

Illinois Environmental Protection Agency
Bureau of Air
Permit Section

October 18, 2013

Responsiveness Summary For
Public Questions and Comments on the
Operating Permit Application from
Automotive Robotics Proving Lab for a
Testing Laboratory
in East Peoria, Illinois

Source Identification No.: 179020ADF
Application No.: 10090024

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DECISION

On October 18, 2013, the Illinois Environmental Protection Agency (Illinois EPA) issued an air pollution control operating permit to Automotive Robotics Proving Lab (ARPL), to regulate air emissions from its engine test cells located at 5 Altorfer Lane in East Peoria, Illinois. In response to Public comments, the issued permit includes a number of additional requirements from the proposed permit compared to the draft permit, as well as various clarifications to conditions.

Copies of the documents can be obtained from the contact listed at the end of this document. The permits and additional copies of this document can also be obtained from the Illinois EPA website www.epa.state.il.us/public-notice/.

BACKGROUND

On September 25, 2012, the Illinois EPA, Bureau of Air received a operating permit application from Automotive Robotics Proving Lab (ARPL), requesting a permit to regulate air emissions from its engine test cells located at 5 Altorfer Lane in East Peoria, Illinois. The proposed project would test engines up to 4500 horsepower. The key emission units of the project would be test cells 1 through 9 and the associated controls, and various other ancillary and support operations.

The operating permit issued for the project identifies the applicable rules governing emissions from the plant, and establishes enforceable limitations on its emissions. The permit also establishes appropriate compliance procedures, including requirements for emissions testing, monitoring, recordkeeping, and reporting. ARPL will be required to carry out these procedures on an ongoing basis to demonstrate that the project is operating within the limitations established by the permit.

COMMENT PERIOD AND PUBLIC HEARING

The Illinois EPA Bureau of Air evaluates applications and issues permits for sources of emissions. An air permit application must appropriately address compliance with applicable air pollution control laws and regulations before a permit can be issued. Following its initial review of ARPL's application, the Illinois EPA Bureau of Air made a preliminary determination that the application met the standards for issuance of an operating permit and prepared a draft permit for public review and comment.

The public comment period began with the publication of a notice in the Peoria Journal Star on May 5, 2013. A public hearing was held on June 19, 2013 at Fon du Lac Park District Administration Center in East Peoria to receive oral comments and answer questions regarding the application and draft permit.

AVAILABILITY OF DOCUMENTS

The permit issued to Automotive Robotics Proving Lab (ARPL) and this responsiveness summary is available on the Illinois Permit Database at

www.epa.gov/region5/air/permits/ilonline.html (please look for the documents under All Permit Records (sorted by name), Operating Permit Records). Copies of these documents may also be obtained by contacting the Illinois EPA at the telephone numbers listed at the end of this document.

QUESTIONS AND COMMENTS WITH RESPONSES BY THE AGENCY

1. **Will ARPL be limited to the fuels stated in the permit- both quantity and type - and Tier 4 certified engines? Will any testing be exempt from meeting the requirements of fuel type and quantity and engine type (Tier 4 certified) as defined in the permit? Is the facility currently testing only with ULSD?**

Ultra Low Sulfur Diesel shall be the only liquid fuel used, as per revised CAAPP Permit Condition 4.1.2(f)(i)(B), and Pipeline Quality Natural Gas shall be the only gas fuel used, as per revised CAAPP Condition 4.1.2(f)(i)(C). As such, they cannot use high sulfur fuels at any time. This includes current testing.

Requiring Tier 4 emission controls on engines is outside the authority of the permit. These requirements are found elsewhere in the Federal Rules. Furthermore, removal of emission controls for certain tests does not allow ARPL to violate the emission limits already set forth in the permit. There are no exemptions from any testing for the type of engine being tested. Rather, the Illinois EPA is permitting the test cells themselves. Therefore, the Illinois EPA does not have governing authority to mandate the TIER level of engine that can be tested in the cells. However, upon review with the source, the number of engines tested with a particular TIER level emission control level removed has historically been less than one percent. Since ARPL's construction and startup, they have only tested one engine where the test protocol required the removal of TIER controls on the engine. To maintain the source's ability to be competitive in the testing industry, this revised draft permit would require ARPL to keep detailed records any time a TIER control is removed from an engine, including results of the impact on emissions, as stated in the revised CAAPP permit at Condition 4.1.2(g)(ii)(B). In addition, the Illinois EPA has added a reporting mechanism to handle testing of an engine with TIER level control removed. This reporting deadline has been established as within five days of removing such control from the engine. The short reporting time and low threshold for reporting based on monthly limits provides for more efficient information exchange in the event of removing a TIER emission control from an engine. This would allow the Illinois EPA to require prompt testing if it was determined that a significant impact would result.

2. **Does the applicant's standing with other Agencies of the State of Illinois, e.g. the Secretary of State, affect their ability to get this permit?**

An applicant's standing with other Agencies of the State does not affect their ability to obtain a permit. The typical standard for Illinois EPA review for environmental permitting is geared towards compliance with the Environmental Protection Act and implementing

regulations. Scofflaws of tax laws, speed limits and just about anything else non-environmental still allow a source to obtain a construction or operating permit under the Act and, conversely, the agency cannot use such infractions against them in their pursuit of such licensing. In some instances, the agency can consider prior adjudications of the Act in our permitting decisions, but only geared towards environmental compliance.

