I reported for work in the 16-Foot Transonic Tunnel in June of 1963. At that time, the slotted test section, for which Langley received a Collier Trophy in 1951, was still classified. As I remember, I was given some type of provisional clearance so that I could actually start work; it is hard for a wind tunnel test engineer to do their job without seeing the test section. The test section was declassified a few years later. At any rate my reward for a new job was – GRAVEYARD (midnight to 8:00 AM) shift! As new man on the job and lowest man on the totem pole, I was handed over to a senior research engineer and four tunnel technicians for my on-the-job training. I found this to be a very effective way to learn the ropes. To my surprise (at the time), the technicians carried most of the load for my initial training. I not only learned how to use a magnet to determine the correct hook-up of an iron-constantan thermocouple (all the technicians carried one in their pocket), leak check model pressure orifices, free locked-up scanivalves, etc, but I also learned to appreciate the critical job these people performed in freezing and stifling hot temperatures (no climate control in the test section). I also learned that if you got your hands dirty in the test section with them rather than sitting in the climate-controlled control room during model changes, they would do almost anything for you.

My first job on graveyard shift was to sit in a semi-acoustically treated phone booth and observe the model during tunnel runs through a window in the tunnel sidewall; this was before models could be monitored in the control room on closed-circuit televisions. Using a headset/microphone, I was to inform the control room staff of any adverse model behavior such as excessive model vibration (I never did figure out what “excessive” meant) or loose/missing model parts (very bad for tunnel health). In addition, I was informed by Paul Trent that I was to inform the control room if I saw any birds flying through the test section so that they could bring the tunnel off line. Paul was the lead technician on the shift and a huge man but a true “gentle giant” who loved practical jokes (unknown to me at the time). Well, I was not born yesterday and I promptly informed him that it was not possible for birds to get into a closed-circuit wind tunnel. Paul proceeded to carry me into the tunnel air-exchange tower (I had not yet learned the function of this tunnel feature) and showed me 3 or 4 dead birds lying on the floor and informed me that birds did indeed get into the tunnel, probably when the tunnel top was raised, and died after flying through the test section and hitting the fan blades. I WAS CONVINCED AND SPENT THE BETTER PART OF THE NEXT WEEK LOOKING THROUGH THAT WINDOW FOR BIRDS FLYING IN THE TEST SECTION! I don't remember now how I discovered that this was a big joke on the “new” guy but I now know that the 16-Foot Tunnel had an air-exchange tower that exchanged 20% of the airflow on each trip around the circuit with fresh outside air. At that time, the air-exchange tower used an oil-bath filter system to clean the incoming air (at the end of the tunnel life, dry filters were used). When the tunnel was not running, birds could enter the air-exchange tower and dead ones were not an uncommon sight in this part of the tunnel. I
don’t know if any birds ever came through the test section or not (if they did, it would be so fast that the human eye could not perceive it), but I think in all probability that they were probably in the air-exchange tower when the tunnel started up and killed themselves flying into the walls trying to get out. As other stories will attest, I was not the only newbie that would fall victim to a practical joke.