MARSHALL ISLANDS FILE TRACKING DOCUMENT

Record Number: 384

File Name (TITLE): Diary of Harry H. Haught

Document Number (ID): 089941

DATE: 1/1980

Previous Location (FROM): OIC

AUTHOR: H. Haught

Addditional Information:

OrMIbox: 21

CyMIbox:

IVY KEY C.4.1

[redacted]

HEADQUARTERS
WEATHER REPORTING ELEMENT 132.4.3.2, PROVISIONAL
TINKER AIR FORCE BASE
OKLAHOMA CITY, OKLAHOMA

TAO306

To Bob Miller

68978

NARRATIVE REPORT
Weather Reporting Element 132.4.3.2, Provisional
Participation in Operation Ivy

1. Air Weather Service Operations Plan No. 4-52, placed the requirement for the organization, deployment, and operation of a provisional weather reporting element on the 2059th Air Weather Wing. This requirement was in turn placed on the 2060th Mobile Weather Squadron, later the 6th Weather Squadron (Mobile). Air Weather Service Operations Plan No. 4-52 was implemented by a detailed 6th Weather Squadron (Mobile) Operations Order 7-52.

2. Organization of the task element presented no problem. Requisitions were forwarded to the Air Task Group in April and were filled to a surprising degree by deployment time. The logistic action was monitored by the Task Group and the 6th Weather Squadron and barring 1 or 2 undesirable substitutions progressed without incident. Without reservation the logistical support provided throughout the operation was the finest I have witnessed and was a credit to Hq AMC, the Air Task Group and especially Lt Col Mario Ciccone, the Air Task Group Director of Materiel. Captain John O. U. Love, Jr. was the project officer for the Provisional Unit and produced exceptional results in that staff position. Major Joseph H. Carpentier was responsible for unit training and his results were exceptional as the subsequent POI inspection by Headquarters MATS indicated.

3. In early July one officer and three NCO's were dispatched to

4AF

2452

[redacted]

EQ JIF SEVEN LOG NR:
FS-203-56W-3

INCL #2

the Naval Supply Center at Oakland to check on the progression of the logistic action initiated in April. Since the flow of materiel was satisfactory the officer was withdrawn and the responsibility for checking equipment and supplies was placed on T/Sgt Wayne L. Neal who from that time until the final roll-up performed his duties in an outstanding manner and for which he has been recommended for the Commendation Ribbon with Medallion.

4. Before continuing with this narrative, it is believed that some of the political, cultural, geographical, ethnical, and archaeological aspects of the area in which we operated will be of some interest.

a. The elements area of operation was located entirely in the great ethnic division of Oceania known as Micronesia, which means little islands. Operating locations were Eniwetok, Bikini and Majuro Atolls in the Marshall Group and the mountainous (2500' MSL) islands of Kusaie and Ponape (Senyavin) in the Eastern Carolines.

b. Oceania, according to general agreement based on evidence of oral tradition and supported by physical, linguistic and botanical evidence, is populated by a composite stock of caucasian, mongolian and negroid elements. Hypothesis varies as to the origin and mention India, Assam and Cambodia. It is believed that the original migration was definitely Polynesian and disregarding "Kontiki", man first entered this area from the West.

c. Micronesia, according to the E. Brit., has been both a puzzle and a fascinating study for the anthropologist and ethnologist. There is a mixture of Melanesian and Polynesian strains, while there is definitely a Malayan strain apparent in the Carolines. The negroid

[redacted]

strain is much in evidence in the Marshalls. Micronesians are generally of medium height with a light brown to yellow skin, black curly hair, high cheek bones and black eyes. They are excellent boat builders and navigators and make good commercial sailors. They were skillful map-makers long before discovery of the islands by the Spanish. Their mongoloid strain has frequently been attributed to Japan and there are traces of Japanese architecture and athletics but I believe these are of recent origin. Some headhunting has been known to occur but the Micronesians as a rule are indolent and inoffensive.

d. [redacted] likewise, has been one of our stations since its capture in [redacted] the same year Eniwetok was captured. The Navy has operated the weather station there since last year. While at Kwajalein and with the aid of S. L. A. Marshall's book, "Island Victory", I had the opportunity of reviewing all the aspects of the campaign conducted by the 32d and 184th Regiments of the 7th Division. It seemed strange to live on almost the exact spot where some of the fiercest fighting occurred. Now we know that modern air tactics, using Napalm, would preclude such use of infantry if the strategic air arm did not completely negate the requirement for the Atoll. The significance seems to be in how operational concepts change in a few short years. However, this does not bring back the 500 men expended. One of the humorous incidents of the campaign was when the reconnaissance troop of the division, while securing the harbor entrance, became lost at night and although their tactics were in the classical style, they captured the wrong island. Curiously enough, the island was named "Chance".

[redacted]

[redacted]

e. [redacted] is an uninhabited atoll comprising some 35 islets on a reef 25 miles long, in the northern Marshalls. Its [redacted] to Ronerik and later to other islands, before the CROSSROADS Operation. The natives are now on Kili. This atoll was formerly called the Escholtz Islands. Majuro is a coral atoll with a lagoon approximately 2-3 miles in width and 18 miles in length. Maximum elevation is 30 feet above MSL but the mean elevation is around 10 feet. Tropical vegation covers the atolls, and coconuts, some breadfruit, limes and bananas are grown. The population is approximately 5,000. Western clothes are worn. Enough speak English so that language is no barrier. There is a concrete dock in excellent condition and a useable runway approximately 5,400 feet in length. Native schools and a fairly well equipped hospital are located at Majuro. There is an abundance of semi-skilled and unskilled native labor. These islands and Kwajalein and Eniwetok, all in the Marshall Group, were discovered in 1526 by the Spanish and were visited by Captains Gilbert and Marshall in 1788. They were a German protectorate from 1885 to 1814 when in the first world war they fell to Japan. Jaluit was the capital of the island group under the Japanese who received a mandate over them in 1922 and claimed complete sovereignity in 1935 when the League of Nations became impotent. Subsequent to their capture by the U. S. Forces in 1944 they were administered by the U. S. Navy. In 1947 they were made a U. S. Trust Territory under United Nations Trusteeship. Control was transferred from the U. S. Navy to the Trust Territories of the Pacific Island, USA, in 1951. The High Commissioner of the Trust is the former senator from Utah, the honorable Elbert Thomas. The Department of the Interior is the executive

[redacted]

[redacted]

agency. The Trust is still under U. N. Trusteeship. Majuro is the headquarters of the civil administrator for the Marshalls, Mr. Don Gilfillan.

f. Kusaie is a volcanic island with a population of approximately 2500 and an area of 30 square miles. The terrain is rugged and some mountains or hills exceed 2000 feet above MSL. It is covered with a tropical jungle and only a narrow band around the coast is readily accessible. Kusaie is actually two islands, the smaller being about 3/4 of a mile square. There are several small fringe islands bordering the reef. Natives are Kanakas of medium build with pleasant features and dispositions. Two American citizens reside on the island, a Mr. A. V. Herman who has resided there for 40 years and his nephew Mr. Jack Youngstrom, a resident for 17 years. There is spring water and an abundance of native labor.

g. Ponape is also a volcanic island covered with a very luxuriant vegetation. It has deposits of bauxite, iron and iron sulphate but none are worked. Like most of Micronesia, its principal products are copra, dried bonito and native handicraft. During WW II the island was the site of a Japanese Air Base and was bombed but not invaded by the U. S. A useable Japanese Sea plane ramp exists on the north side of the Island, which we used during the operation. Kusaie and Ponape are both islands of the Caroline Group. This Group was discovered by the Spanish in 1526. They were under Spanish rule from 1886 to 1899 when they were sold to Germany following the Spanish-American War. Their chronological administration since that time has been essentially the same as the Marshall Islands. The district headquarters for the Civil Administrator for the Carolines, Mr. Kevin Carroll, is at Ponape

[redacted]

h. The principal religion in the Marshalls and Carolines, besides the indigenious, is Catholic, although it was curtailed somewhat by the Japanese. Since WW II, there has been a considerable influx of both Catholic and Protestant missionaries. Some of the latter, recent arrivals on Kusaie, believe in the theological principle of complete submersion to the consternation of the populance. However, since most Micronosians have a marked affinity for water they will probably be rapidly accepted.

