Hydro One Networks Inc.
8th Floor, South Tower
483 Bay Street
Toronto, Ontario M5G 2P5
www.HydroOne.com

Tel: (416) 345-5700
Fax: (416) 345-5870
Cell: (416) 258-9383
Susan.E.Frank@HydroOne.com

Susan Frank
Vice President and Chief Regulatory Officer
Regulatory Affairs

BY COURIER

March 17, 2008

Mr. Chris Pappas
RR 2
Meaford, ON.
N4L 1W6

Dear Mr. Pappas:

EB-2007-0050 – Hydro One Networks' Section 92 Bruce - Milton Transmission Reinforcement Application – Hydro One Networks' Response to Interrogatory Questions from Mr. C. Pappas

I am attaching an electronic copy and a paper copy of the responses to the interrogatory questions in your third list (questions 12 to 16). The paper copy will be sent for overnight delivery by Purolator on March 17, 2008.

Intervenors and the OEB are being provided electronic copies by email today. CDs are available on request and these responses will be available for download from the Hydro One Networks regulatory website.

Sincerely,

ORIGINAL SIGNED BY ANDREW PORAY FOR SUSAN FRANK

Susan Frank

c. Kirsten Walli, Ontario Energy Board
EB-2007-0050 Intervenors (by email)
M. Heinz, Ontario Power Authority (by email)

Pappas INTERROGATORY #12 List 3

Interrogatory

Issues

1.0 Project Need and Justification

1.1 Has the need for the proposed project been established?

1.4 Is the project suitably chosen and sufficiently scalable so as to meet all reasonably foreseeable future needs of significantly increased or significantly reduced generation in the Bruce area?

4.0 Reliability and Quality of Electricity Service

4.1 For the preferred option, does the project meet all the requirements as identified in the System Impact Assessment and the Customer Impact Assessment?

4.2 Does the project meet applicable standards for reliability and quality of electricity service?

4.3 Have all appropriate project risk factors pertaining to system reliability and quality of electricity service been taken into consideration in planning this project.

Ref. 1) APPENDIX A to Procedural Order No. 5 IN THE MATTER OF Leave to Construct Application by Hydro One Networks EB-2007-0050 DATED February 25, 2008

Preamble:

Some of the requested information, following, is available in IESO and Hydro One documents. However, the preference, here, is to have it all available in one document.

Request

Provide the following information for the existing transmission lines energized by the Bruce Nuclear generation facility and for the proposed new Bruce to Milton circuits – the designation of each circuit [eg. N582L], the 'geographical' designation of each circuit [eg. Bruce to Milton], the voltage [eg. 500 kV, 230 kV], the Amperage Rating [eg. 1400 amps, 4100 amps], the power rating in MW, the power actually carried on average, in MW for each, the power carried, in MW on each during Provincial Demand Peaks of 25000 MW, 27000 MW and 29000 MW, the length in km, the power factor [eg. 0.95, 0.9] and the conductor for each. For this last, provide the conductor Type, size

[diameter], cross section Area in mks units, temperature rating, resistance R in ohms [cross section Area], resistivity p in ohm-meters, and resistance R in ohms/km [length]. Provide this in a graphical form similar to the following:

Circuit: 1 2 3 4 5 6 7 8 9 10 [Proposed, eg. 11, 12]
[eg. Designation 1 = n582L]

Circuit: 1 2 3 etc.
[eg. 'geographical' designation]

Voltage: 1 2 3 etc.
kV

Rating: Amps

Rating: Power, MW

Power: Average Non-peak Transmitted MW

Power: MW During Provincial Demand
25000 MW

Power: MW During Provincial Demand
27000 MW

Power: MW During Provincial Demand
29000 MW

Length: Km

Power Factor

Conductor

Type
Diameter
Cross Section Area [mks]

Rating: Temperature

Resistance R: [cross section Area]
Ohms

Resistivity p: Ohm-meters

Resistance:
Length
Ohms/km

[These last three are required as asked to provide R = p L/A ohms.]

Response

Please see the table below.

