

TR-Town

TO: Mr. K. T. Bainbridge
FROM: R. W. Henderson & R. W. Carlson
SUBJECT: Notes on Towers and Jumbo at TR

UNCLASSIFIED

DATE June 22, 1945

PUBLICLY RELEASABLE
LANL Classification Gr
4/21/98

Classification changed to
By authority of the U. S. Atomic Energy Commission

Per Phil Belcher

A-84-019
56-8

By Pat McAndrew

4/11/54
3/7/55
(Date)

A visit was made 19 and 20 June by Henderson and Carlson to the site where the 100-foot tower and Jumbo are located. Both towers were in place and Jumbo was resting in final position but not yet bedded in concrete.

An excellent job had been done in erecting both towers and in placing Jumbo. The 100-foot tower was especially sturdy. Hardly any shaking was detectable at the top in a fairly strong wind. The following notes cover points of minor character, but which nevertheless require attention for the success of the project.

1. The 14-foot boom for the auxiliary hoist could not be mounted directly on the channels of the superstructure of the 100-foot tower, so a design is being made by X-2 for special mounting plates. These will be made in C Shop and delivered to TR as soon as possible.

2. The pinnacle details must be revised to provide for (a) an insulated support for the central hanging cable and (b) a new fixed end for the hoisting cable. Details will be drawn up by X-2 and made in C Shop for delivery to TR as soon as possible.

3. The hand winch near the top of the tower was mounted in such a way that the ratchet prevented a weight from being raised but not from being dropped, and the handle was on the left side. Also, the hand winch and its swinging sheave were located so as to interfere with the main electric winch cable. It was decided, therefore, to dismantle the hand winch (and its cable and special sheave), keeping it merely for emergency. (The special sheave is mentioned again in #9 below.)

4. The 4-foot balcony at elevation 100 which has been designed by X-2 is proposed to be fabricated in Albuquerque under direction of Capt. Davalos. Drawings will be submitted to Capt. Davalos by X-2 not later than 22 June. It was found that the angle brace from the pinnacle interfered with the balcony as designed, so a field change is necessary. This detail is not shown in Blaw Knox drawings. The balcony plans have been revised to provide a railing 4 feet high with three horizontal members.

5. The outer sheave at the 115 foot level for the electric hoist was not installed because of lacking an axle pin. A new pin is being provided by X-2, promised 22 June.

6. The cleats on the hatch panels were incorrectly located, so the panels were ~~in~~ rested about 3/4 inch above the remainder of the floor. It is understood that Lt. Comdr. Keiller will supervise this repair, as well as all construction work on the tower, including the house at the 100 foot level.

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PER DOC REVIEW JAN. 1973
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INTER-OFFICE MEMORANDUM

FINAL DETERMINATION
UNCLASSIFIED
L. M. Redman

JAN 09 1981

DATE

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SUBJECT:

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7. The anchor bolts of the foundation of the tower were misplaced, apparently due to an error in a drawing from the Albuquerque office (the Blaw Knox drawing was correct). The repair was accomplished by cutting the anchor bolts, lap-welding offset extensions to the old stubs, and also welding side plates from the stubs to the bases of the new bolts. More concrete was then added, thus raising the base of the tower to clear the stubs of the original anchor bolts. Provided only that the welding was satisfactory, the repaired anchor bolts should not reduce the safety of the tower as a whole.

8. The concrete pier for the 5-ton hoist at the base of the tower should be installed as soon as possible. Bolt dimensions are in the hands of Lt. Comdr. Keiller and a spare copy is in the Shepard-Niles files in Sgt. Marshall's office. The proposed location is on the east side of the tower base, with the hoist extending about 7 feet inside the base boundary of the tower.

9. A special sheave is necessary at the object end of the 2-part line, because of the need for tying to the sheave with an auxiliary cable for final hanging of the object. In other words, a sheave is needed which will carry a load of 50,000 lb. (10,000 lb. with safety factor 5) from either end. None of the various sheaves in stock were suitable. It is proposed, therefore, to adapt the swinging, 14-inch sheave originally intended for use with the hand winch. A sketch will be made by X-2 of a double-ended strap to be built around the sheave, this strap to be made in U Shop.

10. The Jumbo tower, which will remain in place to facilitate operations at the mouth of the vessel, requires guying against wind from Q. Two guy cables of not less than half inch diameter are recommended from the top of the tower toward Q.

11. Guy cables are recommended also for Jumbo. There should be four of not less than half inch diameter from the neck of Jumbo to the four dead men installed by Richleay.

12. A sketch was left with Capt. Davalos for concreting the base of Jumbo. A pad of 24-inch depth and reaching out to the tower piers was requested to be cast first, with duplicate grout pipes terminating near the pole of the bottom hemisphere of Jumbo. Above the 2-foot level, the concrete need merely extend as far out as the outer cylindrical surface of the vessel. The eight jacks now supporting the vessel must not be removed until most of the bottom hemisphere is bedded in hardened concrete. The grout pipes should be capped and left accessible, in order that grouting can be done after the performance at Q.

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R. W. CARLSON R.W.C
R. W. HENDERSON R.W.H

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RWC/bsa
cc - Comdr. N.E. Bradbury
Lt. Comdr. T.M. Keiller
Capt. S.P. Davalos
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file (2)

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PER DDG REVIEW JAN 1973
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