PetroSkills Distillation Deliverables

PetroSkills is an **individual** deliverable that is due **2 weeks** after the last scheduled day for the experiment.

The simulation (in addition to the link on HuskyCT) needs to be launched through **Anyware -> Engineering Desktop -> PetroSkills -> SS510 -> Distillation**.

Some lessons in PetroSkills will come with their own Word documents describing in more detail the Deliverables for each section, below is a summary.

Lesson 1: Overview – None

Lesson 2: Identification

- Complete the "Reading the Rounds" sheet of all DCS and Outside Operator equipment and instrumentation.

Lesson 3: What-If – None

Lesson 4: Abnormal Scenario

- Complete "Abnormal Scenario" sheet with predictions, safety concerns, and mitigation techniques.

Lesson 5: Start Up and Shutdown

- Complete start up and shutdown scrambles
- Screenshots of "group trends" for start up and shutdown

Lesson 6: Adjusting Operating Conditions

Note: The "Reflux Flow in Local Auto" exercise **does not** need to be loaded, just double check that FIC-121 is in automatic mode

- Predictions of product stream flow rate and composition when each of the three variables are adjusted with prediction explanations.
- Data from 3 experiments of the product flow rates, product compositions, tower top and tower bottom temps.
- Sketch of the overhead system
- Calculate the "design" reflux ratio. Plot the reflux ratio and overhead composition collected in the 3 experiments. Discuss the relationship between reflux ratio and distillate purity

Lesson 7: Feed Composition Disturbance

- Data from the two experiments with predictions with completed deliverables from sections A, B, and C.