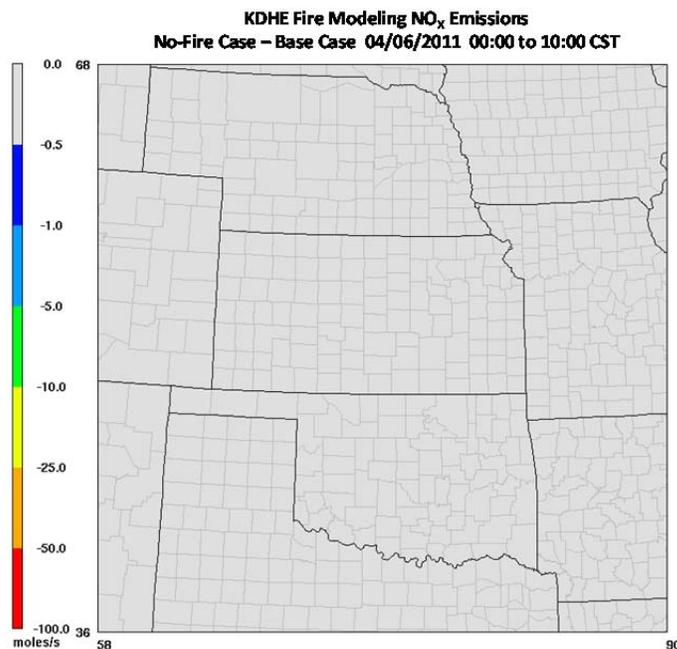


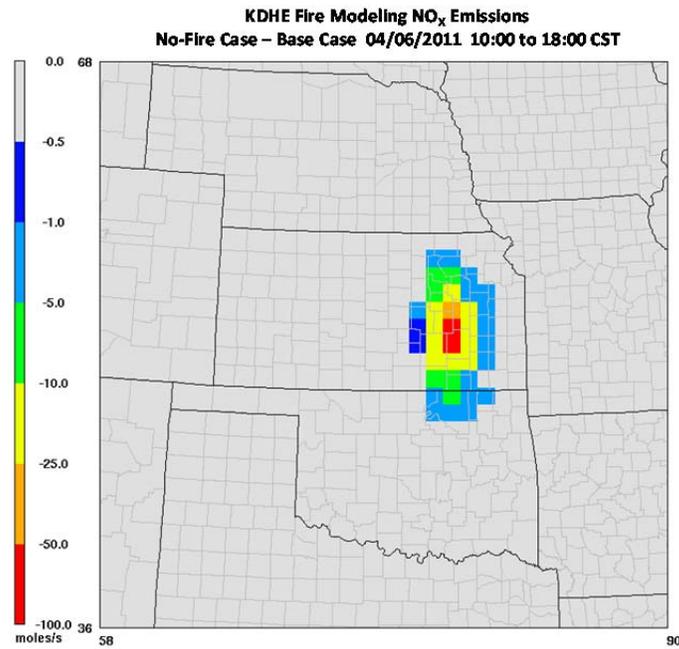
## Appendix D – BlueSky NO<sub>x</sub> and VOC Plots

This section contains hourly plots of no-fire case minus base case NO<sub>x</sub> and VOC emissions from the BlueSky simulations for April 6, 12, and 13, 2011. The base case includes modeled emissions from Flint Hills fires; the no-fire case does not. For all three days, these plots show increased emissions of the ozone precursors NO<sub>x</sub> and VOCs in the base case compared to the no-fire case, demonstrating that the Flint Hills fires produced ozone precursors. A diurnal time profile was applied to all Flint Hills fire emissions to simulate a typical Flint Hills prescribed burn that starts at 10:00 CST and burns evenly across the landscape for eight consecutive hours. Thus, plots are shown for each day representing the 00:00 to 10:00 CST (no burning), 10:00 to 18:00 CST (burning), and 18:00 to 00:00 CST (no burning) periods.

