Supporting Information for:

Bond Distances are not Always What They Appear to be: Discovery and Un-Discovery of the Longest Cr(V)≡N Triple Bond

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Fig. S1. Molecular structure of 4 with thermal ellipsoids drawn at the 30 % probability level and hydrogen atoms removed.
Fig. S2. Thermal ellipsoid plot of the asymmetric unit of 5 showing both crystallographically independent molecules. Displacement ellipsoids are drawn at the 30 % probability level and hydrogen atoms are removed for clarity.
Fig. S3. Electron density (calculated from $F_0$) of 9 with the chromium atom refined with anisotropic displacement parameters.
**Fig. S4.** Difference map $(F_o - F_c)$ of 9 with central Cr atom refined isotropically. The lobes on either side of the Cr atom indicate the necessity for it to be re-refined being disordered over two positions.