Introduction
Pursuant to RSMo. 643.337.2, the Missouri Department of Natural Resources and the Missouri State Highway Patrol are issuing a joint annual report to the Missouri General Assembly on the status of the oversight measures implemented for the decentralized inspection/maintenance program – the Gateway Vehicle Inspection Program (GVIP). This report summarizes GVIP compliance and incidents of fraud discovered during the 2016 fiscal year (July 1, 2015-June 30, 2016). This report also provides our joint recommendations for oversight improvements to the GVIP.

Background
The GVIP is a federally required air pollution control strategy in the St. Louis ozone nonattainment area comprised of Franklin, Jefferson, St. Charles, and St. Louis counties and the city of St. Louis.

Since the 1980s, the department has overseen an inspection/maintenance program for vehicles located in the St. Louis area. The program originated as a decentralized program, became centralized in 2000 and then reverted to a decentralized program in 2007 with the beginning of GVIP.

The Missouri Air Conservation Commission promulgated 10 CSR 10-5.381, “On-Board Diagnostics Motor Vehicle Emissions Inspections,” effective Aug. 30, 2007. This rule established state regulations that the department and the patrol currently use to oversee and enforce the GVIP emission inspection requirements, with assistance from the state’s contractor, Opus Inspection. The department is the lead agency for emissions inspections, and the patrol is the lead agency for safety inspections. The GVIP began collecting vehicle emissions and safety inspection data on Oct. 1, 2007.

Station Licensing
As of June 2016, there was an average of 833 public and 21 private or government active licensed GVIP stations. There were also approximately 4,776 licensed inspector/mechanics. A current directory of licensed GVIP stations is on our website at www.dnr.mo.gov/gatewayvip/repair/index.html.
Vehicle Inspection Data
Each licensed GVIP station performs vehicle inspections, using a Missouri decentralized analyzer system. This system sends real-time inspection information from inspection stations directly to the GVIP database. The Missouri Department of Natural Resources, the Missouri State Highway Patrol, the Missouri Department of Revenue (DOR) as well as contract license offices have access to the database through secure, dedicated Internet connections. During FY2016, GVIP stations conducted 812,531 initial emissions inspections and 812,326 safety inspections.

Previous testing programs identified already polluting vehicles, which resulted in costly repairs. Instead, GVIP identifies problems before vehicles need major repair. Only 22,058 vehicles failed their initial emissions tests. This resulted in a final compliance rate of 97.3% percent for emission-tested vehicles in the St. Louis area.

Emissions Waivers and Exemptions
10 CSR 10-5.381 (3) (K) enables the department to issue waivers and exemptions from GVIP requirements. Just like inspection results, waivers and exemptions issued by the department are available for real-time verification by DOR, contract license offices and online registration via the GVIP database.

· Cost-Based Waivers – The department grants one of these waivers if a motorist spends a specified amount on emissions-related repairs after failing an initial emissions inspection, but the vehicle is still not able to pass the emission test. During FY2016, the department issued 140 cost-based waivers and issued 46 denials or close-outs due to inadequate repairs or responses. Thirty-two vehicles passed a post-repair emissions inspection after owners learned that in order to qualify for the waiver, they needed a retest. At the end of this reporting period, six applications were still being processed.

· Out-of-Area Waivers – The department grants this waiver to applicants with vehicles taxed within the ozone nonattainment area but not driven in the area during the registration period. For FY2016, the department received 530 applications. It denied 74 applicants or determined that the waiver was unnecessary, due to gross vehicle weight ratings. The department issued 456 out-of-area waivers, primarily for businesses such as AT&T and Laclede Gas, but also for charitable organizations with offices located in other areas of the state as well as for the occasional motorist.

· Reciprocity Waivers – The department grants this waiver to motorists driving vehicles taxed within the ozone nonattainment area but located in another state. These vehicles have passed an equivalent emission inspection in that state. For FY2016, the department issued 10 reciprocity waivers.

· Mileage-Based Exemptions – The department grants this exemption to motorists with vehicles having documented odometer readings that meet various mileage waiver criteria. For FY2016, the department received 1,899 applications and issued 1,822 mileage-based exemptions. The department denied the exemption to 77 applicants for various reasons.
Data Oversight Methods

Real-Time Inspection Data/Paperless Inspection Verification
Analyzer units connect to the GVIP database using a dedicated Internet connection. The system’s software uploads inspection data to the database, where it becomes immediately available to the department, patrol, Opus Inspection, DOR, contract license offices and the online registration system for inspection verification. This allows license offices to quickly identify fraudulent vehicle inspection reports, deny vehicle registrations and report the issue so that an immediate investigation may begin. This investigation includes determining the sources of the fraudulent inspection reports, requiring legitimate inspections for the vehicles and possible criminal prosecution.