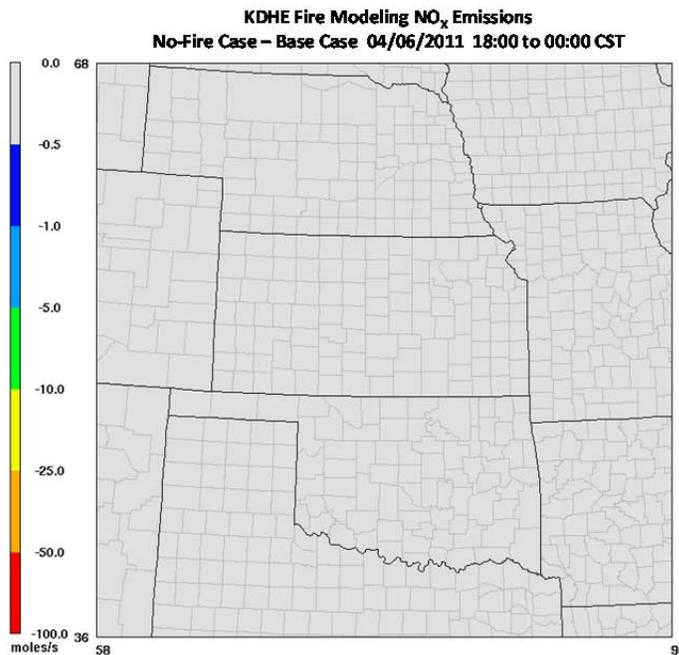
**Figures D-1 through D-6** show plots for April 6, 2011; **Figures D-7 through D-12** show plots for April 12, 2011; and **Figures D-13 through D-18** show plots for April 13, 2011.



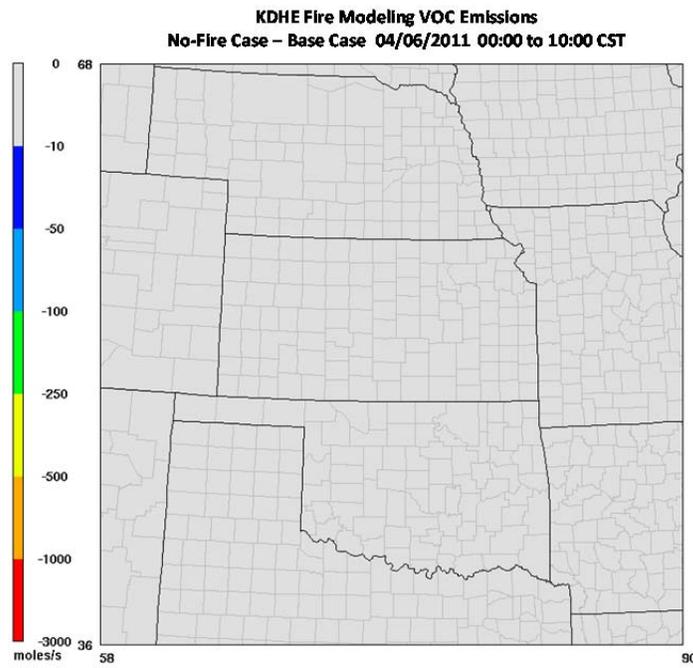
**Figure D-1.** No-fire case minus base case emissions of NO<sub>x</sub> from the BlueSky model simulation for 00:00 to 10:00 CST on April 6, 2011. Negative numbers indicate increased emissions of ozone precursors due to the Flint Hills fires.



