

Airfield Surface Assessment and Reconnaissance (ASAR) at 4 CES

By Lt Zulfiqar

4 Construction Engineering Squadron (4 CES) has been training successive rotations of ASAR teams since its inaugural session in September 2010. The role of the ASAR is to conduct airfield surface(s) assessments, and from this data determine which airframes, in keeping with air mission requirements, the airfield can safely support (i.e. loading, number of take-offs/landings, etc). The need for this capability within the RCAF was highlighted following the earthquake in Haiti in 2010 when Comd 1 CAD had to draw on civilian expertise in his airfield pavements cell in A4 CE to determine whether Hercules aircraft could operate from sites in the country as the expertise was not then resident within his military CEngs to provide this advise. The ASAR course is the brainchild of the A4 CE Infra airfield pavements cell with input from 4 CES staff that provides regular feedback on challenges and issues arising following each course serial.



Rav Clement in Port au Prince, Haiti.



Maj Porteous, CO 4 CES, reviewing survey levelling data with Cpl McLay during the recent ASAR course in Comox.

ASAR is comprised of 4 main tasks; confirming Obstacle Limitation Surfaces (OLS), determining soil bearing strength (CBR), calculating Pavement Condition Index (PCI), and conducting a surface profile survey of the runway and airstrip. The current concept of operations for ASAR is to have a minimum 2-person or preferably a 4-person ASAR team arrive on site and gather all the required data for the airfield over a 1-3 day period (depending on pers resources and tactical situation) following which they would input the data and provide an ASAR report back to 1 CAD with recommendations as to the usability of the airfield for RCAF operations.

In March 2013, 4 CES instructed the most recent serial of the ASAR course at 19 Wing Comox. A total of 14 members were qualified, increasing the list of ASAR qualified pers to over 40. Recent iterations of the RCAF's High Readiness Mission Support Element (MSE) units have included a small ASAR team and this iteration was no exception with Comox putting through four

of their own in preparation for their High Readiness (HR) period that begins this July 1st. Other teams attending the training were from 8 Wing Trenton and from Base Petawawa.

To date ASAR assessments have been carried out on recces to airfields in Valcartier Que, Wainwright AB, Beauval Sk, and most recently to Peawanuck Northern ON. Capt Hartwig, a one time student and instructor of the course from CFB Cold Lake had this to say: “It (ASAR) has developed into a very practical and expedient method of ensuring that austere and remote airfields are capable of supporting CF aircraft. It is exciting to see ASAR in demand and utilized in remote regions of the world.”

Confidence in personnel trained in ASAR from senior staff in 1 CAD Air Div is growing. “ASAR gives CF the opportunity to understand the major elements of the airports and runways, and have a better understanding of the relationships between different airplanes and different runways surfaces like concrete, asphalt and gravel. ASAR is a very important task for RCAF CEngs and it is fun as well. My team has been tasked to do ASAR this summer for two runways in the high Arctic; Cambridge Bay, NU and Hall Beach, NU. The team is very excited to carry out these tasks” said Capt Kouchekan-Zadeh from 8 Wing Trenton.



Capt Kouchekan-Zadeh and Sgt Stacey from 8 Wg Trenton, using a Dynamic Cone Penetrometer (DCP) to determine soil strength during the course in Comox.