

Hydrogen Contamination Detector Workshop

DOE Fuel Cell Technologies Office

Hosted by:

SAE International, Troy, Michigan

June 12, 2014

(8:30 AM – 3:00 PM)

Workshop Objective:

The objective of the Hydrogen Contamination Detector (HCD) Workshop is to gather input from stakeholders on requirements, technologies and the research and development (R&D) gaps associated with the detection of contamination at hydrogen fueling stations. This input will help identify current state-of-the-art detection technologies for the near-term and the R&D advancements needed for low-cost, accurate, and robust detectors for the long-term.

Desired outcomes include:

- Summary of technical and performance requirements for hydrogen contamination detectors
- Summary of existing and potential contaminant detection devices
- Summary of key gaps for long-term contaminant detector research and development
- Workshop report to publically disseminate findings

Tentative Agenda:

8:30 am	Opening Remarks, <i>Will James, U.S. Department of Energy</i>
8:45 am	Current Fuel Quality Challenges 15 mins. – Auto OEM, <i>Tim McGuire, Mercedes-Benz R&D North America, Inc</i> <i>Mike Steele, Consultant</i> 15 mins. – Station Operator, <i>Herie Soto, Shell</i>
9:15 am	Introduction to Existing and Potential Contaminant Detection Devices and Associated R&D Needs (Near- and Long-Term) <ul style="list-style-type: none">• Deployment Requirements – <i>Bill Buttner, National Renewable Energy Laboratory</i>• Specialized Applications – <i>Andrew Kaldor, Power+Energy</i>• R&D Sensing Techniques – <i>Rangachary Mukundan, Los Alamos National Laboratory</i>• Laboratory Applications – <i>JP Hsu, Smart Chemistry</i>
10:15 am	Break
10:45 am	Discussion: Technical and Performance Requirements for Detection of Fuel Quality at the Station (Facilitator: Scott McWhorter, Savannah River National Laboratory) <ul style="list-style-type: none">- Detector Performance Requirements (e.g., response time, sensitivity, etc.)- Refueling System Integration Requirements (where, what action results, mechanical connections, etc.)- Hydrogen Contaminant Detection Device
12:00 pm	Lunch
1:15 pm	Breakout Sessions on Near- and Long-Term Solutions <ul style="list-style-type: none">A. Near-Term Solutions to Meet Deployment Requirements (Facilitator: Danny Terlip, NREL)B. Long-Term R&D Areas to Address Technical Gaps (Facilitator: Terry Johnson, NREL)
2:45 pm	Brief Report-Outs and Wrap-Up
3:00 pm	Adjourn

NOTE: The goal of this workshop is NOT to develop a Funding Opportunity Announcement (FOA). Current and possible future FOAs will not be discussed at any point of the workshop. All attendees are fully responsible for the cost of their travel to the workshop. DOE is not able to reimburse travel costs.

For Questions, please contact [Charles James](mailto:Charles.James@ee.doe.gov) (Charles.James@ee.doe.gov) or [Kristian Kiuru](mailto:Kristian.Kiuru@ee.doe.gov) (Kristian.Kiuru@ee.doe.gov)

