

INFORMATION SUBMISSION FOR NAS

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**Office of Defects Investigation
Office of Vehicle Safety Compliance
National Highway Traffic Safety Administration**

OFFICE OF DEFECTS INVESTIGATION

1.0 Introduction

The Office of Defects Investigation (ODI) consists of seven divisions:

- (1) Early Warning Division – conducts reviews of Early Warning Reporting (EWR) information submitted by manufacturers every quarter;
- (2) Defects Assessment Division -- reviews consumer complaints, external manufacturer communications, and other information related to alleged safety defects so that ODI can decide whether to open an investigation, grant a petition for a defect investigation, determine the adequacy of safety recalls, and grant a petition for a public hearing on the adequacy of a safety recall;
- (3-5) Investigating Divisions –
 - a. Vehicle Integrity Division – investigates matters concerning crashworthiness;
 - b. Vehicle Control Division – investigates matters concerning crash avoidance;
 - c. Medium & Heavy Duty Vehicle Division – investigates all concerns pertaining to medium & heavy trucks, school buses, recreational vehicles, trailers, motorcycles and automotive equipment;
- (6) Recall Management Division – provides oversight of safety recalls to ensure compliance with statutory and regulatory requirements, and
- (7) Correspondence Research Division (CRD) – handles congressional and consumer inquiries about potential safety defects.

ODI's objective is to assure that vehicles and equipment with safety-related defects are recalled in accordance with Chapter 301 of Title 49 of the United States Code. Under that law, NHTSA may require a manufacturer to conduct a recall only if the agency can establish that a defect exists and it is "related to motor vehicle safety." A defect is a problem in the performance, construction, a component, or material of a motor vehicle or motor vehicle equipment. To demonstrate that a problem is a defect NHTSA must be able to show that there is the potential for a significant number of failures. To establish that the defect is related to "motor vehicle safety," NHTSA must be able to show that the defect presents an "unreasonable risk" of an accident, injury, or death. Motor vehicle safety includes nonoperational safety of a motor vehicle (e.g., fires in parked vehicles). On average, ODI will screen approximately 300 issues per year and conduct approximately 100 investigations per year. Annually ODI will review over 30,000 complaints pertaining to the U.S. vehicle population of approximately 250 million vehicles. The volume in 2010 has exceeded 50,000 complaints.

To identify the most serious safety risks, ODI looks at both the frequency and severity of a possible defect. In every investigation, ODI looks at a range of factors to determine the defect's likelihood of occurrence, including:

- Complaint rates (those submitted to NHTSA and company data)
- Warranty rates
- Field report data
- Property damage data

In looking at the severity of a defect, analysis is complicated because the defect's occurrence does not always have a safety consequence that has been realized (e.g., a wheel may crack without causing a loss of control), and the defect may have a range of consequences of varying severity (e.g., temporary loss of power, stalling, or loss of control). In many possible safety defect situations, crashes or injuries are very few in number or have not yet occurred at all, so estimating risk based merely on crash data would be misleading and likely to delay effective action that may avoid crashes, injuries, and other bad consequences. Therefore, the ODI investigator needs to look at both actual consequences (deaths, injuries, crashes, fires, etc.) and the range of potential consequences.

The ODI investigator needs to be able to pull together the available data into a coherent analysis and apply professional judgment in supporting his or her preliminary conclusion as to how to characterize the risk in a particular situation.

The ODI currently has a staff of 51 employees (57 are authorized) to accomplish its mission. It is anticipated that two more will be hired in the near future. The remaining positions will be filled as soon as funding is available. A brief description of each division is listed below:

1.1 Early Warning Division (EWD):

The Early Warning division (EWR) reviews information, including aggregate data, death and injury data, foreign campaigns, and field reports involving regulated motor vehicles and equipment items. This data is submitted quarterly by each manufacturer producing more than 5000 vehicles annually for review and analysis. If EWD discovers a statistical anomaly in the aggregate data, an issue in a foreign campaign that might be applicable to substantially similar vehicles or equipment sold in the United States, or an issue in one or more field reports or notices of a death that could potentially indicate a safety-related problem, EWD sends a follow up information request letter to the manufacturer. The EWD consists of 7 employees. Two are math statisticians, two are electrical engineers, two are automotive specialists and one is a mechanical engineer.

1.2 Defects Assessment Division (DAD):

The Defects Assessment Division is responsible for reviewing all available information -- including but not limited to EWR data (see 1.1 above), manufacturer service bulletins, Electronic Vehicle Owner's Questionnaires (EVOQs), Vehicle Owner's Questionnaires (VOQs), E-mail, verbal consumer complaints, letters, and anonymous reports. On average over 30,000 complaints are received annually. Every complaint is reviewed. If DAD believes that the available information indicates that a safety-related trend may be developing, a staff analyst prepares an Initial Evaluation and a memo report that summarizes the available information. The appropriate ODI investigative Division is notified and the Defects Assessment Review Panel is convened to review the evaluation and to decide whether to open an investigation. The DAD division consists of 9 employees. Of those 9, four are mechanical engineers, 1 is an electrical

engineer, one is a chemical engineer and 3 are automotive specialists with expertise obtained from working in the auto industry.

