CLAIMS:

1. A method for predicting asphalt properties, comprising:

separating a feed containing asphalt components from a plurality of crude sources based on a cut point temperature to form at least an asphalt fraction, the asphalt components being present in the feed in a first set of asphalt component weight ratios;

measuring a kinematic viscosity of the asphalt fraction at a temperature of 100°C to 150°C;

determining a virtual cut point for a virtual asphalt blend comprising the asphalt components having a kinematic viscosity that is within a viscosity tolerance of the measured kinematic viscosity, the virtual cut point being determined based on the measured kinematic viscosity for the asphalt components and the first set of asphalt component weight ratios for the asphalt components;

calculating a second set of asphalt component weight ratios corresponding to a virtual composition of the asphalt components in the virtual asphalt blend based on the virtual cut point;

calculating one or more properties other than a kinematic viscosity for the asphalt fraction based on the second set of asphalt component weight ratios for the asphalt components and at least one of the virtual cut point, the measured kinematic viscosity, or the determined the virtual cut point for the virtual asphalt blend; and

modifying, based on at least one of the one or more calculated properties, the cut point temperature for the separating the feed containing asphalt components from a plurality of crude sources.

2. The method of claim 1, wherein the separating the feed containing asphalt components from a plurality of crude sources comprises at least one of an atmospheric distillation or a vacuum distillation.

3. The method of claim 1, wherein modifying the cut point temperature for the separating the feed containing asphalt components from a plurality of crude sources comprises modifying the cut point temperature based on the calculated value for at

least one of the one or more properties being above a threshold value, below a threshold value, or outside of a threshold range.

4. The method of claim 1, wherein modifying the cut point temperature for the separating the feed containing asphalt components from a plurality of crude sources comprises modifying the cut point temperature based on a calculated value for at least one of a high temperature performance grade or a low temperature performance grade.

5. The method of claim 1, wherein calculating the one or more properties comprises calculating a weighted average of asphalt component property values for at least one property based on the second set of asphalt component weight ratios.

6. The method of claim 5, wherein the calculated weighted average is further based on at least one blending coefficient corresponding to an interaction between two or more crudes sources in the asphalt fraction.

7. The method of claim 1, wherein calculating the one or more properties comprises calculating a weighted average of the log of asphalt component property values for at least one property based on the second set of asphalt component weight ratios.

8. The method of claim 1, wherein measuring the kinematic viscosity comprises measuring the kinematic viscosity of a slip stream withdrawn from the asphalt fraction.

9. The method of claim 1, wherein the asphalt fraction comprises at least four asphalt components.

10. The method of claim 1, the viscosity tolerance is 0.05 cSt or less.

11. A method for predicting asphalt properties, comprising:

obtaining kinematic viscosity values at a plurality of cut point temperatures for a plurality of asphalt components, each of the plurality of asphalt components

corresponding to an asphalt fraction derived from a single crude source at an identified cut point;

obtaining values for one or more additional properties for each of the plurality of asphalt components;

obtaining values for kinematic viscosity and for the one or more additional properties for a plurality of asphalt fractions comprising asphalt components from two or more crude sources;

constructing a predictive model that correlates a measured viscosity value with values for the one or more additional properties for an asphalt fraction, the predictive model comprising parameters for the one or more additional properties for each asphalt component that are fit to the obtained values for the one or more additional properties for the plurality of asphalt components;

separating a feed containing at least two asphalt components based on a cut point temperature to form at least a first asphalt fraction, the at least two asphalt components being present in the feed in a first set of asphalt component weight ratios,

measuring a kinematic viscosity of the first asphalt fraction comprising at least two asphalt components at a temperature of 100°C to 150°C;

determining a virtual cut point for a virtual asphalt blend having a kinematic viscosity within a viscosity tolerance value of the measured kinematic viscosity for the first asphalt fraction, the virtual cut point being determined based on the measured kinematic viscosity for the at least two asphalt components and the first set of asphalt component weight ratios for the at least two asphalt components;

calculating a second set of asphalt component weight ratios corresponding to a virtual composition of the asphalt components in the virtual asphalt blend based on the virtual cut point;

predicting one or more properties other than a kinematic viscosity for the first asphalt fraction based on the constructed predictive model, the second set of asphalt component weight ratios and at least one of the virtual cut point, the measured kinematic viscosity for the first asphalt fraction, or the determined the virtual cut point for the virtual asphalt blend; and

modifying, based on at least one of the one or more predicted properties, the cut point temperature for the separating the feed containing at least two asphalt components.

12. The method of claim 11, wherein constructing the predictive model further comprises fitting a plurality of blending coefficients corresponding to interactions between asphalt components.

13. The method of claim 11, further comprising updating the fit of at least one parameter in the predictive model based on the measured kinematic viscosity value of the first asphalt fraction.

14. The method of claim 11, further comprising:

measuring values for at least one of the one or more properties of the first asphalt fraction; and

updating the fit of at least one parameter in the predictive model based on the measured value for at least one of the one or more properties of the first asphalt fraction.

15. The method of claim 11, wherein obtaining values for kinematic viscosity and for the one or more additional properties for a plurality of asphalt fractions comprises obtaining values for asphalt fractions corresponding to a plurality of refineries.

16. The method of claim 11, wherein modifying the cut point temperature for the separating the feed containing at least two asphalt components comprises modifying the cut point temperature based on the calculated value for at least one of the one or more properties being above a threshold value, below a threshold value, or outside of a threshold range.

17. The method of claim 11, wherein modifying the cut point temperature for the separating the feed containing at least two asphalt components comprises modifying the cut point temperature based on a calculated value for at least one of a high temperature performance grade or a low temperature performance grade.

18. The method of claim 11, wherein measuring the kinematic viscosity comprises measuring the kinematic viscosity of a slip stream withdrawn from the asphalt fraction.

19. The method of claim 11, wherein the viscosity tolerance is 0.05 cSt or less.