IR-2 RIGGING PROCEDURE and JOB HAZARD ANALYSIS
FOR SPECIAL PURPOSE HANDLING FIXTURE
FORWARD UPPER CORNER BLOCK

1.0 Loads:
   FWD Upper Corner Block    4314 lbs
   Fixture                  959 lbs
   Total Load (excluding rigging) 5273 lbs

2.0 Rigging Layout:
   Drawing number SK-HJK080104-2

3.0 Rigging Equipment:
The 10 ton hoist shall have a 10,000 lb capacity digital crane scale (Scale 10) supported from
the hook. The crane scale shall support a 4-ft long sling of 10,000 lb minimum working load
rating plus two 1.5 ton minimum capacity manual hoists (come-alongs) and four 6.5 ton
minimum capacity screw pin shackles. The 50 ton main hoist shall support a 4-ft long sling of
5,000 lb minimum working load rating plus a 6.5 ton minimum capacity screw pin shackle on
each end.

4.0 Removal Procedure:
   Refer to drawing number SK-HJK080104-2. The fixture is designed such that the CGZ of the
   fixture is at the same location as the CGZ of the upper corner block. Therefore, Point A
   represents both the unloaded and the loaded CGZ. Point B is only used to adjust the angular
   position of the upper corner block.

   4.1 Zero the crane scale readout with the rigging hardware hanging clear of the ground.
   4.2 50 ton hoist: Connect the lower screw pin shackle to Point A on the fixture.
   4.3 10 ton hoist: Connect the sling shackle to Point B on the fixture. Connect the two manual
       hoists to Points C & D respectively on the fixture.
   4.4 Lift the fixture with the 10 ton hoist. Remove the slack on the 50 ton hoist as the fixture
       is raised. Scale 10 should read 959 lbs.
   4.5 Place the fixture in the proper position to mate to the Upper Corner Block using both
       hoists and the crane trolley. It may be necessary to make slight angular adjustments
       using the manual hoists. Bolt the fixture to the Upper Corner Block. The fixture holes
       marked “E” are for the upper east corner block and the fixture holes marked “W” are for
       the upper west corner block.
   4.6 Lift gently on the 10 ton hoist until Scale 10 reads 5273 lbs.
   4.7 Remove the slack from the 50 ton hoist.
4.8 Gently loosen corner block bolts as described in *Bolting & Unbolting Sequence for BaBar Flux Return Corner Blocks*.

4.9 Readjust fixture/corner block position using both hooks and manual hoists as needed to minimize side loading on the corner block bolts until all bolts are removed.

4.10 Remove the corner block.

4.11 Place the corner block in the Corner Block Receptacle and remove the rigging.

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**5.0 Installation Procedure:**

5.1 Place the Upper Corner Block in the Corner Block Receptacle.

5.2 Zero the crane scale readout with the rigging hardware hanging clear of the ground.

5.3 50 ton hoist: Connect the lower screw pin shackle to Point A on the fixture.

5.4 10 ton hoist: Connect the sling to Point B on the fixture. Connect the two manual hoists to Points C & D respectively on the fixture.

5.5 Place the fixture in the proper position to mate to the Corner Block using both hoists and the crane trolley. It may be necessary to make slight angular adjustments using the manual hoists. Crane Scale 10 should read 959 lbs.

5.6 Bolt the fixture to the Upper Corner Block. The fixture holes marked “E” are for the upper east corner block and the fixture holes marked “W” are for the upper west corner block.

5.7 Lift the corner block using the 10 ton hoist. Remove any slack in the sling on the 50 ton hoist. Scale 10 should read approximately 5273 lbs.

5.8 Place the corner block in the appropriate position on the BaBar Detector.

5.9 Gently install corner block bolts. Readjust fixture/corner block position as needed to minimize side loading on the corner block bolts until all bolts are installed.

5.10 Torque bolts as described in *Bolting & Unbolting Sequence for BaBar Flux Return Corner Blocks*.

5.11 Lower 10 ton hoist until Scale 10 reads 959 lbs.

5.12 Unbolt fixture from Upper Corner Block.

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**6.0 Potential Hazards:**

6.1 Crushed extremities.

6.2 Personnel in path of load movement or under load.

6.3 Unexpected load movement.

6.4 Operator error.

6.5 Equipment failure.

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**7.0 Hazard Controls:**

7.1 Crane Operator shall be a SLAC-certified (EFD) rigger.

7.2 No one will be allowed under a suspended load or in the path of a load.

7.3 Strict controls of crane control box and rigging procedures.

7.4 Inspection of equipment prior to use.

7.5 Inspection of crane functions.

7.6 Current training of personnel.

7.7 Crane maintenance current.

7.8 Review of procedures with rigging personnel.

7.9 Appropriate use of personnel protection equipment.

7.10 Appropriate supervision of tasks.

7.11 Continuous safety oversight is preferred.
8.0 Field Observations and Comments:

Procedure Reviewed by: Z. Vassilian
J. Kenny
F. O’Neil
S. Pierson