NATIONAL RADIO ASTRONOMY OBSERVATORY EDGEMONT ROAD CHARLOTTESVILLE, VIRGINIA 22901 TELEPHONE 804-296-0211 TWX 510-587-5482

July 7, 1981

Ms. Susan M. Cuevas Sales Manager Electronic Space Systems Corporation Old Powder Mill Road Concord, Massachusetts 01742

Subject: ESSCO Proposal E-5817; NRAO Request for Proposal # 228

Dear Ms. Cuevas:

This will confirm that representatives of the National Radio Astronomy Observatory will visit your facility at Concord, Massachusetts at 10:00 a.m. on July 16 to discuss the technical aspects of the subject proposal as well as terms and conditions of a tentative subcontract. Members of the NRAO staff who will attend this meeting are:

John Findlay	J. Marymor
William Horne	Dale Webb

Our technical staff has reviewed your proposal and finds it generally acceptable; however, there are several questions regarding details that we would like ESSCO to review prior to the meeting.

NRAO accepts the ESSCO method proposed for the measurement of the individual panels, for reducing the measurement data, and for calculating the RMS of the panels. NRAO will not require the computation of an aggregate RMS for all panels as proposed (paragraph 6, page 13). We propose to accept each panel individually based on ESSCO CMM measurements. Panels having a measurement above an agreed RMS value will be rejected by NRAO; panels measuring at or below the agreed RMS will be accepted. We propose that this agreed RMS be $45 \mu r(1-30 mils)$. NRAO is considering the procurement of either two (2) or four (4) spare panels and would appreciate your estimate of the cost of these additional items.

We have now seen your letter E 5817 of July 1st from Mr. Brenner to W. Horne and J. W. Findlay, and it seems likely that the mounting hole locations described in that letter would be satisfactory to us. We are checking the coordinates you give and will discuss this further at the meeting.

We should value your advice as to how to arrange the passage of the feed legs through the surface. The back-up structure is in its early design state and we may have some choice as to where the feed legs fall.

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It is likely that NRAO will not require either ESSCO panel targets or target holes for setting panels on the NRAO back-up structure. We would appreciate your views as to the feasibility of eliminating these items and possible effect on price.

We have no reservations in accepting the general ESSCO warranty on defects in material or workmanship; however, we would like you to consider an extended warranty on epoxy bond failure.

Please be prepared to discuss in detail the calibration of the CMM and any reinspection procedures used to assure maintenance of calibration throughout the manufacturing process. In this connection, it is requested that you detail your production schedule for the 72 panels and discuss the inspection schedule so that NRAO may coordinate its inspection personnel most efficiently.

Finally, it would be helpful if you could give us some idea of the size and shape of the shipping containers and procedures for handling them.

Please let me know if you have any questions concerning the above. Questions of a technical nature should be addressed to John Findlay at 804-296-0240.

Sincerely yours,

J. Marymor, Manager, Contracts/Legal

JM/1c

- bcc: J. Findlay
 - W. Horne
 - H. Hvatum
 - T. Riffe
 - D. Webb