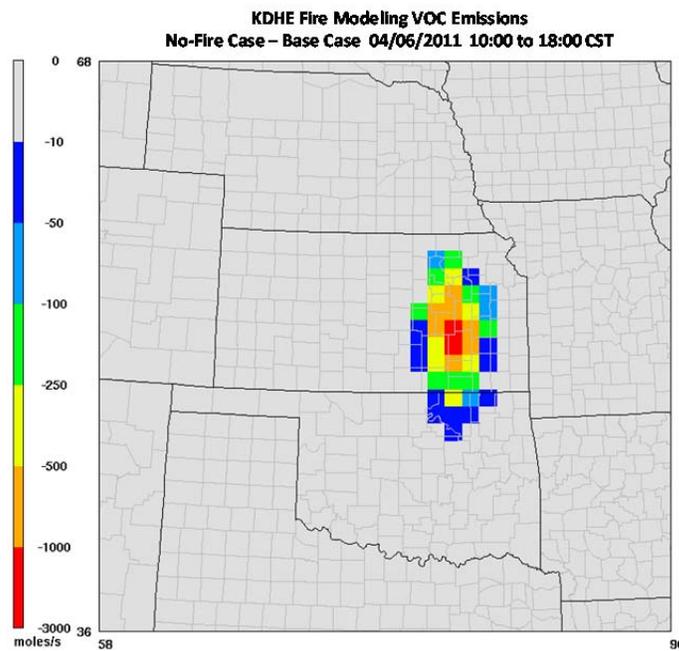
**Figure D-2.** No-fire case minus base case emissions of NO<sub>x</sub> from the BlueSky model simulation for 10:00 to 18:00 CST on April 6, 2011.



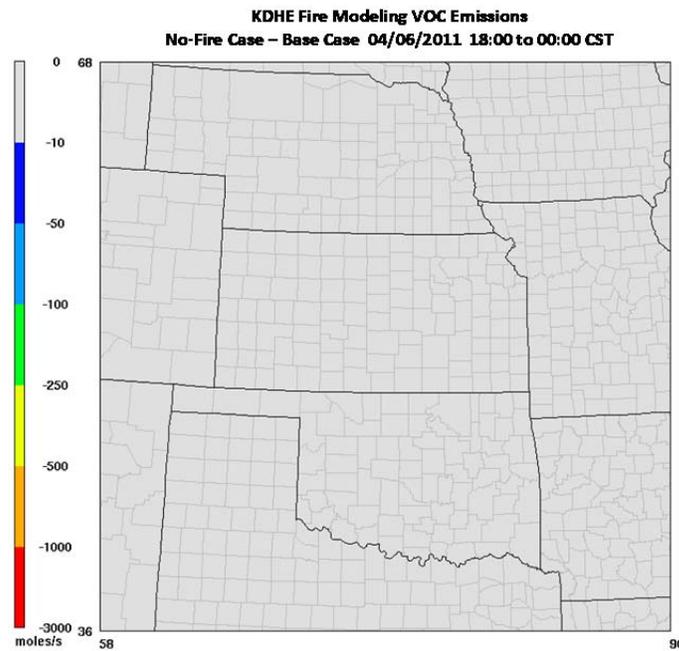
**Figure D-3.** No-fire case minus base case emissions of NO<sub>x</sub> from the BlueSky model simulation for 18:00 to 00:00 CST on April 6, 2011.



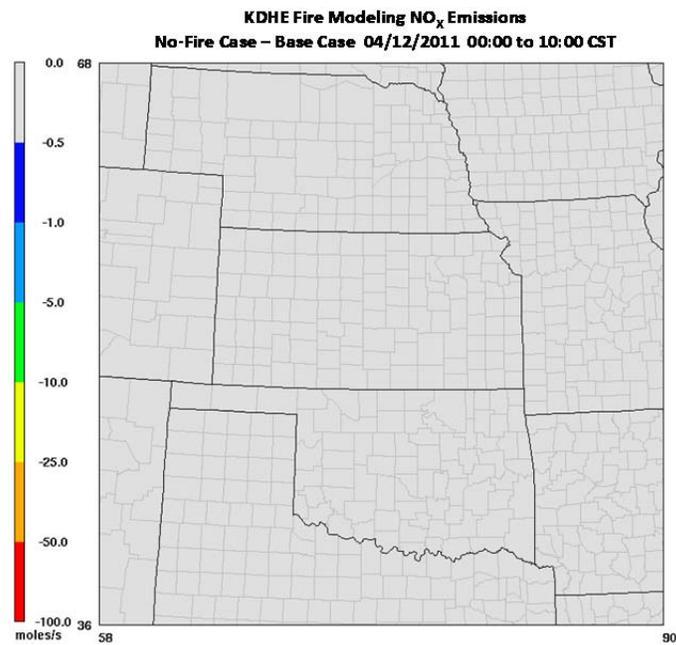
**Figure D-4.** No-fire case minus base case emissions of VOCs from the BlueSky model simulation for 00:00 to 10:00 CST on April 6, 2011.



