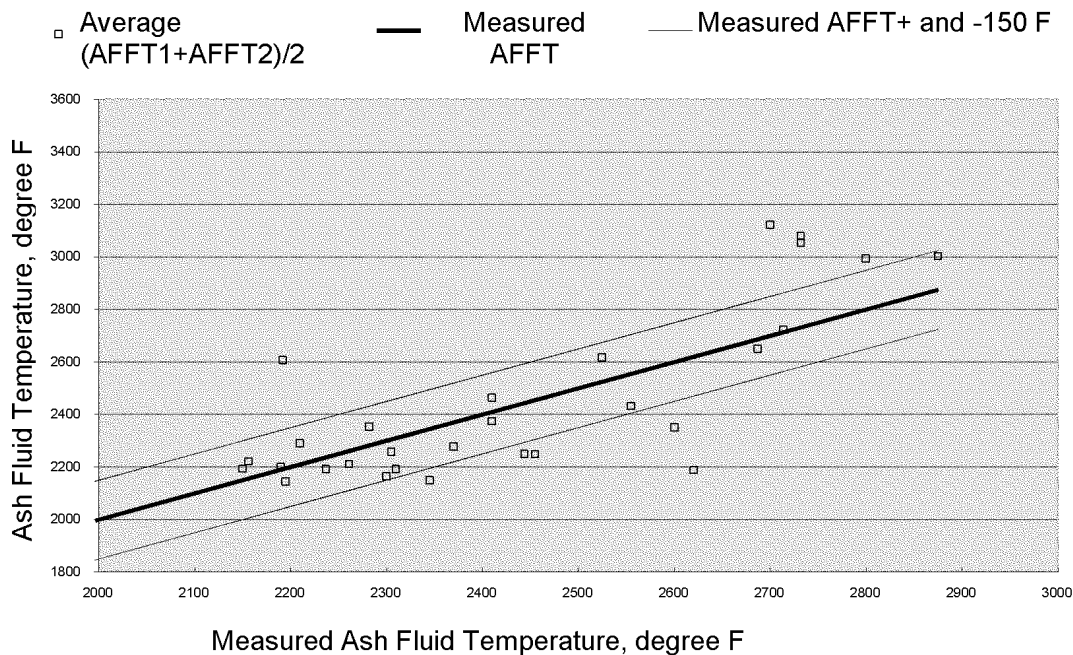


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Figure 2-9 compares the average WR AFFT<sub>1</sub> and WR AFFT<sub>2</sub> correlations with the measured AFFT. The average deviation is +10° F and the standard deviation is 195° F. The average AFFT<sub>1</sub> and AFFT<sub>2</sub> correlations are less scattered than the indirect WR AFFT<sub>2</sub>, but more than the direct WR AFFT<sub>1</sub> correlations. Although a smaller average deviation indicates that the average value is closer to the measured AFFT value, a larger standard deviation indicates that it is no better than the direct WR AFFT<sub>1</sub> predictions.

Figure 2-9  
Comparison of Average WR Correlations and Nexant In-House Coal Data



### EECP Coal Feeds

Following the review and assessments of coal properties from Nexant and other sources, the WR correlations were compared with actual ash fluid temperatures measured for potential EECP feedstocks listed in Table 2-1 and 2-2. Figure 2-10 compares the direct WR AFFT<sub>1</sub> correlation and the measured AFFT for the potential EECP blending feedstocks. The average deviation is -108° F and the standard deviation is 175° F. As shown in Figure 2-10, the estimated values for fusion temperatures are within the plus or minus 150° F reproducibility accuracy limit of the ASTM D-1857 test. The negative average deviation indicates that the direct WR AFFT<sub>1</sub> correlation tends to underestimate the ash fluid temperature for these samples as previously observed.

Figure 2-11 compares the indirect WR AFFT<sub>2</sub> correlation against the actual AFFT. The average deviation is +76° F and the standard deviation is 226° F. Only 9 of the predicted AFFT<sub>2</sub> fall within the plus or minus 150° F the reproducibility accuracy limit. The WR AFFT<sub>2</sub> estimates are more scattered than the WR AFFT<sub>1</sub> estimates and are less accurate

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based on standard deviation. The positive average deviation indicates that the direct WR AFFT<sub>1</sub> correlation tends to over-estimate the ash fluid temperature.

