Connected Systems, CSEPs and ISEPs

Introduction

At the mod 0440 workgroup on 29th October 2013 following a discussin on the proposed new clause G 1.4.7,WWU was asked to produce some diagrams of arrangements it believed were permitted and not permitted by the UNC. This document is produced to aid this discussion.

I list below relevant portions of the UNC, with our interpretation of them and then apply this to some real examples. The last example shows an arrangement that we believe no one would support which we believe would be allowed if the code was interpreted too loosely.

Relevant extracts from the UNC

The extracts below are the relevant section of the UNC Transportation Principal Document

TPD A

3 EXIT POINTS

3.1 Individual System Exit Point

An "**Individual System Exit Point**" is an Individual System Point at which gas can flow out of the Total System.

3.2 System Exit Point

3.2.1 A "**System Exit Point**" is a System Point comprising one or more Individual System Exit Points.

3.2.2 The classes of System Exit Point are:

(a) Supply Meter Points, Supply Point Components and Supply Points in accordance with paragraph 4, and further classes thereof in accordance with that paragraph; and

(b) Connected System Exit Points.

3.3 Connected System Exit Point

3.3.1 A "**Connected System Exit Point**" (or "**CSEP**") is a System Point comprising one or more Individual System Exit Points which are not Supply Meter Points.

3.3.2 Section J1.4.2 sets out the basis on which Individual System Exit Point(s) are or are to be comprised in a Connected System Exit Point.

3.3.3 In the case of a Connected System Exit Point, in accordance with Section J6.1, the relevant provisions of the applicable CSEP Network Exit Provisions apply in addition to the provisions of the Code.

3.3.4 A Connected System Exit Point is an "**Unmetered**" Connected System Exit Point where at any Individual System Exit Point comprised in the Connected System Exit Point there is no meter for the purpose of measuring the volume of gas offtaken from the Total System, and otherwise is a "**Metered**" Connected System Exit Point.

3.3.5 Where so provided in the relevant CSEP Network Exit Provisions, a Connected System Exit Point may be treated as comprising separate System Exit Points for such purposes as are specified in such Network Exit Agreement, and references in the Code to Connected System Exit Points shall be construed accordingly.

TPD G

1.4 Connected System Exit Points

1.4.1 In accordance with Section A3.3, a Connected System Exit Point is a System Exit Point (other than an Inter-System Offtake) comprising one or more Individual System Exit

Points which are not Supply Meter Points.

1.4.2 The Individual System Exit Point or Individual System Exit Points comprised in a Connected System Exit Point will be specified in the applicable Network Exit Provisions.

1.4.3 For the purposes of the Code a "**Connected Offtake System**" is a single system or facility (comprising pipeline(s), plant and/or other installations) operated by one person (or jointly operated by several persons) and connected to the relevant System at the Individual System Exit Point(s) comprised in a Connected System Exit Point.

1.4.4 Without prejudice to paragraph 1.1.2, a Connected Offtake System may be:

(a) a facility for the storage of gas;

(b) the pipeline system operated by another gas transporter;

(c) a pipeline interconnector by which gas is transported to another country;

(d) any other pipeline (other than a pipeline connecting the relevant System directly to single premises) or pipeline system.

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Interpretation of UNC

From TPD A 3.1 and 3.2 3.3 an Individual System Exit Point (ISEP) is an Individual System Point and a System Exit Point is a collection of one or more ISEPs which can be Supply Meter Points, Supply Point Components and Supply Points supply points or CSEPs.

Inasmuch as we do not allow Supply Points to be fed from more than one point on our System then given that CSEPs and Supply Points are both System Exit Points there is no reason why ISEPs should be fed from more than one point on our System. The code is not completely clear on this but this is the most logical construct).

However it is clear that just as currently (but this may change under mod xxxxx) that a Supply Point can comprise one or more meter points so can a CSEP comprise more than one ISEP

J1.4.2 says that the ISEPs included in a CSEP shall be defined in the necessary Network Exit Provisions. This means that there is latitude for a DN to agree to group ISEPs in a CSEP but there are not rules about it.

It is important to get the terminology correct the connected system for example an IGT network or private network (which may be operated by a party that does not require or has an exemption from holding a GT licence) is connected to the System (the DN's network) at the Connected System Exit Point. Often the connected system is incorrectly referred to as a CSEP.