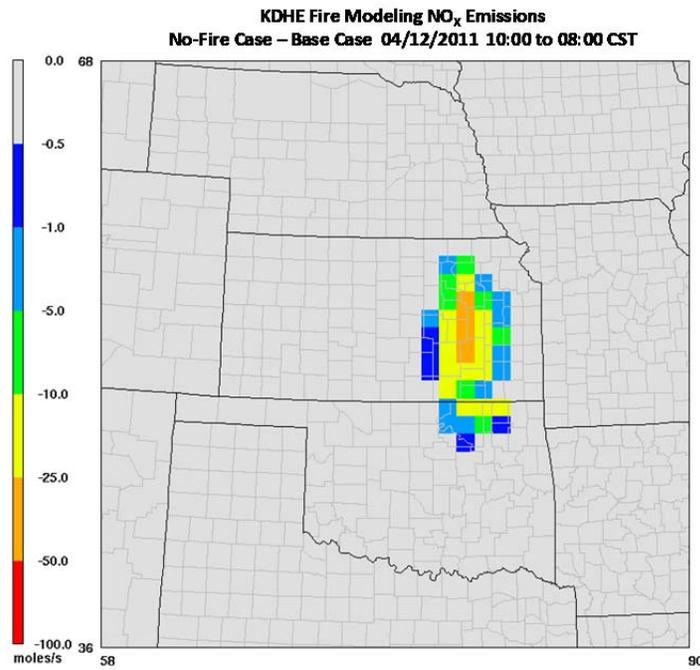
**Figure D-5.** No-fire case minus base case emissions of VOCs from the BlueSky model simulation for 10:00 to 18:00 CST on April 6, 2011.



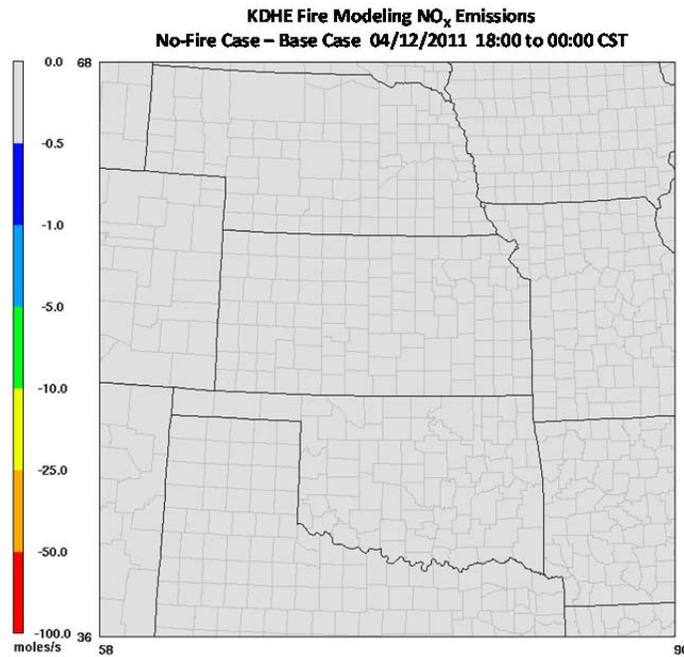
**Figure D-6.** No-fire case minus base case emissions of VOCs from the BlueSky model simulation for 18:00 to 00:00 CST on April 6, 2011.