i. One of the most fascinating puzzles and archaeological monuments in Micronesia is found at Ponape and Kusaie where extensive groups of buildings intersected by canals were constructed on artifically enlarged reefs protected by sea walls. According to the E. Britt., the ruins at Ponape were formerly a mighty city built of stone with waterways, similar to Venice, as a means of communication. Hurricanes and typhoons have caused some demolition, especially in the higher structures, but enough of the characteristic giant stones remain to convey the impression that some unknown people, at an unknown time, erected an amazing oceanic metropolis on this lonely island. The ruins at Ponape take the form of rectangular paved court yards, frequently in contingous clusters, constructed by laying natural columnar blocks of basalt lengthwise and crosswise in alternate layers. These walls rise in places to a height of more than 20 feet but were not roofed. The enclosures formerly contained houses of perishable material, traces of which remains; also platforms, terraced or pyramidal, in which were sepulchral vaults roofed with coral or basalt slabs. The most important and best preserved of these structures is the royal cemetery of NAN TAUACH at Matolenim,

[redacted]

Ponape, which stands in a double enclosure and contains four burial chambers. The tradition that these buildings were constructed by means of inclined planes of tree trunks survives. The objects found in the tombs do not indicate a high antiquity. Major General Clarkson, the Task Force Commander, was interested in visiting the Ponape ruins but the tide conditions, which allowed easy access, only occurred about once a month. The trip was either made in outriggers or picket boat and took some time. The flight to Ponape took four hours and it was another three-hour trip to the ruins. The excursion was planned for 28 October but was postponed because of a CPX that date. The Operation was over before the tide conditions were again favorable. I attempted to find out whether there was any relationship between the ruins in Cambodia, the lava stone monuments on Easter Island, and the tombs at NIKKO in Japan. The E. Britt. mentions the resemblance to NIKKO and even suggests that there was Japanese influence and stating that the word Chamorro, by which some Carolinians are known, may have been a corruption of Samurai, meaning Japanese medieval knights. My efforts have uncovered nothing. The E. Britt. mentions that some features of the architecture of Matolenim suggest a continental Asiatic influence. C. W. Cerams book "Gods, Graves and Scholars", makes no mention of the ruins. Other bibliography on the subject is very limited. In any event the mystery is intensified because Ponape is far away from the mainland and off the normal trade routes. It is doubtful whether the entire Micronesian archipelago, as large as it is, could have supported many more than 500,000 people, in view of the small area of the islands and the primitive methods of obtaining a livlihood. Another interesting sidelight is that Kapingamaringi, which

[redacted]

[redacted]

is 500 miles south of Ponape, is exclusively Polynesian. This island, in the middle of Melanesia and Micronesia, is some 2,000 miles further west than any other island with Polynesian inhabitants. Also on Ponape is a cultured tropical forest started by the Germans, maintained by the Japanese and now being cared for and replenished by the Trust Territories Government. It contains almost every known tropical tree and plant. Oranges are grown 9-12 inches in diameter. Many exotic varieties of tree are grown as in nature. Others have been grafted and pruned and have many strange and beautiful forms. One large palm had been grafted and pruned until it looked like a hugh palm fan with the stems beginning about 50 feet above the ground and twisted like a corrugation, all in one veritcal plane. The Japanese had constructed a tall concrete building in this forest. The upper story looks over the forest and the sea and much of the island is visible. We used the top of this building for our SCR 658.

j. Bibliography - Encyclopedia Brittanica 1950, Volume 15 and 16; Colliers Encyclopedia 1952, Volume 13 and 15; Columbia Encyclopedia, 2nd Edition; C. W. Cornam, "Gods, Graves and Scholars"; Project Report WREP 2, Captain John W. Donahue; Project Report WREP 3, 1st Lt Joseph W. McDaniel; S. L. A. Marshall, "Island Victory".

[redacted] On 31 July the detachments, whose final destinations were Majuro, Kusaie and Ponape in the Marshall and Caroline Islands, departed Tinker Air Force Base via MATS C-97. Enroute they were joined by the Supply Team at Oakland and proceeded to Hickam Air Force Base. Prior arrangements were made with the 57th Strategic Reconnaissance Squadron to provide quarters, rations and some administrative assistance. This was

[redacted]

provided in an admirable fashion and made the stay of the detachments at Hickam Air Force Base pleasant and profitable in that every assistance was furnished in checking supplies and equipment and in the embarkation of the detachments for the forward area. Sgt. Neal, his team, and the detachment commanders, meanwhile, had compared the brownline copy of the requisition with all vouchers and had also procured the necessary perishables. The check indicated that all housekeeping and operations materiel was on hand. The supplies and equipment were segregated into separate shipments at the Naval Supply Center, Pearl Harbor, and loaded on the LST. On 18 August the LST sailed for the forward area. T/Sgt Neal proceeded to Kwajalein NAS via MATS and T/Sgt Beck to Eniwetok where he monitored the arrival, storage and segregation of supplies and equipment shipped to that station for Bikini.

6. USS LST 836, Captain Marvin J. Walker (Lt USN), proceeded to Majuro, Kusaie, Ponape and Eniwetok in turn and the establishment of the three detachments was accomplished without incident. Pier facilities existed at Majuro but equipment had to be moved from 1.5 to 2 miles. The 2½-ton truck requested for unloading purposes was deleted and a DUKW substituted over the voiced objections of all concerned. It proved to be useless for unloading but did serve a useful purpose for dragging heavy materiel over the sand and in resupply from PBMs. However, rafts or boats were required to transfer supplies from the PBM to the DUKW. Mr. Gilfillan, the Civil Administrator for the Marshall Islands located at Majuro, had been contacted earlier in the year and he proceeded to render invaluable aid in assisting Captain John W. Donahue in establishing his detachment. Mr. Gilfillan's assistance continued until the detachment

[redacted]

departed and a mutual respect and understanding of the Civil and Military organization on Majuro developed to the profit of both. At Kusaie the LST, tied to an old Japanese dock, and the detachment, under 1st Lt Joseph W. McDaniels, was established. The only Americans and non-Micronesians on Kusaie were Mr. Herman and his nephew. Mr. Herman had been in the Copra business on Kusaie since 1910 and helped Lt McDaniels in every possible way. Later, several missionaries arrived but settled on the other side of the island. At Ponape the LST had to anchor in mid harbor and the equipment and supplies lightered about 2 miles to shore. The detachment was established near the Old Japanese Agricultural Experimental Station near what is called the tropical forest. Ponape, like Kusaie, is mountainous (2500') and every type of tropical tree exists. It is now maintained by the Civil Administration of the Carolines. The camp site was some 1.5 miles from the shore and assistance was provided by Mr. Carroll, the Civil Administrator. Mr. Carroll was not as helpful as Mr. Gilfillan and he and Lt McKissack had many encounters. To my knowledge, Lt McKissack did not win a single engagement but the last one and paid dearly for every service received. I had known Mr. Carroll for some years and will admit that he could be difficult. He did delight in antagonizing Lt McKissack, who very quickly grabbed the bait. In a way, it was amusing and was probably an inherent animosity which originated with the removal of the Stone of Scone from Scotland.

7. Captain Love and his detachment proceeded from Tinker AFB, via MATS C-54 and arrived at Eniwetok without incident. There they embarked on LST 836, which had arrived from Ponape, and reached Bikini 16 Sep 52. Captain Walker, from LST 836, assisted Captain Love in unloading and, for

[redacted]

the remainder of the project, stopped by to see what he could do to help every time he was near. Captain Love's task was different than the others since there were no inhabitants on Bikini and no installation of any type. The old towers and bombproofs of the CROSSROAD's test were still about. The old officer's club was reroofed, rewired and repainted and used as a mess. The distillation unit was set up on the beach and was soon in operation. Prefabricated barracks were erected and the operational equipment excepting the SCR-658 established in a bomb-proof shelter.

