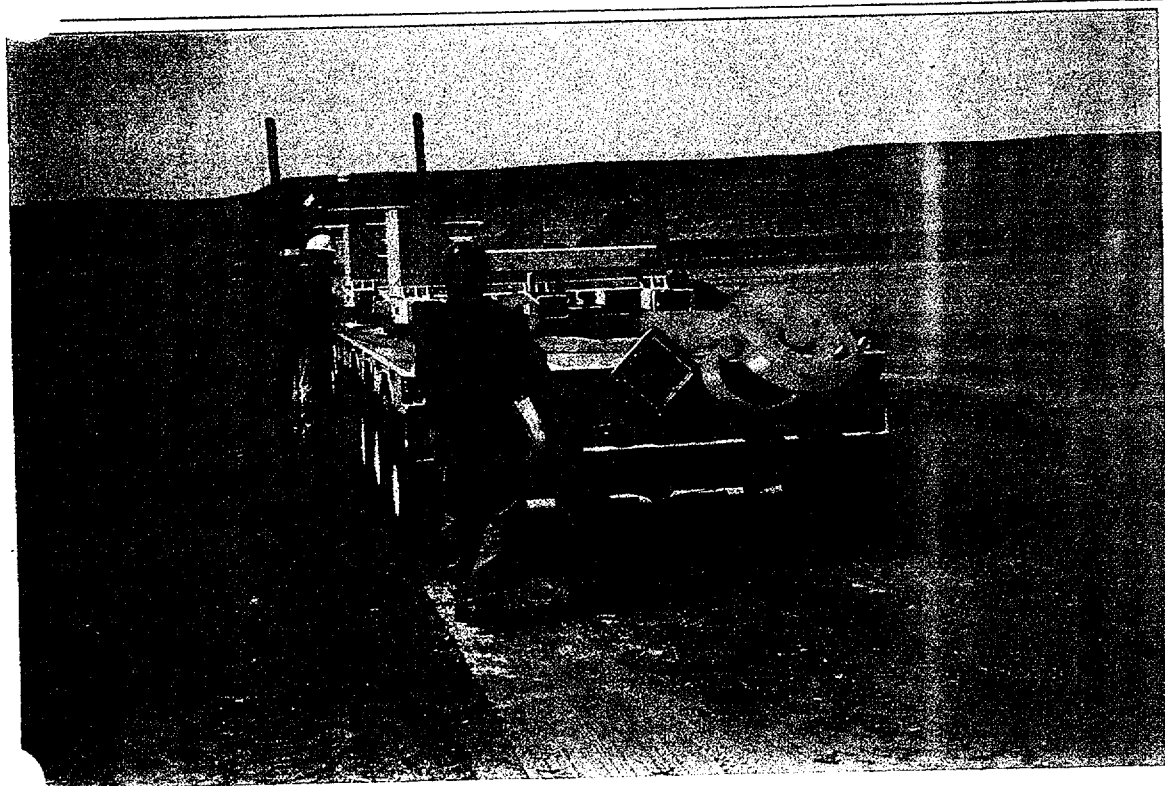
Unloading motors at TTH

PHOTO # 2



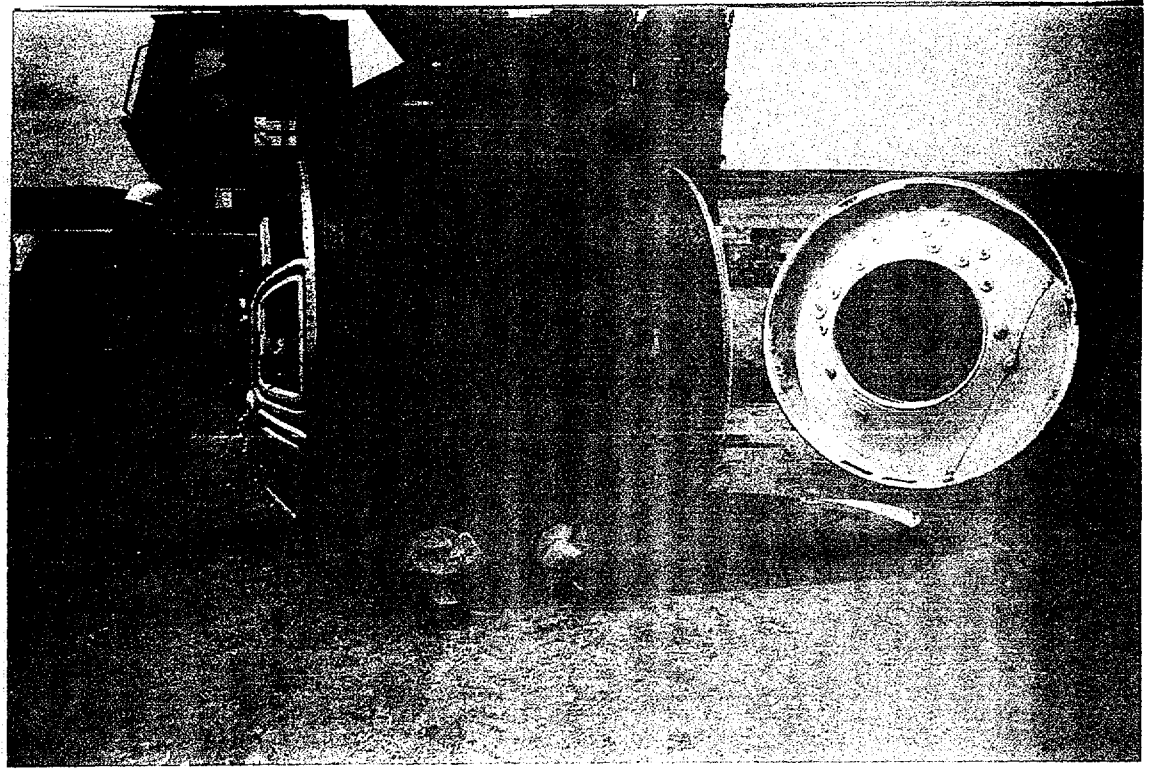
Unloading 2ND motor at TTU

PHOTO # 3

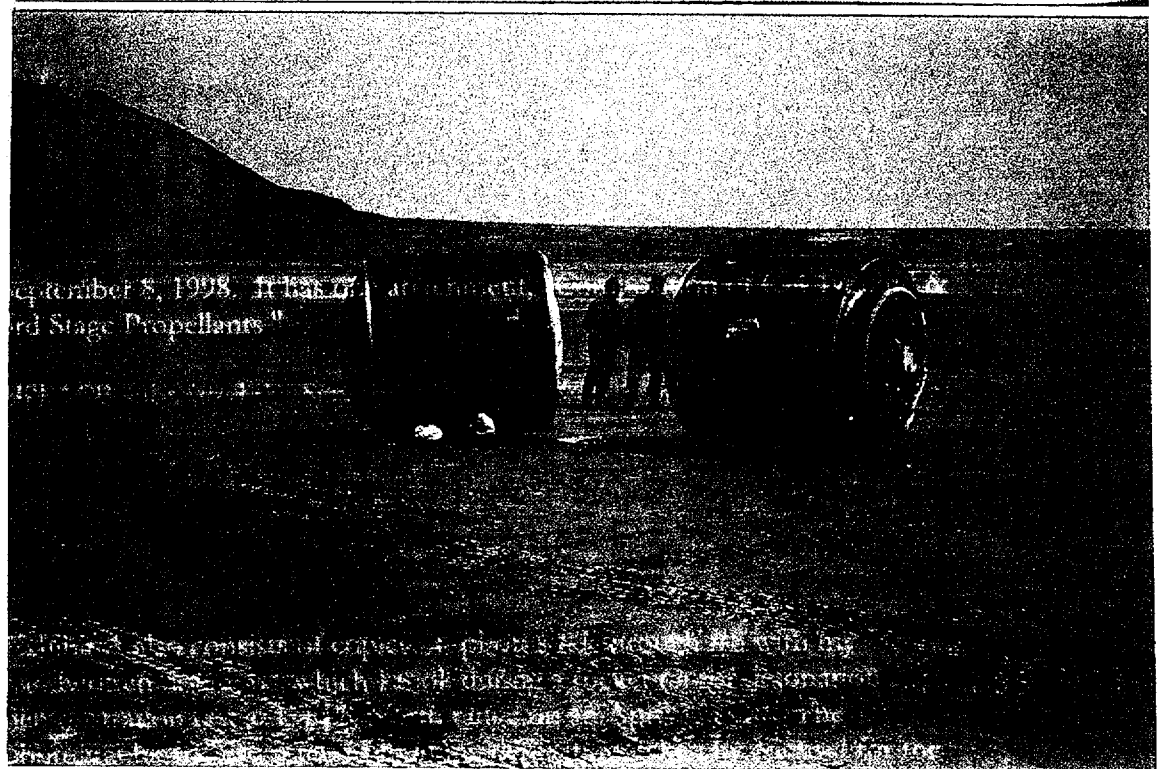


Transport truck with proper DOT
placard

