9 October 1984

Mr Ralph Kriss Bendix Field Engineering Corporation 9250 Route 108 Columbia, Maryland 21045

CTI-CRYOGENICS

Ralph:

Investigation into the items discussed during our meeting of 6 September has resulted in short and long term actions to be instituted from this date. These actions are presented on the attached sheet.

It has been determined that the most critical criteria are the bushing and drive rod dimensions and tolerances. Parts to the new criteria have been ordered, but due to the delivery schedule, they will not be available for four weeks. Therefore, the repair of the returned units will be delayed. This delay was discussed with H Dill of NRAO and he agreed that the extended schedule would be acceptable in order to get more reliable units.

Your comments concerning the repaired and new unit performance would be most appreciated as these will assist CTI-CRYOGENICS in improving the unit quality.

Sincerely yours,

CTI-CRYOGENICS

A Division of Helix Technology Corporation

Leon R Audette Quality Assurance Engineering

cc: Howard Brown, Star Route Box 7, Arbovale, W VA 24915 Harry Dill, NRAO, 2015 Ivy Road, Charlottesville, VA 22903 George McGee, Vice-President of Marketing, CTI-CRYOGENICS Charles Stochl, Director of Quality Assurance, CTI-CRYOGENICS

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## CTI-CTYOGENICS

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ITEM		SHORT TERM ACTION	ACTIONEE DEPARTMENT	LONG TERM ACTION
Good M	lanufacturing Procedures			
0	Corrosion	Gasket material for present paint fixtures	Mfg Eng	New fixture or anodizing parts vs painting
۰	Paint	Air dry	Mfg Eng & Mfg	Air drying specification or anodizing parts
0	Repair of units	Assembler training	Production Eng/ Mfg Eng/ Mfg	Training program and acceptable parts samples
0	Torque	Mounting screws for cylinder 64 in.lbs.	Mfg Eng & Production Engineering	Tools and tightening sequence
•	Yoke pin insertion	Support block .	Mfg Eng	Design support tool
Cylinder Box		Screen for .003" maximum bow away from housing. Bow toward housing not acceptable.	Production Eng & Mfg Eng	Vendor process change
Cylinder Step		Screen for .002" maximum step, flatness to .002" and perpendicu- lar to cylinder axis to .005".	Inspection/ Production Engineering	Change drawing and inspection criteria
Oil Processing		Believe material is from the bush- ing - need sample for testing.		
Bushing/Rod		Tighter toleranced bushing/rods on order	Production Engineering/ Mfg Eng	Investigate line ream/new material