

# Electrical Work Plan

(Reference ES&H Bulletin 68A. Attach additional pages as needed)

Job Name: SPEAR Tunnel Access Hazards Verification

Location: SPEAR Tunnel, B118, B132-101, B514

Effective Dates Of Plan - Start: 12/08/04 End: 12/08/05

Work To Be Performed By: Critt Taylor, Ray Ortiz, Greg Johnson, John Wachter

Person In Charge: Fernando Rafael Phone: 4607

## Description Of Work:

Perform SAPE 111 "SPEAR Tunnel Access Hazards Verification Procedure"

This procedure describes the steps necessary to "manually" verify that all SPEAR Ring hazards are in a de-energized condition to allow entry into the SPEAR tunnel, when the normal verification process is not possible

## Associated Hazards (e.g. voltage, current, etc.):

String magnet voltages 600 to 700 V DC

Individual magnet voltages 100 to 200V DC

## Hazard Mitigation (e.g. specific PPE, barriers, etc):

Follow Precautions and PPE requirements in SAPE 111 "SPEAR Tunnel Access Hazards Verification Procedure"

Note: For a nominal system voltage range, phases to phase, of 301 to 750 volts, the Restricted Approach Boundary is 1 foot 0 inches per NFPA 70E Table 130.2(C). A Flash Protection Boundary of 1 inch was calculated for the worst case, the Dipole Bulk supply. The others have lower stored energy.

Inspection Required After Work? - Yes  No  (Required for New Installations.)

Originator: Rafael *J. Rafael* Date: 12/08/04

Approvals As Required By Bulletin 68a (Sign, print name and title, and date):

*M. Widmayer, M. Widmayer, Supervisor, 12/9/04*

Participants (All workers to read, sign, print name and date):