Table of Transmission Line Data for Pappas IR #12

Line	In Service Date	Firm Capacity *		Capability (MW) **	Avg Loading (2007) *****	Max Loading (2007) *****	Length	Conductor Type, Stranding, Conductors per bundle	Conductor Size (diameter)	Conductor Cross Section Area		Temperature Rating	Conductor Resistance	Conductor Resistance (R/Length)	Conductor Resistivity (ρ)
		Amps	MW*	Total of both circuits			km		m	kcmil	m^2	°C	Ω	Ω/km	Ω-m
230 KV TRANSMISSION LINE BRUCE TO HANOVER/ORANGEVILLE:															
Bruce x Hanover - B4V & B5V	26-Nov-63	1019	423	284	452	560 (B4V) & 340 (B5V)	48	ACSR, 42/7,1	0.02870854	1277.5	0.0006473	127	2.5975	0.053873	3.487E-08
Hanover x Orangeville - B4V & B5V	10-Dec-61	991	412	287	378	293 (B4V) & 267 (B5V)	77	ACSR, 54/19, 1	0.02773703	1192.5	0.0006042	104	4.3488	0.056296	3.402E-08
230 KV TRANSMISSION LINE BRUCE TO OWEN SOUND:															
Bruce x Owen Sound - B27S & B28S	31-Oct-77	860	357	273	175	230 (B27S) & 160 (B28S)	69	ACSR, 26/7, 1	0.02453023	932.7	0.0004726	140	4.7902	0.069594	3.289E-08
230 KV TRANSMISSION LINE BRUCE TO DETWEILER:															
Bruce x Seaforth - B22D & B23D	11-Oct-75	991	412	278	374	355 (B22D) & 355 (B23D)	111	ACSR, 54/19,1	0.02773703	1192.5	0.0006042	150	6.2305	0.056296	3.402E-08
Seaforth x Detweiler - B22D & B23D	20-Nov-70	860	357	274	135	163 (B22D) & 156 (B23D)	81	ACSR, 26/7, 1	0.02453023	932.7	0.0004726	120	5.6436	0.069594	3.289E-08
500 KV TRANSMISSION LINE BRUCE TO MILTON*:**															
Bruce x Milton - B561M	1-Apr-83	2636	2442	2040	2051	1655 (B561M)	176	-	-	-	-	-			-
Section 1							18	ACSR, 26/7, 4	0.02453023	932.7	0.0004726	127	1.2724	0.069594	3.289E-08
Section 2							158	ACSR, 26/7, 4	0.01942713	585	0.0002964	127	17.3424	0.110045	3.262E-08
Bruce x Milton/Claireville - B560V	1-Oct-94	2636	2442			1525 (B560V)	209								
Section 1							3	ACSR, 26/7, 4	0.02264719	795	0.0004028	127	0.2112	0.080033	3.224E-08
Section 2							206	ACSR, 26/7, 4	0.01942713	585	0.0002964	127	22.7161	0.110045	3.262E-08
500 KV TRANSMISSION LINE BRUCE TO LONGWOOD:															
Bruce x Longwood - B562L	26-Nov-90	2636	2442	2038	1103	995 (B562L)	189								
Section 1							3	ACSR, 26/7, 4	0.02264719	795	0.0004028	127	0.2241	0.080033	3.224E-08
Section 2							15	ACSR, 26/7, 4	0.02453023	932.7	0.0004726	104	1.0775	0.069594	3.289E-08
Section 3							171	ACSR, 26/7, 4	0.01942713	585	0.0002964	127	18.7673	0.110045	3.262E-08
Bruce x Longwood - B563L	26-Nov-90	2636	2442			1020 (B563L)	189								
Section 1							3	ACSR, 26/7, 4	0.02453023	932.7	0.0004726	127	0.1949	0.069594	3.289E-08
Section 2							186	ACSR, 26/7, 4	0.01942713	585	0.0002964	127	20.4684	0.110045	3.262E-08
New 500 KV TRANSMISSION LINE Bruce TO MILTON:															
Bruce x Milton - B566M & B567M		2636	2443	2040	-	-	176	ACSR, 26/7, 4	0.01942713	585	0.0002964	127	19.3544	0.110045	3.262E-08

* The MW are calculated from the Ampere capacity assuming the appropriate voltage of 120 kV, 240 kV or 535 kV at a power factor of 0.9.
Firm Capacity means the capacity available on that line assuming that one of the two circuits is out of service.

** Capability means the power that can be transmitted along the line without requiring additional voltage support from other sources. This number is also known as the Surge Impedance Loading (SIL). The SIL can be increased by adding shunt or series compensation. A shunt capacitor bank is an example of shunt compensation. Although it is possible to reliability transmit power along the line in excess of the SIL, the voltage performance suffers. For a transmission path of about the length of the circuits in the Bruce area, exceeding SIL by more than 50% is not realistic unless a large amount of compensation is provided.