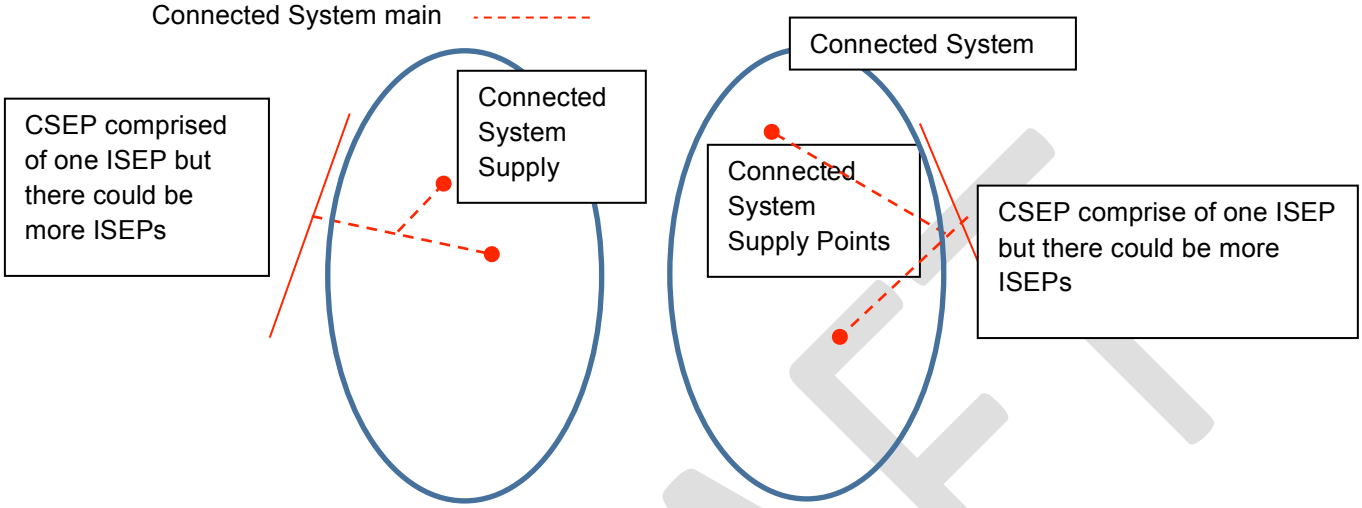
Examples and discussion

Example 1

WWU's view is that the arrangement below is allowed (and is very common)

DN main

Connected System main



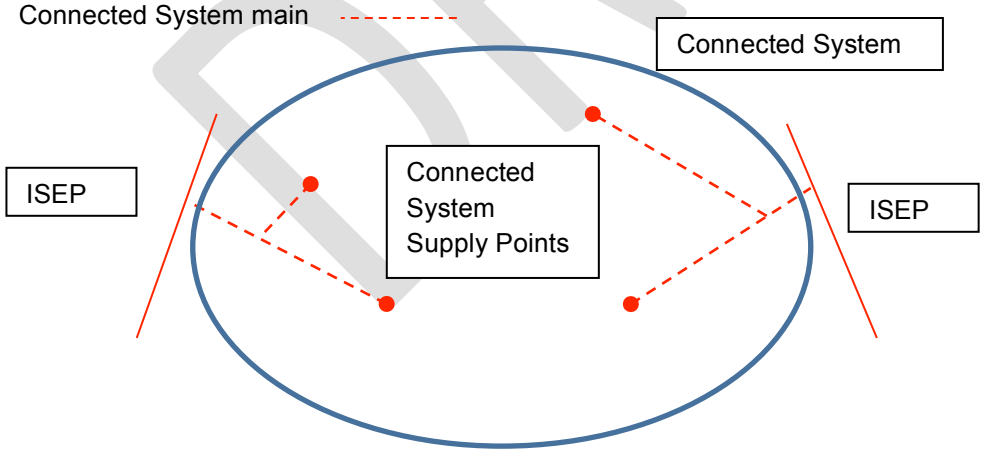
Example 1 is straightforward and needs no discussion

Example 2

WWU's view is that the following arrangement is permitted

DN main

Connected System main



In this case the two ISEPs are will be defined (at the DN's discretion) as being included in one CSEP in the Netowok Exit provisions applicable to this connected system. The DN main in this example could be the same main or different mains.

In this case the CSEP is comprised of several ISEPs which are not (by definition) interconnected. Examples of such arrangements would include a development where different parts were fed from two different legs of an LP system or a development fed by several connections from the same main

where engineering considerations meant that this was more convenient that taking one connection from the DN main. More complex examples could be constructed where each CSEP in example 1 contained more than one ISEP as in example 2; however the key requirement is that each ISEP is only connected to the DN System at one point.

