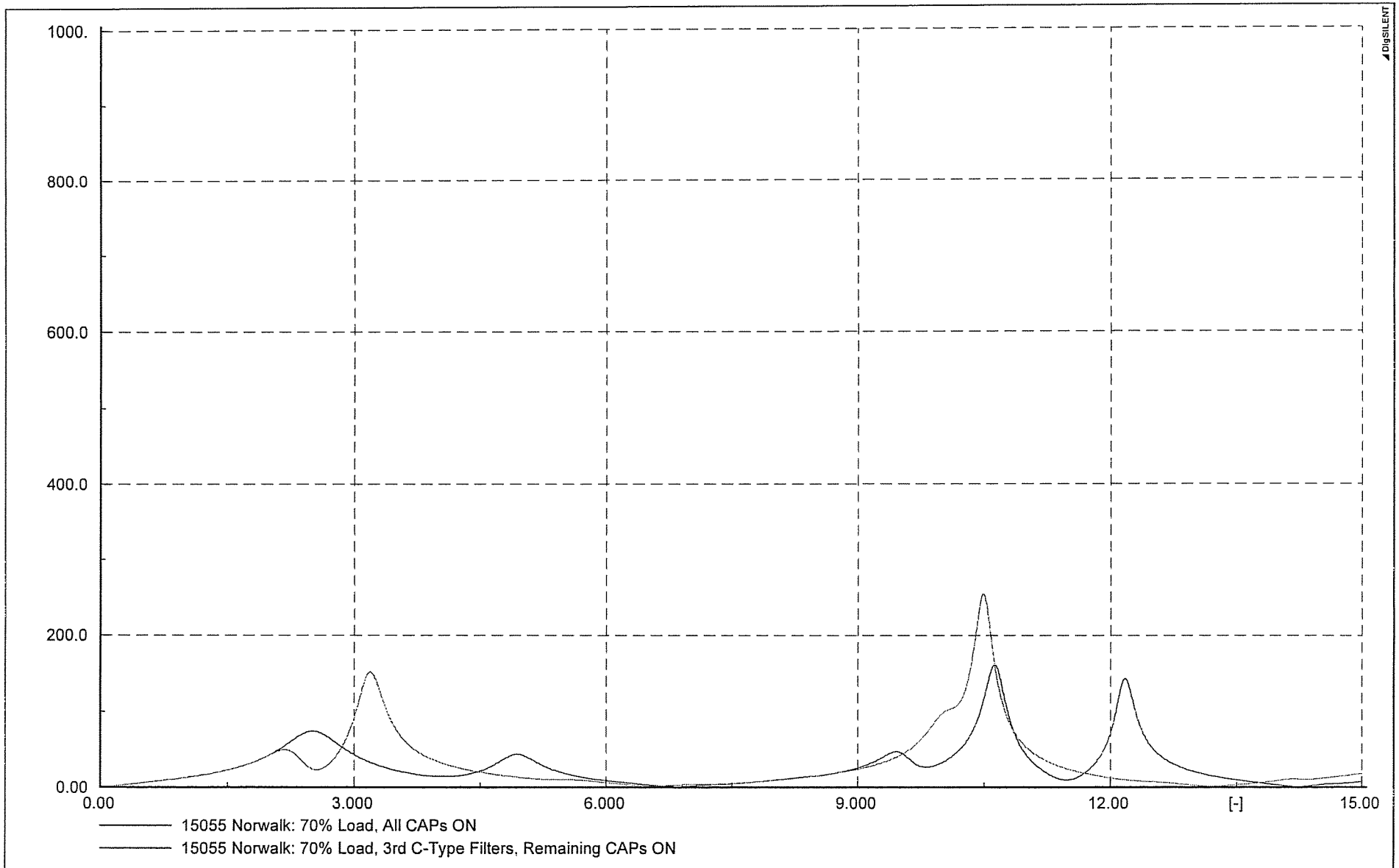
Addendum to KEMA's report, entitled *Harmonic Impedance Study for Southwest Connecticut Phase II Alternatives*, dated October 18, 2004