8. The Headquarters Unit departed Tinker AFB for Travis AFB via the organization's C-47 (6th Weather Group). Travel from Travis AFB was by MATS and arrival time at Kwajalein was 15 Sep 52. The PBM Support Flight had arrived some days earlier and had visited each location and had already provided all the help possible. This aid continued until the end of the project. It was friendly and spontaneous and deeply appreciated by every officer and man in the task element. The PBM flight was commanded by Lt Floyd White, USNR. The other PBM commander was LTJG Ryder, USNR. Early in the project, I had scheduling control of the PBM flight but after the various radiological experts, many in number, arrived, this control reverted to Eniwetok, where it only succeeded by the combined efforts of Lt White and his crews. Headquarters was established 16 Sep and space was also provided for Colonel Roy W. Nelson, the Test Services Unit (132.4.3) Commander. Colonel Thompson, the Deputy ATG Commander, assisted us a great deal after we arrived and throughout the Operation gave us maximum support. He was a fine officer to work for and was always aware of our problems. I feel that my tour was enriched by our association. Lt Col Kienth, the Chief of Staff, was also helpful

and aware of our problems and limitations to a much higher degree than I had anticipated. The following ten days, requests were received from all detachments for every conceivable type of item. These were furnished through the efforts of T/Sgt Neal and on 25 September, when operations began, every detachment was completely equipped and supplied. Needless to say, further search and inventory disclosed that most of the items were available or were still being shipped by air. However, many small items of technical equipment were shipped entirely to one detachment and their redistribution was necessary. In fact, several items were arriving by air as late as 1 Nov which proved they were never required to begin with. Also, I attribute independent command for the first time and at an isolated location as the primary reason for the many emergency requests received. However, this apparent chaos proved, without a doubt, that our communications were excellent and they did operate exceptionally well and without noticeable failure the remainder of the project. Independent command of a self-supporting unit is really a new experience for most AWS Officers. The problems are innumerable and different. There is no organized base to lean on. When your ship moves away from the beach and 20 men look to you for direction, an officer experiences some odd sensations which are normally alleviated by burning up the wires. Such command instills confidence and I sincerely believe that each detachment commander is a much better officer for the experience. The Headquarters Unit handled all personnel records, published orders, paid the detachments and took care of all the resupply needed. Also, all meteorological records were checked and documented by the Headquarters Unit. This relieved the Weather Central of this tedious duty and left them free

[redacted]

to operate.

9. Lt Col Girardo departed Tinker AFB with the Element Headquarters and arrived at Eniwetok 16 Sep 52. The Central was organized and began operations on 25 Sep 52, the bulk of personnel having arrived on 24 Sep 52. The initial requirement placed on all upper air stations was for 50,000 foot average heights for winds and raobs. The scientific task group, after witnessing the initial results, raised this requirement to an average of 70,000 feet. This proved more difficult but I am proud to say it was accomplished. Operational control of the Eniwetok weather detachment passed to the Weather Reporting Element on 23 Sep 52. Administrative control was retained by the 57th Strat Recon Squadron as authorized by Hq AWS. Faced with the fact that the mobile detachments were all sustaining averages which had won the outstanding "R" section plaque in the 2143d Air Weather Wing, the Eniwetok detachment began a series of runs which I believe is unprecedented in the Air Weather Service, sustaining a Rawin average of 75,600 feet. Captain John T. Kuhn was the detachment commander and S/Sgt Jack L. Shriver the NCO. I have since attempted to procure every man in the detachment upon their return. Their efforts were outstanding and their operation superb. The Weather Central was faced with many completely new requirements. The Scientific Task Group requirements were rigid and could not vary. The ATG requirements were also unique. Among them were these: Visual contact with the target for two minutes prior to release from an altitude of 40,000 feet; no cirrus at 42,000 feet which was the sampling altitude; not over 2/8 clouds at [redacted]; no precipitation at the terminal at B-47 landing time and

[redacted]

[redacted]

no heavy precipitation at jet fighter landing time; winds aloft at 40,000 feet from the West or Southwest; etc. September, October and November are the worst months for weather in the low latitudes and only two days existed during the project period when all requirements could be met. There were two rehearsals conducted, two shots completed and one shot aborted at the last minute because of weather.

10. Mike Shot rehearsal was conducted on 18 Oct 52. The forecast was marginal and the weather worse than forecasted, especially at the terminal. The B-47 landed at Roi Island on the northern tip of Kwajalein Atoll and on a runway 3500 feet long of which some 3200 feet were usable. The fighters landed at Eniwetok. If an actual operation had been on the fighters would have been required to land at Wake, Roi, or Majuro. With 18 bottles of JATO the B-47 managed to return to Kwajalein without damage. The fighters also returned without incident. The GCA was slow and had no MTI and it was dark before the 4-engine aircraft landed. The aircraft used in this operation were B-36s, B-47s, F-84s, KB-29s, RB-50s, RB-29s, WB-29s, SB-29s, SA-16s, C-54s, C-47s, H-19s and PV-2s. Everyone was interested in his particular altitude and some were satisfied and others were not. I was not satisfied since we were confident of the talent and very optimistic of results. I beat my chest about results we could expect and definitely boasted too much. The let down I experienced was detrimental to my optimism for a couple of days. It did prove that more weather information was required than was then available at the Kwajalein Aerological Station. Therefore, for subsequent tests, the personnel from the Element Headquarters were utilized to provide the necessary data to the Air Operations Center at Kwajalein. Accordingly, two plexiglass

[redacted]

charts of the area were prepared having a radius of 50 nm and 200 nm from NAS Kwajalein. Plexiglass charts were also prepared for surface observations, upper air reports, and terminal forecasts for every reporting station within a thousand miles radius. Airmen were placed in AACS to speed the relay of data to the AOC where it was immediately entered on the charts referred to above by other airmen from the element headquarters. One WB-29 orbited from 50 to 70 miles south and east of the station reporting the position of the Inter-tropical Front, cloud banks and rain squalls. Admittedly, this is a misuse of strategic reconnaissance but the end justified the means. Contact with the AOC was by VHF on an exclusive channel. Major Carpentier received these reports and was responsible for their continuous presentation to the Operations Officer and controllers. The APQ-13 in the Naval Aerological station was repaired by the weather reconnaissance element and a navigator from that element aided by an airman from the reporting element plotted all clouds, precipitation area, and squall formations. The AOC controllers also contacted aircraft in flight and procured weather reports. They were also received from the orbiting SAR aircraft. The amount of data available was amazing and the Inter-tropical Front, precipitation areas, and cloud banks were tracked with an accuracy of 2 minutes and a mile. Voice communications were maintained between the AOC Kwajalein and the command ship, the USS Estes. This operation paid for itself on M-Day when all returning jet aircraft were successfully vectored so as to arrive at NAS Kwajalein at times when no precipitation occurred. Lt Col Carl Ousley, the ATG CO, was well-pleased with the results and so stated and for the balance of the project placed implicit

faith in our ability to keep track of all detrimental phenomena. The island commander has since directed that this setup be made an integral part of his permanent operation. I cannot speak too highly of the support provided by the reconnaissance element and of Lt Nunan, the observer on the orbiting WB-29. It may be a matter of conjecture why this was not originally planned. The reason is that the Air Force was not responsible for providing any meteorological support at Kwajalein in either the Task Force or ATG Operations Plans or Orders. We were assured that the Aerological Station at Kwajalein would provide all support required. They were neither manned or equipped to do this and never were. Commander May the station aerologist, was exceptionally helpful in every respect but his station was not geared for this type operation. Briefings for all operations, and for several days prior to shot days, were given by either Colonel Nelson or myself. These were prepared in graphic form from forecasts forwarded by the Weather Central. At first AACS communications hindered this method, although no briefings were delayed. However, they improved with time and became reliable as to content and timing.

11. The Inter-tropical Front was quite a problem. It normally lurked between Majuro and Kwajalein and managed to appear early in the morning of almost every operation. With no sun it presents an awesome appearance and made everyone desirous of staying on the ground. It oscillates without rhyme or reason and with total disregard of meteorological indices unless strong trades are flowing or unless it moves north to the Eniwetok-Bikini latitude where it dissipates. The number of days where normal visual operation can be conducted during the

[redacted]

autumn season are few. Since there have been no large scale operations within this area during the autumn, especially at high altitudes, there is no data or experience to draw upon. The many and varied requirements aggravated this condition and as mentioned previously only two days existed during the project when all requirements could have been met.