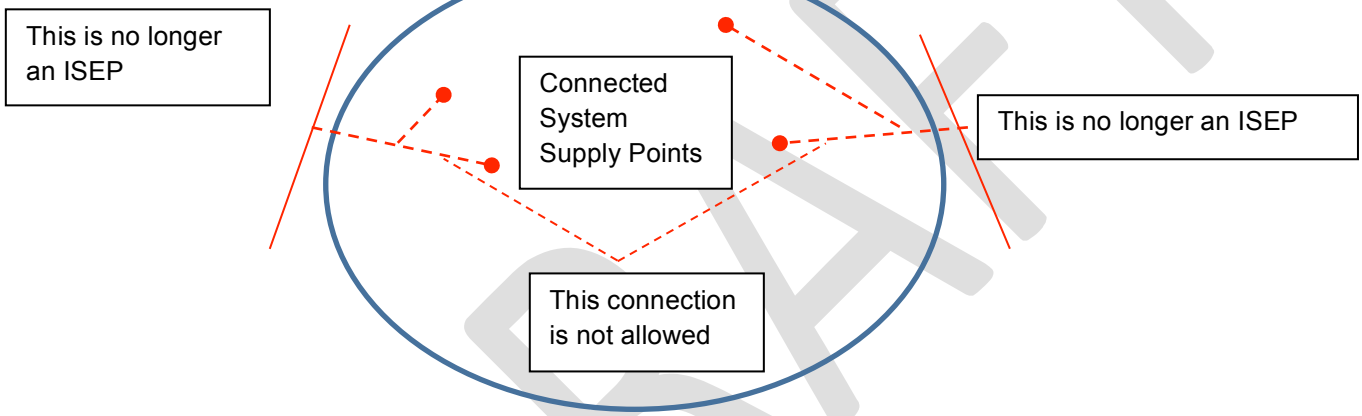
What is not permitted is one connected system which is joined to the DN System at two points and where gas could flow out of the DN system through the connected system and back into the DN system.. This could occur either in the above example where some of the individual connected systems connected to ISEPs are linked or where two previously unlinked connected systems each with its own CSEP are linked, perhaps in response to further housing development While in practice these two occurrences may stem from different causes the practical and legal effects are the same.

Example 3 connecting ISEPs (which are in one CSEP) within a connected system

WWU's view is that this arrangement is not permitted

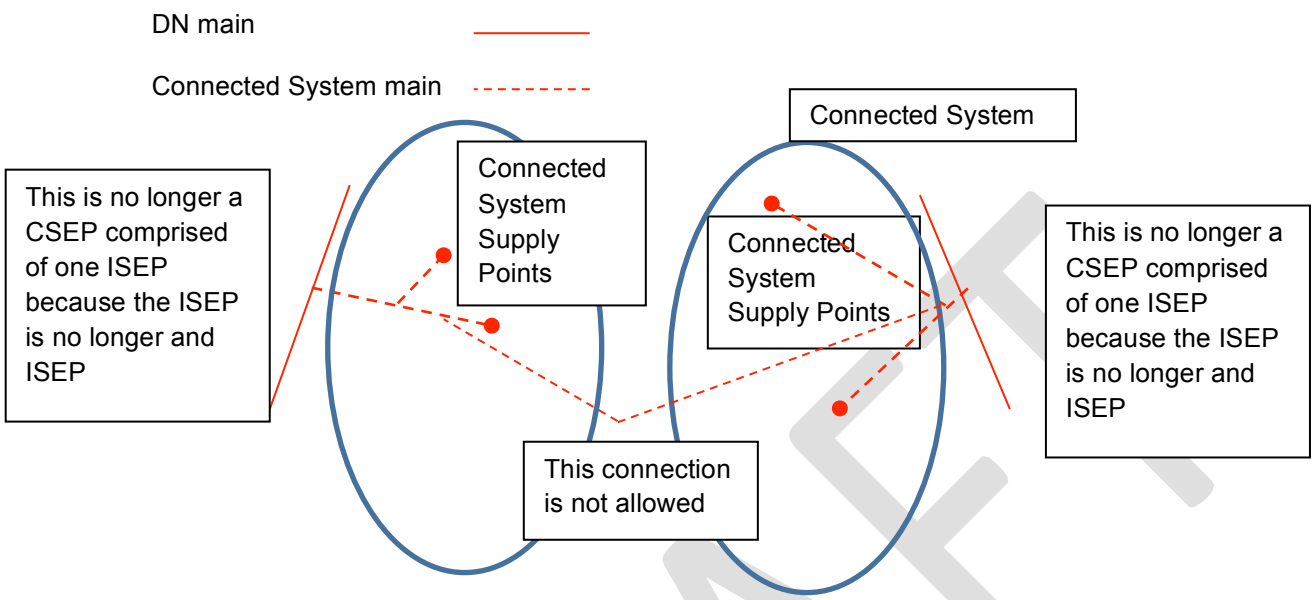
DN main

Connected System main



Example 4 Interconnecting two connected systems which are separately connected to the DN System at ISEP(s) each contained in separate CSEPs

