

Appendix 4  
NEWPCC FACT SHEET

CITY OF WINNIPEG  
NORTH END WATER POLLUTION CONTROL CENTRE

FACT SHEET

<u>Process</u>	<u>No. of Units/Capacity</u>	<u>Remarks</u>
1. Main Pumps	6 horizontal centrifugal Firm Capacity - 827 ML/d Total Installed Power - 2600 kw	1 - 2 speed unit 2 - variable speed units 3 - constant speed units
2. Screening/Grit Removal and Pre-Aeration	4 parallel tanks 827 ML/d design peak flow	Enclosed process Exhaust to 46m stack Fibreglass covers to im- prove working conditions
3. Primary Clarifiers	5 clarifiers 827 ML/d design peak flow Overflow rate at peak flow is 120 m <sup>3</sup> /m <sup>2</sup> /day	3 circular (not enclosed) 2 rectangular (enclosed) with exhaust to 76m odour control stack.
4. Secondary Reactors	3 parallel reactor systems 6 trains (2 per reactor)  4 stages per train  598 ML/d peak flow 332 ML/d average flow	"OASES" Pure oxygen system by Air Products 4.3m liquid depth 2.2 hours detention at average flow SRT - 2 to 10 days O <sub>2</sub> - 65 tonne/day
5. Oxygen Supply	Air Products Cryogenic Plant 80 tonne/day	Privately owned facility with long term contract with the City of Winnipeg
6. Secondary Clarifiers	26 clarifiers - enclosed 598 ML/d peak flow 10 square 16 rectangular 26 variable speed (VFD) return sludge pumps	Overflow Rate at peak flow is 45 m <sup>3</sup> /m <sup>2</sup> /day Exhaust to 76m odour control stack.
7. Sludge Digestion	6 units Mesophyllic (37°C) 10 day retention time at peak sludge flow 14 day at average flow	33.5m diameter 7.6m depth Recirculated confined gas mixers

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| 8. Sludge Dewatering | 6 Sharples PM 76,000 Centrifuges. Peak capacity 125t/day                 | Start-up July 1, 1990<br>Existing sludge beds being phased out due to odour        |
| 9. Sludge Disposal   | Sludge is spread on agricultural land at a rate of 56 dry tonnes/hectare | Environment Act<br>License 1089E   |
| 10. Control System   | Bailey Network 90<br>Distributed Control System                          | Data Highway<br>IBM-AT Network for Data Collection and<br>Engineering Work Station |