*** When this line was first placed into service in 1983, both circuits went to Milton SS and the two circuits were known as B560M and B561M.
On October 1, 1994, the B560M circuit was reconfigured at Milton SS to bypass Milton SS and terminated instead at Claireville TS. It was renamed to B560V to reflect the change in termination. This change increased the length by 33 km. The capacity and capability of the line did not change as a result.
A portion of the Bruce x Milton line was initially placed into service in 1979 and operated at 230 kV in order to provide some additional transmission capacity before the construction of the line at the Milton end was completed. The portion that was so connected went from Bruce to Belwood Junction where it was connected to the 230 kV circuits D6V & D7V, Detweiler x Orangeville.

**** Power: Average Non-peak Transmitted MW is not readily available. Average 2007 loading is provided instead which encompasses on- and off-peak.

***** Power: MW During Provincial Demand of 29000 MW is not available.

Table of Transmission Line Data for Pappas IR #12

Line	Flow Distribution with new Bruce circuits, 8 Bruce units + 675 MW of committed wind generation	Flow Distribution with new Bruce circuits, 8 Bruce units + 675 MW of committed wind generation & 1000MW of additional capacity in the Bruce Complex	Power Flow during Provincial Demand of 25,193 MW	Power Flow during Provincial Demand of 27,000 MW *****
	MW	MW	MW	MW
230 KV TRANSMISSION LINE BRUCE TO HANOVER/ORANGEVILLE:				
Bruce x Hanover - B4V & B5V	192 (B4V) & 193 (B5V)	217 (B4V) & 218 (B5V)	232 (B4V) & 234 (B5V)	261 (B4V) & 267 (B5V)
Hanover x Orangeville - B4V & B5V			172 (B4V) & 171 (B5V)	246 (B4V) & 200 (B5V)
230 KV TRANSMISSION LINE BRUCE TO OWEN SOUND:				
Bruce x Owen Sound - B27S & B28S	143 (B27S) & 65 (B28S)	152 (B27S) & 67 (B28S)	136 (B27S) & 67 (B28S)	152 (B27S) & 70 (B28S)
230 KV TRANSMISSION LINE BRUCE TO DETWEILER:				
Bruce x Seaforth - B22D & B23D	208 (B22D) & 208 (B23D)	223 (B22D) & 223 (B23D)	222 (B22D) & 222 (B23D)	237 (B22D) & 236 (B23D)
Seaforth x Detweiler - B22D & B23D			48 (B22D) & 47 (B23D)	66 (B22D) & 62 (B23D)
500 KV TRANSMISSION LINE BRUCE TO MILTON*:**				
Bruce x Milton - B561M	1243 (B561M)	1430 (B561M)	838 (B561M)	1186 (B561M)
Section 1				
Section 2				
Bruce x Milton/Claireville - B560V	1213 (B560V)	1409 (B560V)	687 (B560V)	1008 (B560V)
Section 1				
Section 2				
500 KV TRANSMISSION LINE BRUCE TO LONGWOOD:				
Bruce x Longwood - B562L	135 (B562L)	213 (B562L)	592 (B562L)	524 (B562L)
Section 1				
Section 2				
Section 3				
Bruce x Longwood - B563L	238 (B563L)	318 (B563L)	631 (B563L)	550 (B563L)
Section 1				
Section 2				
New 500 KV TRANSMISSION LINE Bruce TO MILTON:				
Bruce x Milton - B566M & B567M	1222 (B566M) & 1240 (B567M)	1407 (B566M) & 1427 (B567M)		

Pappas INTERROGATORY #13 List 3

Interrogatory

Issues

1.0 Project Need and Justification

1.1 Has the need for the proposed project been established?

1.4 Is the project suitably chosen and sufficiently scalable so as to meet all reasonably foreseeable future needs of significantly increased or significantly reduced generation in the Bruce area?

4.0 Reliability and Quality of Electricity Service

4.1 For the preferred option, does the project meet all the requirements as identified in the System Impact Assessment and the Customer Impact Assessment?

4.2 Does the project meet applicable standards for reliability and quality of electricity service?

4.3 Have all appropriate project risk factors pertaining to system reliability and quality of electricity service been taken into consideration in planning this project.