1.3 Investigating Divisions:

Vehicle Integrity Division: This division consists of 8 employees, six being mechanical engineers and two are automotive specialists. This division focuses on crashworthiness issues, such as seat belt and air bag failures, vehicle lighting and power steering failures (electric and hydraulic) and vehicle fires. Generally, investigations are conducted on “light vehicles” those being 10,000 pounds or below.

Vehicle Control Division: This division focuses on crash avoidance issues, such as braking, steering, suspension, stalling, fires and throttle control issues. Generally vehicles investigated by this division are “light vehicles” (under 10,000 pounds GVWR). This division consists of 8 professionals; two are mechanical engineers, one industrial engineer, one computer engineer, one aero-space engineer, one automotive specialist, and two electrical engineers have been added within the past 3 months. This division has conducted the Toyota (and other manufacturers) investigations on throttle control and sudden unintended acceleration.

Medium & Heavy Duty Vehicle Division: This division specializes in medium and heavy duty trucks, school and transit buses, recreational vehicles, trailers, motorcycles and automotive equipment. All types of failures applicable to the vehicles listed are investigated by this division. This division consists of 7 professionals, 5 being mechanical engineers and two being automotive specialists.

Regardless of division, investigations are generally conducted in two phases: the Preliminary Evaluation (PE) and the Engineering Analysis (EA). Most PE’s are opened following a review of a concern by DAD, but some are opened on the basis of other information. During the PE phase, ODI sends an information request letter (IR letter) to the manufacturer and obtains information that includes, but is not limited to, data on complaints, crashes, injuries, warranty claims, modifications, and part sales. In the response to ODI’s IR letter, the manufacturer has an opportunity to present its views regarding the alleged defect. PE’s are generally resolved within four months from the date they are opened. They may be closed on the basis that further investigation is not warranted, or because the manufacturer has decided to conduct a recall. In the event that ODI believes further analysis is warranted, the PE is upgraded to an EA.

During an EA, ODI conducts a more detailed and complete analysis of the character and scope of the alleged defect. The EA builds on information collected during the PE and supplements it with appropriate inspections, tests, surveys, and additional information obtained from the manufacturer, manufacturers of peer vehicles or equipment and suppliers. Investigations may involve examination of specific vehicles, but ODI does not have a staff or travel budget that would allow examination of large numbers of vehicles. Nor does ODI have the resources or expertise to conduct full crash investigations. Instead ODI asks the Special Crash Investigations, part of NHTSA’s National Center for Statistics and Analysis, to conduct several investigations a year or crashes that may be relevant to pending or possible investigations. ODI attempts to resolve all EAs within one year from the date they are opened, but some complex investigations require more time. At the conclusion of the EA, the investigation may be closed without further

action. However, if ODI believes that the data developed indicate that a safety-related defect exists, senior level managers within the agency are briefed. With their concurrence, the ODI investigator prepares a briefing to be presented to the Multi-Disciplinary Review Panel (a panel of experts from throughout the agency) for peer review.

The manufacturer is notified (verbally) that a panel will be convened and the date when the panel will be held. Prior to the panel, if the manufacturer desires to present new analysis or data to the agency, the ODI staff will evaluate that information and include it in the panel discussion. After the panel is held, ODI informs the manufacturer of the outcome.

ODI evaluates the recommendation or concerns raised by the panel and decides whether to send a Recall Request Letter. If the manufacturer declines to conduct a recall in response to the RRL, the Associate Administrator for Enforcement or his delegate may issue an Initial Decision that a safety-related defect exists. An Initial Decision will be followed by a Public Meeting, during which the manufacturer and interested members of the public can present information and arguments on the issue. Written materials may also be submitted. The entire investigative record is then presented to the NHTSA Administrator, who may issue a Final Decision that a safety defect exists and order the manufacturer to conduct a recall. A recall can occur at any point during this process.

ODI also opens new investigations based on complaint reports or other information received concerning a recall action. Reports or other information provided to the agency may indicate that the recall remedy could be inadequate or that the scope of the recall may be insufficient to address the problem. An investigation opened based on a recall is called a Recall Query. The Recall Query (RQ) is conducted in a manner very similar to the PE investigation. An RQ investigation may be upgraded to an EA if ODI believes that the issue warrants further attention.

Two other ODI divisions provide administrative support for the Office:

1.4 Recall Management Division:

The Recall Management Division (RMD) maintains the administrative file for all safety recalls, and monitors these recalls ensuring that manufacturers conform to statutory and regulatory requirements and that the recall completion rate is adequate. This division currently has a staff of three specialists and the division chief has legal training.

1.5 Correspondence Research Division

The Correspondence Research Division (CRD) reviews all incoming consumer and Congressional correspondence and prepares replies where appropriate. VIP correspondence is researched in detail and all such correspondence receives an appropriate reply. All correspondence is entered into the ODI complaint database system and complaints are examined for potential defects. Issues identified as an immediate concern are brought to the attention of the Defects Assessment Division or Recall Management Division. CRD also prepares public copies of investigation case files ensuring that all personal identifiers and business confidential information are permanently redacted before public dissemination. This division consists of six staff specialists.