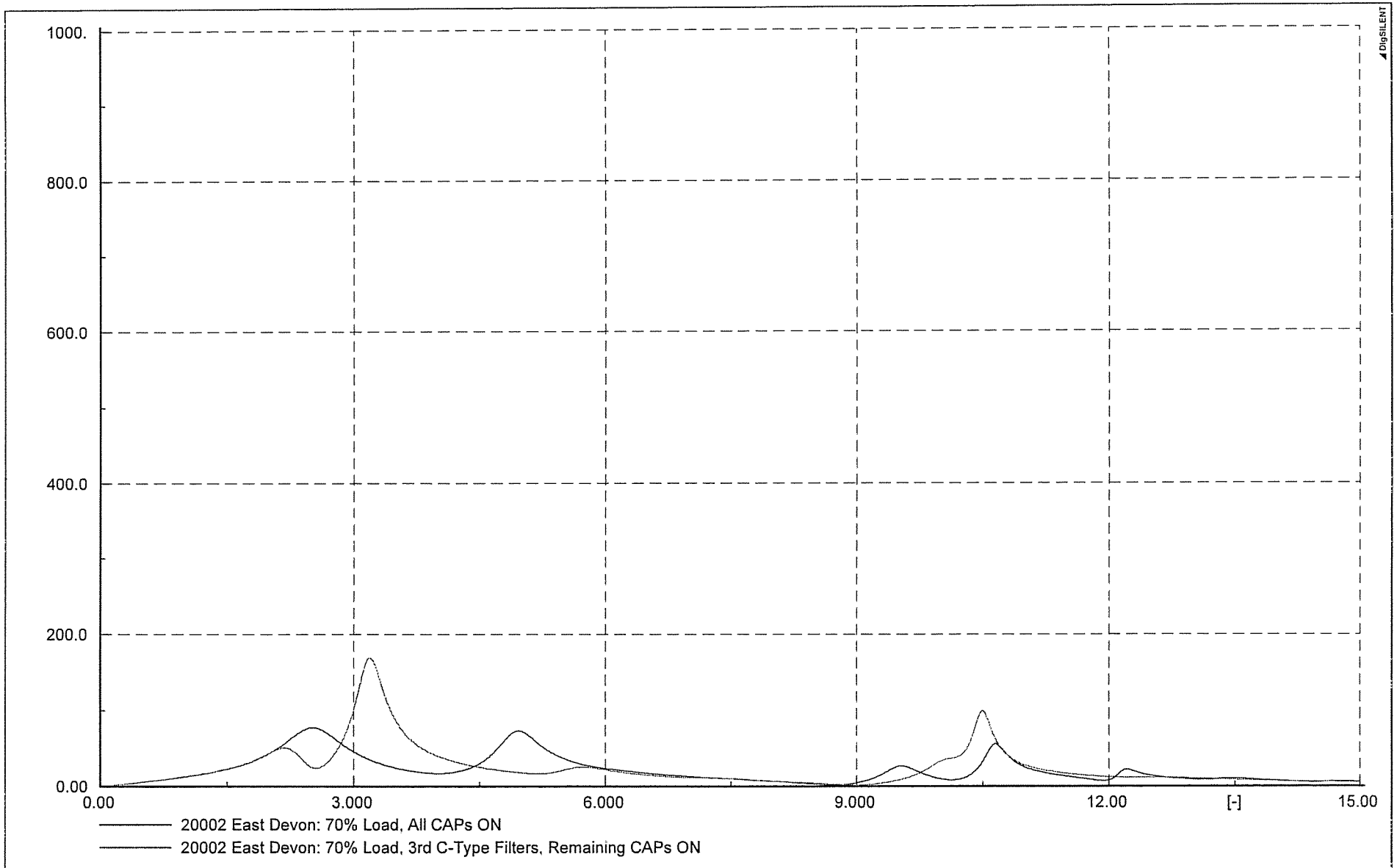
Submitted to the Connecticut Siting Council December 7, 2004

As stated in responses to discovery by the Applicant and by ISO-NE, KEMA considers three parallel sections of 1750 kcmil XLPE cable to be acceptable for use between E. Devon and Beseck. However, the Applicant may be using different criteria to judge acceptability. For comparative purposes, therefore, we include the results of an additional set of frequency scans assuming a higher capacity cable design.

