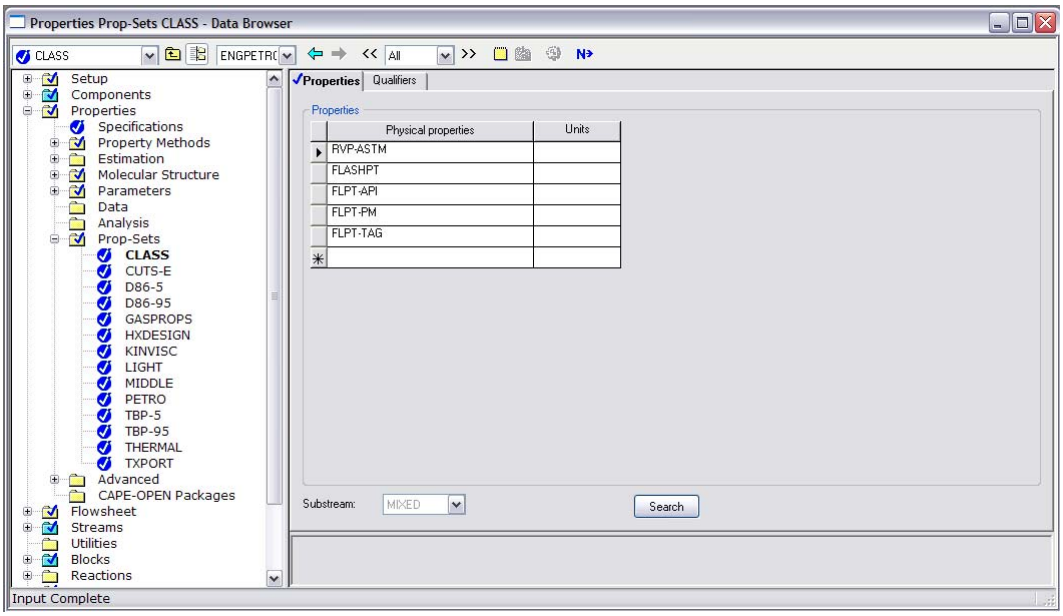
Calculating & Reporting RVP in Aspen

Three step process:

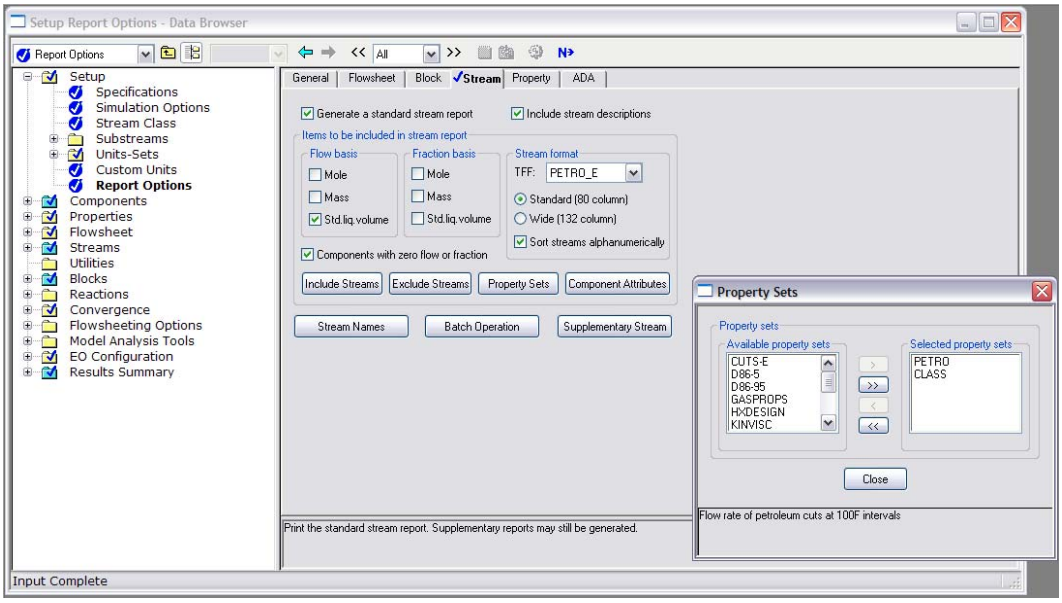
1. Specify one or more RVP calculations in one or more Property Sets.
2. Add the Property Set(s) to the report.
3. Set up a flowsheet. The RVP calculations will be attempted for ALL streams in the flowsheet.

The following are screen shots depicting these steps.

