Vanquishing the VPD

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This publication is primarily directed towards airport management to be disseminated to all levels of personnel working at your airfield. It does not matter how large or how small your airfield or how tight your budget may be or whether your airfield serves general aviation or air carrier operations, this information must be made available to your people by whatever means. Vanquishing the VPD can be accomplished through a solid partnership between the FAA and airport management. The responsibility of making sure safeguards are in place; however, lies squarely on the shoulders of the airport management. Please use this information and all that follows as a guide by which to produce a safer environment at your airfield.

The Management at the Long Beach Airport and the Federal Aviation Administration has combined efforts to test a new technology that will help warn pilots, rather than air traffic controllers, of runway incursions caused by other aircraft or vehicles. This technology is called FAROS (Final Approach Runway Occupancy Signal). The original technology was developed to monitor the movement of vehicles on the nation's streets and highways. That technology has now been adapted for use on airports. It is a simple, low-to-medium cost system that warns the pilot on final approach that an aircraft or a vehicle has entered the runway environment that may not have received authorization to do so. It requires no airborne equipment and does not change existing air traffic control procedures. The system also appears to be well suited for small to medium sized airports that have operating control towers.

The FAROS system, currently being evaluated at the Long Beach Airport (LGB), uses inductive loop sensors embedded in the runway and taxiway surfaces to automatically track aircraft and vehicles entering and exiting encapsulated zones. When the runway is occupied by a potentially hazardous target, the system flashes the Precision Approach

Path Indicator (PAPI) lights as a visual warning to pilots on final approach. The flashing PAPI indication is not to be considered a mandatory "go around" signal but, rather, a signal to the pilot that heightened awareness is demanded while continuing the approach and that an enquiry to the tower should be made.

The operational evaluation of FAROS is now in its third phase. This is an operational phase in which the fully functioning system will detect unauthorized aircraft or vehicles and trigger the PAPI lights to flash as a caution to pilots on final approach that the runway is not clear. Pilots will be asked for their opinions after experiencing the system during the operational phase by completing an on-line survey. After the evaluation phases are complete, the technical data and survey results will be analyzed to determine the system's technical functionality and stability.

The original target date for the operational phase of FAROS was scheduled to begin in the spring of 2006. This date was postponed until August 1, 2006. Since August 1, 2006 pilots have been invited to participate in the evaluation by providing feedback about the systems operation under actual conditions. Unfortunately, there has been little feedback from the pilots. Long Beach tower tapes indicate that the system has functioned as designed; however, feedback (positive or negative) from pilots is not forthcoming. The FAA is now offering a small incentive program (a free computer memory stick) for pilots who experience the FAROS system and who relay their comments to the FAA via the following website:
http://www.faa.gov/and/and500/520/programs/documents/FAROS%20Pilot%20Questionnaire%20.doc

Future applications of FAROS include Enhanced FAROS which is basically the same system tied into the local radar facility. This would keep the incursion signal from flashing the PAPI lights unless there is an aircraft on final approach within certain pre-determined parameters.

QUARTERLY STATISTICS

HOW ARE WE DOING?

Vehicle/Pedestrian Deviation Tracking in the Western-Pacific Region

Calendar Quarter 2006

Month	Vehicle	Pedestrian	V/PD
Jan	1	1	2
Feb	2	1	3
Mar	2	2	4
Total	5	4	9

Calendar Quarter 2007

Month	Vehicle	Pedestrian	V/PD
Jan	*3	0	3
Feb	*1	1	2
Mar	4	3	7
Total	8	4	12

(*Includes 2 aircraft taxied by maintenance crews)

Total V/PDs in the Western-Pacific Region in the calendar year 2005:	77
Total V/PDs in the Western-Pacific Region in the calendar year 2006:	42
Total V/PDs in the Western-Pacific Region year to date CY 2007:	12

*All statistical data supplied by the National Runway Safety Program database.

For more information Airport Managers may consult the following sources of information:

Surface Systems–Final Approach Runway Occupancy Signal (FAROS)

http://www.faa.gov/and/and500/520/programs/FAROS.htm

http://www.faa.gov/and/and500/520/programs/documents/FAROS%20Pilot%20Questionnaire%20.doc

http://www.faa.gov/airports_airtraffic/airports/runway_safety/faros/

Certalert No. 06-05 Stop Runway Incursions and Surface Incidents Now

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