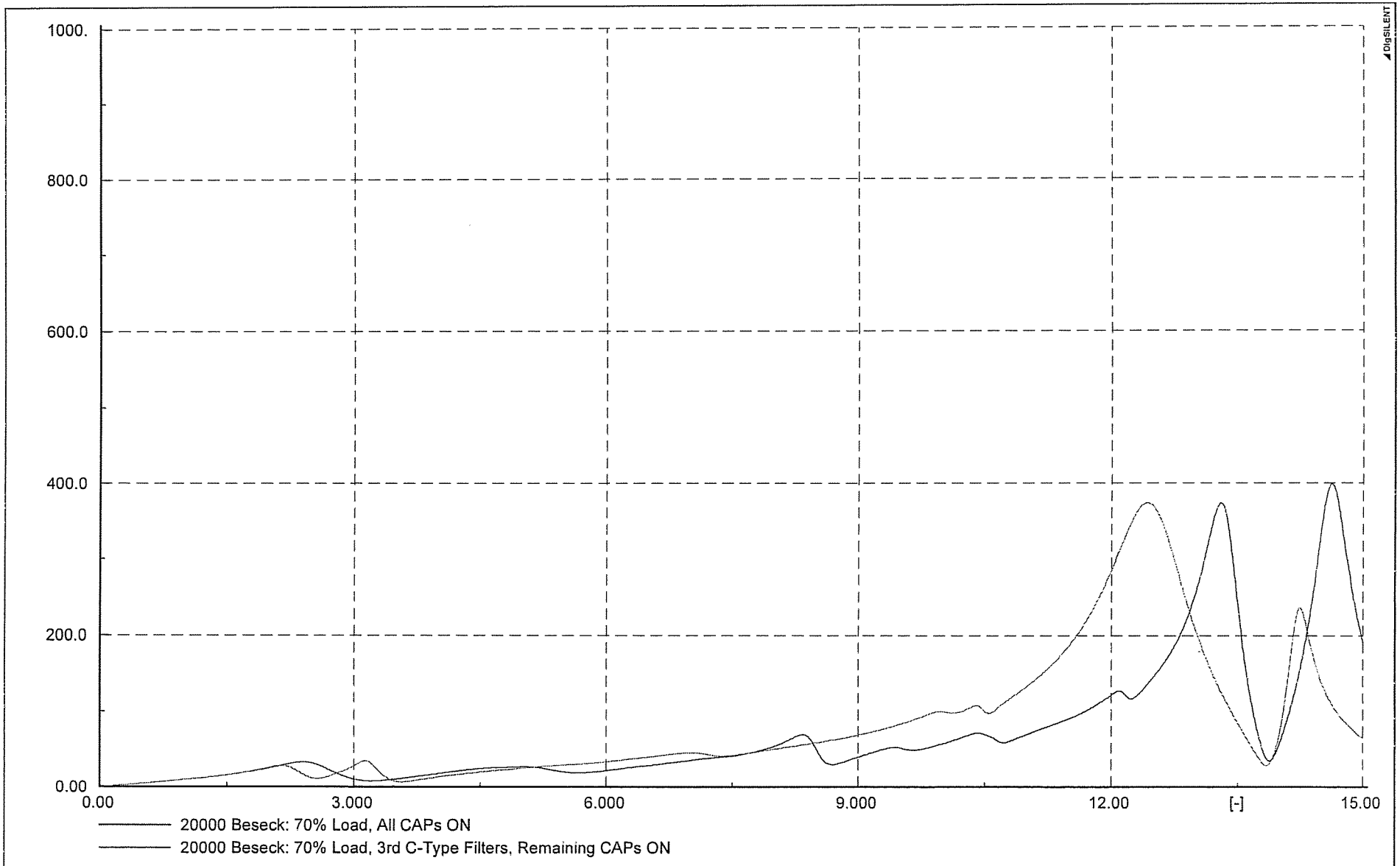
This case includes 15 miles of underground line from E. Devon toward Beseck, assuming four (4) parallel, 1750 kcmil XLPE cables. The results are comparable to those for Case II-10 in KEMA's October 18 report. These results alone would not cause KEMA to change its earlier conclusions.