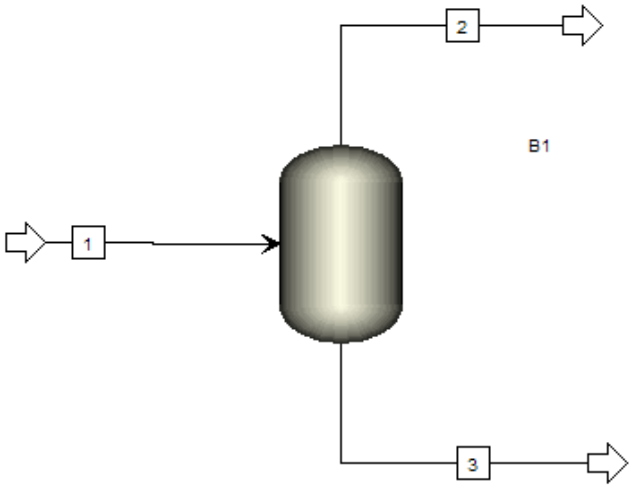
1. *Specify one or more RVP calculations in one or more Property Sets.*
   The following screen shot shows that a property set CLASS has been created to include an RVP calculation using the RVP-ASTM option and 4 different Flash Point correlations.



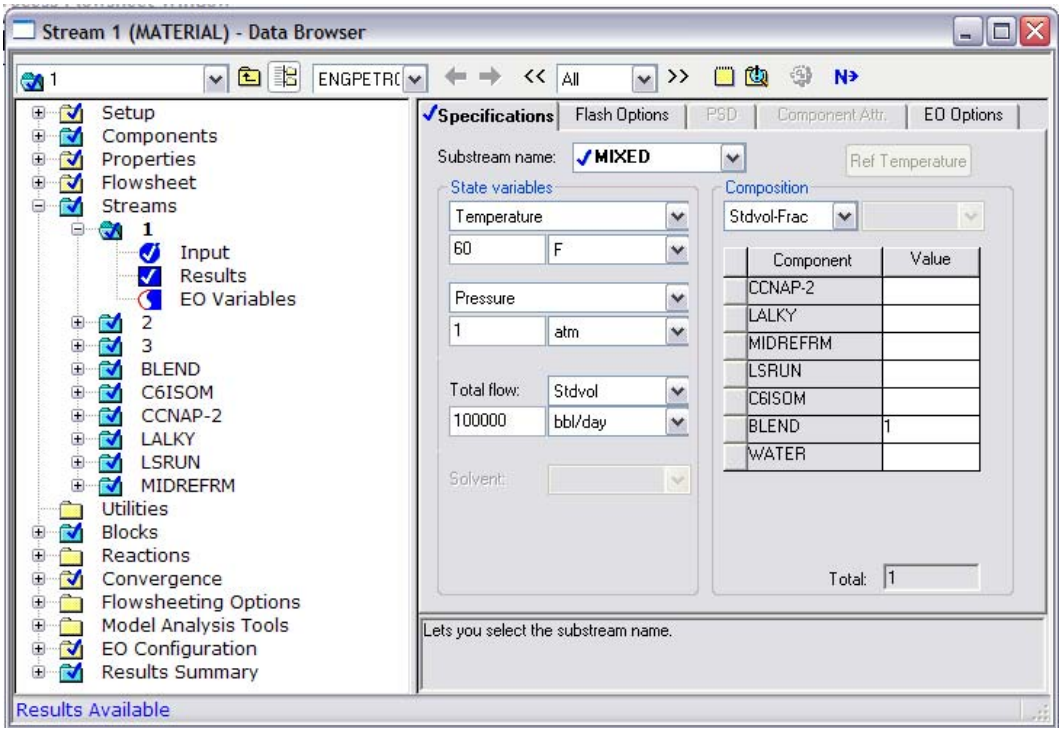
2. *Add the Property Set(s) to the report.*
   The following screen shot shows that there are two Property Sets added to the reports, the PETRO set & the CLASS set.



