

MEDIA ADVISORY



March 15, 2012

For Immediate Release

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Army's Newest Laboratory Complex Opens April 11 at Detroit Arsenal Targeting Energy Security

- Army's Tank Automotive Research, Development and Engineering Center hosting grand opening event with government, industry officials
- Media invited to 10 a.m. ceremony at base April 11
- DOD's unique, eight-in-one facility works to protect Soldiers, benefit Nation

U.S. ARMY DETROIT ARSENAL, WARREN, Mich. – The U.S. Army will open its new complex – the Ground Systems Power and Energy Laboratory (GSPEL) – during a grand opening ceremony at the Detroit Arsenal at 10 a.m. on Wednesday, April 11, 2012. The eight-labs-in-one GSPEL facility offers numerous testing capabilities and an unmatched combination of resources in a single lab. The GSPEL is part of the Army's Tank Automotive Research, Development and Engineering Center's (TARDEC) laboratory system.

While closed to the public, the grand opening ceremony is expected to draw top government and industry leaders – many of whom are or will soon be GSPEL's collaborative partners. GSPEL offers



The Army's new Ground Systems Power and Energy Lab opens April 11 just north of Detroit.

shared access to industry and academia to facilitate the exchange of information and ideas to develop emerging energy technologies and validate ground vehicle systems – research that could also help the Nation achieve energy security goals.

“GSPEL gives the Army overarching, full-spectrum testing and evaluation capability,” remarked TARDEC Interim Director Jennifer Hitchcock. “The GSPEL's unique facilities will allow the Army to drive innovation for tomorrow's energy solutions.”

Decorated TARDEC research scientists, engineers and technicians are already moving into the 30,000-square-foot facility. The eight individual labs are:

1. **Power and Energy Vehicle Environmental Lab (PEVEL)** is the centerpiece lab and features one of the world's largest environmental chambers enabling testing at temperatures from minus 60°F to 160°F, relative humidity levels from 0 to 95 percent and winds up to 60 mph. The lab's dynamometer and environmental chamber combination allows for full mission profile testing of every ground vehicle platform in the military inventory in any environmental condition.

– more –

TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

2. **Air Filtration Lab** is capable of testing the air flow characteristics of various-sized media at four different flow benches using varying flows up to 12,000 standard cubic feet per minute. Each flow stream is equipped with an automated dust feeder enabling simulations from zero visibility to four times zero visibility for evaluation of air filters, cleaners and other components.
3. **Calorimeter Lab** is the world's largest and is capable of testing radiators, charge air coolers, oil coolers individually or all three simultaneously.
4. **Thermal Management Lab** handles work testing thermally-managed mechanical and electrical components in varying environments. It is comprised of a wide variety of chiller and heat systems for use with test bench heat exchanges for evaluating components and systems.
5. **Power Lab** is devoted to evaluating major vehicle electrical systems including charging systems, air conditioning systems, hydraulic systems and associated components. The lab's two explosion-proof environmental chambers allow for expanded technical research.
6. **Fuel Cell lab** tests future fuel cell capabilities for tactical vehicles. The lab enables the development and evaluation of fuel cell components and systems, including systems to reform JP-8 fuel, various fuel cell media and power conditioning. This work will help vehicles become quieter and more efficient.
7. **Hybrid Electric Components** evaluates hybrid electric powertrains with the principal emphasis on developing hybrid motor technology and contributing to the increased electrification of vehicles. Equipment used in this lab will potentially regenerate 80 percent power back into the building, making it possible to re-use the electricity.
8. **Energy Storage Lab** makes it possible to safely test and evaluate advanced chemistry battery vehicle modules. Explosion-proof battery test chambers enable safe testing of 10 – 60 kW advanced chemistry battery packs.

Media must pre-register for access to the U.S. Army Detroit Arsenal to attend this event. If interested, contact John Wray jwray@brtrc.com by 5 p.m. Thursday, April 5, 2012.

Companies interested in partnering with the Army or testing in the GSPEL can contact TARDEC through the Ground Vehicle Gateway: www.groundvehiclegateway.com.

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