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A CHRONOLOGICAL HISTORY OF TEST RANGE SITE CONSIDERATIONS LEADING UP TO THE SELECTION OF THE TONOPAH TEST RANGE

The Salton Sea Test Base (SSTB) was established in 1946 and made into a permanent facility in 1949. As new weapon types came into the picture, changes were made to the range. The first land target was established within this range in 1951. This land target complemented the water target for certain weapon programs and was in use until 1960 for some land drops. Its continued use throughout this period, however, entailed certain limitations in ground delivery tests due to the limited land area available and the intersection of the flight lines with highways and commercial air lanes.

A growing number of tests requiring land impact, coupled with the growing trend toward high speed deliveries, including supersonic, dictated a look at land areas in the Salton Sea area. Areas surveyed were the Yuma Sand Dunes area, southeast of Salton Sea; the Anza-Borrego Desert, due west of Salton Sea, and the Carrizo Desert area southwest of Salton Sea. Private land ownership, lack of sufficient ground area and commercial air lanes dismissed these areas from consideration.

Yucca Lake at Nevada Proving Ground was established as a temporary land target for use on noninterference basis with other NPG activities. This noninterference clause, coupled with physical limitations of Yucca Lake (it is ringed by hills precluding low level deliveries), compelled a continuing search for a suitable land target. Joint Ballistics Range Committee was set up with membership drawn from Air Force, Navy, and Sandia Corporation. The Committee developed criteria for a joint bombing range to be operated by the Air Force under a joint operation concept. Areas surveyed were:

1. Clovis Bombing Range area, due west of Clovis
2. The Bell Ranch area north of Tucumcari
3. The North Plains area near Grants, New Mexico
4. The San Augustine Plains area southwest of Magdalena, New Mexico
5. The Navajo reservation land northwest of Winslow, Arizona

In August 1955 the JBRC approved the proposal that a location near Winslow, Arizona be designated as first choice. This site was part of Navajo Indian land. Following the agreement of all participants on the Winslow location for the Joint Range, formal authorization was sought from the Navajo Tribal Council to conduct air and ground surveys. A resolution was approved by the Navajo Tribal Council on July 19, 1956, to permit these surveys.

Following this approval, another study was made of density population in the target area. Although the number of families who should be moved for safety reasons were few, it was apparent that it might be necessary to negotiate with each family individually. It was reported that the Navajos

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12/19/96

SANDIA SYSTEMATIC DECLASSIFICATION REVIEW

1st Review Date: 12-19-96
Authority: ☐ ADC ☒ ADD
Name: W. Layne
2nd Review Date: 12/19/96
Authority: ADD
Name: R. T. Duff

Determination (Circle Numbers):
1 Classification Retained
2 Classification Changed to: U
3 Contains No DOE Classified Information
4 Coordinate With:
5 Contains UCAI?
6 Comments:
no classified information

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were very concerned about the possible dangers from sonic booms. So, near the end of March 1957, members of the Tribal Council were invited to the Ballistic Test Facility, Edwards AFB, California, to observe the operation of a bombing range and experience the effects of sonic booms. In August 1957 a presentation of the preliminary to the Master Plan for the range was made at Window Rock, Arizona, to the Navajo Tribal Council. However there were reports, still, of serious opposition to the bomb range from the local Navajo residents.

Another meeting was scheduled for November 1957 but denial of funds from Washington on October 23, 1957, stopped all activities. In the fall of 1958, after approximately a year of negotiations, the Navajo Indians rejected the AEC range proposal and a study of potential sites for a permanent land range was begun anew.

As an interim measure for hard target capability, a site previously located by Field Test personnel in October 1956 was re-examined in the summer of 1958. This was the former Dalhart, Texas Air Force Base No. 1, declared surplus by the Air Force, and approximately 240 air miles from Albuquerque. Negotiations were undertaken with the owners of the property who were using the land for the grazing of cattle. This range was purely a "stop gap" facility, and was never considered as a permanent installation, being dangerously close to well-traveled highways and commercial air line flights. No permanent buildings were constructed at Dalhart. Several small metal prefabricated buildings were set up for minimum requirements; wiring was installed for range instrumentation; instrument shelters were constructed for tracking cameras. The range was restored to its original condition, prior to Sandia's testing, and vacated shortly after June 30, 1960.

After breakdown of negotiations with the Navajos, investigations were re-initiated to locate other acceptable ranges near Albuquerque. In the meantime, an additional requirement had been added to range criteria: the firing of test rockets. This had an appreciable impact on the extent of the necessary impact area. With this new requirement in mind, three of the previously studied areas were considered:

1. The north plains area near Grants, New Mexico
2. An area near Clovis, New Mexico, running west and east, and terminating at the east side of the Pecos River south of Ft. Sumner
3. St. Augustine Plains

None of these provided an adequate area for the safe firing of rockets nor were they adjudged feasible due to telemetry interference and, in some cases, flight line capability.

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The following were also investigated and eliminated for the reasons shown:

1. An area near Lordsburg, New Mexico

   (Unsatisfactory because it consisted largely of valuable grazing lands and was so near to White Sands it would suffer from RF interference.)

2. An area north of Highway 66, east of Albuquerque, in the area of Villaneuva

   (Unsatisfactory terrain)

3. Stallion Site at north end of WSMR

   (Excellent terrain, but area had recently been instrumented by WSMR as impact area for rockets from Red Canyon training site; heavy workload scheduled; RF interference from WSMR and HAFB; low level pull-ups would have to be resolved into air corridors; AEC ownership considered necessary before investing in concrete target - WSMR would not consider transfer of ownership.)

4. San Luis Valley in southern Colorado

5. Estancia Valley area southeast of Albuquerque

6. Amargosa Desert area southeast of NPG

   (Numbers 4 through 6 were rejected because of private land ownership, inadequate geography to provide for cross wind bombing techniques and flight line limitations, and too heavy habitation for rocketry.) By this time it was apparent that rocketry would become a continuing research tool in our testing techniques so that a combined ground launch and air drop test range was highly desirable.

Final conclusions were that several sites would provide a good bombing range but none satisfied the requirement for a combined ground launch and air drop test range. A proposal was tendered for separating the functions and to establish a local range for drop testing with the rocket activities to be continued at Tonopah. This was rejected in favor of combining all activities at the Tonopah Site.

Tonopah Test Range was established as a permanent AEC test facility. Salton Sea would phase out its operations and all Sandia Corporation test operations would be consolidated at TTR except for those relatively few which would require water impact or some other special set of conditions. It had been decided that the Tonopah area is the best possible site which will meet rapidly expanding land target test programs consisting of rocket launchings and bomb drops. Proposed additional instrumentation will accommodate high and low level supersonic deliveries particularly needed for early morning

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tests when wind buffeting is minimized. It will also provide coverage for selective approaches with cross wind, head wind, and tail wind deliveries for both general and concrete target impacts.

[1]The conclusion to recommend Tonopah as a permanent test range was reached on the basis of necessity. It is the only area we can locate having an adequate land and air space already restricted and controlled by the government and, consequently, although it is not an ideal solution, it seems to be the best available if we are to accomplish our required test range expansion and prove our present and upcoming weapons. ([1]SRD Memo, Hertford to Starbird, RS 3466/74612, dtd 2-16-59, subject, Preliminary Proposal for Tonopah Ballistics Range)

Glenna Fowler