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RIF - PR - 08/10/05

WDIT

Pad Utilization

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21 Aug 56
Major Randall/bmg/567

1. Given below is information requested of Major Randall by Colonel Boatman concerning anticipated pad utilization of the ballistic missiles programs. This information was prepared by the Project Office, AFSTC, and submitted to the Director of Test Operations at Patrick for anticipated pad utilization of the ballistic missiles programs.
2. The information was prepared to determine the amount of inter pad interference as a result of pad time required, pad personnel, and blockhouse space available, and to determine the recycle and warning times necessary as a result of this inter pad interference.
3. As a reference for the estimated values given below, past experience of Red Stone missile launches was used and extrapolated to the expected WDD Ballistic Program.
 - a. The total time one missile launching would require personnel to work on the pad was given as 36 days for WS-107A-1, WS-107A-2, and WS-117L. This time includes pre-launch pad preparation, static engine runs, systems checkout, captive flight test, launch countdown and post-launch pad maintenance. At an undetermined date later in the program, the captive flight test and/or static engine runs may be reduced in time or eliminated which could result in a savings of approximately 12 days.
 - b. The total time one missile launching would require personnel to work on the pad was given as 27 days for WS-315A. This time includes pre-launch pad preparation, static engine runs, systems checkout, captive flight test, launch countdown, and post-launch pad maintenance. At an undetermined date later in the program, the captive flight test and/or static engine runs may be reduced in time or eliminated which could result in a savings of approximately nine (9) days.
 - c. The average pad time required to launch one missile which had previously been scrubbed was given as 12 days for WS-107A-1, WS-107A-2, WS-117L, and WS-315A. This time is an average based upon the possibilities of having to replace a scrubbed missile with a stand-by missile, having to do extensive missile rework on the pad, having to rerun portions of the pre-launch preparation phase, or having to recycle to some previous time in the launch countdown. The time required could range from 40 days to four (4) hours.
 - d. The total pad time required for static or captive tests on one missile was given as 27 days for WS-107A-1, WS-107A-2, and WS-117L. This time is included in total pad time required to launch one missile and was estimated by assuming approximately 75% of launch preparation time would be required for static engine runs and captive testing.

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

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e. The total pad time required for static or captive tests on one missile was given as 20 days for WS-315A. This time is included in total pad time required to launch one missile and was estimated by assuming approximately 75% of launch preparation time would be required for static engine runs and captive testing.

f. Defining support tests as those tests required in support of one specific missile, no pad time was given for support tests for WS-107A-1, WS-107A-2, WS-117L, and WS-315A. Those routine and continuous checks required for pad preparation and pad system tests will be performed on an additional shift basis.

g. The total number of people one blockhouse would hold was given as 50 people for WS-107A-1, WS-107A-2 and WS-117L. This total was estimated from the available floor space in the portion of the blockhouse constructed to withstand maximum overpressure.

h. The total number of people one blockhouse would hold was given as 25 people for WS-315A. This total was estimated from the available floor space in the portion of the blockhouse constructed to withstand maximum overpressure.

i. The average number of people working on a launch pad per day was given as 65 for WS-107A-1, WS-107A-2, and WS-117L. This number is an average based upon personnel required to perform the various systems tests and the numerous inputs of assembly personnel who will perform varied assembly and checkout operations during launch preparation.

j. The average number of people working on a launch pad per day was given as 55 for WS-315A. This number is an average based upon personnel required to perform various systems tests and the numerous inputs of assembly personnel who will perform varied assembly and checkout operations during launch preparation.

k. The peak number of people working on a launch pad was given as 120 for WS-107A-1, WS-107A-2, WS-117L. The peak strength is expected to be present whenever a captive firing test or launch countdown is being conducted.

l. The peak number of people working on a launch pad was given as 100 for WS-315A. The peak strength is expected to be present whenever a captive firing test or launch countdown is being conducted.

m. The shutdown or lead time necessary to bring a pad to a work stoppage status was given as $3\frac{1}{2}$ hours for WS-107A-1, WS-107A-2, WS-117L, and WS-315A. This time is an average based on possible required defueling, completion of a specific launch preparation sequence, or securing the missile for a short duration hold. This time could vary from one hour to four days.

n. The total time required to clear the pad and get the people to safety was given as 30 minutes for WS-107A-1, WS-107A-2, WS-117L, and WS-315A. This time was based on an average number of people on the pad.

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o. The average time required to pick up work at the point it had been previously stopped was given as one day for WS-107A-1, WS-107A-2, WS-117L, and WS-315A. This time is an average based upon possible required refueling, rerun of a specific launch preparation sequence, or rechecking of missile systems to assure readiness after a short duration hold. This time could vary from 10 days to one hour.

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