

# Residual Risk Audit at the former Tracadie Range, Near Tracadie-Sheila, New Brunswick

## Location and History

The former Tracadie Range is made up of more than 18,000 hectares of land and waterways near the town of Tracadie-Sheila in northeastern New Brunswick. The Army and Air Force used the area as a firing range from 1939 until 1994. In 1994, with the closure of nearby CFB Chatham, the range became surplus to Department of National Defence (DND) requirements.

In 1997, the property was transferred from DND to the Province of New Brunswick. The transfer agreement required that the lands be cleared of Unexploded Explosive Ordnance (UXO) sufficiently to permit forestry, blueberry cultivation and recreational uses. DND carried out UXO clearance work from 1997 to 2001, to mitigate the UXO risk to a level that would permit the designated activities to take place.

Despite the clearance, there will always be a possibility that munitions-related items remain on the land. Clearance was only conducted to a depth of 45cm, sufficient to permit the designated uses. To clear the property of all UXO is technologically impossible and financially impractical. Because of the residual risk, the permitted land uses will remain limited and the lands will remain under Crown administration and control. Great care must be taken in perpetuity in both ascribing land uses and the carrying out of those activities on the land.

## Residual Risk Audit

In 2002, the Province conducted a basic assessment of the UXO clearance work and became concerned that the residual risk might be higher than anticipated. As a result, the Province restricted use of the former impact areas to surface use, postponing any forestry and commercial blueberry activities, and contacted DND with its concerns. The DND UXO Program Management Office (PMO), which has a policy of reviewing previous UXO clearance work on a five-year basis, agreed to conduct a comprehensive Residual Risk Audit (RRA) of the former Tracadie Range.

The RRA will:

- assess whether or not the original UXO Clearance achieved a level of residual UXO risk that would safely permit the designated property uses;
- assess whether unacceptable levels of risk can be reduced through the application of new technology;
- determine if changes in physical conditions at the site, such as soil erosion, wave action, or the freeze-thaw cycle may be causing UXO to surface;
- determine if there have been changes in public accessibility and land use conditions that increases the level of risk at the site; and
- create a Statement of UXO Clearance Requirements that

DND can use to contract for additional risk mitigation measures that may be required to permit designated property uses to take place.

## Current Status

The Residual Risk Audit contract was awarded to AMEC Earth and Environmental (Fredericton Office) at the end of April 2006. Work is currently underway, with an expected completion date of the end of October 2006.

A significant element of the RRA is an assessment of the capabilities of current UXO detection equipment. UXO detection equipment has evolved considerably since the commencement of the original Tracadie Range clearance in 1997. Information gathered on the capabilities of modern UXO detection equipment will enable DND to better plan and implement future clearance operations.

During the assessment of the state-of-the-art detection equipment, it has been necessary to dig below the 45cm clearance depth designated in the original clearance contract, in order to confirm whether an anomaly predicted to be munitions of a certain size and depth was actually of the size and depth predicted by the software. As a result of these digs, live ordnance has been discovered.

Finding live ordnance does not necessarily indicate a failure of the original clearance contract. Some live ordnance has been found buried below the designated clearance depth. This UXO did not present an unacceptable level of risk for the designated property uses, however, it was the opinion of the investigative team that the ordnance should be blown-in-place, vice reburied, due to the risk associated with reburying the round. Hence, CFB Gagetown has been asked to provide Explosive Ordnance Disposal (EOD) responses, to eliminate UXO. The web site pictures show one of these EOD Responses, the demolition of a 60mm UXO round.

## Next Steps

Following completion of the RRA, DND, in consultation with the Province, will determine what additional risk mitigation measures are required to ensure that the property continues to be safe for the designated uses. The UXO Program will rectify any identified deficiencies and will remain engaged with the Department of Natural Resources for the foreseeable future, to ensure that the designated property uses can be engaged in safely.

## Further Information

The Province of New Brunswick web site also provides information on the former Tracadie Range: [http://www.gnb.ca/0263/tracadie\\_range-e.asp](http://www.gnb.ca/0263/tracadie_range-e.asp)

