

APR 02 1986

STANFORD SYNCHROTRON RADIATION LABORATORY

March 31, 1986

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TO: WILLIAM C. GOUGH, Director Stanford Site Office  
(SLAC/SSRL) ER Division, SAN

FROM: ARTHUR BIENENSTOCK, Director SSRL

SUBJECT: SSRL PROP #456 "IODINE DICHROMOGRAPHY WITH  
MONOCHROMATIC X-RAY BEAMS FOR ANGIOGRAPHY"

Dear Bill,

This letter is to present, for your review, the background material and safety evaluations relating to the proposed angiography experiment on human subjects at SSRL. The first human exposure is scheduled to take place in early May, 1986. The human subjects portion of the experiment is the culmination of more than three years of tests using phantoms, excised pig hearts and anesthetized dogs.

The medical protocols and informed consent material have been reviewed and approved by the Stanford University Medical Committee for the Protection of Human Subjects in Research. The approval memorandum is enclosed.

The experimental procedure and safety plan "FRAMEWORK of ANGIOGRAPHY SAFETY PLAN" by John Otis and Albert Thompson have been reviewed and approved by the SLAC Radiation Safety Committee. The approval memo and the referenced plan are attached. At SSRL invitation, health physicists from Stanford University and from UC/LBL attended the review. They advanced no adverse comments on the planned procedure or safety plan.

Prior to performance of the experiment, the following steps will be taken by SSRL:

1. The interlock system will be designed and installed to SLAC standards by SSRL. An independant circuit analysis will be performed. The circuit review is scheduled to take place during the first week of April 1986.

2. A ray trace of the beam transport system will be produced and analyzed to assure that only monochromatic x-rays can reach the subject. This is presently scheduled to be completed during the second week of April 1986.

3. A system safety analysis will be performed. This review is planned for mid-April 1986.

The reports of these reviews and analyses will be forwarded to the SSC upon completion and internal approval. It is our belief that the actions described constitute sufficient assurance of safe practices. We are, however, very anxious to

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FOLDER 1300.3.c Angiography Expt  
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assure the safety of all participants in this experiment and,  
therefore, solicit your comments.

Sincerely,



A. Bienenstock

cc: J. Cerino

Encls: Human Subjects Committee approval memo 1/7/86  
SLAC Radiation Committee approval memo 2/25/86  
Framework of Angiography Safety Plan 2/7/86

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