Figure 2-10  
Comparison of Direct WR Correlations and WMPI/EECP Coal Data

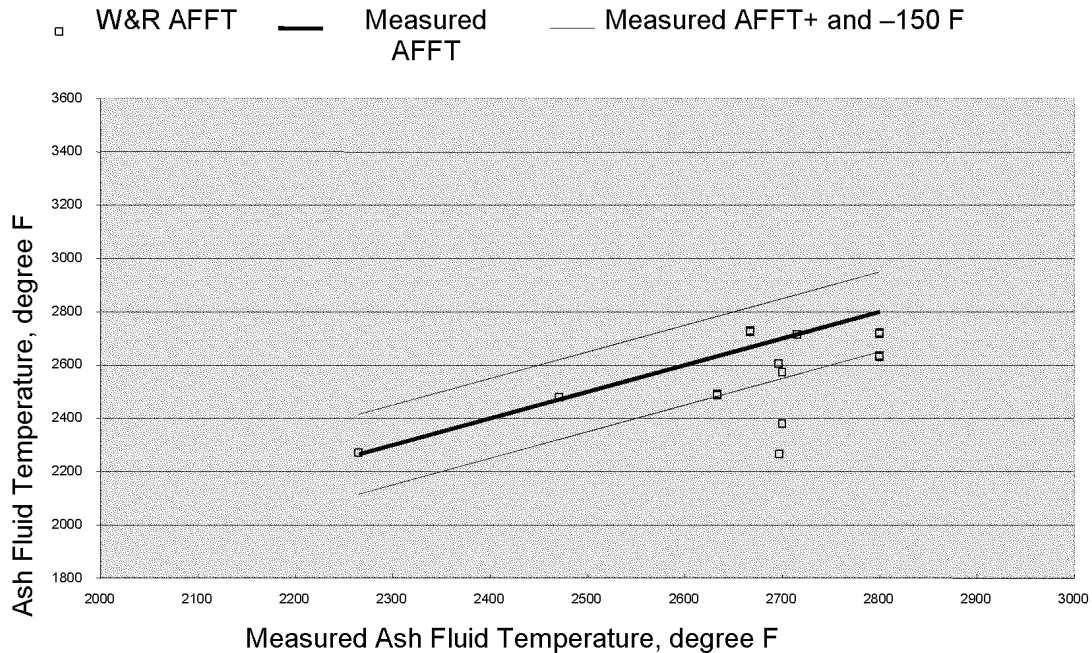
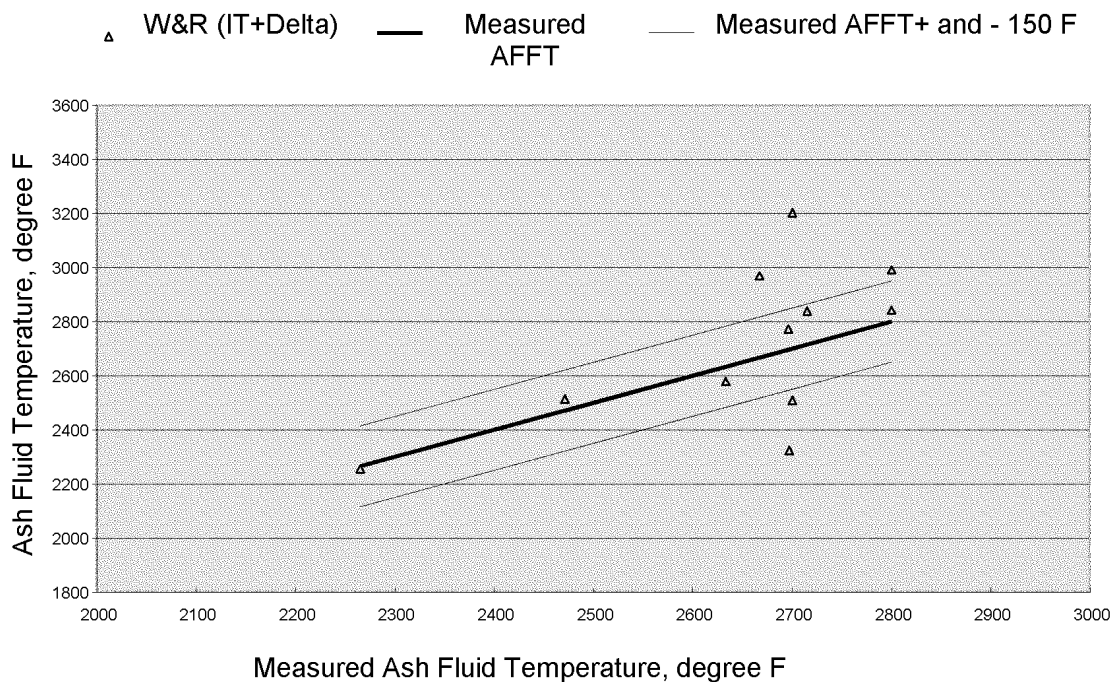


