Introduction
The Spot the Smoke campaign was created in partnership with Virtual Technology, LLC. and Sustainable Skys. It is a campaign designed to raise community involvement in air pollution awareness, as well as empower people to document emission sources in their community. The application, Spot the Smoke, allows the public to upload an image taken with their cell phone of visible air pollution and submit it for an opacity analysis. Spot the Smoke uses opacity measurements, the same scale used by air quality specialists and industry alike. Opacity is the measurement of a pollution plume’s ability to obscure its background, represented in increments of 5 on a scale of 0-100 percent. After submission of an image, a certified digital opacity analyst will then determine the plumes opacity and send it back to the interested party. With this tool, the public can now play a role in protecting our environment on a greater level than ever before.

Objective
The main objective is for an individual to have an all inclusive report to send in as a informative complaint to their air inspector. This will also enhance their ability to identify different stationary, mobile, natural and area sources within their environment. After learning about the different forms of emissions, the public is able to identify and document air pollution. The applications ability to gather all the necessary information for a formal Method 9 reading allows the user to have a better understanding of how visible emissions are monitored. A finalized report includes: the users location, the height of the emission point, the distance and direction to the emission point, the angle to observation point, the sun position at the time the photo, and an opacity percentage of the plume.

Application Methodology

1. Take a picture of the emission source
2. Login
3. Name and describe what it is you see
4. Allow GPS access and tap where the source is on the screen
5. Attach image from gallery
6. Click generate report and an analyst will receive an opacity request notification
7. Wait for an email back from an analysis with a link that connects you to a full copy of your report

Discussion
Proactive community involvement will increase air pollution awareness and improve source watch significantly. The community will now be able to identify different pollutant emissions and document them in the form of a photograph. With Spot the Smoke there will be a better understanding of what is and what is not a violation. Spot the Smoke allows the public to participate in environmental protection more than ever before. In turn, this application will improve the air quality within a community. There will now be a better understanding of how visible emissions are monitored and regulated.

Literature Cited

Acknowledgments
- Pat Grieco for designing the application
- Shawn Dolan for funding the creation of the application
- Families for Clean Air for inquiring about Virtual Technology’s Digital Opacity Compliance System second generation (DOCS II) public capabilities