WWU's view is that linking the two connected systems shown in example 2 as shown below is not allowed



While we accept that examples 3 and 4 could be cheaper for the connected system operator and could satisfy the Connected System Operator's obligation under Gas Act section 9 to develop and operate an economic and efficient system it **does not** satisfy the DNs obligation as it is not efficient nor safe to allow a third party to control flows in the DN system and therefore it is not reasonable for the DN to permit such a connetion. If the UNC is interpreted in this way it would allow a connected system operator to connect its system to for example, an IP main and an LP main and then potentially flow gas at over 2Bar into an LP system. No one would agree to this and therefore any interpretation of code that would allow it is either incorrect or the UNC needs amending to prevent it. WWU believes that the UNC does not bear this interpretation.

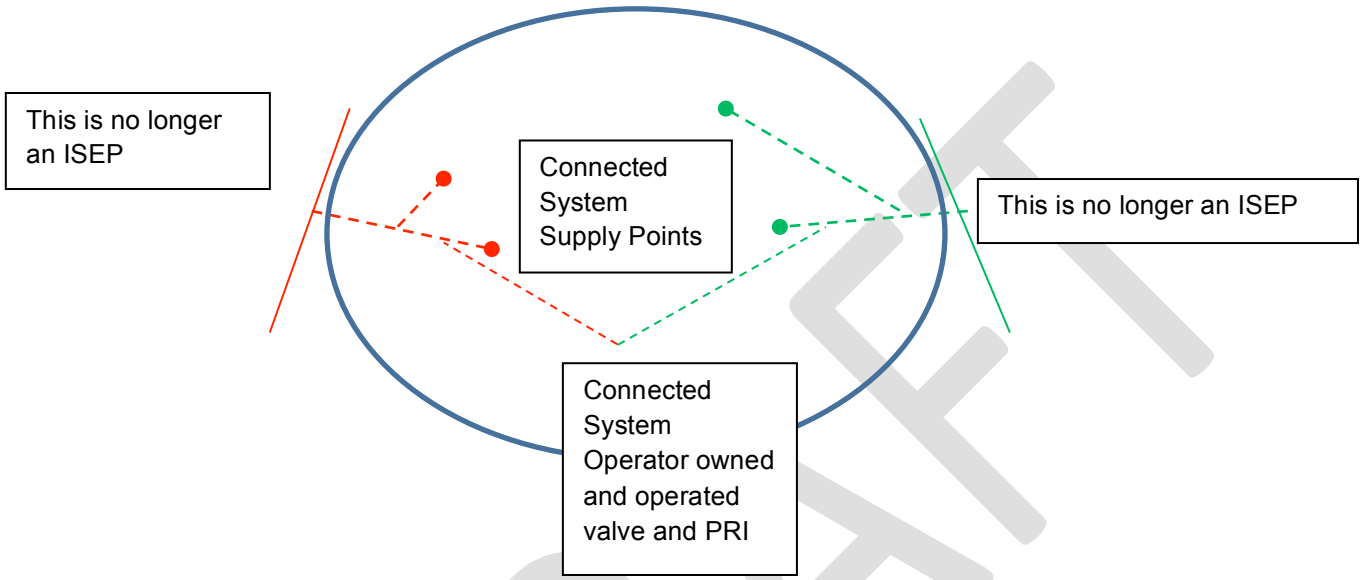
Example 5 Would you want to allow the arrangement below?

DN LP main

Connected System LP main

DN IP main

Connected System IP main



At the very least the “ISEP” on the DN’s LP main would require need to be an exit and entry point (with its requirements for CV measurement etc.)and the DN would want to have knowledge of when the valve was open and would want to see details of ongoing compliance with Pressure Safety System Regulations.

Summary

WWU believes that while there will be multiple cases of CSEPs comprising of several ISEPs which each support a separate connected system there should be none or very few cases of connect systems joined at two points to a DN System. Where these occur they should be addressed by the nietwork on a case by case basis and the connected system operator.