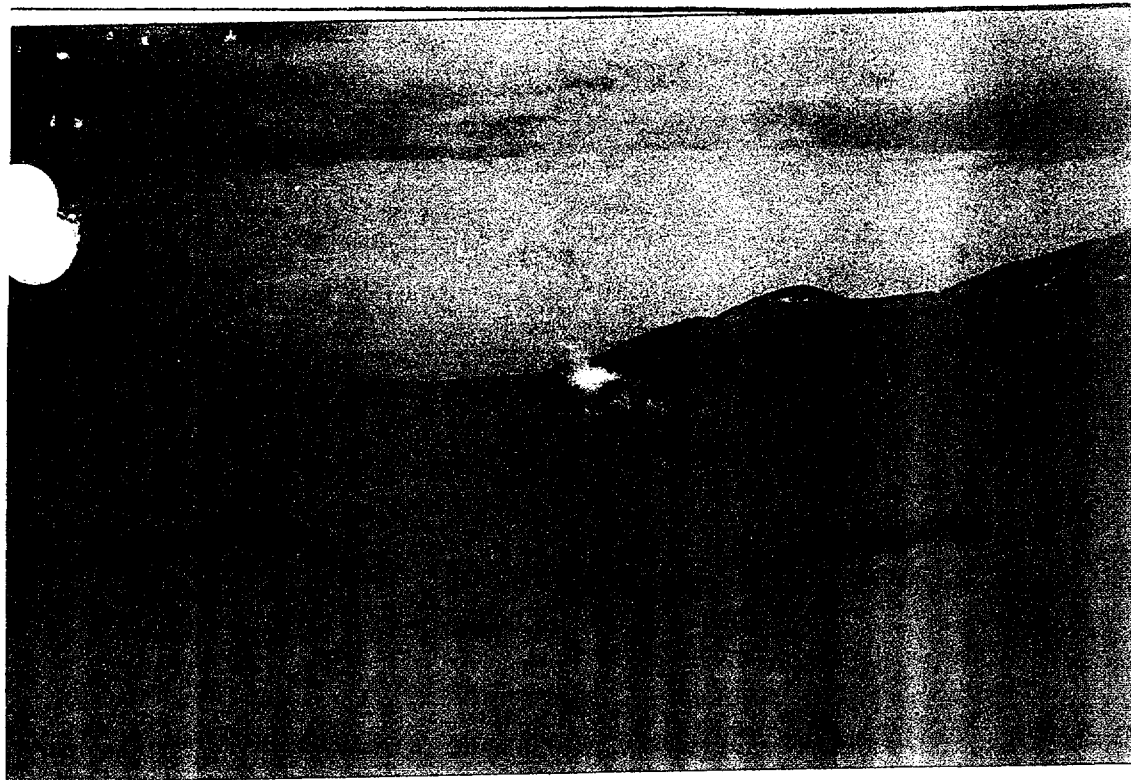
PHOTO # 4



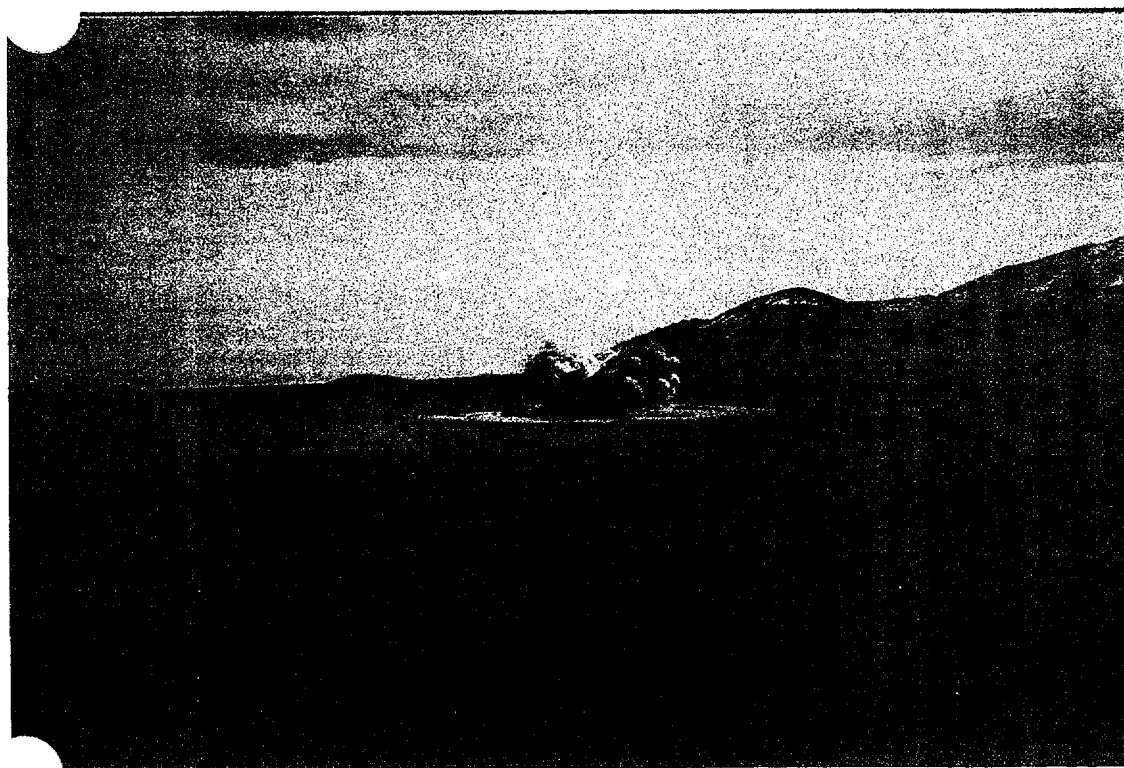
Alliant Techsystems personnel checking PHOTO # 5
for static electrical charge



Motors ready for treatment (detonation) PHOTO # 6
Note: Static electrical ground between the motors



"Fire Ball" from detonation Noh: Three PHOTO # 7
red balloons tethered above ground zero
Each has an air sampling unit for plume gas



The three balloons are all still in PHOTO # 8
place. The shock wave has not