12. M-Day was 1 November 1952, with detonation scheduled for 0730M. As usual, the ITF had been informed of the operation and had moved to a position 10 miles south of the station. However, the WB-29, using its APQ 13, was keeping it in close check and the Aerial Operation began at 0230M. The forecast for the day was marginal at the terminal with good conditions at the target area and the refueling altitude and positions. Detonation occurred on time and everything was progressing well when we started receiving reports of intense clouds in the target area and many clouds in the refueling area. However, the sampling was conducted and everything required accomplished. [redacted] were lost when [redacted] between the fighter and the bomber. [redacted] fighter had to land at [redacted] because of fuel. Luckily, the radioactive cloud moved away from that base as forecasted and the pilot was not affected. The B-36 crews, B-47 crews, as well as the C-54s, WB-29s, SA-16s and SB-29s reported the weather as forecasted except in the target area after detonation. The SAC elements said the forecast was horrible and continuously complained of the forecasting service from then on. My personal belief is that the weather was worse than forecasted. However to forecast for the refueling area the weather central had to accurately forecast the wind direction and velocity at 40,000 feet, and

[redacted]

[redacted]

then vector this from detonation point for four (4) hours where they dropped down and prepared their forecast for the intermediate levels 12,000-18,000 feet. This was difficult. I knew the two SAC Colonels, who became our tormentors, very well. Both were specialists in their field. They were also specialists in repartee and caustic remarks. Their requirements were high and they exhibited little knowledge of the limitations of the service. On the other hand, the ATG Commander, Brigadier General Glantzburgh and Lt Col Ousley, were well aware of our limitations and understood them. They defended us, as did Colonel Nelson, and life was again livable. I cannot state that the detonation on H-Day changed the weather over a wide area. There are many conflicting reports and I was not a witness. I can state that there were many radical changes. That 20,000 feet towering cumulus disappeared instantaneously and that others to 50,000 feet appeared in a radius of 35 miles. Reliable observers and radar pictures proved this. We have been promised a set of the radar photographs. The test director informed Dr. Johnson, who informed me, that the forecast provided met all AEC requirements. For this we were thankful. The AOC at Kwajalein, using the weather information successfully, vectored the B-47 and the fighters through precipitation and cloud areas and the samples were preserved. Viewed in retrospect, I believe that the Weather Central did only average work on this operation but there were extenuating circumstances. Three days previous to H-Day the Weather Central was split in half. One-half was evacuated to the USS Estes, the Command Ship, where they established and operated the Joint Task Force Weather Central. The remainder came to Kwajalein and prepared analysis above 20,000 feet

[redacted]

since the Aerological Station prepared no charts above that altitude. They served as a back-up or reserve. They were in general agreement with the Weather Central except for the terminal forecast; but, for obvious reasons, the Central's forecasts were utilized as the final say. Communications aboard the USS Estes were poor before and during H-Day. However, I do not believe they curtailed the meteorological service appreciably. The Command Ship asked for and received the Weather information available at the Kwajalein AOC although it should have arrived there as early, if not earlier, than Kwajalein which was not the net monitor but only an intercept point.

13. On 5 November word was received that there had been a severe earthquake in the vicinity of Kamchatka and that a tidal wave was imminent. This warning was received about 0800H and was forwarded to the Station Commander at Kwajalein. There was much activity thereafter. Most everyone imagined that there was a huge wall of water bearing down on Kwajalein and few realized that the words "tidal wave" was a misnomer and that what would occur would be a series of increases in the water depth. Bowditch, I believe, once wrote that no tidal waves which originate in the Kamchatka-Aleutians area would affect the Pacific Atolls because of the wedge shape of the Pacific and because there are no sloping "V" shaped reefs around atolls. This book was published in 1870 and is still amazingly accurate. Also when Krakatoa blew up in 1883 the Carolines and Marshalls were not severly affected although the tidal wave generated by the upheaval was felt as far away as the English Channel. Conversation with the Japanese had given us some idea of the intensity and speed of "TSUNAMIS" and when called upon by General Glantzberg, Colonel Nelson and I mentioned our limited capabilities and

voiced out opinion that there was no danger. General Glantzberg apparently wasn't too worried and departed on a flight he had scheduled. About 0900M word was received that a 9-foot wave had passed Midway and everyone then visualized a 9-foot wall of water over Midway. Subsequently there were many strange and amusing occurrences. Faced by death from drowning our inquisitors from SAC produced a chart and asked that our computations be placed thereon. The approximate center was placed in Kamchatka and arcs of concentric circles extended southward. Using 400 miles per hour as the speed of movement we came up with a time of 1038M for the first crest at Kwajalein. Since the 9-foot wave at Midway was actually a reading above the reference plane and since we were sure that if it had occurred over the actual station they would not have been able to inform us, we assumed it was reading above Mean Low Tide or at the most above MSL. Since lowest tide was occurring at this time we assumed that Midway had only a rise of 4 or 5 feet above normal. Also, there was a 1000-mile fetch of about 20 knots from north to south which would augment any rise in water. Based on this and since Kwajalein was some 1000 miles further south, we figured that the maximum crest would be about 2 feet and that three crests would occur with decreasing amplitude. The inquisition thanked us and took to the air. In the meantime, our detachments had heard of the impending disaster and were disappointed when told to go back to work. In the meantime, the JTF at Eniwetok had digested the 9-foot wave at Midway and although about every scientist from the Scripps institute was present, including their vessel the HORIZON, the JTF had the evacuation warning order transmitted by the Weather Central over the strenuous objections of our

[redacted]

own and the Scripps personnel. In the meantime, Captain Love and his detachment had returned to duty but when this message arrived he and his detachment took to their DUKW. Major Carpentier was in a PBM headed for Bikini to pay the detachment when the warning reached the PBM with instructions to orbit over Bikini and watch for the wave but not to land. Needless to say no one called off the alert and the PBM orbited over 8 hours when they ran out of fuel and had to return and the detachment was not paid. This proved unfortunate to Major Carpentier who made four (4) more attempts to pay the Bikini troops before successful. He failed the 2nd time because of a rough sea, the 3rd time because he forgot the money and the 4th time because the airplane twice caught fire. When the JTF message reached Kwajalein, much pressure was applied to the panic button, many life jackets and IF 4 rations were issued; aircraft took off cowlingless; and many goodbyes were said. The last words from the senior air controller present as he departed for the control tower, the highest point on the island, with his life jacket on and rations in hand were: "For God's sake take cover, this thing is on us". Everyone was evacuated to a large concrete barracks where some 2500 men, women and children were retained in close and miserable confinement for some 4 hours. We visited the tidal gauge which was manned by a Commander, a lieutenant and a seaman. The Commander's life jacket was inflated and while preparing for death was succeeding in making the last hours of the lieutenant and seaman as torturous as the hereafter could possibly be. We then departed for the AACS station, which is close to the lagoon, and where a few hardy souls still operated their equipment and prepared to watch the catastrophe. Realizing the valor of ignorance,

[redacted]

that a little knowledge was a dangerous thing, etc, we stayed close to a mangrove tree and watched three successive TSUNAMIS raise and fall at 15-minute intervals about an abandoned barge. The first of the four crests, which we missed, occurred at 1115Z, and the maximum height was 2.4 feet. The SAC unit retained the chart for inclusion in their records with the remark it was better than the weather forecasting service. The following day Dr. Monet and Dr. Johnson from the Scripps Institute arrived and informed us that the Eniwetok warning message was issued while they were under pressure, whatever that might mean. Captain Love and his detachment, who were supposed to have returned to duty at 1000Z but were realerted by the JTF went ashore at 1500 when they became hungry and because the 1500Z rawinsonde was due. The tidal wave was sighted several times by the evacuated aircraft according to reports received. None could have been accurate. The tidal wave scare was actually a good t'ing. It broke the monotony and provided a subject for discussion. Poe's, "Entrance into a Maelstrom", was probably a wash basin whirlpool when compared with the glowing accounts of the Kwajalein tidal wave which were written home that night. One thing was proven and that was the Pacific Tidal Wave Warning System does work. Also it was educational and interesting. The fact that the water level of a lagoon, some 600 square miles in area, would raise and fall 2 feet in 2 minutes in a calm sea indicated the power of the phenomena and made a torrent of the passages into the lagoon.