Directions to SAE International

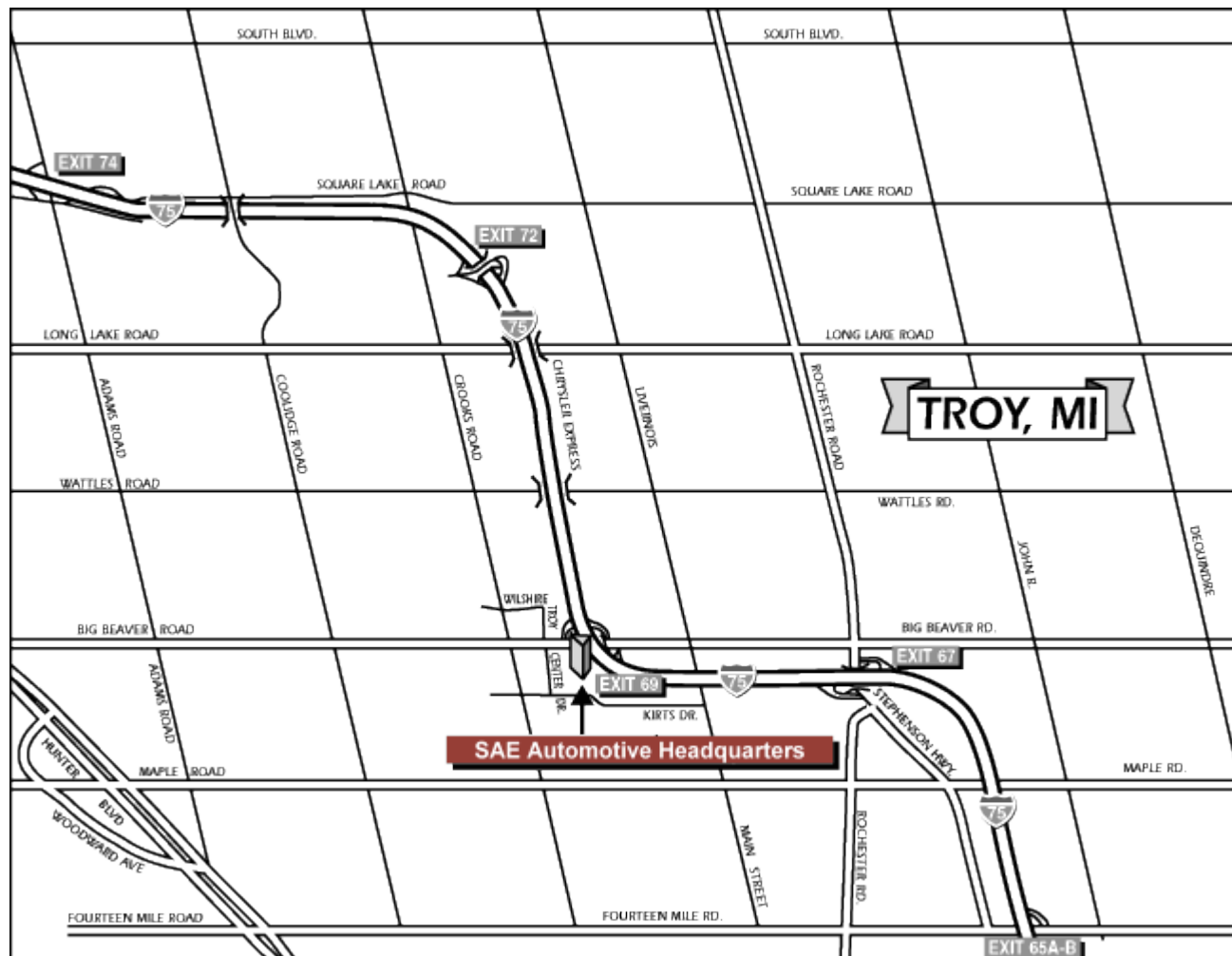
Address:

SAE Automotive Headquarters (inside PNC Center)

755 W. Big Beaver, Suite 1600

Troy MI 48084 USA

Telephone number: 248-273-2455



From North

Take I-75 South to Exit 69, Big Beaver West. As you exit I-75 onto Big Beaver, stay in the left lane. Make a U-turn at the first possible/legal turn around island. Move to the right lane immediately. Turn right onto Troy Center Drive and make the first left turn into the PNC Center parking lot. Parking is free. PNC Center is the tallest building in the area. It is located on the southwest corner of the I-75/Big Beaver intersection.

From the Detroit Metro Airport

From the Detroit Metro Airport, take I-94 East to I-75 North to Exit 69, Big Beaver West. As you exit I-75 onto Big Beaver, stay in the left lane. Make a U-turn at the first possible/legal turn around island. Move to the right lane immediately. Turn right onto Troy Center Drive and make the first left turn into the PNC Center parking lot. Parking is free. PNC Center is the tallest building in the area. It is located on the southwest corner of the I-75/Big Beaver intersection.

From East

Take I-696 West to I-75 North to Exit 69, Big Beaver West. As you exit I-75 onto Big Beaver, stay in the left lane. Make a U-turn at the first possible/legal turn around island. Move to the right lane immediately. Turn right onto Troy Center Drive and make the first left turn into the PNC Center parking lot. Parking is free. PNC Center is the tallest building in the area. It is located on the southwest corner of the I-75/Big Beaver intersection.

From West

Take I-696 East to I-75 North to Exit 69, Big Beaver West. As you exit I-75 onto Big Beaver, stay in the left lane. Make a U-turn at the first possible/legal turn around island. Move to the right lane immediately. Turn right onto Troy Center Drive and make the first left turn into the PNC Center parking lot. Parking is free. PNC Center is the tallest building in the area. It is located on the southwest corner of the I-75/Big Beaver intersection.