FY 2010 ODI FTE Staffing

The ODI is budgeted for 57 positions. Currently 51 positions are filled and six vacancies exist. The ODI has approximately 27 engineers on-board, the majority (18) being mechanical engineers, one chemical, five electrical engineers, one computer engineer and, one industrial engineer. ODI also has a division manager trained as an attorney, a second division manager trained in math and six vacancies. To address the vacancies, we expect to hire a new Office Director, a mechanical engineer and two analysts for our recall management division later in FY2011. We also expect to hire two writers for our correspondence division hire a specialist in the very near future and hope to fill the other two vacancies in late spring. Collectively, these actions will allow the office to achieve its FTE allocation by late summer of 2011.

Financial Information

Listed below are the financial resources provided to ODI in FY-2010 and FY-2011 to support its activities:

ODI Program Funding – FY-2010

Project	Enacted Level
Program Support, EWR Field and Correspondence Support	\$2,706,000.00
Artemis Operations and Maintenance (Computer/database)	\$2,572,165.00
Vehicle Testing	\$1,424,810.00
Unintended Acceleration Investigation Support	\$1,955,954.00
Administrative Support (OCIO, PDAs, Credit Cards)	\$390,621.00
Defects Program Outreach/Printing/Graphics	\$300,000.00
Artemis Hosting (back-up facility support)	\$175,000.00
Co-operative Education - Student Program	\$112,663.00
Office Support	\$100,000.00
Document and Material Storage (Investigation file storage)	\$61,787.00
Vehicle Leases	\$30,000.00
	\$9,829,000.00

ODI Program Funding – FY-2011

Project	President's Budget Request
Program Support, EWR Field and Correspondence Support	\$3,091,688.00
Artemis Operations and Maintenance	\$2,132,616.00
Artemis Technology Refresh	\$1,364,663.00
Vehicle Testing	\$2,000,000.00
Administrative Support (OCIO, PDAs, Credit Cards)	\$365,815.00
Defects Program Outreach/Printing/Graphics	\$328,325.00
Artemis Hosting	\$175,000.00
Co-operative Education - Student Program	\$171,893.00
NVS-230 Support	\$100,000.00
Document and Material Storage	\$75,000.00
Vehicle Leases	\$24,000.00
	\$9,829,000.00

OFFICE OF VEHICLE SAFETY COMPLIANCE

1.0 Introduction

The Office of Vehicle Safety Compliance (OVSC) consists of four divisions and one test facility:

1. NVS-221 - Manages Vehicle Crash Avoidance Compliance Testing programs
2. NVS-222- Manages Equipment Compliance Testing programs
3. NVS-223 – Manages Import and Certification Programs for nonconforming Vehicles/equipment
4. NVS-224 - Manages Vehicle Crashworthiness Testing Programs
5. San Angelo Test facility - Manages UTQGS Tire / Selected Compliance Testing Programs

The primary mission of the Office of Vehicle Safety Compliance (OVSC) is to assure the American driving public that motor vehicles and motor vehicle equipment comply with the requirements of all applicable Federal motor vehicle safety standards (FMVSS), and that manufacturers comply with applicable regulations and fuel economy standards.

OVSC also helps to ensure that manufacturers of motor vehicles and motor vehicle equipment understand and meet their responsibilities to produce motor vehicles and motor vehicle equipment that meet the minimum level of safety specified for regulated vehicles and equipment. This is accomplished by conducting compliance testing, inspections, and educating new manufacturers before compliance problems begin. Of particular note are OVSC one-day seminars on the details of new standards and the associated test procedure, and OVSC Outreach efforts where OVSC staff is sent to trade shows to discuss the self-certification and compliance process.

When potential noncompliances with FMVSS requirements are identified, OVSC conducts compliance investigations with the ultimate goal of determining if a safety recall is necessary. This supports the agency's mission to save lives, prevent injuries and reduce health care costs by removing unsafe equipment and vehicles from the road.

Finally, OVSC offers direct support to importers on compliance and certification matters, where manufacturers, importers, or brokers can call the Import and Certification Division to discuss issues.

Also, the Office provides technical support to other NHTSA offices particularly for rulemakings to assure that those rulemakings have objective test procedures and are enforceable, and other enforcement offices for special project situations (i.e. Cash- For- Clunkers program and the current Toyota Investigation follow up activities).

FY 2010 OVCS FTE Staffing

The OVSC is budgeted for 38 positions. Currently 33 positions are filled and five vacancies exist. The OVSC has approximately 23 engineers on-board, the majority being mechanical engineers, 2 chemical and one electrical engineer, eight program specialists, one computer science specialist, division manager trained as an attorney, and five vacancies. OVSc intends to hire four engineers (electrical) and one program specialist to fill the vacancies.

FY 2010 OVSC PROGRAM FUNDING

In FY2010, OVSC was budgeted \$8,096,000 to support program activities. About \$5 million was spent to conduct over 500 vehicle compliance tests, about \$2.3 million was spent to conduct over 800 regulated equipment compliance tests (including the UTQGS test activities), and approximately \$0.8 million was spent to manage the import certification program.