14. K-Day rehearsal was held on 9 November 1952. The only jet which participated was the B-47. The forecast was good, our AOC setup worked perfectly and the mission was uneventful. We looked forward to

[redacted]

K-Day with confidence and security, soon disrupted by a phalanx of cumulonimbus clouds moving majestically across the tropic sky, according to some of our more literate observers.

15. K-Day was scheduled for 13 November, an unlucky number and for us an unlucky day. Shot time was scheduled for 1130M. Aircraft started taking off at 0600M and everything was going well. Our AOC setup was working well and the walls were covered with data, all favorable. We were in the AOC waiting for announcement of the drop when word was received that the operation had been postponed 40 minutes because of clouds over the target. The forecast for the target area was marginal, calling for three decks of clouds 3/8ths covered at each level. Since there was only one IP and that west of the target, it is easy to see that from 40,000 feet it would be difficult to see the target for a minimum of 2 minutes before release. At 1115 notice was received that shot time had been postponed 45 minutes. Shortly after 1130M word was received that the operation had been cancelled. An hour later the aircraft began landing at Kwajalein and everyone complained of the weather. Scattered cumulus were forecasted at 20,000 feet and everyone reported them at 55 and 60,000 feet and anything but scattered. Dr. Plank told me that there was an overcast at the alto stratus level and long rows of cylyindrical cumulonimbus reaching up to and extending beyond the cirrus level which was around 42,000 feet and 4000 feet thick. He said it was like being in an enormous building and everyone had a claustrophobic and depressed feeling. Most of the other reliable observers said the same. The refueling area, colloquially speaking, was "clobbered" and the complaints and laments were long and loud because rollup was to

[redacted]

[redacted]

begin immediately following the operation. We were third degreed from every angle. All the airmen looked at us as if we were saboteurs who were out to postpone their return till after Christmas. General Glantzberg was unhappy and rightfully so because the Staff Weather Officer of the Task Force had stated implicitly that trade wind weather would occur. He sent Colonel Nelson to Eniwetok to check on the reasons for the miss and I remained at Kwajalein completely ostracized from what social life which existed. The 14th and 15th were not good days and everyone was disheartened. They had built up to a peak, had packed and planned for an early departure and were naturally moody and melancholy. Even our airmen were hazed. Over his objections Colonel Nelson went to Eniwetok and his conclusion was that the Weather Central had either missed a trough which moved by the area or minimized its effect. Also the Staff Weather Officer and Lt Col Girardo were absent from the station after the briefing, having gone to the observation post, and were not current on the changes. When General Glantzberg arrived at the Central after the cancellation and asked what happened, they had also just arrived and truthfully stated that they didn't know. That added fuel to the fire. These last remarks are actually second and third handed and should be considered accordingly.

16. The weather for the 16th looked good and was forecasted accordingly. There was a trade wind flow of 4000 miles from the ENE at 15-20 knots and the Pacific High was large and oblong. When 2/8 thin cirrus less than 1/8 middle clouds and 2/8 cumulus with max tops of 14,000 feet were briefed everyone immediately started their chronic riducle which was only stopped when a few bets were placed. We even

[redacted]

went so far as to let them be the judges. Colonel Nelson al
go on this mission in the photographic C-54 which orbited l
at 12,000 feet. The forecast was for excellent conditions
weather was exactly as forecasted. I had a ringside seat,
was the best I have ever seen. We could see aircraft at
could see everything within 60 miles. The contrails app
altitudes forecasted and the cumulus did not tower. Ev
and we received many glowing compliments and extracted
our previous tormentors in the process.

17. Viewed in retrospect our overall forecast
satisfactory except for some of the air operations
on one occasion the terminal forecast for Kwajale
However, all AEC requirements were met and there
forecasts for aerial operations during the tests
enough emphasis was placed on Air Operations by
Officer and actually can see why. The AC was
served those closest to him who also were the
Also our weather control was loaded with the
Dr. Palmer but there was little experience
was had been shifted to Kwajalein on K-Day
until final K-Day. There still appears t
city in our forecasting methods. Field
The chasm between the theoretical and
The fault I believe lies with the per
who disdain either the lofty attainme

[redacted]

will not stoop so low as to put their knowledge to plebian practice. I am now confident that our surface observations of the heights and amounts of middle and high clouds are very inaccurate and frankly I can make no recommendations on improving them at this time other than intensive training by the use of cloud photographs where the exact heights are known and some terrestial or cultural features are also shown. The fault here is that to be good training a set of photographs would be required at every station. Our upper air reports are good but computation time must be shortened. Much misunderstanding has occurred because we use eights to forecast cloud amounts. Science has always tended to progress to a decimal system and the change to eighths is reactionary and retrogressive. We still observe in tenths so verification is hindered. There is little more room for error using tenths and it is also easier to display graphically and to understand. 3 to 5/8ths covers a multitude of sins and is used indiscriminately, not being as finite as when a denominator of ten is used.

18. Our requirements for the rollup were given to the Task Group in October. Previously we had entered into negotiations with the High Commissioner of the Trust Territories to maintain our buildings between projects which will be quite a time saver and will also reduce the expense. During the project our buildings were all roofed and painted. Earlier the Task Group had sent to MATS a suggestion that the weather island equipment be stored in Hawaii where it could be rehabilitated and repaired. AMC concurred in this and MATS and AWS tentatively concurred. PAC DIV MATS also concurred and appointed a project officer from the 57th Reconnaissance Squadron. I was not in on this original planning

BEST AVAILABLE COPY
[redacted]

[redacted]

but I thought it was a good idea. We had previously thought of returning only unserviceable items and had sounded out the Civil Administrators on storing our equipment between projects and some facilities for such storage actually existed. However, Bikini had to be evacuated, the weather equipment and helium cylinders returned to the ZI and since the LST was required to make the circuit I abandoned my idea as being less practicable than the Task Groups. The deployment vessel for the next operation will, of necessity, originate at Hawaii and MATS owns Hickam. Repair and rehabilitation as well as repacking and crating can be easily accomplished at Hickam. Also perishables and POL products are supplied there, leaving only weather equipment, helium and expendables for procurement. Due to the time of the next project, logistical action should start immediately., Although Hq AWS was queried as to which organization would support Operation CASTLE (Secret) no answer was received. If equipment was returned to Air Force Stocks the transportation costs to the ZI depots would liquidate the cost of the equipment and the CASTLE requisitions would arrive before the returning equipment. By storing equipment at Hickam AFB we will have saved several hundred thousand dollars because the capital cost of the equipment will be amortized over subsequent projects. Originally the JTF indicated that the LST would off-load the equipment at Kwajalein for shipment to Hickam. The ATG rollup plan was in general terms and I amplified and implemented it by a more detailed order of my own. Shortly thereafter, due to objections and arguments on our part, the JTF decided to send the LST from Majuro to Pearl Harbor eliminating the Kwajalein stop. The JTF amended my order accordingly. That was the reason for our recommendation

[redacted]

[redacted]

to Hq AWS contained in our secret message of 24 November 1952. Open storage at Kwajalein for 9 months would have been more harmful than leaving the equipment at the sites. Repair, rehabilitation and accounting would have been difficult as would re-requisitioning and re-supplying. Redeployment to the sites would not have been as fast and personnel would have been required at Kwajalein for this work. As it was the Project Officer from the 57th would only have to accept and store the equipment unless the 57th is to support the next project. If so, that unit would have a start in preparation for Operation CASTLE (Secret). Actually, the equipment is rather a compact lot and there is an indication of whether the items are in serviceable or unserviceable condition on each case. The UPREL's (AF-115) are available and shipping documents are attached to each case. There is also a consumption chart of POL products, perishables and expendables for each station. Housing for the next project is no problem since our buildings are in good condition and I believe that they will be properly maintained. Returning to the UPREL this method of accounting is for T/O organizations only. For ease of accounting each detachment commander was made an accountable officer and given an SO number. The UPREAL was used because it was the easiest way of shipping the equipment to the detachment commander and for him to account for it since the format and procedures are simple and easy to learn. Some difficulty was encountered because of the lack of proper nomenclature on shipping documents and vague discriptions on UPREALS, but this was corrected. This sudden emergence into the supply field caused considerable consternation and much weeping and wailing, both solo and in unison. One of the detachment commanders had no

[redacted]

[redacted]

trouble but the others needed assistance, and occasional coercion. Their entries looked like hieroglyphics and would have been an auditor's nightmare. If instructions could have been possibly misunderstood they were, so part of the blame was mine. There was no loss of accountable equipment on the project and I am certain that many items of equipment were returned in better shape than when received. Every walk-in refrigerator motor had to be repaired and cleaned on the spot since all were corroded and unserviceable. In addition, many of the power units were unserviceable. The distillation unit at Bikini also required some work before it could be used.