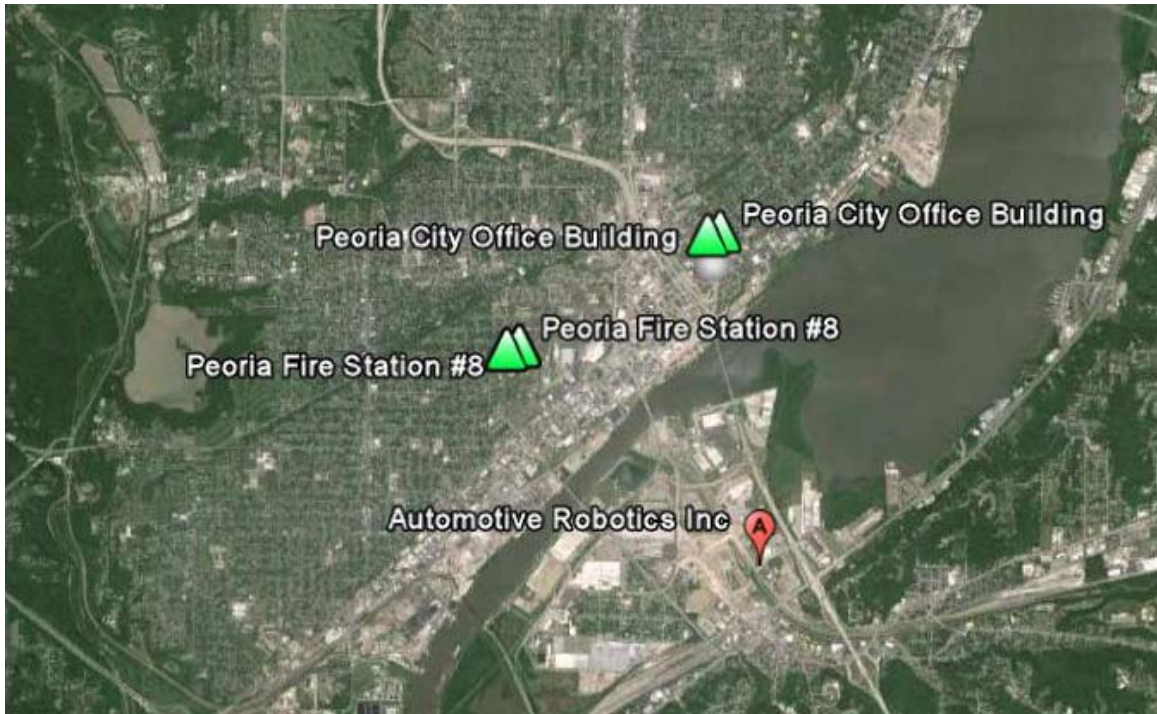
3. Where is the closest ambient air monitoring station (to ARPL)?

The Illinois EPA has two monitoring stations for air quality located in the Greater Peoria Metropolitan area near ARPL operations in East Peoria.

Monitoring Location	Type	Pollutants	Objective	Spatial Scale
Fire Station #8, Peoria	SLAMS	SO ₂ & O ₃	Population	Neighborhood
City Office Bldg., Peoria	SLAMS/SPMS	PM _{2.5}	Population	Urban

Both of these locations are 1.8 miles N-NW of ARPL across the Illinois River in Peoria.

The below map of the Greater Peoria Metropolitan area shows these monitoring stations in relation to Automotive Robotics Performance Laboratory operations. The monitoring stations are depicted with a double green triangle and the source with a red teardrop labeled "A".



- 4. The ambient monitoring stations west of East Peoria do not accurately reflect the ambient air quality in East Peoria.**

The station at the Peoria City Office Building site monitors for PM_{2.5} utilizing both a filter based sampler and a continuous monitor. The station at the Peoria Fire Station #8 site monitors for SO₂ and Ozone utilizing continuous monitors.

These monitoring sites are "ambient oriented" monitoring stations as opposed to "source oriented" monitoring stations. These sites each have a monitoring objective of providing air quality data to the public and supporting compliance with the National Ambient Air Monitoring Standards (NAAQS). The determination as to whether a monitoring station's geographical location is representative of a specific area depends on the relationship between the objectives, the type of monitoring and the spatial scale. Spatial scale is basically the dimensions of an air parcel for which the pollutant of concern is reasonably similar. Based on the criteria established in 40 CFR Part 58, Appendix D, the Peoria Fire Station #8 site is a neighborhood spatial scale monitor. In other words, the sampling radius (0.3 to 2.5 miles) extends beyond the proximity of ARPL and appropriately encompasses emissions from ARPL.

