



National Radio Astronomy Observatory

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February 25, 2013

Mr. Brian D. Schrader, PE
Vertex Communications Corp.
General Dynamics Installation Services, LLC
2600 N. Longview Street
Kilgore, TX 75662

SUBJECT: Contract No. 300640, ALMA Production Antennas, and
Contract No. 5001021, Chilean Installation of Antennas

RE: Contract Final Payment and Warranty Status

Dear Mr. Schrader,

Following your submission of the final invoices and our receipt of the executed Release of Claims forms for the subject contracts, final payment will be made. We thank you and the entire General Dynamics team for your efforts and support during the nearly 8 years of this project.

Since the warranty period will continue past the final payment, we wanted to reiterate the Warranty/Guarantee provisions in accordance with the terms of the contracts and the final acceptance letters we submitted. Per Contract No. 300640, Article SC9, "Warranty/Guarantee," of the Special Terms and Conditions, as modified in Change Order #19 in October 2009, General Dynamics' guarantees extend for twenty-four (24) months after the date of final written acceptance of each antenna by AUI. Change Order #19 further specifies that for any period wherein an antenna is not available for use due to defects in materials, workmanship, or engineering furnished by General Dynamics, General Dynamics shall extend the guarantee period by an equal period of time.

The 25 final acceptance letters submitted to General Dynamics identify the start of the warranty period for each of the 25 antennas. The final acceptance letters also describe performance specifications which require verification by ALMA, including:

- Offset Pointing and Tracking Errors,
- Fast Switching Phase Calibration,
- On The Fly Mapping, and
- Antenna Surface Accuracy Requirements

General Dynamics remains responsible to ensure these items are met even if deficiencies are found after the 24 month warranty period for each antenna. In addition, all open ALMA JIRA tickets related to the antennas were required to be closed within 6 months of final acceptance. If resolution of those items took longer than 6 months, the warranty associated with the unresolved items was extended by the time period needed for resolution.

Should you have any questions or concerns regarding this letter, I can be reached at +56(2)2210-9602 or by e-mail at mpilleux@nrao.edu.

Sincerely,



Dr. Mauricio Pilleux
NRAO ALMA Deputy Project Manager

cc: Mrs. Suzette Lucy, General Dynamics
Dr. Mark McKinnon, AUI/NRAO
Mr. Patrick Donahoe, AUI/Corporate Office
Mr. Arthur Symmes, AUI/NRAO
Mr. John Cappiello, AUI/NRAO