Following Synthesis Run Number 11, which was ended by a slide valve failure, a new slide valve was constructed and installed. This valve contains a flat plate slide which is 3-3/8" wide, 4-3/4" long and 1/2" thick. The slide has a V-notch which is 1-1/2" wide at the base and has an altitude of 1-1/2". The slide moves across a 3" opening in the base of the 3" standpipe and discharges into a conical hopper which is 8" in diameter at the top and 10" high. The hopper converges into the 1" transfer line which returns catalyst to the reactor. The transfer line is bent through a 90 degree angle on a radius of about 10 feet. The transfer gas which carries the catalyst through the line is introduced at the top of the hopper just below the slide.