small noncomsumable arc-melted and drop-cast ingots were rolled directly to final sheet thickness for blanks, whereas the larger consumable arc-melt ingots are now hot-extruded to a sheet bar and rolled to final thickness.

As indicated, DOE-OSA has generated an integrated production schedule for the activities of all program participants. On the basis of this schedule, activities associated with the fabrication of iridium-alloy blanks and foil that will be ultimately used for the CRAF and Cassini missions was initiated at ORNL in April 1989. Deliveries of blanks and foil for flight applications began in the second quarter of FY 1990 and will continue through FY 1993 and will provide the Y-12 Plant with 1103 blanks and 0.9 m^2 of foil (Fig. 6). The suitability of these production procedures and controls shall be reaffirmed by an independent Quality Readiness Review (QRR).

2.3.2 Iridium Alloy Clad-Vent-Set Production Task

This task is performed at the Y-12 Plant. For this operation, the Y-12 Plant uses iridium powder and iridium-alloy foil provided by ORNL to fabricate a number of small components. Iridium-alloy blanks supplied by ORNL are formed into a pair of small flat-nosed cups (formed cups, see Fig. 7). Assembly of selected components results in a CVS assembly composed of a shield cup and a vent cup. The Y-12 Plant has the responsibility for preparing the certification package required to ensure that the CVS meets the required specification and is fit for its end use.

Fabrication of the CVS used for the Galileo and Ulysses missions occurred between FY 1980 and FY 1984 and was performed by EG&G-MAT using blanks and foil fabricated by ORNL. In FY 1987, DOE-OSA requested that the CVS manufacturing technology be transferred to the Y-12 Plant to integrate all iridium-alloy fabrication at one site. The transfer to the Y-12 Plant was initiated in November 1987. Demonstration of effective transfer of this technology is expected to be complete in April 1990 with the successful fabrication of 15 CVS. With fabrication of the 15 CVS and successful completion of a QRR performed by an independent review team, the Y-12 Plant will initiate a pilot production run of 20 CVS using ORNL-provided products of iridium-alloy blanks, iridium-alloy foil, and iridium powder. Successful completion of this ORR will allow the initiation of routine production that will provide an additional 400 CVS through FY 1994.