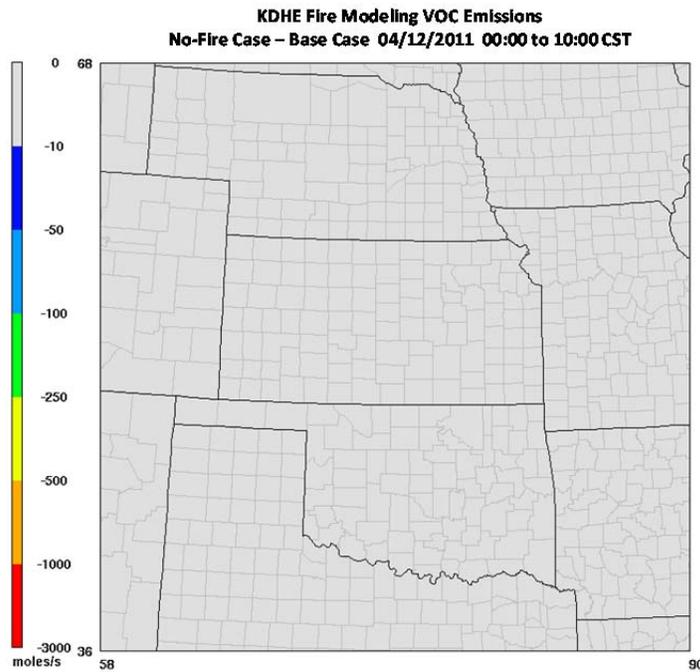
**Figure D-7.** No-fire case minus base case emissions of NO<sub>x</sub> from the BlueSky model simulation for 00:00 to 10:00 CST on April 12, 2011.



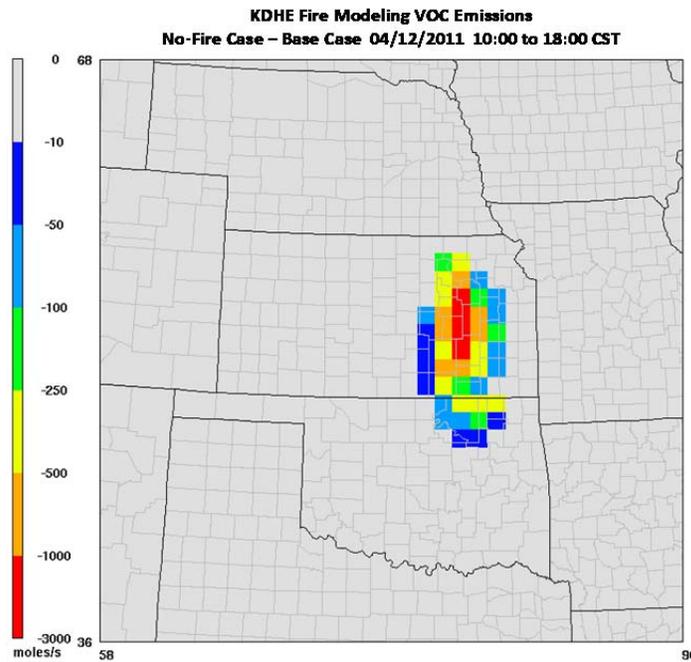
**Figure D-8.** No-fire case minus base case emissions of NO<sub>x</sub> from the BlueSky model simulation for 10:00 to 18:00 CST on April 12, 2011.