Ref. 1) APPENDIX A to Procedural Order No. 5 IN THE MATTER OF Leave to Construct Application by Hydro One Networks EB-2007-0050 DATED February 25, 2008

Preamble:

Some of the requested information, following, is available in IESO and Hydro One documents. However, the preference, here, is to have it all available in one document.

Request

Provide, in the case of only the existing circuits [from Interrogatory # 12], without the proposed new Bruce to Milton Transmission Build, the generation source for each existing circuit, from Bruce A or Bruce B, and which particular generating unit with its MW rating, for each circuit.

Response

The information cannot be provided in the requested format because in an interconnected power system such as the Bruce transmission system, all of the available generating units share the use of the transmission circuits in relation to the impedances of the circuits. A particular transmission circuit is not dedicated to the use of a particular generating unit. Instead, the output is shared amongst the available transmission paths.

Tables of transfer distribution factors have been generated below which indicate the % of power flow from the referenced nuclear or wind generators on each of the 10 available circuits emanating from Hydro One's Bruce switching station (Bruce SS) located within the Bruce Nuclear Complex. The Bruce SS is the common interconnection point for these circuits. The transfer values represent measurements taken at Bruce SS. The values assume positive for flows out of Bruce SS and negative for flows into Bruce SS. The wind generators connect to the Hydro One system at the 230 kV level at locations outside of the Bruce Nuclear Complex. The wind generation then feeds through connecting circuit(s) to the Bruce switching station and is redistributed to all the circuits at the station. As a result the flow direction is not the same for all the circuits, and this accounts for the difference in sign of the distribution factors.

Bruce Units	Percentage Power Flow Distribution Factors Of Existing Circuits Emanating out of Bruce SS									
	B560V (%)	B561M (%)	B563L (%)	B562L (%)	B4V (%)	B5V (%)	B22D (%)	B23D (%)	B27S (%)	B28S (%)
G1	17.3	19.2	20.2	21.2	5.5	5.5	4.5	4.5	1.9	0.3
G2	17.3	19.2	20.2	21.2	5.5	5.5	4.5	4.5	1.9	0.3
G3	20.0	22.2	22.0	23.1	3.0	3.0	2.7	2.7	1.0	0.2
G4	20.0	22.2	22.0	23.1	3.0	3.0	2.7	2.7	1.0	0.2
G5	19.1	23.5	23.2	22.0	2.9	2.9	2.6	2.6	1.0	0.2
G6	19.1	23.5	23.2	22.0	2.9	2.9	2.6	2.6	1.0	0.2
G7	19.1	23.5	23.2	22.0	2.9	2.9	2.6	2.6	1.0	0.2
G8	19.1	23.5	23.2	22.0	2.9	2.9	2.6	2.6	1.0	0.2

Pappas INTERROGATORY #14 List 3

Interrogatory

Issues

1.0 Project Need and Justification

1.1 Has the need for the proposed project been established?

1.4 Is the project suitably chosen and sufficiently scalable so as to meet all reasonably foreseeable future needs of significantly increased or significantly reduced generation in the Bruce area?

4.0 Reliability and Quality of Electricity Service

4.1 For the preferred option, does the project meet all the requirements as identified in the System Impact Assessment and the Customer Impact Assessment?

4.2 Does the project meet applicable standards for reliability and quality of electricity service?

4.3 Have all appropriate project risk factors pertaining to system reliability and quality of electricity service been taken into consideration in planning this project.

Ref. 1) APPENDIX A to Procedural Order No. 5 IN THE MATTER OF Leave to Construct Application by Hydro One Networks EB-2007-0050 DATED February 25, 2008

Preamble:

Some of the requested information, following, is available in IESO and Hydro One documents. However, the preference, here, is to have it all available in one document.

Request

Provide, in the case of the existing circuits [from Interrogatory # 12], with the addition of the proposed new Bruce to Milton Transmission Build, the generation source for each existing circuit and the proposed new circuits, from Bruce A or Bruce B, and which particular generating unit with its MW rating, for each circuit.

Response

The information cannot be provided in the requested format because in an interconnected power system such as the Bruce transmission system, all of the available generating units share the use of the transmission circuits in relation to the impedances of the circuits. A particular transmission circuit is not dedicated to the use of a particular generating unit. Instead, the output is shared amongst the available transmission paths.