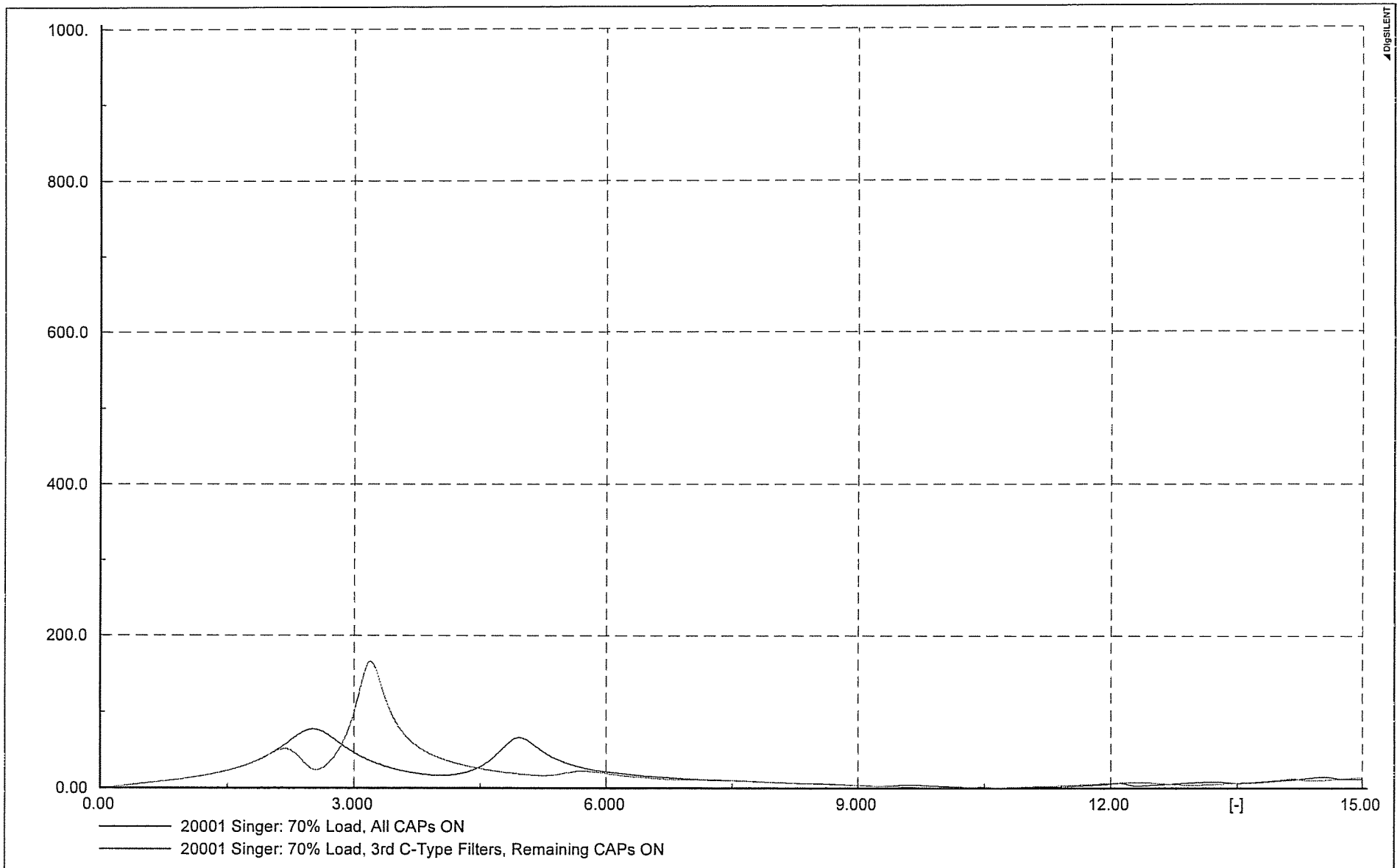
	Selected bus driving point Z(f) plot — Norwalk 345 kV	Date: 12/2/2004
	Min. Dispatch, PH1 1x HPFF, 4x15-mile cable Devon-Beseck — X: order of harmonic; Y: Impedance in OHM	Annex: /2



	Selected bus driving point Z(f) plot — East Devon 345 kV	Date: 12/2/2004
	Min. Dispatch, PH1 1x HPFF, 4x15-mile cable Devon-Beseck — X: order of harmonic; Y: Impedance in OHM	Annex: /4

