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Health & Safety Analysis

- Thermal runaway mitigations in reactors
- Hydrogen peroxide decomposition monitored and controlled
- Sophisticated control logic throughout plant
- PG product high purity ensures no undesirable impurities
- Intermediates are fully contained within process

Environmental & Social Impacts

- PG is less toxic than ethylene glycol alternatives
- No waste products disposed to environment
- Stable jobs for skilled professionals in Alberta
- Minimal impact to environment and landscape
- Natural addition to domestic chemical industry with local suppliers and buyers
- Diversifies Alberta's petrochemical industry

Propylene Glycol from Propylene and Hydrogen Peroxide

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| Design Parameter | T-100 | T-101 | T-102 | T-103 |
|--------------------------|--------------|---------|----------|---------|
| Reflux Ratio | 0.00 | 4.00 | 16.00 | 1.02 |
| Number of Stages | 11 | 15 | 65 | 60 |
| Height | 4.57 m | 13.11 m | 43. 59 m | 40.54 m |
| Diameter | 4.57 m | 1.83 m | 2.90 m | 2.90 m |
| Distillate Purity | 99.72% | 99.99% | 99.61% | 99.88% |
| Bottoms Purity | 99.82% | 100.00% | 99.90% | 99.98% |
| Condenser Duty | 0 MW | 4.9 MW | 12.4 MW | 28.3 MW |
| Reboiler Duty | 19.4 MW | 11.1 MW | 6.4 MW | 20.0 MW |

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