

filing. This factor which gives a realistic appraisal of the final settlement, is based on experience with similar major construction projects of both NASA and DOD. It took into account claims which were filed and later denied, claims filed and subsequently withdrawn, together with those on which settlements were negotiated and paid.

As of March 1, 1967, \$2.434 million had been paid for the settlement of claims connected with work on LC 39. It is estimated that an additional \$10.6 million will be required for the payment of claims during Fiscal Year 1968, \$7.2 million of which is required for claims which are presently on file and \$3.4 million for anticipated filings. Of the latter, approximately \$2.7 million will be required for the settlement of appeals from contractors on unilateral settlements by NASA and \$0.7 million for the settlement of new claims on work that is presently in process.

The funds requested should satisfy our requirements through FY 1968. Since contractors are not limited as to the time in which they may file a claim there is a possibility that some claims might be filed and settled after FY 1968.

The following examples of claims that have been filed where there were differences in interpretation of specifications and/or project delays:

Provision of Hurricane Protection During Construction of VAB----	\$1,000,000
Correction of Deflection in Horizontal Rolling Door Guide Rail—	
VAB-----	59,138
Definition of Electrical Interface Between Crane and Construction	
Contracts—VAB-----	186,000
Late Delivery of Amended Contract Drawings and Specifications---	20,000
Delays in Defining Discrepancies in Contract Drawings-----	10,000
Delays in Resolving Problems on Heat Sensing Devices—Jib and	
Bridge Cranes—VAB-----	11,070

Question. Will the Launch Umbilical Towers be refurbished after each launch? Is it anticipated that all three towers will use Launch Umbilical Tower Park Position No. 3 for refurbishment?

Answer. The Launch Umbilical Towers will be refurbished after each launch. All three towers will use Launch Umbilical Tower Park Position No. 3 in connection with refurbishment operations.

Question. What type of storage is KSC presently using for helium? If railroad cars are being used, is KSC paying demurrage for such storage and what are the estimated annual costs of such demurrage? Does NASA anticipate that the permanent storage requested will pay for itself over a period of time? If so, what is the time period estimate?

Answer. KSC currently has permanent facilities capable of storing 2,720,000 standard cubic feet of helium. This storage capability is being augmented through the use of railroad tank cars. We are presently paying \$25.00 per day per car for demurrage or about \$130,000 per year. The actual expenses from December 10, 1965 through December 31, 1966 was \$138,425. These additional permanent storage facilities will pay for themselves in approximately 5 years.

Question. Funds are being requested to remove pockets of clay below the surface of crawlerways and to replace them with suitable fill material. Did not KSC or the contractor take core samples of the area before the crawlerways were initially built? If so, why were such clay pockets permitted to remain? Why was not this work considered before the surfacing operations in FY 1966 and 1967? Will the funds requested complete, in NASA's opinion, all of the necessary subsurface work?

Answer. Deep core borings were made at 1,000 foot intervals on the crawlerway to Pad A. Intermediate, shallower borings were taken at 250 foot intervals and at 100 foot intervals in areas where the borings indicated poor subsoil conditions might exist. The unsuitable material discovered as a result of the boring data was removed and back filled. The pocket in question is quite localized, is not in an area where the borings indicated questionable subsoil conditions existed, and was discovered when the crawlers underwent fully loaded tests in May 1966. As a result, the work included in this request could not be considered before the surfacing operations took place. The funds requested are expected to complete all necessary subsurface work.

Question. During last year's hearings, NASA estimated that the final runoff costs on the Marion Power Shovel contract (for the crawler-transporters) would amount to \$13.9 million (including a \$4 million overrun from the original contract