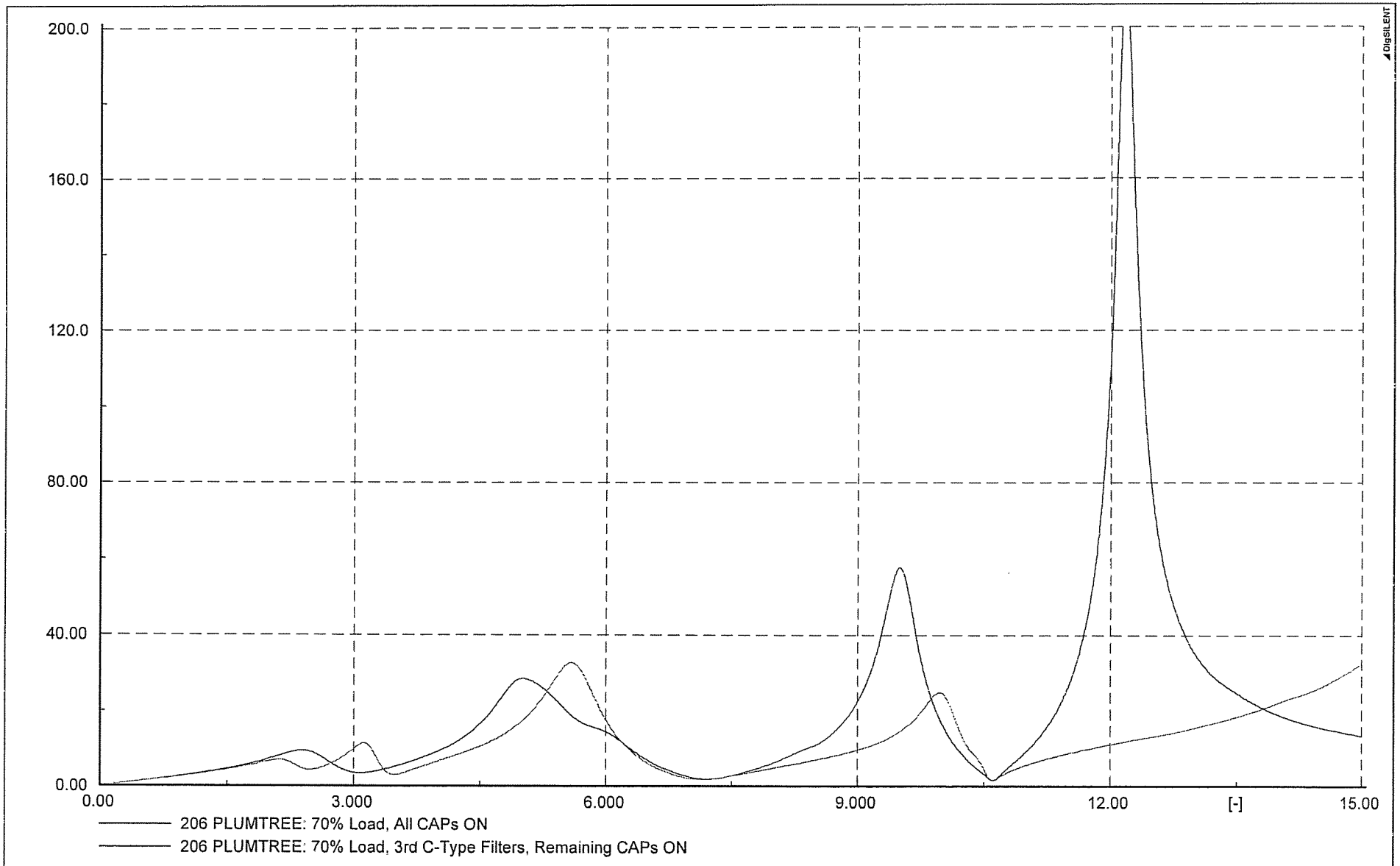


	Selected bus driving point Z(f) plot — Beseck 345 kV	Date: 12/2/2004
	Min. Dispatch, PH1 1x HPFF, 4x15-mile cable Devon-Beseck — X: order of harmonic; Y: Impedance in OHM	Annex: /5