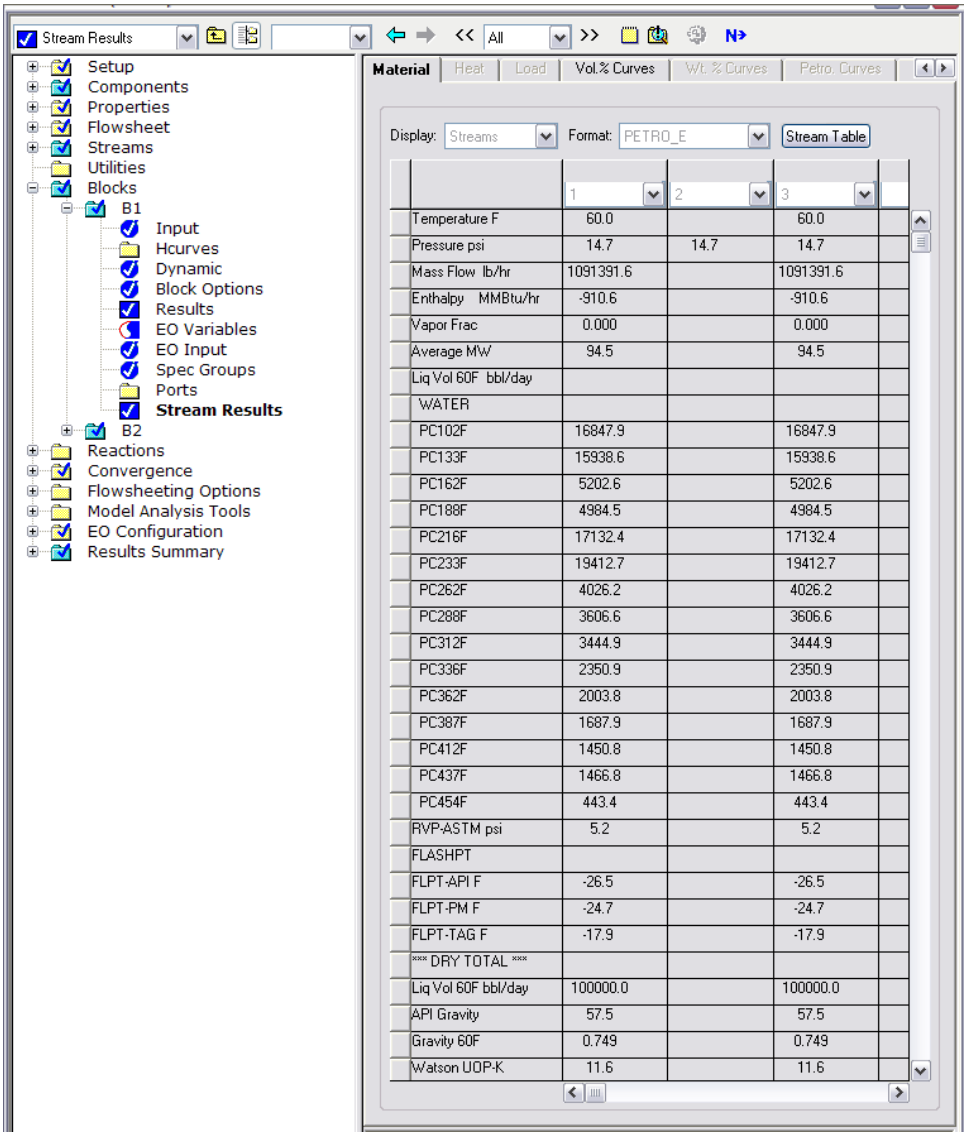
3. *Set up a flowsheet.*
   The Property Sets are only calculated for streams in a flowsheet – they are not calculated when just doing a set of Fluid Analysis calculations. The simplest flowsheet is one that involves a feed stream & a flash operation. A sample PDF is shown.



   The feedstream is defined as one consisting only of the blended composition & conditions that will make it a liquid (such as the standard conditions of 60°F & 1 atm).



When the Aspen calculations are completed, you can look at the report & see that the RVP & 4 Flash Point results are at the bottom the results table.



	1	2	3
Temperature F	60.0		60.0
Pressure psi	14.7	14.7	14.7
Mass Flow lb/hr	1091391.6		1091391.6
Enthalpy MMBtu/hr	-910.6		-910.6
Vapor Frac	0.000		0.000
Average MW	94.5		94.5
Liq Vol 60F bbl/day			
WATER			
PC102F	16847.9		16847.9
PC133F	15938.6		15938.6
PC162F	5202.6		5202.6
PC188F	4984.5		4984.5
PC216F	17132.4		17132.4
PC233F	19412.7		19412.7
PC262F	4026.2		4026.2
PC288F	3606.6		3606.6
PC312F	3444.9		3444.9
PC336F	2350.9		2350.9
PC362F	2003.8		2003.8
PC387F	1687.9		1687.9
PC412F	1450.8		1450.8
PC437F	1466.8		1466.8
PC454F	443.4		443.4
RVP-ASTM psi	5.2		5.2
FLASHPT			
FLPT-API F	-26.5		-26.5
FLPT-PM F	-24.7		-24.7
FLPT-TAG F	-17.9		-17.9
*** DRY TOTAL ***			
Liq Vol 60F bbl/day	100000.0		100000.0
API Gravity	57.5		57.5
Gravity 60F	0.749		0.749
Watson UOP-K	11.6		11.6

This is not the only way to set up the simple simulation. You can also create feed streams for each blend stock & then blend with a MIX operation. The advantage to this is that you can see the Aspen calculations for the individual blend stocks, too.