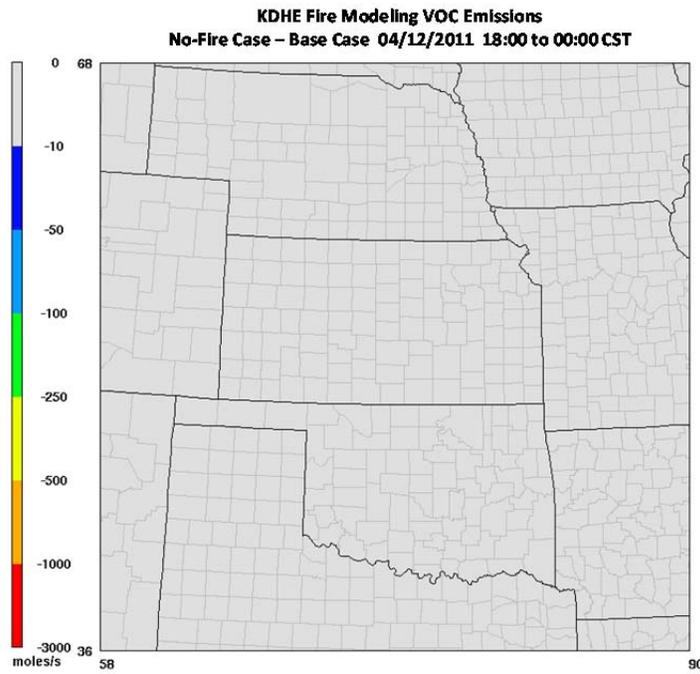
**Figure D-9.** No-fire case minus base case emissions of NO<sub>x</sub> from the BlueSky model simulation for 18:00 to 00:00 CST on April 12, 2011.



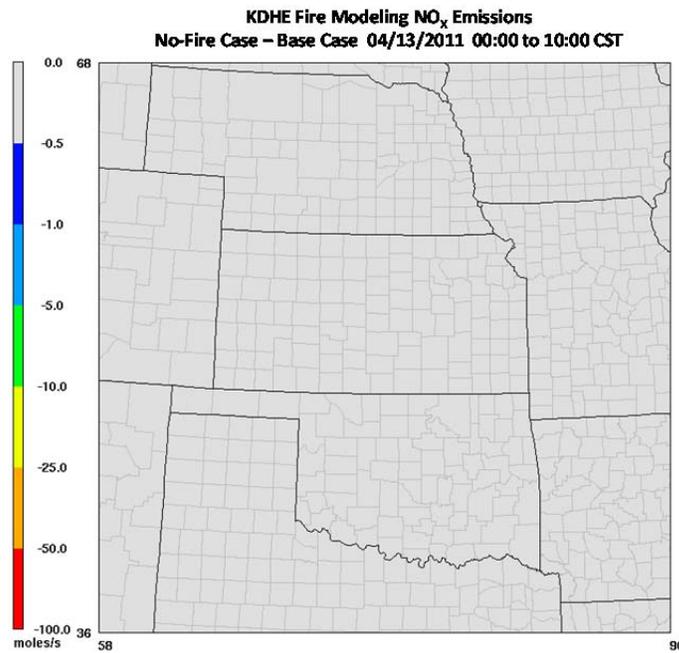
**Figure D-10.** No-fire case minus base case emissions of VOCs from the BlueSky model simulation for 00:00 to 10:00 CST on April 12, 2011.



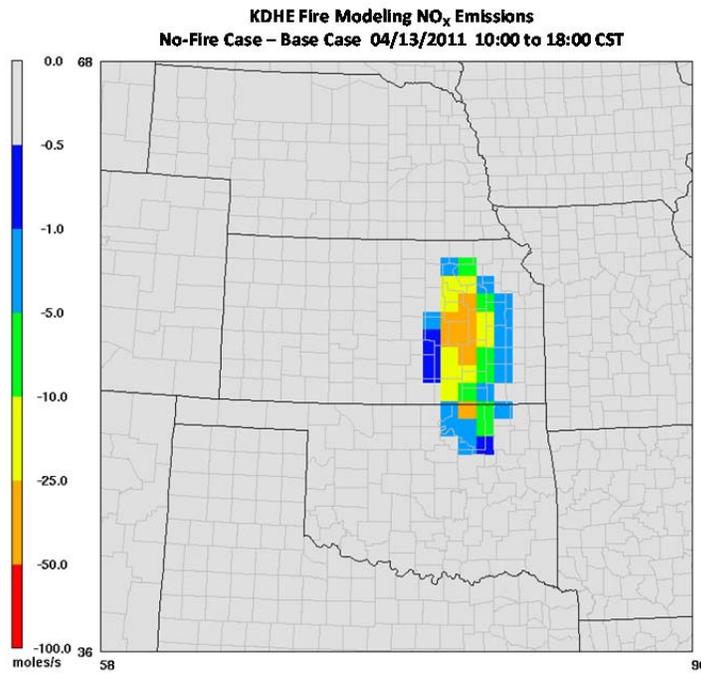
**Figure D-11.** No-fire case minus base case emissions of VOCs from the BlueSky model simulation for 10:00 to 18:00 CST on April 12, 2011.