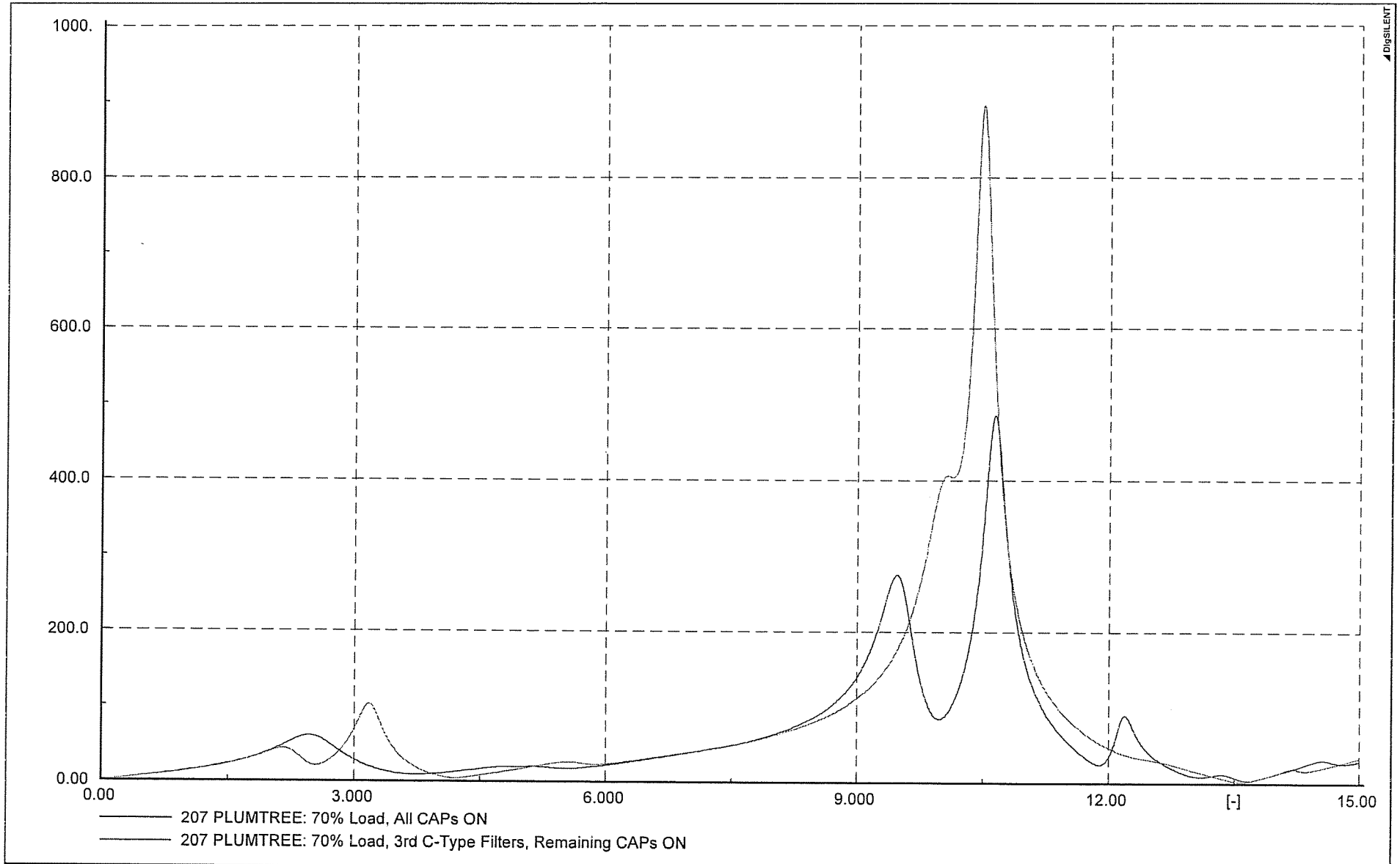


Selected bus driving point Z(f) plot — Singer 345 kV — Date: 12/2/2004

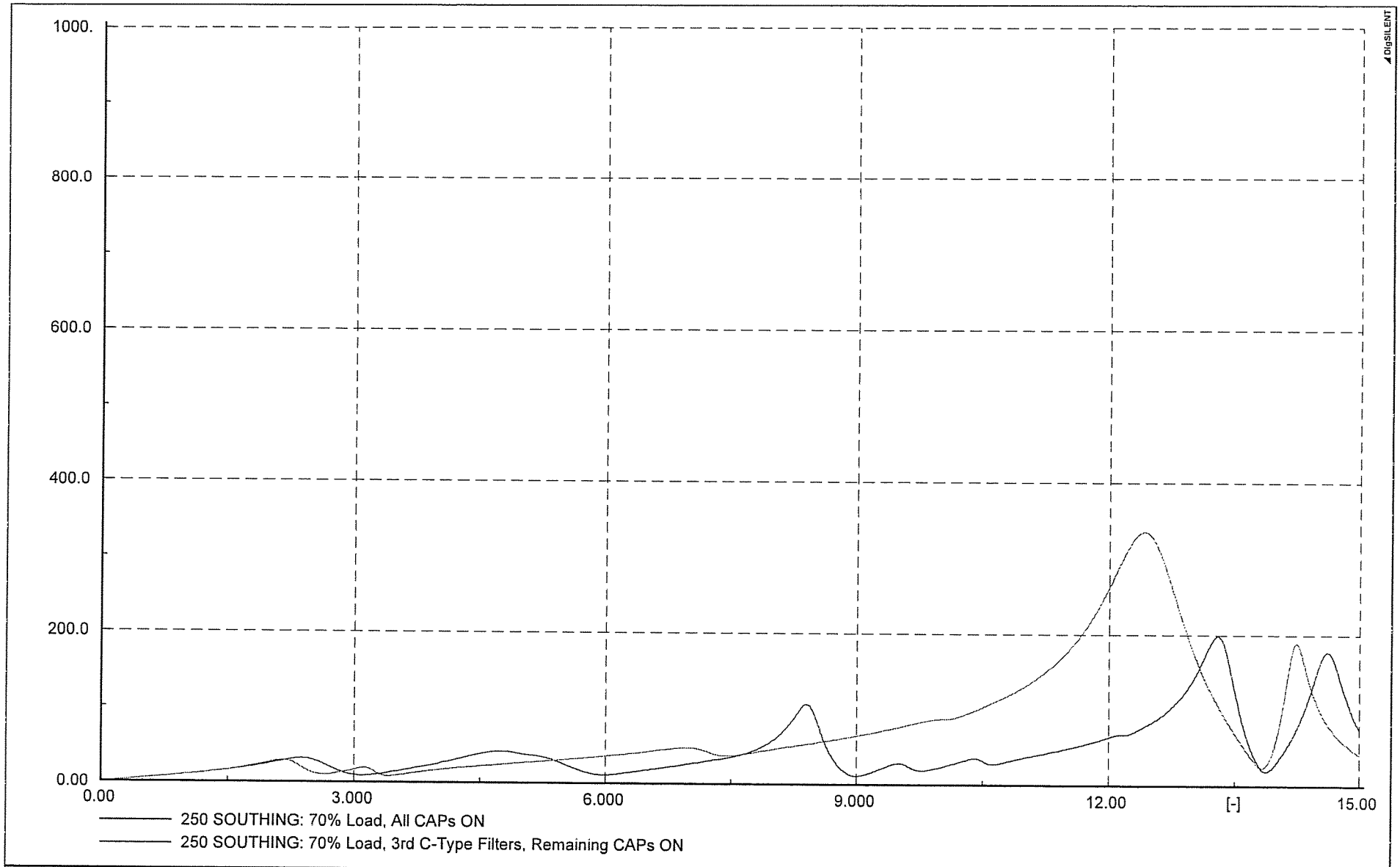
Min. Dispatch, PH1 1x HPFF, 4x15-mile cable Devon-Beseck — X: order of harmonic; Y: Impedance in OHM — Annex: /3