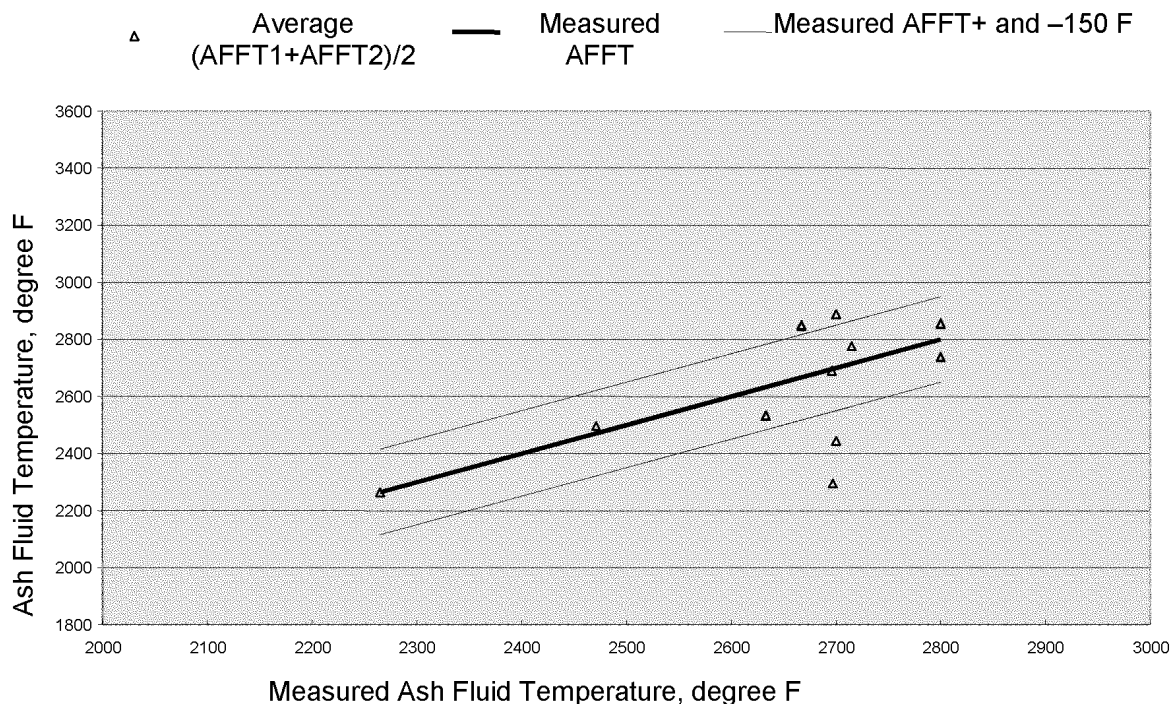
Figure 2-11  
Comparison of Indirect WR Correlations and WMPI/EECP Coal Data



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Figure 2-12 compares the average WR AFFT<sub>1</sub> and WR AFFT<sub>2</sub> estimates against the measured AFFT. The average deviation is -16° F and the standard deviation is 162° F. The average values scattering are about the same as the direct WR AFFT<sub>1</sub> predictions, and the accuracy is just slightly better than the direct WR AFFT<sub>1</sub> estimates based on standard deviations.

**Figure 2-12**  
**Comparison of Average WR Correlations and WMPI/EECP Coal Data**



### **EECP Blended Feeds**

For the two laboratory-synthesized blends of potential feedstock, the data in Table 2-4 was prepared.