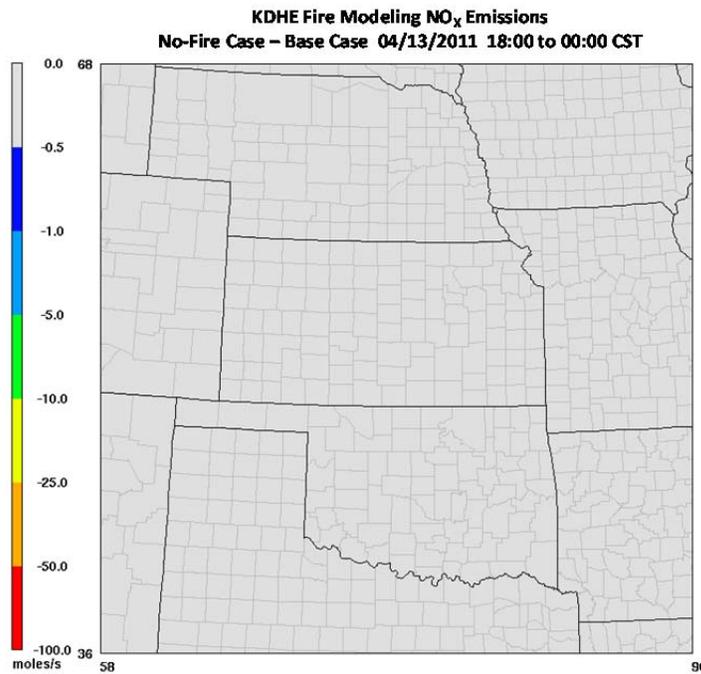
**Figure D-12.** No-fire case minus base case emissions of VOCs from the BlueSky model simulation for 18:00 to 00:00 CST on April 12, 2011.



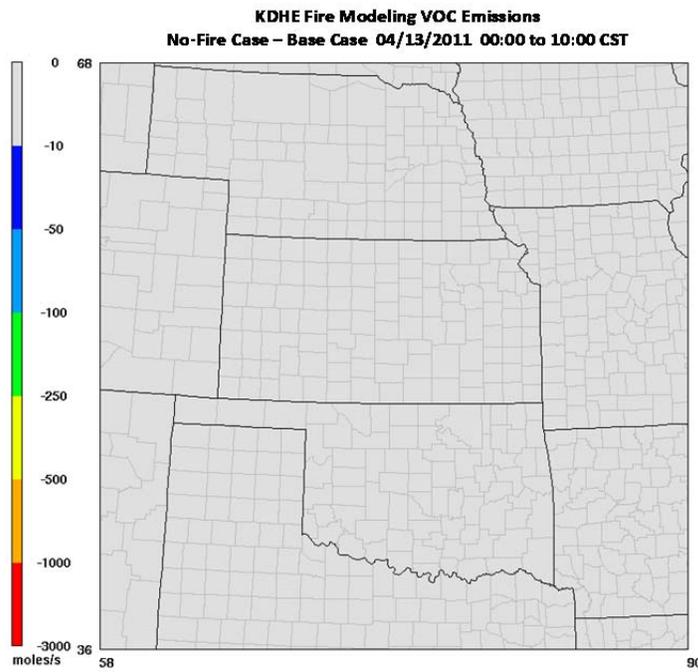
**Figure D-13.** No-fire case minus base case emissions of NO<sub>x</sub> from the BlueSky model simulation for 00:00 to 10:00 CST on April 13, 2011.