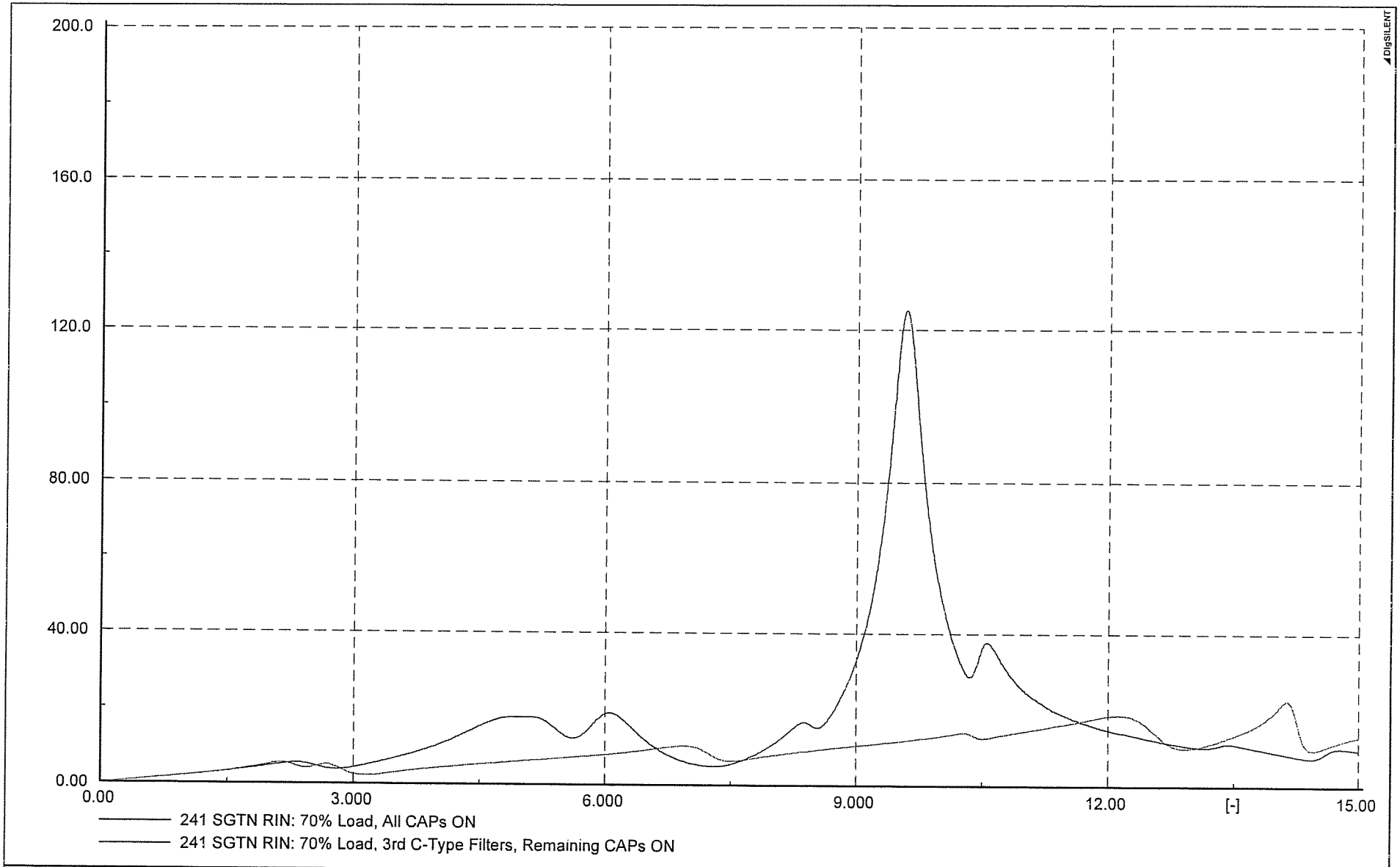
	Selected bus driving point Z(f) plot — PLUMTREE 115 kV	Date: 12/2/2004
	Min. Dispatch, PH1 1x HPFF, 4x15-mile cable Devon-Beseck — X: order of harmonic; Y: Impedance in OHM	Annex: /7