Bulletin Messaging and Documents Menu
Each analyzer unit includes a messaging system that allows the department, patrol, and Opus Inspection to contact GVIP stations, individually or collectively, to inform inspectors and mechanics about inspection procedures, billing reminders and software updates. Each unit is also equipped with a documents menu that stores and prints GVIP regulations and fact sheets as well as comment, waiver and exemption forms. This simplifies the distribution of public information to inspection stations and to vehicle owners.

Consumer Protection Technical Service Centers
Cost-based waivers allow a vehicle to register and operate in failing condition for up to two years. Therefore, the department strives to ensure that repairs made to vehicles receiving a cost-based waiver are appropriate and beneficial. Through negotiated contracts, the department retains the services of approximately 11 vehicle repair facilities to serve as technical service centers. These technical service centers employ Missouri-recognized repair technicians, who are certified by the National Institute for Automotive Service Excellence in specific areas, specializing in diagnosing the cause of a failed emissions test. These centers serve to:

- Diagnose readiness issues with specific makes and models. This helps identify vehicles requiring special testing circumstances and ease future testing.
- Diagnose vehicles that received repairs but show no signs of improvement.
- Review vehicles and prepare receipts to ensure that repairs performed were necessary for the emissions failure and performed as billed.
- Provide motorists with accurate diagnostic information on how best to repair their vehicles to pass an emissions test.

The department is able to deny cost-based waiver requests if reviews show repairs were not appropriate to correct the emissions failure. Many times the department works with the shops that performed the initial repairs to reimburse the motorist or provide additional free repairs. The use of technical service centers reduces the number of cost-based waivers, thereby minimizing the emissions from waived vehicles while also maximizing the number of fully repaired vehicles.

For FY2016, the department authorized the review of 11 vehicles by one of these centers.
Equipment Oversight Methods

*Laptop Audit Computers with Wireless Internet Access*

Department and patrol auditors receive laptop computers containing both analyzer software and customized auditing software. These allow auditors to securely access the GVIP database and conduct audits with or without Internet access. Department and patrol auditors are able to review inspection records for all stations and inspector/mechanics while in the field. Once an audit is complete, department and patrol staff managers can immediately review audit results and generate summary audit reports from the inspection database. This allows for a quicker response when identifying fraudulent inspections and procedures.

*Digital Cameras*

Each analyzer unit includes a detachable digital camera. The analyzer’s software requires licensed inspector/mechanics to photograph the rear license plate, the vehicle identification number plate and the odometer. The inspector/mechanic attaches these photographs to the vehicle inspection reports on the inspection database, where it is available for review and comparison to previous inspection reports to ensure that the vehicle reported matches the vehicle inspected. The department and the patrol can then identify inspector/mechanics taking improper photos or neglecting to take photos prior to the inspection.

*Fingerprint Readers*

Each analyzer unit includes a digital fingerprint reader. The software requires the licensed inspector/mechanics to scan one finger prior to each inspection. This fingerprint scan must match the scan stored in the system for that individual in order to proceed with the inspection. Fingerprint readers in combination with the trigger reports described below have dramatically improved enforcement efficiency by documenting and pinpointing inspector/mechanics conducting improper inspections.

*Enforcement*

*Station Audits*

The department and the patrol conduct overt and covert audits of GVIP stations. During covert audits, the department uses a fleet of six vehicles altered to fail in order to assess test effectiveness and to prevent test station fraud. The patrol also has a vehicle with defects to evaluate the station’s safety inspections. During FY2016, department staff conducted 1,085 overt lane and inspector audits and 767 covert vehicle inspection and data audits of GVIP stations, and patrol staff conducted 4,846 overt audits and 115 covert audits.

*Trigger Reports*

Once uploaded to the inspection database, the inspection data becomes available to the department, patrol, DOR, and Opus Inspection via an Internet-based reporting suite. The reporting suite contains general informational reports along with “trigger reports” designed to identify emissions or safety inspection patterns inconsistent with state regulations. When improper inspections occur, the trigger report compiles the evidence into a report used to initiate an investigation. For example, the OBD VIN mismatch report and the protocol mismatch report reveal “clean scanning” violations. Clean scanning is the illegal act of connecting the analyzer cable to a different vehicle than the one identified on the inspection report with the intent of bypassing the required test procedure. The OBD VIN mismatch report compares the
vehicle identification number entered by the inspector/mechanic with the number the vehicle reported through the system. In addition, vehicle manufacturers program every make and model with a certain protocol that the vehicle uses to communicate. The protocol mismatch report identifies inspections where the protocol used by the on-board diagnostic is different from the known protocol for the vehicle reported. These two reports are extremely effective in identifying instances of fraudulent inspections.