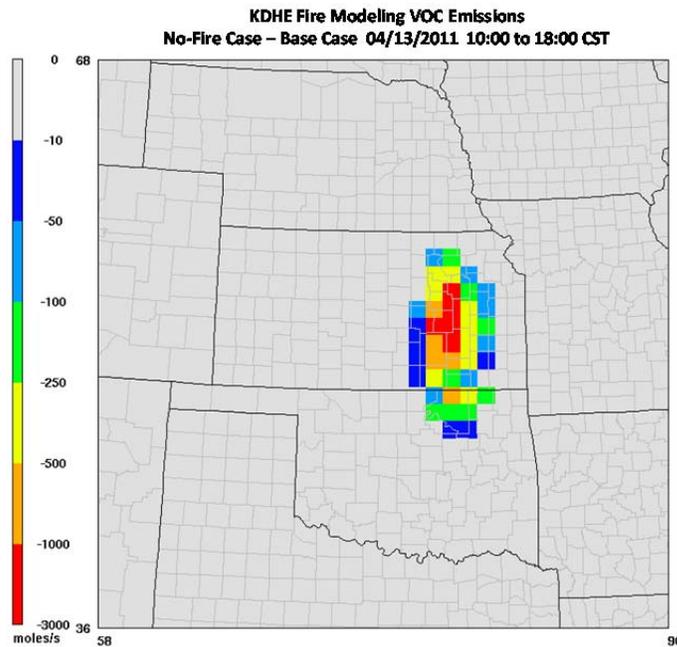
**Figure D-14.** No-fire case minus base case emissions of NO<sub>x</sub> from the BlueSky model simulation for 10:00 to 18:00 CST on April 13, 2011.



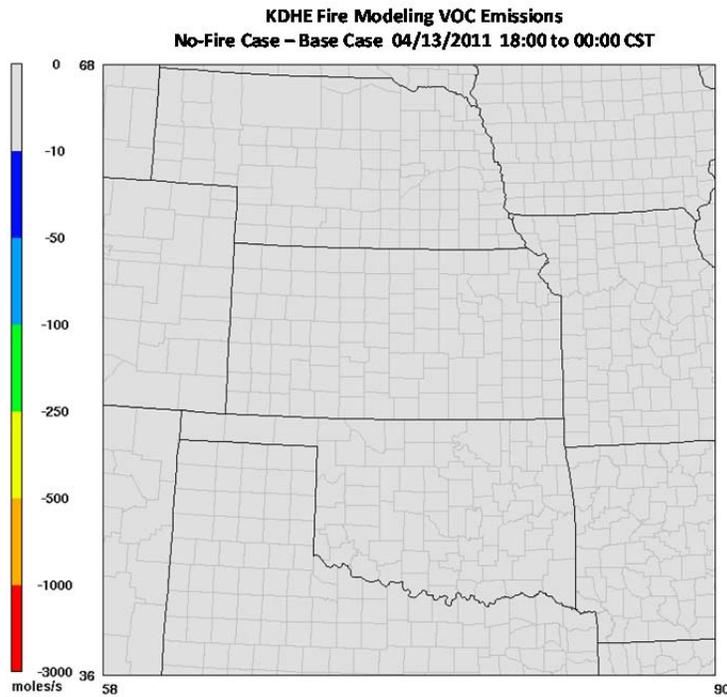
**Figure D-15.** No-fire case minus base case emissions of NO<sub>x</sub> from the BlueSky model simulation for 18:00 to 00:00 CST on April 13, 2011.



**Figure D-16.** No-fire case minus base case emissions of VOCs from the BlueSky model simulation for 00:00 to 10:00 CST on April 13, 2011.



**Figure D-17.** No-fire case minus base case emissions of VOCs from the BlueSky model simulation for 10:00 to 18:00 CST on April 13, 2011.



**Figure D-18.** No-fire case minus base case emissions of VOCs from the BlueSky model simulation for 18:00 to 00:00 CST on April 13, 2011.