



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
RESEARCH TRIANGLE PARK, NC 27711

APR 20 2015

OFFICE OF  
AIR QUALITY PLANNING  
AND STANDARDS

MEMORANDUM

**SUBJECT:** Guidance on EPA Alternative Method 082 – Stacks Larger than 7 Feet in Diameter

**FROM:** Barrett H. Parker, Acting Group Leader  
Measurement Technology Group  
Air Quality Assessment Division

A handwritten signature in black ink, appearing to read "Barrett H. Parker".

**TO:** Sara Breneman, Chief  
Air Enforcement and Compliance Assurance Branch  
Region 5 Air and Radiation Division

We are writing in response to your January 8, 2015 request to our office for guidance on the application of Alternative Method 082 (ALT-082; see <http://www.epa.gov/ttn/emc/approalt/ALT082.pdf>) to stacks larger than 7 feet in diameter. More specifically, you seek our technical opinion as to whether such application would provide credible evidence of an emission source's compliance with applicable opacity limits in lieu of, or in addition to, the use of EPA Reference Method 9 (40 CFR part 60, Appendix A). As stated in your request, ALT-082 allows for the use of ASTM Method D7520-09 with additional caveats in lieu of Method 9 to meet opacity measurement requirements under 40 CFR parts 60 and 63. ASTM D7520-09 utilizes a Digital Camera Opacity Technique or DCOT to determine the opacity from an emission source using a digital camera coupled with software-based analysis. You are correct in your understanding that ASTM D7520-09 methodology, and consequently ALT-082, includes a scope that limits the application to stacks less than 7 feet in diameter. As we understand it, this limited scope was included in ASTM D7520-09, not due to concerns that the method would yield inaccurate results from stacks greater than 7 feet in diameter, but rather due to caution on the part of the ASTM workgroup, as there was only a limited amount of data for large diameter stacks at the time.

Staff in our group have reviewed the three recent ASTM D7520-09 Method 301 (40 CFR part 63, Appendix A) validation studies referenced in your request and believe that they provide an adequate technical basis for using ALT-082 opacity readings on larger diameter stacks (greater than 7 feet in diameter) as credible evidence in air enforcement activities. The credible evidence rulemaking, at 62 FR 8316 (February 24, 1997), allows for the use of "...any credible evidence - that is, both reference test and comparable non-reference test data - to prove or disprove violations of the Act in enforcement actions..." The credible evidence rule further clarified that

“...enforcement authorities can prosecute actions based exclusively on any credible evidence, without the need to rely on any data from a particular reference test...” Although ALT-082 was not originally approved for application to stacks greater than 7 feet in diameter, we are unaware of any technical reason that data from this alternative method could not be used as credible evidence in assessing compliance.

Thank you for your request and I hope you find this information useful. If you have any questions, you may contact Robin Segall at (919) 541-0893 or [segal.robin@epa.gov](mailto:segal.robin@epa.gov).