Based on the provided predicates and the domain information for the GPCA system, I have instantiated the safety case pattern to create the corresponding safety case and displayed it in a hierarchical tree format using dashes (-) to denote different levels. Below is the instantiated safety case:

```

G1: Operational safety is verified in GPCA system

- S1: Argument over the satisfaction of all specs over GPCA system (undeveloped)

- C1: All specs are given by spec.allInstances()

- G2: All operational hazards are mitigated

- S3: Argument over operational hazards

- C2: Operational hazards are given by operational hazard.allInstances()

- G3.0: Overinfusion is mitigated

- S4: Argument over the applied scenarios of Overinfusion

- C3.0: All related scenarios are given by Overinfusion

- G4.0: Overinfusion is mitigated under Flow rate does not match the programmed rate

- S5: Argument over all specs related to Flow rate does not match the programmed rate

- C4.0: All related specs are given by Flow rate does not match the programmed rate.spec.allinstances()

- G5.0: SR1.1 is appropriate for Flow rate does not match the programmed rate

- S6: Argument the appropriateness of SR1.1 over properties

- C5.0: Properties are given by SR1.1.property.allinstances()

- G6.0: Flow rate sensor is equipped is appropriate for SR1.1

- S7: Argument over the source of the Flow rate sensor is equipped definition

- C6.0: Source is given by Flow rate sensor is equipped.source

- G7.0: FDA standard is appropriate and trustworthy

- Sn1: FDA standard

- G8.0: Flow rate sensor is equipped definition is sufficient

- Sn2: Flow rate sensor is equipped

- G5.1: SR1.2 is appropriate for Flow rate does not match the programmed rate

- S6: Argument the appropriateness of SR1.2 over properties

- C5.1: Properties are given by SR1.2.property.allinstances()

- G6.1: Period (to trigger the underinfusion alarm) is 15 minutes is appropriate for SR1.2 (undeveloped)

- G5.2: SR1.4 is appropriate for Flow rate does not match the programmed rate (undeveloped)

- G5.3: SR1.10 is appropriate for Flow rate does not match the programmed rate (undeveloped)

```

In this instantiated safety case:

- The placeholders in the goals, strategies, contexts, and solutions have been replaced with specific information related to the GPCA system.

- The hierarchical structure captures the relationships as defined in the pattern.

- Certain goals and strategies are marked as undeveloped, indicating that they need further development.

- The multiplicity relationships are instantiated but captured by individual instances in this format.