Based on the provided safety case pattern and the domain information on the GPCA system, I will instantiate the pattern by replacing placeholder "{}" with specific information related to the system:

### Hierarchical Tree Structure of the GPCA Safety Case:

- \*\*Goal (G1, "Operational safety is verified in GPCA system")\*\*

- \*\*Strategy (S1, "Argument over the satisfaction of all specs over GPCA system")\*\*

- \*\*Context (C1, "All specs are given by GPCA spec instances")\*\*

- \*\*Goal (G2, "All operational hazards are mitigated")\*\*

- \*\*Strategy (S3, "Argument over operational hazards")\*\*

- \*\*Context (C2, "Operational hazards are given by GPCA operational hazard instances")\*\*

- \*\*Goal (G3, "Overinfusion is mitigated")\*\*

- \*\*Strategy (S4, "Argument over the applied scenarios of Overinfusion")\*\*

- \*\*Context (C3, "All related scenarios are given by operational hazards")\*\*

- \*\*Goal (G4, "Overinfusion is mitigated under various scenarios")\*\*

- \*\*Strategy (S5, "Argument over all specs related to various scenarios of Overinfusion")\*\*

- \*\*Context (C4, "All related specs are given by scenario-specific Overinfusion specs")\*\*

- \*\*Goal (G5, "Flow rate sensor is appropriate for preventing Overinfusion")\*\*

- \*\*Strategy (S6, "Argument the appropriateness of spec over properties for Overinfusion")\*\*

- \*\*Context (C5, "Properties are given by GPCA spec for Overinfusion properties")\*\*

- \*\*Goal (G6, "Flow rate checking is appropriate for flow rate sensor")\*\*

- \*\*Strategy (S7, "Argument over the source of the property definition")\*\*

- \*\*Context (C6, "Source is given by property source documents")\*\*

- \*\*Goal (G7, "FDA standard is appropriate and trustworthy for flow rate sensor specs")\*\*

- \*\*Solution (Sn1, "FDA approval documents")\*\*

- \*\*Goal (G8, "Flow rate property definition by FDA is sufficient")\*\*

- \*\*Solution (Sn2, "Flow rate property documents")\*\*

- \*\*Strategy (S2, "Argument over reliability in all suitable levels of GPCA system")\*\*

- \*\*UndevelopedDecorator (Pending development and instantiation)\*\*

This tree structure in GSN represents the instantiated safety case from the pattern for the GPCA system. Each goal, strategy, or solution explicitly states the specific aspect of the system it addresses, and it leverages the domain information provided, including replacing placeholders with specific identifiers or references. This structure also visually and hierarchically shows the dependencies and argumentation paths established in the safety case to ensure the GPCA system's safe operation.