Alberta Government

amec Environment & Infrastructure

PEACE REGION – SWAN HILLS
GEOHAZARD RISK ASSESSMENT
SITE INSPECTION FORM

SITE NUMBER	SITE NAME	HIGHWAY & KM	PREVIOUS INSPECTION DATE	INSPECTION DATE
SH 28	Little Smoky SH28	HWY 744:02	May 31, 2011	July 5, 2012

LEGAL DESCRIPTION	NAD 83 COORDINATES	PREVIOUS RISK ASSESSMENT		
LSD 13-18-76-22 W5M	N6160721 E474084	**PF: 10**	**CF: 3**	**TOTAL: 30**
		CURRENT RISK ASSESSMENT		
		PF: 9*	**CF: 3**	**TOTAL: 27**
		*There are currently no slope movement instruments installed at this site and it is difficult to estimate rates of slope movement**.**		

SUMMARY OF SITE INSTRUMENTATION:	INSPECTED BY:
No Instruments **LAST READING DATE: N/A**	(i) AMEC: John Richmond, Eric Paton (ii) AT: Ed Szmata, Roger Skirrow

PRIMARY SITE ISSUE:

Localized failure on embankment (4 to 5 m high) and natural slope adjacent to Highway 744, that occurred in fall 2004**.** Oval shaped failure encroaching on highway. Currently, the failure backscarp is 3 m from the highway (asphalt) and there appears to be no change from 2011. The 2011 assessment also reported a 3m separation between the failure backscarp and the highway shoulder.

Based on a discussion with AT staff and local AMEC experience, t is possible that the feature is failed waste fill material that has been saturated and failed on the natural grade. The backslope ditch is wet and it is possible there is seepage from the backslope side, under the highway and into the failure area.

There was no evidence of movement at the time of the inspection. Grass (vegetation) has grown along the failure mass and scarps.

Note: Refer to previous inspection reports for further details

APPROXIMATE DIMENSIONS:

Oval shaped failure approximately 45 m wide (along highway) and about 35m in length (perpendicular to highway). The headscarp is up to 3 m in height, and currently 3 m from road. The failure mass is estimated to be approximately 3 m deep at its deepest. The overall embankment slope slopes at 19 degrees from horizontal.

DATE OF ANY REMEDIAL ACTION:

None. There is no plan to remediate the site.

ITEM	CONDITION EXISTS		DESCRIPTION AND LOCATION	NOTICABLE CHANGE FROM LAST INSPECTION		
	YES	NO		YES	NO	See Comment
PAVEMENT DISTRESS		X			X	
SLOPE MOVEMENT	X		Oval shaped failure of possible saturated, waste fill.		X	
EROSION		X			X	
SEEPAGE	X		Possible seepage from backslope ditch, under highway and into failure area.			X
OTHER		X			X	

COMMENTS:

The mechanism of failure is not known with certainty. It is estimated that the feature is failed waste fill that has been saturated and failed on the natural grade. An investigation and possible instrumentation would be required if remedial works was planned.

Annual inspection of the site should be continued.

Short term repairs of the road surface including, milling, patching, and crack filling should be carried out as required when distortion/settlement and cracking of pavement occurs. Longer term remediation may include drainage improvements, slope flattening/buttressing, and/or placement of a berm.