19. One thing that caused us some concern was the method that the Army Task Group used in saddling Captain Love of the Bikini Detachment with additional responsibilities. While at Eniwetok, Colonel Burritt, the Army Task Group Commander, made him Atoll Commander at Bikini and made him responsible for a large amount of signal equipment and also for the support of a signal detachment of 2 officers and 8 men. [redacted]. Our detachment was organized and equipped to support 22 people and this influx overtaxed their capacity and required a resupply of food. Taking care of this additional M/R property was an additional load and definitely hindered Captain Love's mission. I was displeased with Captain Love when he assumed this additional responsibility to the detriment of his mission until informed that he had objected strenously at the time stating that he had a written order which he could not alter

[redacted]

[redacted]

or deviate from. Commander Pate stood by Captain Love but General Wise (USAF) and Colonel Burrit (USA) beat them down by stating that the ATG concurred in the arrangement. This was not true. I broached the subject to the ATG, received sympathy but no relief, and abandoned any further recourse as the damage was done. Captain Love's detachment averaged 65,640 feet in winds and raobs, the lowest in the element, and I am confident this increased work load was directly responsible since we only had 6 operators and 2 technicians making four (4) runs per day in addition to their housekeeping functions. We did provide Captain Love with an additional cook but this was a slight augmentation to men who averaged 14 hours a day of hard work including a great deal of manual labor. Running an isolated and self-supporting detachment is quite a job and when there is added a requirement of 70,000 foot rawinsonde heights, 24 hour communications, the distillation of your own water and the operation of a homing beacon with 22 men, while feeding a dozen drones, the job becomes more difficult. The Army mission on Bikini would never have been accomplished unless Captain Love shouldered most of the responsibility and made the decisions. These were the words of the LST Commander who delivered them and also Army TG Staff Officers.

20. [redacted] We supported six different radiological programs and the PBM's constantly hauled from 2 to 5 civilians on every trip. [redacted] Our personnel

[redacted]

made all of the readings and radioed in all the results. The project equipment apparently was not of great value because after K-Day the radiological personnel went home immediately and we returned the equipment. The equipment was so simple to operate and maintain that an orang-utan chained nearby could have handled. I shudder to think of the expense of the various programs, none of which were planned but were dropped on us after our detachments and their messes were established. Another allied program was the collection of water samples. These samples were obtained by two scientists submerging a pint plastic bottle in the lagoon , then placing the lid on it and carrying it back to Kwajalein. These modern Gunga Dins were equipped with snorkels and water fins and after filling their bottles dived for seashells and traded with the natives. It became so obvious that they were just sightseeing that Lt White refused to carry them and thereafter the PBM crew, Sgt Neal or Airman Curbow obtained the water samples.

21. In August I forwarded a letter requesting permission to exchange leftover POL products and broken lot supplies with the Civil Administrators for what services and supplies they provided us. Air Force and AMC concurred because the cost of transporting and handling POL products was greater than their value. Broken lot supplies are also uneconomical to handle and account for. However, the High Commissioners and the Civil Administrators would not openly agree to such an exchange because they would get the products anyway. In no way does this imply that the High Commissioner was not cooperative. In fact, Mr. Thomas and his deputy Mr. McConnel were very helpful and assisted us in every way. We were always welcome in their office and they made many

[redacted]

helpful suggestions. Our bill at Majuro and Kusaie was relatively small but at Ponape the lighterage fee was exorbinant. Beaching was a Navy responsibility and they should have assumed the cost. Mr. Carroll had the only lighters and crane and made Lt McKissack pay through the nose. One way lighterage cost about $800 and caused Lt McKissack to acquire a strong dislike for Mr. Carroll. We were authorized $6000 for such expenses but I hoped to get by without using it. Late in the operation the Trust Territories supply ship was late and Mr. Carroll had no POL products and Lt McKissack did. This was the engagement that Lt McKissack won, liquidating a $2800 account in the process. To date we have used none of the $6000 and I don't believe we will.

22. The detachments were ordered to start preparing for roll-up by K plus 4 days and to cease operations 5 days before the LST arrived at their station. As quickly as their operation ceased about half of the complement, consisting mostly of TDY personnel from other AWS units, were airlifted to Kwajalein and airlifted from there to the ZI. Because the LST was originally scheduled to dock and unload at Kwajalein it was planned to document all packing boxes and crates at Kwajalein. The schedule was changed while the LST was between Bikini and Eniwetok. Sgt Neal took a ditto machine to Eniwetok where he assisted in the documentation of the Bikini equipment which consisted of 19 copies per crate. The packing lists were then attached to all but six (6) crates on the LST while the ship was in port. These were cabled down and could not be reached. On the next resupply run the ditto machine was sent to Ponape and remained on the LST till it arrived at Majuro. Another machine was sent to Majuro. Documentation was completed in every instance

[redacted]

[redacted]

before the LST arrived at Ponape, Kusaie and Majuro and cut from two to four days from the sailing time to the gratification of Captain Walker, the LST Commander. Even before roll-up Sgt Neal had prepared shipping documents for known cased items such as the SCR-658, package station, helium cylinders, etc. This also saved time and trouble after the roll-up began.

23. While the LST was enroute from Eniwetok to Ponape several messages were received from PAC DIV MATS and MATS Hq wanting to change the storage location to Kwajalein. The Air Task Group Hq had moved to Kirtland AFB and their files had also been shipped. I answered these messages which were addressed to the ATG quoting the arguments indicated previously plus the fact that LST 836 was sailing under COMPHIBPAC orders and had a reporting date in San Diego of 22 December. Hq MATS withdrew their objections but PAC DIV MATS still insisted on Kwajalein storage even after the LST had departed Majuro.

24. Since all material was on the piers, docks or lighters, the roll-up proceeded rapidly and on 30 November the LST departed Majuro for Honolulu with an ETA of 10 December. On that date, using two C-47's, 35 officers and airmen were airlifted to Kwajalein for Air Travel to the ZI. This method of transportation had been approved in October by the ATG and the airlift requirements forwarded to PAC DIV MATS. Also on 22 November the MATS unit at Kwajalein had been advised of the exact number and readiness date. On 1 December PAC DIV MATS changed their schedule deleting the Kwajalein flights, leaving only space available on the Eniwetok and Manila flights, both of which were always loaded. A flight originating at Haneda was scheduled to arrive 4 times weekly

[redacted]

[redacted]

on 2 December but failed to show. After waiting 4 days (D + 20) I requested assistance from Hq AWS after conferring with the MATS Commander on Kwajalein. It was provided immediately and on 5 December all personnel departed Kwajalein and on 9 December the Element Hq and the remaining personnel arrived at Tinker. I was the last person to leave Kwajalein, Hickam and Travis in order to expedite shipment of personnel delayed enroute and pick up stragglers. As usual in all ZI redeployments there were no stragglers. Several men were being held longer than necessary at the Aerial Ports or enroute stations but we succeeded in arranging early airlift for them. There was no loss of material or personnel during the redeployment.

