

Use of Infrared Cameras for Source Emissions Detection

With the advancement of infrared technology, aircraft outfitted with infrared imaging cameras are being used to detect emissions and air pollutants at the source.

During 2006 several industrial facilities became subjected to informal infrared emissions studies. The Louisiana Department of Environmental Quality (LaDEQ) conducted a series of “Hawk Infrared Camera Flights” with a helicopter during July of 2006. The helicopter was fitted with a specialized infrared gas imaging camera and flew from Baton Rouge to New Orleans. The camera was also used along the Intracoastal Waterway to Lake Charles and along the Calcasieu River in an effort to find chemical leaks that are not detectable to the human eye. The primary mission was to examine emissions from tank barges and chemical storage tanks.

EPA also conducted its own “tour” of oil and gas facilities near Denver using a pollution-detecting infrared camera. Richard Long, head of air programs for the Denver regional office, emphasized that their emissions findings did not mean that they are illegal, or that this informal tour was a step towards formal enforcement action. However, he did indicate that a large number of “minor sources” existed in the area, suggesting that EPA needed to examine these sources more closely. In a concerned [letter](#) responding to Region 8’s finding, Senator James Inhofe (R-OK) questioned EPA’s activities and raised the following questions for consideration:

- If a privately owned land or facilities were scanned using EPA's infrared camera, was written permission from the owners obtained? If not, please explain why.
- Does the camera chemically identify the emissions viewed?
- Under what authority was Region 8 conducting an “unofficial” search?
- How did Region 8 ensure the privacy rights of the subjects who were searched?
- Provide a detailed explanation of what was meant that the EPA must “get a handle on” and identify the authority that the Agency would be asserting.
- Explain how unofficial searches of privately owned facilities, with and without notice to owners and operators, affect Region 8’s ability to establish a foundation of trust with the oil and gas industry, state governments, and private citizens.

The [State of Texas](#) conducted similar emissions studies during August and September of 2006. It is believed that regulators may have been influenced by the results of these imaging studies when considering the new TCEQ regulations for landing floating roofs.

ILTA members have reported similar emissions studies going on in other states, including Connecticut, Delaware and New Jersey as of August 2008. ILTA invites all members to notify us of any actions taken by state and federal agencies relating to the use of infrared cameras for emissions monitoring which may be construed as inappropriate. This could include exceeding agency authority, straying from a scientific grounding, or a violation of trust between regulators and the regulated community.

Link letter to existing link found on the Regional Issues page:

<http://www.ilta.org/LegislativeandRegulatory/StateRegionalIssues/060718EPARegion8flyoverabuse.pdf>

Link State of Texas to existing link found on the Louisiana page:

<http://www.cleantexas.org/docs/TexAQSI1%20Remote%20Sensing%20VOC%20Project.ppt>