**Clean Scanning**

Fraudulent inspection activities, such as clean scanning, are violations of the Clean Air Act, and they are prosecutable by the U.S. Attorney’s Office. The department and patrol collaborate with EPA’s Criminal Investigation Division and the U.S. Attorney’s Office on investigations of vehicle inspection fraud and falsification of inspection documents.

As shown in the table below, the department finalized a number of enforcement cases with monetary penalties during this reporting period.

<table>
<thead>
<tr>
<th>Source</th>
<th>Date of Violation</th>
<th>Resolution Date</th>
<th>Violation Description</th>
<th>Penalty Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midas Auto Service Center</td>
<td>02/19/15</td>
<td>10/13/15</td>
<td>Clean scan of 1 vehicle</td>
<td>$2,000 penalty with $1,500 suspended and $500 paid.</td>
</tr>
<tr>
<td>Suburban Service</td>
<td>01/06/15</td>
<td>07/20/15</td>
<td>Clean scan of 1 vehicle</td>
<td>$2,000 penalty with $1,500 suspended and $500 paid.</td>
</tr>
<tr>
<td>St. Charles Hyundai</td>
<td>06/11/15</td>
<td>09/22/15</td>
<td>Clean scan of 1 vehicle</td>
<td>$2,000 penalty with $1,500 suspended and $500 paid.</td>
</tr>
<tr>
<td>Western Tire and Auto</td>
<td>4/9/2015</td>
<td>6/23/16</td>
<td>Clean scan of 1 vehicle</td>
<td>$2,000 penalty with $1,500 suspended and $500 paid.</td>
</tr>
</tbody>
</table>

**Equipment Lockouts and License Suspensions/Revocations**

The department and the patrol have the ability to apply an electronic “lockout,” which prevents an individual inspector/mechanic or an entire GVIP station from using analyzer unit(s). For FY2016, the patrol initiated 533 lockouts, including 27 for no photos of vehicles, eight for excessive off-line testing, two for unauthorized equipment and 88 for failing the audit. The removal of a lockout occurs upon completion of the license suspension or correction of problems leading to the violation.

In addition to having their analyzers locked out, inspection stations conducting improper inspection activities may have their inspection licenses suspended for up to one year or revoked entirely. To date, the patrol has suspended seven inspector/mechanic licenses for clean scanning violations. During FY2016, the patrol suspended or revoked the following station license for clean scanning violations:
• **Green Trails Mobil** (14298 Ladue Road)

The department and the patrol continuously investigate additional GVIP stations and inspector/mechanics for improper inspection activities.

**Oversight Results**

The GVIP prevents registration fraud by investigating and identifying individuals producing fraudulent inspection reports. The GVIP implemented an improved auditing system, streamlining department and patrol oversight of vehicle emissions and safety inspections. The result of the integrated oversight methods described above is that the department and patrol can cost-effectively audit, detect and enforce to further prevent emissions and safety inspection fraud.

**Recommendations for the Future**

The department and the patrol continually strive to improve our ability to detect fraud and ensure data integrity. We continue to move forward by identifying areas of possible improvement to the GVIP, including:

- Provide ability for mileage-based exemptions to be provided at GVIP inspection facilities through the inspection analyzer by using data already in the inspection system at no charge to the motorist and with no VID fee or authorization fee charged to the shop.

- Continue efforts to seek out and prevent fraudulent inspection procedures in addition to clean scanning violations. With ongoing improvements to the reporting system and varied covert audit techniques, we continue to improve our ability to efficiently identify improper inspections.

- Continue working with DOR to improve the registration process through identifying and preventing invalid registrations obtained with counterfeit inspection reports, ensuring individual licensing offices conduct proper verifications, minimizing problems or confusion with registration of vehicles exempt from safety and/or emissions inspections, minimizing issues associated with online registrations and providing additional information regarding exemptions. We will also continue to work with DOR to ensure that automobile dealers statewide meet their statutory obligations to inform vehicle purchasers of their rights regarding emissions inspections.

- Continue efforts to coordinate with DOR and the Missouri Attorney General’s Consumer Protection Division to bring enforcement action against used car dealers who fail to meet requirements of the statute. RSMo. 643.315.4 requires a dealer to obtain a passing emissions test before sale or clearly state in the sales contract that the purchaser may return the vehicle to the dealer for retest and repair within ten days of sale should the vehicle fail an emissions test.
Conclusion
The oversight measures described in this report have elevated the Gateway Vehicle Inspection Program so that it is now among the best in the country. Thanks to efforts like GVIP in the St. Louis area, ozone levels have shown a continued decline in recent years. As the program continues, we will have an even greater potential for compliance and enforcement capabilities. The department and the patrol will continue working with Opus Inspection to enhance the oversight tools needed to identify violations and improve enforcement capabilities. Both agencies will continue to ensure compliance with state statutes and rules, remove violators from the program and work for the public health and safety by overseeing an inspection program with proven value and integrity.