25. When I arrived at Hickam AFB I contacted the 57th Recon Sq concerning storing of equipment. They informed me that they were completely out of the picture because they didn't have the personnel to handle it. The 1500th Transport Wing didn't want it either using the same excuse. If so, history has been made because for the first time since annexation there are two under-strength military units in the territory. However, after further conversation with Colonel Kelly, the 1500th Materiel Officer, he agreed to store all of the equipment and to arrange for its rehabilitation if I could arrange for the funding. I informed him that it was probable that the AWS organization responsible for the next operation or the Air Task Group would send personnel out to supervise rehabilitating the equipment early in 1953. Concerning funds, I stated that I had no authority to commit funds but that the JTF and AWS would be contacted and that it was probable they would be provided. Col Kelly seemed satisfied. This was not in accordance with the Air Task

[redacted]

[redacted]

Groups orders but was a substitute measure. I did not have the authority to change my orders but since General Glantzberg and Colonel Nelson had given me a great deal of latitude, I concluded that this arrangement would be satisfactory because the ordered transaction could not be accomplished. After our return I notified the Air Task Group of what I had done and they expressed their concurrence. Colonel Kelly did not want our UPREALS but did want the shipping documents. On 24 December I received an info copy of ATG 132.4 message DM 12-97 which indicated that evidently Air Force Supply Officer 714 was in the act. The outcome is still unknown but if the equipment has been returned to AF stocks all the pre-planning for the logistical support of Operation CASTLE (Secret) has been wasted. My personal opinion was that the 57th could have accomplished everything necessary in six weeks, using an officer and two men. If the requirement for the support of Operation CASTLE (Secret) is placed on the 6th Weather Squadron (Mobile) I am confident that no more work than that will be required. The AACS Group at Hickam would not accept our transmitter crystals although our instructions were to return them to the bank. The crystals would be of no use if we returned them to the ZI as they were Pacific frequencies. However, the 57th Recon Sq agreed to accept them. We are still puzzled as to why AACS didn't want their crystals returned.

26. The quality of communications were referred to earlier in the narrative. Each of our detachments were equipped with one SCR-399 which contained one BC-610 transmitter and one each BC-342 and BC-312 receiver. Unfortunately the SCR-399's were not shipped with the technical manuals and some of the more finite maintenance and care could not

[redacted]

[redacted]

be provided. The manuals were difficult to obtain in the forward area and some days elapsed before the detachments received them. Our communications complement was one technician and three operators and a 24 hour watch was maintained. The net control station was located at Eniwetok because most of the traffic was addressed to the Weather Central. There was an intercept station at Kwajalein for administrative messages. This station also intercepted all weather messages and forwarded them to the station Aerological Officer. All weather traffic was transmitted in the clear. Each detachment was furnished an individual crypto pad for Classified traffic. Late in the project we were advised that seven men were required to operate a 24 hour communications station. Since we were obtaining excellent results with 4 we made no attempt to obtain the others, Some receiver trouble was experienced but we always had one available for substitution at Element Hq and the detachments also had an extra one.

27. Each detachment's messing complement was two men. They were equipped with M-1937 ranges and the standard 28 man utensil set. We were very fortunate in the calibre of cooks and supervisors we received. They were mature, capable and with the exception of one man, were sober. This is an exceptionally high percentage of sobriety. Average service was 15 years. All messes were inspected by Navy and Air Force surgeons and mess personnel and every one received a superior rating on each inspection. The more critical inspectors, i.e., the men consuming the food, also consistently praised their various messes and argued vehemently that they were better than other detachments. The mess steward at Bikini was also the detachment NCOIC and acquitted himself in an

[redacted]

outstanding manner. He has been recommended for the Commendation Ribbon with Medallion. The old maxim "Feed them red meat twice a day and work them 14 hours", is still true.

28. The results from all detachments were much above average. The number of obligated rawinsonde, rawinsondes accomplished, average rawin heights, number of major and minor errors, and number of surface observations follows:

	Bikini	Kusaie	Majuro	Ponape	Eniwetok	Total or Mean
Obligated runs	180	209	215	203	185	992
Runs Accomplished	180	208	215	203	181	987
Av Height (Rawin)	65640'	71100'	70866'	73600'	75600'	71341'
Av Err Per Ob	1.93	1.79	2.22	1.83	2.38	2.03
No Sur Obs	501	472	500	525	1988	3986

A check of the observations received at the NAS Aerological Station was constantly maintained and unsatisfactory heights called to the attention of the Detachment Commanders. Records were picked up weekly and checked thoroughly. Lt Col Girardo was adverse to contacting the detachments when poor runs were made although he had the authority to do this so most of the complaints were registered by the Element Headquarters. SCR-658's were used in all AWS detachments. The Naval Station at Kwajalein was equipped with a GMD-1A. However, it failed to produce the results of our 658's, not because of the equipment but because the men were not familiar with the equipment and there were few spare parts. Most of our equipment had to be repaired on arrival and the technicians were kept busy throughout the project. We used the ML-543 balloon at our stations and over test periods provided enough for the NAS Kwajalein Station. Some ML-391's were obtained and used with good results at

[redacted]

Kusaie, Ponape and Majuro during the daylight hours. The majority of failures occurred as the balloon reached the tropopause and minimum temperature. Limiting the free lift to 2200 grams reduced the rate of balloon bursts a great deal. Minimum temperatures were often -85° C. Another reason for abortions was failure of the temperature element. No failures because of limiting angles were experienced. Frequent and continuous periods of heavy precipitation, often for 24-36 hours caused many extra releases. The most pleasing revelation was that the heights at all stations steadily increased throughout the project.

PS. The weather central was authorized eleven officers counting the static detachment at Eniwetok. We were advised that 15 would be required but Lt Col Girardo and I thought 11 would suffice. They did. From some source, three Navy Aerological Officers arrived but stayed only for the first test. As mentioned before the weather central was split in half on M-Day. One half was evacuated to the Command Ship, the USS Estes, and when operational assumed the duties of the JTF Weather Central. The remaining personnel were evacuated to Kwajalein and operated as the reserve central until the conclusion of the Mike or 1st Test. They were then moved to Eniwetok concurrently with the move of those from the USS Estes and re-established the Weather Central ashore. On M-Day, the rawinsonde section at Eniwetok, made their last release about 4-5 hours before detonation time. They were the last personnel to leave Eniwetok, being evacuated to the USS Estes by helicopter. As mentioned in paragraph 17, page 26, I believe that the overall forecasting service was satisfactory, although the forecasts for air operations for the M-Day rehearsal and the first K-Day were poor. In every case the JTF

[redacted]

was satisfied with the results and so stated. Actually, the forecast on the first K-Day rehearsal and final K-Day was perfect. In fact, the results of the last day did much to leave everyone highly satisfied and complimentary. The timing was definitely in our favor and the project could not have ended at a better time from our standpoint.

30. Our organic medical service did an outstanding job during the operation. The authorization was one medical technician for each detachment. Each detachment was well equipped and supplied. Training of all personnel included first aid as well as several lectures on endemic diseases, insects and vermin. There proved to be an abundance of each. Every man was inoculated or vaccinated as required prior to departure. Every man but one was trained to swim 200 yards non-stop and to be able to tread water. This proved useful during the loading and unloading phases of the project and for recreation. The Task Force established no firm evacuation policies and we did not establish any replacement rates. One replacement cook was requested and one rawinsonde operator. Both were provided. No personnel were returned to the ZI prior to the conclusion of the project so the returning strength was TD strength plus 2. Four emergency evacuations were made, 1 for appendicitis, 1 for hernia, 1 for an infection, and 1 for possible appendicitis. All were returned to duty within 15 days. In all cases the technicians diagnosis was correct. A/1C Tanks appendicts were removed six hours after notification. The flying time to his station (Kusaie) and return was five hours. This points out the cooperation of the PBM flight and Navy medical personnel. Inspections of medical and sanitary facilities were conducted by both Navy and Air Force doctors. All detachments received an

