

# **NATIONAL TRANSPORTATION SAFETY BOARD**

**Washington, D.C.**

## **Attachment V REFERENCE 33**

33. IR 357: NTSB verbal request of 2/26/2012 regarding significant crack length. Page 1

**07-26-10  
Marshall, MI  
DCA10-MP-007**

**MP 608 – Marshall, Michigan Incident  
NTSB/PHMSA Information Request No. 340**

**340 Reference:** NTSB verbal request of February 6, 2012 by Ravi Chhatre

**Preamble:**

**Request:** With regards to section 6 of the 2003 Field Assessment Procedures,  
 a) Was the failed feature considered “significant” per the definitions in 6.1?  
 b) Does Enbridge grind remove all SCC as required in Table 1 of section 6.4?

**Response:** a) Understanding that (1) SCC dimensions are only determined in the field and not from ILI, (2) section 6.1 only applied to Canadian pipelines, (3) the term “Significant SCC” does not necessarily relate to SCC severity, (4) and that CEPA removed this definition from their updated Recommended Practice, the following table provides the length pertaining to 75% of the critical crack length for 30”OD x 0.25” wt pipe determined for 50% deep cracks exposed to internal pressure of 110%SMYS.

CVN (ft-lb)	YS (ksi)	UTS (ksi)	75% of Critical Length (in)
20	52	66	0.98
	56	71	1.75
	60	75	2.47

b) All SCC confirmed by field NDE technician is mitigated through surface grinding, installation of a pressure containing sleeve, or through cutout. Table 1 of section 6.4 is intended to relate limits to grinding and the maximum operating pressure during these mitigation activities, and not the necessary repair itself. There are field conditions, such as local geometry, that prevents UT examination for other potential flaws, and that prevent grind removal of all shallow SCC. In these cases, a pressure containment sleeve is also a mitigation option allowed by our O&MP.