Tables of transfer distribution factors have been generated below which indicate the % of power flow from the referenced nuclear or wind generators on each of the 10 available circuits emanating from Hydro One's Bruce switching station (Bruce SS) located within the Bruce Nuclear Complex. The Bruce SS is the common interconnection point for these circuits. The transfer values represent measurements taken at Bruce SS. The values assume positive for flows out of Bruce SS and negative for flows into Bruce SS. The wind generators connect to the Hydro One system at the 230 kV level at locations outside of the Bruce Nuclear Complex. The wind generation then feeds through connecting circuit(s) to the Bruce switching station and is redistributed to all the circuits at the station. As a result the flow direction is not the same for all the circuits, and this accounts for the difference in sign of the distribution factors.

Bruce Units	Percentage Power Flow Distribution Factors of Circuits Emanating out of Bruce SS											
	Existing										Proposed New	
	B560V (%)	B561M (%)	B563L (%)	B562L (%)	B4V (%)	B5V (%)	B22D (%)	B23D (%)	B27S (%)	B28S (%)	B566M (%)	B567M (%)
G1	11.1	11.0	17.2	18.2	4.8	4.8	4.1	4.1	1.6	0.3	12.0	11.0
G2	11.1	11.0	17.2	18.2	4.8	4.8	4.1	4.1	1.6	0.3	12.0	11.0
G3	12.9	12.7	18.6	19.7	2.2	2.2	2.1	2.1	0.7	0.1	13.8	12.7
G4	12.9	12.7	18.6	19.7	2.2	2.2	2.1	2.1	0.7	0.1	13.8	12.7
G5	12.0	14.0	19.8	18.6	2.1	2.1	2.1	2.1	0.6	0.1	12.6	14.0
G6	12.0	14.0	19.8	18.6	2.1	2.1	2.1	2.1	0.6	0.1	12.6	14.0
G7	12.0	14.0	19.8	18.6	2.1	2.1	2.1	2.1	0.6	0.1	12.6	14.0
G8	12.0	14.0	19.8	18.6	2.1	2.1	2.1	2.1	0.6	0.1	12.6	14.0

Pappas INTERROGATORY #15 List 3

Interrogatory

Issues

1.0 Project Need and Justification

1.1 Has the need for the proposed project been established?

1.4 Is the project suitably chosen and sufficiently scalable so as to meet all reasonably foreseeable future needs of significantly increased or significantly reduced generation in the Bruce area?

4.0 Reliability and Quality of Electricity Service

4.1 For the preferred option, does the project meet all the requirements as identified in the System Impact Assessment and the Customer Impact Assessment?

4.2 Does the project meet applicable standards for reliability and quality of electricity service?

4.3 Have all appropriate project risk factors pertaining to system reliability and quality of electricity service been taken into consideration in planning this project.

Ref. 1) APPENDIX A to Procedural Order No. 5 IN THE MATTER OF Leave to Construct Application by Hydro One Networks EB-2007-0050 DATED February 25, 2008

Preamble:

Some of the requested information, following, is available in IESO and Hydro One documents. However, the preference, here, is to have it all available in one document.

Request

Provide, in the case of only the existing circuits [from Interrogatory # 12], without the proposed new Bruce to Milton Transmission Build, which circuits would carry the power from the Bruce Wind Installation and the power in MW for each.

Response

The information cannot be provided in the requested format because in an interconnected power system such as the Bruce transmission system, all of the available generating units share the use of the transmission circuits in relation to the impedances of the circuits. A particular transmission circuit is not dedicated to the use of a particular generating unit. Instead, the output is shared amongst the available transmission paths.

Tables of transfer distribution factors have been generated below which indicate the % of power flow from the referenced nuclear or wind generators on each of the 10 available circuits emanating from Hydro One's Bruce switching station (Bruce SS) located within the Bruce Nuclear Complex. The Bruce SS is the common interconnection point for these circuits. The transfer values represent measurements taken at Bruce SS. The values assume positive for flows out of Bruce SS and negative for flows into Bruce SS. The wind generators connect to the Hydro One system at the 230 kV level at locations outside of the Bruce Nuclear Complex. The wind generation then feeds through connecting circuit(s) to the Bruce switching station and is redistributed to all the circuits at the station. As a result the flow direction is not the same for all the circuits, and this accounts for the difference in sign of the distribution factors.

