Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Northeast Regional Office • 205B Lowell Street, Wilmington MA 01887 • 978-694-3200

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November 9, 2016

David Conroy
U.S. Environmental Protection Agency Region 1
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: Initial Notification of Potential Exceptional Event for Ozone on May 25-28, 2016

Dear Mr. Conroy:

The Massachusetts Department of Environmental Protection (MassDEP) observed and recorded an ozone episode during the period May 25 – 28, 2016 that appears to have been significantly influenced by the Fort McMurray, Alberta, Canada wildfire. As a result, MassDEP has flagged all ozone data for this period in EPA's Air Quality System (AQS) as having been influenced by this fire. Factors that lead us to conclude that the Fort McMurray wildfire influenced the flagged data include:

- Weather patterns were initially not favorable for ozone formation in Massachusetts or for ozone transport from areas to the south and west of the state; high pressure trapped pollutants from the wildfire over the upper Great Lakes region for several days before normally clean west and northwest winds transported "unhealthy" levels of ozone to the east and southeast across New York and then to Massachusetts;
- Wildfire smoke plumes evident on visible satellite pictures combined with back trajectory analysis before the event reveal wildfire smoke transport southeast into the Midwestern states before arriving in Massachusetts on May 25, 2016; and
- Both the NOAA operational forecast model and Barons CMAQ ozone forecast model under-predicted ozone levels by more than 20 ppb during the period. The under-prediction is likely due to the inability of the models to account for the effect of real-time smoke emissions from the fire.

In accordance with 40 CFR 50.14(c)(2) of the recently revised "Exceptional Events Rule," discussions between our offices are required to determine the appropriate scope of a technical demonstration package with consideration for regulatory significance and approvability. Please

This information is available in alternate format. Call Michelle Waters-Ekanem, Diversity Director, at 617-292-5751. TTY# MassRelay Service 1-800-439-2370
MassDEP Website: www.mass.gov/dep

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contact Glenn Keith at (617) 292-5874 or by email at glenn.keith@state.ma.us to schedule these discussions.

Sincerely,

Christine Kirby
Acting Assistant Commissioner
Bureau of Air and Waste