



CONNECTION ASSESSMENT & APPROVAL PROCESS

ASSESSMENT SUMMARY

Applicant: INCO Limited: Port Colborne Refinery

Project: Install New 115kV Circuit Switcher

CAA ID No. 2002-EX042

***Long Term Forecasts & Assessments Department
Consistent Information Set Department***

Date: 6th June 2002

ASSESSMENT SUMMARY

INCO Limited: Port Colborne

Install a new 115kV Circuit Switcher

1.0 GENERAL DESCRIPTION

The existing INCO TS in Port Colborne is connected to the 115kV radial circuit C2P from Crowland TS via an existing disconnect switch. Circuit C2P is, in turn, connected through a load-break switch at Crowland TS to circuit A6C from Allanburg TS.

INCO is proposing to install a new 115kV circuit switcher that will be used to isolate faults involving the single step-down transformer at the TS; thereby avoiding the need to trip the main 115kV circuit breakers associated with circuit A6C at Allanburg TS.

The scheduled in-service date for the new circuit switcher is 20th July 2002.

2.0 PROPOSED WORK

In addition to installing the new 115kV circuit switcher, INCO is proposing to install the following new facilities at their TS:

- 120kV & 12kV station class surge arresters
- A new 40 ohm grounding resistor, rated for 200A, on their step-down transformer
- New, duplicated protective relaying
- New revenue metering

Specification for the new 115kV circuit switcher

Siemens CPV2 SF ₆	
Maximum operating voltage	145kV continuous
Rated interrupting capability	31.5kA

Low SF ₆ gas pressure alarms:	Alarm initiated at 57 psig (@ -40°C)
	Lock-out at 51 psig (@ -40°C)

When the circuit switcher locks-out, the TRIP & CLOSE circuits are automatically disabled. Should a fault occur while the circuit switcher is locked-out, the breaker-failure scheme for the circuit switcher would be initiated, sending a remote trip signal to the main breakers at Allanburg TS.

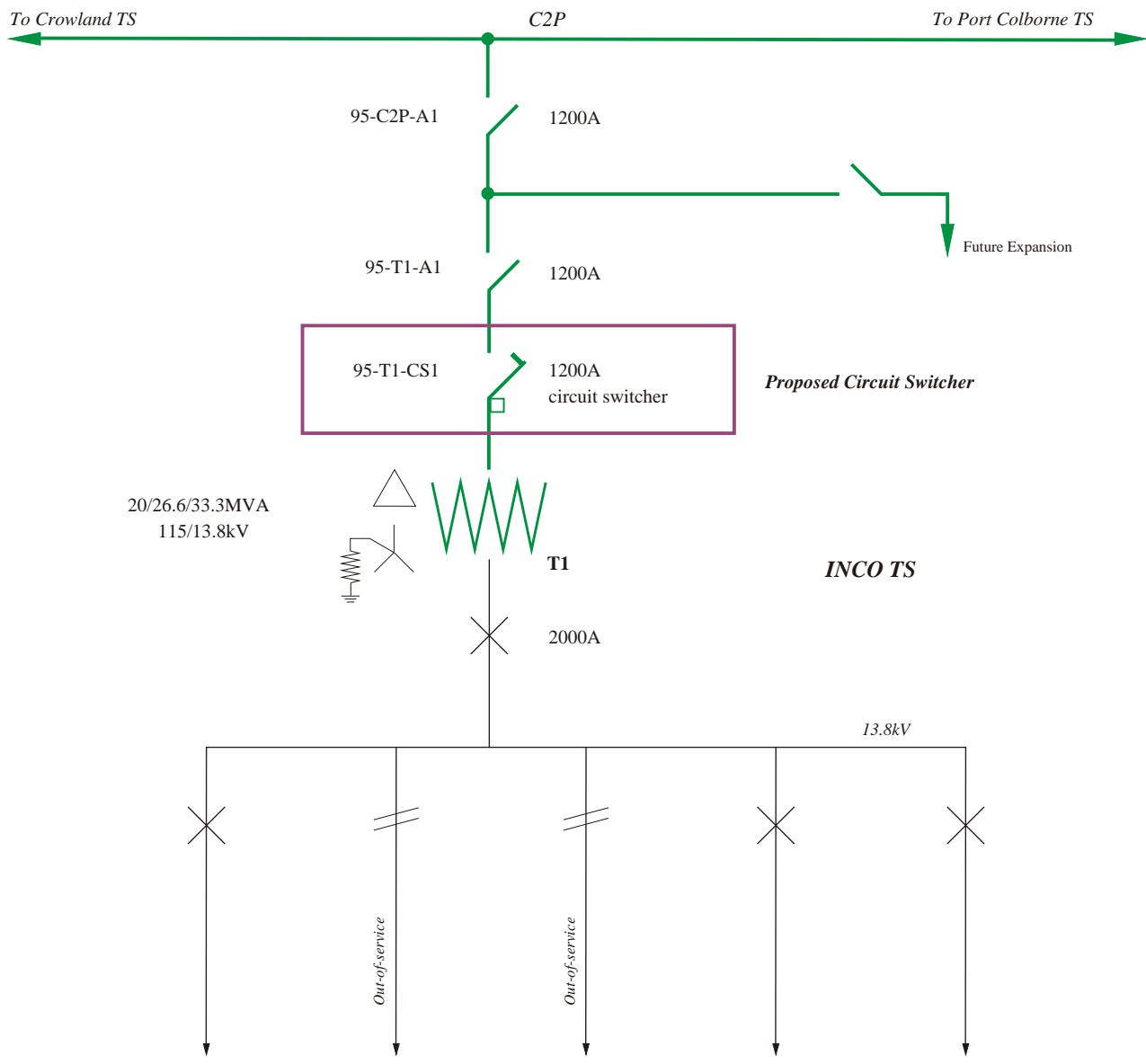
3.0 ASSESSMENT

The installation of the proposed 115kV circuit switcher at the INCO TS would avoid the need to remove circuits A6C & C2P from service in the event of a fault involving the step-down transformer at the TS.

It would therefore be expected to have a beneficial impact on the overall reliability of the IMO-controlled grid.

4.0 NOTIFICATION OF APPROVAL

It is therefore recommended that a Notification of Approval of the Connection Proposal be issued.



**Proposed Installation of a New 115kV Circuit Switcher
at INCO TS - Port Colborne**