Wind Generators	Percentage Power Flow Distribution Factors of Existing Circuits Emanating out of Bruce SS									
Windfarm	B560V (%)	B561M (%)	B563L (%)	B562L (%)	B4V (%)	B5V (%)	B22D (%)	B23D (%)	B27S (%)	B28S (%)
Underwood B4V	16.0	17.9	19.4	20.4	-85.8	2.8	4.1	4.1	0.9	0.2
Underwood B5V	16.0	17.9	19.4	20.4	2.8	-85.7	4.1	4.1	0.9	0.1
Amaranth B4V	2.8	3.8	11.7	12.1	-17.2	-10.3	-0.4	-0.4	-1.8	-0.3
Amaranth B5V	2.8	3.8	11.7	12.1	-10.4	-17.1	-0.4	-0.4	-1.9	-0.3
Ripley	16.4	18.2	19.4	20.3	5.0	5.0	-43.2	-43.2	1.7	0.3
Kingsbridge	8.0	8.8	12.2	12.8	0.6	0.6	-21.8	-21.8	0.6	0.1

Pappas INTERROGATORY #16 List 3

Interrogatory

Issues

1.0 Project Need and Justification

1.1 Has the need for the proposed project been established?

1.4 Is the project suitably chosen and sufficiently scalable so as to meet all reasonably foreseeable future needs of significantly increased or significantly reduced generation in the Bruce area?

4.0 Reliability and Quality of Electricity Service

4.1 For the preferred option, does the project meet all the requirements as identified in the System Impact Assessment and the Customer Impact Assessment?

4.2 Does the project meet applicable standards for reliability and quality of electricity service?

4.3 Have all appropriate project risk factors pertaining to system reliability and quality of electricity service been taken into consideration in planning this project.

Ref. 1) APPENDIX A to Procedural Order No. 5 IN THE MATTER OF Leave to Construct Application by Hydro One Networks EB-2007-0050 DATED February 25, 2008

Preamble:

Some of the requested information, following, is available in IESO and Hydro One documents. However, the preference, here, is to have it all available in one document.

Request

Provide, in the case of the existing circuits [from Interrogatory # 12], with the addition of the proposed new Bruce to Milton Transmission Build, which circuits would carry the power from the Bruce Wind Installation and the power in MW for each.

Response

The information cannot be provided in the requested format because in an interconnected power system such as the Bruce transmission system, all of the available generating units share the use of the transmission circuits in relation to the impedances of the circuits. A particular transmission circuit is not dedicated to the use of a particular generating unit. Instead, the output is shared amongst the available transmission paths.

Tables of transfer distribution factors have been generated below which indicate the % of power flow from the referenced nuclear or wind generators on each of the 10 available circuits emanating from Hydro One's Bruce switching station (Bruce SS) located within the Bruce Nuclear Complex. The Bruce SS is the common interconnection point for these circuits. The transfer values represent measurements taken at Bruce SS. The values assume positive for flows out of Bruce SS and negative for flows into Bruce SS. The wind generators connect to the Hydro One system at the 230 kV level at locations outside of the Bruce Nuclear Complex. The wind generation then feeds through connecting circuit(s) to the Bruce switching station and is redistributed to all the circuits at the station. As a result the flow direction is not the same for all the circuits, and this accounts for the difference in sign of the distribution factors.

Wind Generators	Percentage Power Flow Distribution Factors of Circuits Emanating out of Bruce SS											
	Existing										Proposed New	
Windfarm	B560V (%)	B561M (%)	B563L (%)	B562L (%)	B4V (%)	B5V (%)	B22D (%)	B23D (%)	B27S (%)	B28S (%)	B566M (%)	B567M (%)
Underwood B4V	10.3	10.2	16.7	17.6	-86.4	2.1	3.7	3.7	0.7	0.1	11.1	10.2
Underwood B5V	10.3	10.2	16.7	17.6	2.1	-86.4	3.7	3.7	0.6	0.1	11.2	10.2
Amaranth B4V	1.6	2.1	11.1	11.5	-17.4	-10.5	-0.5	-0.5	-1.9	-0.3	2.5	2.1
Amaranth B5V	1.6	2.1	11.1	11.5	-10.5	-17.3	-0.5	-0.5	-1.9	-0.3	2.5	2.1
Ripley	10.5	10.4	16.6	17.6	4.3	4.3	-43.6	-43.6	1.5	0.3	11.4	10.4
Kingsbridge	5.2	5.0	10.9	11.4	0.3	0.3	-22.0	-22.0	0.5	0.1	5.5	5.0