outstanding rating each time. Only 2 light cases of diarrhea were reported and I believe that both cases were caused by excessive consumption of coconut milk. Halozone tablets were used at all detachments because with the exception of Bikini they utilized cistern trapped rain water. Bikini distilled about 2,000 gallons of sea water per day although they once sent a request for a supply of battery water. In most places the technicians did some emergency work on the Natives. T/Sgt Clark conducted a number of emergency appendectomies and hernia operations at Kusaie in conjunction with a Native practioneer. Dr. Erdbring of the Navy said they all looked like professional jobs. The other detachment personnel at Kusaie claimed that Sgt Clark was "Knife-Happy" which may have also helped improve the health and sick call report of that unit. Rats were plentiful as to be expected in copra producing localities. Mosquitoes and flies were also much in evidence but their incidence or absence depended on the winds. They were effectively controlled. There was no VD although I am certain all friendships were not platonic. The coordination trip for Operation CASTLE (Secret) will probably reveal just how platonic the relationships were. According to ethnical science the female population of Micronesia has never been associated with chastity, modesty, or shyness. Reports from detachment personnel indicated that the anthropologists and ethnologists were correct in their deductions. I moved one man from Kusaie for being overly indiscreet much to the chagrin of the young lady and her father, an indigenous dignitary. Another was removed from Ponape for a clandestine affair. At Bikini temptation was far away. All in all, the behavior of our men was much above what I expected. I am not naive enough to believe that when

[redacted]

temptation is present, the more enterprising of our men won't eat the apple. Rather, I believe some will consume it stem and core. In resume, our noneffectives for all causes was 4/10 of 1% which was the best record in the Task Force and one of which we are all proud.

31. Each detachment was required to conduct the formations and ceremonies normal on an Air Force base. All detachments were required to dress in Class "A" uniform for the evening meal. Honor guards were provided all flag officers, their deputies and unit commanders. All ceremonies I witnessed were well conducted. One case of interest was when the Commander of the seaplane tender the USS Curtiss, which delivered the devices to the test grounds, needed flying time and went to Ponape on one of the PBM's. I didn't know he was aboard and did not alert Lt McKissack. About an hour out, Lt White informed the detachment (each detachment could receive and transmit by voice on 9180 KC) that the highest rank on board was a Navy Captain. He was given the appropriate ceremony on arrival and seemed pleased and impressed. We had many visitors at our detachments and everyone was impressed and gratified with the food and hospitality. I never asked Army, Navy or Air Force units on either Kwajalein or Eniwetok for any items for our detachments which were not furnished. Bikini was provided with 8 pewter pitchers by General Glantzberg. The detachment had none and he noticed it. They were the type used in Navy Officers mess and besides being extremely helpful, improved the appearance of the mess.

32. As has become all too common, our detachments were too luxuriously equipped and supplied. This was no one's fault but my own as I was given "carte blanche" authority to requisition. Nothing was wasted

[redacted]

[redacted]

or thrown away but the expense of requisitioning, packing, crating and shipping often exceeds the capital costs. Our supply of perishables was of good quality and sufficient quantity. We computed the cost and compared it with the standard ration. It proved to be cheaper, there was less waste and it was easier to prepare. In any case, I discovered that I exercised poor judgment in allowing too many luxury items My detachment commanders also learned this lesson. The sad part is that I can cite fifty different articles warning against over requisitioning, as well as half a dozen supply and logistics manuals and texts. Another case of relearning something already known.

33. During the operation I served as Colonel Nelson's executive. Since he maintained no administrative Headquarters, the Weather Reporting Element acted in that capacity for most of the operation. The actual amount of work connected with this duty was negligible being primarily distribution and filing. The reconnaissance element which had a larger staff than mine assumed this duty late in the operation but we were again made responsible about 17 November 1952. Colonel Nelson personally handled all of the Test Unit's problems and gave each element commander much latitude in operations and decisions. It worked very well and the trust was not abused. The coordination and cooperation between the elements was exemplary. Of special significance was the outstanding maintenance support provided air rescue, SAC's photo RB-50 and MATS photo C-54's by the 57th Reconnaissance Squadron. Although of no immediate concern to me, this display of coorperation was very noticeable and made the Air Weather Service many friends. Frankly I attribute most of this to the Test Services Unit Commander who created this cooperative atmosphere

[redacted]

[redacted]

by tact and diplomacy and not by demand. The AACS element proved very helpful to us and was always eager to assist.

34. There were many small problems encountered which now definitely appear insignificant. Most were solved locally and are not worthy of future mention. The greatest problem was the vacillation concerning the disposition of equipment. My personal opinion is that the Air Task Group issued legal and practical disposition instructions and that those instructions were in the best interests of MATS and Operation CASTLE (Secret). However, the fact remains that the PAC DIV MATS did create a great deal of confusion and almost made a fiasco of our roll-up.

35. We hope to have an unclassified colored motion picture of about an hour's duration of the project. So far I am disappointed at our photographic results and think the program was mishandled by the element. We requisitioned 8 rolls of 16 mm film per detachment and received 8 cases, probably on account of an expiration date of January 1953. All film not used was returned to the 6th Weather Squadron and will be used in filming our other projects. If the film turns out well it will be available for showing.

36. In summing up the operation from the Weather Reporting standpoint, the operation was very successful. From the forecasting standpoint, the results were satisfactory. Major General Clarkson and Brigadier General Glantzberg were both pleased with our results as their letters during and subsequent to the project indicated. In addition we were authorized an unusually high quota of achievement certificates and to date none of our recommendations for other awards or decorations have been returned. In all fairness to my predecessor, in the 6th Weather

[redacted]

[redacted]

Squadron, Lt Col E. R. Miller, I was very fortunate in inheriting an organization that was well manned and equipped and by instinct and training geared to this type of operation. The project indicated that we have never truly exploited the capabilities of the SCR-658 and should therefore place our requirements for GMD-1A performance very high. On the next project, GMD's should be used if spare parts are available. The requirements will probably be an average of 100,000 feet in winds and raobs. My men believe it can be done with GMD's and the use of ML-443's at night and ML-391's during daylight hours. Also the instrument for the GMD is more stable than the one used with the SCR-658. If we can succeed in getting our flight expendables through the tropopause without failure 100,000 feet runs would be easy in that area.

37. It is not planned to prepare a formal voluminous report with supporting documents since no requirement for such a report was contained in any of the operations orders or plans. Most of the documents referred to in this narrative are available in Headquarters, AWS. Reports of the Detachment Commanders, UPREALS, Shipping Documents, requisitions and brown line copies are being retained at Hq 6th Weather Squadron under the assumption that that organization will provide meteorological support for Operation CASTLE (Secret). Frequent contacts with the ATG (latest 5 January 1953) indicate that the inclusive dates for that operation are not firm. In any case this type of project is neither complicated or difficult if properly equipped and supplied. Logistics is definitely "the tail that wags the dog"

38. Although not complete, I have computed the cost of my element's participation in the operation. The pay and allowance figures are based

[redacted]

[redacted]

on official returns. The cost of capital equipment and all expendables are based on latest costs available at this station. No figures or estimates on the transportation costs of equipment are available. The cost of transportation of personnel by MATS to the forward area or their return to the PAE are not known and therefore have not been added. Costs follow:

Per diem & travel	(Travel from PAE to Tinker AFB)	$31,480.00
Pay & Allowances	(July)	28,871.00
	(August)	28,545.40
	(September)	29,804.13
	(October)	33,594.70
	(November)	25,419.86
	(December)	2,555.00
Cost of Equipment and Expendables	(Bikini)	139,904.64
	(Kusaie)	122,261.19
	(Majuro)	121,138.20
	(Ponape)	114,241,27
	Total Cost	$677,815.39

Cost of Expendables and Property fixed on site:

(Bikini)	$ 39,328.94
(Kusaie)	32,683.41
(Majuro)	30,567.47
(Ponape)	27,669.22
Total Cost of Expendables	$130,249.04
Cost of Equipment Returned	367,296,26
Net Cost of Project	310,519.13

I believe that this cost can be reduced approximately $100,000 by later deployment, less luxury and prompt placement of personnel on TDY by other units.

/s/ WILLIAM S. BARNEY
/t/ WILLIAM S. BARNEY
Lt Col, USAF
Commanding

[redacted]