	Selected bus driving point Z(f) plot — Plumtree 345 kV	Date: 12/2/2004
	Min. Dispatch, PH1 1x HPFF, 4x15-mile cable Devon-Beseck — X: order of harmonic; Y: Impedance in OHM	Annex: /1



	Selected bus driving point Z(f) plot SGTN 345 kV	Date: 12/2/2004
	Min. Dispatch, PH1 1x HPFF, 4x15-mile cable Devon-Beseck X: order of harmonic; Y: Impedance in OHM	Annex: /6



Selected bus driving point Z(f) plot — SGTN RING1 115 kV — Date: 12/2/2004

Min. Dispatch, PH1 1x HPFF, 4x15-mile cable Devon-Beseck — X: order of harmonic; Y: Impedance in OHM — Annex: /9

Additional 15 Miles of Underground 70% Load, Minimum Dispatch					
		Three Cables - Case II-10		Four Cables - Case II-10a	
Substation & Bus Voltage		No Mitigation All Caps ON -1	3rd C-Type Filters, Remaining Caps ON -3	No Mitigation All Caps ON -1	3rd C-Type Filters, Remaining Caps ON -2
Norwalk 345 kV	1st Resonance	2.7	3.3	2.5	3
	Impedance O	72	159	74	152
Norwalk 115 kV	1st Resonance	2.4	3.2	2.4	3.1
	Impedance O	6	7	6	6
Plumtree 345 kV	1st Resonance	2.5	3.3	2.5	3
	Impedance O	61	110	61	102
Plumtree 115 kV	1st Resonance	2.5	3.2	2.4	3.1
	Impedance O	10	13	10	12
Southington 345 kV	1st Resonance	2.5	See note	2.4	See note
	Impedance O	32	See note	32	See note
Southington 115 kV	1st Resonance	2.4	See note	2.3	See note
	Impedance O	6	See note	6	See note
Singer 345 kV	1st Resonance	2.6	3.3	2.5	3.2
	Impedance O	76	170	77	166
Devon 345 kV	1st Resonance	2.6	3.3	2.5	3.2
	Impedance O	75	170	77.7	169
Beseck 345 kV	1st Resonance	2.4	3.6	2.4	3.1
	Impedance O	33	40	33	34

Note: Southington 345 kV and 115 kV substations have maximum impedance values below the 3rd harmonic. From the detailed plotted results it is clear that these are not resonance peaks. These maximum values, indicated around or below the 3rd harmonic, are the result of the system characteristics and the filtering properties of the C-Type filter. These maximum values are also damped to levels that they do not pose any problems in terms of over-voltages or resonances. Therefore the results from these substations are excluded from the conclusions.