

Request for SGAS Deviation/Waiver – SGAS-D-01

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| 1. Contract: NN-G-04-DA00-C TO2 Winslow H. Joy, Jr. | 2. Project: Second Guam Antenna System November 16, 2005 |
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5. Title: SGAS Seismic Zone 4 rack compliance.

6. Description:

The racks to be procured for the SGAS project do not meet the SGAS SRD Requirement in terms of seismic compliance. The specific requirement states:

"4.4.2.1 The SGAS equipment racks shall be compliant to Seismic Zone 4 criteria (0.4 G of lateral acceleration and 0.2 G vertical acceleration) and conform to EIA-310, "EIA Specification for Cabinets, Racks, Panels and Associated Equipment".

The racks being procured for the SGAS project are not seismic compliant. Specifically, this means that the vendor (H&H Industrial) has not formally tested this rack design for seismic compliance. The rack design used for SGAS is based on modified STDN specifications, which are typically more stringent than commercial designs. The vendor unofficially stated that they believe the racks would pass the seismic testing (if performed). Additionally, the SGAS racks are nearly identical to the racks currently used in the legacy Guam GRGT system as well as other programs (same vendor) on Guam.

In order to mitigate risk associated with safety, the SGAS racks will be secured in a manner similar to the method currently employed at Guam for GRGT. To date, this method has proven sufficient. Additionally, the two (2) racks being installed in the Radome will be anchored to the concrete floor of the Radome.

7. Need:

The SGAS project has unique needs with respect rack design. Specifically, the SGAS project is attempting to use equipment (racks) that is similar in design and functionality to the other systems in place on Guam (e.g. GRGT). In doing so, the agreed upon design for the racks has not yet gone through formal seismic testing.

Additionally, The SNE (Space Network Expansion) project which is currently in development will be utilizing identical racks. The SNE Project System engineering believes the use of the H&H Industrial rack is an acceptable risk.

8. System Impact:

There is minimal risk to the SGAS system by utilizing the proposed racks and securing methods. The proposed racks are identical to the racks being used by the SNE project and equivalent to those currently in use at GRGT. For these reasons, the recommendation is to waive the referenced requirements.

9. Identify any adverse impact to cost and/or schedule:

If the waiver is approved,

- a) There will be no impact to the SGAS schedule.
- b) There will be no cost impact to the SGAS project.

If the waiver is disapproved, the following situation arises:

- a) The vendor would provide a rack to a certified lab for Seismic testing at a testing cost of approximately \$10K
- b) Upon successful completion of the seismic testing, the rack integration is completed as planned
- c) Upon an unsuccessful outcome to the testing, the racks will either be modified and retested (cost and schedule impact) or a deviation would be required

Should the waiver be denied, there will be an impact to the SGAS Project schedule and cost since a separate procurement from the SNE initiative would have to be undertaken.

10. NENS Project Manager's Name/Signature:

 , N KEITH HARRISON

11. Date Submitted:

12/13/05

12. NASA Project Manager's Assessment:

Approved: X

Disapproved:

Deferred:

13. NASA Project Manager's Name/Signature:

 , Andre S. Fortin

14. Date:

12/7/05