- 5. There should be an air monitor downwind of ARPL to check the impact of the facility on ambient air quality.**

Monitoring stations that are used for purposes other than the monitoring objectives identified in comment #3 above would be considered Special Purpose Monitoring stations in that these monitors would not be included in demonstrating compliance with the State's minimum requirements for the number and location of various types of monitors. The SO₂ monitoring site in Peoria is not a Special Purpose Monitoring station. In other words, the site in Peoria has been included in the States minimum requirements for the number and location of monitors for SO₂ in the Greater Peoria Metropolitan area. As such, this monitoring site meets all the minimum requirements to accurately represent the air quality for the Metropolitan Statistical Area MSA that encompasses Peoria and East Peoria.

The monitor's geographical location is representative regardless of the wind direction because the spatial scale of the monitor is designed such that the air parcels in the proximity are reasonably similar.

- 6. Will IEPA be installing a PM monitor in the Peoria area? Where will the monitor be placed?**

PM monitoring consists of PM₁₀ and PM_{2.5} monitors. Based on the MSA population and historic concentration levels, the Greater Peoria Metropolitan area does not require PM₁₀ monitoring to be performed. As for PM_{2.5}, there are no additional monitors being proposed for the Greater Peoria Metropolitan area for PM_{2.5}. However, the currently operational monitor at the City Office Building will continue to be operated.

7. Can citizens buy and install their own air monitor?

Citizens can purchase their own monitoring equipment. The installation of such monitoring equipment would be dependent on the monitoring objectives, the use of the data and any municipal or local ordinances, regulations, etc. Monitors of various types are available for public purchase. Aside from the cost to purchase a monitor, there are costs to operate and maintain the monitor to ensure its performance is reliable. There is also the potential cost of laboratory analysis that would need to be conducted depending on the type of sampler purchased.

8. Initiate procedures to install and continually monitor ambient air quality in East Peoria to provide evidence of attainment.

Presumably the commenter is referring to obtaining data from the installation of a new monitoring station that would show compliance with the NAAQS for East Peoria. The Illinois EPA already has data showing the MSA to be in compliance with the NAAQS. This data can be found in the Annual Air Quality Reports which can be downloaded at <http://www.epa.state.il.us/air/monitoring/>.

The comment does not provide the Illinois EPA with any additional information that would suggest the City of East Peoria to have air quality concentrations of NAAQS pollutants that would exceed the standards. Thus, there is not a need for the Illinois EPA to initiate any type of action to install such additional monitoring at this time.

9. Air Monitoring guidance on how to install a monitor.

Guidance for the installation and siting of an ambient air monitor or network can be found in 40 CFR Part 58, manufacturer's instructions and recommendations as well as the US EPA website, <http://www.epa.gov/ttn/amtic/>.

10. Does the IEPA have control on where the facility is located?

Pursuant to 39.2(c) of the Act, no permit for the development or construction of a new pollution control facility may be granted by the Agency unless the applicant submits proof to the Agency that the location of the facility has been approved by the County Board of the county if in an unincorporated area, or the governing body of the municipality when in an incorporated area, in which the facility is to be located in accordance with Section 39.2 of this Act.

In addition, Pursuant to Section 3.330(a) of the Act, "Pollution control facility" is any waste storage site, sanitary landfill, waste disposal site, waste transfer station, waste treatment facility, or waste incinerator. This includes sewers, sewage treatment plants, and any other facilities owned or operated by sanitary districts organized under the Metropolitan Water Reclamation District Act.

Pursuant to 39.2(c) of the Act, site approval would be granted by the City of East Peoria. Since this is not a pollution control facility by definition in the Act, this source is not required to submit proof of site approval to the Illinois EPA. Thus, the IEPA defers site issues

for facilities not considered pollution control facilities to local municipality and county zoning laws, which is in this case, the City of East Peoria.

FOR ADDITIONAL INFORMATION

Questions about the public comment period and permit decision should be directed to:

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LISTING OF SIGNIFICANT CHANGES
BETWEEN THE DRAFT PERMIT AND THE ISSUED PERMIT

1. Increased opacity monitoring for each test cell. See Condition 4.1.2(a)(ii)(B).
2. Calibration and maintenance of fuel monitoring equipment has been included, to be performed annually. See Condition 3.4(b)(ii)(D).
3. Added an inspection requirement for instrumentation and integrity of cells. See Condition 4.1.2(g)(ii)(A).
4. Increased testing established for SO₂, VOM, CO, NO_x, and individual HAPs when CO exceeds 125 tons per year. See Conditions 4.1.2(d)(ii)(A), 4.1.2(b)(ii)(B), 4.1.2(c)(ii)(A), 4.1.2(e)(ii)(A), and 3.4(a)(ii)(A)(II).
5. Detailed recordkeeping any time a TIER control is removed from an engine to be tested, as per Condition 4.1.2(g)(ii)(C).
6. Additional reporting established in Condition 4.1.5(b) to determine when emission controls that are removed leads to exceedances.
7. Permitted Emissions for Fees in Section 8.1 for sulfur dioxide has been lowered from 30.7 tons per year to 1.5 tons per year, to reflect proper calculation of sulfur dioxide based on 15 ppm sulfur content of the liquid fuel.